Anacortes City Council

Municipal Building Council Chambers
904 6th Street

August 10, 2026
6:00 PM

PRELIMINARY AGENDA
Packet Materials / Watch Meeting

1. **Call to Order**
2. **Pledge of Allegiance**
3. **Announcements and Committee Reports**
   a. Housing Affordability and Community Services and Planning Committee (Report)
   b. Port / City Liaison Committee (Report)
   c. Mayor's Awards of Merit (Presentation)
4. **Public Comment**
   a. Participation Rules and Procedures
5. **Consent Agenda**
   a. Minutes of August 3, 2026 (Action)
   b. Approval of claims in the amount of $1,306,507.41 (Action)
6. **Other Business**
   a. Contract Award: Ziply Fiber Dedicated Internet Access #26-178-FBR-001/#26-178-FBR-002 (Discussion/Action)
   b. Resolution 3196: Adoption of the Skagit County Hazard Mitigation Plan (Discussion/Action)
   c. Contract Award: Water Treatment Plant Intake Pump Station Alternatives Analysis #C2026-0218 (Discussion/Action)
   d. Ordinance 5035: Contract Numbering (Discussion/Possible Action)
7. **Executive Session**
   a. Potential Real Estate Transaction per RCW 42.30.110(1)(c) (15 minutes) (Discussion)
8. **Adjournment**

Watch online or participate via Zoom at www.anacorteswa.gov/meetings. Comment via email to cityclerk@anacorteswa.gov or to City Clerk, P.O. Box 547, Anacortes WA 98221. Public comments received by the City Clerk prior to 3 p.m. on the day of the meeting will become part of the record for the meeting. The City of Anacortes is committed to making public meetings accessible to all community members. For assistance with special needs, contact the City Clerk at 360-299-1960 in advance of the meeting.

City Council
August 10, 2026

Highlights:

- Resolution 3196: Adoption of Skagit County Hazard Mitigation Plan
- Contract Award: Water Treatment Plant Pump Station Alternatives Analysis

12TH & COMMERCIAL
INTERSECTION UPDATE

NEXT PHASE BEGINS MID-AUGUST

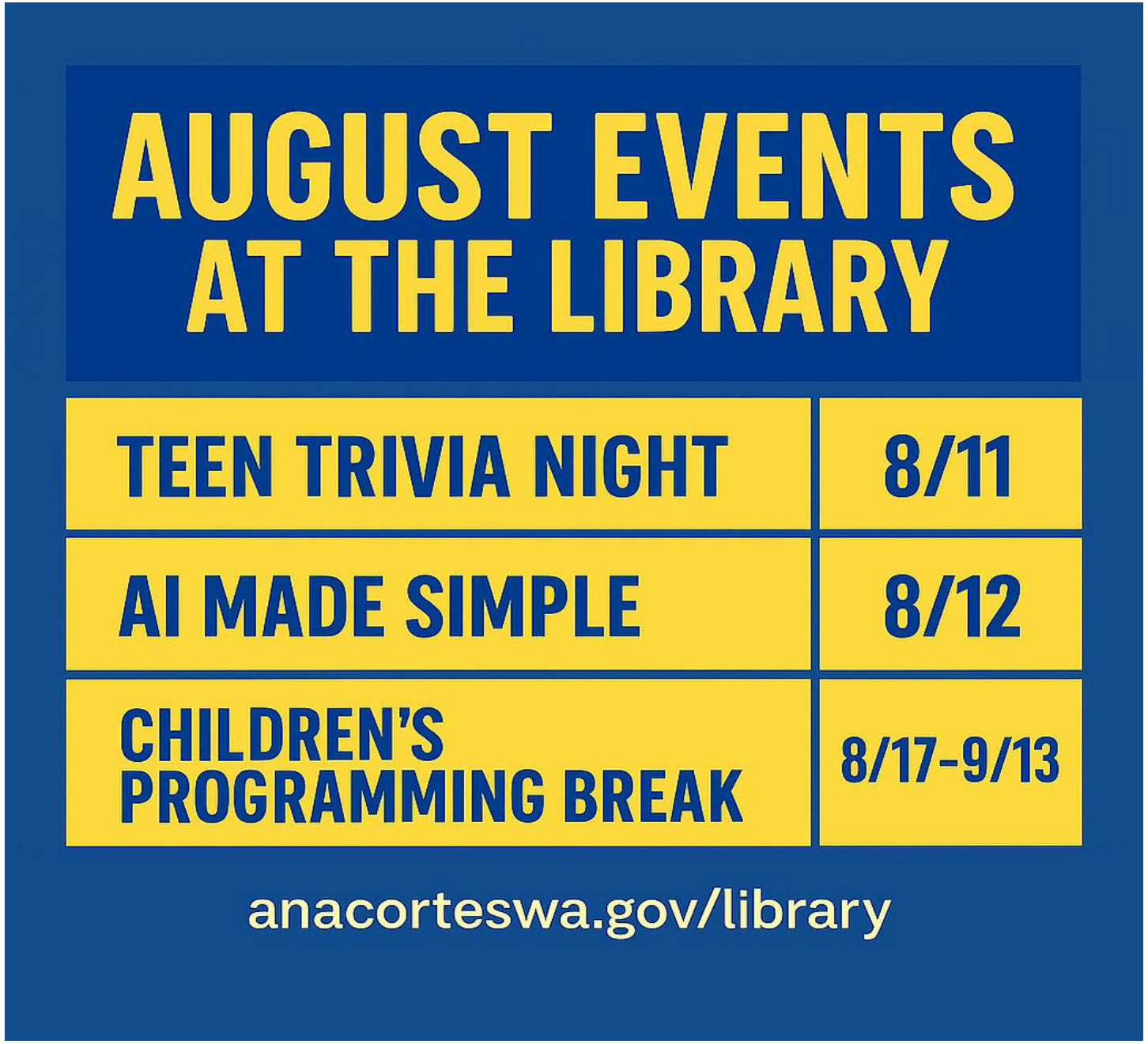
IMPROVING SAFETY
for drivers, pedestrians and cyclists

ENHANCING ACCESS
and connectivity

BUILDING A STRONGER
community together

LEARN MORE | anacorteswa.gov/projects

CITY OF ANACORTES 1891


AUGUST EVENTS
AT THE LIBRARY
TEEN TRIVIA NIGHT
8/11
AI MADE SIMPLE
8/12
CHILDREN'S PROGRAMMING BREAK
8/17-9/13
anacorteswa.gov/library

ANACORTES
Presented by
MARATHON
OPEN STREETS!
AUGUST 30
11-3
Let's meet on the streets!
LIVE MUSIC, BEER & FOOD
FEATURING:
ROCK FISH GRILL
OTHER SPONSORS:
Anacortes American
CITY OF ANACORTES
1891

RESIDENTIAL CLEAN UP DAY

SATURDAY, SEPTEMBER 19
9AM–12PM

Bring your residential garbage and yard waste to our operations facility at no charge.

E-bikes and E-motorcycles

- Helmets are now required by law (for all bikes)
- Speed limit for all bikes is 15 mph
- It is against the law for anyone under age 16 to ride an e-motorcycle; over 16 must be licensed with motorcycle endorsement
- Tickets for a first violation is $52 including court fees
- Police may impound and parents may be held responsible

Committee Reports

- Housing Affordability and Community Services/Planning
- Port/City Liaison

Mayor's Award of Merit

Water Treatment Plant

- Gilbert Quevedo
- Seth Schuh
- Wade Hoskinson
- Cameron Frazer

Planning, Permitting, Community and Economic Development

- Libby Grage

Fiber

- Corby Stephens
- Aaron Brown
- Ian Wade

City Council Agenda Bill

August 10, 2026

Action Type: Presentation **Item:** 3.c.

Title: Mayor's Awards of Merit

Staff Contact(s): Ryan Walters

Approved for Submittal to Council by:
Ryan Walters

Summary: The Mayor's Award of Merit is awarded to employees who demonstrate especially meritorious performance. This year's recipients include:

Public Works — Water Treatment Plant
Gilbert Quevedo
Wade Hoskinson
Cameron Frazer
Seth Schuh

Planning, Community, and Economic Development
Libby Grage

Fiber
Corby Stephens
Aaron Brown
Ian Wade

Budget Impact:

Previous Action:

Recommended Motion:

Alternative Actions:

Attachments (listed in order presented): None

Anacortes City Council Minutes - August 3, 2026

Call to Order

Mayor Ryan Walters called to order the August 3, 2026, Anacortes City Council meeting at 6:00 p.m. Councilmembers Marcia Hunt, Luke Currier, Anthony Young, Christine Cleland-McGrath, Carolyn Moulton, and TJ Fantini were present. Councilmember Bruce McDougall participated in the meeting remotely via Zoom.

Pledge of Allegiance

The assembly joined in the Pledge of Allegiance.

Announcements and Committee Reports

Mayor Walters made announcements regarding the 12th Street and Commercial Avenue intersection project, upcoming events at the Library, and National Night Out on August 4th from 6-8pm, referring to a slide presentation that was added to the packet materials for the meeting.

Public Works Committee

Ms. Cleland-McGrath reported from the Public Works Committee meeting held earlier in the evening. The topics discussed included the committee's appreciation for the work that was done on the Wastewater Treatment Plant Alternatives Analysis with the next workshop scheduled for October 8th, and a pending $1.2 million no-match Safe Routes to School grant for a multimodal trail and sidewalk improvement project on 22nd Street between M Avenue and J Avenue. The committee also discussed traffic safety concerns from the staff and the public, including possible implementation of a 4-way stop at the 4th Street and Q Avenue intersection, measures to discourage speeding vehicles on Kingsway in Skyline, and reducing the speed limit approaching the crosswalk near 24th Street and R Avenue from 35 to 25 miles per hour. Finally, the committee discussed the draft National Pollutant Discharge Elimination System permit for the Wastewater Treatment Plant, which regulates nitrogen discharge. Ms. Cleland-McGrath reported that consultants have drafted a technical memorandum on behalf of the city in response to the draft permit, and that staff have requested an additional 30 days to solicit public comment on the draft permit, which will likely accelerate the upgrade window for reducing nitrogen levels in wastewater.

Public Comment

Mayor Walters invited the public to comment on any item not on the agenda.

Pat Gardner of Anacortes commented on the successful Arts Festival this past weekend and suggested that parents of minors who violate regulations while operating a personal transportation device should be fined.

Linda Martin of Ward 3, Anacortes spoke about the Event Center, asking if the city had in fact put aside Lodging Tax revenues in accordance with the 2016 Tourism Promotion Strategic Plan, how the city intended to fund the portion of the project not covered by grant funding, and if the return on the taxpayers' investment on a facility and property that the city would not own or operate would be adequate.

Consent Agenda

Ms. Hunt moved, seconded by Mr. Young, to approve the following Consent Agenda items. The motion carried unanimously by voice vote.

a. Minutes of July 27, 2026

b. Approval of claims in the amount of $434,096.90

The following vouchers/checks were approved for payment:

EFT numbers: 210 through 247, total $269,414.39

Check numbers: 116077 through 116098, total $49,640.35

Wire transfer numbers: 194 through 208, total $115042.16

c. Contract Modification: March's Point Road Water Main and Bike Lane Project – Design #24-159-ENG-001

Other Business

Contract Award: Ben Root Skate Park Restroom & Parking Lot Project #25-136-PRK-004

Assistant Parks and Recreation Director Bob Vaux introduced proposed contract #25-136-PRK-004 with Colacurcio Brothers, Inc. to perform the Ben Root Skate Park Restroom & Parking Lot Project, referring to a slide presentation that was included in the packet materials for the meeting.

Discussion topics included:

- Signage on the Tommy Thompson Trail.
- The provision of parking facilities for disabled community members.

TJ Fantini moved, seconded by Anthony Young, to approve contract #25-136-PRK-004 with Colacurcio Brothers, Inc. as presented. The motion carried unanimously by voice vote.

Ordinance 5034: 2026 Budget Amendment Consolidating Accounting Funds and Establishing a Construction Fund.

Finance Director Steve Hoglund introduced proposed Ordinance 5034 that would consolidate several accounting funds and establish a separate construction fund for capital projects, referring to an electronic copy of the draft ordinance that was included in the packet materials for the meeting.

Discussion topics included:

- Expenditures would still be recognizable by departments via a unique code.
- Getting to true operational costs of the city and ease of understanding.
- Simplifies accounting of funds and maintains transparency.
- Parks capital funding will remain a separate fund for now due to having a dedicated revenue source.
- The construction fund is a governmental fund, not for utilities.
- General Accepted Accounting Principles say that utility capital projects should be budgeted for within the applicable utility fund.
- The capital facilities plan and budget process is the mechanism for adding a project to the newly established construction fund.

Mayor Walters invited members of the audience to comment on this agenda item. No one present wished to address the Council.

Luke Currier moved, seconded by Anthony Young, to approve Ordinance 5034 to consolidate funds 101, 102, and 103 into the General fund, and establish fund 301 for governmental construction projects. Vote: Ayes - Carolyn Moulton, Anthony Young, Christine Cleland-McGrath, Bruce McDougall, TJ Fantini, Luke Currier, Marcia Hunt. Nays - None. Abstentions - None. Result: Passed

Adjournment

There being no further business, at approximately 6:38 pm, the Anacortes City Council meeting of August 3, 2026, was adjourned.

The following claims against the City of Anacortes have been preaudited and certified by the Clerk-Treasurer as ready for City Council approval at the August 10, 2026 City Council meeting:

Download this file in OpenDocument spreadsheet format.

Invoice Doc #	Invoice Date	Invoice #	Vendor Full Name	Description	Total Amount	Department
401048	5/17/2026	96644112	INGRAM	Children's Books	$ 355.34	LIBR
400382	6/1/2026	26-COA-DFP-10	FIRST FORTY FEET LLC	DOWNTOWN STREETSCAPES PLAN	$ 4,100.00	PW
400383	6/1/2026	26-COA-DFP-11	FIRST FORTY FEET LLC	DOWNTOWN STREETSCAPES PLAN	$ 1,270.75	PW
400449	6/17/2026	69393	SKAGIT PUBLISHING ACCT 46833	PUBLISH AA-752599	$ 97.44	FIN
400450	6/17/2026	69392	SKAGIT PUBLISHING ACCT 46833	PUBLISH AA-751740	$ 36.54	FIN
401032	6/24/2026	201563	HARGIS ENGINEERS INC	PUBLIC SAFETY BUILDING HVAC - DESIGN -5/17-6/13/26	$ 8,573.20	FAC
401073	6/30/2026	045-569743	TYLER TECHNOLOGIES, INC	EERP SOFTWARE/IMPLEMENTATION SERVICES	$ 5,518.62	FIN
401074	6/30/2026	045-569588	TYLER TECHNOLOGIES, INC	EERP SOFTWARE/IMPLEMENTATION SERVICES	$ 4,138.20	FIN
401062	6/30/2026	377096	CIVICPLUS, INC.	WEB SERVICES - AudioEye	$ 5,145.53	IT
400900	7/1/2026	045-570630	TYLER TECHNOLOGIES, INC	EERP QTRLY SAAS FEES 7/1/2026-9/30/2026	$ 48,385.10	FIN
400966	7/6/2026	35	ISLAND HEALTH	PRE-EMPLOYMENT DRUG SCREEN; KENT	$ 29.00	APD
400967	7/6/2026	700000198-B	FAMILY CARE NETWORK PLLC	PRE-EMPLOYMENT MEDICAL - ADJUSTMENT TO COST; KENT	$ 57.40	APD
401040	7/6/2026	322356	DOORMAN COMMERCIAL, LLC	PLANNING DEPARTMENT DOOR INSTALLATION	$ 4,800.29	FAC
400095	7/7/2026	Retainage Release	SPANE BUILDINGS, INC	Retainage Release-Ops Eq Storage #25-271-FAC-001	$ 4,044.10	PW
400968	7/8/2026	220013286491	PUGET SOUND ENERGY INC	APD: 6/5-7/7/26	$ 3,089.63	APD
401072	7/9/2026	045-570921	TYLER TECHNOLOGIES, INC	ENTERPRISE RESOURCE SOFTWARE IMPLEMENTATION	$ 2,452.72	FIN
401056	7/10/2026	509119942	MIDWEST TAPE, LLC.	DVDs for Collection	$ 29.01	LIBR
400984	7/11/2026	8498 30 017 0464628	COMCAST	WA park internet service	$ 113.18	PARKS
400986	7/13/2026	31107737	EWING IRRIGATION PRODUCTS, INC	Parks irrigation maintenance supplies	$ 54.15	PARKS

Invoice Doc #	Invoice Date	Invoice #	Vendor Full Name	Description	Total Amount	Department
400374	7/14/2026	2607	OSBORN CONSULTING, INC	PROFESSIONAL PLAN REVIEW CONSU	$ 8,445.25	PLAN
400939	7/16/2026	1639669	BIG STATE INDUSTIRAL SUPPLY	Hydration Supply for WD Team	$ 563.02	WDIST
401008	7/16/2026	26442.00.6	GRAY & OSBORNE INC	HEART LK SHORELINE RESTORATION-DESIGN-6/14-7/11/26	$ 4,418.49	PARKS
401035	7/19/2026	97981580	INGRAM	Ingram Adult Books	$ 1,056.00	LIBR
401050	7/19/2026	97981581	INGRAM	Children's Books	$ 574.61	LIBR
401037	7/20/2026	20901	WILSON ENGINEERING, LLC	29TH STREET RESERVOIR REPLACEM	$ 27,486.80	PWENG
401031	7/21/2026	13495	SPANE BUILDINGS, INC	OPERATIONS BUILDING SIDING AND	$ 19,033.31	FAC
400467	7/22/2026	GCI0020190	CODE PUBLISHING, LLC	CODIFICATION SERVICES	$ 397.50	LEGAL
400869	7/22/2026	959347	CASCADE COLUMBIA DISTRIBUTION	Blue Heron Booster Fluoride	$ 3,311.00	WDIST
400874	7/22/2026	90427185	CHEMTRADE CHEMICALS DEPT 771807	Aluminum Sulfate PO 26-170	$ 7,590.77	WTP
400876	7/23/2026	402316	BAY CITY SUPPLY	Cleaning Supplies	$ 97.19	WTP
400930	7/23/2026	37626	AEON MFG CO INC	Replacement vases for cemetery use	$ 624.17	PARKS
400905	7/23/2026	27-WAG994323-1	DEPARTMENT OF ECOLOGY	Heart Lake pest control permit	$ 565.00	PARKS
400934	7/23/2026	RefundSouth	LINDSEY SOUTH	WA park camping resident refund	$ 40.00	PARKS
400931	7/23/2026	RefundFranklin	JOSEPH FRANKLIN	WA park camping cancellation	$ 97.00	PARKS
400935	7/23/2026	RefundFelker	ALFRED FELKER	WA park camping resident refund	$ 30.00	PARKS
400933	7/23/2026	RefundLorvick	LORVICK, AARON	WA park camping cancellation	$ 233.00	PARKS
400927	7/23/2026	RefundSmith	SUSANNE SMITH	Refund for WA park camping cancellation	$ 131.00	PARKS
400932	7/23/2026	RefundJayne	JOSHUA JAYNE	WA park resident refund	$ 100.00	PARKS
400937	7/23/2026	RefundMack	KATHERINE MACK	WA park camping refund, paid for wrong type site	$ 47.00	PARKS
400936	7/23/2026	RefundJohnson	RILEY JOHNSON	WA park boat launch refund, paid for too many days	$ 14.00	PARKS
400957	7/23/2026	RefundWard	TERRY WARD	WA park camping cancellation refund	$ 165.00	PARKS
400958	7/23/2026	RefundRoush	STEPHANIE ROUSH	WA park camping cancellation refund	$ 125.00	PARKS
400955	7/23/2026	RefundBrennan	MARY BRENNAN	WA park camping cancellation refund	$ 97.00	PARKS
400952	7/23/2026	RefundBrady	LISA BRADY	WA park camping cancellation refund	$ 97.00	PARKS

Invoice Doc #	Invoice Date	Invoice #	Vendor Full Name	Description	Total Amount	Department
400956	7/23/2026	RefundChristian	ANNISSA CHRISTIAN	WA park camping cancellation refund	$ 47.00	PARKS
400954	7/23/2026	RefundLeopold	ALPHONSE LEOPOLD	WA park camping cancellation refund	$ 97.00	PARKS
400973	7/23/2026	6560800764	VESTIS SERVICES LLC	CARPETS	$ 16.34	APD
400981	7/23/2026	291548	STORMIE REECE	Depot janitorial services	$ 1,628.00	PARKS
400870	7/24/2026	1100012622	EUROFINS ENVIRONMENT TESTING	Water Analysis - 34th St New Main Investigative	$ 22.00	WDIST
400871	7/24/2026	1100012619	EUROFINS ENVIRONMENT TESTING	Water Analysis - IOC Compliance 2026-07-20	$ 650.00	WTP
400942	7/24/2026	Credit 9018987918	GRAINGER	Freight Adjustment Credit	$ 205.83	WWTP
400945	7/25/2026	116329	SKAGIT FARMERS SUPPLY	Ethanol Free Unleaded @ 18.2570 Gal	$ 100.40	WTP
400946	7/25/2026	7998	FLOORING CONNECTIONS	ASAC RECEPTION/STORE AREA CARP	$ 3,941.64	FAC
401036	7/26/2026	98137910	INGRAM	Ingram Adult Books	$ 31.02	LIBR
401043	7/26/2026	98137911	INGRAM	Children's Books	$ 269.74	LIBR
400913	7/27/2026	2050652	POLYDYNE, INC	Co-Ag Poly PO 26-173	$ 12,913.56	WTP
401047	7/27/2026	20771	FIBERONE, LLC	Fiber optic cables	$ 2,533.50	FIBER
401070	7/27/2026	593	PACIFIC NORTHWEST HYDRO LLC	ANNUAL TESTING OF FIRE PUMPS	$ 1,862.19	FIRE
400897	7/28/2026	260728-1	WREN SCHULTZ	2025 KIDS R BEST FEST JUGGLING	$ 500.00	PARKS
400909	7/28/2026	1100012755	EUROFINS ENVIRONMENT TESTING	Water Analysis BACT Raw & Finished 2026-07-20	$ 81.00	WTP
400910	7/28/2026	1100012763	EUROFINS ENVIRONMENT TESTING	Water Analysis TOC 2026-07-220	$ 144.00	WTP
400912	7/28/2026	0123012	FERGUSON	Inventory Restock - 3/4 in ER Registers	$ 20,421.80	WDIST
400925	7/28/2026	PS-INV117470	PORT OF ANACORTES	EVENT FACILITY PROJECT - DESIG	$ 8,624.47	PLAN
400924	7/28/2026	3.478	SKAGIT COUNCIL OF GOVERNMENTS	STAFFING SERVICES FOR GROWTH M	$ 1,805.44	PLAN
400917	7/28/2026	360-299-3674-021417-	ZIPLY FIBER	OPS PHONE LINE: 7/28-8/27/26	$ 91.55	FLEET
400922	7/28/2026	1922912	WALTON BEVERAGE COMPANY, INC	OPS BREAKROOM SUPPLIES	$ 285.00	FLEET
400906	7/28/2026	DB2005946	FIFTH ASSET	DEBTBOOK ACCOUNTING SOFTWARE	$ 3,601.87	FIN
400971	7/28/2026	360-299-6615-061516-	ZIPLY FIBER	911 LINE 7/28/26 - 8/27/26 (360-299-6615-061516-5)	$ 97.40	APD
400972	7/28/2026	360-299-6615-061516-	ZIPLY FIBER	BAC LINE 7/28/26 - 8/27/26 (360-293-4900-091286-5)	$ 107.51	APD

Invoice Doc #	Invoice Date	Invoice #	Vendor Full Name	Description	Total Amount	Department
401033	7/28/2026	360-299-0973-1017915	ZIPLY FIBER	WWTP Landline	$ 559.24	WWTP
401044	7/28/2026	322397	DOORMAN COMMERCIAL, LLC	AUTOMATIC DOORS ANNUAL PREVENTATIVE MAINTENANCE	$ 4,274.19	FAC
401021	7/28/2026	402352A	BAY CITY SUPPLY	SUPPLIES FOR FACILITIES - PAPER CUPS	$ 128.76	FAC
400943	7/29/2026	1100012779	EUROFINS ENVIRONMENT TESTING	Lab Testing	$ 468.00	WWTP
400944	7/29/2026	1100012796	EUROFINS ENVIRONMENT TESTING	Lab Testing - Side Stream	$ 45.00	WWTP
400965	7/29/2026	2172506	LIFE ASSIST, INC	Lancets, Glucometer tests, Vacutainer, Catheters,	$ 1,052.25	FIRE
401038	7/29/2026	10111656	MILES SAND & GRAVEL CO.	SUPPLIES FOR STREET DEPT - CONCRETE MIX	$ 1,215.33	FLEET
401023	7/29/2026	XA116033290:01	RWC INTERNATIONAL	PART FOR EQUIP #610	$ 176.68	FLEET
401011	7/29/2026	300000006951	PUGET SOUND ENERGY INC	STREET LIGHTS: 5/30-6/30/26	$ 11,543.93	FLEET
401012	7/29/2026	300000325005	PUGET SOUND ENERGY INC	STREET LIGHTS: 6/6-7/8/26	$ 118.26	FLEET
401019	7/29/2026	300000340004	PUGET SOUND ENERGY INC	STREET LIGHTS: 6/30-7/29/26	$ 56.17	FLEET
401034	7/29/2026	WA07-00263118	MOTION INDUSTRIES, INC	Maintenance supplies	$ 157.14	WWTP
401014	7/29/2026	7484728926	CARDINAL HEALTH 110, INC.	Ketamine, Midazolam, Naloxone, Ondansetron, Prochl	$ 259.72	FIRE
400938	7/30/2026	Retainage Release	VECA ELECTRIC & TECHNOLOGIES	Retainage Release - Contract 25-218-WTR-001	$ 3,720.48	PUBWR
400941	7/30/2026	CINV0264163	BATTERY POWER SOLUTIONS, LLC	Annual DC battery inspection	$ 3,202.75	FIBER
400962	7/30/2026	WTPIntake0730202	PUGET SOUND ENERGY INC	WTP Intake Electricity 5/8/26 - 7/13/26 *9996	$ 1,210.42	WTP
400974	7/30/2026	6560804394	VESTIS SERVICES LLC	CARPETS	$ 17.40	APD
400982	7/30/2026	IN2558492	MES SERVICE COMPANY LLC	SCBA Repair	$ 2,322.53	FIRE
400970	7/30/2026	INV3223012	COPIERS NORTHWEST, INC	6/29/26-7/28/26 - APD HALLWAY	$ 49.72	APD
401059	7/30/2026	0002760557	CENTRAL WELDING SUPPLY CO, INC	O2 for Ambulances	$ 119.03	FIRE
401020	7/30/2026	300000290043	PUGET SOUND ENERGY INC	STREET LIGHTS: 10/21/25-6/1/26	$ 8,900.11	FLEET
401028	7/30/2026	57942	ZUMAR INDUSTRIES, INC.	SUPPLIES FOR STREET DEPT	$ 848.03	STREE
401025	7/30/2026	6560804399	VESTIS SERVICES LLC	OPS MAT CLEANING	$ 62.40	FLEET
401026	7/30/2026	6560804400	VESTIS SERVICES LLC	OPS & PARKS LAUNDRY SERVICE	$ 80.83	FLEET

Invoice Doc #	Invoice Date	Invoice #	Vendor Full Name	Description	Total Amount	Department
401061	7/30/2026	CD_001508303	RINGCENTRAL INC	RINGCENTRAL VOIP - 7/28/26-8/27/26	$ 4,528.13	IT
400951	7/31/2026	5342236608	CINTAS CORPORATION	First Aid Supplies	$ 425.42	HR
400953	7/31/2026	5347686205	CINTAS CORPORATION	First Aid	$ 528.19	HR
401003	7/31/2026	1003183	JONES CHEMICALS INC	Plant Chemicals	$ 7,532.15	WWTP
400980	7/31/2026	INV-6245548	UNITED SITE SERVICES, INC	Penn Ave Porta-Potty Rental 7/1/26 - 7/31/26	$ 210.25	WTP
400977	7/31/2026	ECI-CI-000269	ENVIROCARE INTERNATIONAL, INC,	Maintenance supplies	$ 26,730.00	WWTP
401078	7/31/2026	14608682	BROWN AND CALDWELL	WWTP INCINERATION EVALUATION A	$ 21,501.50	WWTP
401030	7/31/2026	GCI0020263	CODE PUBLISHING, LLC	CODIFICATION SERVICES	$ 67.50	LEGAL
401018	7/31/2026	18255	MATERIALS TESTING & CONSULTING	ON-CALL MATERIALS TESTING - CSO Pump Station	$ 272.50	PWENG
401007	7/31/2026	220030712800	PUGET SOUND ENERGY INC	STREET LIGHTS: 7/2-7/31/26	$ 8.73	FLEET
401009	7/31/2026	220025931985	PUGET SOUND ENERGY INC	STREET LIGHTS: 7/2-7/31/26	$ 13.42	FLEET
401051	7/31/2026	200000666863	PUGET SOUND ENERGY INC	6863 Library 7-2 to 7-31-26	$ 19.86	LIBR
401053	7/31/2026	200000667218	PUGET SOUND ENERGY INC	Library 10 ST & M AVE 7-2 to 7-31-26	$ 34.23	LIBR
401066	7/31/2026	CL17982	NELSON-REISNER DISTRIBUTOR INC	Vehicle Fuel - July	$ 38,364.61	FIN
401022	7/31/2026	P3266TAC	SWS EQUIPMENT	PART FOR EQUIP #304 - DEF TANK SENSOR	$ 4,864.16	FLEET
401054	7/31/2026	FB-3158	CITY OF MOUNT VERNON	Dark fiber, July 2026	$ 525.00	FIBER
401057	7/31/2026	509218043	MIDWEST TAPE, LLC.	DVDs for collection	$ 195.44	LIBR
401010	7/31/2026	IN970712	NOANET	DEDICATED INTERNET ACCESS - JULY 2026	$ 4,310.00	FIBER
401013	7/31/2026	0726	BONNIE NELSON	AGING MASTERY PROGRAM July 2026	$ 1,350.00	ASAC
401084	7/31/2026	25083	HOME INSTEAD	Home Services ,LEOFF 1 - Richard Cousins	$ 1,260.00	HR
400988	8/1/2026	2104878	MILES SAND & GRAVEL CO.	Sand for Festival sand box	$ 169.88	PARKS
400975	8/1/2026	5073619948	RICOH USA, INC	PATROL ROOM: 5/1/26-7/31/26	$ 150.10	APD
400976	8/1/2026	5073619953	RICOH USA, INC	FRONT OFFICE: 7/1/26-7/31/26	$ 37.70	APD
400978	8/1/2026	10624-8	PORT OF ANACORTES	Electricity & Environment for Marine 29 Moorage	$ 17.00	FIRE
400987	8/1/2026	155445	VENTEK INTERNATIONAL	WA park paystation monitoring	$ 294.03	PARKS
400983	8/1/2026	42921	SHIFTNOTE, LLC	ShiftNote Daily Log 8/1/26 - 10/31/26	$ 122.30	WTP
401039	8/1/2026	August 2026	COMMUNITY ACTION OF SKAGIT CTY	COMMUNITY ACTION OFFICE & CARE SPECIALIST - August	$ 6,666.66	PLAN

Invoice Doc #	Invoice Date	Invoice #	Vendor Full Name	Description	Total Amount	Department
401029	8/1/2026	3918	OAB ENGINEERING, LLC	Sta 3 Data Services - August	$ 150.00	FIRE
401080	8/1/2026	11104044	NAVIA BENEFIT SOLUTIONS	July - Flexible Spending Account Fee	$ 159.10	HR
400969	8/2/2026	1100012960	EUROFINS ENVIRONMENT TESTING	Water Analysis TCR South 2026-07-28	$ 182.00	WTP
401041	8/2/2026	98297328	INGRAM	Ingram Adult Books	$ 1,057.17	LIBR
401045	8/2/2026	98297330	INGRAM	Children's Books	$ 281.05	LIBR
401049	8/2/2026	98297329	INGRAM	Children's Books	$ 396.74	LIBR
401001	8/3/2026	1100012854	EUROFINS EATON ANALYTICAL, LLC	Lab Testing	$ 45.00	WWTP
401077	8/3/2026	Pay App 3	STRIDER CONSTRUCTION CO, INC	COMBINED SEWER OVERFLOW PUMP STATION	$ 507,707.35	PWENG
401055	8/3/2026	6560805744	VESTIS SERVICES LLC	Laundry services	$ 36.51	WWTP
401058	8/3/2026	6560805745	VESTIS SERVICES LLC	Sta 1 Mat/Mop Service 8/3	$ 21.33	FIRE
401067	8/3/2026	Pay App 1	SUMMITX CONTRACTORS, INC	34TH STREET WATER MAIN REPLACEMENT	$ 229,666.53	PWENG
401046	8/4/2026	97836428	INGRAM	Children's Books	$ 308.04	LIBR
401052	8/4/2026	58271948	LINDE GAS & EQUIPMENT INC.	Maintenance supplies	$ 445.94	WWTP
401079	8/4/2026	C2022-0042	SKAGIT COUNTY SHERIFF'S OFFICE	JAIL FACILITY USE AGREEMENT JULY	$ 93,069.68	FIN
401075	8/4/2026	C2021-0036	ANACORTES HOUSING AUTHORITY	SALES AND USE TAX REVENUE AGREMENT JULY	$ 34,029.72	FIN
401071	8/4/2026	C2021-0008	ANACORTES FAMILY CENTER	AGREEMENT ON SALES AND USE TAX JULY	$ 34,029.72	FIN
401063	8/4/2026	Retainage Release	FLOORING CONNECTIONS	Retainage Release - Contract 26-162-FAC-001	$ 351.73	PUBWR
401068	8/4/2026	July 26	THE LAW OFFICE OF JULIE C WALTERS, LLC	Prosecution Services for July	$ 12,500.00	LEGAL
401016	8/4/2026	1329	BE ENTERPRISES LLC	2026 LTAC Award- Public Restroom Maintenance	$ 3,575.10	PARKS
	Total				**$ 1,306,507.41**	

City Council Agenda Bill

August 10, 2026

Action Type: Contract Award **Item:** 6.a.

Title: Contract Award: Ziply Fiber Dedicated Internet Access #26-178-FBR-001/#26-178-FBR-002

Staff Contact(s): Jim Lemberg

Approved for Submittal to Council by:
Jim Lemberg

Summary: City staff seeks City Council consent to enter a contract with Northwest Fiber, LLC dba Ziply Fiber (Ziply) to provide Dedicated Internet Access (DIA) Service for the City-managed ISP service. The City is committing to a 36-month term with a monthly cost of $4,200.00 after which we may opt to continue the agreement on a month-to-month basis. The contract includes the negotiated terms and conditions of the Ziply Fiber Services Agreement (ZFSA) as contract #26-178-FBR-001 and the 36-month Service Order Form as contract #26-178-FBR-002.

History: The City has established a municipally owned ISP providing affordable high-speed Internet, dark fiber, and Metro Ethernet services throughout the City of Anacortes over our community-owned fiber optic infrastructure. The City requires DIA to connect to the wider Internet, and the most prudent architecture is to maintain two DIA connections for redundancy. The City currently maintains one such connection through NoaNet and one such connection through Cogent Communications. The service that would be provided under this contract will (i) replace the Cogent connection whose term ends Fall 2026 and (ii) provide 20 Gbps symmetrical service. This contract will allow the City to provide reliable, robust internet access for our subscribers. Of further note, the existing Cogent connection is transported from Seattle to Anacortes on infrastructure owned and operated by Ziply; a combination of services from NoaNet and Ziply provides significantly stronger redundancy than does a combination of services from Cogent and Ziply.

Key Terms:

- The City is committing to a 36-month term with a monthly cost of $4,200.00,

after which we may opt to continue the agreement on a month-to-month basis or negotiate a new agreement reflecting then-current market conditions.
- The Service Term and billing for the Service will begin upon the earlier of (i) City's use of the applicable Service(s) or Equipment or (ii) five (5) days following Ziply Fiber's installation of such Service(s) or Equipment, and such date is deemed the commencement of the applicable Service Term.
- Ziply calls this service "Ethernet Internet Access," but the service is what the industry and this Agenda Memo refer to as "Dedicated Internet Access."

Competitive Bidding: This work is considered a Personal Service and as such the City made an informal price comparison of current market conditions:

Cogent Communications, 10 Gbps..... $3,706 per month

NoaNet, 15 Gbps..... $4,310 per month

Ziply Fiber, 20 Gbps..... $4,200 per month

Budget Impact:

Contractor	Northwest Fiber, LLC dba Ziply Fiber
Contract Amount	$151,200.00 for 36 months
In CFP?	No
Funding Source	Rates/User Fees; Operating Budget
Earmarked Funds	$394,167 budgeted for the specified Bars #
BARS #	001.260.532.41.5321041.00.54100.
Budget Amendment Required?	No

Start Date	Service Term Commencement
End Date	36 months

Previous Action: N/A

Recommended Motion: I move that City Council authorize the Mayor to sign a contract with Northwest Fiber, LLC dba Ziply Fiber in the amount of $151,200.00 for 36 months for Ethernet Internet Access service.

Alternative Actions: Not award the contract.

Attachments (listed in order presented):
1. 26-178-FBR-001 & 26-178-FBR-002

Ziply Fiber Services Agreement (herein as "ZFSA" or "Agreement") COA #26-178-FBR-001

Northwest Fiber, LLC dba Ziply Fiber on behalf of it operating affiliates (collectively, "Ziply Fiber") agrees to provide the City of Anacortes ("Customer" or "City") with the Services that have been ordered under the terms and conditions of this Agreement. By using the Services, Customer agrees to abide by, and require others using Customer's account to abide by, the terms of this Agreement.

1. Provision of Services and Equipment

a. Ziply Fiber will provide and the Customer agrees to pay for the communications, installation and maintenance services (collectively "Service"), and/or purchase or lease equipment ("Equipment"), described in this ZFSA and Schedules executed by Customer.

b. Customer acknowledges that certain Services may be governed by tariff or price schedule filed with the Federal Communications Commission and/or state public utilities commission(s). In the event of any inconsistencies between this ZFSA and an applicable tariff, the tariff shall control except with respect to pricing, early termination charges, or cancellation charges for which this ZFSA shall control.

c. Ziply Fiber will provide, maintain, and repair the Ziply Fiber owned facilities and equipment used to provide the Services ("Ziply Fiber('s) Network"), up to and including the point at which Ziply Fiber's Network is made available for interconnection to Customer's premises equipment or inside wiring. Customer shall provide Ziply Fiber reasonable access to Customer's premises during normal business hours for the purpose of installing, inspecting, testing, rearranging, repairing, or removing any Ziply Fiber Network components, including obtaining approvals, permits, or licenses from third parties, as necessary. Customer will cooperate in good faith and provide all reasonable information and authorizations required by Ziply Fiber for the purpose of installing Services and/or Equipment, performing routine network grooming, maintenance, upgrades, and addressing emergencies, including but not limited to design layout records of any Customer or third party network elements to be connected to the Services and Letters of Agency allowing Ziply Fiber to act on the Customer's behalf related to the Services and auxiliary third party services.

d. Only authorized agents and representatives of Ziply Fiber may perform maintenance work with respect to Ziply Fiber's Network. Any repair, alteration, configuration or servicing of Ziply Fiber's Network, Services or Equipment by Customer or third parties without the written consent of Ziply Fiber is a material breach of this ZFSA and cause for termination at Ziply Fiber's option.

e. If Ziply Fiber is unable to commence performance hereunder due to circumstances within Customer's control, reasonable related costs incurred by Ziply Fiber, including but not limited to travel at normal rate and overtime labor rate expenses, will be reimbursed by Customer. Customer will reimburse Ziply Fiber for all costs incurred for installation, maintenance and repair if: (i) Ziply Fiber's Network is altered, maintained or repaired by the City or any party acting under City's direction , without Ziply Fiber' prior written consent, (ii) the malfunction of the Service or Equipment is the result of mishandling, abuse, misuse, improper operation, improper storage, or improper installation by anyone other than Ziply Fiber (including use in conjunction with equipment electrically or mechanically incompatible).

f. Customer will provide (i) suitable building facilities (including but not limited to space, circuitry, power, backup power, and surge protectors) for the installation, operation, and maintenance of Ziply Fiber's Network in accordance with manufacturer's documentation and Ziply Fiber's installation standards, more fully described in the applicable Schedule; and (ii) a well-lighted and safe working area that complies with all local safety standards and regulations.

g. The Services or Equipment may be connected with the services or facilities of other carriers. Ziply Fiber may, when authorized by Customer in writing and as may be agreed to by Ziply Fiber, act as Customer's agent for ordering facilities provided by other carriers to allow such connection of Customer's locations to Ziply Fiber's Network or to the network of an underlying carrier or service.

h. Customer is responsible for all charges billed by other carriers or third parties in accordance with this Agreement. Ziply Fiber shall not be responsible for the installation, operation, repair or maintenance or performance of equipment, facilities, software, or service not provided directly by Ziply Fiber or its contractors. Customer is responsible to provide equipment compatible with the Service or Equipment and Ziply Fiber's Network, and any wiring required to extend a communications termination and/or demarcation at the Customer premises. Customer will provide suitable building facilities for the provision of Services in accordance with local codes, including but not limited to ducting, conduit, structural borings, etc. for cable and conductors in floors, ceilings and walls; electrical service with suitable terminals and power surge protection devices; and metallic grounds with sufficient slack in the equipment room, installed in conformity with the National Electrical Code and local codes, and Ziply Fiber's installation standards.

i. Customer is solely responsible for the selection, implementation, and maintenance of security features for protection against unauthorized or fraudulent use of the Services and Equipment. Customer is solely responsible for ensuring that all of Customer's data in Customer's control is adequately secured, documented and backed-up at all times. Ziply Fiber and its contractors are not responsible or liable for data loss and/or unauthorized or fraudulent use of Customer Services or Equipment to the extent caused by Customer's acts or omissions.

j. Ziply Fiber will manage the Ziply Fiber Network in Ziply Fiber's sole discretion, and reserves the right to substitute, change or rearrange any equipment or facilities used in delivering Services or provisioning the Equipment; provided that such change or

rearrangement does not materially degrade the Services provided to Customer. Ziply Fiber will endeavor to provide reasonable notice prior to any scheduled maintenance, planned enhancements or upgrades, which may result in a degradation or disruption in Service. Ziply Fiber reserves the right to suspend Service for emergency maintenance to Ziply Fiber's Network without notice to Customer. Customer shall designate a primary contact for receipt of such notice.

k. Each party represents and warrants that its use of the Service and Equipment will comply and conform with all applicable federal, state and local laws, administrative and regulatory requirements and any other authorities having jurisdiction over the subject matter of this ZFSA and Customer will be responsible for applying for, obtaining and maintaining all registrations and certifications applicable to Customer which may be required by such authorities with respect to such use.

l. The parties acknowledgment that City will use Ziply Fiber's Service to provide broadband service to City customers.

2. Service Description

Ethernet Internet Access is a data transport configuration comprised of a physical User Network Interface (UNI) connected to Ziply Fiber's network. EIA can be used to support delivery of eligible Ziply Fiber services to a designated Customer Location (e.g., Ziply Fiber Connect – Cloud). Ziply Fiber provides EIA on a standard best efforts' basis and subject to unspecified variable bit rate, latency, and packet loss with dependencies on current traffic load(s) within Ziply Fiber's core network Infrastructure. Physical termination shall conform to applicable rules and regulations with respect to Minimum point of entry (MPOE) and demarcation point. If Customer requests extensions beyond the MPOE, such extension (s) shall be subject to Ziply Fiber's cabling service policies and Ziply Fiber's charges related thereto per separate Ziply Fiber Cabling Service and Fee Schedule.

3. Term

The term of this ZFSA will commence as of the date identified in the introductory paragraph above or the date the ZFSA is executed by both Parties, whichever is later (the "Effective Date") and will continue through the Service Term with respect to any Service or Equipment provided pursuant to this ZFSA. Customer will purchase the Services, or lease Equipment, identified in each Schedule for the period of time stated in the Schedule (the "Service Term"). Unless otherwise stated in the Schedule, the Service Term and billing for the Service, will begin upon the earlier of (i) Customer's use of the applicable Service(s) or Equipment or (ii) five (5) days following Ziply Fiber's installation of such Service(s) or Equipment, and such date is deemed the commencement of the applicable Service Term; provided that Ziply Fiber shall notify Customer in writing of the Service Term upon its commencement. If the parties agree to negotiated renewal terms, such terms will not be effective unless and until documented in writing and executed by both parties.

4. Payment

a. Customer shall pay all charges set forth in the Schedules and in applicable tariffs during the Service Term. Ziply Fiber will invoice Customer any nonrecurring charges ("NRC"), monthly recurring charges ("MRC"), and usage based charges.

b. In addition to the applicable charges set forth in the tariffs and Schedules, Customer shall pay all applicable federal, state or local sales, use, privilege, gross receipts, utility, value added, excise or other taxes (excluding taxes based on Ziply Fiber's net income) that apply to Customer, and any applicable surcharges or fees, whether government mandated or Ziply Fiber initiated including but not limited to Primary Interexchange Carrier Charge, Federal Pre-Subscribed Line Charge, Carrier Cost Recovery Surcharge, E-911, and Universal Service and Local Number Portability, (i) in the amounts applicable at the time of billing and (ii) stated within this Agreement or on the applicable invoice. Customer shall also be responsible for third party charges and penalties incurred as a result of Customer's use of the Services or Equipment in violation of this Agreement and/or unauthorized or fraudulent use thereof due to Customer's conduct or omissions.

c. All undisputed payments shall be due within thirty (30) days of the Customer's receipt of an invoice and, in addition to and not in lieu of any other remedies Ziply Fiber may have hereunder or under the law as a result of Customer's failure to pay, late payments shall be subject to a late payment fee of the lesser of one percent (1%) per month or the maximum allowed by law. In the event Customer disputes any invoiced amount, Customer will pay all charges not disputed, and notify Ziply Fiber of the dispute in writing, providing a detailed explanation of the basis for the dispute. If Ziply Fiber does not receive notice of a payment dispute by Customer within ninety (90) calendar days after the date of Customer's receipt of an invoice, such invoice will be final and not subject to further challenge. For the purpose of computing partial month charges, a month will consist of thirty (30) calendar days. Ziply Fiber reserves the right to immediately suspend or terminate any or all Services or the installation or lease of any or all Equipment if Customer is overdue more than thirty (30) days for payments that have not been disputed in good faith.

5. Special Construction

All Services are subject to availability and Ziply Fiber Network limitations. The rates identified in this Schedule are estimated based on standard installation costs and Services may not be available at all service locations at the rates identified. If Ziply Fiber determines, in its reasonable discretion, that the costs of provisioning Service to any Customer service location are, due to a circumstance at the Customer location that was not reasonably anticipated by Ziply and was not disclosed by Customer in writing prior to the Effective Date, materially higher than normal for customers similar to Customer, Ziply Fiber will notify Customer of the additional costs associated with provision of the Services and request Customer's acceptance of such costs as a condition to proceeding ("Special Construction"). Upon notification that Special Construction is required, Customer will have ten (10) business days to notify Ziply Fiber of its acceptance. If the Customer does not

agree to the Special Construction within ten (10) business days, Ziply may terminate this Agreement without cause with sixty (60) days' prior written notice to Customer and Customer will not have further liability. If the Customer agrees to the Special Construction, Ziply Fiber and Customer will execute a replacement Schedule.

6. Obligations of Customer

Customer is responsible to ensure appropriate processes and protocols are in place for rate shaping to the amount of throughput ordered to avoid excessive usage/application of the Service. Customer acknowledges that failure to comply with this responsibility may negatively impact Service performance.

a. Except as otherwise expressly stated herein, Customer is responsible for obtaining, installing, configuring and maintaining all equipment (including, but not limited to, SIP phones, and firewalls), software, wiring, power sources, telephone connections and/or communications services necessary for interconnection with Ziply Fiber's network or otherwise for use in conjunction with IP Service (Facilities). Customer is responsible for ensuring that such Facilities are compatible with Ziply Fiber's requirements and that they continue to be compatible with subsequent revision levels of Company-provided equipment, software, and services. Ziply Fiber is not responsible for the availability, capacity and/or condition of any Facilities not provided by Ziply Fiber. Customer is responsible for operation and configuration of its computer(s) and LAN/WAN. If Customer connects any Facilities to IP Service that Customer reasonably should know may not be compatible with IP Service, Customer is solely responsible for any effects that arise from that connection and Customer waives any claims against Ziply Fiber relating to the performance of IP Service. Customer may purchase CPE necessary for use of the Services, as well as extended Maintenance of such CPE from Ziply Fiber under the terms of a separate Equipment Purchase, Installation and Maintenance agreement.

b. Use of IP Service, like other network-based services, carries certain security risks to the systems and networks of Customer, Ziply Fiber and third parties including, but not limited to: misuse; unauthorized access; alterations; theft; destruction; corruption; and attacks ("Occurrences"). Customer shall, at its own expense, take security measures including but not limited to use of firewalls, passwords, access restrictions, encryption, policies, and physical access restrictions ("Security Measures") to protect from Occurrences all Services, IP traffic, Facilities and other equipment, software, data and systems in Customer's control and/or located on Customer's premises and used in connection with IP Service.

c. Customer agrees that Ziply Fiber is not liable, in contract, tort, or on any other basis, for any loss resulting from any Occurrences or use of Services, Facilities or other equipment, software, data and systems to the extent such loss was caused by Customer's acts or omissions. Customer is responsible for all security measures for Customer's own equipment, even if Customer uses a third party or Ziply Fiber to configure and implement them.

d. Customer Facilities: Except as otherwise expressly stated herein, Customer is responsible for obtaining, installing, configuring and maintaining all equipment (including, but not limited to, SIP phones, and firewalls), software, wiring, power sources, telephone connections and/or communications services necessary for inter-connection with Ziply Fiber's network or otherwise for use in conjunction with IP Service ("Facilities"). Customer is responsible for ensuring that such Facilities are compatible with Ziply Fiber's requirements and that they continue to be compatible with subsequent revision levels of Ziply Fiber's Network relevant to the Services, and for meeting the minimum requirements outlined for Hosted Voice Service at www.Ziply Fiber.com/terms, to the extent applicable. Ziply Fiber is not responsible for the availability, capacity and/or condition of any Facilities not provided by Ziply Fiber. Customer is responsible for operation and configuration of its computer(s) and LAN/WAN. If Customer connects any Facilities to IP Service, Customer is solely responsible for any negative effects that arise from that connection to the extent caused by Customer's acts or omissions and Customer waives any claims against Ziply Fiber relating to the performance of IP Service to the extent outside of Ziply Fiber's or its subcontractors' control.

e. Security:

i. Use of IP Service, like other network-based services, carries certain security risks to the systems and networks of Customer, Ziply Fiber, and third parties, including but not limited to: misuse; unauthorized access; alterations; theft; destruction; corruption; and attacks ("Occurrences"). Customer shall, at its own expense, take security measures including but not limited to use of firewalls, passwords, access restrictions, encryption, policies, and physical access restrictions ("Security Measures") to protect from Occurrences all IP traffic, Facilities and other equipment, software, data and systems located on Customer's premises and/or in Customer's control and used in connection with IP Service, whether owned by Customer, Ziply Fiber, or Ziply Fiber's subcontractors. CUSTOMER AGREES THAT ZIPLY FIBER IS NOT LIABLE, IN CONTRACT, TORT, OR ON ANY OTHER BASIS, FOR ANY LOSS RESULTING FROM ANY OCCURRENCES OR USE OF ZIPLY FIBER'S NETWORK, IP TRAFFIC, FACILITIES OR OTHER EQUIPMENT, SOFTWARE, DATA AND SYSTEMS TO THE EXTENT CAUSED BY CUSTOMER'S ACTS OR OMISSIONS. CUSTOMER IS RESPONSIBLE FOR ALL SECURITY MEASURES FOR ITS OWN EQUIPMENT, EVEN IF CUSTOMER USES A THIRD PARTY OR ZIPLY FIBER TO CONFIGURE AND IMPLEMENT THEM.

ii. Customer shall properly use any equipment or software, and all pass codes, personal identification numbers ("PINs") or other access capability obtained from Ziply Fiber or an affiliate or vendor of Ziply Fiber and shall surrender the equipment and software in good working order, reasonable wear and tear excepted, to Ziply Fiber at a place specified by Ziply Fiber and terminate all use of any access capability upon termination or expiration of this agreement. Customer shall be responsible for all uses of PINs, pass codes or other access capability during or after the term hereof within Customer's control. Customer's use of any software component of the Service is limited to use with the Service, subject to and in strict compliance with the end user license

agreement embedded in the software. Title and all other rights to the software shall remain at all times with Ziply Fiber or its suppliers. Customer is responsible for all costs and procedures associated with fraud, such as subscription fraud, cloning fraud, fraud associated with the use of the Service, hacking, or usage on lost or stolen devices that Customer has failed to notify Ziply Fiber should be deactivated.

iii. Customer is solely responsible for the security of its own networks, equipment, hardware, software, and software applications, including security features for protection against unauthorized or fraudulent use of the Equipment or the Service to the extent within Customer's control. Customer is solely responsible for ensuring that all of Customer's data files within Customer's control are adequately duplicated and documented at all times. Ziply Fiber and its contractors are not responsible or liable for data loss for any reason to the extent caused by Customer's acts or omissions. Abuse that occurs as a result of Customer's systems or account being compromised or as a result of activities of third parties permitted by Customer that are not authorized by Ziply Fiber may result in suspension of Customer's accounts or Internet access by Ziply Fiber. Customer will defend and indemnify Ziply Fiber and its affiliates with respect to third party claims arising from Customer's or third parties' negligent acts or omissions related to Customer's usage of the Hosted Voice or Ziply Fiber Internet access through Customer's hardware or software.

iv. Ziply Fiber disclaims any express or implied warranty or condition that the Services prevent toll fraud, unauthorized access, loss or theft of electronic data, or invasion of privacy to the extent caused by Customer's acts or omissions (collectively, "fraudulent activity"). Ziply Fiber shall have no liability to Customer in the event of such fraudulent activity. Customer will be responsible for any charges assessed to Ziply Fiber for such fraudulent activity.

7. Equipment or Software Not Provided by Ziply Fiber

a. Upon notice from Ziply Fiber that the Customer's facilities, services, equipment, or software not provided or approved by Ziply Fiber is causing or is likely to cause hazard, interference or service obstruction, Customer shall promptly eliminate the likelihood of hazard, interference, or service obstruction. If Customer requests Ziply Fiber to troubleshoot difficulties caused by the equipment or software not provided by Ziply Fiber, and Ziply Fiber agrees to do so, Customer shall pay Ziply Fiber at its then current rates, subject to Customer's prior agreement.

b. Ziply Fiber and Customer will cooperatively establish the initial configuration for the Customer-provided router's interface with the Ziply Fiber network.

c. Ziply Fiber may, from time to time, procure Services or facilities from an affiliate of Ziply Fiber, and in doing so, may act as an agent and not a principal for the affiliated entity with respect to the procurement and provision of the Service or facility; provided that Ziply Fiber will be responsible and liable for any breach of this Agreement by an affiliate of Ziply Fiber. The Service or facility may be provided by an affiliate or vendor that is a common carrier, in which case the provision of the service or facility may be provided pursuant to terms and conditions stated in a filed federal or state tariff or price list, which Customer agrees will govern the provision of the service or the facility, provided that Customer is given an opportunity to review such terms and conditions.

8. After Hours/Holiday Labor Hours

If Customer desires coordinated turn up services ("After Hours") during non-business hours, defined below, then the After Hours services shall be provided at the rate of $175.00 per hour. Non-business hours include: (1) weeknights between the hours of 5:00 p.m. and 7:59 a.m. Pacific time; (2) weekends, including Saturday and/or Sunday and (3) the Ziply Fiber designated holidays (New Year's Day, Martin Luther King Day, President's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day and Christmas Day). Such After Hours services may be subject to change, based upon Ziply Fiber's reasonable determination of increases in actual costs to provide such After Hours services, determined in accordance with generally accepted commercial accounting practices, and consistent with After Hours service charges for projects comparable to the project outlined in this Schedule; provided that Ziply Fiber shall provide Customer with at least thirty (30) days' prior written notice of any such increased costs. Minimum point of entry (MPOE) and demarcation point. If Customer requests extensions beyond the MPOE, such extension (s) shall be subject to Ziply Fiber's cabling service policies and Ziply Fiber's charges related thereto per separate Ziply Fiber Cabling Service and Fee Schedule.

9. Insurance

a. Insurance Term: Ziply shall procure and maintain for the duration of the Agreement, insurance against claims for injuries to persons or damage to property which may arise from or in connection with the performance of the work hereunder by Ziply, its agents, representatives, or employees.

b. No Limitation: Ziply's maintenance of insurance as required by this Agreement shall not be construed to limit the liability of Ziply to the coverage provided by such insurance, or otherwise limit the City's recourse to any remedy available at law or in equity.

c. Minimum Scope and Limits of Insurance: Ziply shall obtain Technology Errors & Omissions (E&O) insurance which shall be written with limits no less than $1,000,000 per claim and $1,000,000 policy aggregate limit.

d. Acceptability of Insurers: Insurance is to be placed with insurers with a current A.M. Best rating of not less than A:VII.

e. Verification of Coverage: Ziply shall furnish the City with original certificates evidencing the insurance requirements of Ziply within 10 days of contract execution and before scheduling of the work. Upon request by the City, Ziply shall furnish certified copies of all required insurance policies.

f. Notice of Cancellation: Ziply shall provide the City with written notice of any policy cancellation at least thirty (30) days of their receipt of such notice.

g. Failure to Maintain Insurance: Failure on the part of Ziply to maintain the insurance as required shall constitute a material breach of contract, upon which the City may, after giving five business days' notice to Ziply to correct the breach, immediately terminate the contract, or at its discretion, procure or renew such insurance and pay any and all premiums in connection therewith, with sums so expended to be repaid to the City on demand, or at the sole discretion of the City, offset against funds due Ziply from the City.

h. City Full Availability of Ziply Limits: If Ziply maintains higher insurance limits than the minimums shown above, the City shall be insured for the full available limits of Commercial General and Excess or Umbrella liability maintained by Ziply, irrespective of whether such limits maintained by Ziply are greater than those required by this Agreement or whether any certificate of insurance furnished to the City evidences limits of liability lower than those maintained by Ziply.

i. Customer Minimum Insurance. Customer, at its own expense, agrees to keep in full force and effect during the Term of this ZFSA: (i) commercial general liability insurance in an amount not less than One Million Dollars ($1,000,000.00) per occurrence and Two Million Dollars ($2,000,000.00) general aggregate including coverage for bodily injury and property damage. (ii) statutory workers' compensation insurance and employer's liability insurance (Stop Gap) in an amount not less than One Million Dollars ($1,000,000.00) per occurrence for bodily injury, One Million Dollars ($1,000,000.00) per employee for bodily injury by disease and One Million Dollars ($1,000,000.00) aggregate for bodily injury by disease, and (iii) and property insurance written on a Causes of Loss-Special Form basis covering any Customer's equipment and Ziply Fiber's Equipment in Customer's care, custody, and control in an amount not less than its full replacement cost, (iv) business automobile liability insurance covering all owned, non-owned, leased and hired vehicles with limits no less than One Million Dollars ($1,000,000.00) combined single limit per accident, (v) cyber insurance with limits no less than One Million Dollars ($1,000,000.00) per claim. Where not specifically prohibited by law, all policies shall contain waiver of subrogation. Customer shall notify Ziply Fiber in writing at least thirty (30) days in advance of cancellation or reduction in coverage. Customer agrees that it will ensure and be solely responsible for ensuring that its agents (including contractors and subcontractors) maintain insurance coverage at levels no less than those required by applicable law and customary in Customer's and its agents' industries. Upon execution of this ZFSA Customer shall provide Ziply Fiber with a liability evidence of coverage document.

I. The Parties acknowledge the City is a member of a municipal risk pool and such membership shall satisfy the obligations set forth in this section.

10. Cancellation and Early Termination Charges

a. If Customer cancels any Service or Equipment prior to delivery of any Equipment or installation of the Service or Equipment, Customer shall pay a cancellation charge equal to the NRC and one (1) month of MRC for the Service, plus the total reasonable and documented costs and expenditures of Ziply Fiber in connection with establishing the Service prior to Ziply Fiber's receipt of notice of cancellation, including but not limited to any Equipment restocking fees.

b. Following installation, Customer may terminate this Agreement or individual Service(s) or Equipment(s) without cause by providing at least thirty (30) days prior written notice to Ziply Fiber. All unpaid undisputed amounts for Service and Equipment provided by Ziply Fiber to Customer prior to the date of termination shall be due upon termination of any Service identified in a Schedule for any reason. In addition, and unless otherwise specifically provided in the applicable Schedule, if any Service or Equipment is terminated by Ziply Fiber due to Customer's breach, then Customer shall pay Ziply Fiber a termination charge equal to the applicable MRC and all related taxes and surcharges multiplied by the number of months remaining in the Service Term. Partial months shall be prorated.

c. Customer agrees that Ziply Fiber's damages in the event of early termination will be difficult or impossible to ascertain, and that the charges identified in this Section are intended, therefore, to establish liquidated damages in the event of termination and are not intended as a penalty.

11. Limitation of Liability and Warranty Provisions

a. The liability of each party and its affiliates related to this ZFSA or the Service or Equipment provided under this ZFSA, shall in no event exceed the limitations of liability set forth in the applicable tariffs, or regulatory rule or order. If there is no applicable tariff, regulatory rule or order, the total amount of $1,000,000.00. In cases of an Outage, Customer is entitled to a credit as detailed in the applicable Service Schedule. An "Outage" is an interruption in Service or use of the Equipment caused by a failure of Ziply Fiber's Network, excluding degradation or disruption due to planned or emergency maintenance or an event outside Ziply Fiber's direct control. Notwithstanding the above, Ziply Fiber will not be liable to Customer for interruptions in Services or Equipment caused by failure of hardware or software, failure of communications services, power outages, or other interruptions not within the control of Ziply Fiber. In addition, there will be no credits, reductions, or set-offs against charges for Services or Equipment, or for interruptions of Services or Equipment, except as expressly set forth herein.

b. IN NO EVENT WILL EITHER PARTY OR ITS AFFILIATES BE LIABLE FOR ANY LOST PROFITS OR BUSINESS OPPORTUNITIES, OR FOR ANY OTHER SPECIAL, INCIDENTAL, INDIRECT, EXEMPLARY, PUNITIVE OR CONSEQUENTIAL DAMAGES, EVEN IF ADVISED OF THE POSSIBILITY

THEREOF. ZIPLY FIBER AND ITS AFFILIATES SHALL NOT BE LIABLE FOR ANY LOSS, LOSS OF USE, COST, CLAIM OR EXPENSE EXPERIENCED OR INCURRED BY CUSTOMER OR THIRD PARTIES TO THE EXTENT RESULTING FROM THE USE OF THE SERVICES OR EQUIPMENT PROVIDED HEREUNDER OUTSIDE OF ZIPLY FIBER'S REASONABLE CONTROL, WHICH MAY INCLUDE BUT ARE NOT LIMITED TO DAMAGE, LOSS OR LOSS OF USE OF CUSTOMER DATA OR FRAUD BY THIRD PARTIES.

c. Ziply Fiber warrants that Ziply Fiber's Network and the Services will: (i) be maintained in good working order, (ii) when used by Customer as permitted under this Agreement will operate in accordance with the user manuals, correspondence, and other written specifications distributed by Ziply Fiber to Customer in all material respects, (iii) not in any way violate any copyright, trade secret, trademark, service mark, patent, invention, or other rights of any third party, and (iv) use industry standard precautions to ensure that they do not, and do not permit any third party, to introduce any content that contains any viruses, worms or other malicious computer programming codes able to damage Customer's information technology systems. If any Service does not function substantially in accordance with applicable Service specifications as a result of Ziply Fiber's failure to maintain Ziply Fiber's Network (excluding degradation related to the acts or omissions of Customer or anyone using the Services, a force majeure event, or scheduled maintenance), Ziply Fiber will repair the affected Service at Ziply Fiber's expense. THE FOREGOING WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AND ZIPLY FIBER DISCLAIMS ALL OTHER WARRANTIES WITH RESPECT TO ZIPLY FIBER'S NETWORK, SERVICES OR EQUIPMENT PROVIDED PURSUANT TO THESE TERMS INCLUDING, WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OR FUNCTION. EXCEPT AS SET FORTH UNDER THIS AGREEMENT, ZIPLY FIBER DOES NOT WARRANT THAT THE SERVICES OR EQUIPMENT OR ACCESS OR OPERATION OF THE SERVICES OR EQUIPMENT WILL MEET CUSTOMER'S NEEDS, OR WILL BE UNINTERRUPTED, ERROR-FREE, OR SECURE.

d. This ZFSA shall not be construed as granting a license with respect to any patent, copyright, trade name, trademark, service mark, trade secret, or any other intellectual property, now or hereafter owned, controlled or licensable by either party.

e. Customer agrees that the Services and Equipment, and Ziply Fiber's performance hereunder are subject to the terms, conditions and restrictions contained in any applicable agreements (including software or other intellectual property license agreements) between Ziply Fiber and Ziply Fiber's vendors.

f. No action, regardless of form, arising out of this ZFSA or the Schedules may be brought after the expiration of the applicable statute of limitations.

12. Indemnification

Each party ("Indemnifying Party") shall indemnify, defend and hold the other party ("Indemnified Party") and its affiliates, and their respective directors, officers, employees, successors, assigns and agents, harmless from and against any and all claims, loss, damage, cost or expense (including reasonable attorneys' fees) to the extent arising out or relating to any claim, action or proceeding brought by any third party against the Indemnified Party based upon: (i) Indemnifying Party's alleged negligence or willful misconduct in the performance of its obligations under this ZFSA; (ii) as to Customer, Customer's infringement of a third party's intellectual property or misappropriation of any third party patent, copyright, trademark, trade secret or other proprietary right by Customer to the extent caused by Customer's use of the Equipment or Services in combination with other third party products or services not provided or approved by Ziply Fiber, or any modification of the Equipment or Services by anyone other than Ziply Fiber or approved by Ziply Fiber; or (ii) any bodily injury (including illness or death) or property damage in connection with this Agreement caused by Indemnifying Party or anyone within its control. The obligations under this Section 12 are independent of any other obligation under this ZFSA.

13. City Data

a. Definitions:

i. "City Data": data exchanged as a result of providing the Services, such as City Account Data, City Content, Personal Data, and Personal Information.

ii. "City Account Data": personal data that relates to City's relationship with Ziply, including the names or contact information of individuals authorized by City to access City's account, and billing information of individuals that City has associated with its account. City Account Data also includes any personal data Ziply may need to collect for the purpose of identity verification (including providing the Multi-Factor Authentication Services).

iii. "City Content": (a) all data that is owned, licensed, leased or developed by or on behalf of the City, whether provided to Ziply by the City or provided by a third party to Ziply in connection with Ziply's provision of services to the City, including any such data that is loaded into, or located in, any data files, tables, objects or other storage medium developed or maintained by or on behalf of Ziply, including related data that results from hygiene, cleaning, and database build services performed by or on behalf of Ziply, (b) data exchanged as a result of providing the Services, such as text message bodies, voice and video media, images, email bodies, email recipients, sound, and, where applicable, information City submits to Ziply and (c) data stored on City's behalf in providing the Services.

iv. "Personal Data": any information relating to an identified or identifiable natural person. An identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier, such as a name, an identification number, location data, an online identifier, or one or more factors specific to the physical, physiological, genetic, mental, economic, cultural, or social identity of that natural person.

v. "Personal Information": information defined by RCW 19.255.010.

b. Use of City Data: Ziply, Ziply's subcontractors, and any Ziply service providers are prohibited from using City Data for any use other

than necessary to provide the Services, including in aggregated form. Ziply, Ziply's subcontractors, and any Ziply service providers are prohibited from selling or sharing City Data in any form, including in aggregated form, with third parties for compensation or for those third parties' own business interests. Upon any expiration or earlier termination of the Agreement, Ziply will return all City Data to City in the format approved by the City within 30 days of termination.

c. Ownership of City Data: Ziply acknowledges that, as between Ziply and City, City owns all right, title, and interest in and to the City Data, including all Intellectual Property Rights and all derivative works of, based on, derived from or otherwise using any City Data which are themselves considered to be City Data.

14. Confidentiality

a. Parties acknowledge that the City of Anacortes is subject to requirements under the Public Records Act under RCW 42.56 and any legal requirements under said Act supersede any requirements under this Agreement or any Schedule or Order Form.

b. Customer and Ziply Fiber may disclose to each other information that is confidential in nature. In order to receive confidential treatment, all such information (hereafter "Information") shall be either (i) clearly marked as confidential if written, or clearly identified as confidential if oral or (ii) reasonably understood by the recipient, based on the nature of the Information or the circumstances of disclosure, to be confidential or proprietary to the discloser. Except as required by law or regulation, Customer and Ziply Fiber agree not to disclose any Information to any third party and to keep Information in a secure place available only to employees, affiliates, contractors or agents who are subject to obligations of confidentiality no less restrictive than those set forth herein, and who need to know the Information for purposes of the business dealing between Customer and Ziply Fiber, and to use Information only in connection with such business dealings. This Section is enforceable by injunction.

c. Information will lose its confidential status if obtained legitimately from a third party without restriction or upon the expiration of five (5) years from delivery of each item of Information. Information shall remain the property of the disclosing party.

15. Breach

a. Breach by Customer: If Customer fails to make any undisputed payment when due and such failure continues for thirty (30) days after notice, or Customer fails to comply with any other term or condition of this ZFSA or any Schedule and such failure continues for thirty (30) days after notice, then Ziply Fiber may terminate the applicable Schedule (or any portion thereof), or terminate this ZFSA and all Schedules. Notwithstanding the foregoing, Ziply Fiber may immediately suspend Services and, after giving notice to Customer with an opportunity to respond appropriate to the circumstances and Customer's failure to respond, Ziply Fiber may terminate any or all Services, retrieve Ziply Fiber Network elements from the service location and Equipment for which title has not transferred to Customer, in the following circumstances: (i) in the event of unauthorized, unlawful or improper use or abuse of the Ziply Fiber Network or Service caused by Customer's acts or omissions; (ii) if, in the reasonable judgment of Ziply Fiber, Customer's use of the Ziply Fiber Network or Service has or will damage or have an adverse effect on Ziply Fiber's Network, its personnel, property or service; (iii) such action is necessary to meet the exigencies of an emergency; or (iv) a court or other governmental authority having jurisdiction issues an order prohibiting Ziply Fiber from furnishing the Equipment or Services to Customer.

b. Breach by Ziply Fiber: If Ziply Fiber has failed to comply with any term or condition of this ZFSA or any Schedule and such failure is not remedied within thirty (30) days after Ziply Fiber's receipt of written notice from Customer of such failure (providing reasonable detail), Customer may terminate the Service which is the subject of such breach and will not be liable for any remaining Service Term charges.

16. Force Majeure

In no event will either party or its affiliates be liable for any delay in performance directly or indirectly caused by events beyond their control, which may include, but are not limited to: acts or omissions of the other party, its agents, employees or contractors; acts of God; acts of the public enemy; acts of the United States, a state or other political subdivision; fire, floods or other natural disasters; epidemics or pandemics; accidents; wars; terrorism; cyber security events; labor disputes or shortages; and inability to obtain material, power, equipment or transportation.

17. Assignment

This ZFSA may not be assigned by either party without the other party's prior written consent, which consent shall not be unreasonably withheld or delayed, except that either party may assign this ZFSA to any successor to the business of such party by merger, consolidation or sale of assets or to any corporation controlling, controlled by or under common control with such party. Ziply Fiber may subcontract portions of the work to be performed hereunder to provision the Services or Equipment; provided that Ziply Fiber is solely responsible and liable for any breach of this Agreement by its subcontractors.

18. Work Site Conditions

a. If asbestos, or material containing asbestos, or any other hazardous or toxic materials are discovered during work pursuant to this ZFSA, Ziply Fiber will suspend its work for a reasonable period of time to permit Customer to engage a qualified firm to remove and dispose of the asbestos or other toxic or hazardous materials from the site. Such suspension may result in an equitable adjustment

to the charges identified in the related Schedule, based on any increase in costs incurred by Ziply Fiber.

b. Customer agrees to release, indemnify, defend, and hold harmless Ziply Fiber from and against any third party damages, losses, claims, demands, or lawsuits arising out of or relating to the presence, removal or disposal of asbestos or any other hazardous or toxic material from the Customer's premises or location where Services or Equipment will be installed.

19. Title and Risk of Loss

a. Risk of loss or damage for Ziply Fiber Network elements installed at a Customer designated service location shall pass to Customer at time of delivery to Customer.

b. Any Ziply Fiber Network elements or Equipment installed at Customer's premises or location where Services or Equipment will be installed (which is leased or for which title has not transferred to Customer) remain the personal property of Ziply Fiber or Ziply Fiber's assignee, notwithstanding that it may be or become attached to or embedded in realty, and upon termination of this ZFSA or any Schedule (in whole or in part), all Ziply Fiber property shall be returned to Ziply Fiber in the same condition as installed, normal wear and tear excepted. Customer will not tamper with, remove, or conceal any Ziply Fiber identifying plates, tags, or labels. In the event Ziply Fiber property is not returned to Ziply Fiber in accordance with this Section, Customer will be billed for and pay to Ziply Fiber an amount equal to the retail value of the Ziply Fiber property, except to the extent such failure is caused by the acts or omission of Ziply Fiber or its agents or subcontractors.

20. Competition

Customer recognizes the availability of competitive alternatives for receiving the Services and Equipment provided under this ZFSA, and has freely elected to enter into this ZFSA in order to receive the benefits it offers.

21. Government Regulation

To the extent that any Service(s) provided hereunder are subject to the jurisdiction of the Federal Communications Commission (FCC) or any state public utilities commission or other regulatory agency, this ZFSA shall at all times be subject to changes, modifications, orders and rulings by the FCC and/or state public utilities commission or other regulatory agency. Ziply Fiber reserves the right to suspend, modify or terminate any Service without liability where any statute, regulation and/or ruling, including modifications thereto, by any regulatory agency (including the FCC), legislative body or court of competent jurisdiction, (i) prohibits, restricts or otherwise prevents Ziply Fiber from furnishing such Service, or (ii) has a material negative impact on Ziply Fiber's performance hereunder or the benefits provided by this ZFSA. If as a result of such government regulatory action Ziply Fiber suspends Service for more than three (3) consecutive business days, modifies, or terminates any Service provided under this ZFSA, Customer shall have the right to terminate the affected Service without termination liability by providing thirty (30) days written notice per subsection 12.b of this ZFSA. If provision of any Service pursuant to this ZFSA is subject to advance approval of the FCC and/or any state public utilities commission, this ZFSA shall not become effective with respect to such Service until after receipt by Ziply Fiber of written notice of such approval.

22. Governing Law

This ZFSA shall be governed by and construed according to the laws of Washington State without regard to its conflicts of laws provisions. Any related litigation may be brought in any State or Federal courts of competent jurisdiction within Skagit County, Washington State. Customer and Ziply Fiber consent to personal jurisdiction in such courts.

23. No Waiver

If either party fails, at any time, to enforce any right or remedy available to it under this ZFSA, that failure shall not be construed to be a waiver of the right or remedy with respect to any other breach or failure by the other party.

24. Severability

A declaration by any court, or other binding legal source, that any provision of this ZFSA or any Schedule is illegal and void, will not affect the legality and enforceability of any other provisions of this ZFSA, unless the provisions are mutually dependent.

25. Notice

All notices provided pursuant to this ZFSA will be in writing and delivered by registered or certified US Mail, postage prepaid, or by commercial overnight delivery service, or by regular mail, or email notification and shall be deemed delivered either on the date of return receipt acknowledgment (in the case of certified US Mail), or on the next day after the sending of the notice if sent overnight mail, or three (3) days after mailing if by regular mail to the address of the party designated to receive such notice, or when sent by email and upon the receipt by the sending party of written confirmation by the receiving party; provided, however, that an automated email confirmation of delivery or read receipt shall not constitute such confirmation.

26. Independent Relationship

Each party understands and agrees that it and its personnel are not employees of the other party, and that each party is an independent contractor hereunder for all purposes and at all times.

27. Dispute Resolution

Except as otherwise specifically provided in or permitted by this ZFSA, all disputes arising in connection with this ZFSA shall first be resolved through good faith negotiation. If, after negotiating in good faith for a period of thirty (30) calendar days or any agreed further period, the parties are unable to resolve the dispute, then each party may seek resolution by exercising any rights or remedies available at law or in equity.

28. Authorization and Entire Agreement

Each party represents that the person executing this ZFSA is authorized to enter into this ZFSA on its behalf. This ZFSA and any Schedules executed by the parties constitute the entire agreement between the parties pertaining to the subject matter herein and supersedes all prior oral and written proposals, correspondence, and memoranda with respect thereto. This ZFSA may not be modified, amended, or supplemented except by written agreement signed by an authorized representative of each party. Notwithstanding anything otherwise stated, a Customer purchase order document (whether signed by one or both parties) shall be construed solely as evidence of Customer's internal business processes, and the terms and conditions contained thereon shall be void and of no effect or application toward this ZFSA.

City of Anacortes	**Ziply Fiber**
Signature: _____	Signature: _____
Printed Name:	Printed Name:
Title:	Title:
Date:	Date:

COA #26-178-FBR-002

City of Anacortes

SERVICE ORDER FORM
Schedule ID 20098348
April 27, 2026

This is **Schedule ID 20098348 ("Service Order")** by and between City of Anacortes ("Customer") and Northwest Fiber, LLC, dba Ziply Fiber, on behalf of its operating affiliates (collectively, "Ziply Fiber"). Customer orders and Ziply Fiber agrees to provide the Services and Equipment identified in the table below. This Service Order incorporates the Ziply Fiber Services Agreement referenced below, as well as any Ziply Fiber policy, terms and conditions, or tariffs referenced in the text below.

Type/Purpose: New **Term Length:** 36 Months

Monthly Recurring Charges (MRC):

Description	Term	Qty	Price	Total	Loc A	Loc Z
EIA - Dedicated 20G (2x10G on single port) (36 Mo)	36	1	$ 4,200.00	$ 4,200.00	1220 10TH ST; ANACORTES, WA 98221	
Total Monthly Recurring Charges:				**$ 4,200.00**		

Non-Recurring Charges (NRC):

Description	Term	Qty	Price	Total	Loc A	Loc Z
Data-NRC	1	1	$ 0.00	$ 0.00	1220 10TH ST; ANACORTES, WA 98221	

1. **Terms and Conditions.** Customer shall comply and shall cause all Service users to comply with terms and conditions as per the Ziply Fiber Services Agreement ("ZFSA") negotiated by both parties and identified as COA #26-178-FBR-001.

2. **Change Requests**. Prior to, during and after the installation of requested services, Customer may choose to request that Ziply Fiber augment the original Service Order to provide additional services or remove services from the Service Order. Depending on the scope of the requested changes, verbal requests from the Customer will be acceptable in which case Ziply Fiber shall notify Customer of its acceptance of the requested changes via email. In some instances, Ziply Fiber may require additional written authorization. All applicable charges resulting from changes requested by the Customer, whether written or verbal, are the responsibility of the Customer and shall be deemed to be part of the Service Order and subject to its terms and conditions.

3. **Evergreen Clause.** Notwithstanding anything to the contrary in the ZFSA identified as COA #26-178-FBR-001, upon the completion of the initial 36-month Term set forth in this Schedule ID 20098348, the Term shall continue on a month to month basis at the rate stated on this Service Order. If the parties agree to negotiated renewal terms, such terms will not be effective unless and until documented in writing and executed by both parties.

4. **Service Level Agreement.** The Service Level Agreement for Ethernet Services is available for review at: https://ziplyfiber.com/sla

5. **Internet Acceptable Use Policy and Security.** With the exception the AUP Section 6 requirement for use of DHCP and prohibition of use of static IP addresses, Customer shall comply, and shall cause all Service users to comply, with Ziply Fiber's Acceptable Use Policy ("AUP"), which Ziply Fiber may modify at any time. Customer is hereby specifically allowed to use static IPv4 addresses from the following blocks:
   23.90.88.0 – 23.90.91.255
   45.115.204.0 – 45.115.207.255
   75.119.180.0 – 75.119.183.255
   152.228.36.0 – 152.228.39.255
   168.203.12.0 – 168.203.15.255

The current AUP is available for review at the following address, subject to change: https://ziplyfiber.com/policies/commercial_aup.Customer is responsible for maintaining awareness of the current AUP and adhering to the AUP as it may be amended from time to time. Failure to comply with the AUP is grounds for immediate suspension or termination of Ziply Fiber Internet Service, notwithstanding any notice requirement provisions of the ZFSA. Customer is responsible for the security of their own networks, equipment, hardware, software and software applications. Abuse that occurs as a result of Customer's systems or account being compromised or as a result of activities of third parties permitted and/or allowed by Customer may result in suspension of Customer's accounts or Internet access by Ziply Fiber. Customer will defend and indemnify Ziply Fiber and its affiliates with respect to claims arising from Customer's or third parties' usage of Ziply Fiber Internet access through Customer's hardware or software.

6. **Cancellation and Early Termination Charges.** Customer may terminate a Service or Equipment by providing at least thirty (30) days prior written notice to Ziply Fiber subject to the terms and conditions of the ZFSA identified as COA #26-178-FBR-001.

7. **Dispute Resolution.** All disputes arising in connection with this Service Order shall first be resolved as detailed within the ZFSA identified as COA #26-178-FBR-001.

This Service Order is not effective, and pricing, dates and terms are subject to change until signed by both parties and may not be effective until approved by the FCC and/or applicable State Commission. This Service Order and any of the provisions hereof may not be modified in any manner except by mutual written agreement. The above rates do not include any taxes, fees or surcharges applicable to the Service for which Ziply Fiber will invoice Customer. This Service Order, and all terms and conditions of the ZFSA identified as COA #26-178-FBR-001, is the entire agreement between the parties with respect to the Services described herein, and supersedes any and all prior or contemporaneous agreements, representations, statements, negotiations, and undertakings written or oral with respect to the subject matter hereof.

Ziply Fiber		**City of Anacortes**	
Signature:	_____	Signature:	_____
Printed Name:	_____	Printed Name:	_____
Title:	_____	Title:	_____
Date:	_____	Date:	_____

City Council Agenda Bill

August 10, 2026

Action Type: Resolution **Item:** 6.b.

Title: Resolution 3196: Adoption of the Skagit County Hazard Mitigation Plan

Staff Contact(s): Logan Lee

Approved for Submittal to Council by:
Logan Lee
Steve Hoglund
Darcy Swetnam

Summary: Resolution 3196 would adopt the 2026 Skagit County Hazard Mitigation Plan that includes the City of Anacortes and other local agencies including Skagit County, the Cities of Mount Vernon, Sedro-Woolley, and Burlington; the Towns of La Conner, Concrete, Hamilton, and Lyman; the Samish Indian Nation; and the Swinomish Indian Tribal Community.

A Hazard Mitigation Plan considers the hazards a community may have, the impacts of those hazards, and possible actions to reduce those impacts. The hazards are identified and ranked based on probability, historical impacts, vulnerability, and potential future consequences. The plan lists the technical, financial and regulatory ability of the agency to reduce hazard impacts. The agency lists actions that they might take to reduce hazard impacts on their community. The governing body of the agency needs to adopt by resolution the part of the plan that covers the entire county (Volume 1) and its Annex (Anacortes is Annex 1 in Volume 2 of the plan from pages 1-1 to 1-20) for the Federal Emergency Management Agency (FEMA) to include it as part of the finished plan. Being part of the plan maintains an agency's eligibility for FEMA's Hazard Mitigation Assistance programs, which can fund millions of dollars in mitigation projects. Mitigation investments typically reduce long-term disaster recovery costs, as studies show every dollar spent on mitigation can save multiple dollars in future losses. The Plan is updated yearly, with a period of review for public comment.

Budget Impact:
N/A

Previous Action:

Recommended Motion: Adopt Resolution 3196 as presented

Alternative Actions: Not adopt the resolution

Attachments (listed in order presented):
1. Resolution 3196

Resolution 3196

A Resolution Authorizing the Adoption of the Skagit County Hazard Mitigation Plan

Whereas all of Skagit County has exposures to hazards that increase the risk to life, property, environment, and the County's economy;

Whereas pro-active mitigation of known hazards before a disaster event can reduce or eliminate long-term risk to life and property;

Whereas the Skagit County Hazard Mitigation Plan was originally adopted in 2003 as a multi-jurisdictional plan in accordance with the Disaster Mitigation Act of 2000 (Public Law I 06-390) pursuant to Skagit County Resolution # R20030274, and was subsequently updated pursuant to Skagit County Resolution Numbers R20090138, R20150028, and R20200082;

Whereas The Disaster Mitigation Act of 2000 (Public Law 106-390) established requirements for pre and post disaster hazard mitigation programs requiring that local and tribal government applicants for sub-grants must have an approved local mitigation plan in accordance with 44 CFR 201.6 prior to receipt of a Hazard Mitigation Grant Program sub-grant funding, and the purpose of such local mitigation plan is to represent the Jurisdiction’s commitment to reduce risks from natural and man-made hazards;

Whereas pursuant to 44 CFR 201.6, a coalition of Skagit County stakeholders with like-planning objectives was formed to pool resources and create consistent mitigation strategies to be implemented within each partner's identified capabilities within the Skagit County Planning Area;

Whereas the coalition has completed a planning process that engages the public, assesses the risk and vulnerability to the impacts of hazards, develops a mitigation strategy consistent with a set of uniform goals and objectives, and creates a plan for implementing, evaluating and revising this strategy;

Whereas pursuant to 44 CFR 201.6 and 44 CFR 201.7, the Skagit County Hazard Mitigation Plan has been reviewed and found to meet the regulatory criteria, and following adoption by participating jurisdictions, will be approved by FEMA, making all adopting jurisdictions eligible for mitigation project grants;

Now, therefore, the City Council does resolve as follows:

Section 1. The Skagit County Hazard Mitigation Plan update, dated April 2026, is hereby adopted in its entirety, including the City's Annex, which represents the City's commitment to reduce risks from natural and human-caused hazards.

ADOPTED by the City Council of the City of Anacortes this ___ day of _____, 2026.

CITY OF ANACORTES:

_____
Ryan Walters, Mayor

Attest:

_____
Steven D. Hoglund, City Clerk-Treasurer

Approved as to Form:

_____
Darcy Swetnam, City Attorney

Exhibit A

Skagit County HMP 2026 Volume 1

Skagit County Multi-Jurisdictional Hazard Mitigation Plan 2026 Update

Volume 1 – Planning Area-Wide Elements

Nature's Fury created by Chat GPT

Adopted: DATE

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Record of Changes

Location	Change	Person	Date

Executive Summary

Hazard mitigation is the short- and long-term strategies that aim to reduce or alleviate the loss of life, personal injury, and property damage that can result from a disaster. It involves strategies such as planning, policy changes, programs, projects, and other activities that can mitigate the impacts of hazards. Mitigation planning provides a basis for risk reduction investments that increase community resilience to future hazard events. The planning process involves various stakeholders and public involvement, including property owners, business owners, and local, state, and federal agencies representatives to guide planning for resilience, land use, and economic development.

A planning partnership made up of Skagit County, local government, Tribes, Fire Districts, Dike and Drainage Districts, and a few special districts worked together to complete this plan. We appreciate their time and effort to make this plan usable as a guide for current and future projects to increase our community resilience. Each of the partner agencies has an Annex with analysis and mitigation actions for their jurisdiction.

Updates from the 2020 Natural Hazard Mitigation Plan include adding man-made disasters, making this an all-hazards plan, and expanding the planning partners to include Fire Districts.

Information regarding hazard history was already completed by mid 2025. Events happening after that (including the flooding event in December 2025), while influencing some jurisdiction Annex mitigation actions, were not included in this update.

Skagit County and its planning partners thank and acknowledge the Washington Military Department's Emergency Management Division and the Federal Emergency Management Agency (FEMA) for financial support of the plan development through the Hazard Mitigation Grant Program.

Figure 1 Water falls over Cascade River Road December 2025

Chapter 1. Introduction

The Skagit County Multi-Jurisdiction Hazard Mitigation Plan (the "Plan") was developed to update the 2020 version and guide the County to become more resilient to the impacts of natural, technological, and human hazards through mitigation planning. The Plan provides updated information on past hazard events, probabilistic hazard events through Hazus 7.0 and Geographic Information System (GIS) analyses, public outreach, and identification of mitigation strategies.

1.1 Purpose of Plan

Natural hazards can be a threat to communities if not planned for and can be more expensive when responding to threats compared to preparing for threats. To reduce the impact of the hazards and assist the public in protecting life, property and the economy, the County determined that it was in the best interests of its citizens to develop the 2025 Skagit County Multi-Jurisdictional Hazard Mitigation Plan which is an update to the 2020 and 2015 plans.

The five-year update is a collaboration between the Skagit County Core Planning Team and Stakeholders (see Chapter 2.2 "Plan Participation"). The Plan accomplishes the following:

- Identify planning process including preparation procedures and public involvement;
- Describe and analyze hazard type, location, extent, previous occurrences, probability of future hazard events, and vulnerability to hazard events;
- Identify strategies and priorities to mitigate risk from hazards; and
- Establish eligibility for future state and federal mitigation program grant funding.

1.2 Authority

The federal Disaster Mitigation Act (DMA) (Public Law 106-390) required state and local governments to develop hazard mitigation plans as a condition for federal non-emergency disaster grant assistance. The DMA amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act (the Stafford Act) in 2000 and emphasized the need for state and local entities to closely coordinate mitigation planning and implementation efforts.

The Plan has been developed pursuant to the requirements of FEMA's 2025 Local Mitigation Planning Policy Guide (FP-206-21-0002) consistent with local responsibilities per 44 CFR § 201.3(d). Tribal governments that chose to participate in the multi-jurisdictional plan update are consistent with the requirements outlined in 44 CFR §201.6.

Chapter 2. Planning Process

The planning process is described as the procedures taken to update the hazard mitigation plan with particular focus on community engagement and public outreach (44 CFR § 201.6(c)(1)). This chapter describes the planning area, participants in the plan update, core team members, stakeholders, and process milestones.

2.1 Planning Area

The planning area encompasses the unincorporated areas of Skagit County, eight (8) incorporated jurisdictions (i.e., cities and towns), four tribal nations, and many special districts (i.e., school districts, fire districts, dike and drainage districts, public utility district) within the geographic boundaries of Skagit County. All partners to this Plan have jurisdictional authority within this planning area. All incorporated jurisdictions and special districts were invited to participate in the planning process.

2.2 Plan Participation

This section describes the method in which the County involved stakeholders and members of the public to participate in the planning process. Participation methods include:

- Developing a core planning team,
- Soliciting feedback and updates during regularly scheduled stakeholder meetings,
- Providing updates and technical assistance to stakeholders and annex representatives during office hours, and
- Engaging the public in countywide open houses and online surveys.

2.2.1 Core Planning Team

The core planning team consists of representatives from the County Department of Emergency Management (DEM), led by Joan Cromley, and staff from Kimley-Horn & Associates. The core planning team developed a stakeholder plan and public engagement plan which are incorporated by reference and included in the Appendices section.

2.2.2 Planning Partnerships

Planning partnerships are individuals from various agencies with jurisdictional authority within their planning area (44 CFR § 201.6(b)(2)). The County solicited partners from the various agencies to participate in the Plan update process and further inform the Plan. The table below lists cities, towns, special districts, and tribal nations that participated in the multi-jurisdictional update of the Plan as annex partners and stakeholders. Participating jurisdictions included at least one (1) representative that attended stakeholder meetings during the planning process. The core planning team hosted three (3) stakeholder meetings in hybrid format.

Agency	Name, Title
Anacortes	Bill Harris, Fire Chief
Burlington	Steve Riggs, Asst Fire Chief
Concrete	Andrea Fichtner, Clerk
Hamilton	Kym Eldridge, Clerk
La Conner	Aaron Reinstra, Fire Chief
Lyman	Asher Schoepflin, Contractor
Mount Vernon	Bryan Harris, Fire Chief
Sedro-Woolley	Charlie Bush, Administrator
Skagit County	Joan Cromley, Emergency Management Coordinator
Skagit County	Heidi Rous and Denise Truong, Kimley-Horn
Samish Tribe	Randy Storms, Emergency Management
Swinomish Tribe	Ben Beshear, Planning
Dike and Drainage Districts (14 agencies)	Jenna Friebel, Consortium Director
Skagit Regional Fire Authority	Rod Coffell, Chief
Skagit County Fire District 2	Bryan Ekkelkamp. Chief
Skagit County Fire District 3	Chad DeVlieger, Chief
Skagit County Fire District 4	Brian Crabtree, Commissioner
Skagit County Fire District 5	Steve Riggs, Chief
Skagit County Fire District 6	Ed Tjeerdsma, Chief
Skagit County Fire District 7	Larry Hawke, Commissioner
Skagit County Fire District 8	Josh Carpenter, Chief
Skagit County Fire District 9	Earl Klinefelter, Commissioner
Skagit County Fire District 11	Micheal Noyes, Chief
Skagit County Fire District 12	Travis Ashby, Chief
Skagit County Fire District 13	Wood Weiss, Chief
Skagit County Fire District 14	David Skrinde, Chief
Skagit County Fire District 15	Stuart Kranick, Chief
Skagit County Fire District 17	Olivia Cole, Chief
Conway School District	Jeff Cravy, Superintendent
Skagit 911	Alysn Everbeck, Director
Skagit Public Utility District	Jay Sedivy, Safety Coordinator
Skagit (Whatcom) Conservation District	Robert Walters, Wildfire Resilience Specialist

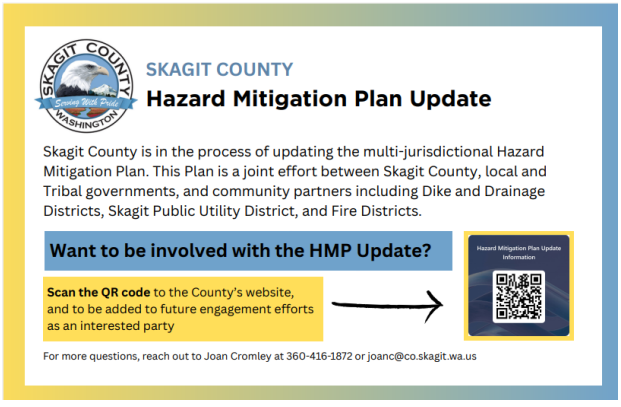
2.2.3 Stakeholder Invitations

Multiple emails were sent to the Fire, Planning and Public Works departments in each municipality and Tribe requesting a lead point of contact. Invitations to each stakeholder meeting were sent to Lead Point of Contacts and all School Districts, Fire Districts, Hospital Districts, Port Districts, Skagit Conservation District, Skagit 911, Skagit Public Utility District, Skagit Transit, and Skagit Valley College. A focus for this update was to include the non-municipal Fire Districts so we also made multiple phone calls if they didn't respond to emails or attend Stakeholder meetings. Each Fire Department that was willing to participate had one or more in-person meetings to assist with the process.

2.2.4 Public Involvement

The Plan must document the County's process for involving members of the public pursuant to 44 CFR § 201.6(b)(1). The Plan update includes monitoring, evaluating, and updating the HMP process and is validated with the lived experiences of local community members. This was done through the following:

- Tabling at the Tulip Festival, April 2025
    - Inform participants of the festival about the planning efforts being underway
    - Provide an opportunity for participants to sign up for notifications on the DEM website regarding the planning process updates. Flier about the HMP update was provided in English and Spanish (see below). Website is accessible in multiple languages at: https://www.skagitcounty.net/Departments/EmergencyManagement/2025-hazard-mitigation-plan.htm



- Public opinion survey, July 2025 – August 2025
    - Solicit general feedback from the public on the individual's perception of general preparedness, feeling of safety, and hazard understanding.
    - Participants were asked to rate each hazard based on personal perception of risk, prioritization of critical facilities, and prioritization of mitigation strategies by hazard type.

- Open House Meetings, August 2025 – September 2025
    - Twelve Open Houses were held across the County with posters explaining the Hazard Mitigation Plan and process, and proposed mitigation actions from participating agencies local to that area. The public were asked to vote on their top five mitigation actions per agency.
- Proposed Mitigation Actions Survey October 2025 – November 2025
    - A survey was available in English and Spanish listing every participating agency and their proposed mitigation actions. The public was asked to rank actions from most to least important, and were able to take the survey multiple times to rank as many agencies as they wanted.

2.3 Review of Plans and Studies

This section lists the core planning team's review and incorporation as appropriate of existing plans, studies, reports and technical information (44 CFR § 201.6.b(3)). County regulations that can affect hazard mitigation initiatives are reviewed in **Chapter 23 Capabilities Assessment**. In addition to data referenced as footnotes, references, additional plans, studies, and reports used for this process include, but are not limited to:

- Skagit County Hazard Mitigation Plan (2020)
- Skagit County Comprehensive Emergency Management Plan (2019)
- Skagit County Comprehensive Plan (2025 Update)
- Washington State Enhanced Hazard Mitigation Plan (2023)
- Skagit County Public Works Annual Bridge Reports (2020-2025)
- Skagit County Community Wildfire Protection Plan (2024)
- Skagit County Building and Land Use Municipal Code
- Washington State Building Code

Data obtained from the documents listed above provided technical background information for the hazard profiles and were incorporated into various sections of the Plan. The risk assessment beginning in Chapter 5 refers to plans and ordinances that affect the management of each hazard.

2.4 Plan Development Milestones

The planning process consisted of the following key tasks and milestones:

- Task 1: Organize Resources (April 2025)
    - Draft stakeholder plan and public participation plan.
    - Identify and solicit stakeholder participation and partnerships.
- Task 2: Conduct Risk Assessment (June 2025)

- Compile records of past events.
- Profile hazards for natural, technological, and human-caused hazards.
- Conduct GIS analysis of hazard impacts and risk using Hazus and ESRI software.
- Conduct CPRI scoring and rank hazards.

- Task 3: Public Engagement (April – November 2025)
  - Conduct public engagement activities such as open houses and public opinion surveys. Results from the public survey are provided in **Chapter 20 Hazard Ranking**.
  - Seek public input on initial list of goals, objectives, and actions.
  - Coordinate with stakeholders and annexes on plan development.

Figure 2. Open House Event at Conway, Skagit County

- Task 4: Identify Mitigation Strategies (August 2025)
  - Review existing goals, objectives, and initiatives.
  - Conduct gap analysis of existing strategies with updated hazard findings.
  - Develop and prioritize updated mitigation strategies.
  - Assess County capabilities for updated strategies.

- Task 5: Develop Plan (September 2025)
    - Develop maintenance strategy including annual progress reporting.
- Task 6: Plan Adoption (early 2026)

Chapter 3. County Profile

3.1 County History

Skagit County was established in 1883 and named after the river and one of the Indigenous tribes that lived along its banks. The first European settlers arrived and settled on Fidalgo Island in 1856-59, followed by loggers and homesteaders that settled in the region shortly afterwards[1].

The drainage basins in the west along with adjacent upland areas were cleared in the 1880s and 1890s to accommodate agricultural crops. As the population grew, additional agricultural lands and logging opportunities were sought after to economically develop the region. For example, oats and hay were grown in the flood plain to feed the horses working in the logging camps[2].

Once easily accessible trees were no longer available, the economic engine for the County shifted from logging to dairy and crop farming. The fertile delta provided prime soil conditions for crop farming, producing small fruit and orchards that proved profitable for the first homesteaders in the upland areas[3].

Towards the end of the industrial revolution, the County experienced a renaissance of economic development which included steel production in Sedro Woolley and various mining enterprises in the mountainous areas.

The Skagit River is the third largest in the western United States, flowing 78 miles through a diverse and beautiful land. The county stretches from the crest of the rugged North Cascade Mountains on the east, down and westward through the fertile valleys, before exiting to Puget Sound through estuaries, rocky saltwater beaches, saltmarshes, and large mudflats.

3.2 Physical Setting

3.2.1 Topography

The County is represented by 43 USGS topographic map sections with Cypress Island to the west and Mount Arriva to the east. The topography of Skagit County ranges from sea level to the 9,087 foot-high Mount Logan in the east. As the tallest peak in the County, Mount Logan is situated within the North Cascades National Park and is part of the Cascade Mountain Range that spans the entire eastern boundary of the County. Ancient glaciers and magma flow from volcanoes carved deep valleys and left behind wide riverine floodplains with alluvial clay, silt, sand, gravel, and (or) cobble deposits[4]. Mountainous terrain surrounds the Skagit River floodplain throughout the County and includes prominent features such as Sauk Mountain, Mount Higgins, and Haystack mountains.

[1] https://www.govinfo.gov/content/pkg/GOVPUB-A57-PURL-LPS106025/pdf/GOVPUB-A57-PURL-LPS106025.pdf.
[2] Ibid.
[3] Ibid.
[4] https://geologyportal.dnr.wa.gov/2d-view#wigm?-13726410,-13466677,6103363,6247217?Surface_Geology,500k_Surface_Geology,Map_Units.

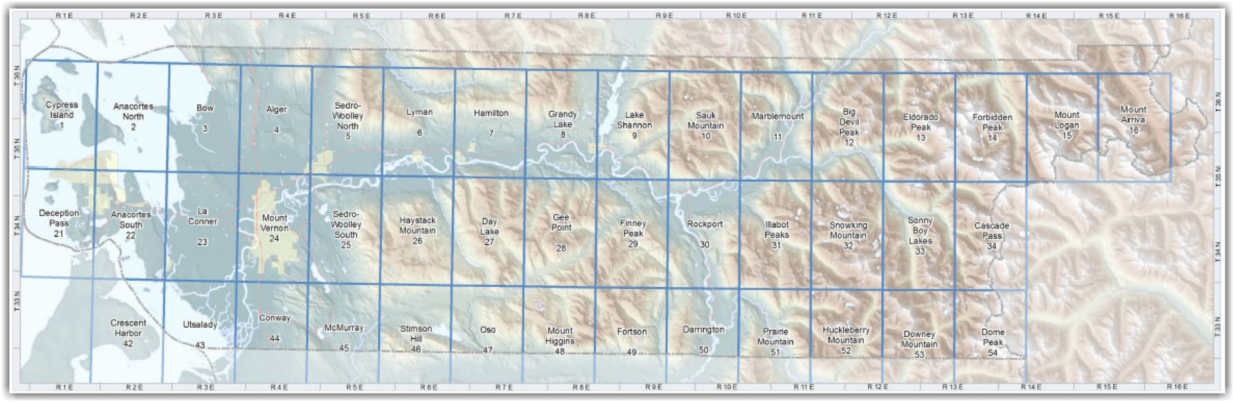


Figure 3. Topographic Map Sections of Skagit County, WA

The County's diverse and rugged natural landscape is reflected in the terms used for such places as the Skagit Flats, western islands, upper Skagit, Sauk, and Samish River Valleys, and the Cascades.

3.2.2 Soils and Geology

The western area of Skagit County is comprised of flood plains, low terraces, and deltas (Skagit Flats) that are naturally very deep and poorly drained, subject to frequent flooding. In response, early settlers diked and artificially drained the area, protected by a series of earthen dams, to prevent future flooding. Undrained areas of Skagit soils are high in salt content, which formed in recent alluvium and volcanic ash[5]. The eastern side of Skagit County is comprised of uplands and steep mountain terrain that are a result of glacial outwash and organic matter from coniferous plants. General soil map units are listed below and describe broad areas with distinctive patterns of soil, relief, and drainage.

- Skagit-Sumas-Field – Very deep, poorly drained and moderately well drained, level and nearly level soils; on flood plains and deltas. Slope of 0 to 3 percent.
- Larush-Pilchuck – Very deep, well drained and excessively drained, level to gently sloping soils; on flood plains and low terraces. Slope is 0 to 5 percent.
- Barneston-Dystric Xerorthents-Indianola – Very deep, somewhat excessively drained and excessively drained, level to very steep soils; on terraces and terrace escarpments. Slope is 0 to 80 percent.
- Tokul-Skipopa-Dystric Xerochrepts – Moderately deep to very deep, somewhat poorly drained to well drained, level to extremely steep soils; on terraces, hills, and escarpments. Slope is 0 to 90 percent.
- Vanzandt-Montborne-Squires – Moderately deep, moderately well drained and well drained, level to very steep soils; on plains and mountainsides. Slope is 0 to 65 percent.

[5] https://www.govinfo.gov/content/pkg/GOVPUB-A57-PURL-LPS106025/pdf/GOVPUB-A57-PURL-LPS106025.pdf.

- Chuckanut-Cathcart – Deep and very deep, well drained, moderately sloping to very steep soils, on plains, foothills, hills, and mountainsides. Slope is 8 to 65 percent.
- Bow-Coveland-Swinomish – Moderately deep and very deep, somewhat poorly drained and moderately well drained, level to steep soils; on terraces and hills. Slope is 0 to 30 percent.
- Skykomish-Jug-Saxon – Very deep, moderately well drained and somewhat excessively drained, level to very steep soils; on terraces, terrace escarpments, and hills. Slope is 0 to 65 percent.
- Wollard-Kindy-Diobsud – Moderately deep, moderately well drained, gently sloping to very steep soils: on mountains. Slope is 3 to 65 percent. This soil map unit experiences the greatest precipitation and occurs primarily in the central and eastern parts of the County.

3.2.3 Drainage Basins

The Skagit River is the main hydrologic feature in the County that is fed by three major tributaries from mountains surrounding the Skagit Valley: Sauk, Suiattle, and Cascade Rivers. The Skagit River headwaters come from Beaver Lake in British Columbia, Canada, and flows southwesterly for approximately 135 miles before draining into Puget Sound via the Skagit Bay[6]. The river drains an area of approximately 3,115 square miles. Based on discharge flows of rivers that empty into saltwater, the Skagit River is the third largest river system on the West Coast of the contiguous United States.

[6] https://pubs.usgs.gov/wsp/0419/report.pdf.

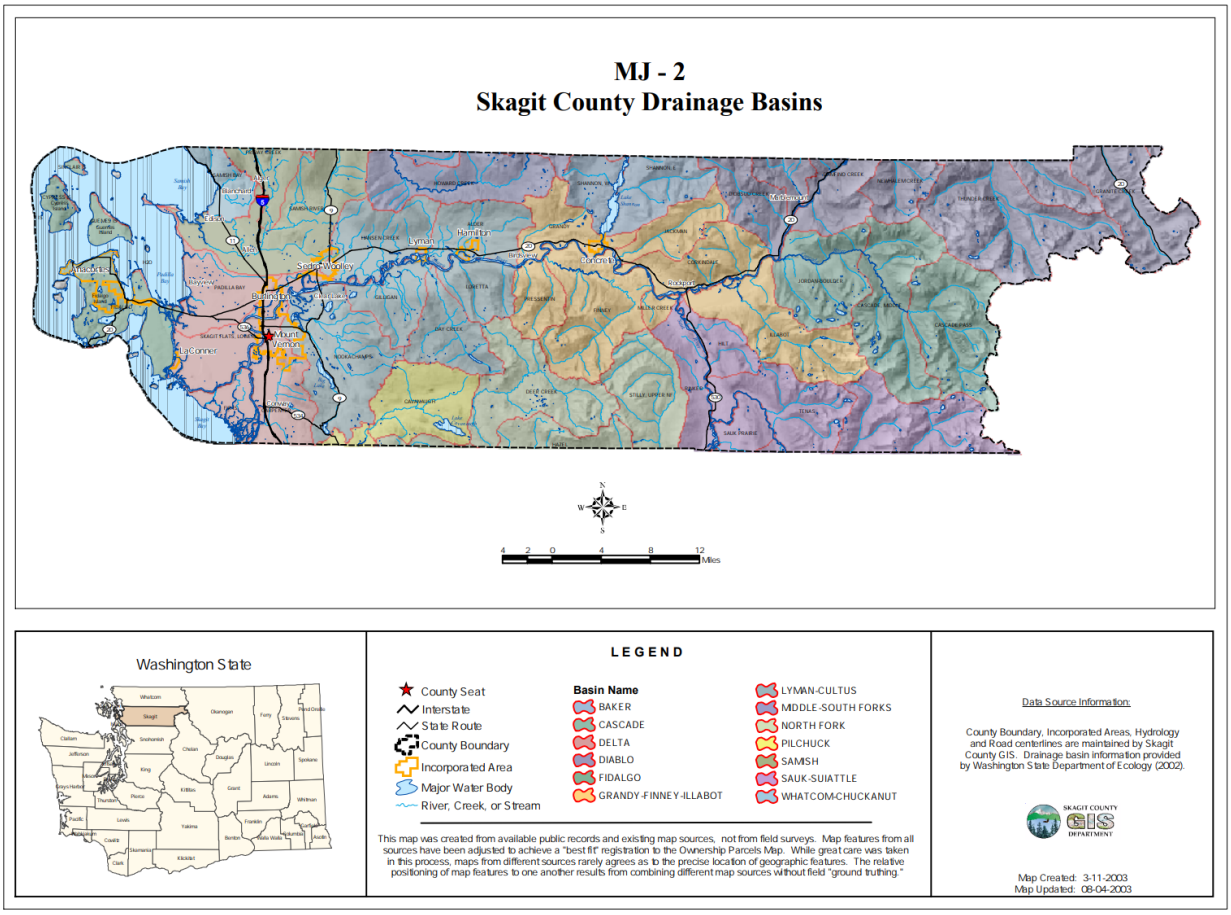


Figure 4 Skagit River Drainage Basins

In 2001, the Department of Ecology established instream flow level areas to help preserve the Skagit River, which is a designated wild and scenic river, along with its surrounding ecosystem (WAC 173-503). The rule manages usage and allocation of incoming streamflow to ensure that adequate water in the river is available for healthy salmon runs, good water quality, and recreational activities while protecting existing water rights.

3.2.4 Climate

Skagit County has a marine climate affected by its proximity to the Puget Sound and the Pacific Ocean resulting in mild winters and warm, drier summers. Average annual precipitation ranges from 32 to 75 inches depending on the terrain with 75% of precipitation occurring during the winter months of October to April[7].

The fluctuation in annual temperature is moderate with summer highs in the 80's to low 90's and winter lows as low as 10°F. Temperatures can dip below freezing in high mountainous areas. The annual average temperature is 50°F and the frost-free growing season averages 193 days[8].

[7] https://www.govinfo.gov/content/pkg/GOVPUB-A57-PURL-LPS106025/pdf/GOVPUB-A57-PURL-LPS106025.pdf.

[8] 2020 Skagit HMP

Average relative humidity varies significantly depending on the time of day, season, and location, but generally averages 60 percent with levels typically higher at night. The prevailing wind is from the southwest and funnels through the Skagit Valley before condensing in higher elevations. Average windspeed is highest, 9 miles per hour, in winter. Heat indexes, which represent a combination of ambient temperatures and humidity, are influenced by a combination of ocean and atmospheric conditions, also known as the pacific oscillation decadal (PDO)[9],[10]. PDOs are long-term 30-year phenomena that alter existing conditions in precipitation, heat, ocean levels, and barometric pressure.

3.3 Major Past Hazard Events

Understanding major past hazard events can aid in risk assessment and mitigation by identifying patterns and types of significant hazardous events. Skagit County has received 19 Presidential Disaster Declarations since 1951, with the latest declaration issued in 2021 for the Skagit River flood event. An atmospheric river driven by a significantly low-pressure system, combined with rapid snowmelt, resulted in the 100-year flood event[11],[12]. Water levels crested at 38.93 feet and inundated areas along Highway 20, Sedro-Woolley, Lyman, and Hamilton[13], resulting in a Phase 1 flooding event.

In 2024, the County witnessed international headline events for severe rainstorms and wildfires that were more severe and destructive than any in recent recorded history. This was due to a wintertime atmospheric river that made coastal flooding conditions dangerous in parts of the County such as the Guemes and Samish islands. High winds, below freezing temperatures, and precipitation/snow resulted in downed power lines and a blizzard warning for elevations above 2,000 feet[14].

In addition to past hazard events described in the 2020 HMP, the following describes major hazard events within the last five (5) years.

Table 1. Major Disaster Declarations 2020-2025, Skagit County

Disaster Number	Declaration Date	Disaster Type	Incident Type	Title	Incident Begin Date	Incident End Date	PA Dollars Obligated Or Losses (State)
20-0265	March 2020	Pandemic	Disease	Covid-19	Feb 2020	Ongoing	N/A
Description: Covid-19 pandemic.							

[9] https://www.worldclimateservice.com/2021/09/01/pacific-decadal-oscillation/.
[10] https://www.ncei.noaa.gov/access/monitoring/pdo/
[11] https://www.weather.gov/mtr/AtmosphericRiver_10_24-25_2021.
[12] https://youtu.be/BSCr0cRfBzk?si=nIYJgthCcTbjyoDb.
[13] https://www.skagitcounty.net/Departments/Flood/stage.htm.
[14] https://www.cascadiadaily.com/2024/jan/09/tuesday-update-high-winds-knock-out-power-in-whatcom-skagit-counties/.

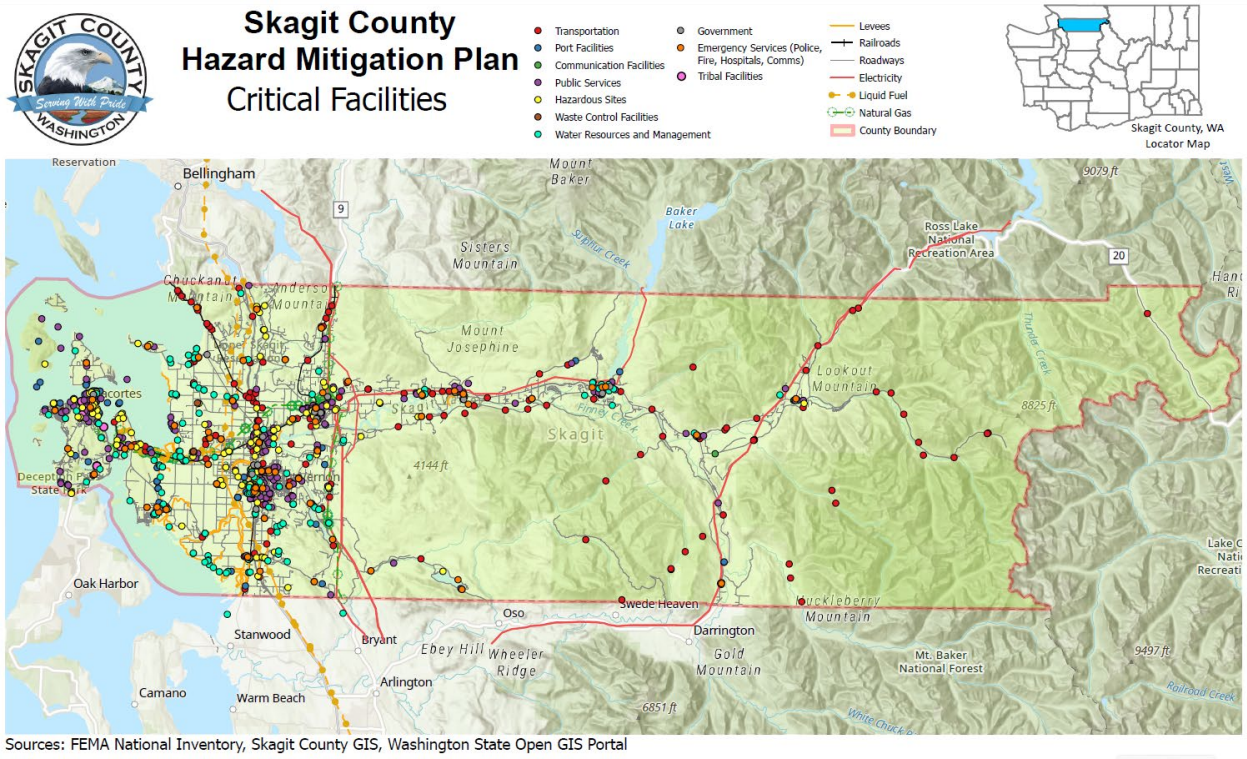
4539	4/23/2020	DR	Flood	Severe Storms, Flooding, Landslides, and Mudslides	1/20/2020	2/10/2020	Unknown
Description: Severe storms, flooding, landslides, and mudslides occurred during the period of January 20, 2020, to February 10, 2020, as a result of heavy rain and snowmelt. The President of the United States declared a major disaster for Public Assistance in the state of Washington. 408 homes were affected, 22 of which were destroyed.							
4635	1/5/2022	DR	Flood	Flooding and Mudslides	11/5/2021	12/2/2021	$32,011,462
Description: Severe storms threatened Clallam, Skagit, and Whatcom counties, forcing over 1000 individuals to evacuate and for some areas, bringing the largest and most severe disaster to occur in history. Extreme rainfall due to bands of intense tropical moisture triggered flooding and mudslides that prompted closure of the Interstate 5 and many other roads and bridges.							
4650	3/29/2022	DR	Severe Weather, Flood	Severe Winter Storms, Snowstorms, Straight-line Winds, Flooding	12/26/2021	1/15/2022	$16,094,227
Description: As a result of strong winter storms bringing heavy rain, high winds, and record snowfall to western Washington, at least 18 major rivers exceeded the flood stage. Infrastructure damage included roads, bridges, utilities, and public buildings, impacting 12 Washington counties and multiple tribal nations.							
N/A	N/A	N/A	Flood	Flooding and landslides	12/4/2023	12/6/2023	N/A
Description: Skagit River near Concrete crested at 33.8 feet on December 5th, above the major flood threshold of 32.5 feet. A strong atmospheric river caused multiple rivers to flood and caused landslides.							
N/A	N/A	N/A	Hazardous material spill	Conway Pipeline Spill	12/10/ 2023	March, 2024	N/A
Description: Olympic pipeline near Conway Elementary School spilled gasoline through field to creek. 105 day complex Emergency Response, ongoing restoration.							

3.4 Critical Facilities and Infrastructure

Critical facilities and infrastructure are physical structures that are essential to the health and welfare of the population. Loss of a critical facility could also result in significant impacts to people, property, economic continuity, government functions, environment, and social/cultural well-being. These facilities that function in response to a hazard event can provide life-saving services, also known as community lifelines. Critical facilities typically include police and fire stations, schools and emergency operations centers. Critical infrastructure can include the roads and bridges that provide ingress and egress for evacuations and allow emergency vehicles access to those in

need. Roadways and bridges also play a role in allowing utilities providers to continue water, electricity and communication services to the community.

The majority of critical facilities are in the western area of the County. Most critical facilities in the eastern County are bridges, many of which will not survive a major earthquake, isolating many communities. Each jurisdiction included critical infrastructure in their area for hazard ranking. Appendix D lists the top twenty most vulnerable road sections in the County-wide Transportation Resilience Improvement Plan.



Sources: FEMA National Inventory, Skagit County GIS, Washington State Open GIS Portal

Figure 5 Skagit County Critical Facilities

3.5 Development

This section describes any changes in development since the last plan update and any plan revisions to reflect changes in development per 44 CFR § 201.6(d)(3). Changes in development, especially as they occur in hazard-prone areas, have an increased risk to hazards as identified in this plan and can increase the community's vulnerability.

3.5.1 Land Use

There are 1,112,715 acres of land in the County, 46.7% of which is comprised of Public Open Space of Regional/Statewide Importance (OSRSI), 42.6% of Natural Resources Land (NRL), 7.3% of Rural Lands, <0.1% of Commercial/Industrial Lands, and 3.4% of Urban Growth Areas (land included in the boundaries of cities, towns or tribes).

3.5.2 Changes in Development

The Planning Team utilized approved building permits from the last 5-7 years to understand the patterns of development occurring throughout the County. Single-family buildings are the predominant and preferred building type followed by ADU construction. There have been 586 single-family buildings, 195 ADUs, and 39 manufactured homes that have received building permits from 2018 to 2024 (in part) in unincorporated Skagit County. Out of 820 total permits issued, a majority of permits issued were for areas zoned Rural Reserve (RRv) and Rural Intermediate (RI), in which 41.7% (342 permits) and 21.6% (177 permits) of total building permits were issued, respectively.

Housing growth rates in the municipalities are similar to population growth for those areas, with most of it centered in the cities. Multi-family housing accounted for 57.7% of housing growth in the cities.[15]

3.5.3 Economy

Agriculture is the dominant factor in Skagit County's economy and community character. Farming and ranching have been an important part of the community's heritage since early settlement in the 1800s. The Skagit Valley is regarded as one of the most fertile valleys in the world, producing major commodities, specialty crops, and vegetable seeds and flowers with unique market niches. Forest lands, which predominate much of the county's upland landscape, are another significant natural resource. The practice of forestry (logging, reforestation, and timber management) was established in the earliest stages of settlement in the county. Large-scale commercial forestry remains a vital industry and is practiced on well over 300,000 acres, or about 29 percent of Skagit County's total land area of 1.1 million acres. Fishing, both commercially and recreationally, is another natural resource industry that has influenced Skagit County economically and culturally. The mining industry similarly has much importance to the county economy. In addition to natural resource-based industries, the economy has diversified to include strengths in the areas of retail sales, contracting, fabrication, and services. Industrial energy production such as oil refineries in Marche Point and tourism have made a significant contribution to the economy of the area.

3.5.4 Future Development

According to the 2025 Comprehensive Plan update, future population growth and urban development are expected to occur in unincorporated County areas adjacent to city boundaries that are limited areas of more intense rural development (LAMIRDs), specifically the rural village residential zone (RVR). Future development considers water availability, critical areas, and vacant parcels available in Alger, Bay View, Clear Lake, and Similk Beach.

The Skagit Council of Government's Skagit Growth Monitoring Report 2025 finds that housing growth is closely following population growth, with 79.4% of new growth occurring in urban areas. Industrial development continues in some Port and urban areas. The locations of proposed energy storage facilities are of particular interest for hazard mitigation.

[15] Skagit Council of Government 2025 Growth Monitoring Report. https://www.scog.net/Growth_Management/2025/SkagitGrowthMonitoringReport2025.pdf

3.6 Demographics

3.6.1 Population Trends

According to the Office of Financial Management (OFM), the total population of Skagit County in 2023 was approximately 132,000. Between 2000 and 2023, Skagit County has grown by 29,021 people, an average annual increase of 1.1%. The Growth Management Act Steering Committee (GMASC) projected a 2045 population target of 160,830 for the county, which presents an expected 0.9% average annual population growth over the next two decades. Approximately 80% of the growth in Skagit County is expected to occur within incorporated cities and their UGAs[16].

illustrates the population trends from 2010-2024.

Table 2. Countywide Population Changes by Jurisdiction 2010-2024

City or Town	2010	2015	2018	2020	2021	2022	2023	2024
Unincorporated Skagit County	48,112	49,220	51,540	52,606	52,750	52,970	53,065	53,210
Incorporated Skagit County	68,789	71,400	74,980	76,917	77,250	78,280	78,935	80,090
Anacortes	15,778	16,310	16,990	17,637	17,750	17,880	18,020	18,270
Burlington	8,388	8,485	9,025	9,152	9,290	9,800	9,905	10,410
Concrete	710	730	740	801	805	810	810	810
Hamilton	301	305	300	299	295	295	295	295
La Conner	891	895	940	965	970	980	990	995
Lyman	438	445	455	423	420	425	425	430
Mount Vernon	31,743	33,530	35,180	35,219	35,390	35,500	35,590	35,800
Sedro-Woolley	10,540	10,700	11,350	12,421	12,330	12,590	12,900	13,080
TOTAL	116,901	120,620	126,520	129,523	130,000	131,250	132,000	133,300

Source: https://ofm.wa.gov/sites/default/files/public/dataresearch/pop/april1/ofm_april1_poptrends.pdf.

3.6.2 Income

Income for the purposes of this section is classified as household income, which includes multiple individuals in one household. Household income can include multiple salaries or wages earned. Approximately 51% of Skagit County households have a yearly income between $50,000 and

[16] BERK Consulting, 2024. Technical Appendix D Housing Needs Assessment. Accessed at https://www.skagitcounty.net/PlanningAndPermit/Documents/compplan2025/SkagitCompPlan_BOCC5.4_withappendix.pdf.

$149,999, with the largest share (19.9%) in the $100,000 to $149,999 range. 19.3% of households in Skagit County make more than $150,000. This is lower than Washington State as a whole (26.2% of households make more than $150,000). 29.8% of Skagit County households make less than $50,000 a year[17].

3.6.3 Age Distribution

According to 2022 ACS 5-Year Estimates, there is a larger distribution of male population in the young to middle age groups (30.4% male vs 28.9% female in the 0-49 age group). There is also a larger distribution of female population in the near retirement to retirement age groups (19.5% male vs 21.2% female in the 50+ age group). The largest single age group is people between the ages 50-64 (19.2%). The next two largest age groups are people between the ages 20-34 (18%) and 35-49 (18%) who are people likely in their prime working years and may have young families[18].

3.6.4 Race, Ethnicity, and Language

According to the US Census, 2022 5-Year data estimates that 72% of the Skagit County population identify as White alone, not Hispanic or Latino, which is a higher percentage than Washington state at 65.5%. Approximately 19% of the population identifies as Hispanic or Latino, which is higher than the 13% of the population identifying as Hispanic or Latino in Washington State. 84% of the Hispanic or Latino population in the county are Mexican, compared to 76% for the state.

Most of the population in Skagit County speak English only, but there has been an increase in those speaking Spanish since the year 2000 and a general decrease in the English only percentage. According to 2023 American Community Survey 5-year estimates (DP02), 83.8% of Skagit County households speak English only with 13.1% of households who speak Spanish.

The agricultural base in Skagit County draws seasonal farm workers at various times of the year. Many speak different South American languages, including Mixteca.

Close to 3% of Skagit residents identify as Native American, with a rich local heritage of Coast Salish tribes.

3.6.5 Social Vulnerability

Social vulnerability is defined by FEMA as “the susceptibility of social groups to the adverse impacts of natural hazards, including disproportionate death, injury, loss, or disruption of livelihood”. Social vulnerability is also defined by the Centers for Disease Control and Prevention and Agency for Toxic Substances and Disease Registry (CDC/ATSDR) as “demographic and socioeconomic factors (such as poverty, lack of access to transportation, and crowded housing) that adversely affect communities that encounter hazards and other community-level stressors.” FEMA’s social vulnerability index utilizes CDC/ATSDR metrics.

[17] Ibid.

[18] BERK Consulting, 2024. Technical Appendix D Housing Needs Assessment. Accessed at https://www.skagitcounty.net/PlanningAndPermit/Documents/compplan2025/SkagitCompPlan_BOCC5.4_withappendix.pdf.

In Skagit County, social vulnerability is rated as moderately susceptible to hazards with a 54.84 percentile relative to the rest of the U.S. The areas with highest susceptibility are in census tracts within and surrounding the cities of Mount Vernon and Burlington.

Chapter 4. Hazard Identification and Risk Assessment Methodology

4.1 Identified Hazards

Identifying hazards is the first step to conducting a risk assessment. A risk assessment is the process of measuring the potential loss of life, property damage, economic injury, and critical services continuity resulting from hazard events. The risk assessment process involves three key steps:

- Hazard identification and profiling
- Vulnerability identification
- Cost Evaluation

This HMP update includes natural hazards carried over from the previous HMP as well as additional hazards not previously identified. These include Acts of Violence, Hazardous Materials, Disease, Bridge & Road Failure, Power & Water System Failure, and Dam Failure. Technological and human hazards were added to address the recent and ongoing hazard events that occurred in the last 5-7 years. Additional stakeholder and public inputs refined the list to emphasize the importance of the non-natural hazards, as shown in **Figure 6** below.

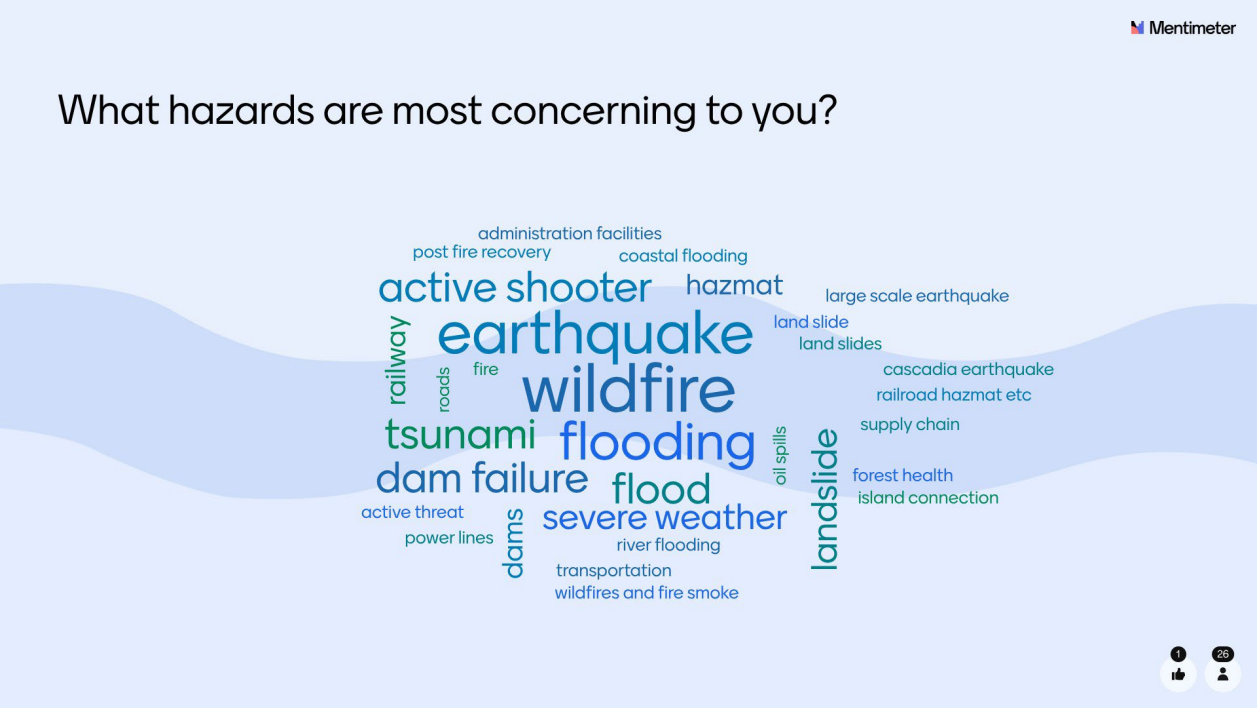


Figure 6. Word cloud of Most Concerning Hazards from Stakeholder Meeting #1

Hurricane, lightning/thunderstorms, hailstorms, and avalanches were natural hazards not included in this update because the hazards are not considered to have a significant impact on the County due to the lack of data available and/or the County's geographic location in the country.

Identifying and assessing risks specific to the County is the foundation for determining mitigation strategies for implementation within the next five (5) years. The risk assessment process allows the County to rank hazards from highest priority to lowest priority and anticipates issues as they relate to hazardous scenarios within the planning horizon. Ranking hazards is done through a Calculated Priority Risk Index (CPRI) scoring rubric, in which the identified hazards with higher index scores assume to result in more significant impacts whereas lower scoring hazards result in less significant impacts. Higher scoring hazards are ranked as higher priority whereas lower scoring hazards are ranked lower priority. The CPRI methodology is further described below.

Understanding high priority hazards allows the County to focus on recurring and high impact hazards that continually take a significant toll on County resources. Regardless of priority, FEMA requires that all hazards are considered and addressed by mitigation strategies in the action plan. The action plan and capabilities assessment thus provide actionable steps to implement the mitigation strategies that have been updated since 2020.

4.2 Methodology

After the list of hazards was identified for inclusion in the plan update, the Planning Team developed the CPRI scoring worksheet to rate risks and rank hazards according to their CPRI score. Scores range from 0 to 4 and vary based on the hazard's severity. Attributes of the CPRI score are:

- **Probability of hazard occurrence** – the future likelihood of a hazard event occurring considering development trends, population changes, and climate change.
- **Magnitude/Severity of hazard occurrence** – the impacts to people, property, economy, continuity of government, and continuity of operational functions despite the hazard scenario. This can also be described as the "…what if.." analysis and is the main component of the risk assessment.
- **Geographic location and extent** – the spatial location of hazard events such as flood inundation boundaries, wildfire susceptibility zones, etc. Hazard extent is synonymous to hazard severity i.e., low to high liquefaction, mild to severe earthquake shaking, etc.
- **Warning time** – the hazard's onset and an agency's ability to respond to the hazard before they occur.
- **Duration** – the timeframe for which the hazard persists until it subsides.

Each attribute was weighed to apply additional considerations to the hazard's importance. The scoring emphasizes probabilistic scenarios because identifying more common, regularly occurring hazards can contribute to significant cumulative losses over time, compared to rare single events.

4.2.1 Identify Vulnerability

Vulnerability represents an asset's sensitivity to a hazard and its ability to adapt to hazardous conditions. Sensitivity encompasses the asset's or critical facilities' exposure to a hazard and the

degree to which a system, population, or resource is or might be affected by hazards[19]. Adaptive capacity includes existing measures in place to protect the asset against hazards such as ordinances that avoid development in a flood zone, and hard armoring such as seawalls.

The Planning team utilized asset data from the previous plan update, the HAZUS national inventory, and additional assets from the County GIS department and Washington State inventory. HAZUS software was used to assess vulnerabilities and cost impacts under flooding hazard scenarios. During the preparation of this plan, FEMA was in the process of updating the HAZUS software and did not provide earthquake scenarios. The Planning Team thus utilized FEMA's National Risk Index (NRI) and HAZUS Loss Library pre-run analyses to understand the County's infrastructure and demographic risks to earthquake, tsunami, and volcano hazards.

4.2.1.1 Exposure and Extent

Exposure refers to whether an asset is located within a hazard zone and therefore subject to potential impacts. Exposure is measured in a binary form: it's in a hazard zone or it's outside a hazard zone. Extent can also indicate the levels of hazard that exist and are further described in each hazard chapter below (i.e., Moderate-High Liquefaction, USDA Drought Monitor Index D0-D4, Modified Mercalli earthquake scale). Any asset located in moderate to severe or high hazard zones are generally considered exposed. The cumulative sum of assets located in a hazard zone is considered exposed and rated using extent factors below.

Table 3. Extent Factors

Extent	Description	Extent Factors
Extensive	50% or more of area impacted.	4
Significant	25-49% of area impacted.	3
Moderate	10-24% of area impacted.	2
Limited	Less than 10% of area impacted.	1
NR	None of the area will be impacted.	0

4.2.1.2 Past Events

Past event data was compiled through personal experience and knowledge from the County, official records, online research of press releases, news reports, and other forms of anecdotal information. Each hazard chapter provides a list of sources used.

4.2.1.3 Probability of Future Events

Probability of future events represents the likelihood that the hazard will occur. Probability considers how often hazards have occurred in the past combined with climate change research

[19] https://toolkit.climate.gov/glossary.

and changes in development. A significant hazard is defined as any hazard occurrence that directly or indirectly damages structures or infrastructure, impedes normal business operations, and/or is likely to cause serious or fatal injuries.

Table 4. Probability of Occurrence

Probability	Description	Probability Factor
High	Significant hazard event is likely to occur annually.	4
Medium	Significant hazard event is likely to occur within 10 years.	3
Low	Significant hazard event is likely to occur within 100 years.	2
Unlikely	The likelihood of a significant hazard event occurring is very low, or the recurrence interval is greater than every 100 years.	1
NR	There is no data available.	0

4.2.1.4 Warning time

Warning time represents the hazard's onset and an agency's ability to respond to the hazard before they occur. This includes communications, mobilizing resources, coordinating among different agencies, and community social networks.

Table 5. Warning Time/Preparation Time

Warning Time	Description	Warning Time Factor
Limited	There is a less than 6 hour warning time for hazards to occur and for people to prepare.	4
Low	There is a 6-to-12-hour warning time for hazards to occur and for people to prepare.	3
Moderate	There is a 12 to 24 hour warning time for hazards to occur and for people to prepare.	2
High	There is more than 24 hours warning time for hazards.	1
NR	There is no information available.	0

4.2.1.5 Duration

Duration represents the typical timeframe in which the hazard persists until it subsides, and communities return to normal functions.

Table 6. Hazard Duration

Duration	Description	Duration Factor
Extensive	The hazard persists for more than 24 hours.	4
Significant	The hazard persists for 12 to 24 hours.	3
Moderate	The hazard persists for 6 to 12 hours.	2
Limited	The hazard persists for less than 6 hours.	1
NR	There is no information available or is Not Applicable.	0

4.2.2 Identify Risk

Risk identification for the purposes of this HMP is the calculated impacts to people, property, economy, and services continuity whether administrative and publicly or privately managed, otherwise known as magnitude and severity of impact.

According to FEMA's NRI, Skagit County is rated as 89.12 and in relatively moderate risk when compared to the rest of the U.S. The rating is a composite score that considers expected annual building and property value losses, social and demographic vulnerabilities, and community resilience.

4.2.2.1 Severity of Impact

Magnitude of impact represents the measure of potential consequences when a hazard occurs. Each hazard was rated per category (people, property, economy, continuity of government, and operations) from negligible to catastrophic impact. Catastrophic impact is synonymous with a significant hazard event and is defined as any hazard occurrence that directly or indirectly damages structures or infrastructure, impedes normal business operations, and/or is likely to cause serious or fatal injuries. The magnitude of impact is further described below:

Table 7. Severity of Impact Scoring Matrix

Impact Factor	Impact	Description
4	**Catastrophic Impact**	People – Injuries or illnesses result in permanent disability and death to a significant amount of the population exposed to a hazard. >30% of the population impacted.
		Property – Severe property damage; greater than 50% of critical facilities and non-critical facilities and infrastructure impacted.
		Economy – Significant impact as a result of loss of buildings and content, inventory, lost revenue, lost income.
		Continuity of Government significantly impacted, with limited services provided (life safety and mandated measures only). Services disrupted for more than 1 month.
		Operational Impact – Functional Downtime 365 days or more
3	**Critical Impact**	People – Injuries or illness results in some permanent disability or significant injury; hospital calls for service increased significantly; no deaths. 15% to 25% of the population impacted.
		Property – Moderate property damages (greater than 25% and less than 50% of critical and non-critical facilities and infrastructure).
		Economy – Moderate economic impact as a result of critical and non-critical facilities and infrastructure being impacted, loss of revenue associated with tax base, lost income.
		Continuity of Government impacted with ~50% operational capacity; limited delivery of essential services. Services interrupted for more than 1 week, but less than 1 month.
		Operational Impact – Functional Downtime 180-364 days.
2	**Limited Impact**	People – Injuries or illness are predominantly minor in nature; some increased calls for service at hospitals; no deaths; 14% or less of the population impacted.
		Property – Slight property damage; greater than 5% and less than 25% of critical and non-critical facilities and infrastructure.

		Economy – Economic impact associated with lost property tax base limited; impact results primarily from lost revenue/tax base from businesses shut down during duration of event and short-term cleanup; increased calls for emergency services result in increased wages.
		Continuity of Government impacted only slightly, with 80% of normal operations; most essential services being provided. Disruption lasts less more than 36 hours, but less than 1 week.
		Operational Impact – Functional downtime 179 days or less
1	**Negligible Impact**	People – Injuries and illnesses are treatable with first aid; minimal hospital impact; no deaths. Negligible impact to quality of life.
		Property – Less than 5% of critical facilities and infrastructure impacted and only for a short duration (less than 24-36 hours such as for a snow event); no loss of facilities, with only very minor damage/clean-up.
		Economy – Negligible economic impact.
		Continuity of Government operating at 90% of normal operations with only slight modifications due to diversion of normal work for short-term response activity. Disruption lasts no more than 24-36 hours.
		Operational Impact – No Functional Downtime (less than 1 day).

4.2.3 Calculated Priority Risk Index (CPRI) Scoring

Subsequent to initial research and qualitative data inputs, the CPRI score was determined using GIS and HAZUS to quantitatively assess impact severity. The hazards were ranked from 0 to 4 with 0 being the least priority and 4 being the highest priority hazard. Prioritizing hazards is a critical step in the risk assessment process and allows jurisdictions to appropriately allocate resources where available. Hazards with the same CPRI scores were reviewed with local knowledge and local subject matter experts to qualitatively rank the hazards. Results from the CPRI scoring matrix are provided in **Chapter 20 Hazard Ranking**.

4.3 Limitations

Limitations include the availability of comprehensive quantitative data. Since data was provided in a broad level, granularity was limited to general assumptions by jurisdiction or census tract. Assessor's data such as building footprint, building material type, building valuation, and land use/zoning by parcel was not available. Due to time and budget constraints, the HMP update utilized existing risk data and applied qualitative rankings to prioritize hazards.

Chapter 5. Coastal Hazards

5.1 General Background

Skagit County's coast is diverse and is comprised of peninsulas, bays, estuaries, wetlands, sloughs, islands, and coastal bluffs. As such, the effects of coastal hazards will vary due to local conditions. Coastal threats and hazards in Skagit County include sea level rise, coastal erosion, groundwater shoaling, and saltwater intrusion and can result in direct impacts to life and/or property. According to the Comprehensive Plan, Coastal High Hazard Areas (CHHAs) are defined as "…an area subject to high velocity and/or volume of waters, including but not limited to storm surge or tsunamis". FEMA designates CHHAs on a Flood Insurance Rate Map as Zone V1-30, which are "Coastal areas with a 1% or greater chance of flooding and an additional hazard associated with storm waves…[and]...have a 26% chance of flooding over the life of a 30-year mortgage".

Coastal Erosion

Coastal erosion is a process where the rate of sediment supply from stream deposits is lower than the rate of sediment transport. Erosion can be exacerbated by various factors including land subsidence, high tides, wave action, changes in marine hydrodynamics, and manmade structures such as rock revetments that disrupt the natural movement of sand along the shore i.e., longshore sediment transport. Coastal erosion can intensify due to sediment budget, wave climate, and sea-level rise.

Although erosion in Puget Sound's shoreline occurs naturally, this process can become hazardous when an eroding slope produces additional weights and movement on building foundations. Foundations that experience weights and movement that exceed their designs thus lead to unstable and inhabitable conditions resulting in cracking and failure. Similarly, sea level rise becomes hazardous when development in once habitable land becomes inhabitable or unusable due to chronic wet conditions. When combined with winter storms, wave action, and extreme precipitation, sea water can also combine with shallow groundwater levels leading to saltwater intrusion.

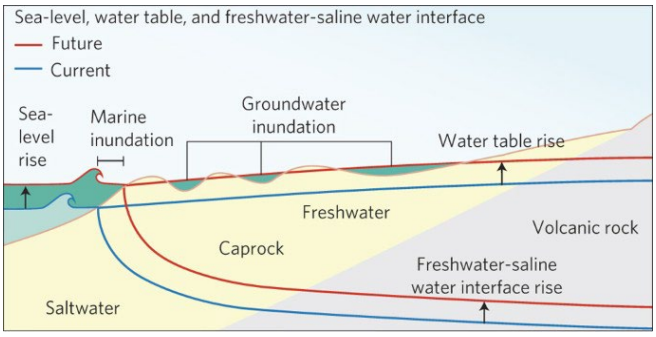
Sea Level Rise (SLR)

Sea level rise is a global phenomenon where melting glaciers and ice sheets results in a greater volume of water in the oceans. Due to higher temperatures and atmospheric influences, water that was once frozen finally melts and expands and increases in volume. The expansion of ocean water, a process known as thermal expansion, results in higher sea levels thus increasing the extent of ocean water. Intense wave action with higher sea levels can exacerbate coastal hazards by eroding bluffs and other geologic features where previously dry. Sea level rise is often viewed as a singular and linear event that occurs over a long period of time. However, other coastal phenomena such as land subsidence, King tides, storm events, and coastal geology can intensify coastal hazards. Events where higher sea levels, high riverine floodwater levels, and atmospheric storms during wintertime typically result in significant damage along the coast in Skagit County.

Groundwater Shoaling

Groundwater shoaling is a phenomenon where higher density seawater migrates inland and pushes less dense groundwater above the seawater layer[20]. This results in groundwater seepage above ground after reaching or exceeding the base level (or water table). Shoaling typically occurs in coastal areas that experience excessive rainfall, poor drainage, and shallow water tables.

Coastal and low-lying areas in Skagit County are at risk of groundwater shoaling. The County's widespread and shallow riverine floodplain that empties into the Puget Sound can exacerbate hazardous coastal conditions when combined with other events such as extreme precipitation, riverine flooding, high sea levels, and high groundwater levels which all exist in western County. Groundwater levels typically rise from October to March due to increased rainfall and decline when there is less rainfall from April to September. Concerns about groundwater shoaling are anticipated to increase as a result of increased rainfall and sea levels due to global climate change.

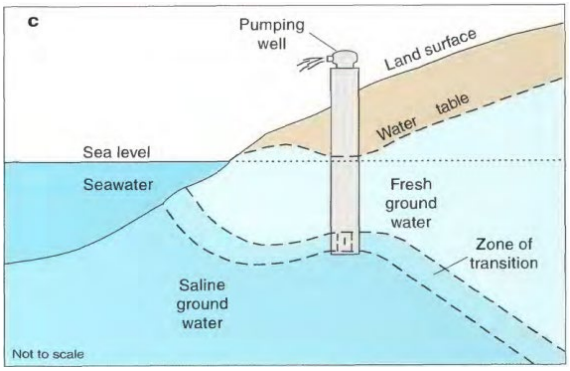


Example hydrologic condition of SLR-induced groundwater emergence and shoaling (Source: Rotzoll et. al., 2013)

Saltwater Intrusion

Saltwater intrusion is a phenomenon where seawater migrates inland infiltrating groundwater and freshwater aquifers. Saltwater intrusion differs from groundwater shoaling in that saltwater intrusion occurs as a result of aquifer overdraft. Saltwater intrusion becomes hazardous when freshwater is no longer drinkable. This can result in the contamination of privately owned wells and soils for agricultural farmland, impacting irrigation and drinking water supplies. Saltwater intrusion typically occurs below ground level; however, the extent of saltwater intrusion is highly variable and dependent on local geologic and geomorphic conditions, vegetation presence, wind and tide events, droughts and storms, and human development e.g., land use change, coastal engineering, groundwater over draft[21],[22].

Coastal hazards can be anticipated ahead of time thereby minimizing impacts to life and property; however, the extent of coastal hazards can vary due to geomorphology, ocean currents, and existing development i.e., shoreline armoring, dikes, etc.



Example hydrologic condition of seawater intrusion (Source: USGS)

[20] Daniel J. Hoover, Kingsley O. Odigie, Peter W. Swarzenski, Patrick Barnard. 2017. *Sea-level rise and coastal groundwater inundation and shoaling at select sites in California, USA*, Journal of Hydrology: Regional Studies, Volume 11. Accessed at https://doi.org/10.1016/j.ejrh.2015.12.055.

[21] https://www.epa.gov/arc-x/climate-adaptation-and-saltwater-intrusion

[22] https://www.sciencedirect.com/science/article/pii/S2213305424000043?via%3Dihub

5.2 Extent and Location

Coastal Erosion

Erosion typically occurs on beaches, estuaries, and shorelines subject to wave action from marine waters. Coastal shoreline in the county is predominantly comprised of stable slopes except for the unstable slopes in northern Samish Bay. In addition, areas of past landslides or debris movement and reinforced shorelines development via protective devices such as rock revetments and dikes in the coastal zone can also be indicators of coastal erosion. Over the last 30 years, feeder bluff functions have remained relatively stable with no significant erosion or deposition occurring in the Puget Sound region. In Skagit County, there are 189 miles or 36,106 acres of coastline, 5.9% (2,132 acres) of which are unstable slopes (in blue) located predominantly along offshore islands and Chuckanut Mountains in north County. A majority of the County's coastline contains stable coastal slopes, as shown in **Figure 7** below.

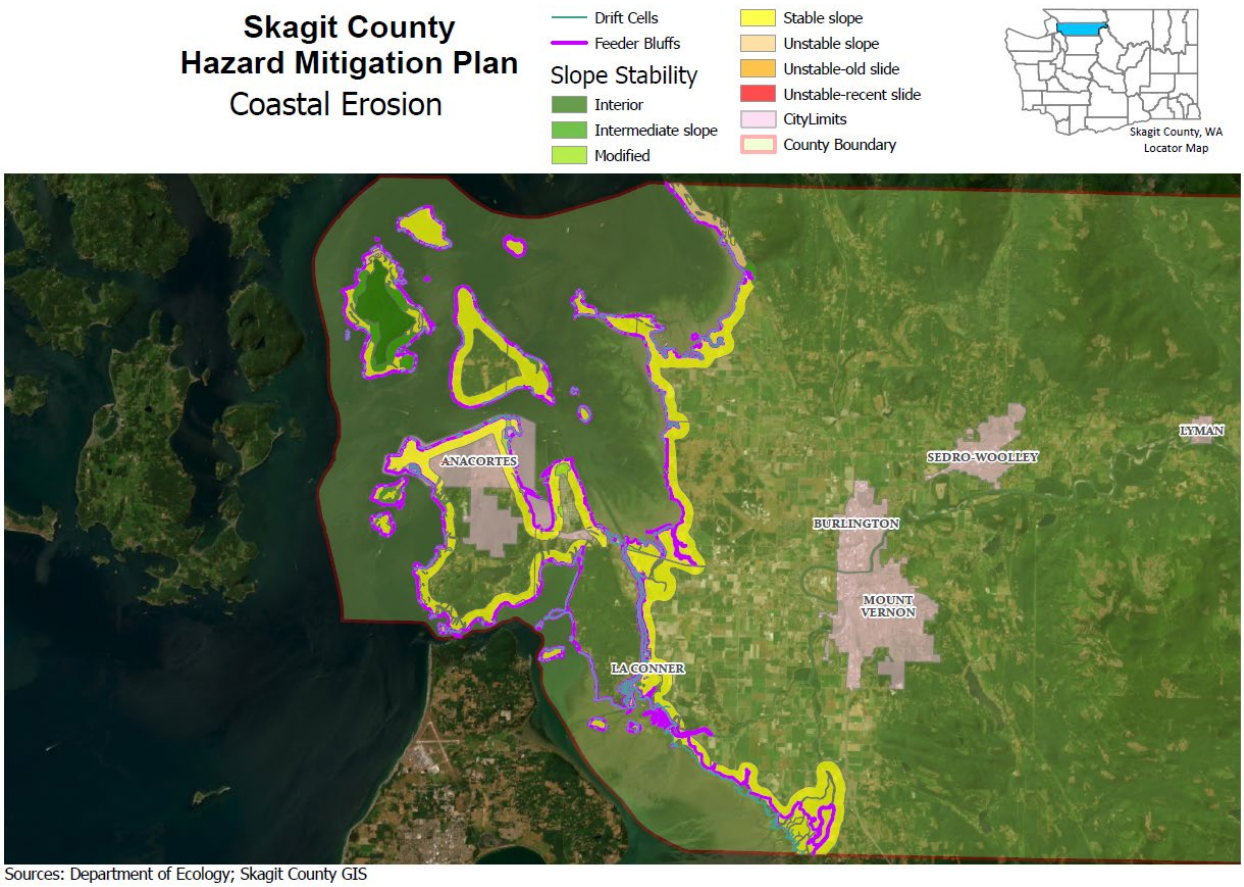


Figure 7. Coastal Erosion in Skagit County, WA

Sea Level Rise

Washington State's Department of Ecology utilizes projections from the Washington Coastal Resilience Project (WCRP) 2018 Assessment as the best available science for likely sea level rise along the state's coast. Probabilistic projections of relative SLR projections are the best available data for hazard mitigation planning and risk management. It is important to note that coastal conditions are dynamic and constantly changing, therefore, SLR projections can vary

depending on local conditions. Although the County's coastal landscape is diverse, SLR projections fall within a range as described in Table 8 below. There is a 50% likelihood that sea levels will rise by one foot by mid-century, and 3.3 feet by the end of the century[23, 24] under various scenarios, as further illustrated in **Figure 8**. Reduced emissions (RCP 4.5) and business-as-usual (RCP 8.5) scenarios show sea levels that are projected to remain relatively the same until mid-century.

Table 8. Relative Sea Level Rise in Skagit County, WA

	2050		2100	
	10% probability	50% probability	10% probability	50% probability
RCP 4.5 scenario	1.0-1.1 feet	0.6-0.7 feet	2.7 feet	1.6 feet
RCP 8.5 scenario	1.0-1.1 feet	0.7 feet	3.3 feet	2.1 feet

Source: Washington Coastal Resilience Project, 2018.

According to the Washington State Department of Ecology the impacts of sea level rise could include the following: increased coastal community flooding, coastal erosion and landslides, seawater well intrusion, acidification of waters, and lost wetlands and estuaries. Rising seas will result in more frequent and destructive coastal storms from associated storm surges as the frequency and intensity of flooding events and extreme precipitation events occur.

[23] Miller, I.M., Morgan, H., Mauger, G., Newton, T., Weldon, R., Schmidt, D., Welch, M., Grossman, E. 2018. *Projected Sea Level Rise for Washington State – A 2018 Assessment*. A collaboration of Washington Sea Grant, University of Washington Climate Impacts Group, University of Oregon, University of Washington, and US Geological Survey. Prepared for the Washington Coastal Resilience Project. updated 07/2019.

[24] https://wacoastalnetwork.com/research-and-tools/slr-visualization/.

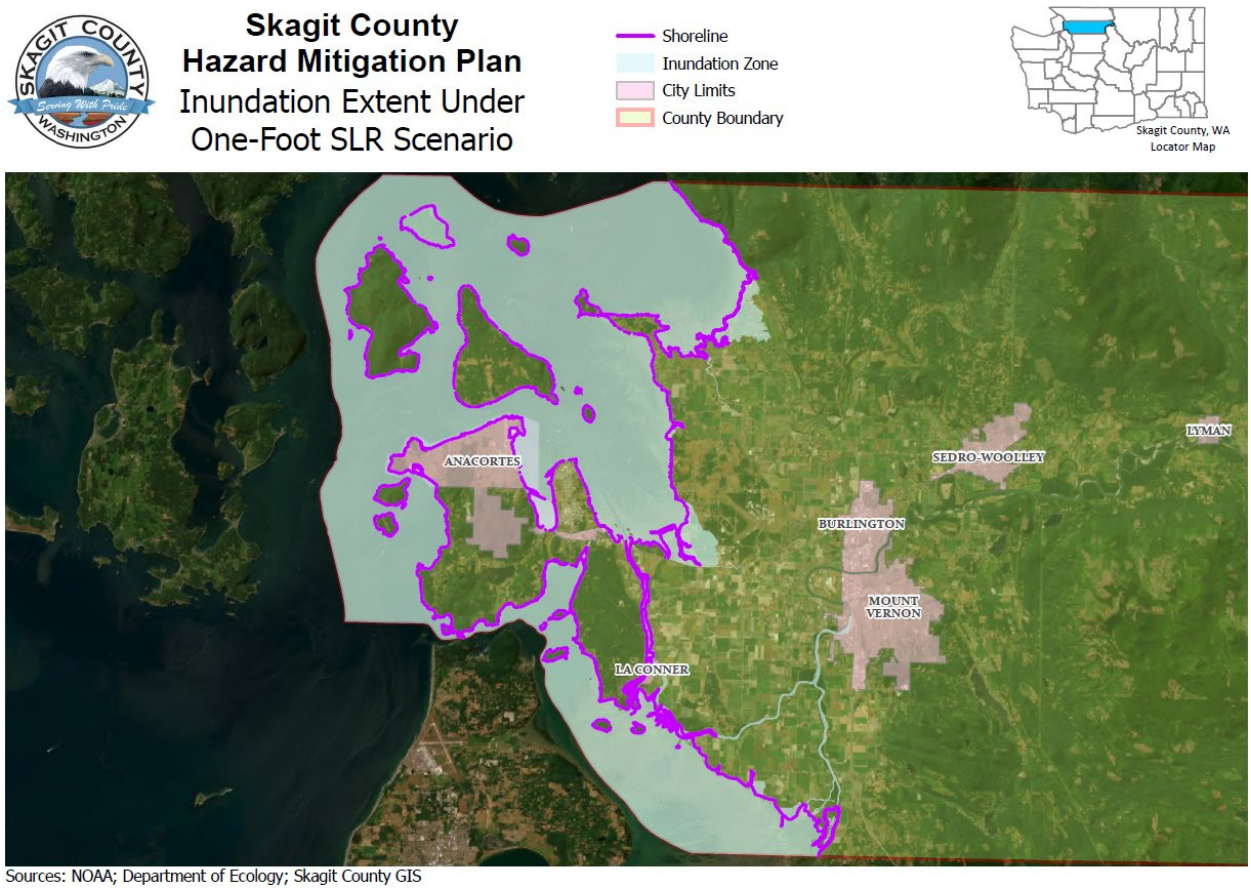


Figure 8. One-Foot Sea Level Rise Inundation Extent, Skagit County (RCP8.5)

Groundwater Shoaling

A USGS study on future coastal groundwater emergence and shoaling in Puget Sound showed that a majority of the Skagit River and Sauk River deltas exhibit emergent and very shallow (0 to 1 meter) groundwater levels[25] under the present-day SLR (0 meter) scenario. Groundwater levels represent water table depth relative to the ground surface, meaning that areas with very shallow levels are highly susceptible to groundwater inundation.

[25] Befus, K.M., Hoover, D.J., Grossman, E.E., and Barnard, P.L., 2024, Future coastal groundwater hazards in the Puget Sound region, Washington, U.S.A.: U.S. Geological Survey data release, https://doi.org/10.5066/P946YX5G.

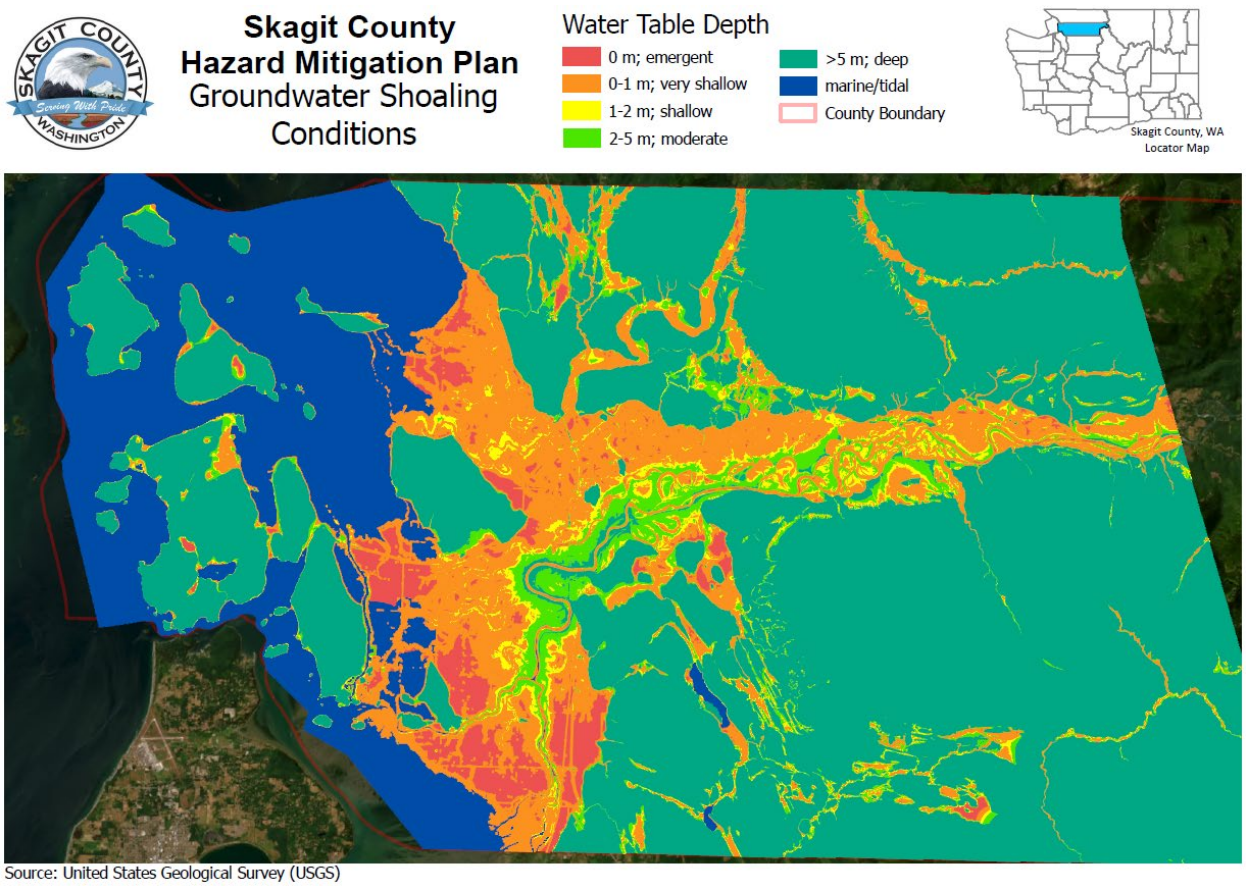


Figure 9. Groundwater Elevation Conditions in Skagit County, WA

Saltwater Intrusion

The variability of saltwater intrusion events means that evidence of saltwater presence in freshwater supplies relies on localized studies and reports. Guemes Island in northwest Skagit County has recorded history of saltwater intrusion and continues to monitor groundwater conditions from well drilling activities. In addition, the presence of chlorides, water conductivity, and water levels are indicators of seawater intrusion, where elevated levels of chloride and sodium can lead to public health issues such as hypertension and exacerbate health issues for individuals with high blood pressure, cardiovascular, and kidney issues[26,27].

5.3 Past Events

Coastal Erosion

Most coastal landslides occur at Chuckanut Mountain which is comprised of coarse sand and gravel stream terrace deposits that are weakly cemented. Ancient volcanic material and rocks: dunite, peridotite, pyroxenite, serpentinite, and altered ultrabasic (ultramafic) rocks also makeup the unstable bluff area. Landslides that occur on the coast are most common during wintertime

[26] https://online.ucpress.edu/elementa/article/doi/10.1525/elementa.143/112784/Drinking-water-salinity-associated-health-crisis

[27] New report finds that as sea levels rise, underground saltwater surges inland in South Florida

where rockslides occur following extreme precipitation events, thus blocking roads resulting in road closures.

Table 9. Past Events of Coastal Landslides (2019-2025)			
Date	**Nearest Place**	**Information Source**	**Damage Description**
1/9/2019	Chuckanut Dr. / SR-11 MP 13	WA Dept. of Transportation	A rockslide blocked both lanes of Chuckanut Drive overnight
2/8/2020	Chuckanut Dr, 2.5 miles south of Larrabee SP entrance	Bellingham Herald	Rocks, trees, and debris slide blocking the road for at least a day.
2/10/2020	Friday Creek between Alger and Belfast	Homeowner, Forest Practices, Dept. of Natural Resources	Stream side slump after heavy precipitation.
12/12/2021	SR-11 MP 12 North of Oyster Creek	WA Dept. of Transportation	both directions of SR-11 temporarily closed
11/2/2024	SR 11 MP 13	WA Dept. of Transportation	Rockfall damage to roadway
4/22/2025	SR 11 MP 10	WA State Department of Transportation	Rocks and boulders blocking road
5/29/2025	SR 11 milepost 10, just north of Blanchard Rd.	WA State Department of Transportation	All lanes closed due to rockslide

Past events of coastal erosion are also analyzed by reviewing historic shoreline photos to look for evidence of a receding coastline. Aerial photos from 1979 to 2016 were reviewed within areas that exhibit feeder bluffs, high littoral drifting, and recent landslides[28, 29]. No significant receding of coastal shorelines are evident. The County's shoreline also contains areas that are highly engineered with a series of infill, dike infrastructure, tide gates, rock revetments, and natural vegetation to manage coastal erosion. Areas with shallow mudflats tend to flood under storm conditions before fronting coastal protective structures.

Sea Level Rise

According to NOAA, relative sea level trends indicate a rise of 2.09 millimeters (or 0.006856955 feet) per year with a 95% confidence interval of +/1 0.14 millimeters per year, based on monthly mean sea level data from 1899 and 2024. Relative sea levels do not account for annual and seasonal fluctuations in sea levels from temperature, salinity, wind, atmospheric pressure, and ocean currents.

[28] https://apps.ecology.wa.gov/coastalatlasmap. Accessed on July 2025.

[29] https://apps.ecology.wa.gov/shorephotoviewer/?CustomMap=y&photo=010524-145948&vintage=2000. Accessed on July 2025.

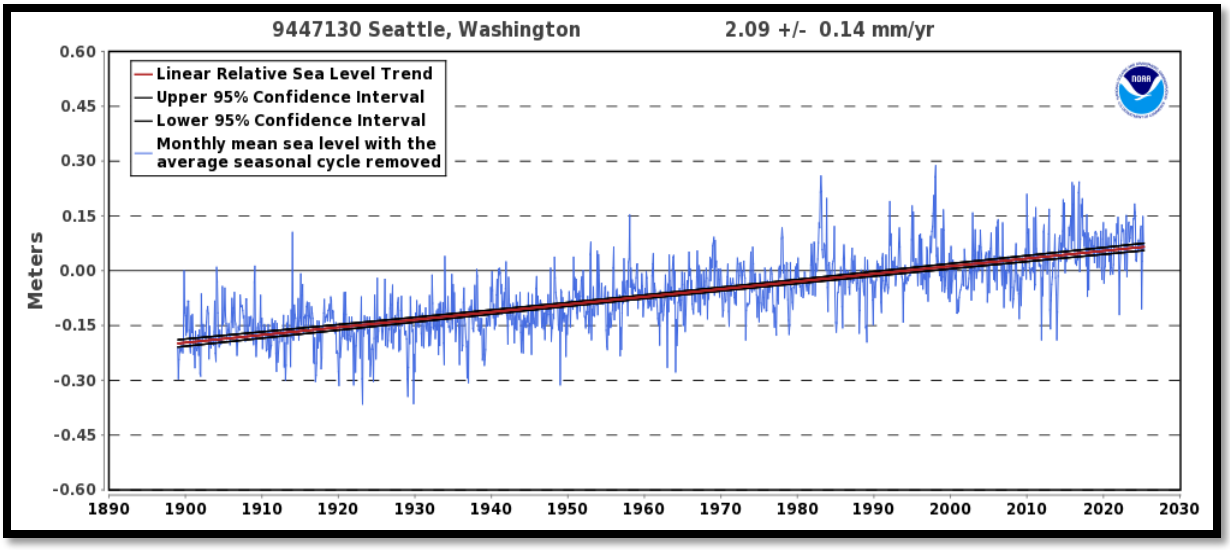


Figure 10. Existing and Projected Sea Levels from 1890-2030[30]

Groundwater Shoaling

The USGS study by Kevin Befus et. al. modeled groundwater response to sea level rise in the Puget Sound region and found that under various SLR scenarios and ground hydraulic conductivity, projected water table depths are shallower in areas where riverine and ocean waters meet. Fir Island, south Conway, agricultural lands surrounding Fish Town, Whitney, Fredonia, and Edison have experienced surface flooding associated with terrestrial groundwater emerging at the ground surface[31] and may be more vulnerable to groundwater shoaling and emergence from SLR.

To further illustrate this phenomenon, a 2007 study on shallow groundwater movement in the Skagit delta found that groundwater levels were naturally influenced by streamflow volume and tidal cycles[32]. A well near the tidally influenced Swinomish Channel exhibited water-level fluctuations that corresponded with semidiurnal tidal extremes, suggesting that increased sea levels also result in increased groundwater levels near in the delta area.

5.4 Probability of Future Events

Coastal erosion and seawater intrusion occur episodically during events with high tides and high flood waters. Since erosion and sea level rise do not occur as single, discrete events, the analysis below describes these phenomena as ongoing trends and impacts rather than specific incidents and emergency declarations. An indicator of future probability is documented evidence of seawater intrusion for well drilling or well monitoring efforts. The Washington State Department of Ecology requires counties to annually report chloride, conductivity, and depth to static water level measurements for certain wells (RCW 90.54.020; WAC 173-200-030).

[30] https://tidesandcurrents.noaa.gov/sltrends/sltrends_station.shtml?id=9447130
[31] Befus K. et. al. 2024.
[32] Savoca, M.E., Johnson, K.H., and Fasser, E.T., 2009, Shallow groundwater movement in the Skagit River Delta Area, Skagit County, Washington: U.S. Geological Survey Scientific Investigations Report 2009–5208, 22 p. Accessed at https://pubs.usgs.gov/sir/2009/5208/pdf/sir20095208.pdf on July 2025.

Skagit County requires well drilling applications to include information on estimated well depth, land elevation, depth and chloride levels of surrounding wells, and other related information for sole source aquifer (SSA) zones (SCC Chapter 14.08).

Earthen dikes in emergent groundwater zones can experience frequent flooding when extreme precipitation, storms, and other flood events occur. Continual exposure of earthen dikes to flooding compromises the structural integrity of the flood management system, requiring maintenance or risk eventual failure. However, inundation extents of coastal flooding are often difficult to predict as inundation typically comes from or are influenced by multiple sources: rapid snowmelt, extreme precipitation, groundwater withdrawals, high or King tides, and winter storms. As such, the vulnerability assessment considers a combination of SLR extent, unstable slope buffers, and groundwater conditions for exposure and sensitivity to coastal hazards.

Thus, the Planning Team determined that – on balance – the probability of significant coastal hazard event occurring is considered medium (10 to 20 year recurrence), while catastrophic saltwater intrusion events remain low but is anticipated to increase with future SLR projections.

5.5 Risk Assessment

Overview, Methodology

Vulnerability represents the exposure, sensitivity, and adaptive capacity of the county's assets in the event of a hazard. Coastal hazard exposure was conducted using GIS analyses under the following combined scenarios:

- Ran 1-foot SLR scenario as conservative measure – did not run year 2100 50% likelihood scenario of 2-feet SLR
- Ran Slope stability analysis of assets located in unstable and unstable-recent slide areas
- Ran groundwater shoaling presence under "emergent" conditions

The exposure analysis was performed at the census tract scale since parcel-level building data was not available. Assets and census tracts located completely within hazard zone for scenarios above are considered exposed. Census tracts with a majority of the area not within hazard zone was considered not exposed or partially exposed. Sensitivity of critical facilities increase with assets closer to the shoreline than those further away from the shoreline. Building materials can also affect a building's sensitivity in which those made of earthen material are more prone to coastal hazards than those made of steel or brick, for example. Critical facilities impacted by coastal hazards would result in direct damage by undermining the foundation.

Warning Time

SLR is relatively predictable using tide gauge readings over a certain period of time. Littoral drift zones and sediment deposits can be predicted using oceanographic monitoring of wave activity. Similarly, groundwater levels and their chemistry are often monitored and can be tested for changes before consumption.

Duration

Coastal hazards are typically viewed as a process over a long period of time – coastal erosion occurs indefinitely where there is land and natural sediment supply available. Similarly, sea level rise will likely occur as a single occurrence phenomenon within the next 100 years unless a catastrophic event such as volcanic eruption occurs which cools ambient land temperatures and forms ice sheets and glaciers around the planet. Groundwater shoaling is not a one-time phenomenon and typically occurs annually, sometimes multiple times in a year, depending on the magnitude of tidal influence, extreme precipitation, and snowpack melting. Regardless, when considering the most likely coastal hazard event that could occur in the County, the Planning team determined that coastal hazards are likely to persist for less than 24 hours.

5.5.1 Impact on Life, Health, and Safety

Coastal hazards can impact human life, health, and safety in many ways; Approximately 2,561 of the County's population are exposed to coastal hazards, 68.4% of which reside in unincorporated County. There are 297 lower income households exposed, 46.5% of which are in unincorporated County and 33.8% of whom are individuals working commercial or industrial jobs. Lower income households are more likely than higher income households to experience homelessness or displacement when their home or workplace is exposed to hazards[33].

Table 10. Population and Household Impact from Coastal Hazards in Skagit County, WA

	Population	% Population Exposed	Income 50k or Less	Population Working in Commercial/Industrial
Unincorporated County	**1,751**	**3.6%**	**138**	**592**
Anacortes	605	3.4%	118	510
Mount Vernon	0	0	0	0
Swinomish Indian Reservation	0	0	0	0
La Conner	82	8.5%	20	708
Concrete	0	0	0	0
Town of Hamilton	0	0	0	0
Lyman	3	0	0	4
City of Sedro-Woolley	120	0.95%	21	3
Burlington	0	0.0%	0	0
Upper Skagit Indian Tribe	0	0	0	0
Samish Indian Nation	0	0	0	0
Total	***2,561***	***16.5%***	***297***	***1,817***

[33] https://www.samhsa.gov/sites/default/files/dtac/srb-low-ses_2.pdf.

5.5.2 Impact on Critical Facilities, Properties, and Infrastructure

Impact on critical facilities, properties, and infrastructure are measured by the amount and rate of facilities lost or potentially affected by a hazard event.

Table 11. Number of Facilities Exposed by Type to Coastal Hazards

	Transportation[1]	Ferry Landings & Port Facilities[2]	Wastewater[3]	Flood Control[4]	Fire Stations and Police Stations	Parks	Boat Launch	Hazardous Sites	Educational Facilities	Estimated Total
Unincorporated County	**11**	**22**	**2**	**24**	**2**	**2**	**2**	**1**	**0**	**66**
Anacortes	0	18	0	0	0	1	1	3	0	23
Mount Vernon	0	0	0	0	0	0	0	0	0	0
Swinomish Indian Reservation	2	0	1	0	0	0	0	0	0	3
La Conner	0	1	0	0	0	0	0	0	0	1
Concrete	0	0	0	0	0	0	0	0	0	0
Town of Hamilton	0	0	0	0	0	0	0	0	0	0
Lyman	0	0	0	0	0	0	0	0	0	0
City of Sedro-Woolley	0	0	0	0	0	0	0	0	0	0
Burlington	0	0	0	0	0	0	0	0	0	0
Upper Skagit Indian Tribe	0	0	0	0	0	0	0	0	0	0
Samish Indian Nation	0	0	0	0	0	0	0	0	0	0
Total	***13***	***41***	***3***	***24***	***2***	***3***	***3***	***4***	***0***	***93***

[1] Bridges for highways and railways. Road impacts assessed separately.
[2] Guemes Channel Port Facility (Guemes Channel Ship Harbor, Industrial canning manufacturers/storage, Piers, Anacortes Wharf, Shipyard), Cap Sante Marina
[3] Burlington WWTP, Pump stations/houses, Swinomish Reservation Sewer Plant
[4] Tidegates, floodgates

5.5.3 Impact on Economy

Impact to economy is measured by the amount and rate of lost revenue and income. Total exposure of building value and property values are indicated below. Property damage amounting

to more than $5 million with more than 50% of facilities experiencing severe property damage is considered catastrophic.

Table 12. Total Exposure in USD by Building Type to Coastal Hazards

	Average Property Value	Structures Built 75+ years Ago (1950)[1]	Wood Building Exposure (in USD)	Steel Building Exposure (in USD)	Concrete Building Exposure (in USD)	Total Exposure (in USD)
Unincorporated County	$437,864	183	$540,167,000	$65,444,000	$85,809,000	$802,455,000
Anacortes	$444,100	70	$236,876,000	$64,176,000	$211,553,000	$557,821,000
Mount Vernon	$ -	0	$23,786,000	$6,430,000	$21,736,000	$60,891,000
Swinomish Indian Reservation	$ -	0	$ -	$ -	$ -	$ -
La Conner	$347,775	12	$81,909,000	$26,857,000	$41,469,000	$185,541,000
Concrete	$ -	0	$ -	$ -	$ -	$ -
Town of Hamilton	$ -	0	$ -	$ -	$ -	$ -
Lyman	$313,700	1	$4,239,000	$446,000	$892,000	$7,001,000
City of Sedro-Woolley	$271,100	14	$10,783,000	$749,000	$662,000	$13,379,000
Burlington	$ -	0	$ -	$ -	$ -	$ -
Upper Skagit Indian Tribe	$ -	0	$ -	$ -	$ -	$ -
Samish Indian Nation	$ -	0	$ -	$ -	$ -	$ -
Total	***$1,814,539***	***280***	***$897,760,000***	***$164,102,000***	***$362,121,000***	***$1,627,088,000***

[1] 75 years is the typical lifespan of a building.

5.5.4 Impact on Environment

The County's shoreline has conditions suitable for estuarine habitat that juvenile fish use to mature before migrating to the ocean. Pocket estuaries, deep brackish waters, and grassy wetlands provide ideal conditions for fish and fauna to thrive. Although sediment drift and erosion are natural processes of a shoreline, intense wave action, sea levels, and saltwater intrusion can alter water chemistry and temperatures that directly impact habitat for protected species.

5.5.5 Impact from Climate Change

Higher global temperatures have broad implications for climate change impacts. One of the primary indicators of climate change is higher sea levels as global temperatures can permanently melt glaciers that increase ocean water volume. Higher temperatures also influence atmospheric pollution by retaining carbon dioxide, methane, and other greenhouse gases, providing more pollutants for the ocean to absorb thus resulting in ocean acidification. Increased sea levels when

combined with atmospheric storms, unstable landforms, riverine flooding, and failing coastal flood infrastructure can exacerbate coastal hazards by inundating areas that were previously safe from flooding.

5.5.6 Risk Determination

Risk was determined using combined coastal hazard scenarios of one-foot SLR inundation extent, landslides, and emergent groundwater levels. Because of coastal hazards warning time, duration, and other vulnerabilities, the CPRI score has been determined to be 2.65.

Chapter 6. Drought

6.1 General Background

Droughts are defined by the National Weather Service as a deficiency in precipitation over an extended period, usually lasting a season or more.[34] Depending on duration, droughts may be classified as short or long-term. Washington State further defines drought conditions as the means that the water supply for a significant portion of a geographic area is below 75% normal and the shortage is likely to create undue hardships for water users for the environment.[35] Unlike other natural hazards, droughts develop over time and can persist for months to years. Scientists classify droughts based on their effects, as described in **Table** 13 below:

Table 13. Types of Drought Conditions

Type	Description
Meteorological	When dry weather patterns dominate an area.
Hydrological	When low water supply becomes evident in the water system.
Agricultural	When crops are affected by drought.
Socioeconomic	When the supply and demand of various commodities are affected by drought.
Ecological	When natural ecosystems are affected by drought.

Depending on the severity, droughts have the potential to lead to a wide range of environmental, social, and economic impacts. Reducing water availability, according to NIDIS, droughts can have severe implications for agriculture, transportation, public health, ecosystems, water quality, and wildfires.[36] Effective drought mitigation would require a prolonged approach, including monitoring systems, water conservation measures and public education.

6.2 Extent and Location

Drought severity is typically measured using the U.S Drought Monitor classifications (**Table** 14). The U.S Drought Monitor represents collaboration among the National Drought Mitigation Center, USDA, and National Oceanic and Atmospheric Administration to rate droughts nationwide. Their scale ranges from abnormally dry (D0) to exceptional drought (D4). According to the U.S Drought Monitor interactive map, Skagit County ranges from D1 to D3, with most of the population living in areas classified as D2, severe drought.

Table 14. U.S. Drought Monitor Classification

Category	Description	% of Skagit County Population Within Category
D0	Abnormally Dry	0%

[34] NOAA and NWS Definition: https://www.weather.gov/safety/drought
[35] Washington State RCW 43.83B.011 https://app.leg.wa.gov/RCW/default.aspx?cite=43.83B.011
[36] NIDIS https://www.drought.gov/what-is-drought/drought-basics

D1	Moderate Drought	18.49%
D2	Severe Drought	62.96%
D3	Extreme Drought	18.55%
D4	Exceptional Drought	0%

Drought often occurs in relation to regional climate patterns. Its intensity depends on a variety of factors, including moisture, duration, size, and location of the area. Skagit County varies in geography, with the western portion of the county receiving more precipitation than the eastern portion. This creates variation in drought intensity across Skagit County, leaving agricultural areas and rural communities most vulnerable. The eastern portion of the County typically experiences prolonged dry periods due to lower snowpack and water availability. In Washington State, snowpack acts as an important water source. In 2024, Skagit County received an average of 77.2 inches of precipitation.[37]

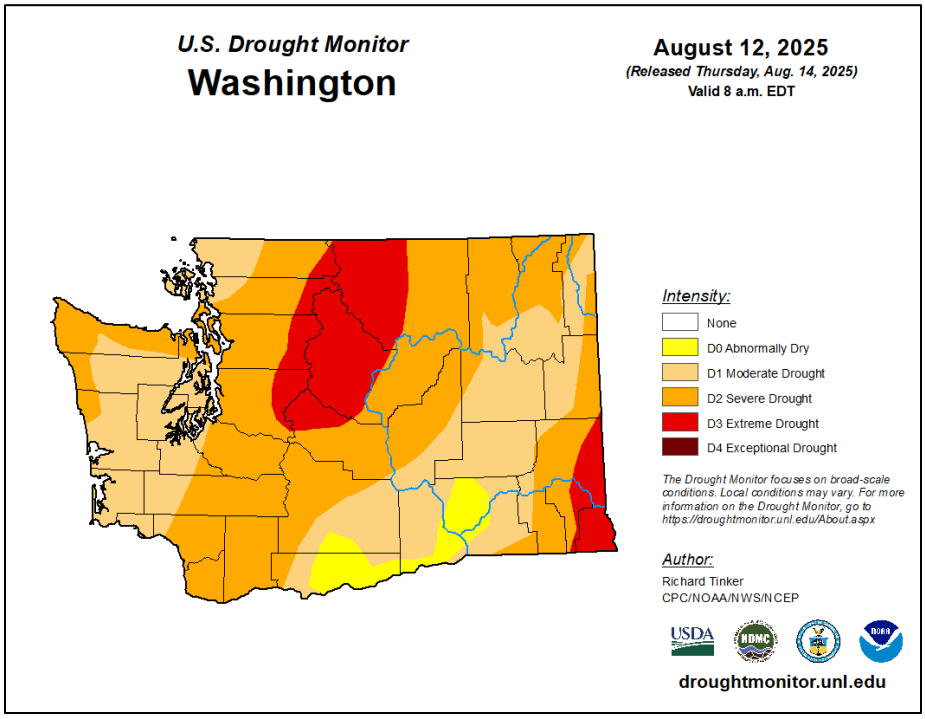


Figure 11. U.S. Drought Monitor for Washington State

6.3 Past Events

Droughts are recurring and, unlike other hazards, are not isolated events. Skagit County has experienced multiple droughts between 2000 and 2025, as illustrated in **Figure** 12.[38]

[37] Average Rainfall https://skagitcountytrends.org/graph
[38] Skagit County Drought Time Series: https://www.drought.gov/states/washington/county/skagit

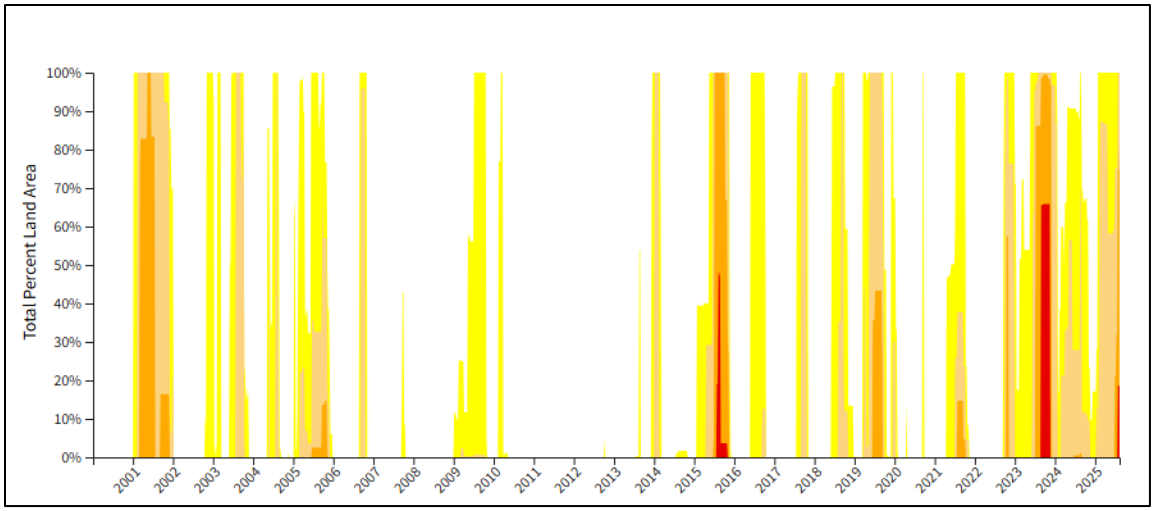


Figure 12. Historic Drought in Skagit County (2000-2025)

There have been three notable droughts in Skagit County since 2022, listed in **Table 15**.

Table 15. Past Occurrences of Significant Drought

Year	Event Description
2022-2023	On July 24th, 2023, a drought emergency was declared across 12 counties in Washington, including for the Upper and Lower Skagit County watersheds. Rainfall levels fell 50% the normal level, compounded by low streamflow and early snowmelt. Data from the U.S. Drought Monitor put most of Western Washington in "severe" drought conditions, with implications such as increased wildfires, stressed fish, warm river water, and rationed water supplies for irrigation leading to stunted harvests.
2024	On April 16th, 2024, a low snowpack and a dry forecast led to a state declaration of drought. Due to decreased snowpack and low river flows as well as warm water conditions, the event threatened aquatic wildlife. Additionally, the ability to sustain the agriculture industry was questioned. Summer flows in the Skagit River were among the lowest on record in the Spring of 2024 and July, the record setting heat and drier than normal conditions added to the strain.
2025	On June 5th, 2025, the Department of Ecology issued a Drought Emergency Declaration for 19 Washington counties, including all of Whatcom and Skagit counties. This declaration expanded the declaration from April 8, 2025. According to the Washington State Department of Ecology, snowpack deficits coupled with rapid and early melt off, as well as dry January, April, and May have impacted the state's water supply. The Yakima Basin water supply is impacted by low reservoir storage from low rainfall, soil moisture and snowpack from the 2023 and 2024 droughts as well.

Sources: ***Cascadia Daily News***; ***Washington State Department of Ecology***; ***Washington State Department of Ecology***

6.4 Probability of Future Events

In Skagit County, the probability of a significant drought occurring is likely within 10 years. For reference, a significant hazard event is defined as any hazard occurrence that directly or indirectly damages structures, or infrastructure, impedes business operations, or is likely to cause serious or fatal injuries.

6.5 Risk Assessment

Warning Time

Drought events in the United States are monitored by the Drought Early Warning System (DEWS). This monitoring system is a network of regional and national partners that share information and coordinate actions to help communities in the region cope with drought.[39] The Drought Monitoring System forecasts monthly, seasonal, and rapid onset drought conditions. Because of these extensive systems, advanced notice for drought events can be given to the community that is impacted.

Duration

Droughts may vary widely in duration. Short-term droughts typically last a few weeks to months, while long-term droughts can last longer than 6 months to years. The duration of this natural hazard is extensive compared to other analyzed hazards in this Hazard Mitigation Plan.

6.5.1 Impact on Life, Health, and Safety

The entire population of Skagit County is vulnerable to drought events. Drought impacts water availability and temperature, which can negatively impact human health and challenge health departments, emergency management, and healthcare providers.[40] The National Integrated Drought Information System outlines several human health implications of drought, which include:

- Compromised quantity and quality of drinking water
- Effects on air quality
- Diminished living conditions related to energy, air quality, sanitation and hygiene.
- Compromised food and nutrition
- Increased incidence of illness and disease, including anxiety, depression, or other adverse mental health outcomes.
- Increased recreational risks[40]

Aging populations are especially vulnerable to severe drought conditions. As airborne pathogens, and particulate matter worsen during drought conditions, elevated pollution levels trigger

[39] DEWS https://www.drought.gov/about/drought-early-warning
[40] NIDIS Public Health https://www.drought.gov/sectors/public-health

autoimmune responses that increase mental and physiological stress on the human body[41],[42]. Areas where severe drought conditions are becoming more common resulted in increased risk of mortality and cardiovascular disease compared to areas where drought is more common. Impacts are particularly high in the County where there is a higher proportion of older residents and retirees exposed to meteorological drought. Drought may also worsen the impact of wildfires within Skagit County. The timing, intensity, and frequency of drought events have differing impacts on fuel flammability and fire behavior.[43] During periods of drought, vegetation can dry and become more flammable, which can increase the probability of ignition and the rate at which the fire spreads.

6.5.2 Impact on Critical Facilities, Properties, and Infrastructure

Drought does not have direct impacts on critical facilities, properties, or infrastructure. However, drought can cause lasting impacts to county water supplies and reservoirs, which can affect critical facilities like water transmission pipelines and pumping stations, fire stations, and hospitals. Drought also creates drier conditions that worsen the impacts of wildfire damage. While drought does have significant impacts on landscapes, the issue for properties will be aesthetic and is not considered a critical effect.

6.5.3 Impact on Economy

The primary direct economic impact of drought will be in the agricultural sector, an important contributor to the Skagit County economy. There are 882 farms identified in Skagit County by the USDA Census of Agriculture[44]. Droughts create drier conditions, decreasing water availability and quality, and causing increasing costs for irrigation and watering livestock. Wildfire hazards worsened by drought conditions can also have severe impacts on the agricultural sector.

Because of these compounding issues, agricultural productivity may decrease, leading to higher costs for rural communities. Tourism from agriculture and landscape may also be impacted by drought conditions in Skagit County. Combined, the impact on the agricultural industry could be high. Additional economic impact could reach other businesses that depend on water, such as fishing industries, water-based recreational activities, public facilities and recreational areas.

6.5.4 Impact on Environment

Drought may have long lasting impacts on several environmental factors, including aquatic life, plants, animals, wildlife habitats, air and water quality, forest fires, landscape quality, biodiversity, and soil erosion. In Skagit County, the Skagit River is the only system in Washington to support all five species of salmon: Chinook, Chum, Coho, Pink, and Sockeye.[45] A severe drought could

[41] Berman, Jesse D et al. "Drought and the risk of hospital admissions and mortality in older adults in western USA from 2000 to 2013: a retrospective study." The Lancet. Planetary health vol. 1,1 (2017): e17-e25. doi:10.1016/S2542-5196(17)30002-5.

[42] Kevin Dennehy, Yale School of the Environment. "Drought Linked With Health Risks in Older Adults, Yale-Led Study Shows". Accessed on August 2025 at https://environment.yale.edu/news/article/study-links-drought-with-human-health-risks#:~:text=Led%20Study%20Shows-,Drought%20Linked%20With%20Health%20Risks%20in%20Older%20Adults%2C%20Yale%2DLed,among%20adults%2065%20or%20over..

[43] NIDIS Droughts Impact on Wildfires https://www.drought.gov/sectors/wildfire-management

[44] USDA Census of Agriculture https://www.nass.usda.gov/Publications/AgCensus/2022

[45] Skagit County Salmon https://www.psp.wa.gov/shared-salmon-strategy

reduce streamflow and create environmental impacts on local salmon populations. Decreased streamflow can also severely impact local fishing and recreational utilization of lakes and streams in Skagit County. Wildlife habitats are also at risk due to drought conditions.

6.5.5 Impact from Climate Change

Climate change will have a significant impact on drought conditions in Skagit County. As average temperatures in the Pacific Northwest increase, areas with high elevations are anticipating increased warming and evaporation. This will impact snowpack in the eastern portion of Skagit County, decreasing the overall water supply. This decrease may cause issues with irrigation and watering livestock, water for firefighters to control fire spread, and water consumption by the population of Skagit County. Climate change will exacerbate the effects of drought within the agricultural sector, further damaging the local economy.

6.5.6 Risk Determination

Because of the drought's warning time, duration, and other vulnerabilities, the CPRI score for drought has been determined to be 2.8.

Chapter 7. Earthquake

7.1 General Background

An earthquake is defined by the United States Geological Survey as a sudden slip on a fault and the resulting ground shaking and radiated seismic energy. This could be caused by volcanic magmatic activity or other sudden stress changes in the Earth.[46] The location of an earthquake is described by its epicenter and by its focal depth. Many earthquakes occur along a fault, which is a fracture in the Earth's crust.

Earthquakes are typically classified in two ways, either by the amount of energy released, measured in magnitude, or by the impact on people and structures, measured in intensity. Magnitude is related to the amount of seismic energy recorded on instruments. Intensity indicates how the earthquake is felt at various distances from the earthquake epicenter. Magnitude is represented by a single determined value of each earthquake event, as shown on the right.[47]

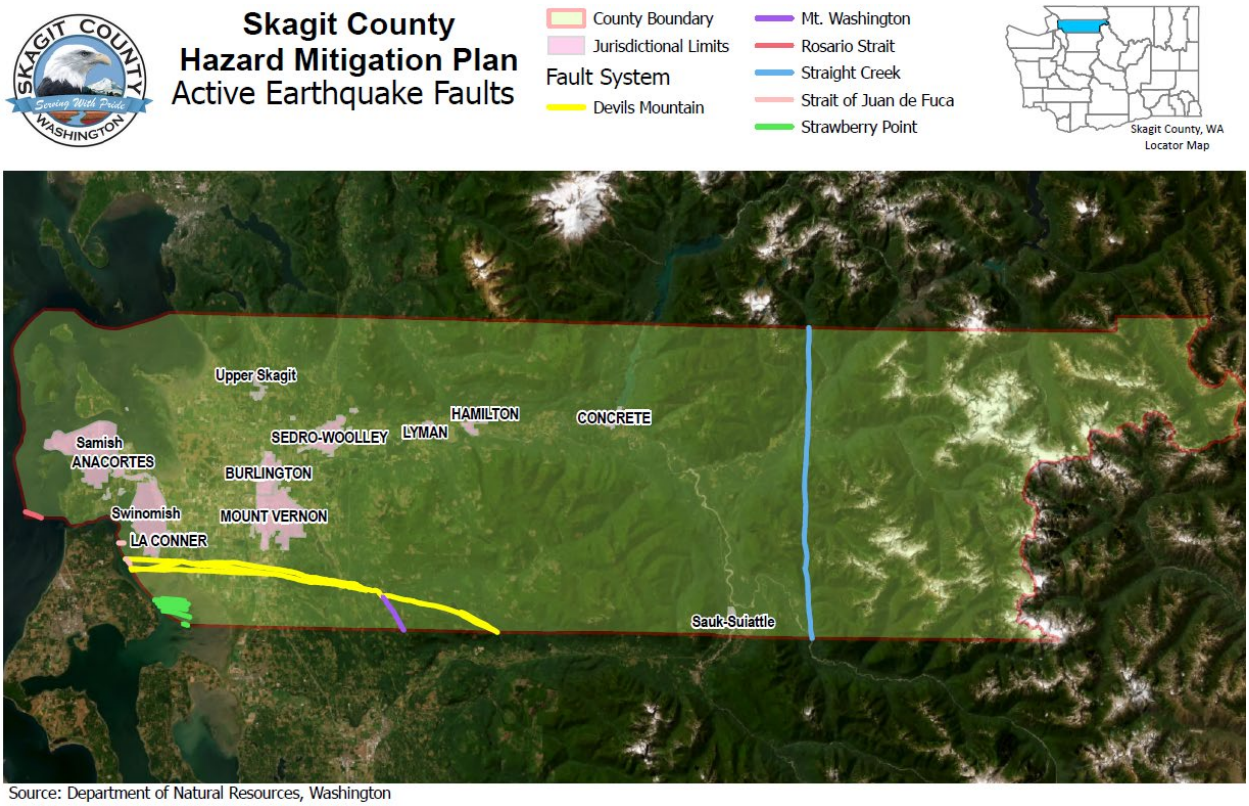
Magnitude (M_W) Scale	
Great	$M_W \geq 8$
Major	M_W 7.0 – 7.9
Strong	M_W 6.0 - 6.9
Moderate	M_W 5.0 – 5.9
Light	M_W 4.0 - 4.9
Minor	M_W 3.0 – 3.9
Micro	$M_W < 3$

The geography of the Pacific Northwest is tectonically active. The Washington Department of Natural Resources states that earthquakes are very common in the state, though most are too small to be felt or cause damage. Large earthquakes are less common; however, there is potential for them in the area. The Cascadian Subduction Zone, stretching from Northern Vancouver Island to Cape Mendocino, California separates the North American and Juan De Fuca plates. It runs on the west side of Washington through Skagit County. According to the Pacific Northwest Seismic Network, these subduction zones have the potential to create some of the largest earthquakes in the world.

7.2 Extent and Location

Skagit County is located near numerous local faults, including Straight Creek Fault, Darrington-Devils Mountain Fault, and Strawberry Point Fault.[48]

[46] USGS Earthquake: https://www.usgs.gov/programs/earthquake-hazards
[47] PNSN Magnitude and Intensity https://pnsn.org/outreach/about-earthquakes/magnitude-intensity
[48] UGUS U.S Quaternary Faults https://usgs.maps.arcgis.com/apps/webappviewer



Source: Department of Natural Resources, Washington

Figure 13. Skagit County Local Area Faults

The extent to which earthquakes are felt across Skagit County can be measured using the modified Mercalli intensity value scale, shown in **Table 16** below.

Table 16. Mercalli Intensity Earthquake Scale

Intensity	Shaking	Description/Damage
I	Not felt	Not felt except by a very few under especially favorable conditions.
II	Weak	Felt only by a few people at rest, especially on the upper floors of buildings.
III	Weak	Felt quite noticeably by people indoors, especially on the upper floors of buildings. Many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibrations like the passing of a truck. Duration estimated.
IV	Light	Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sounds.
V	Moderate	Felt by nearly everyone; many awakened. Some dishes, windows broken.
VI	Strong	Felt by all, many frightened. Heavy furniture moved, a few instances of fallen plaster. Damage slight.

VII	Very strong	Damage negligible in buildings of good design, slight to moderate in well-built ordinary structures, considerable damage in poorly built or badly designed structures.
VIII	Severe	Damage slight in specially designed structures; considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly designed structures.
IX	Violent	Damage considerable to all structures. Buildings shifted off foundations.
X	Extreme	Some well-built wooden structures destroyed, most masonry/frame structures were destroyed. Rails may bend.

Source: https://www.usgs.gov/programs/earthquake-hazards/modified-mercalli-intensity-scale

7.3 Past Events

Historically, Western Washington has experienced frequent earthquakes. Since 2020, Skagit County has experienced two significant earthquakes. These earthquakes occurred on May 1, 2025, and March 3, 2025.[49] Their magnitudes were 3.6 and 4.5, respectively.

Table 17. Historical Earthquakes Impacting the Planning Area:

Year	Magnitude	Epicenter	Type
5/1/2022	3.6	2 km E of Mount Vernon	Shallow Crustal
3/3/2025	4.5	Orcas Island	Crustal

7.4 Probability of Future Events

Earthquakes have varying impacts depending on their magnitude. Based on historical data, a significant earthquake event, defined as magnitude 6.0 or greater occurs roughly every 35 to 40 years. Although the onset of earthquakes is unpredictable, it is likely a significant hazard event will occur in Skagit County within 100 years. The USGS National Seismic Hazard Maps reflect the current understanding of earthquakes hazards in an area. The figure below illustrates the expected number of damaging earthquakes shaking in 10,000 years.

[49] PNSN https://www.pnsn.org/earthquakes/recent

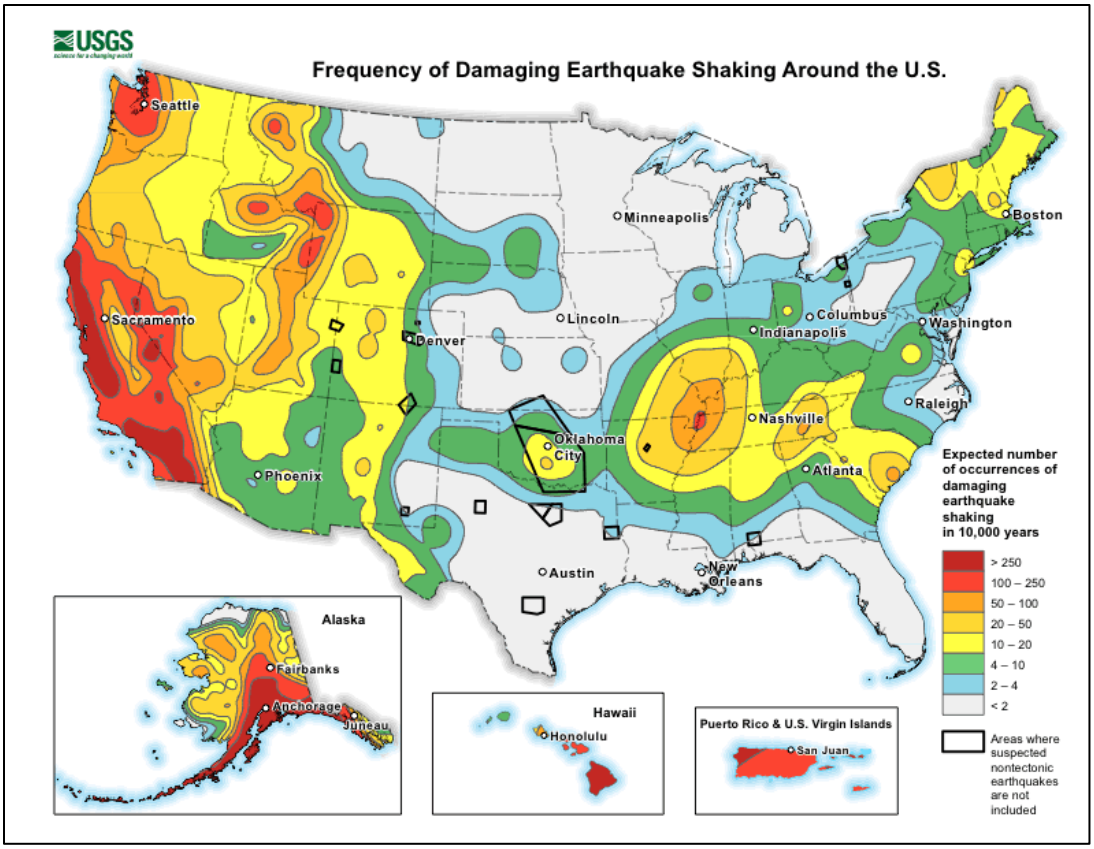


Figure 14. Probability of Future Damaging Earthquakes

7.5 Risk Assessment

Warning Time

Earthquakes often occur with no warning to those who experience them. Early warning systems have been developed by the United State Geological Survey and more local organizations like the Pacific Northwest Seismic Network.[50] These systems notify those of an incoming earthquake either seconds or minutes before.

Duration

An earthquake's duration depends on the magnitude of the event. According to the Pacific Northwest Seismic Network, earthquakes can last seconds to minutes, with larger magnitude earthquakes lasting for a couple minutes with strong shaking.[51] Their duration is much shorter when compared to other natural hazards.

7.5.1 Impact on Life, Health, and Safety

The entire population of Skagit County is vulnerable to both the direct and indirect impacts of earthquakes. The planning team has identified the earthquake's impact on health and safety to be catastrophic. The FEMA National Risk Index identified the expected annual loss of life to be a

[50] Shake Alert https://www.shakealert.org/
[51] Earthquake Duration https://pnsn.org/outreach

value of 0.53. Injuries from this event could result in permanent disability or death. Rescue efforts will be needed to aid elderly and young people in the event of an earthquake, which may put strain on emergency medical services. Depending on the severity of the earthquake, life-threatening injuries and fatalities can occur. Impacts from the aftermath of an earthquake vary widely and may include decreased air quality, limited water availability, or an overall lack of services.

7.5.2 Impact on Critical Facilities, Properties, and Infrastructure

Significant impacts on critical facilities, properties, and infrastructure may occur depending on earthquake severity. The planning team has identified that there could be a catastrophic impact on critical facilities. In the event of an earthquake, critical facilities such as refineries and hazardous material storage can be damaged, negatively impacting the environment. Indirect effects of an earthquake like landslides and liquefaction can worsen the damage to critical infrastructure and property. According to the FEMA National Risk Index, the expected annual loss would be $24,293,42 county wide.[52]

7.5.3 Impact on Economy

Economic losses due to earthquakes would be in the form of building and infrastructure damage. According to the Hazus Loss Library, the losses from the Cascadia Megathrust Earthquake reaching from Washington to Central California will cause $347 billion in losses across Washington, California, and Oregon. Because of this damage, Skagit County may experience interruptions in business operations and public services, including emergency response and infrastructure maintenance. The impacts on the economy will be far reaching. Damaged infrastructure could also lead to issues transferring supplies to vulnerable populations, as larger vehicles might struggle to navigate damaged roads. A large contribution to Skagit County's economy, tourism, will also be impacted by building and infrastructure damage.

In the long term, rebuilding from an earthquake will require a large investment from Skagit County. Depending on the severity, this will include diverting resources away from economic development which may lead to income losses for the county. Recovering to pre-disaster conditions will require prioritizing costly infrastructure improvements, which will impact the local economy in all sectors.

7.5.4 Impact on Environment

An earthquake can impact the environment in multiple ways. Because of widespread damage to the built environment, changes in water and air quality may occur. Induced landslides and liquefaction can also impact the surrounding environment in Skagit County, potentially damaging wildlife habitats and landscapes.

7.5.5 Impact from Climate Change

While there is no direct link between climate change and frequency of earthquakes, climate change impacts like rising sea levels could worsen the impacts of earthquake-induced tsunamis, which is addressed separately in this hazard mitigation plan.

[52] FEMA NRI https://hazards.fema.gov/nri/report/viewer?dataLOD=Counties&dataIDs=C53057

7.5.6 Risk Determination

Because of earthquake's warning time, duration, and other vulnerabilities, the CPRI score for earthquakes has been determined to be 3.05.

Chapter 8. Flooding

8.1 General Background

Flooding, as defined by the NOAA National Severe Storms Laboratory, is the overflow of water onto normally dry land.[53] This overflow can come from heavy rainfall, acceleration of snowmelt, or when infrastructure such as dams or levees break. Flooding is the most common and widespread natural disaster, and the most common in Skagit County.

According to NOAA, in the U.S floods kill more people each year than tornadoes, hurricanes, and lightning.[53] Densely populated areas are at higher risks for flooding impacts, as the construction of buildings, highways, and parking lots decrease impervious surfaces, worsening runoff. The National Severe Storms Laboratory identifies five flood types, described below.

Table 18. Flood Types[53]

River Flood	Occurs when water levels rise over the top of riverbanks due to excessive rain from tropical systems.
Coastal Flood	Caused by higher-than-average high tides and is worsened by heavy rainfall and onshore winds.
Storm Surge	Abnormal rise in water level in coastal areas, over and above the regular astronomical ride, caused by forces generated from a severe storm's wind, waves, and low atmospheric pressure.
Inland Flooding	Occurs when moderate precipitation accumulates over several days, intense precipitation falls over a short period, or rivers overflow because of an ice/debris jam or dam/levee failure.
Flash Flood	Caused by heavy or excessive rainfall in a short period of time, generally less than six hours.

The Skagit River often experiences flooding due to heavy rain, snowmelt, coastal storms, and other severe weather events. In the past, flooding has caused road closures on I-5, State Route 9, 20, and 536.[54] Additionally, lowland areas of the Skagit Delta are vulnerable to coastal flooding, because they reside below the average high tide level of the Puget Sound.

8.2 Extent and Location

Flooding hazard in Skagit County is widespread. The county has abundant water resources, including the Skagit, Samish, Sauk, and Cascade Rivers that are subject to regular riverine flooding. There are also four watersheds within the county: Skagit, Samish, Nooksack, and Stillaguamish. Runoff from the Skagit River basin depends on rainfall and snowmelt. Additionally, the Skagit River Basin is near the Pacific Ocean. During the winter months, it lies directly in the storm path of cyclonic disturbances from the Pacific and is subject to numerous severe storms. Therefore, the basin is subject to winter rain floods and annual high water due to snowmelt runoff and storm frequency.

[53] NOAA NSSL https://www.nssl.noaa.gov/education/svrwx101/floods/
[54] Skagit County Flooding https://www.skagitcounty.net/Departments/Flood/Main.htm

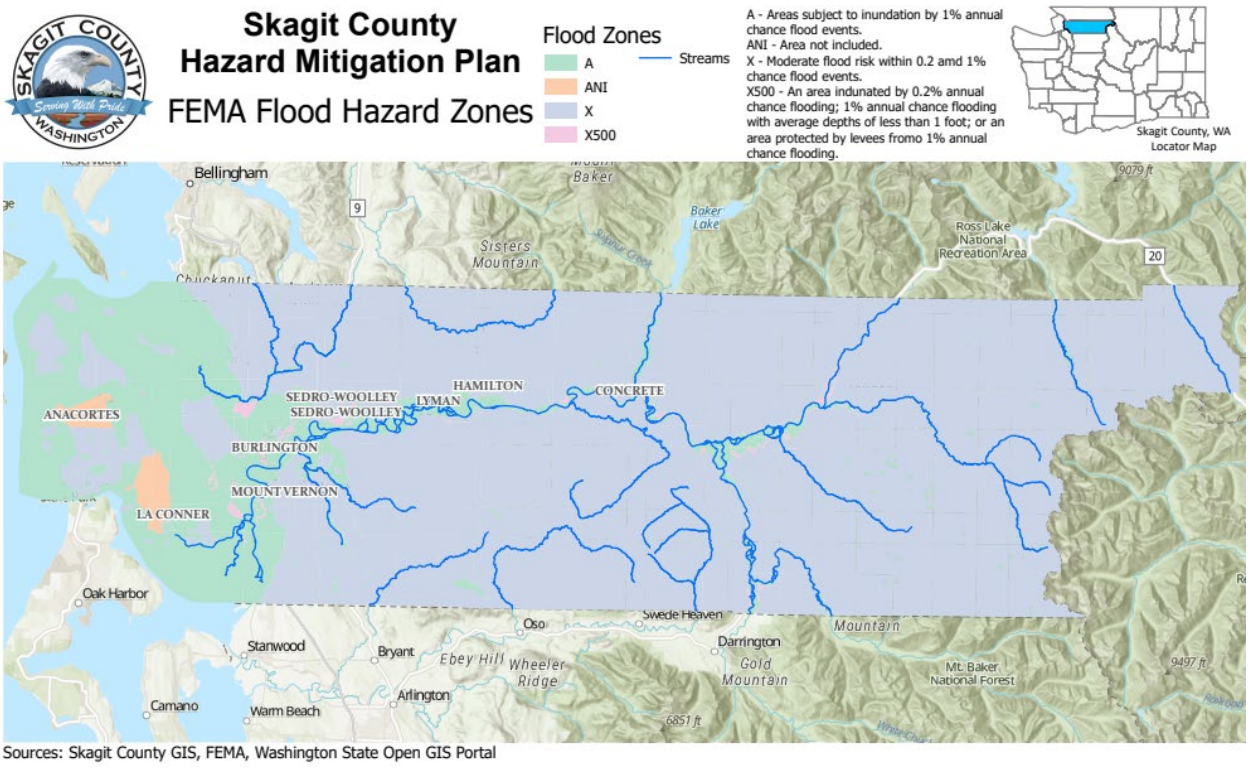


Figure 15. FEMA Flood Hazard Zone

The Skagit River poses a significant flood threat to the county, however, the Sauk and Suiattle River in the upper valley pose threats of their own. There are no levee systems for these streams which has led to homes and property being negatively impacted by flooding events.[55]

8.3 Past Events

During the floods of November 2021, an atmospheric river brought intense rain to the Pacific Northwest. The Skagit River in Mount Vernon crested at 36.89 feet. In Concrete, the river crested at 38.93 feet. Additionally, the Sedro Woolley gauge had the highest gauge reading at 43.51 feet of any major flood since 1990. Numerous state and county roads were closed during this event, and evacuation was recommended to residents of Fir Island, Sterling, West Mount Vernon, and Samish Island. Just over a month later, heavy rain and snowmelt prompted a separate disaster declaration for Skagit County for late December 2021 through January 2022.

Though not a FEMA-declared emergency, heavy rainfall from multiple atmospheric rivers and early snow melt led to the U.S. National Weather Service issuing a Flood Watch for Skagit County on December 6, 2023. The Skagit River reached almost 39 feet in Concrete and 35 feet near Mount Vernon. Thus, the flood events of December 2023 came just 2 years after those seen in November 2021, indicating heightened frequency of large flood events.

[55] Skagit County Flood Hazard https://www.skagitcounty.net/Departments/Flood/hazard.htm

Table 19. Flood Events Impacting Planning Area						
Disaster #	**Declaration Date**	**Disaster Type/Incident Type**	**Title**	**Incident Begin Date**	**Incident End Date**	**PA Dollars Obligated or Losses (State)**
N/A	N/A	Flood	Flood Watch Issued in Skagit County	12/4/2023	12/6/2023	N/A
Skagit River near Concrete predicted to be close to crest at 4pm and be fully crested at 38.02 feet at 10pm. The Skagit River near Mount Vernon is anticipated to crest at 35.47 feed on December 6th, 2023, at 4pm. Both levels above respective thresholds of 32.5 feet (Concrete) and 32 feet (Mount Vernon). The US National Weather Service issued a Flood Watch from December 4, 2023, through December 6, 2023						
4650	3/29/2022	DR/Flood	Severe Winter Storms, Snowstorms, Straight-line Winds, Flooding.	12/26/2021	1/15/2022	$16,094,227
As a result of strong winter storms bringing heavy rain, high winds, and record snowfall to western Washington, at least 18 major rivers exceeded the flood stage. Infrastructure damage included roads, bridges, utilities, and public buildings, impacting 12 Washington counties and multiple tribal nations.						
4635	1/5/2022	DR/Flood	Flooding and Mudslides	11/5/2021	12/2/2021	$32,011,462
Severe storms threatened Clallam, Skagit, and Whatcom counties, forcing over 1000 individuals to evacuate and for some areas, bringing the largest and most severe disaster to occur in history. Extreme rainfall due to bands of intense tropical moisture triggered flooding and mudslides that prompted closure of the Interstate 5 and many other roads and bridges.						
4539	4/23/2020	DR/Flood	Severe Storms, Flooding, Landslides and Mudslides	1/20/2020	2/10/2020	Unknown
Severe storms, flooding, landslides, and mudslides occurred during the period of January 20, 2020, to February 10, 2020, because of heavy rain and snowmelt. The President of the United States declared a major disaster for Public Assistance in the state of Washington. 408 residences were impacted, 22 of which were destroyed.						

8.4 Probability of Future Events

Flooding in Skagit County is a common event. According to the planning team, there is a high probability of a significant flood hazard occurring each year. The Skagit River has a long, well-documented history of flooding, with several of those events resulting in Presidential Disaster

Declarations. The severity of these events will widely vary depending on snowmelt and severe weather events.

8.5 National Flood Insurance Program (NFIP) Participation

The National Flood Insurance Program (NFIP) was established through the passage of the National Flood Insurance Act of 1968. The federal program enables property owners in participating communities to purchase insurance as a protection against flood losses in exchange for state and community floodplain management regulations that reduce future flood damage. NFIP participants must regulate development in floodplain areas in accordance with NFIP criteria. The County must demonstrate NFIP compliance by assessing administration of the program and mitigate any repetitive loss and severe repetitive loss properties through local regulations per 44 CFR § 201.6(c)(3)(ii). Before issuing a permit to build in a floodplain, participating jurisdictions must ensure that three criteria are met:

- New buildings and those undergoing substantial improvements must, at a minimum, be elevated to protect against damage by the 100-year flood.
- New floodplain development must not aggravate existing flood problems or increase damage to other properties.
- New floodplain development must exercise a reasonable and prudent effort to reduce its adverse impacts on threatened salmonid species.

Each municipality in the County is a member of the NFIP and administers their own program, as further discussed in Volume 2 for each respective annex. Each municipality has their own floodplain ordinance and is responsible for their own enforcement. The County provides building and fire code services to Lyman, Hamilton, and La Conner.

For Skagit County, the Building Official also serves as the Floodplain Manager and Fire Code Official within the Planning and Development Services Department. Several teams/staff members in the Planning Department maintain a role with respect to oversight and enforcement of the NFIP, including:

- Natural Resources Division, which conducts reviews for compliance with habitat impacts in the floodplain;
- Permit technicians, which accept and process flood permits, answer flood questions, make flood determinations;
- Plans examiners, which verify that construction methods shown on plans are compliant with SCC14.34 and FEMA requirements;
- Building inspectors, which verify implementation on site;
- Stormwater Review Tech, which reviews LID methods when in flood areas; and
- Certified Floodplain Manager, which has ultimate authority and oversight for all of the above functions.
- GIS Technician, which maintains the County’s maps of flood hazard zones and updates them as necessary.

The County also participates in the Community Rating System (CRS). The CRS is a voluntary program within the NFIP that encourages floodplain management activities that exceed the minimum NFIP requirements. FEMA has classified the County as Class 5, indicating that all NFIP flood insurance policies issued or renewed after October 1, 2019 in qualifying zones will receive an automatic 25% discount on premiums[56]. This is a reduction from the last planning effort indicating a upward trajectory of good standing.

8.5.1 NFIP Status and Severe Loss/Repetitive Loss Properties

Skagit County is in good standing in the NFIP, and does incorporate regulatory authority within its land use planning, as do all planning partners. The County must report repetitive loss (RL) and severe repetitive loss (SRL) properties. NFIP-insured RL and SRL properties typically include the following criteria:

- RL: Two or more claim payments (including building and contents) totaling more than $1,000 per claim in any 10-year period.
- SRL: Four or more separate claim payments (including building and contents) totaling more than $5,000, with cumulative amounts exceeding $20,000, in any 10-year period.

The County also has properties that receive Flood Mitigation Assistance (FMA) grants for NFIP-insured structures that have incurred damages from floods and have submitted claim payments under FMA. The goal of reporting RL and SRL properties is to reduce flood damage to residential properties that have experienced severe repetitive losses under flood insurance coverage and demonstrate mitigation efforts.

As of February 2025, Skagit County is reported to have 114 RL properties and 23 SRL properties (some RL and SRL properties overlap), 132 of which are single-family residences, two (2) 2-4 unit residential building, two (2) non-residential buildings, and six (6) single-family residential building with the exception of a mobile home or a single residential unit within a multi-unit building. There are also 12 RL and 31 SRL NFIP-insured properties that receive FMA grants for flood damage. Census areas that have the highest rate of unmitigated RL properties are west of Lake Shannon near Hamilton (block group 530579510001) and south of Highway 20 between Burlington and Sedro-Woolley (block group 530579516001)[57].

8.6 Risk Assessment

Warning Time

Flood warnings are often given in advance as part of a severe weather warning. Several governments can warn communities of flood events 24 hours before the event occurs. For flash flooding events, a notice of 4-6 hours is more common.

Duration

[56] https://www.fema.gov/sites/default/files/documents/fema_crs_eligible-communities_apr-2024.pdf.
[57] https://www.fema.gov/openfema-data-page/nfip-multiple-loss-properties-v1.

Typically, major flood events are long-term and can last days or weeks depending on the severity. Flash floods, characterized by excessive rainfall in a short period of time, can last generally less than 6 hours. [58]

8.6.1 Impact on Life, Health, and Safety

Often, deaths occur during a flood when debris flows into the rushing floodwater, creating hazards to the nearby population. The FEMA National Risk Index identified an expected annual loss of 0 from riverine flooding and 0.33 from coastal flooding. According to the Center for Disease Control and Prevention (CDC), flood water can contain downed power lines, human and livestock waste, and wild or stray animals such as rodents and snakes.[59] Additionally, vehicles driving through flood areas for evacuation can cause threats to health and safety by increasing drowning risk. Floodwater may make the population vulnerable to infectious diseases, chemical hazards, and injuries.

8.6.2 Impact on Critical Facilities, Properties, and Infrastructure

Floods may pose direct threats to critical facilities, properties, and infrastructure. In Skagit County, much of the western portion resides in the Skagit River Floodplain, which lies below the high tide line of the Puget Sound. This creates potential risk to properties in the floodplain, and in the event of a flood could cause widespread damage. Infrastructure will be threatened by flooding, as many of the I-5 and State Routes within Skagit County have closed in the past due to flooding impacts. Repeated flooding events can put strain on the rebuilding process for the county. The FEMA National Risk Index identified the expected annual loss of buildings to be $1,214,750 for coastal flooding, and $384,755 for riverine flooding.

Due to the flood events that occurred in 2021, portions of the Skagit River levee system were damaged. The Army Corps of Engineers began working to repair the system. Repairs to failed slopes, bank instability, scoured riprap armor, and cracking of riverward benches were underway to restore the Skagit levees to their original functionality. While these improvements are underway, floods have the potential to occur, worsening infrastructure and preventing rebuilding.

Table 20. Estimated Dollar and Percent Loss

Jurisdiction	# of Critical Facilities in SFHA*	% Critical Facilities in SFHA	Total Cost of Buildings Impacted (in USD)[1]	Average Value by Census Tract (in USD)	Total Exposure/ Building Value (in USD)
Unincorporated County	217	40.5%	$1,000,771,436	$415,931	$4,183,890,000
Anacortes	2		$1,337,800	$495,350	$68,976,000
Mount Vernon	34		$403,988,362	$99,294	$1,867,971,000
Swinomish Indian Reservation	0		0	0	0

[58] NWS Floods https://www.weather.gov/mrx/flood_and_flash
[59] CDC Floodwater Safety https://www.cdc.gov/floods/safety/floodwater

La Conner	5		$81,688,361	$331,000	$388,942,000
Concrete	2		$514,600	$225,900	$160,944,000
Town of Hamilton	6		$1,284,664	$315,400	$124,428,000
Lyman	0		0	0	0
City of Sedro-Woolley	8		$7,028,318	$274,525	$559,937,000
Burlington	24		$74,746,381	$321,720	$1,933,774,000
Upper Skagit Indian Tribe	0		0	0	0
Samish Indian Nation	0		0	0	0
Total	298		$1,571,359,922	$2,479,120	$9,288,862,000
***SFHA = Significant Flood Hazard Zone (100-Year Flood Event = Zone A)**					
[1] Total Cost is a rough estimate based on available inventory data.					

8.6.3 Impact on Economy

The planning team has designated flooding as having a critical impact on Skagit County's economy. The expected annual losses for the economy would coincide with property loss, outline in the critical facilities section of this risk assessment. During a flooding event, businesses could be flooded and unable to reopen due to necessary repairs and damage. According to FEMA, 25% of businesses do not reopen after disasters.[60] Loss of businesses in Skagit County may lead to a reduction in tax revenue and a decrease in economic activity within the county. Damage to infrastructure like roads and bridges can also prevent deliveries that provide inventory for businesses, impacting supply chain. Flooded roads and impaired bridges can also prevent employees from accessing workplaces since conditions would be unsafe to reach places of work.

8.6.4 Impact on Environment

Flooding can have a severe impact on the environment. It has the potential to disrupt local wildlife habitats and landscapes. Flooding can also carry hazardous debris around the county, which can worsen water and air quality. Once the flooding event has subsided, these hazardous materials settle into the soil, worsening soil quality for agricultural uses.

8.6.5 Impact from Climate Change

The frequency of priority climate hazards such as drought is anticipated to increase in intensity and become more unpredictable among all assets. Major floods exceeding 80,000 cubic feet per second ("cfs") has been recorded intermittently since the year 1815 and occurs roughly every one to five years. Annual maximum streamflow is anticipated to be 11 to 20 percent greater than the 30-year baseline by mid-century throughout the County. The Skagit River, Samish River, Sauk

[60] FEMA Business Data https://www.fema.gov/press-release/20250602/business

River, Suiattle River, and Cascade River are in 2% (50-year) and 1% (100-year) annual chance FEMA flood zones and are susceptible to increased hazardous flooding events.

With additional flood events that did not rise to the level of FEMA disaster declaration, flooding has increased over the decades, and floods are already the most common natural disasters that occur in Skagit County. With warmer winters capable of holding more moisture and earlier snowmelt on the rise due to changing climate, flooding issues in Skagit County are expected to be exacerbated.

A 2016 study on climate change impacts within Puget Sound's floodplains documents that the heaviest 24-hour rain events in western Washington and Oregon will intensify on average by +22% by the 2080s. Heavy rain events are also expected to occur up to 7 days per year by the 2080s, up a significant amount compared to the history 2 days per year. Additionally, many Puget Sound watersheds are expected to see more rain and less snow as temperatures increase. By the 2040s, the Skagit River's 100-year flood flows are expected to become 22-year flood flows, and historical 30-year flood flows are expected to become 7-year flood flows. Increased sediment load is also expected to affect flood risk, as excess sediment deposition in stream beds, also known as aggradation, reduces channel capacity and increases the likelihood of flooding. Sediment transport is expected to more than double on average by the 2080s for the Skagit River basin. Sea level rise is also expected to make it more difficult for flood waters to drain into Puget Sound during a flood event, increasing the extent, depth, and duration of river flooding.

8.6.6 Risk Determination

Because of flooding's warning time, duration, and other vulnerabilities, the CPRI score for floods has been determined to be 3.1.

Chapter 9. Landslides

9.1 General Background

The United States Geological Survey defined a landslide as the movement of a mass of rock, debris, or earth down a slope.[61] Washington is one of the most landslide-prone states according to the Washington Department of Natural Resources and causes tens to hundreds of millions of dollars in annual damages.[62] Landslides often occur due to earthquakes, fires, volcanic eruptions, or human modifications. In Washington, landslides often occur during the winter season due to unstable glacial sediment. The Department of Natural Resources defines diverse types of landslides:

Table 21. Types of Landslide Movement

Slides	• **Falls and topples:** Rapid downward movement of large pieces of rock or debris. Sometimes this is enough rock to cover a road or block a stream or river. Rockfalls and topples are common on Washington's mountain highways. • **Translational:** usually fail along geologic surfaces such as faults, joints, bedding surfaces, or contacts between different rock types. They slide along a planar surface and can travel great distances. • **Rotational:** occur along a curved or spoon-shaped surface. Back-tilting of the ground may occur near the main scarp of the landslide and there is often a toe of displaced material at the bottom.
Flows	• **Earthflows:** involve the downhill movement of water-saturated, fine-grained soil or debris. Earthflows often have a distinctive hourglass shape. Movement speed can vary, ranging from slow, almost imperceptible creeps to sudden, rapid flow and is dependent on ground conditions. • **Debris Flows:** downslope movements of water and debris, including water, mud, trees, and rocks. They usually occur in steep gullies or stream channels, may move very rapidly, and can travel for many miles. Slopes where vegetation has been removed by fire or humans may be at greater risk for debris flows. • **Lahars:** debris flows that originate on volcanoes. A volcanic eruption can rapidly melt snow and ice, causing a deluge of rock, soil, ash, and water that accelerates down the slopes of a volcano, devastating anything in its path. • **Lateral spreads:** occur on very low angle surfaces that slope toward a cliff or embankment. Movement is accompanied by cracking the ground. Failure is often caused by liquefaction.

[61] USGS Landslides https://www.usgs.gov/faqs/what-a-landslide
[62] DNR Landslides https://dnr.wa.gov/washington-geological-survey/landslides

9.2 Extent and Location

The location of landslides can be predicted by studying where they have occurred in the past. Past landslides have distinct topographic shapes which can remain in place for thousands of years. It can therefore be shown that the majority of Skagit County is susceptible to landslides. Landslides may be especially prevalent towards the eastern portion of the county where slopes might be greater than 40 percent. The extent or intensity with which these landslides occur depends on numerous factors, including slope angles, the material of the landslides, and water content. In Skagit County, the Planning Team has determined that the extent of landslide hazards is moderate, meaning that 10-24% of the County is exposed to the hazard.

The USGS provides a system of notification for potential landslides. Watches and warnings may be issued for discrete areas and include advice about contacting the area's local emergency management. Additionally, rainfall induced debris flows watches and warnings are weather dependent and will closely track NWS advisories for flash flooding.[63]

Table 22. Type of Landslide Severity

Type	Description
Landslide Advisory	A general statement about the potential of landslide activity in each region relative to developing rainfall predictions. An advisory may include general statements about rainfall conditions that can lead to debris flow activity, and list precautions to be taken in the event of heavy rainfall.
Landslide Watch	Landslide activity will be possible but is not imminent. People in, or planning to travel through, a watch area should be familiar with landslide preparedness and stay informed about developing weather patterns
Landslide Warning	Indicate that landslide activity is presently occurring, and extreme caution should be taken.

[63] USGS Landslides https://www.usgs.gov/faqs/what-difference-between-a-landslide

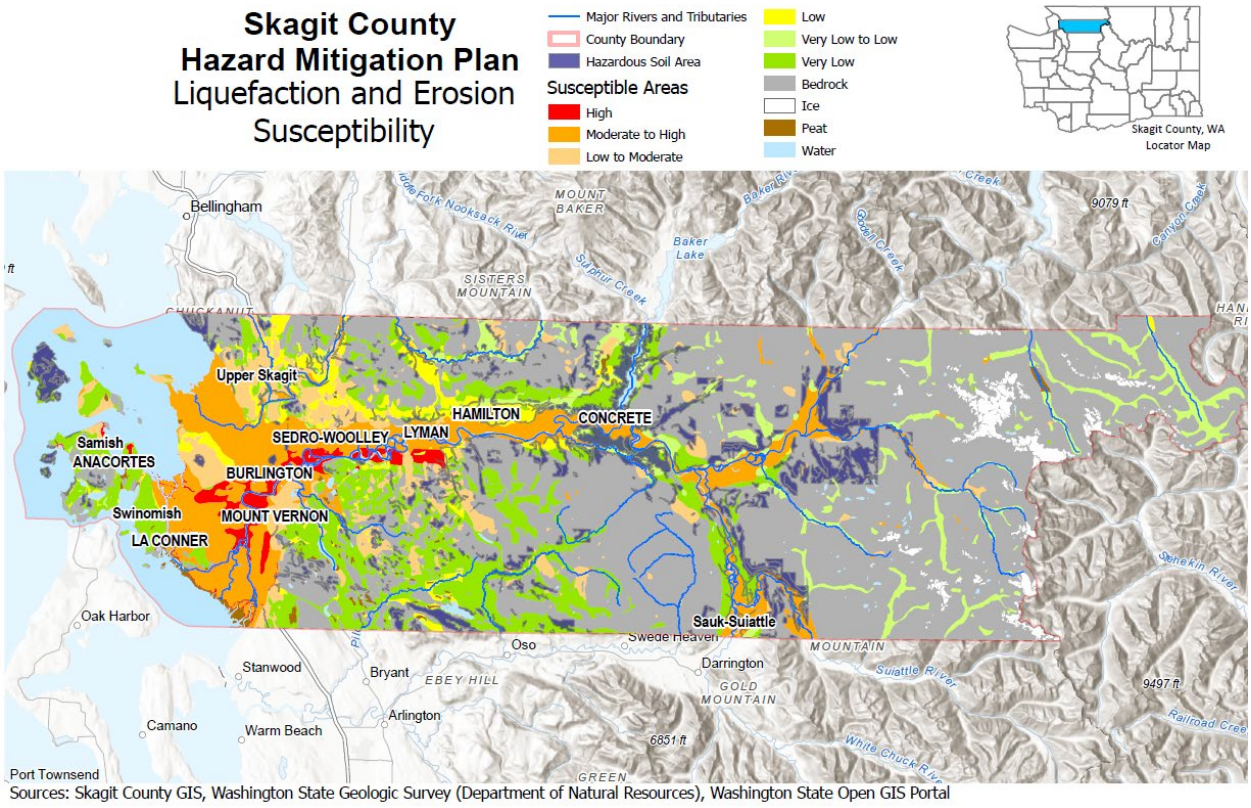


Figure 16. Erosion and Liquefaction hazard zone, Skagit County, WA

9.3 Past Events

Following the severe storm events and floods of November 2021 throughout most of Washington state, a series of landslide events were triggered as a result. For example, debris flows in Sedro-Woolley and Clear Lake are documented within WA DNR's Reported Landslides portal. Interstate 5 near Lake Samish was blocked by a mudslide as well, closing northbound traffic for several days due to the debris. For almost a month from early November 2021 through early December 2021, a series of floods resulted in landslides and mudslides that forced over 1000 individuals to evacuate their homes and closure of many of the county's roads and bridges. On November 29th, 2021, the Skagit County Public Works department identified increased landslide risks along South Skagit Highway and Concrete Sauk Valley Road. Residents and visitors were urged to avoid those areas as a result. Additional press releases by the Public Works department warned of high soil saturation and continued rain triggering dike and levee issues in addition to landslide occurrence.

Since the harsh stormy season of November and December 2021, Skagit County has seen additional landslide warnings in effect following storm events and flooding that occurred in December 2023. Given soil saturation levels and warm temperatures, the County issued a risk for landslides, recommending caution and awareness. Overall, as wintertime precipitation continues to increase in Skagit County, susceptibility to landslides and mudslides due to increased soil saturation is sure to increase as well. Those areas of previous slope failure from earth slumps,

earthflows, mudflows, lahars, debris flows, rockslides, landslides, or other failures remain subject to future slope failure as well.

9.4 Probability of Future Events

The Planning Team has assessed that the probability of a future landslide occurring in Skagit County is high. Landslides are often a cascading event that is triggered by other natural hazards such as earthquakes, severe weather, floods, or wildfires. Therefore, landslide frequency is related to the frequency of the hazards. In Skagit County, landslides occur after periods of heavy rainfall or severe weather, primarily in the winter season and are likely to increase as wildfire events, severe storm or weather events, and extreme precipitation becomes more intense.

9.5 Risk Assessment

Warning Time

Landslides can affect communities with little to no warning. Some landslides, according to the United States Geological Survey, provide clues that they will occur. Signs like cracking or breaking wood, unusual sounds and knocking boulders may be signs to evacuate the area. As of 2025, the USGS is working to establish early warning systems in strategic areas across the country that may provide the public with more time to respond.

Duration

Landslides often have varied durations depending on severity. Some landslides are rapid and last minutes, while others can last months to years, moving inches at a time. On average, landslides can persist for 6 to 12 hours at a time, classifying the hazard as having a moderate duration.

9.5.1 Impact on Life, Health, and Safety

Landslides have been identified to have a limited impact on loss of life in Skagit County. However, in the United States, landslides, and debris flow result in 25 to 50 deaths each year.[64] The FEMA National Risk Index expects the annual population loss from landslides to be .01. There is several health hazards associated with landslides, including rapid moving water that can lead to trauma, broken public utility systems that can result in injury or illness, and disrupted roadways that can endanger motorists. As Skagit County's population increases and more properties are developed near high slopes, an increasing number of lives could be endangered by this hazard.

9.5.2 Impact on Critical Facilities, Properties, and Infrastructure

Landslides have the potential to severely damage or destroy homes and properties. The Planning Team has identified landslides to have a critical impact on property loss with estimated property damages to be greater than 25% but less than 50% of critical facilities and infrastructure[65]. The FEMA NRI expected annual loss for buildings was identified to be $581,592. Roads, bridges, and utility lines are vulnerable and may be impacted by landslide events. Road and bridge access is crucial to safety and disaster response after an event. Landslides can also impact critical facilities such as hospitals, schools, government buildings, and emergency services.

[64] CDC Landslides https://www.cdc.gov/landslides-and-mudslides/about/index.html
[65] Appendix A – Risk Rating Workbook (Kimley-Horn & Associates)

9.5.3 Impact on Economy

The main economic impact of a landslide would be the costs to repair critical facilities and infrastructure, such as road repair and property cleanup. The expected annual loss for the economy would equal the building loss, which is outlined in the critical facilities section. There are indirect economic impacts of landslide events in Skagit County, including a loss of tax revenue and property value. Skagit County's large agricultural sector may be impacted by a landslide incident. When critical infrastructure is damaged, some might lose the ability to deliver irrigation water. This may create significant, direct economic impacts.

9.5.4 Impact on Environment

Environmental issues because of landslides can vary widely and are numerous. Landslides or erosion that fall into water bodies, wetlands, or streams may significantly impact fish and wildlife habitat, simultaneously affecting water quality. Hillsides that provide wildlife habitat can be lost for prolonged periods of time due to landslides. With effects already occurring due to increased sediment loads in floodplains, landslides could cause additional impacts within the Skagit River watersheds.

9.5.5 Impact from Climate Change

Landslide events are typically triggered by other natural hazards, which can be exacerbated by climate change. Heavier precipitation events, for example, are expected to intensify flooding, landslides, and erosion as a result. With increased winter precipitation expected due to climate change, landslide susceptibility in Skagit County is sure to increase. On the other hand, drier vegetation and soils following drought and extreme heat events also increase the likelihood of a landslide occurring. Wildfire events, which are exacerbated by climate change, also have the potential to increase the likelihood of landslides, as wildfire removes vegetation from slopes. Most commonly, landslides occur during and after major storms, when slopes and soil become adequately saturated for instability and movement resulting in post-wildfire debris flows. With landslide activity common along coastal bluffs in Washington, sea level rise is likely to increase the risk of landslides on the coast by destabilizing coastal slopes.

9.5.1 Risk Determination

Because of a landslide's warning time, duration, and other vulnerabilities, the CPRI score for landslides has been determined to be 3.05.

Chapter 10. Severe Weather

10.1 General Background

For the purposes of this plan, severe weather includes thunderstorms, ice storms, strong winds, lightning, and extreme temperatures (heat and cold waves). Severe weather represents any meteorological phenomena with the potential to cause damage, serious social disruption, or loss of human life. Severe weather differs from extreme weather, which refers to weather events that are unusually severe to the historical record.

10.1.1 Types of Severe Weather[66]

There are various types of severe weather that affect Skagit County, the most common being strong winds and precipitation. The table below describes the types of severe weather with some applicable to the County.

Table 23. Severe Weather Hazard Types

Hazard Type	Description
Thunderstorms	A rain shower during which thunder occurs. Since thunder comes from lightning, all thunderstorms have lightning. Classified as severe when it contains hail one inch or greater, wind gusts more than 50 knots, or a tornado.
Ice Storms (Hail)	A form of precipitation consisting of solid ice that forms inside thunderstorm updrafts. Hail has the potential to damage aircraft, homes, and cars.
Strong Winds	Often called “straight-line” winds, these cause damage at the ground and are a result of outflow generated by thunderstorm downdraft. Damaging winds are classified as those exceeding 50-60 mph.
Lightning	There is a spark of electricity in the atmosphere between clouds, the air, or the ground. Occur during volcanic eruptions, extremely intense forest fires, surface nuclear detonations, heavy snowstorms, and thunderstorms.
Tornadoes	A narrow, violently rotating column of air that extends from a thunderstorm to the ground. This can be among the most violent phenomena of atmospheric storms experienced.
Extreme Temperatures	• **Extreme Heat (Heat Wave):** Categorized by a period of high heat and humidity with temperatures above 90 degrees Fahrenheit for at least 2 to 3 days. Humidity increases the feeling of heat. • **Winter Weather (Cold Wave):** Categorized by a period of low temperatures that aid in the formation of ice and snowfall. These periods can coincide with blizzards that bring extreme cold, freezing rain, snow, ice, and high winds.

[66] NOAA NSSL https://www.nssl.noaa.gov/education/svrwx101/

10.2 Extent and Location

The entire planning area of Skagit County is susceptible to the impacts of severe weather. Severe weather events often occur during the months of October to April, although they have occurred year-round in the past. Specifically, Skagit County has been impacted by strong winds similar to hurricane forces from mid-latitude cyclones. The cyclones occur when warm air from the tropics and cold air from the arctic converge to create a center of low pressure with sustained winds and gusts of 50-70 mph[67].

Extreme precipitation, riverine flooding, hail or other precipitation types, and thunder or lightning storms from atmospheric rivers have also occurred in the County, most notably the "Pineapple Express". High velocity jet streams funnel warm air from the moist tropics to higher altitudes, causing clouds to quickly condense that result in significant rainfall and snow, often resulting in flooding and landslides. Considerable snowfall does not occur throughout the region, but it is more common in the eastern portion of the county near the Cascade Mountain range.

Oceanic extratropical cyclones bring strong, damaging winds to the Puget Sound area when making landfall and are comparable to winds associated with hurricanes. Strong winds are categorized by the Saffir-Simpson Hurricane Wind Scale developed by the National Hurricane Center.[68] Table 24 below includes five (5) types of damage by wind speed. Although hurricanes do not typically occur in the County, the Saffir-Simpson scale can illustrate the intensity of prevailing winds that tend to occur annually throughout the County.

Table 24. Saffir-Simpson Hurricane Wind Scale Definitions

Category	Sustained Wind Speed	Types of Damage
1	74-95mph	**Very dangerous winds will produce some damage:** Well-constructed frame homes could have damage to roof, shingles, vinyl siding and gutters. Large branches of trees will snap, and shallowly rooted trees may be toppled. Extensive damage to power lines and poles likely will result in power outages that could last a few to several days.
2	96-110 mph	**Extremely dangerous winds will cause extensive damage:** Well-constructed frame homes could sustain major roof and siding damage. Many shallowly rooted trees will be snapped or uprooted and block numerous roads. Near-total power loss is expected with outages that could last from several days to weeks.
3 (major)	111-129 mph	**Devastating damage will occur:** Well-built framed homes may incur major damage or removal of roof decking and gable ends. Many trees will be snapped or uprooted, blocking numerous roads. Electricity and water will be unavailable for several days to weeks after the storm passes.

[67] https://www.seattle.gov/documents/Departments/Emergency/PlansOEM/SHIVA/2014-04-23_Windstorms.pdf.
[68] Saffir-Simpson Hurricane Winds https://www.nhc.noaa.gov/aboutsshws.php

4 (major)	130-156 mph	**Catastrophic damage will occur:** Well-built frame homes can sustain severe damage, including loss of most of the roof structure and/or some exterior walls. Most trees will be snapped or uprooted and power poles downed. Fallen trees and power poles will isolate residential areas. Power outages will last weeks to possibly months. Most of the area will be uninhabitable for weeks or months.
5 (major)	157 mph or higher	**Catastrophic damage will occur:** A high percentage of framed homes will be destroyed, with total roof failure and wall collapse. Fallen trees and power poles will isolate residential areas. Power outages will last for weeks to possibly months. Most of the area will be uninhabitable for weeks or months.

Wind events are most damaging to areas of the County. Winds coming from the Pacific Ocean can have a significant impact. For the planning region, wind events are one of the most common weather-related incidents. Two types of wind events typically occur in the County[69],[70]:

- Juan de Fuca Strait Wind Surges – Originating from the Juan de Fuca straight, wind surges act as a wind funnel particularly affecting the Skagit River valley. Winter surges often result in sustained wind speeds of 50-70 mph and gusts of 70-80 mph.
- Cascade Downslope Winds – Storms are caused by a build-up of high pressure east of the Cascades and funnels through the Puget lowlands when a low pressure exists. Downslope winds can result in sustained wind speeds of 50-60 mph.

10.3 Past Events

FEMA has identified severe weather disaster declarations that have occurred between 2020 and 2025. Table 25 analyzes the four severe weather events that happened at that time.

Table 25. Severe Weather Impacting Planning Area Since 2020[71]

Date	Type	Deaths or Injuries	Property Damage
April 2021 (D# 4593)	Severe Winter Storm, Straight-line winds, flooding, landslides, and mudslides.	Unknown	Skagit County was eligible for PA from FEMA. IA was not offered. PA: **$19,126,125.88**
March 2022 (D# 4650)	Severe Winter Storm, Snowstorms, Straight-line winds, flooding	Unknown	Skagit County was eligible for PA from FEMA. IA was not offered. PA: **$16,094,227.72**

[69] https://atmos.uw.edu/~cliff/Windstorm090409Final.pdf;
[70] https://www.seattle.gov/documents/Departments/Emergency/PlansOEM/SHIVA/2014-04-23_Windstorms.pdf.
[71] FEMA https://www.fema.gov/disaster/declarations

January 2023 (D# 4682)	Severe Winter Storm, Straight-line winds, flooding, landslides, and mudslides.	Unknown	Skagit County was eligible for PA from FEMA. IA was not offered. PA: **$4,641,355**
April 2024 (D# 4775)	Severe Winter Storm, Straight-line winds, flooding, landslides, and mudslides.	Unknown	Unknown

In the past, wind storms have occurred that resulted in fatalities, building damages, road closures, and utility interruptions. Some notable events include:

- Columbus Day Storm (October 1962): The deadliest storm on record. Sustained winds of 85 mph resulted in 46 fatalities, 53,000 homes damaged, and power outages throughout the Puget Sound and greater region.
- Inauguration Day Windstorm (January 1993): Sustained winds of 60-70 mph resulted in 6 fatalities, 664 homes damaged – insurance claimed – and power outages serving 870,000 people.
- Hanukkah Eve Windstorm (December 2006): Sustained winds of 60-70 mph resulted in power outages serving over a million people. More utilities were affected than the 1993 storm due to significant tree loss from extraordinary wet antecedent conditions.

Snow, Wind, and Seismic Design Criteria for all buildings in the County are required to be designed for wind speed variations of 85 to 110 mph per the International Building Code. Wind load designs must consider ground surface irregularities, vegetation, topography, and other features[72]. Wind exposure is assessed under two categories:

- Wind Exposure B – Urban and suburban areas, wooded areas or other terrain with numerous closely spaced obstructions having the size of a single-family dwelling or larger.
- Wind Exposure C – Open terrain with scattered obstructions having heights generally less than 30 feet. This category includes flat open country, grasslands, and all water surfaces.

Recent events of extreme heat have become increasingly concerning for the County. On August 12, 2021, the national Weather Service issued an Excessive Heat Warming and Air Quality Alert for Skagit County. Temperatures rose into the 90s and near 100 degrees, increasing the potential for heat-related illnesses, especially for those working or participating in outdoor activities. A long-duration, unprecedented heat wave throughout the Pacific Northwest was reported by the National Weather Service known as the 2021 “Heat Dome” event. This event resulted in high risk

[72] 2021 Washington State Residential Code, Section R3.1.2.1.4.

of heat-related illness for the population, especially those with sensitivity to heat and inadequate cooling[73],[74].

10.4 Probability of Future Events

Severe weather events in Skagit County are the most common. A significant event is likely to occur annually in the winter months.

Table 26 outlines the annualized frequency for types of severe weather, based on FEMA NRI data for Skagit County[75]. Strong winds are also known as damaging winds that typically originate from thunderstorms and exceed 58 mph.

Table 26. National Risk Index Results for Severe Weather in Skagit County

Type	Events on Record	Period of Record	Annualized Frequency[1]
Lightning	20	1991-2012	1 event per year
Strong Wind	1	1986-2021	0 events per year
Tornado	0	1950-2021	0 events per year
Winter Weather	226	2005-2021	15.3 events per year
Hail	1	1985-2021	0 events per year
Heat Wave	9	2005-2021	0.6 events per year

[1]Annualized frequency is defined as the expected frequency or probability of a hazard occurring per year, and is calculated by dividing the number of recorded events or event-days by period of record.

Although the annualized frequency for strong winds are low, local data shows that strong wind events have occurred and are likely to occur in the future. The 2023 Washington State HMP identifies the Puget Sound area, including Skagit County, as a region most at-risk for increased extreme weather-related disaster declarations annually. The annual probability for extreme weather is 72% in which average extreme weather events occur once a year from 1980 to 2022. Skagit County is identified as an extreme weather hazard area, specifically for anticipated increases in extreme heat and atmospheric river events that may include wind gusts of over 100 mph.

10.5 Risk Assessment

Warning Time

Severe weather events such as thunderstorms, tornadoes, strong winds, excessive heat, or hail often have long warning periods that could begin a week before the event occurs. Storms typically occur during the “neutral” period between the ENSO extremes every three to seven years. Monitoring the extremes allow meteorologists to predict the transitions three to six months ahead

[73] https://doh.wa.gov/emergencies/be-prepared-be-safe/severe-weather-and-natural-disasters/extreme-heat/hot-weather-precautions/heat-wave-2021

[74] https://www.skagitcounty.net/Departments/Home/press/081221.htm.

[75] FEMA NRI https://hazards.fema.gov/nri/map

of time[76]. The National Weather Service tracks and notifies residents of possible severe weather conditions, giving large amounts of time to prepare and evacuate if necessary.

Duration

Events with severe weather can last anywhere from 4-8 hours depending on the severity. Flooding that occurs because of heavy or excess precipitation can have wider reaching impacts and last longer for communities impacted by the weather event.

10.5.1 Impact on Life, Health, and Safety

Severe weather in Skagit County can cause tremendous damage to the population. The expected annual loss of life identified by FEMA NRI was zero; however, risk still exists. It was identified to have a critical impact on the lives, health, and safety of Skagit County. Winter weather, one of the most common severe weather events in the county, can cause a variety of impacts. These include frostbite and hypothermia in higher elevations, along with physio-psychological stress from sheltering indoors and power outages. Individuals who drive during winter storms are at an increased risk of car accidents from fallen trees, road closures, downed powerlines, and extreme temperatures. Winter storms can also put older adults, children, and sick individuals at greater risk of injury.[77] Other severe weather events, like strong winds, thunderstorms, and extreme temperatures, can also have adverse effects on the population of Skagit County resulting in fatalities, impacting overall health and safety.

10.5.2 Impact on Critical Facilities, Properties, and Infrastructure

All critical facilities, infrastructure, and properties could be subject to damage by severe weather events. According to the planning team, severe weather may have a critical impact on property and facilities. Depending on the severity of the event, infrastructure and critical facilities may need to be repaired to avoid further impacts on the population of Skagit County. Flooding and landslides caused by excessive precipitation can further damage roads and bridges.

10.5.3 Impact on Economy

Severe weather events are increasing in the United States and in Skagit County. Therefore, they are creating a larger fiscal impact. The risk assessment has shown that severe weather events will have a critical impact on Skagit County's economy. Transportation systems like roads, bridges, and railways can be impacted by severe weather events. This, in turn, impacts supply chains and local businesses who rely on deliveries of products. Agriculture is a significant component of Skagit County's economy. Severe weather events have the potential to destroy crops and worsen soil, water, and air quality.

10.5.4 Impact on Environment

The environment is highly exposed to severe weather events. Natural habitats such as streams and trees are exposed to the elements during a severe storm and risk major damage and destruction. Prolonged rains can saturate soil and lead to slope failures and landslides. Extreme

[76] https://www.seattle.gov/documents/Departments/Emergency/PlansOEM/SHIVA/2014-04-23_Windstorms.pdf.
[77] Winter Weather Impacts https://www.ready.gov/winter-weather

heat can raise temperatures of rivers, impacting oxygen levels in the water, threatening aquatic ecosystems.

10.5.5 Impact from Climate Change

Extreme precipitation is anticipated to increase as the intensity of atmospheric rivers become more frequent due to global warming temperatures. Overall, heavy precipitation is predicted to increase countywide by approximately 8% by mid-century. Although extreme temperatures and other types of storms (wind, thunder, snow, etc.) and their severity are predominantly driven by atmospheric conditions and large-scale climate patterns, the frequency of priority climate hazards are anticipated to significantly impact people, property, and the environment and become more unpredictable among all assets.

10.5.6 Risk Determination

Because of severe weather warning time, duration, and other vulnerabilities, the CPRI score for severe weather has been determined to be 3.35, which is the highest of all hazards analyzed in this Hazard Mitigation Plan.

Chapter 11. Tsunami

11.1 General Background

According to NOAA National Weather Service, a tsunami is among the most powerful and destructive natural hazards. A tsunami is a series of extremely long waves caused by a large and sudden displacement of water in the ocean. They can cause dangerous coastal flooding and powerful currents that can last for several hours or days.[78] The most common cause of a tsunami is a large earthquake, but landslides and volcanic activity can also cause them.

Tsunamis can be classified either as local or distant. Their classification depends on the location of the source and where the tsunami might land. For example, the source of a local tsunami is close to the coast and may arrive in less than an hour. A distant tsunami is generated far from the coastline, leaving more time to respond.[78]

There are three types of tsunami messages that may occur before the hazard has occurred. Table 27 below illustrates the types described by the NOAA National Weather Service.

Table 27. Tsunami Hazard Types

Type	Description
Tsunami Warning	Issued when a tsunami has the potential to create widespread inundation. Dangerous coastal flooding and powerful currents are possible. Actions may include the evacuation of low-lying coastal areas.
Tsunami Advisory	Issued when a tsunami with the potential of generating strong currents or waves is imminent or occurring. Significant inundation is not expected. Actions may include closing beaches and evacuating harbors.
Tsunami Watch	Issued when a tsunami may later impact the watch area. May be upgraded to an advisory or warning depending on incoming information. Emergency management and the public should prepare to act.

11.2 Extent and Location

Tsunamis affecting Washington may be induced by local geologic events or earthquakes from a distance, such as events occurring in Alaska or South America. The Pacific Ocean's "Ring of Fire" creates a geologically active area that makes land masses bordering the Pacific vulnerable to tsunami inundation, as further described below:

[78] Tsunami Definition https://www.tsunami.gov/?page=tsunamiFAQ

- Cascadia Subduction Zone (CSZ) – A “megathrust” fault that stretches 1,000 km from Northern Vancouver Island to Cape Mendocino California. The CSZ is located offshore in the Pacific Ocean and separates the Juan de Fuca and North American continental plates.
- Alaska-Aleutian Subduction Zone (AASZ) – A zone stretching 2,900 km from the Gulf of Alaska to Kamchatka. The AASZ is located offshore and separates the Pacific plate and North America plate. Some of 20th century’s largest earthquakes came from the subduction zone boundary.
- Seattle fault – A 4- to 7-km-wide east-trending fault zone that extends from the Cascade Range foothills on the east across the Puget Lowland to Hood Canal, and crossing Puget Sound among other westerly locations.

The western portion of Skagit County will be especially vulnerable to tsunami inundation. Low-lying areas in Anacortes, Fidalgo Island, and areas bordering the Puget Sound will be most impacted in the event of a tsunami. The severity of a tsunami will largely depend on the triggering geologic event, but inundating zones could experience flooding, strong waves, and currents that endanger the population.

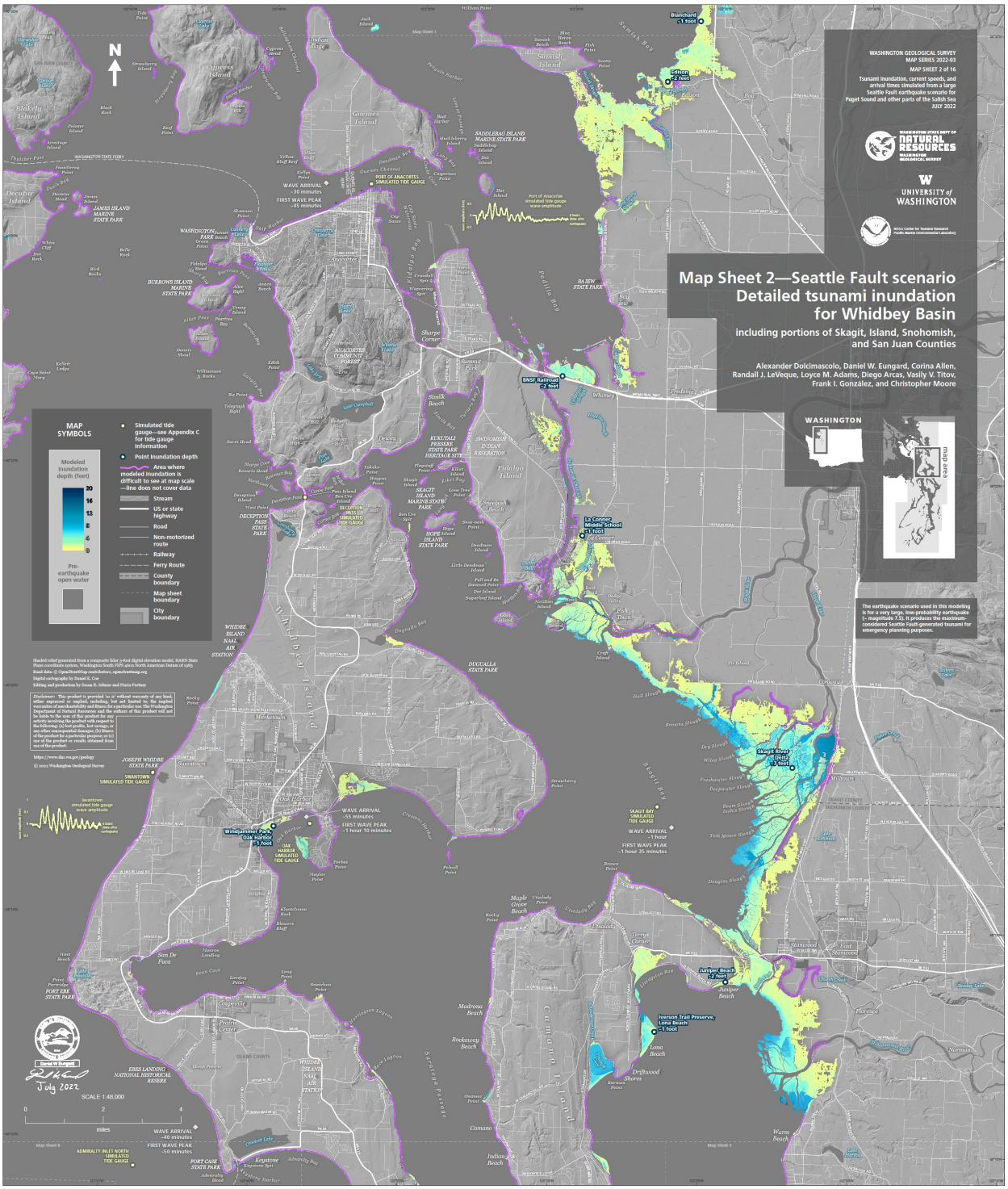


Figure 17. Tsunami Inundation Extent, Washington Geological Survey Map Series

11.3 Past Events

According to NOAA there is no record that Skagit County has been impacted by tsunami wave events from 2020 to 2025. However, there have been several historical events that have impacted the state of Washington.

- On May 22, 1960, the biggest earthquake ever recorded at the time occurred just off the coast of Chile, South America. The earthquake measured 9.5 (Richter) with swarms of aftershock earthquakes that measured as large 8.0 (Richter). The earthquakes triggered the creation of a tsunami, which was responsible for most of the ensuing devastation and death. The tsunami, together with the coastal subsidence and flooding, caused tremendous damage along the Chile coast, where about 2,000 people died. The waves spread outwards across the Pacific and fifteen (15) hours after the earthquake, tsunami waves flooded Hilo, on the island of Hawaii, where they built up to thirty (30) feet in height and caused 61 deaths along the waterfront. Seven hours later, the waves flooded the coastline of Japan where waves at least ten (10) feet in height caused 200 deaths. Tsunami waves also caused damage in the Marquesas, Samoa, and New Zealand.
- The 1964 Magnitude-9.2 earthquake in Prince William Sound, Alaska which caused a tsunami that struck Washington, Oregon and California, killing 139 people, mostly in Alaska. There were no reported deaths in Washington, but there were reports of damaged roads, bridges, boats and houses along the coastline in the more southwestern portions of the state.[39]
- On July 17, 1998, an earthquake measuring 7.1 (Richter) occurred about 15 miles off the coast of New Guinea in the southwestern Pacific Ocean. While the magnitude of the quake was not large enough to create the tsunami directly, it is believed the earthquake generated an undersea landslide, which in turn caused the tsunami that generated waves reaching 40 feet killing an estimated 2,200 people.
- On December 26, 2004, a massive earthquake measuring over 9.0 (Richter) occurred under the Indian Ocean floor just off the coast of the Indonesian island of Sumatra. Violent movement of the Earth's tectonic plates in this area displaced an enormous amount of water, sending powerful tsunami waves in every direction. Within hours, tsunami waves radiating from the earthquake’s epicenter slammed into the coastline of 12 Indian Ocean countries with wave heights reaching up to 50 feet. As many at 250,000 persons were either killed or listed as missing and presumed dead. As many as 1,125,000 people were displaced by the earthquake and subsequent tsunami. The economic losses exceed $10 billion.
- The February 27, 2010, Chilean Magnitude-8.8 earthquake generated a small tsunami with no reported damage in Washington. NOAA reported increased wave heights above sea level as 5.5 inches in Westport, 7.5 inches in Port Angeles, 8.5 inches in La Push, and 9 inches in Neah Bay. (NOAA, 2011).
- The March 2011 tsunami that resulted from a Magnitude-9.0 earthquake in Japan caused increased wave heights along the California, Oregon and Washington coastlines. Major declarations were issued in California and Oregon, but Washington sustained much less

damage. Washington coastline wave heights above sea level were reported at La Push at 28 inches; Port Angeles at 23 inches; Westport at 18 inches; Toke Point at 13 inches; Port Townsend at 6 inches; and Neah Bay at 17 inches. No significant damage was reported, but this incident had the potential to be much worse.

- As a result of the Queen Charlotte Island M7.7 Earthquake which occurred on October 28, 2012, Toke Point and Westport experienced a tsunami, with maximum water height at Toke Point .04m and Westport .08m.[40]

11.4 Probability of Future Events

FEMA provides four deterministic scenarios for tsunami hazards which include 800-year scenarios (AASZ), 2,500-year scenario (CSZ), and 16,000-year scenario (Seattle fault). The scenarios indicate that an earthquake induced tsunami from the various subduction zones are likely to occur an average of 800, 2,500, and 16,000 years based on historical records and geologic surveys[79].

11.5 Risk Assessment

Warning Time

Tsunamis often occur because of prior hazards like earthquakes and volcanic eruptions. Often, there is less than a 6-hour warning time before the hazard occurs and for people to prepare or evacuate. The amount of warning time also depends on the location of the tsunami and its proximity. Some can occur more than 6 hours after an event, but others could occur in less than 20 minutes.

Duration

According to the NOAA National Weather Service, large tsunamis may continue for days, reaching their peak often a couple hours after arrival.[80] The currents created from tsunamis can last for days. This duration of natural hazard is larger than other hazards analyzed in this Hazard Mitigation Plan.

11.5.1 Impact on Life, Health, and Safety

Several factors will need to be considered when determining the impact to the population from a Tsunami hazard. Tsunamis have been identified as having a critical impact on loss of life. The arrival time and duration of the flooding are key factors and could vary widely depending on the event's severity. The populations most vulnerable to tsunami hazards are the elderly, disabled, and youth who reside near beaches and low-lying areas. In the event of a tsunami in Skagit County, warning times would vary. The amount of time to evacuate and warn the population will affect how many people may be impacted. According to the FEMA National Risk Index (NRI), the expected annual loss (EAL) of population in Skagit County is 0, indicating a low probability of fatalities.

[79] https://pubs.usgs.gov/fs/2014/3018/pdf/fs2014-3018.pdf.
[80] Tsunami Information https://www.tsunami.gov/?page=tsunamiFAQ

11.5.2 Impact on Critical Facilities, Properties, and Infrastructure

The planning team has identified tsunamis as having a critical impact on facilities, property, and infrastructure. The FEMA NRI identified the expected annual loss for buildings to be $7,054. Properties that reside in or near low-lying coastal areas, tidal flats, or river deltas would be vulnerable to a tsunami hazard event. This includes port facilities located at the Guemes Channel, flood control devices, fire stations, boat launches, highway and railroad bridges, industrial facilities, and hazardous cleanup sites. The impact of flooding in these areas may be detrimental, with debris being carried over wide distances and creating additional hazards to properties and infrastructure. Roads and railroads that become damaged can prevent access to homes and isolate residents from emergency services. Public utility systems like water and sewer lines could become flooded, causing health issues in Skagit County.

11.5.3 Impact on Economy

A tsunami will have a devastating impact on Skagit County's economy. The expected annual loss for the economy would coincide with the loss of property, which was outlined to be $7,054. It has been assessed that it will have a critical impact as compared to other natural hazards. Many ports will be severely impacted by flooding, which will require investment to rebuild. This investment to be rebuilt after a disaster will divert funding from economic development, weakening the local economy. This will also place strain on government finances, potentially impacting public services and utilities. The agricultural sector, a large part of Skagit County's economy, will be severely affected. Crops could be flooded and ruined and supply chains routes blocked, placing strain on farmers and local markets. Tourism will also be greatly impacted in the event of a tsunami, with frequently traveled areas near the coastline will have to be restricted or shut down to rebuild and maintain safety for the population.

11.5.4 Impact on Environment

Tsunamis may have a critical impact on Skagit County's environment. Flooding from a hazard can cause widespread pollution in water, air, and soil, greatly impacting the surrounding habitats and landscapes. This would require a large investment from the county or would require collaboration with organizations and agencies to restore the surrounding areas.

11.5.5 Impact from Climate Change

The impacts of climate change on tsunami events could be significant in regions with low-lying coastlines. Rising sea levels affect all coastal regions, especially those that are densely populated. This may worsen the impact of flooding on coastlines and further threaten structures.

11.5.6 Risk Determination

Because of a tsunami's warning time, duration, and other vulnerabilities, the CPRI score for a tsunami has been determined to be 2.5.

Chapter 12. Volcano

12.1 General Background

A volcano, according to the Washington Department of Natural Resources, is an opening on the surface of a planet that allows hot material to escape from an area of magma storage below the surface, commonly called a magma chamber. The location where the magma erupts is called volcanic vent.[81]

The Cascade Mountain Range is home to several volcanoes near Skagit County, which forms the eastern boundary. While there are no volcanic peaks within the county, Mount Baker lies north in Whatcom County, and Glacier Peak south in Snohomish County. Eruption events from these volcanoes could lead to lahars, ash fall, and pyroclastic flows, which would significantly impact Skagit County.

The United States Geological Survey identifies multiple types of volcanoes, as described in the table below.[82]

Table 28. Volcano Hazard Types

Type	Description
Cinder Cone	Simplest type of volcano. Made from small pieces of lava, called cinder, which erupt from the vent. Most common in North America.
Composite (Stratovolcano)	Usually tall mountains with steep, even sides that are made of layers of repeating lava flows, volcanic ash, and cinders. Mount Rainer in Washington is classified as a stratovolcano.
Shield	Built entirely from fluid lava flows. Lava flows from all directions, either from the summit or fractures in the mountain. Because of this, a dome shape is built over time.

12.2 Extent and Location

While there are no volcanoes in Skagit County, the planning area can be largely impacted by lava flows from potential eruptions from Mt. Baker in Whatcom County and Glacier Peak in Snohomish County. *Figure 18* from the United States Geological Survey and Skagit County Government[83] shows a map of volcano hazard zones in Skagit County. Lahars (volcanic mudflows) follow rivers to densely populated areas on the western side of the county, with the intensity of the lahars decreasing as it flows further away from the eruption site.

[81] DNR Volcano Definition https://dnr.wa.gov/volcanoes-and-lahars
[82] Volcano Types https://www.usgs.gov/programs/VHP/about-volcanoes
[83] Lava Flow Map USGS https://www.skagitcounty.net/Departments/EmergencyManagement/volcano

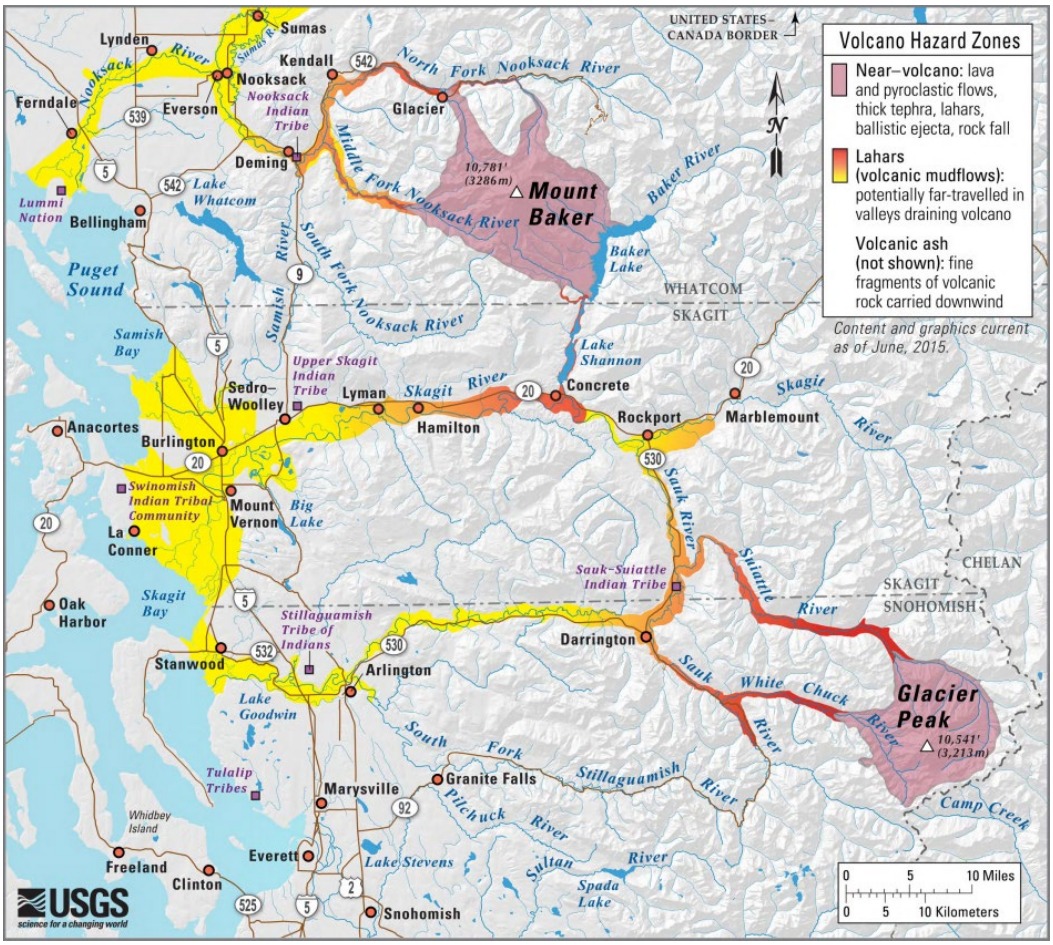


Figure 18. Regional Volcanic Hazards from Mount Baker and Glacier Peak, Skagit County

12.3 Past Events

There is no new data from 2020-2025 for volcanic eruptions in or near Skagit County. There is a historical record of eruptions in Washington State that will provide context for future volcanic hazards, shown below.

Table 29. Past Eruptions in Washington State

Volcano	Number of Eruptions	Type of Eruptions
Mount Adams	Three in the last 10,000 years, the most recent between 1,000 and 2,000 years ago.	Andesite lava
Mount Baker	Five eruptions in the past 10,000 years; mudflows have been more common (8 occurred in same period).	Pyroclastic flows, mudflows, ash fall in 1843.
Glacier Peak	Eight eruptions in the last 13,000 years.	Pyroclastic flows and lahars.
Mount Rainer	Fourteen eruptions in the last 9,000 years; also 4 large mudflows.	Pyroclastic flows and lahars.

Mount St Helens	Nineteen eruptions in the last 13,000 years.	Pyroclastic flows, mudflows, lava, and ash fall.

12.4 Probability of Future Events

Based on FEMA NRI data, the likelihood of a volcano hazard occurring every year is none and is extremely rare. Thus, the planning team has assessed that the CPRI score of a volcano in Skagit County is 2.5. While ranked lower than other hazards analyzed, volcano lahars can still pose a threat to the population of Skagit County and preparedness measures should be practiced.

12.5 Risk Assessment

Warning Time

The United State Geological Survey does comprehensive monitoring of volcanoes in Washington State. There are several precursors to an eruption, including:

- An increase in frequency and intensity of earthquakes
- Noticeable steaming
- Subtle swelling of ground surface
- Small changes in heat flow[84]

Often, volcanic eruptions occur with more than 24 hours' notice. This timing allows for communities to evacuate from potentially impacted areas. The Volcano Notification Service by the United States Geological Survey sends out regular emails on volcanic activity using the Volcanic Activity Notice alert-levels, including:

Table 30. Alert-Level Terms [85]

Normal	Volcano is in typical background, noneruptive state or, after a change from a higher level, volcanic activity has ceased, and volcano has returned to a noneruptive background state.
Advisory	Volcano is exhibiting signs of elevated unrest above known background level or, after a change from a higher level, volcanic activity has decreased significantly but continues to be closely monitored for possible renewed increase.
Watch	Volcano is exhibiting heightened or escalating unrest with increased potential of eruption, timeframe uncertain, eruption is underway but poses limited hazards.

[84] Volcano Monitoring USGS https://www.usgs.gov/faqs/how-can-we-tell-when-a-volcano-will-erupt
[85] Volcanic Alert-Level Terms https://www.usgs.gov/programs/VHP/volcanic-alert-levels

Warning	Volcano is exhibiting heightened or escalating unrest with increased potential of eruption, timeframe uncertain, eruption is underway but poses limited hazards.

Duration

Volcanic eruptions can last more than 24 hours. Additionally, other impacts of an eruption, including ash fall and lahars, can affect communities for weeks or months.

12.5.1 Impact on Life, Health, and Safety

Volcanoes can pose a severe threat to the health and safety of the population of Skagit County. According to the planning team, volcanoes will have a catastrophic impact to many people, with injuries that could result in permanent disability and death, with a significant amount exposed to impacts. The FEMA NRI identified the expected annual loss of life to be 0.03. Ash fall can create widespread air pollution and create respiratory issues in all who are exposed. With ash in the atmosphere, rain will combine with sulfur dioxide to form diluted sulfuric acid, which can cause burns to exposed skin, eyes, nose, and throat. High annual rainfall in Skagit County could worsen this impact.

12.5.2 Impact on Critical Facilities, Properties, and Infrastructure

The planning team has identified volcanoes to have a catastrophic impact on critical infrastructure, properties, and facilities. This impact may result in severe property damage, with more than 50% of both critical and non-critical facilities and infrastructure impacted. The FEMA NRI expected the annual loss of property from volcanic activity to be $2,653,298. All the planning area will see ash accumulation and pollution, which will impact county facilities and properties. Lahar inundation would severely impact facilities near lava flow paths.

12.5.3 Impact on Economy

A severe lahar event from the eruption of Mt. Baker or Glacier Peak could have lasting impacts for most of the western portion of Skagit County, resulting in millions of dollars of property loss for individuals and the county. Agricultural losses can include destroyed crops and supply chain interruptions. Lost tax revenues from businesses disrupted by structural damage or evacuations could result in fewer patrons and damage the local economy. The tourism industry in Skagit County would also be severely impacted.

12.5.4 Impact on Environment

The environment is highly exposed to the effects of volcanic eruptions. The planning team has identified volcanoes to have a critical impact on the surrounding environment of Skagit County. Ash accumulation can pollute streams and rivers in the county, causing detrimental impacts to wildlife and habitats. A volcanic eruption would expose the local environment to several other effects, including lower air quality, and many elements that might harm local vegetation. Flooding might occur from a volcanic eruption, as the extreme temperatures could melt surrounding glaciers, sending runoff down into the county.

12.5.5 Impact from Climate Change

Climate change is not likely to affect the risk associated with volcanoes; however, volcanic activity can impact climate change.[86] During major explosive eruptions, large amounts of volcanic gas and ash are injected into the stratosphere. Gases like sulfur dioxide can cause global cooling, while volcanic carbon dioxide, a greenhouse gas, has the potential to promote global warming.[86]

12.5.6 Risk Determination

Because of a volcano's warning time, duration, and other vulnerabilities, the CPRI score for a volcano has been determined to be 2.5.

[86] Volcanoes Impact on Climate Change https://www.usgs.gov/programs/VHP/volcanoes-can-affect-climate

Chapter 13. Wildfire

13.1 General Background

Wildfires are fires that are caused by nature or humans that result in the uncontrolled destruction of forests, brush, field crops, grasslands, and real and personal property.[87] In Washington State, wildfire season usually begins in early July and lasts until early October when rainfall begins. According to the 2019 Update to Skagit County's Community Wildfire Protection Plan (CWPP), a common misconception is that due to higher moisture levels on the west side of Washington, there is little to no danger of wildfire occurrence. [88] However, during the dry summer months, and intensified by dead vegetation acting as ground fuel, wildfires are not as minor of a threat as it may seem. The western Cascades tend to be perceived as not having a wildfire problem. However, though they do not occur every year, major wildfire events tend to occur every 20 years. Typically, Skagit County has numerous fires within the forestlands each year, though these fires tend to stay less than .2 acres in size due to high moisture content within fire fuels. The 2019 Washington State Wildland Fire Protection 10-Year Strategic Plan characterizes Western Washington forests and grasslands as containing a cool, wet climate with abundant vegetation that burns at the hands of large fires every few decades to few hundred years, with smaller fires occurring more frequently. Infrequent large fires in the area historically are the result of late summer conditions compounded by abundant dry vegetation and strong east winds.

Wildfires can initiate a cascade of other natural hazards, increasing soil erosion and as a result, causing mud and debris flows which threaten infrastructure and communities. Soil that is exposed to intense heat during wildfire events is less capable of holding water, leading to an accumulation of topsoil, ash, and debris that gets washed away by rain.

Additionally, in densely wooded areas, the likelihood of fire increases during extreme heat conditions. Due to climate change intensifying warm weather, the occurrence of wildland fires in future years is expected to increase in Skagit County, as well as the remainder of Washington state.

For instance, on May 27th, 2023, the Shannon Lake Fire kicked off the western Washington summer fire season just north of Concrete, determined to be human-caused ignition. Burning 85 acres of logging slash and reproduction timber, the fire's quick spread indicated the small amount of late spring precipitation the area had received that year, demonstrating the importance of dry fuel accumulation in feeding the spread of wildfires such as this one.

In Skagit County, one challenge is the fact that increasing numbers of homes are being constructed in the wildland-urban interface as well as the industrial forest. As more people seek to reside in rural or isolated areas with scenic elements, development continues to spread into natural land, those homes increasingly become threatened by wildfire risk.

13.2 Extent and Location

The Skagit County Community Wildfire Protection Plan (CWPP) was updated in 2024 and assesses wildfire susceptibility in Skagit County. Although the entire planning area is susceptible

[87] Wildfire Information https://mil.wa.gov/wildfire

[88] Skagit county CWPP https://www.skagitcounty.net/EmergencyManagement/Documents/CWPP

to wildfires; both in smoke pollution and direct burning, the extent of susceptibility did not significantly change since 2019. The abundance of trees and vegetation in the valley foothills makes the area susceptible to wildfire spread.

The CWPP outlines land ownership within the county. There are several types of land ownership, including:

- U.S. Forest Service manages 282,812 acres (26%)
- National Park Service manages 214,378 acres (20%)
- Washington State Department of Natural Resources manages 131,206 acres (12%)
- Private forest lands own 331,700 acres (30%)

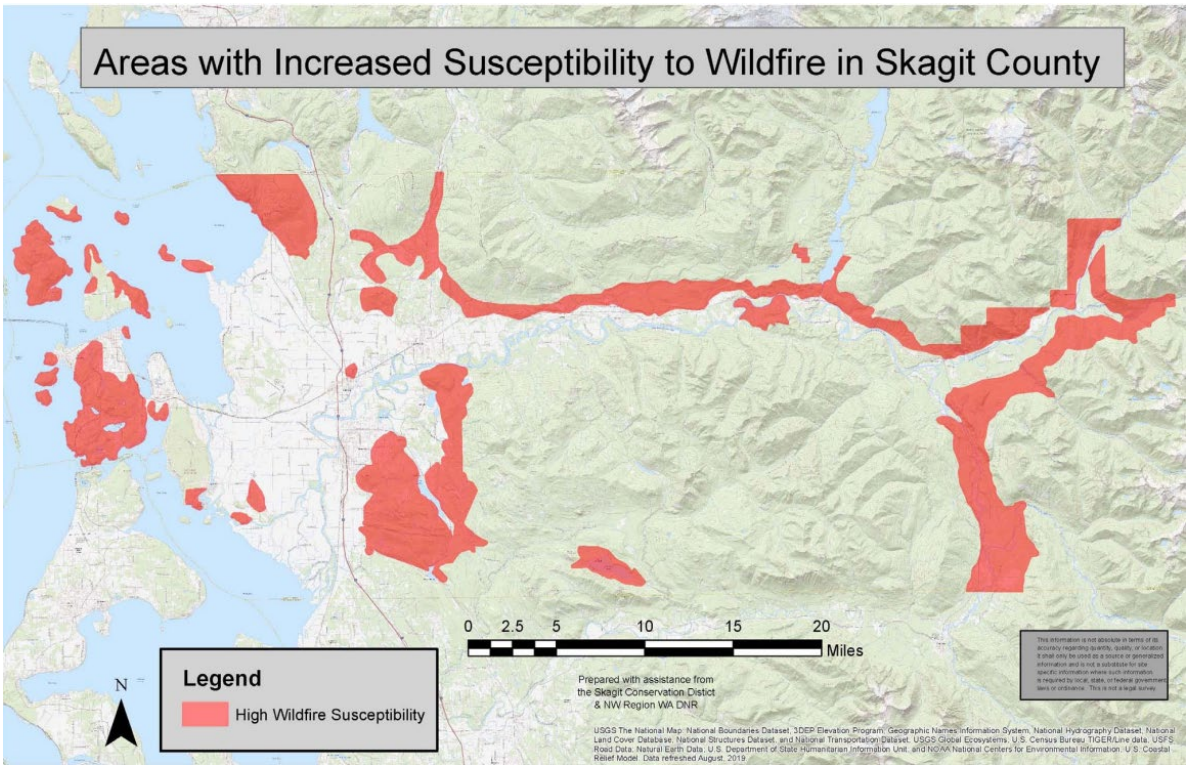


Figure 19. Urban Interface Areas Susceptible to Wildfire (CWPP, 2024)

Wildfires are considered a natural and necessary component of wildland ecology. Because of this, wildfires are not considered a major hazard unless their movement threatens lives, homes, communities, critical infrastructure, and natural or cultural resources.

Wildfire smoke can affect visibility and air quality in the region. The United States Environmental Protection Agency (EPA) uses the Air Quality Index (AQI) to report air quality. It is divided into six categories, as displayed in **Table 31** below.[89]

[89] AQI Index https://www.airnow.gov/aqi/aqi-basics/

Table 31. Air Quality Hazard Ratings			
Daily AQI Color	Level of Concern	Values of Index	Description of Air Quality
Green	Good	0 to 50	Air quality is satisfactory; air pollution poses little to no risk.
Yellow	Moderate	51 to 100	Air quality is acceptable. However, there may be risks for some populations.
Orange	Unhealthy for sensitive groups	101 to 150	Members of sensitive groups may experience health effects.
Red	Unhealthy	151 to 200	Some members of the public may experience health effects.
Purple	Very unhealthy	201 to 300	Health alert. The risk of health effects is increased for everyone.
Maroon	Hazardous	301 and higher	Health warning of emergency conditions. Everyone is more likely to be affected.

13.3 Past Events

Skagit County is susceptible to wildfires, and they occur regularly in the planning area. The following **Table 32** includes recent wildfires that burned more than twenty acres in Skagit County.

Table 32. Previous Occurrences of Wildfires		
Name of Fire	Date	Description
Goodell Fire	8/10/2015	This fire was sparked on August 10, 2015, by lightning from highway 20. The Goodell Fire was one of many fires in the area, which were named the Upper Skagit Complex Fires. The Goodell Fire took about 5 days to contain and burned about 8,505 acres of land.
Cranberry Lake	8/24/2016	A 10–12-acre fire burned in the Anacortes Forestlands at Little Cranberry Lake. No evacuations were required but people were asked to stay out of the area
Cascades of Whatcom and Skagit Counties	2017	A wildfire started 10 miles NE of Darrington on the Sauk-Suiattle Indian Reservation on July 30th. No structures were lost thanks to fire suppression efforts. The fire burned 216 acres and was permitted to burn itself out by early September after moving into more isolated areas.
Chuckanut Mountain	2018	The Chuckanut Mountain Fire burned 60 acres on both sides of the Whatcom-Skagit County line. Flames were kept away from houses, but the fire was 200 yards from one of four threatened homes at one point.

Shannon Lake	5/27/2023	North of Concrete, the Shannon Lake Fire burned 85 acres of logging slash and reproduction timber. The fire indicated how little late spring rain there was leading up to this point.
Tenas Creek	9/15/2023	Vegetation fire is estimated at 30 acres off the Suiattle River Road near Marblemount in Skagit County.
Dearinger Fire	2024	Burned on steep and rugged terrain on privately-owned timberland. The combination of strong wind and terrain conditions assisted in the fire growing quickly. No structures were lost in the fire and there was no threat to the surrounding infrastructure.
Easy Fire	7/17/2024	Sparked by lightning over the Okanogan-Wenatchee National Forest and located about 17 miles west of Mazama (Skagit County), Washington.
Lyman Fire	4/20/2024	A brush fire sparked near Carpenter Road and Pipeline Road, east of Lyman and estimated at 20-30 acres. Overnight rainfall and cooler temperatures helped firefighters gain control of the fire.

13.4 Probability of Future Events

Given the frequency at which wildfire events have happened in the past, it can be deduced that the likelihood of another wildfire happening is high in Skagit County. While the severity of which it will be is unknown, the planning area may be impacted by either smoke pollution or burning.

13.5 Risk Assessment

Warning Time

Wildfires are extensively monitored by the Washington State Department of Natural Resources and the United States Forest Service. This monitoring ensures that danger to communities is mitigated, however, evacuations may be necessary. On average, wildfires have a limited warning time, with less than 6 hours' notice for the hazard to occur and for people to prepare.

Duration

Wildfire duration can vary depending on the intensity. Wildfires often occur seasonally, lasting for weeks to months at a time. In Washington, wildfires typically begin in July and last till October, when seasonal rainfall comes to the area.

13.5.1 Impact on Life, Health, and Safety

Wildfire poses severe risks to the health and safety of Skagit County residents. Elderly and younger populations and individuals with pre-existing health conditions such as cardiovascular or respiratory diseases, are specifically at risk with increased sensitivity to smoke and heat. Depending on the severity, there can be detrimental effects to water and air quality. Sensitive populations, such as those with asthma or older age groups, will be especially vulnerable to changes in air quality. These impacts on air quality can also be widespread, with wind carrying

pollution to areas not directly impacted by the event. According to the CDC, symptoms of this decreased air quality include decreasing lung function, irritated sinuses, and headaches.[90]

13.5.2 Impact on Critical Facilities, Properties, and Infrastructure

When wildfires are in the immediate vicinity of urban areas, severe damage may occur to individual properties and county critical facilities. The expected annual loss of building value is $30,042. Infrastructure such as highway and railway bridges, roadways, communications, utilities (i.e., pump stations, distribution pipelines, etc.), and water supply reservoirs are susceptible to wildfire events. Critical facilities such as fire stations, schools, and hospitals are also susceptible to wildfire events due to their location in shallow, dry, and steep soils. Damage to critical facilities and infrastructure impacts public services that are important for disaster recovery, including but not limited to evacuation, firefighting, and responding to public health emergencies. Emergency services can also be disrupted, either due to damage or for safety to avoid poor air quality hazards.

13.5.3 Impact on Economy

Wildfire can disrupt several sectors of the Skagit County economy, including tourism, agriculture, and timber industries. A majority of the County's open forestlands are managed by privately operated and State operated silviculture companies. The timber and forestry sectors will be severely impacted by wildfires. Smoke can reduce plants and crops' transpiration activities, which reduces their harvestable quality. Additionally, poor air quality can pollute soils and disrupt supply chains reliant on timber.

13.5.4 Impact on Environment

Wildfire typically occurs in summer leaving areas of land bare of vegetation and roots that would otherwise stabilize the soil. Since vegetation does not naturally re-establish itself in burn areas quickly enough, wintertime precipitation events lead to landslides and debris flow that impacts fish habitat and riverine water quality. In addition, wildfires can increase water temperatures to lethal levels and cause death to aquatic life. Additionally, according to the Community Wildfire Protection Plan, smoke inhalation kills animals more frequently than the fire itself. However, wildfires are a natural process in ecology. Wildfires are likely to be monitored to ensure destruction to human structures and areas does not occur. There are other impacts that wildfires have on the environment, including soil erosion from decreased plants and vegetation, and watershed contamination.

13.5.5 Impact from Climate Change

As global temperatures warm, climates in the United States are becoming drier. This leads to longer and more active wildfire seasons. According to NASA, the earth's warming climate is specifically amplifying wildfire activity in the Northern, temperate forests.[91] Because of this amplification, wildfires are contributing to global emissions. Researchers have found carbon emissions to increase by 60% between 2001 and 2023.[91]

[90] CDC Wildfire Risk Factors https://www.cdc.gov/wildfires/risk-factors/index.html
[91] NASA Climate Change and Wildfires https://science.nasa.gov/earth/explore/wildfires-and-climate-change/

13.5.6 Risk Determination

Because of a wildfire's warning time, duration, and other vulnerabilities, the CPRI score for a wildfire has been determined to be 2.95.

The 2024 Skagit County Community Wildfire Protection Plan is included as Appendix B, and is adopted as part of the Skagit County Hazard Mitigation Plan.

Chapter 14. Acts of Violence

14.1 General Background

The Acts of Violence hazards category can be further broken down into the following: active shooter, mass shooting, terrorism, and civil unrest.

The FBI defines an active shooter as one or more individuals actively engaged in killing or attempting to kill people in a confined and populated area. A mass shooting, by contrast, is defined as an active shooter incident that involves at least three fatalities in a single incident, not including the shooter. Active shooter incidents do not include incidents that result from self-defense, gang violence, drug violence, domestic or residential disputes, hostage situations, or crossfire due to another criminal act.

Terrorism is defined by the FBI as violent and criminal acts that are committed by individuals or groups to further certain ideological goals, which may stem from domestic or international influences. These goals are often political, religious, social, racial, or environmental in nature.

Finally, FEMA defines civil disturbance as “an activity such as a demonstration, riot, or strike that disrupts a community and requires intervention to maintain public safety.” Though political protests and demonstrations have a history in Skagit County, these activities remain peaceful, and there is no documentation of events that have required any sort of maintenance of public safety.

14.2 Extent and Location

Acts of violence are typically confined to the settings in which they occur, meaning they tend to be localized hazards in Skagit County.

Active shooter incidents and mass shootings typically remain within populated confined spaces. Active shooter incidents can also occur in populated open spaces, though these incidents typically do not geographically disperse the way most natural hazards do. The same localized nature goes for acts of terrorism, including bomb threats, in which these violent activities remain within populated confined areas. Though protests and demonstrations have the potential to disperse across wider geographic spans, these activities are not known to unfurl into civil disturbances in Skagit County due to their tendency to remain peaceful.

Acts of violence can happen anywhere in Skagit County. However, incidents tend to occur in public spaces such as shopping centers, businesses, and schools, where people tend to congregate. When active shooter incidents occur in residential areas, it is typically around individuals the perpetrators are familiar with.

The geographic extent of hazards categorized as acts of violence in Skagit County can be categorized as limited since acts of violence hazards typically occur in populated confined areas like shopping malls, work places, or individual homes.

14.3 Past Events

Previous occurrences of active shooter and mass shooting events are sparse and unpredictable with no obvious pattern. There are no records of civil unrest or terrorism in the County.

Table 33. Active Shooter & Mass Shooting Incidents:		
Date	**Event**	**Description**
6/27/2025	Gunshots; body found under tarp reported	At around 9:30pm, residents reported gunfire in a neighborhood near Sedro-Woolley, and witnesses say they saw a body on the ground.
6/27/2025	Shooting in Clear Lake	At around 6:30pm, deputies responded to reports about multiple people being injured in Clear Lake. One man was found dead on the roadway following what investigators learned stemmed from a neighborhood dispute between two men.
9/23/2016	Cascade Mall shooting in Burlington	Arcan Cetin walks into Cascade Mall in Burlington, armed with a rifle, killing 5 random victims inside Macy's. The victims include Belinda Galde, Beatrice Dotson, Chuck Eagan, Shayla Martin, and Sarai Lara.
9/2/2008	Alger Shooting Spree	On September 2, 2008, Isaac Zamora killed six people in a shooting rampage in his hometown of Alger. The victims include Deputy Anne Jackson, Mr. Chester Rose, Mr. David Radcliffe, Mr. Greg Gillum, Julie Binschus, and Leroy Lange. Zamora had a history of mental health problems and a criminal record.
Bomb Threats		
April 2025	Cascade Valley Hospital	The first of three bomb threats was received by the hospital on Sunday, April 27, 2025. As a result, the hospital went into lockdown.
2024	Mt Vernon College	Mt Vernon College campus lockdown after reports of a shooting near Skagit Valley College
2022	Anacortes High School	Californian teenager Alan W. Filion pleaded to federal charges from over 375 false reports addressing mass shootings at high schools, including several in Washington State. Filion threatened to carry out a mass shooting at Anacortes high school in October 2022, and he also claimed to have planted bombs throughout the campus.
Sources: https://www.fox13seattle.com/news/convicted-murderer-isaac-zamora-wants-to-withdraw-guilty-pleas; https://www.skagitcounty.net/Departments/Home/press/090308.htm; https://www.king5.com/article/news/crime/bomb-threats-arlington-hospital-cascade-valley-hospital/281-150e2629-a87f-4ee8-afc3-0c5d9b6e3eba ;		

https://www.timesnownews.com/world/us/us-news/mount-vernon-shooting-skagit-valley-college-in-washington-in-lockdown-after-reports-of-shots-fired-article-113828221

14.4 Probability of Future Events

The probability of future events for acts of violence such as mass shootings, active shooters, and bomb threats is difficult to predict, as these events come without notice. Given Skagit County's historically low levels of violent incidents, the probability of these events occurring in the future remains low with less than one significant incident every 100 years. Though the likelihood of mass shootings or active shooter incidents occurring in Skagit County is low, the consequences of these events remain high, with severe psychological, economic, and operational community effects.

14.5 Risk Assessment

Warning Time

There is no reliable means to predict the day or instant that a violent hazard will occur. These events are almost always unexpected and happen instantaneously. The warning time for a violent hazard such as a mass shooting or active shooter is limited, meaning there is less than 6-hour warning time for hazards to occur and for people to prepare. Victims and law enforcement officials often must respond quickly. In the case of a bomb threat, however, warning time may surpass 6-hours. However, when considering all violent hazards, which are most often unexpected, the warning time can be characterized as limited.

Duration

The duration of violent hazards such as mass shootings or active shooters is limited, and typically less than 6 hours. Often times, these hazards can be over in 5 to 10 minutes. In the case of bomb threats, the event may persist longer, even for a few days. Most often, acts of violence remain short in duration.

14.5.1 Impact on Life, Health, and Safety

Active shooters, mass shootings, and the other listed types of "acts of violence" carry a spectrum of short and long-term consequences. Most immediately, acts of violence can lead to the loss of life, with fatalities that not only deeply affect the victims and their families, but wider communities as well. Aside from fatalities, these violent events can also cause physical injury, whether minor or critical. For more severe injury, some victims of these events may require long-term medical care and/or rehabilitation services.

In addition to physical implications, victims and survivors of violent incidents tend to suffer significant psychological trauma. According to the National Institute of Health (NIH)[92], "mass shootings are associated with a variety of adverse psychological outcomes in survivors and members of affected communities." These outcomes include increased fears and declines in severe safety, as well as increased prevalence of posttraumatic stress disorder (PTSD), depression, anxiety disorder, and substance use disorder. For the community as a whole and not

[92] Lowe, S. R., & Galea, S. (2017). The Mental Health Consequences of Mass Shootings. Trauma, violence & abuse, 18(1), 62–82. https://doi.org/10.1177/1524838015591572.

just survivors, feelings of fear and vulnerability can decrease the general sense of safety within public spaces.

14.5.2 Impact on Critical Facilities, Properties, and Infrastructure

Physical damage to the spaces in which mass shootings and active shooting incidents occur is a consequence of these violent events. Schools and hospitals are especially vulnerable due to past occurrences and increased hospitalizations to treat gunshot wounds. Bullets and other weapons can cause significant damage to property, facilities, and infrastructure. Additionally, law enforcement intervention may need to further destroy property in order to control the situation and maintain the safety of those involved.

When evacuations or lockdowns occur, buildings may experience temporary pauses in essential services and operations. In addition, buildings and facilities may respond to violent emergency events by updating building codes and safety practices.

14.5.3 Impact on Economy

Economic impacts of mass shooting and active shooter incidents may range from short-term to long lasting. In terms of immediate financial burdens, active shooter and mass shooting incidents require the mobilization of a variety of emergency response resources. These include law enforcement, medical services, and other first responders. These expenses can be considerable, especially medical expenses, as survivors require emergency treatment as well as long-term rehabilitation in some cases. Expenses for investigative processes, forensic analyses, and legal proceedings should also be considered.

Indirect economic impacts include disruptions to local businesses, which may be forced to close or alter their hours of operation in response to emergency events in their area. In the longer term, businesses may seek to invest in security upgrades, surveillance systems, or the employment of security personnel. Additionally, if customers do not feel as safe due to these events, they may not seek out engagement with those businesses impacted by hazard events. Broader community economic impacts may also include less workplace productivity because of mental implications.

If the impacted area is highly dependent on the economic activity from tourism, a decrease in tourists visiting the area following violent events may impact these economies. The real estate market may also be impacted if property values in the impacted area decline.

14.5.4 Risk Determination

Because of an act of violence warning time, duration, and other vulnerabilities, the CPRI score has been determined to be 1.95.

Chapter 15. Hazardous Materials

15.1 General Background

Hazardous materials are characterized by their chemical, physical, or biological nature, which has the potential to threaten human health, property, and/or the environment when released. Spilling, leaking, or emitting toxic vapors or fluids from closed containers creates these hazards. Damage from hazardous materials is due to properties such as flammability, toxicity, corrosiveness, chemical instability, and/or combustibility.

According to the 2023 Washington State Enhanced Hazard Mitigation Plan, potential sources of hazardous material releases include superfund sites, storage facilities, residences, manufacturers, transportation carriers, hospitals/medical facilities, veterinary hospitals/clinics, and brownfield sites. Additionally, equipment failure and human error are to blame for many hazardous spills, emitting hazardous materials that contaminate the environment and threaten public health and quality of life. Natural hazards such as floods, earthquakes, and landslides also have the potential to trigger the release or spread of potentially toxic substances. When these hazardous materials are released, they seep through soil and thus groundwater, contaminating water supplies. Vapors released from spills can collect in structures and create fires, explosions, or just toxic inhalation hazards, resulting in health impacts ranging from skin irritation to death.

15.2 Extent and Location

The geographic scope of hazardous material incidents may either be localized to a laboratory, industrial facility, or have broader implications for more populated areas or ecosystems. These incidents typically occur during the production, storage, transportation, use or disposal of hazardous materials. Though the hazardous material in question may spread after being spilled, these incidents tend to remain localized to their geographic area where the material was spilled. The extent of each incident depends on the type of material that is released, the amount of the material, the location of the release, and the weather and environmental conditions which may spread hazardous materials further. Based on past instances of hazardous spills and releases, the extent of these incidents tends to vary significantly depending on the amount and quantity of material released.

Locations in Skagit County where hazardous spills are more typical include transportation corridors, such as highways, rail lines, and various roads. There are 425.8 miles of transmission pipelines that run along the BNSF Railway, I-5 Freeway, and Highways 5, 20, and 9, 16% (69.6 miles) of which are natural gas pipelines and 25% (106.7 miles) of which are petroleum gas pipelines that run to Ferndale in Whatcom County. These locations are at risk of hazardous material spills and releases due to their role in the movement of petroleum and natural gas. More defined sites such as refineries, tank farms, former landfills, and former water treatment plants, among others, are also cited as frequent locations of material hazards. Illegal dumping of toxic material in rural areas of the Planning Area has also been documented, indicating the possibility of risk outside of designated industrial sites and zones.

Cleanup and response measures taken also play a considerable role within evaluations of assessing extent and intensity. Effectiveness and efficiency of containing, controlling, and remediating the substance can vary significantly. The duration of the hazardous material incident

and the persistence of materials in the environment also play a role in assessments of hazard extent.

15.3 Past Events

The County has experienced past hazardous material events. The table below presents previous incidents of oil spills, toxic waste dumping, refinery/industrial releases, transportation accidents, and industrial releases and contamination.

Table 34. Previous Occurrences of Hazardous Material Incidents

Date	Name of Incident	Description
Spill Incidents		
February 2025	Mystery barrels dumped in Skagit County, cost thousands to clean up	13 large 55-gallon barrels of potential toxic material were found illegally dumped on the side of Kelleher Road. Most of the material in the barrels appeared to be used motor oil, totaling about 500 gallons.
12/10/2023	Olympic Pipeline gasoline spill near Conway	A gasoline leak spilled approximately 21,168 gallons of gasoline due to a failure in a 3/8-inch tube connecting a pressure gauge to the pipeline in a concrete vault. The vault was located north of SR 534 and northwest of Conway Elementary School. Pipeline leak stopped on Dec. 10. Emergency response (cleaning up gasoline from water and ground surfaces) lasted 105 days.
6/2/2020	Skagit County Transfer Station Spill	N/A
3/18/2014	Anacortes Shell Refinery Spill	Shell Refinery reported a crude oil spill in their waste-water treatment plant at 9:45am due to a hose that broke during the transfer process of crude oil from a storage tank to a pipeline. Early indications estimate a potential spill in the range of 8,000-10,000 gallons. A US Coast Guard confirmed that no oil spilled to the waters.
2/21/2014	Shelter Bay Marina Fire and Spill	A fire involving a dozen boats, six of which sank, took place at the Shelter Bay Marina. Many of the boats were filled with diesel fuel. On-water oil recovery efforts removed an estimated 10,000 pounds of oily debris and oiled sorbents, and 600 gallons of diesel fuel were pumped odd one vessel that was badly damaged, but did not sink.
Industrial Releases		
June – July 2025 (Public Comment Period)	Shell Oil Tank Farm	The Tank Farm was initially a portion of the Fidalgo Bay tide flats, which was filled between 1925 and 1929 and leased to Shell Oil Company in 1930 for fuel storage and distribution. Groundwater continues to remain below cleanup standards and currently, the public comment period is underway to ensure that ongoing cleanup is effective.

June 2024 (Agreed Order finalized)	Lovrics Sea Craft Inc	The site is a marine ship repair and maintenance facility in Anacortes. Analytical results from 2019 were above the Sediment Management Standards for some chemical compounds. Agreed Order finalized in 2023 between Ecology and Guemes Channel Holdings for cleanup actions needed at the site.
March-April 2024	A Avenue Landfill	Located in Anacortes, WA, the former landfill was constructed in the mid-1940s until operations ceased in 2006. Petroleum contamination was identified during a shallow soil sample in 2003. Polycyclic aromatic hydrocarbons may be present in soil and groundwater as well. The indicated date is the comment period to review an Agreed Order with the City of Anacortes. An Agreed Order is a document that requires the City to investigate environmental conditions, complete a Remedial Investigation, and prepare a draft Cleanup Action Plan if necessary.
December 2023	Northern State Multi Service Center	The Site is located on the eastern edge of Sedro-Woolley and was formerly known as Northern State Hospital, constructed in 1912. Contamination was found between 2014 and 2021 within soil, groundwater, and soil vapor and testing also identified contamination within 7 areas of concern (AOCs) at the site. Ecology held a public comment period from July – August of 2023 to review an amendment to the Agreed Order for the site cleanup, as contaminant levels at the Site are present at potentially harmful levels.
January 2023 (NFA issued)	North Cascade Ford	Site was used as an auto dealership from 1949 to 2016. Soil and groundwater contamination was discovered and following clean-up between 2016 and 2020, Ecology issued a No Further Action (NFA) in 2023.
Cleanup July 2023 – April 2024	Anacortes Former Water Treatment Plant	The site, an old water treatment plant, is located next to the Skagit river in Mount Vernon and is next to the current water treatment plant, which provides drinking water for the City of Anacortes and surrounding communities. PCBs were found in building materials as well as shallow soil at the site. Specifically, PCBs were found in exterior wall coatings of the Sedimentation and Filtration basins and shallow soils between 0-12 inches below the surface but not in the groundwater or surface water. Cleanup for this site was completed in May of 2025.
January 2023	503 Bella St Sedro-Woolley	The site includes contamination that was caused by leaks from junk cars and improperly stored oil containers. The site is a single-family residence and initial soil sampling was conducted in October 2023.
2022 (Heron Management Plan approved)	March Point Landfill	The landfill operated from 1950 to 1973 first as an unregulated public dump and later as a county disposal area. From the late 1980s to mid-2011, a sawmill operated and generated wood waste up to 10 feet thick over large portions of the landfill. The March Point Landfill site is located next to a great blue heron rookery. A Cleanup Action

		Plan was developed in early 2020 and a Heron Management Plan was developed and approved by Ecology in 2022 with remediation scheduled to start in Spring 2025.
November 2021	Holly-Frontier Puget Sound Refinery	The refinery has proposed building 3 new above-ground storage tanks at Solid Waste Management Unit (SWMU) 55 but must first complete cleanup activities under Agreed Order 16081. Located in Anacortes, the refinery can process between 135,000 and 160,000 barrels of crude oil each day to make various petroleum products. Site includes the Oily Water Sewer, SWMU 55, and West Impounding Basin. Contaminants of concern include metals, volatile organics, and semi-volatile organics. Dangerous waste permit modification request, corrective action permit, and Oily Water Sewer Agreed Order were effective Nov. 2021.
November 2021	Tesoro Refining & Marketing Company	Located in Anacortes, Tesoro's Marathon refinery processes an average of 105,000 barrels of crude oil each day to make petroleum products. Both the Oily Water Sewer and Leaded Tank Farm Disposal Areas include contaminants of concern. A dangerous waste permit modification request, a corrective action permit and Agreed Order are effective in 2021.
June 2020 (30-day public comment period)	Chevron 97502	Located in downtown Sedro-Woolley, the site was an operating Chevron service station from 1950 to 1991. Now, the property is owned by the City and since 2005 has been in use as Hammer Heritage Park. Petroleum contamination in soil and groundwater exceeded cleanup levels allowed under the Model Toxics Control Act (MTCA). Groundwater monitoring in 2013-2014 revealed contamination remains above MTCA cleanup levels and the creation of a new cleanup plan is now under way.
Refinery Fires		
4/2/2010	Explosion and fire at the Tesoro Refinery in Anacortes kills seven refinery workers	The Tesoro Refinery, sitting on 900 acres at March Point near Anacortes, was constructed by Shell Oil Corporation and bought by Tesoro Petroleum Corporation in 1998. The explosion on April 2nd, 2010 killed seven refinery workers and shook nearby homes in Anacortes.
Sources: GovDelivery; Washington State Department of Ecology; Washinton State Department of Ecology; Washington State Department of Ecology – Cleanup and Tank Search; History Link		

15.4 Probability of Future Events

Future hazardous material incidents remain difficult to predict due to uncertainty in exact location as well as severity. However, hazardous materials incidents tend to impact every state and jurisdiction to some extent. Counties in Western Washington, according to the 2023 Washington SEHMP, are more at risk to hazardous material spills due to greater density of industrial and populated areas, as well as major transportation routes surrounding coastal waterways and Puget Sound.

15.5 Risk Assessment

Warning Time

The warning time for hazardous materials incidents is generally limited, meaning less than 6 hours, as most of these incidents occur rather suddenly and instantaneously. These hazards cannot be predicted, thus making it difficult for adequate warning to be provided. Most of the incidents with hazardous spills, industrial releases, or refinery fires that have occurred in Skagit County have been accidental and rapid, with no prior indication and therefore, very limited warning time. Refineries are able to test run “Initial Electronic”, “All Clear”, and “Unit Horns” sirens on a regular basis.

Duration

The duration of hazardous material spills, industrial releases, or refinery fires tend to be limited (the hazard persists for less than 6 hours). However, the cleanup process or health impacts may be more drawn out. Transportation-related spills are typically contained quickly and within a few hours.

On the other hand, longer-term industrial releases may stretch and persist for longer than a “limited” duration. The timelines for remediation tend to be longer for industrial releases. Skagit County’s prioritization of major refineries, pipelines, and various other industrial operations makes these industrial releases with longer duration incident potential more probable. With these incidents, cleanup often does not begin immediately, and it may also be a more drawn-out process to remove contamination. Thus, the Planning Team is characterizing the duration as “moderate.”

15.5.1 Impact on Life, Health, and Safety

Hazardous material spills and releases leave considerable impacts on life, health, and safety. For one, exposure to hazardous and often toxic materials can result in injuries, respiratory problems, or chemical burns. In instances such as the 2010 Tesoro Refinery explosion in Anacortes, physical injury and even death is possible.

According to the Environmental Protection Agency (EPA), people are exposed to hazardous air pollutants by breathing contaminated air, eating contaminated food products, drinking contaminated water, ingesting contaminated soil, or touching any contaminated surfaces.

Exposure to hazardous and toxic materials can often lead to an increased chance of getting cancer, according to the EPA. Other severe health effects include immune system damage and problems to reproductive, developmental, and respiratory systems.

The EPA also differentiates short term from long term health effects of hazardous substances. Short term health effects include difficulty breathing, headaches and/or nausea. More severe effects include behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (e.g., reproductive impairment, kidney failure, etc.), physical deformations, and birth defects.

15.5.2 Impact on Critical Facilities, Properties, and Infrastructure

Hazardous material spills and incidents can result in considerable property damage and impacts to critical infrastructure. The degree of impact varies depending on the type of material and

amount of material that is released, but the extent of property damage can be severe especially in cases of chemical, spills, explosions, or fires.

Private property, such as homes and businesses can be easily contaminated during spills, illegal dumping, and chemical fires. While these incidents are less common in the assessment of Skagit County's historical hazardous material incidents, the 2023 Olympic Pipeline spill in Conway demonstrates potential risk, as the incident threatened a local elementary school and neighboring residential areas.

Critical infrastructure, including power plants, water treatment facilities, landfills, transit corridors, and communication networks, can be affected by hazardous material incidents. Hazardous material incidents can contaminate water sources, disrupt water treatment plants, and thus affect the supply of clean water to communities in the area. Fires or explosions may lead to power outages or damage to electrical infrastructure that may impact energy supply and general safety.

Transportation networks, including highways, roads, and bridges, may also be compromised following hazardous material incidents, and this could hinder transit access for the general public as well as emergency responders. Transit networks are especially vulnerable to these incidents given that hazardous materials are often transported along these corridors.

15.5.3 Impact on Economy

The economic impacts of hazardous material incidents are associated with the costs of emergency response, containment, cleanup, and environmental remediation efforts. Short-term cleanup efforts, including deployment of first responders, hazmat teams, and emergency services can be costly. Longer-term environmental remediation and cleanup of damaged infrastructure also require specific equipment, specialists, coordination with government agencies, and other resources to contain and mitigate the incident.

Additionally, any businesses that are impacted by hazardous material incidents may face temporary closures, inventory loss, and a reduction in customers and business, all leading to reduction in revenue. If soil and water in more rural areas are threatened with contamination, agricultural and tourism industries may be compromised.

15.5.4 Impact on Environment

Hazardous material spills and releases can have significant and long-lasting environmental implications. These incidents can contaminate soil, groundwater, surface water, and air. When hazardous materials are released to the environment, often deposited in soil and surface waters, they tend to be taken up by plants. In effect, animals that consume these plants are also exposed to hazardous materials, which become magnified as they travel up the food chain. Wildlife exposed to these hazardous and toxic substances may experience similar health effects to those seen in humans, which include organ damage, increased mortality, and reproductive issues.

Water contamination has implications for aquatic life, degradation of water sources, and disruption of wetland ecosystems following a hazardous material incident. In events such as the Shelter Bay Marina Fire and Diesel Spill, oil and fuel in the water column has the potential to smother fish eggs, reduce oxygen levels, and threaten bird species that rely on aquatic ecosystems for feeding

and nesting. Areas such as Fidalgo Bay and Guemes Channel are especially sensitive, as they are home to species that face considerable threat in the event of a hazardous material spill.

Soil contamination is also a significant concern at former industrial and landfill sites in Skagit County. The March Point Landfill hazardous waste cleanup, for example, facilitated the development of a Heron Management Plan, due to the site's location next to a heron rookery. Due to the mitigation and cleanup actions taking place at the site, the Heron Management Plan also committed to reducing noise levels so as to not cause any further disturbance to the nearby heron rookery.

15.5.5 Impact from Climate Change

Climate change is expected to influence the frequency and intensity of natural hazard events, directly and indirectly impacting the storage, transportation, and processing of hazardous materials. More intense flooding, storms, and landslide events, for example, may directly disrupt the storage and transportation of hazardous materials, triggering their release.

Increased temperatures and extreme heat events due to climate change may also contribute to heat-related transportation incidents. Overheated vehicles carrying hazardous material cargo can potentially increase the risk of leakage or general hazardous material incidents.

Finally, general changes in temperature and humidity may impact the stability of certain chemicals, in some cases making them more susceptible to release. Higher ambient temperatures may degrade containers which store hazardous materials or increase the off-gassing rate of hazardous materials, raising the likelihood of release.

15.5.6 Risk Determination

Because of a hazardous materials spill or release warning time, duration, and other vulnerabilities, the CPRI score has been determined to be 2.30.

Chapter 16. Disease

16.1 General Background

Disease is generally described as a sickness or attack on the immune system that results in the loss of health. Many conditions and ailments can fall under the umbrella of disease; however, this section of the HMP will focus on communicable diseases and epidemics such as the COVID-19 pandemic. The National Institute of Health (NIH) defines pandemic as “an epidemic occurring worldwide, or over a wide area, crossing international boundaries and usually affecting many people.” Most recently, Skagit County was impacted by the worldwide COVID-19 pandemic. In addition to COVID-19 outbreaks, the county documents hospitalizations for influenza and respiratory syncytial virus (RSV).

Though seasonal flu outbreaks are common in the area, they are not recognized as pandemics. COVID-19 does not show a clear seasonal pattern. The molecular composition of a virus morphs depending on its environmental conditions and continues to evolve regularly. However, influenza and RSV typically occur in a more seasonal fashion, with cases peaking between October 1st and May 31st, during what is referred to as “flu season.” Inclusion of diseases in this Hazard Mitigation Plan stems from extended impacts beyond health affecting schools, businesses, local government operations, and the economy.

16.2 Extent and Location

Disease events are typically spread through human contact; therefore, wherever there are urban settlements and densely populated areas, there is also a possibility where diseases can spread. However, a hazard’s level of severity can vary and affect individuals differently ranging from sickness and recovery within weeks to hospitalization and even death. In 2022, there were 92 Covid-19 deaths reported Countywide that were attributed to the viral strain and mostly affected those who were 65+ years old. An individual’s sensitivity to a disease when exposed typically increases for those with pre-existing health conditions such as cardiovascular disease, diabetes, and autoimmune diseases. Disease hazards can be exacerbated by emergency and health care services, limiting resources and stretching out response times during critical care operations.

16.3 Past Events

The Washington State Department of Health (WA DOH) documents trends in Washington state for COVID-19, influenza, and RSV within the Respiratory Illness Dashboard. Instead of documenting each county individually, this dashboard uses larger regional areas called Accountable Communities of Health (ACH), as there is often not enough data reported by individual counties for public display. Skagit County is included within the “North Sound” ACH. Recent data listed in Table 35 show how COVID-19 hospitalizations are now generally lower than they were at peak pandemic levels, yet they still fluctuate seasonally. RSV and influenza levels maintain seasonal fluctuations.

Table 35. Previous Occurrences of Disease			
	2022-2023 Season	**2023-2024 Season**	**2024-2025 Season**
Percent of COVID-19 Hospitalizations	4% in October, increase to peak just below 8% in December, decrease to below 1% in June, slight growth back to below 3%	3% in October, slight growth in December, peak at 5.2% in January, decrease to 0.8% in May, slight increase to below 4% in September	3% peak in October, decrease to 0.5% in December and stays below 1.5% for the remainder of the year
Influenza Hospitalizations	Almost 0% in October, peak at 8.3% in November, decrease back to 0% in February, stays below .3%	Almost 0% in October, slight increase but stays below 2% in December and January, gradual decrease to 0%	Almost 0% in October, gradual growth to 3.4% in January, sudden jump to 7.5% peak in February, sudden then gradual decrease to 0%
RSV Hospitalizations	Almost 0% in October, sudden growth to 3.6% peak in November, sudden then gradual decrease to 0%	Almost 0% in October, growth to 1.6% in December with fluctuations in December and January, gradual decrease to 0%	Almost 0% in October, increase to peak at 1.7% in February, gradual decrease to 0%

16.4 Probability of Future Events

The likelihood of a COVID-19 pandemic or other widespread event of a communicable disease is frequent with past event data showing annual recurrence of communicable diseases. The severity, frequency, type, and location of diseases are often difficult to predict. Although 2024 and 2025 trends are lower than previous years, the severity of future events may increase and are highly dependent on individual attributes such as personal hygiene, immune system response, and frequency of human contact.

16.5 Risk Assessment

Warning Time

The Planning Team has determined that the warning time for disease hazards in Skagit County can be characterized as high (>24 hours). When disease outbreaks occur, public health agencies can detect early signs of quickly spreading disease. Advanced warning is very possible, as agencies such as the CDC are able to efficiently keep track of the spread of known and emerging diseases.

Duration

The Planning Team's characterization of duration for disease hazards in Skagit County is extensive (>24 hours). Disease outbreaks typically last weeks to months and in even more severe cases, such as the COVID-19 pandemic, outbreaks can last for years. More localized disease outbreaks are also not typically contained within a period that is any less than 24 hours.

16.5.1 Impact on Life, Health, and Safety

Pandemic and disease hazards expose the community to significant vulnerabilities. According to the "General Weaknesses" section of the 2025 Skagit County Comprehensive Plan, the COVID-19 pandemic revealed the need for behavioral health support, with stronger access to mental health resources, substance use treatment, increased training for medical works, and community education. Job loss, school closures, social isolation, and fear of the disease itself worsened during the pandemic, exacerbating behavioral health challenges. Additionally, COVID-19 revealed challenges can occur with healthcare access, including how the Latinx population is disproportionately represented within essential workforces, exposing them further to the disease itself.

16.5.2 Impact on Critical Facilities, Properties, and Infrastructure

Diseases primarily impact humans but have an indirect impact on critical facilities and properties. Hospitals and medical facilities typically experience increased hospitalizations during a spike and can strain medical staff and available resources.

16.5.3 Impact on Economy

Disease has an indirect impact on the economy and impacts personal health in which an individual is unable to work due to sickness. Household incomes are temporarily reduced as the householder spends less time working and more energy recovering. In addition, during the Covid-19 pandemic, businesses around the country were required to shut down or shift business operations to reduced hours or customer capacity, increasing unemployment rates. The pandemic also impacted commercial business profitability and in turn reduced worker shifts.

16.5.4 Impact on Environment

Diseases can come from vector-borne transfers of human exposure to viral bodies from animals. Conditions which make diseases easier to thrive can occur from sudden change in temperature, longer duration of elevated temperature, water contamination, and decaying organic matter. Although diseases can be transferred through human contact, disease can originate from environmental conditions that are exacerbated by climate change. In Skagit County, the likelihood of disease hazards impacting the environment is negligible due to average cool weather year round and sparse populations centers in unincorporated county.

16.5.5 Risk Determination

Because of a disease's warning time, duration, and other vulnerabilities, the CPRI score has been determined to be 2.25

Chapter 17. Bridge & Road Failure

17.1 General Background

Bridge failure occurs when a constructed bridge or appurtenant structures cannot perform as designed, leading to reduced capacity or total collapse[93]. The failure of a bridge, especially when unexpectedly collapsing, can result in serious loss of life and economic losses. One of the leading causes of bridge failure can occur when loads exceed the standards which the bridge was designed for, otherwise known as overload. Design errors, construction mistakes, hydraulic, and collision are other leading causes of bridge failures which account for more than 70% of national bridge failures[94]. Exceeding loads over time often compromise a bridge's stability and structural integrity and can occur from a variety of human and natural forces. This includes, but is not limited to structural type, built material, type of use, service age, and foundation exposure that can occur from scouring of riverbanks from high flooding events, extreme precipitation, earthquakes, and severe weather events.

Similarly, road failure occurs when the surface deteriorates from extreme temperature changes, forming cracks, fractures, potholes, ruts, and other deformations that compromise the structural integrity of the roadway[95]. Road failure can be exacerbated by repeated traffic loads that exceed the intended design threshold or where there are poor construction practices and subgrade soil characteristics. Subgrade soil stability is influenced by soil type, water content, degree of compaction, mineral content, and other characteristics[96]. Areas with high groundwater tables, extreme temperature fluctuations, and soils with low cohesion factors or high organic matter could also result in road stress over time[97], eventually resulting in failure.

17.2 Extent and Location

There are 287 bridges and approximately 1,743 miles of roadway located throughout the County. Approximately 26% of highway bridges are considered functionally obsolete and structurally deficient. Bridges often provide safe passage and navigation above waterways and significant geologic features. When the structural integrity of roads and bridges are compromised, it can lead to potential failure that can isolate households and neighborhoods from accessing resources and receiving emergency response services.

17.3 Past Events

The Skagit County Department of Public Works releases a bridge report each year, including documentation of bridges that are deemed structurally deficient or in poor condition. Between the years of 2020 and 2025, no bridge collapses occurred, but the following bridges were deemed deficient.

[93] https://doi.org/10.1016/j.jtte.2021.12.003
[94] Ibid.
[95] https://doi.org/10.1016/j.jreng.2024.01.005.
[96] https://www.sciencedirect.com/topics/earth-and-planetary-sciences/subgrade.
[97] Ibid.

Table 36. Previous Occurrences of Bridge Failure		
Report Year(s)	**Bridge Name / Bridge Number**	**Deficiency**
2020, 2021	Anacortes Ferry Dock / 40152	Girder Condition
2020, 2021, 2022, 2023	Skagit River Marblemount / 40070	Superstructure
2020, 2021, 2022, 2023	Bay View-Edison at Joe-Leary / 40029	Deck
2022, 2023	S Skagit Hwy at Mill Creek / 40086	Waterway Adequacy
2020, 2021, 2022, 2023, 2024	Old Hwy 99 at Thomas Ck / 40113	Deck/Substructure
2021, 2023, 2022, 2024	F&S Grade Samish River / 40013	Deck
Sources: 2020-2024 Annual Bridge Reports		

In addition, in May 2013, a portion of the I-5, a major thoroughfare for the County and region, experienced a failure. At approximately 7pm, the northernmost span of the bridge, which carries Interstate 5 over the Skagit River, collapsed into the water below. Three people fell into the river and were rescued. The failure was caused by an oversized load hitting several of the bridge's overhead support beams, triggering the collapse[98].

Road failures are recorded by Skagit County Public Works Department and WSDOT, resulting in the need for regular maintenance and response to road closures, restrictions, and construction.

Table 37. Previous Occurrences of Road Failure		
Posted Date	**Road Name**	**Description**
February 2025	Airport Way (Town of Concrete)	Freezing temperatures and heavy snowfall resulted in Airport Way, a critical school bus route, quickly deteriorating, cracking, and seeping.
February 2022	North Shore Drive	This portion of the road has been experiencing slope and stability issues over many years, and is directly adjacent to Lake Cavanaugh. Wave action from increased lake fluctuations have undermined the roadway, and collapse/crumbling into water has been recorded.
12/27/2022	Samish Island Road	This road is surrounded by privately-owned dikes, and sections of the dikes are in stages of disrepair. Flooding events of December 27th, 2022 resulted in temporary closure of the roadway.
4/22/2025	Chuckanut Drive (State Route 11)	Rockslide blocked both directions of the roadway, requiring extensive cleanup and repair. WSDOT crews removed 3600 tons of debris, including large boulders.
Sources: *Skagit County Department of Public Works; Skagit County Department of Public Works Engineering; Washington State Department of Transportation*; *Washington State Department of Commerce*		

[98] https://en.wikipedia.org/wiki/I-5_Skagit_River_bridge_collapse.

17.4 Probability of Future Events

Bridge and road failures are not common due to regular maintenance activities. However, regular maintenance and repair activities are often expensive and time consuming, sometimes requiring extensive engineering designs and construction to ensure public safety.

17.5 Risk Assessment

Warning Time

The warning time for bridge and road failure has been determined by the Planning Team to be limited (< 6 hours). These incidents are not predictable and the moment of failure for road and bridge infrastructure is rarely predetermined. These failures often occur suddenly because of other hazards such as flooding, severe weather, seismic incidents, or general degradation, with little to no advance notice.

Duration

While some bridge and road failures may be temporary, resulting in closures of roads for only a few hours, most failures result in the need for extensive repairs and multi-day closures. When a bridge or road experiences slope and stability issues, damage from rockslides or landslide events, or general structural problems, management and repair tends to take several weeks or even months. Thus, the Planning Team defines the duration of this hazard as extensive (> 24 hours).

17.5.1 Impact on Life, Health, and Safety

Roadways and bridges can be a nuisance when surfaces buckle and warp making surfaces uneven and difficult to drive on. Failing roadways and bridges can occur at any time. Bridge failure would result in injuries and possibly fatalities. Evacuation critical junctions can become a barrier or delay response times that can be the difference between life and death. For example, Deception Pass bridge is a critical junction and is the sole evacuation junction for Island County residents.

17.5.2 Impact on Critical Facilities, Properties, and Infrastructure

Bridge and road failure has a direct impact on critical facilities and infrastructure. Road and bridge failure can prevent personnel from servicing other critical infrastructure and associated facilities such as downed powerlines or generators.

17.5.3 Impact on Economy

Road and bridge failure could prevent the transportation of goods and services that disrupt business continuity. In the past, flood events have disrupted truck traffic on the I-5 freeway resulting in millions of dollars losses. Road and bridge failure can also prevent workers from accessing workplaces, impacting household income and revenues.

17.5.4 Impact on Environment

Road and bridge failure has an indirect impact on the environment where the accumulation of particulate matter, oils and grease, tire dust, metals, and other pollutants from vehicles negatively impacts water quality and habitat quality.

17.5.5 Risk Determination

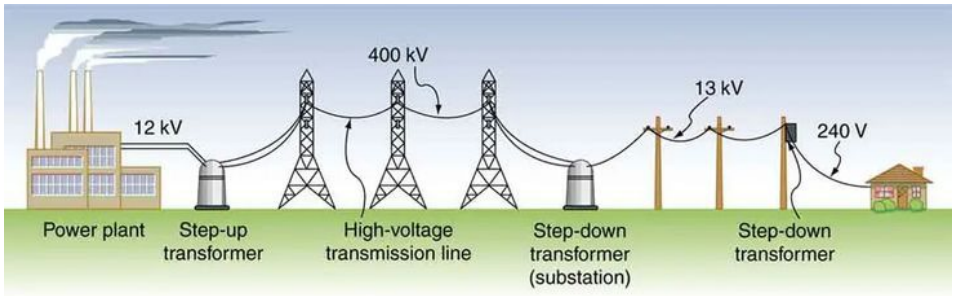
Because of the short to no warning time of road and bridge failures, duration, and other vulnerabilities, the CPRI score has been determined to be 2.65.

Chapter 18. Power/Water System Failure

18.1 General Background

Power and water systems are critical infrastructure that is essential for survival. When the delivery of power and potable water is interrupted for long periods of time, it can cause widespread public health and safety impacts.

Electrical system failure occurs when there is a disruption to electricity supply, leading to power outages and loss of power to buildings. Power system failure can range from localized, temporary blackouts to large-scale, longer duration blackouts across regions. Typically viewed as a cascading effect of severe storms, extreme temperatures, wildfire, floods, and other hazard events[99], power outages can also occur from wildlife, lightning, vandalism, overloads, and poor insulation[100]. Power outages often occur as temporary, localized events and can recover within 24 hours, whereas large-scale failures are rarer and oftentimes the result of an "uncontrolled successive loss of system elements triggered by an incident [or multiple disturbances] at any location[s]"[101], otherwise known as cascading failure. The power supply chain is linear in nature, meaning that an impact at any point in the system can cause a 'domino effect' in which the failure can be located or sourced to a single or isolated event and lead to power failure for the end user.



Electrical Power System Components (Source: Electrical Academia, 2025)

Water system failure occurs when there is a disruption to the delivery of potable water, leading to the loss of water supply to buildings or contaminated water supply. Natural and human causes of water shortages include drought, landslides, floods, wildfires, water contamination, inadequate planning to meet demand, shallow wells, inadequate pumping equipment, water waste, or water outage due to loss of power or major service disruption[102].

In the event that a water supply shortage occurs, the U.S EPA requires that community water systems serving more than 3,300 people complete a vulnerability assessment and subsequently revise their emergency response/operations plan to implement findings. The assessment documents any anticipated malevolent acts and natural hazards per Section 1433 of the Safe Drinking Water Act[103].

[99] https://doi.org/10.1016/j.joule.2021.07.006.
[100] https://electrical-engineering-portal.com/11-major-causes-of-power-system-failures.
[101] https://doi.org/10.1016/j.rser.2017.05.206.
[102] Washington State Department of Health (2011). https://www.islandcountywa.gov/DocumentCenter/View/4829/DOH-331-301---Preparing-Water-Shortage-Response-PlansPDF?bidId=.
[103] https://www.epa.gov/waterresilience/awia-section-2013.

18.2 Extent and Location

Transmission power lines make up 39% or 317 miles of the County's utility infrastructure that are owned and operated by Seattle City Light, Puget Sound Energy, and Bonneville Power Administration. Natural gas pipelines account for 8.6% or 69.6 miles of utility infrastructure and are owned and operated by Cascade Natural Gas. Transmission lines are vulnerable to a variety of natural hazards. Under extreme heat and wildfire conditions, power lines can sag and trip, causing sparks or ignition sources for wildfire. Gas pipelines are typically made of steel material whereas water pipelines are made of steel, copper or plastic and are sensitive to breakage and seepage when exposed to earthquakes, floods, vandalism, and storms, among other hazard events.

The duration of power and water system interruptions is an indicator of the hazard's severity and its impact to the county. Consumers can tolerate longer power system interruptions compared to water system interruptions, where oftentimes humans are unable to survive without running water for three (3) days. Puget Sound Energy is the main energy provider for Skagit County and provides daily updates of power outages throughout the Washington region.

18.3 Past Events

Water supply and electricity supply failure are typically localized events that affect private households. During extreme cold weather, distribution pipelines can burst or break due to frigid temperatures, causing flooding. As a result, some households may have no running potable water for more than 24 hours. A particularly cold wave in January 2024 resulted in increased call volumes. Response from private plumbing companies can be impacted, thus increasing public health risks.

Table 38. Previous Occurrences of Power & Water System Failure

Date	Event	Description
2020-2023	Transmission Line Breaks	A 24-in. diameter concrete cylinder pipe experienced several significant line breaks in recent years (since Sept. 2023) and Skagit Public Utility District replaced it with a new 5.3-mile long 36-in. diameter welded steel transmission pipeline from the Water Treatment Plant at Judy Reservoir to East College Way in Mount Vernon.

Sources: Skagit PUD; Mount Vernon Chamber of Commerce; Fox13 Seattle News;

18.4 Probability of Future Events

Large scale blackouts are not common, however climate change is anticipated to increase the frequency and severity of hazardous events, thus increasing the chance of system failure. The likelihood of power and water failure can also increase due to infrastructure age, lack of capacity from increasing demand, and technological failures. Households experience water pipeline breakage annually during wintertime and are likely to remain the same. Interruptions to larger

transmission pipelines from reservoirs and wells are managed by utility districts. Thus the Planning Team rated the likelihood of a significant power and water failure event occurring as low.

18.5 Risk Assessment

Warning Time

Failures of water and power systems tend to occur without warning and in a sudden manner. These events are triggered by weather extremes, severe storms, wildfires, floods, lightning, and other hazardous events. Therefore, because they are the result of often unpredictable natural weather phenomena and hazards, the warning time associated with these events is determined by the Planning Team to be limited (>6 hours).

Duration

In some cases, water and power service can be restored within a day. However, in many cases, such as the water pipe breaks/bursts of January 2024, residents were without water for over 24 hours. Similarly, the transmission line breaks of 2020-2023 left affected residents without access to power for days at a time. This event indicates chronic stress on infrastructure stretching out over a multi-year period. Thus, the Planning Team designates a duration that can be characterized as extensive (>24 hours) for this hazard.

18.5.1 Impact on Life, Health, and Safety

Loss of water and electricity services directly impacts personal livelihood and quality of life. Without the delivery of necessary utilities, the continuity of life is disrupted and becomes difficult to conduct household chores and exercise. Lack of water and electricity also prevents one from cooking and drinking, which can result in fatalities if the hazard persists for more than three (3) days. The hazard is rated as limited since the entirety of the county's population would experience injuries and/or fatalities from such hazards but is more likely to occur in isolated areas. Large transmission pipelines that supply more households have a more significant impact than smaller distribution pipelines.

18.5.2 Impact on Critical Facilities, Properties, and Infrastructure

Loss of water and electricity supply impacts the services provided from critical infrastructure. Hospitals for example require continual energy supply for life-saving machinery and operations. Schools also contain and allow operation of communication radios and equipment, becoming temporary emergency communication centers. Due to the sensitive nature of critical facilities, they typically have backup generators and operation plans in case of a shutdown, otherwise known as redundancies. Although an inconvenience, loss of water and electricity services does not compromise the structural integrity and safety of facilities/buildings and is rated as negligible.

18.5.3 Impact on Economy

Since the Covid-19 pandemic, business operations have relied more heavily on electronic systems to continue the flow of goods such as capturing inventory changes, tracking profitability, market fluctuations, and other financial services. Also, websites, social media platforms, and emails generally offer accessible ways for the public to consume content and spread information.

Revenue and income impact from lack of power and water is rated as limited since loss of water and power remain localized in small areas of a community and are managed by utility companies.

18.5.4 Impact on Environment

Power and water supply failure requires brush and vegetation clearing for personnel to access failed equipment and troubleshooting operations. In addition, substations, transformers, water pumps, and water storage reservoirs require regular maintenance and upgrades that also require a vegetative buffer to avoid impacts to the environment.

18.5.5 Risk Determination

Because of power and water system failures' warning time, duration, and other vulnerabilities, the CPRI score has been determined to be 2.05.

Chapter 19. Dam Failure

19.1 General Background

Dam failure refers to a partial or complete breach in structural integrity of any artificial barrier, including levees, that diverts or impounds water. Dam failure occurs for several technological reasons such as inadequate spillway size, foundation defects, mechanical failure of valves or other equipment, freezing and thawing cycles, and intentional destruction. Dam failure can also occur as a cascading effect of natural hazards such as earthquakes, landslides, flash flooding, extreme precipitation, and sudden and intense snowmelt. Dam failure can result in catastrophic and widespread flooding, leading to the passage of the 1972 National Dam Safety Act (Public Law 92-367). The Act directed the Army Corps of Engineers to carry out a national program to inspect dams regularly for overtopping, seepage, settlement, erosion, sediment, cracking, earth movement, earthquakes, failure of bulkheads, flashboard, gates on conduits, or other conditions[104].

19.2 Extent and Location

The Dam Safety Office (DSO) of Washington State classifies hazardous dams based on the downstream potential impacts to life, property, economy, and environment[105].

- 1A = Greater than 300 lives at risk (High hazard);
- 1B = From 31 to 300 lives at risk (High hazard);
- 1C = From 7 to 30 lives at risk (High hazard);
- 2 = From 1 to 6 lives at risk (Significant hazard);
- 3 = No lives at risk (Low hazard).

Of the 23 dams located in Skagit county and listed in the national dams inventory, 16 are classified as high hazard or significant hazard potential. Of the 16 high-significant hazard dams, four are assessed as being in poor condition. They are: Whistle Lake dam, Nookachamps Hills dam, Valley View dairy waste pond, and Lower Baker dam. The Lower Baker dam is under remediation as of April 2023. The listed dams have Emergency Action Plans (EAPs) that have been reviewed and revised if necessary to provide emergency response protocol. Dams are maintained by private and public entities that are responsible for maintaining dam inundation maps and emergency response protocol in the event of dam failure.

19.3 Past Events

Though the Washington State Department of Ecology does not document any incidents of dam failures that occurred within Skagit County, dam failure remains potential hazard impacting the County. According to the Cascadia Daily News, “60,000 acres of Skagit County’s agricultural lands are farmable only because of a complex network of dikes and drains separating the ground from

[104] https://www.congress.gov/92/statute/STATUTE-86/STATUTE-86-Pg506-2.pdf
[105] https://apps.ecology.wa.gov/publications/documents/9255a.pdf.

saltwater."[106] The three most recent incidents of recorded dam failures took place in Snohomish County in 2010, Okanogan County 2014, and Asotin County in 2017.

There are no recorded dam failures within the last 5-7 years. The dams are also inspected regularly to maintain safe operations and conditions.

19.4 Probability of Future Events

The likelihood of dam failure occurring in the future varies based on evidence of past failures, how often they occur, future development trends that may impact the infrastructure's function, natural hazards exacerbated by climate change, and other human and natural influences.

False alarms are most likely to occur but does not directly damage or significantly impact the dam's structural integrity. Dam failure is rated as unlikely to occur within the next 100 years.

19.5 Risk Assessment

Warning Time

Baker River hydroelectric dam has an early warning system. Levee systems do not have a warning system but are maintained by special districts. Sirens in the past were triggered by mistake due to human error such as failing equipment or damaged during construction. Warning systems for dams are typically triggered immediately once dam failure occurs. Lower river residents must evacuate immediately before inundation occurs, leaving residents with little to no time to act and evacuate to higher ground once an alarm is activated.

Duration

Flooding for dam failure varies depending on the dam's capacity and distance from properties and homes. Flooding or inundation from dam failure is likely to persist for more than 24 hours.

19.5.1 Impact on Life, Health, and Safety

Inundation from dam failure would result in personal injury and loss of life due to the rapid onset of high velocity and deep water levels. However, inundation from dam failure is extremely rare and requires extensive recordkeeping and maintenance activities to prevent the downstream loss of life.

19.5.2 Impact on Critical Facilities, Properties, and Infrastructure

Dam failure also has a direct impact on critical infrastructure and facilities since failure can act similarly to significant flood events from storms and/or extreme precipitation.

19.5.3 Impact on Economy

Buildings that are lost due to inundation from dam failure result in business closure and disruption to business continuity, indirectly impacting the economy. Dam failure located upstream of roadways and rail lines can disrupt the distribution of goods and services.

[106] https://www.cascadiadaily.com/2024/nov/02/downstream-impacts-stakes-are-high-in-skagit-dam-dispute/.

19.5.4 Impact on Environment

Dams are highly engineered environments but can provide conditions suitable for wildlife. Meanwhile, dams are known to disrupt the migration of salmon species, disrupting natural ecosystem functions and wildlife behavior. Some dams installed fish ladders, traps, and hauls to mitigate the impacts to fish migration.

19.5.5 Impact from Climate Change

As precipitation events become more intense during winter months followed by rapid snowmelt, dams that act as reservoirs can increase releases to avoid overcapacity and potentially compromising dam stability. Levees that act as flood mitigation infrastructure can also experience failure as wintertime precipitation increases or other hazards occur.

19.5.6 Risk Determination

Because of a dam failure's warning time, duration, and other vulnerabilities, the CPRI score has been determined to be 2.10.

Chapter 20. Hazard Ranking

Hazards were ranked based on qualitative and quantitative data compiled over multiple sources. As a continuation of the 2020 HMP, the scores and priority ranking for natural hazards remained generally the same and are ranked as a higher priority than most human and technological hazards.

Table 39. Hazard Ranking Results, Skagit County

Hazard Rank	Hazard Type
1	Severe Weather
2	Flooding
3	Earthquake
4	Landslides
5	Wildfire
6	Bridge/Road Failure
7	Coastal Hazards
8	Drought
9	Tsunami
10	Volcano
11	Hazardous Material Spill or Release
12	Disease
13	Dam Failure
14	Power/Water System Failure
15	Acts of Violence

According to the public survey results, 101 responses were received regarding the public's opinion on individual perception of hazard risk, preparedness, and mitigation satisfaction. 58% of respondents noted that wildfire was the top concern, followed by about 53% of respondents who were concerned about flooding & dam failure, and power & water system failure, and are generally aligned with the hazard ranking above. The top hazard concerns are sparked in large part by recent events such as the false alarm at Baker Dam[107], winter flooding at the Skagit River[108], and BNSF train derailment[109]. When asked which community assets were most important to protect, the top three responses were hospitals, critical communication centers, and

[107] https://www.goskagit.com/news/local_news/baker-dam-false-alarm-discussed-at-concrete-town-council-meeting/article_801d74ff-c509-403b-af57-5cccf13cbf1b.html.

[108] https://www.goskagit.com/gallery/photos-skagit-valley-flooding-from-the-air-11-17-21/collection_b8c46a29-f3cf-5e49-b5b5-a2f67474e4f1.html

[109] https://www.epa.gov/newsreleases/bnsf-swinomish-channel-derailment-unified-command.

bridges & roads. This indicates that there are some deficiencies in critical care and response services and infrastructure.

Respondents also noted that the hazards that should be prioritized for mitigation are wildfire (49%), flooding & dam failure (47.5%), and power & water system failure (45.4%). Specific mitigation actions recommended by respondents include communication and education methods for individuals with difficulty hearing, increased evacuation awareness, discouraging development in hazard zones, and collaborating with partner agencies (i.e., WA-DOT, tribal governments, etc.) to improve roadways and bridges. The public survey responses have been considered by the Planning Team and incorporated as mitigation strategies where appropriate.

Table 40. CPRI Hazard Scoring Results						
Hazard	**Probability**	**Magnitude/Severity**	**Geographic Extent and Location**	**Warning Time**	**Duration**	**CPRI Score**
Coastal Hazards	3	2	3	2	3	**2.65**
Drought	3	2	4	1	4	**2.80**
Earthquake	2	4	4	4	1	**3.05**
Flooding	4	2.8	3	1	2	**3.10**
Landslides	4	2.2	2	4	2	**3.05**
Severe Weather	4	3	4	1	2	**3.35**
Tsunami	2	3	2	4	3	**2.50**
Volcano	1	4	4	1	4	**2.50**
Wildfire	4	2	2	4	1	**2.95**
Acts of Violence	2	2	1	4	1	**1.95**
Hazardous Material Spill or Release	3	1.6	1	4	2	**2.30**
Disease	2	1.4	4	1	4	**2.25**
Bridge/Road Failure	3	1.8	2	4	4	**2.65**
Power/Water System Failure	2	1.6	1	4	4	**2**
Dam Failure	1	2.8	2	4	4	**2.10**

Chapter 21. Progress Tracker

This section tracks progress from initiatives described in the 2020 Plan and their implementation status at the time this update was prepared as required per 44 CFR § 201.6(c)(4)(i).

21.1 Plan Progress Tracker & Efforts

A comprehensive review of the 2020 action plan was performed to determine which countywide actions were completed, which should carry over to the updated plan, and which were no longer feasible and should be removed from the plan. The following identifies the results of this review for the County (completed, continual/on-going, removed, carried over) and revisions to the mitigation strategies, as summarized. Each respective annex update contains information concerning their previous strategies.

Table 41. Current Status and Results of Previous Hazard Mitigation Action Plan

Mitigation Strategy	Completed	Continual/On-Going Nature	Removed/ No Longer Relevant/ No Action	Carried Over	Update
C-1 Gathering data for facility information.	☐	☒	☐	☒	Facilities currently creating and maintaining list.
C-2 Establish hazardous materials identification protocol, advance permitting, and Countywide incident response team.	☐	☒	☐	☒	
C-3 Develop drought contingency plan.	☐	☒	☐	☒	
C-4 Coordinate with County Assessor's for parcel-level building-specific information.	☐	☒	☐	☒	
C-5 Coordinate with annexes for site hardening facilities grants.	☐	☒	☐	☒	
C-6 Continue public information program coordination.	☐	☒	☐	☒	Fairs, seasonal web based information sessions, small group presentations
C-7 Continue CERT training and expand services.	☐	☒	☐	☒	
C-8 Identify emergency shelter readiness.	☐	☒	☐	☒	Concrete Community Center remodel, including generator.
C-9 Provide erosion control information to citizens.	☐	☒	☐	☒	As a part of our standard critical areas review

Table 41. Current Status and Results of Previous Hazard Mitigation Action Plan					
Mitigation Strategy	**Completed**	**Continual/On-Going Nature**	**Removed/ No Longer Relevant/ No Action**	**Carried Over**	**Update**
Increase monitoring countywide.					process, Skagit County staff uses maps of known or suspected geologic hazards (erosion hazards, landslide hazards, seismic hazard areas, volcanic hazard areas and mine hazard areas), as well as a site inspection to determine if a geologic hazard is present within 200 feet of proposed development. If a known or suspected geologic hazard is within our review area, the applicant shall provide a site assessment prepared by a qualified geologist or geotechnical engineer, licensed in the State of Washington. Erosion control methods and slope stability recommendations are provided by qualified professionals and will be listed as conditions of approval on permits from the County.
C-10 Assist dike and irrigation districts with a needs assessment.	☐	☒	☐	☒	
C-11 Continue promoting “FireWise” program.	☐	☒	☐	☒	
C-12 Develop various emergency planning efforts for business continuity with planning partners.	☐	☒	☐	☒	

Table 41. Current Status and Results of Previous Hazard Mitigation Action Plan					
Mitigation Strategy	**Completed**	**Continual/On-Going Nature**	**Removed/ No Longer Relevant/ No Action**	**Carried Over**	**Update**
C-13 Partner with WSDOT to expand earthquake assessment of roadways and bridges.	☐	☒	☐	☒	
C-14 Continue promoting countywide emergency management actions, projects, and programs.	☐	☒	☐	☒	Annual Flood Awareness week, Tsunami drills, Great Shakeout
C-15 Capture time-sensitive data i.e., high water marks, extent & location of hazards, etc.	☐	☒	☐	☒	
C-16 Continue enhancing local emergency planning committee involvement with stakeholders.	☐	☒	☐	☒	
C-17 Integrate mitigation planning data in on-going land use planning efforts.	☐	☒	☐	☒	Included in update of County Comprehensive Land-Use Plan.
C-18 Maintain countywide mutual aid agreements.	☐	☒	☐	☒	Ongoing
C-19 Update flood profile and review existing ordinances to ensure continued protection and compliance.	☐	☒	☐	☒	
C-20 Work with local school districts to study and retrofit school facilities.	☐	☒	☐	☒	
C-21 Study, retrofit, or move county owned facilities.	☐	☒	☐	☒	Earthquake study done on County Courthouse. Top floor removed for stability.
C-22 Evaluate and enhance current capital improvement programs for roads.	☐	☒	☐	☒	

Table 41. Current Status and Results of Previous Hazard Mitigation Action Plan					
Mitigation Strategy	**Completed**	**Continual/On-Going Nature**	**Removed/ No Longer Relevant/ No Action**	**Carried Over**	**Update**
C-23 Seek grant funding to acquire properties in high-hazard areas, especially RL or SRL properties.	☐	☒	☐	☒	1 buyout in process, seeking grant funding for more.
C-24 Continue participation in NFIP.	☐	☒	☐	☒	CRS program on hold at NFIP.
C-25 Continue to design and build seismically-secure facilities including redundant essential equipment.	☐	☒	☐	☒	
C-26 Support mitigation efforts i.e., hazard identification, warning, public education, outreach.	☐	☒	☐	☒	New public alerts system in process.
C-27 Review infrastructure control systems to ensure security and protection measures are in place.	☐	☒	☐	☒	
C-28 Implement cost-effective measures to address facilities vulnerability to coastal hazards. Work with local private water purveyors.	☐	☒	☐	☒	
C-29 Utilize risk assessment data to identify capital projects.	☐	☒	☐	☒	
C-30 Consider projects enhancing resistance of county structures to impacts from hazards.	☐	☒	☐	☒	
C-31 Implement recovery system for disaster response, repair, mitigation, and recovery.	☐	☒	☐	☒	
C-32 Develop web-based application to capture	☐	☒	☐	☒	Online survey available.

Table 41. Current Status and Results of Previous Hazard Mitigation Action Plan					
Mitigation Strategy	**Completed**	**Continual/On-Going Nature**	**Removed/ No Longer Relevant/ No Action**	**Carried Over**	**Update**
damage assessment from citizens.					
C-33 Develop public outreach and incentive-based programs.	☐	☒	☐	☒	
C-34 Seek and apply for grant funding for tsunami-resistant structures in inundation zones.	☐	☒	☐	☒	

Chapter 22. Mitigation Strategy

This section describes the County's approach to reducing impacts from hazards identified in the assessment above. The section includes the County's goals, strategies, priorities, and action plan for implementing mitigation measures.

22.1 Mitigation Goals

The Planning Team reviewed the 2020 goals and objectives and confirmed the same for use in the 2025 update. The goals and objectives are identified below:

Goal 1: Protect Life and Property

Objective 1: Implement mitigation activities that will assist in protecting lives and property by making homes, businesses, infrastructure, and critical facilities more resistant to natural hazards.

Objective 2: Continue the Skagit Community Emergency Response Team (C.E.R.T.) Program to provide for and promote individual and family disaster preparedness.

Objective 3: Encourage homeowners and businesses to purchase insurance coverage for damage caused by natural hazards.

Objective 4: Encourage homeowners and businesses to take preventative actions in areas that are especially vulnerable to natural hazards.

Goal 2: Increase Public Awareness

Objective 5: Develop and implement additional education and outreach programs to increase public awareness of the risks associated with natural hazards.

Objective 6: Continue the current flood awareness programs conducted by various jurisdictions as part of the National Flood Insurance Program and Community Rating System.

Goal 3: Encourage Partnerships

Objective 7: Strengthen inter-jurisdiction and inter-agency communication and coordination and partnering of jurisdictions and agencies to foster the establishment and implementation of natural hazard mitigation strategies and/or projects designed to benefit multiple jurisdictions.

Objective 7b: Partner with Community Based Organizations to protect community lifelines that enable the continuous operation of critical facilities and functions that strengthen local support and response efforts.

Goal 4: Provide for Emergency Services

Objective 8: Encourage the establishment of policies to help ensure the prioritizing and implementation of mitigation strategies and/or projects designed to benefit critical/essential facilities, services, and infrastructure.

Objective 9: Where appropriate, coordinate and integrate natural hazard mitigation activities with existing local emergency operations plans.

22.2 Mitigation Action Plan

The mitigation action plan that describes how the actions identified will be prioritized (including a cost-benefit review), implemented, and administered by the County per 44 CFR § 201.6(c)(3)(iv) and §201.6(c)(3)(iii).

The Planning Team reviewed and assessed potential mitigation strategies identified in the 2017 Community Rating System (CRS) Coordinator's Manual. At the time of this plan's writing, the revised manual was not available and therefore utilized the 2020 Plan outline. Although the CRS mitigation types are targeted for floodplain management, the classification types are comprehensive and can be used for all hazards. The Planning Team reviewed FEMA guidance documents, the 2020 Skagit County hazard mitigation plan, and stakeholder input to inform potential mitigation activities.

In conjunction with the progress tracker, this section aims to fill in gaps based on updated hazard findings in the risk assessment. The Planning Team reviewed past initiatives and determined the following strategies and actions to be appropriate.

22.2.1 Mitigation Priorities

Prioritizing mitigation actions is the process of assessing what the benefits and cost of recommended initiatives are. The Planning Team reviewed the benefits of the mitigation action against the approximate cost to implement them and is primarily based on the County's experience and judgement. Benefits on the other hand describe the assets that will be protected or losses avoided by implementing the initiative. The rankings from Open House votes and online surveys were added to create a ranking based on public input.

Table 42. Mitigation Strategy and Priority Schedule										
Priority Ranking	Objectives Met	Type of Initiative(s)	Hazards Mitigated [1]	Lead Agency/ Agencies	Can project be funded under existing programs/ budgets?	Estimated Cost	Is Project Grant Eligible?	Timeframe	Included in Previous Plan?	Who or What Benefits
[1]Hazards: Coastal Hazard-CZ/ Drought-D/ Earthquake-EQ/ Flooding-Fl/ Landslide-LS/ Severe Weather-SW / Volcano-Vol/ Wildfire-WF/ Tsunami-T/ Acts of Violence-AV/ Hazardous Sites or Materials Spill-HazMat/ Disease-D/ Dam Failure-DF/ Infrastructure Failure-IF										
C2: Establish hazardous materials ID protocol and incident response team										
1	1, 3-9	Public Information and Education, Natural Resource Protection, Emergency Services/Response	HazMat	EM, PH, Fire, EMS, PW, WSDOT, WDOE	General Fund, DHS, CDC grants	High	Yes	Long	Yes	Region
C7: Continue to expand Community Emergency Response Team (CERT) training and expand services										
2	All	Prevention, Public Information and Education, Emergency Services/Response, Recovery	All	EM, County Citizen Groups	EMPG	Low	Yes	On-going	Yes	County and Community
C14: Continue to promote and establish countywide emergency management actions, projects, and programs working with cities and special purpose districts, to enhance resiliency and maintain consistency in mitigation activities, emergency management programs, and capabilities. This includes seeking grant funding to support such initiatives.										
3	All	Prevention, Public Information and Education, Emergency Services/Response	All	EM	General Fund, Grants	Medium	Yes	Long-term	Yes	County, Local

Table 42. Mitigation Strategy and Priority Schedule										
Priority Ranking	Objectives Met	Type of Initiative(s)	Hazards Mitigated [1]	Lead Agency/ Agencies	Can project be funded under existing programs/ budgets?	Estimated Cost	Is Project Grant Eligible?	Timeframe	Included in Previous Plan?	Who or What Benefits
[1]Hazards: Coastal Hazard-CZ/ Drought-D/ Earthquake-EQ/ Flooding-Fl/ Landslide-LS/ Severe Weather-SW / Volcano-Vol/ Wildfire-WF/ Tsunami-T/ Acts of Violence-AV/ Hazardous Sites or Materials Spill-HazMat/ Disease-D/ Dam Failure-DF/ Infrastructure Failure-IF										
C10: Assist dike and irrigation districts with needs assessments for logistical requirements, including water distribution sources and continued supply of potable water.										
4	2-6, 9	Prevention, Public Information, Emergency Services/Response	All	Dike Districts, PH, EM, PW, WDOE	Tsunami and Earthquake programs, EPA, EMPG	Medium	Yes	Ongoing	Yes	County, Local
C13: Partner with WSDOT and local partners to assess roadways and bridges to reduce hazard impacts.										
5	2-8	Emergency Services/Response, Recovery	All	EM, PW, WSDOT	US and WA DOT, HLS	Medium	Yes	Long-term	Yes	Regional
C6: Continue public information program coordination to inform citizens about the hazards faced and appropriate preparedness and response measures.										
6	All	Prevention, Public Information and Education	All	EM, Land Use Planning, private industry	EMPG, General Fund	Low	Yes	Ongoing	Yes	County and Community
C8: Identify and designate emergency shelter structural and utility readiness.										
7	1,2,4-9	Prevention, Public Information, Emergency Services/Response	All	EM, PH	PDM, HMGP, General Funds	Medium	Yes	Short	Yes	Regional
C16: Continue to enhance local emergency planning committee (LEPC) involvement with private industry and local jurisdictions.										

Table 42. Mitigation Strategy and Priority Schedule										
Priority Ranking	Objectives Met	Type of Initiative(s)	Hazards Mitigated [1]	Lead Agency/ Agencies	Can project be funded under existing programs/ budgets?	Estimated Cost	Is Project Grant Eligible?	Timeframe	Included in Previous Plan?	Who or What Benefits
[1]Hazards: Coastal Hazard-CZ/ Drought-D/ Earthquake-EQ/ Flooding-Fl/ Landslide-LS/ Severe Weather-SW / Volcano-Vol/ Wildfire-WF/ Tsunami-T/ Acts of Violence-AV/ Hazardous Sites or Materials Spill-HazMat/ Disease-D/ Dam Failure-DF/ Infrastructure Failure-IF										
8	5, 7, 8	Prevention, Emergency Services/Response, Recovery	WF, HazMat	EM, Fire, Private Industry	General Funds	Low	No	Ongoing	Yes	County and Local
C32: Develop web-based application to capture damage assessments from citizens, which can be verified by emergency personnel to expedite damage assessment. This may include an interface between the Assessor's office for property value, as well as a mechanism for rapid windshield assessment by first responders.										
9	2, 5, 6, 8	Recovery	All	EM, IT, Assessor, Risk, P&DS	General Fund, HLS, HMGP	Medium	Yes	Short-term	Yes	County
C4: Coordinate with County Assessor for parcel-level building info for enhanced risk assessment to provide detailed loss estimation.										
10	2,3,4,5,6,7	Structural projects, property protection, recovery	All	Assessor's Office, GIS	General fund, HMGP	Medium	Unknown	Short-term	Yes	County and Local
C34: Seek and apply for grant funding and/or technical assistance to identify tsunami-resistant structures in inundation zones to allow for the installation of flashing lights to serve as potential tsunami shelters or evacuation sites. This may include retrofits of most suitable structures in the inundation areas to serve as vertical evacuation or tsunami-resistant structures.										
11	All	Emergency Services/Response, Public Information	T, SW	EM	No	Medium	Yes	Ongoing	Yes	County, Local

Table 42. Mitigation Strategy and Priority Schedule										
Priority Ranking	Objectives Met	Type of Initiative(s)	Hazards Mitigated [1]	Lead Agency/ Agencies	Can project be funded under existing programs/ budgets?	Estimated Cost	Is Project Grant Eligible?	Timeframe	Included in Previous Plan?	Who or What Benefits
[1]Hazards: Coastal Hazard-CZ/ Drought-D/ Earthquake-EQ/ Flooding-Fl/ Landslide-LS/ Severe Weather-SW / Volcano-Vol/ Wildfire-WF/ Tsunami-T/ Acts of Violence-AV/ Hazardous Sites or Materials Spill-HazMat/ Disease-D/ Dam Failure-DF/ Infrastructure Failure-IF										
C33: Develop public outreach and incentive-based programs which support community participation, such as Community Rating System, FireWise and Storm Ready.										
12	All	Public Information and Education, Emergency Services/ Response	All	EM, P&DS, FD, Conservation District	General Funds	Low	No	Ongoing	Yes	County
C3: Develop drought contingency plan.										
13	1,3-9	Public Information and Education, Emergency services/response, recovery	All	SC PUD, local PW, water purveyors, local EM	EMPG, HUD	Low	Short	Short	Yes	regional
C25: Design and build seismically secure facilities with redundant equipment. Apply current seismic and wind standards to all renovation or replacement of existing facilities and/or equipment.										
14	All	Structural Projects, Property Protection	EQ, LS, SW, T	P&DS, P&Fac, PW	HMGP, PDM	High	Yes	Ongoing	Yes	County
C20: Work with local schools to study and retrofit facilities to better withstand damage from any hazards.										
15	All	Structural Projects, Property Protection, Emergency Services/Response, Recovery	All	EM, School Districts	EMPG, HMGP, HUD, Dept of Education	High	Yes	Ongoing	Yes	County, Local, Facility

Table 42. Mitigation Strategy and Priority Schedule										
Priority Ranking	Objectives Met	Type of Initiative(s)	Hazards Mitigated [1]	Lead Agency/ Agencies	Can project be funded under existing programs/ budgets?	Estimated Cost	Is Project Grant Eligible?	Timeframe	Included in Previous Plan?	Who or What Benefits
[1]Hazards: Coastal Hazard-CZ/ Drought-D/ Earthquake-EQ/ Flooding-Fl/ Landslide-LS/ Severe Weather-SW / Volcano-Vol/ Wildfire-WF/ Tsunami-T/ Acts of Violence-AV/ Hazardous Sites or Materials Spill-HazMat/ Disease-D/ Dam Failure-DF/ Infrastructure Failure-IF										
C26: Support mitigation efforts to reduce the impacts of hazards, such as appropriate hazard identification, warning, sharing relevant information and data, and public education.										
16	All	Structural Projects, Public Information and Education, Natural Resource Protection	All	EM, P&DS, PH	General fund, various grants	Low	Yes	Ongoing	Yes	County, Local, Facility
C31: Implement recovery system to ensure maximum FEMA reimbursement for disaster response, repair, mitigation, and recovery. Capture and track emergency activities, associated expenses, employee time and dedicated resources.										
17	All	Recovery	All	EM, Risk, Finance	EMPG, General Fund	Medium	No	Long-term	Yes	County
C19: Update flood profile and review existing ordinances for compliance. This includes flood insurance and risk map products. This may include the County seeking grant funding to develop a comprehensive update, including public outreach.										
18	All	Emergency Service/Response , Recovery	All	EM	Ecology, HMGP, Grant funds	High	Yes	Ongoing	Yes	County, Local
C28: Implement measures to protect facilities, to include bridges and culverts, from coastal hazards. This includes working with local private water purveyors.										
19	All	Structural Projects, Property Protection, Natural Resource Protection	CC, EQ, F, LS, SW, T	EM, P&DS, PH, PW, WDNR, WDOH, WDOE	General Fund, PDM, HMGP, WDOE, WDOH, HLS	Medium	Yes	Long-term	Yes	County, Local, Facility

Table 42. Mitigation Strategy and Priority Schedule										
Priority Ranking	Objectives Met	Type of Initiative(s)	Hazards Mitigated [1]	Lead Agency/ Agencies	Can project be funded under existing programs/ budgets?	Estimated Cost	Is Project Grant Eligible?	Timeframe	Included in Previous Plan?	Who or What Benefits
[1]Hazards: Coastal Hazard-CZ/ Drought-D/ Earthquake-EQ/ Flooding-Fl/ Landslide-LS/ Severe Weather-SW / Volcano-Vol/ Wildfire-WF/ Tsunami-T/ Acts of Violence-AV/ Hazardous Sites or Materials Spill-HazMat/ Disease-D/ Dam Failure-DF/ Infrastructure Failure-IF										
C27: Review infrastructure control systems for security and protection measures. Conduct audit of policies and procedures to ensure consistency and accuracy in application of security devices in place at critical infrastructure .										
20	2, 4-7	Prevention, Property Protection, Emergency Services	All	EM, PUD, LE, CS	General Fund	Low	Yes	Short-term	yes	Regional
C18: Maintain countywide mutual aid agreements with both public and private agencies in support of preparedness and response activities .										
21	4, 5, 6	Emergency Services/Response, Recovery	All	EM	General Fund	Medium	No	Ongoing	Yes	County, Local
C12: Work with local agencies and planning partners to develop various emergency planning efforts for business continuity and resiliency, and to develop mechanisms for recovery efforts.										
22	1-8	Recovery	All	EM, ED, Chambers	EMPG, General Fund	Medium	Yes	Long-term	Yes	County, Local
C23: Seek grant funding for high-hazard property acquisition, with special attention to repetitive or severe loss properties.										
23	All	Property Protection, Structural Projects	All	EM, CFM	No	High	Yes	Long-term	Yes	County, Local, Facility

Table 42. Mitigation Strategy and Priority Schedule										
Priority Ranking	Objectives Met	Type of Initiative(s)	Hazards Mitigated [1]	Lead Agency/ Agencies	Can project be funded under existing programs/ budgets?	Estimated Cost	Is Project Grant Eligible?	Timeframe	Included in Previous Plan?	Who or What Benefits
[1]Hazards: Coastal Hazard-CZ/ Drought-D/ Earthquake-EQ/ Flooding-Fl/ Landslide-LS/ Severe Weather-SW / Volcano-Vol/ Wildfire-WF/ Tsunami-T/ Acts of Violence-AV/ Hazardous Sites or Materials Spill-HazMat/ Disease-D/ Dam Failure-DF/ Infrastructure Failure-IF										
C9: Provide erosion control information and increase monitoring countywide of erosion issues and bluffs.										
24	All	Structural Projects, Property Protection	E, EQ, F, LS, SW	EM, PW, WDNR, CS	PDM, HMGP, General Funds	Medium	Yes	Long-term	Yes	County, Local
C11: Promote FireWise program in coordination with Skagit Conservation District and local fire agencies.										
25	2-9	Property Protection, Natural Resource Protection, Prevention	D, WF	EM, Fire	Fire grants, PDM, HMGP	Low	Yes	Ongoing	Yes	Local
C17: Integrate mitigation data into ongoing land use planning to provide information necessary to enforce building codes, flood plain and critical areas ordinances, and shoreline protection.										
26	All	Prevention, Emergency Services, Planning, Response, Recovery	All	EM, CD, CS, P&DS	General Fund, FEMA	Low	Yes	On-going	Yes	County, Local
C15: Capture time-sensitive hazard data (high water marks, hazard extent) following hazard events to support future risk assessment updates and in support of future grant applications to demonstrate impact.										
27	All	Emergency Services/Response, Recovery	All	EM	General Funds	Low	Yes	Ongoing	Yes	County, Local

Table 42. Mitigation Strategy and Priority Schedule										
Priority Ranking	Objectives Met	Type of Initiative(s)	Hazards Mitigated [1]	Lead Agency/ Agencies	Can project be funded under existing programs/ budgets?	Estimated Cost	Is Project Grant Eligible?	Timeframe	Included in Previous Plan?	Who or What Benefits
[1]Hazards: Coastal Hazard-CZ/ Drought-D/ Earthquake-EQ/ Flooding-Fl/ Landslide-LS/ Severe Weather-SW / Volcano-Vol/ Wildfire-WF/ Tsunami-T/ Acts of Violence-AV/ Hazardous Sites or Materials Spill-HazMat/ Disease-D/ Dam Failure-DF/ Infrastructure Failure-IF										
C21: Study, retrofit, or move county-owned facilities to better withstand damage from hazards, to include new buildings as needed.										
28	All	Structural Projects, Property Protection	All	EM, P&Fac	No	High	Yes	Long-term	Yes	Facility
C29: Utilize risk assessment data to identify capital projects that increase the resilience of the County's structures and conveyances to damage, or that allow a more expedited process for recovery from the impact of disaster incidents.										
29	All	Structural Projects, Property Protection, Recovery	All	EM, PW, P&DS, FEMA, WDNR	Grant funds, General Fund, PDM, HMGP, FWHA	Medium	Yes	Short-term	Yes	County, Facility
C22: Evaluate and enhance capital improvement programs for County roads. Work with corresponding special purpose districts as necessary. Examples include drainage projects, elevating roadways, replace small-diameter flood control devices, enhance drainage system maintenance plans to include sediment and debris clearance.										
31	All	Property Protection, Structural Projects, Natural Resource Protection	E, F, LS, SW, T	PW, DOT	FHWA, CRAB	High	Yes	Long-term	Yes	County, Local

Table 42. Mitigation Strategy and Priority Schedule										
Priority Ranking	Objectives Met	Type of Initiative(s)	Hazards Mitigated [1]	Lead Agency/ Agencies	Can project be funded under existing programs/ budgets?	Estimated Cost	Is Project Grant Eligible?	Timeframe	Included in Previous Plan?	Who or What Benefits
[1]Hazards: Coastal Hazard-CZ/ Drought-D/ Earthquake-EQ/ Flooding-Fl/ Landslide-LS/ Severe Weather-SW / Volcano-Vol/ Wildfire-WF/ Tsunami-T/ Acts of Violence-AV/ Hazardous Sites or Materials Spill-HazMat/ Disease-D/ Dam Failure-DF/ Infrastructure Failure-IF										
C30: Consider projects enhancing resistance of county structures to impacts from hazards, such as seismic bracing, removal of high hazard beams, access road reinforcement or seismic upgrades of underwater interceptors.										
32	All	Property Protection, Structural Projects	EQ, F, LS, T, WF	EM, PW, P&Fac	PDM, HMGP	High	Yes	Ongoing	Yes	County, Facility
C24: Continue participation in NFIP, continue steps to increase CRS scores to lower insurance premiums.										
33	All	Prevention, Mitigation	F, SW	EM	Yes	Medium	Yes	Long-term	Yes	County
C5: Coordinate with partner agencies for grants to site harden facilities, including back-up power.										
34	All	Structural projects, property protection, Natural Resource protection	E, EQ, F, LS, SW, V, WF	EM, PW	HMGP, PDM, HUD, DOT, EPA	Medium	Yes	Long	Yes	Facility specific
C2026.1 Evaluate and apply for funding to build Safety Campus for essential emergency response training and active response duties.										
New	All	Structure, Emergency Response	All	DEM, P&Fac	No	High	Yes	Long-term	No	Facility, Local, County, Regional

Table 42. Mitigation Strategy and Priority Schedule										
Priority Ranking	Objectives Met	Type of Initiative(s)	Hazards Mitigated [1]	Lead Agency/ Agencies	Can project be funded under existing programs/ budgets?	Estimated Cost	Is Project Grant Eligible?	Timeframe	Included in Previous Plan?	Who or What Benefits
[1]Hazards: Coastal Hazard-CZ/ Drought-D/ Earthquake-EQ/ Flooding-Fl/ Landslide-LS/ Severe Weather-SW / Volcano-Vol/ Wildfire-WF/ Tsunami-T/ Acts of Violence-AV/ Hazardous Sites or Materials Spill-HazMat/ Disease-D/ Dam Failure-DF/ Infrastructure Failure-IF										
C2026.2 Work with Planning and Development Services to create and enforce codes that reduce building in high-risk areas, such as codes for geohazards, wildfire urban interface, and coastal hazards.										
New	1,3-9	Structural projects, property protection, Natural Resource protection	All	P&DS	Yes	unknown	N/A	Long	No	Local, County
C2026.3 Provide training and equipment to County employees for work-place hazards, including active threat and hazardous materials. This includes communications systems.										
New	1,7,8,9	Public Information, Emergency Response	AV, HazMat	Risk	Yes	Medium	Yes	On-going	No	Facility, Local, County
C2026.4 Maintain and upgrade as needed equipment and training for law enforcement agencies to deter and respond to high risk events.										
New	1,7,8,9	Emergency Response	Hazmat, AV	SCSO, LE	No	Medium	Yes	On-going	No	Local, County
C2026.5 Protect County digital and information infrastructure from hazards, to include hardening, disaster recovery and continuity planning.										
New	1,7,8,9	Emergency Services, Recovery	Hazmat, AV, IF	Central Services	Partially	High	Yes	Short-term	No	Facility, Local, County

Table 42. Mitigation Strategy and Priority Schedule										
Priority Ranking	Objectives Met	Type of Initiative(s)	Hazards Mitigated [1]	Lead Agency/ Agencies	Can project be funded under existing programs/ budgets?	Estimated Cost	Is Project Grant Eligible?	Timeframe	Included in Previous Plan?	Who or What Benefits
[1]Hazards: Coastal Hazard-CZ/ Drought-D/ Earthquake-EQ/ Flooding-Fl/ Landslide-LS/ Severe Weather-SW / Volcano-Vol/ Wildfire-WF/ Tsunami-T/ Acts of Violence-AV/ Hazardous Sites or Materials Spill-HazMat/ Disease-D/ Dam Failure-DF/ Infrastructure Failure-IF										
C2026.6 Implement and maintain Municipal Separate Stormwater Sewer program, to include mapping, documentation, and inspection program focused on high-risk conveyance and facility assets.										
New	1,8,9	Preventive Actions, Emergency Services	Fl, SW, IF	PW	Yes	Medium	Yes	Long-term	No	Local, County
C2026.7 Support plans and programs that protect and reduce risks for stormwater and catch basin systems including pre- and post-storm inspections and management plans.										
New	1,8,9	Preventive Activities, Natural Resource Protection, Structural, Recovery	Fl, SW, IF,	PW	Yes	Medium	Yes	On-going	No	Facility, Local, County
C2026.8 Coordinate with WA Dept of Health on public education on disease prevention.										
New	1,5,7,8	Public Information	D	PH, WDOH	Yes	Low	Yes	On-going	No	Local, Region

Chapter 23. Capability Assessment

Coordination with other community planning efforts is paramount to the successful implementation of this plan. This section provides information on how planning mechanisms, policies, and programs are integrated into other on-going efforts. It also identifies the County's capabilities with respect to preparing and planning for, responding to, recovering from, and mitigating the impacts of hazard events and incidents.

Capabilities include the programs, policies and plans currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. The capabilities are divided into the following sections: National Flood Insurance Information; regulatory capabilities which influence mitigation; administrative and technical mitigation capabilities, including education and outreach, partnerships, and other on-going mitigation efforts; fiscal capabilities which support mitigation, and classifications under various community programs.

Identified gaps in capabilities are often filled by working with regional partners and expanding staff education. Contractors are used as needed to also fill capability gaps.

23.1 Regulatory Capability Assessment

The assessment of the jurisdiction's legal and regulatory capabilities is presented in Table 43. This includes planning and land management tools, typically used to implement hazard mitigation activities and indicates those that are currently in place.

Table 43. Legal and Regulatory Capability

	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Codes, Ordinances & Requirements				
Building Code	Yes	Yes	Yes	2025 International Building Code
Zoning Ordinance	Yes	Yes	Yes	Title 14 – Land Use/Development Code
Subdivision Ordinance	Yes		Yes	Updated regularly through Comprehensive Land Use Plan.
Floodplain Ordinance	Yes	Yes	Yes	Ordinance in place; meets/exceeds FEMA Requirements
Stormwater Management	Yes		Yes	
Growth Management	Yes		Yes	Updated 2025. Available at: https://www.skagitcounty.net/Departments/PlanningAndPermit/2025CPA.htm.
Critical Areas Ordinance	Yes		Yes	Skagit County Code Chapter 14.24 - Critical Areas identified and regulatory authority established.

Table 43. Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Site Plan Review	Yes			
Public Health and Safety	Yes	Yes	Yes	
Coastal Zone Management	Yes	Yes	Yes	
Climate Change Adaptation	Yes		Yes	Addressed in Climate Resiliency Element of the 2025 Comprehensive Plan Update
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire, etc.)	Yes		Yes	Reviewed and/or updated annually as needed.
Environmental Protection	Yes	Yes	Yes	Through various departments and with other entities.
Planning Documents				
General or Comprehensive Plan	Yes		Yes	Updated in 2025
Is the plan equipped to provide linkage to this mitigation plan?				Yes
Floodplain or Basin Plan	Yes		Yes	Various plans in place, maintained by several departments throughout county.
Stormwater Plan	Yes			Various plans are in place
Capital Improvement Plan	Yes		Yes	
Habitat Conservation Plan	Yes			Critical Areas Ordinance and Shoreline Master Plans.
Economic Development Plan	Yes		Yes	Yes
Shoreline Management Plan	Yes		Yes	Various plans in place, maintained by several departments throughout county.
Community Wildfire Protection Plan				Updated in 2025 – adopted as Appendix B
Transportation Plan	Yes		Yes	2025 Update with Comprehensive Plan
Response/Recovery Planning				

Table 43. Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Comprehensive Emergency Management Plan	Yes		Yes	2021 CEMP Update – Adopted in 2022. Available at https://www.skagitcounty.net/EmergencyManagement/Documents/CEMP2022.pdf.
Threat and Hazard Identification and Risk Assessment	Yes	Yes		2024 County Emergency Preparedness Assessment.
Terrorism Plan	Yes			Law enforcement maintains
Post-Disaster Recovery Plan	Yes			Maintained within the CEMP
Continuity of Operations Plan	Yes			Each department has a plan in place, as well as an overall plan that is an annex to the County's 2021 CEMP.
Public Health Plans	Yes			Various public health plans are in place both through the Health Department and through the hospital districts.
Hazardous Materials Plan				Local Emergency Planning Committee (LEPC) Hazardous Materials Contingency Plan. Available at https://www.skagitcounty.net/EmergencyManagement/Documents/Skagit%20County%20LEPC%20Plan.pdf.
Boards and Commission				
Board of Commissioners	Yes		Yes	
Emergency Management Advisory Board	Yes	No	No	The County maintains not only the advisory board, but is also involved in several regional activities for response, recovery, exercise, and training.
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems, chipping, etc.)	Yes		Yes	Various programs in place, including tree trimming, drainage systems, etc.

Table 43. Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Mutual Aid Agreements / Memorandums of Understanding	Yes	Yes		Interlocal agreements with all eight (8) municipalities and mutual aid agreements between fire departments.

23.2 Administrative and Technical Capabilities Assessment

The assessment of the County's administrative and technical capabilities and on-going programmatic efforts are presented in Table 44. These are elements which support not only mitigation, but all phases of emergency management already in place that are used to implement mitigation activities and communicate hazard-related information.

Table 44. Administrative and Technical Capability		
Staff/Personnel Resources	**Available (Yes/No)**	**Department/Agency/Position**
Planners or engineers with knowledge of land development and land management practices	Y	Planning & Community Services
Professionals trained in building or infrastructure construction practices (building officials, fire inspectors, etc.)	Y	Planning & Community Services; Public Works
Engineers specializing in construction practices	Y	
Planners or engineers with an understanding of natural hazards	Y	Floodplain Manager
Staff with training in benefit/cost analysis	Y	Various personnel in different departments
Surveyors	N	
Personnel skilled or trained in GIS applications	Y	
Personnel skilled or trained in Hazus use	N	
Scientist familiar with natural hazards in local area	Y	The county has hazard-specific subject matter experts on staff in various departments, available via contracting mechanisms, and available through state resources.
Emergency Manager	Y	Emergency Management Department with trained personnel and volunteers.

Table 44. Administrative and Technical Capability		
Staff/Personnel Resources	**Available (Yes/No)**	**Department/Agency/Position**
Floodplain Manager (NFIP compliance)	Y	Various County departments have internal personnel who write grants; county staff monitors grants.
Grant writers	Y	CodeRED with alert notifications; Public Works signage available as needed; Evacuation signage; Sirens.
Warning Systems/Services (Reverse 9-1-1, outdoor warning signs or signals, flood or fire warning program, etc.?)	Y	Planning & Community Services
Hazard data and information available to public	Y	GIS maintains data for various departments which have knowledge of and responsibility for specific types of hazards, such as flood, landslide, snow- and wind-load capacity, as well as and other hazards of concern.
Maintain Elevation Certificates	Y	

The County participates in the NFIP and must demonstrate continued compliance with NFIP requirements, as appropriate, per 44 CFR § 201.6(c)(3)(ii).

Table 45. National Flood Insurance Program Compliance	
What department is responsible for floodplain management in your community?	Planning and Development Services
Who is your community's floodplain administrator? (department/position)	Randy Johnson, Building Official, Floodplain Manager, Fire Code Official
Do you have any certified floodplain managers on staff in your community?	Yes
What is the date of adoption of your flood damage prevention ordinance?	Latest update 2011, joined NFIP 1975
When was the most recent Community Assistance Visit or Community Assistance Contact?	November 8, 2007
To the best of your knowledge, does your community have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are.	No

Do your flood hazard maps adequately address the flood risk within your community? (If no, please state why)	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of assistance/training is needed?	No
Does your community participate in the Community Rating System (CRS)? If so, is your community seeking to improve its CRS Classification? If not, is your community interested in joining the CRS program?	Yes. Received updated CRS Classification during 2020 update process.

23.3 Fiscal Capability Assessment

The assessment of the County's fiscal capabilities is presented in Table 46. These are the financial tools or resources that could potentially be used to help fund mitigation activities.

Table 46. Fiscal Capability

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	Yes

23.4 Community and Social Capabilities Assessment

Community and social capabilities represent community-based organizations, non-profits, and programs that provide partnership opportunities for the County. As trusted members in the community, partnership with local organizations can increase social resiliency by addressing gaps in services due to the unique needs of an individual or community. The County's role in addressing community and social capabilities are through education and outreach. The assessment of the County's community and social capabilities are presented in Table 47.

Table 47. Community and Social Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Local citizen groups or non-profit organizations focused on emergency preparedness?	Y	CERT and SAR trained personnel
Local citizen groups or non-profit organizations focused on environmental protection?	Y	Skagit County Conservation District
Organization focused on individuals with access and functional needs (AFN) populations	Y	Skagit County Medical Reserve Corps (MRC), Council of the Blind, Hearing Loss Association
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Y	Various agencies at the county and state levels which promote educational efforts such as Firewise, Forestland-Urban Interface Fire Protection Act, and Fire Adapted Communities from the National Cohesive Wildfire Strategy, the Community Rating System, FCAAP, NFIP, StormReady, TsunamiReady.
Natural disaster or safety related school programs?	Y	Pursuant to the RCW, schools are required to develop and exercise hazard-specific response plans.
Public-private partnership initiatives addressing disaster-related issues?	Y	Various public education outreach; provide information and presentations; NFIP insurance; outreach for Continuity Planning, public involvement for update to the County's Comprehensive Land Use Plan.
Multi-seasonal public awareness program?	Y	The County maintains information on its website to address specific hazards at issue; also, as situations arise, the website, email lists and local area broadcasting provides public service announcements and information. The county also participates in specific awareness opportunities, such as the October Flood Hazard Awareness program, among others.

Chapter 24. Plan Maintenance Strategy

This section describes the County's efforts in continuing to seek public participation after plan approval, method, and schedule for keeping the plan current and to evaluate the plan for effectiveness. Efforts include developing criteria to monitor, evaluate, and update the plan to track the progress/status of the mitigation actions identified within the Mitigation Strategy, along with when this process will occur and who will be responsible for the process. The criteria below will be utilized to evaluate the plan:

- Continually evaluate plan for effectiveness by utilizing the annual progress report. This should be conducted once a year or after a disaster by the Department of Emergency Management (DEM) and/or lead annex partner.
- Utilize an annual progress report to track implementation and effectiveness of mitigation initiatives and their actions. This should be conducted once a year by DEM personnel.
- Conduct regular check-ins with stakeholders and partner agencies by DEM personnel.
- Review and revise the plan at least once every five years by DEM personnel and lead annex partner.

County staff at the Department of Emergency Management will be the primary agency responsible for maintaining the plan and monitoring mitigation initiatives. Staff will utilize the report provided in **Appendix C** to track progress. The report will also include sections to document any changes that have been made to initiatives, outreach efforts, hazard mapping, Countywide development changes, successful implementation instances, and other changes relevant to the HMP.

24.1 Plan Adoption and Integration

As a multi-jurisdictional plan, the governing body of each jurisdiction that has officially adopted the plan must provide documentation to be eligible for FEMA assistance per 44 CFR § 201.6(c)(5). The plan must also describe each jurisdiction's individual process for integrating information from the mitigation strategy into their identified planning mechanisms, such as comprehensive or capital improvement plans. See Volume 2 for Annex Plans and their integration in this plan.

24.2 Continued Public Participation

Hazard mitigation plans are required to include a discussion of how each community will continue public participation in the plan maintenance process per 44 CFR § 201.6(c)(4)(iii).

County DEM staff will continue to utilize social media and the website to solicit feedback from the community. The DEM staff regularly interact with community members and stakeholders to increase awareness of hazard mitigation and planning efforts. This includes but is not limited to:

- "Flood Awareness" week webinars
- Press Releases

Plan Updates will be posted online for public review and comment.

Appendix A Public Participation Plan

Skagit County 2025 Natural Hazard Mitigation Plan Update

Public Outreach Summary Report

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1.0 Public Engagement Overview

The purpose of this report is to summarize feedback from public engagement activities including the open houses and public survey. The report analyzes the results and further recommends methods to engage the public after adoption of the HMP update that aligns with the engagement and equity goals outlined in the Public Engagement Plan.

Skagit County aims to promote an update process that is inclusive of all community values and visions, including those located in remote and rural areas. This public engagement plan identifies strategies in which the County will create opportunities for community members to engage with the HMP update and provide feedback during its development and after its adoption. The Plan outlines a process that aim to meet people where they are at and plan for a safe and resilient community.

2.0 Public Engagement Goals

The goals for public engagement are to:

a) Provide information to enhance community understanding of issues related to pertinent natural and human disasters, including hazards exacerbated by climate change;

b) Understand community values and visions to shape priorities in hazard identification and mitigation;

c) Offer accessible opportunities for the public to provide feedback on the draft Hazard Mitigation Plan;

d) Prioritize equity and environmental justice to ensure adequate involvement, inclusion, and support of vulnerable communities, including groups located in remote and rural areas and others at increased risk due to factors such as ethnicity, household income, disability, age, vehicle access; and

e) Develop an accessible, equitable, and engaging Hazard Mitigation Plan process.

Along with its community engagement efforts, the County prioritized equity and environmental justice (EJ) to ensure adequate involvement, inclusion, and support of vulnerable communities[110]. The County also considered the following types of equity as defined by the Urban Sustainability Directors Network (USDN) and includes a description of how the County aligned with the following equity and EJ goals:

a) **Procedural (Inclusion)**: inclusive, accessible, and authentic engagement and representation in processes to develop or implement programs and policies.

    a. Staff made a diligent effort to include annexes that were not included in the previous update and worked directly with annex partners to provide an updated plan document. Staff also ensured that open houses were conducted in rural communities, i.e., Conway, Concrete, Fire Districts, where constituents were difficult to reach. Staff also disseminated a second and focused survey to collect

[110] Vulnerable populations are identified as (i) Racial or ethnic minorities; (ii) Low-income populations; (iii) Populations disproportionately impacted by environmental harms; and (iv) Populations of workers experiencing environmental harms. RCW 70A.02.010.

public feedback from jurisdictions that did not submit their responses in the first round of surveys.

b) **Distributional (Access)**: programs and policies result in fair distribution of benefits and burdens across all segments of a community, prioritizing those with highest need.

    a. Proposed mitigation measures include addressing populations with mobility and hearing constraints, lower incomes, and aging households.

c) **Structural**: decision-makers institutionalize accountability; decisions are made with a recognition of the historical, cultural, and institutional dynamics and structures that have routinely advantaged privileged groups in society and resulted in chronic, cumulative disadvantage for subordinated groups.

    a. The County recognizes that households in rural communities often feel less equipped and prepared to respond to hazards. Proposed mitigation measures recommend outreach to communities to encourage education and preparedness such as warning systems for neurodivergent .

d) **Transgenerational**: decisions consider generational impacts and don't result in unfair burdens on future generations.[111]

    a. The County collaborated with tribal annexes and provided resources for their plan update. The proposed measures listed in this plan update consider students and youth and multi-generational households with disabilities.

The Public Outreach report addresses how the County aligns with the USDN goals mentioned above to include the entire Skagit County residents and businesses. The County aims to incorporate equity and EJ into both its stakeholder engagement, public participation process, and plan development.

3.0 Summary of Public Engagement Strategies

3.1.1 Public Workshop/Open House

The County DEM and Kimley-Horn staff were available during open houses at various annex partner locations throughout the months of August and September, as shown in the schedule below.

Date	Time	Location	Main Host	Additional Agencies
8/19/2025	6:30-8:00	Conway FD, 21020 Greenfield Street, Conway	Conway Fire District (FD)	Dike Districts (DD) 3 and 22
8/21/2025	6:30-8:00	Town Hall, 45672 Main St. Concrete	Concrete	RFA
8/25/2025	6:30-8:00	MVFD2, 1901 N Laventure Rd, Mount Vernon	Mount Vernon	DD17
8/26/2025	6:30-8:00	Central Skagit Library, 110 W State St, Sedro-Woolley	Sedro-Woolley	Clear Lake, FD 8

[111] https://www.usdn.org/uploads/cms/documents/USDN_Innovation_Report_Tools_Equity_Scan-3-2015.pdf

Date	Time	Location	Main Host	Additional Agencies
8/28/2025	6:30-8:00	FD 8 Punkin Center, 34041 SR 20, Sedro-Woolley	FD 8	Lyman, Hamilton
9/6/2025	10:00 am - 2:00 pm	Clear Lake Elementary, 23631 Lake St, Clear Lake	Skagit FD 4	None
9/9/2025	6:30-8:00 pm	Anacortes, Council Chambers, 904 6th St Anacortes	City of Anacortes	Samish Indian Nation, FD 11
9/10/2025	6:30-8:00 pm	Fire Dist 6, 16220 Peterson Rd, Burlington, WA 98233	FD 6	Fire District 14, FD 12
9/15/2025	6:30-8:00 pm	Big Lake Fire Hall, 16818 W Big Lake Blvd, Mount Vernon	Big Lake Fire Dept 9	Skagit FD 15
9/19/2025	6:30-8:00 pm	Burlington City Hall Council Chambers, 833 S Spruce St, Burlington	City of Burlington	Skagit PUD, Dike District 12
9/20/2025	6:30-8:00 pm	Fire District 5 9061 Avon Allen Road	Fire District 5, Allen Station	Samish Fire District 5, Edison Fire District 5

Figure 20. Open House Event at Conway on August 19th (County DEM, Kimley-Horn & Associates)

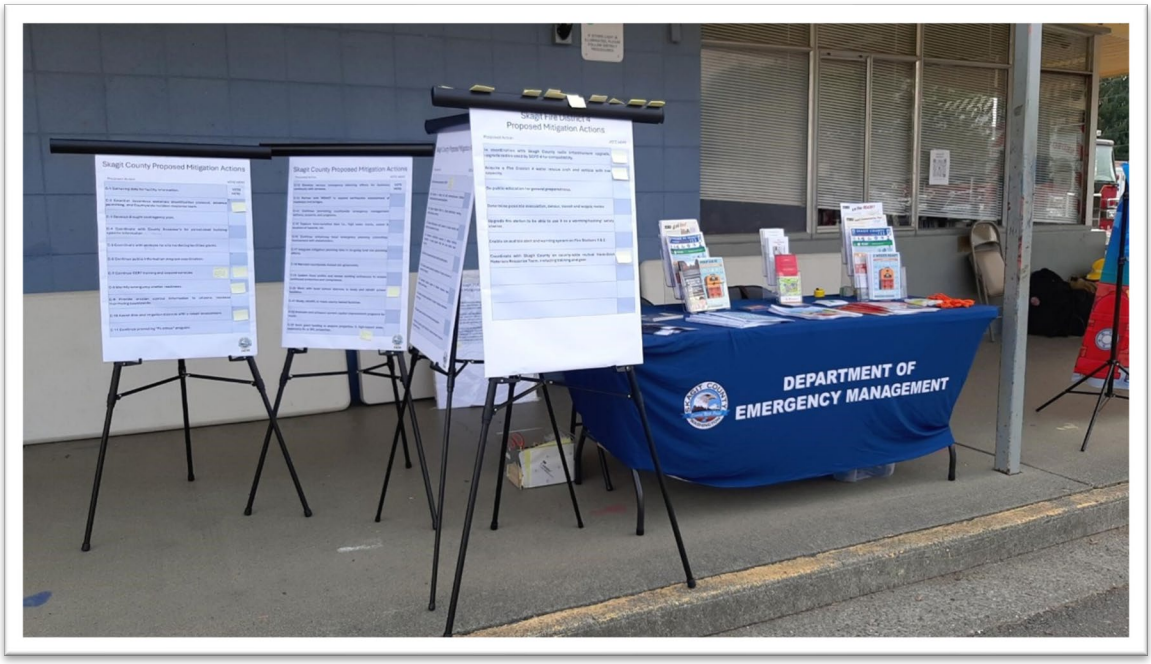


Figure 21. Open House Event at Clear Lake on September 6th (County DEM, Kimley Horn & Associates)

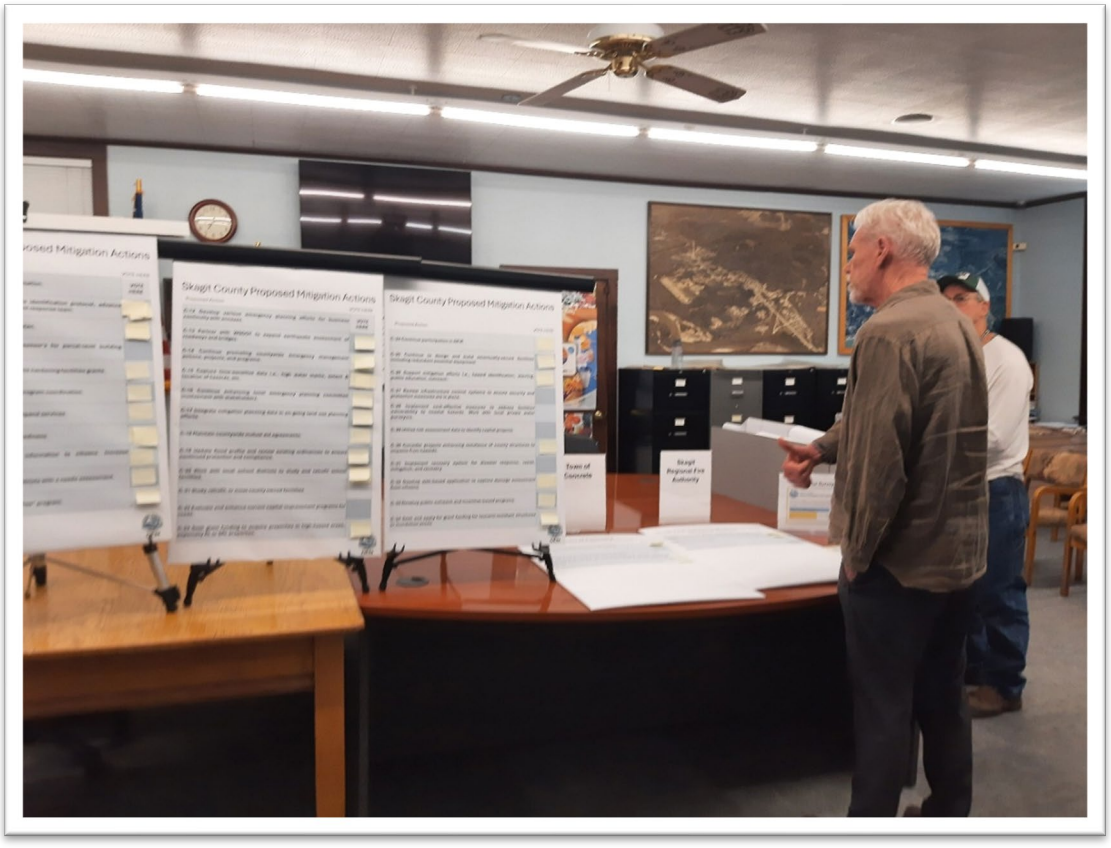


Figure 22. Open House Event at Concrete on August 21st(County DEM)

The goal of the open houses was to receive general feedback regarding the respective jurisdiction's mitigation strategies based on the risk assessment. During the open house, staff engaged with attendees about the hazard mitigation plan update process i.e., what it looks like and general outcomes/results of an HMP update. Attendees were also prompted to comment on mitigation measures from the 2020 HMP update based on hazards and risks they have experienced in their own community. A total of 33 annexes including Unincorporated County received feedback from attendees regarding the proposed mitigation measures. Feedback includes voting by adding a sticky note next to their favorite measure that was displayed on a board. The votes were then tallied to show which measures are popular and considered for the 2025 plan update.

For members of the public who were not available to attend open houses in person, an online survey was posted on the County DEM's website. The survey is to rank all partner mitigation actions and solicit public feedback on existing measures that can be carried over or amended under the current planning cycle.

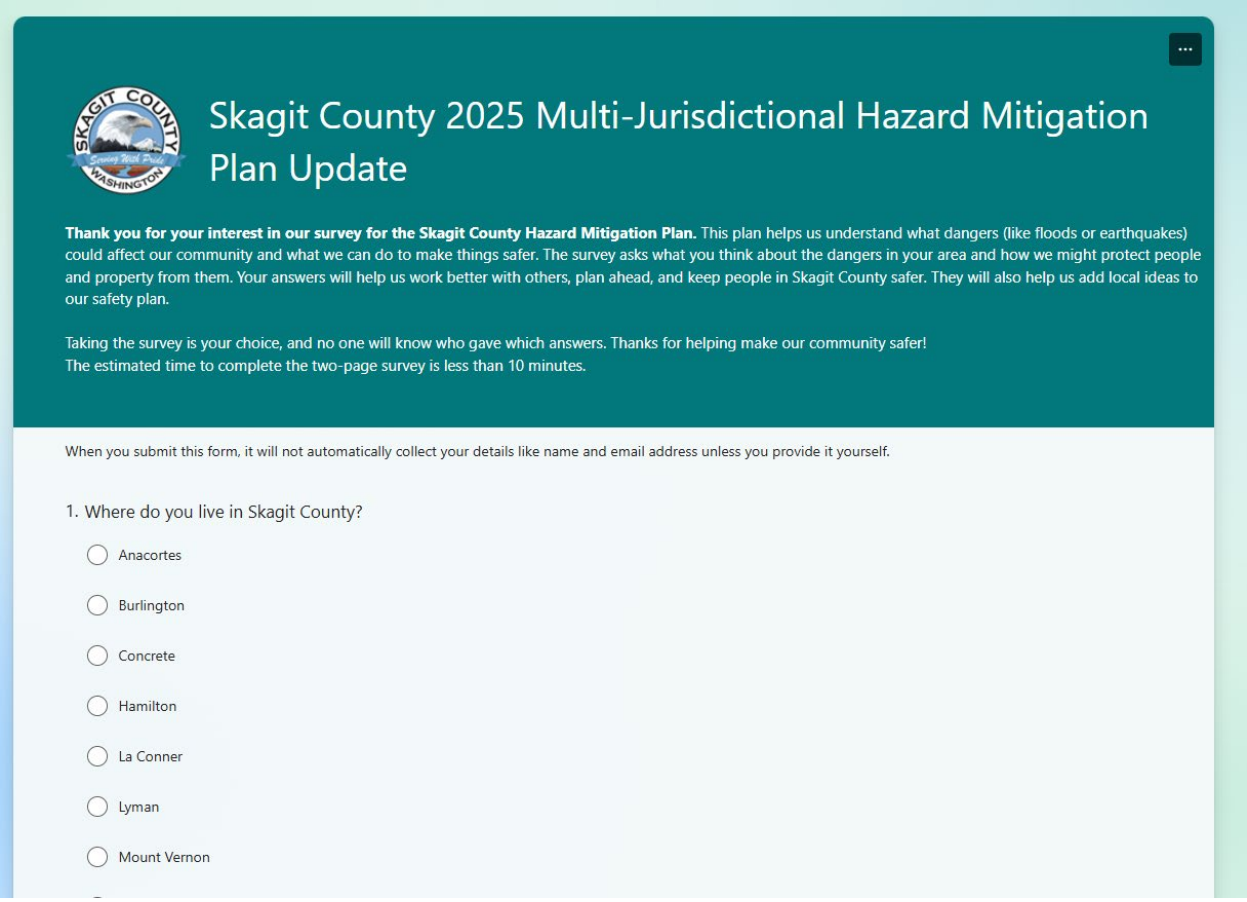
General feedback shows that emergency response services, public education, and hardening infrastructure to increase resilience against hazards are top priorities for the local constituents. Specific feedback includes:

- Identify protocols and response measures for hazardous material incidents;
- Ensure that critical facilities are retrofitted to withstand damage from various hazard types especially flooding, wildfire, and earthquakes;
- Increase public awareness and preparedness as a top priority for the community
    - Describing programs that provide resources, information, and funding can be helpful when emphasizing vulnerable populations such as those with ambulatory and hearing difficulties.
- Emergency response especially as it relates to services, responsibilities, and gear for fire districts;
    - Concerns that most fire district personnel are volunteer-based and may lack the resources necessary to respond to emergency situations from various types of hazards.
- Identifying areas of greater need with vulnerable populations or households;

Other recommendations include service-based initiatives such as using fire stations for warming/cooling shelters and an emergency evacuation center for households displaced by hazards.

3.1.2 Survey Timeline

During these events, the County provided a flier with a QR code to the webpage and online survey. The survey was available online at the County's dedicated webpage for about 10 weeks at the following website: https://www.skagitcounty.net/Departments/EmergencyManagement/2025-hazard-mitigation-plan.htm.

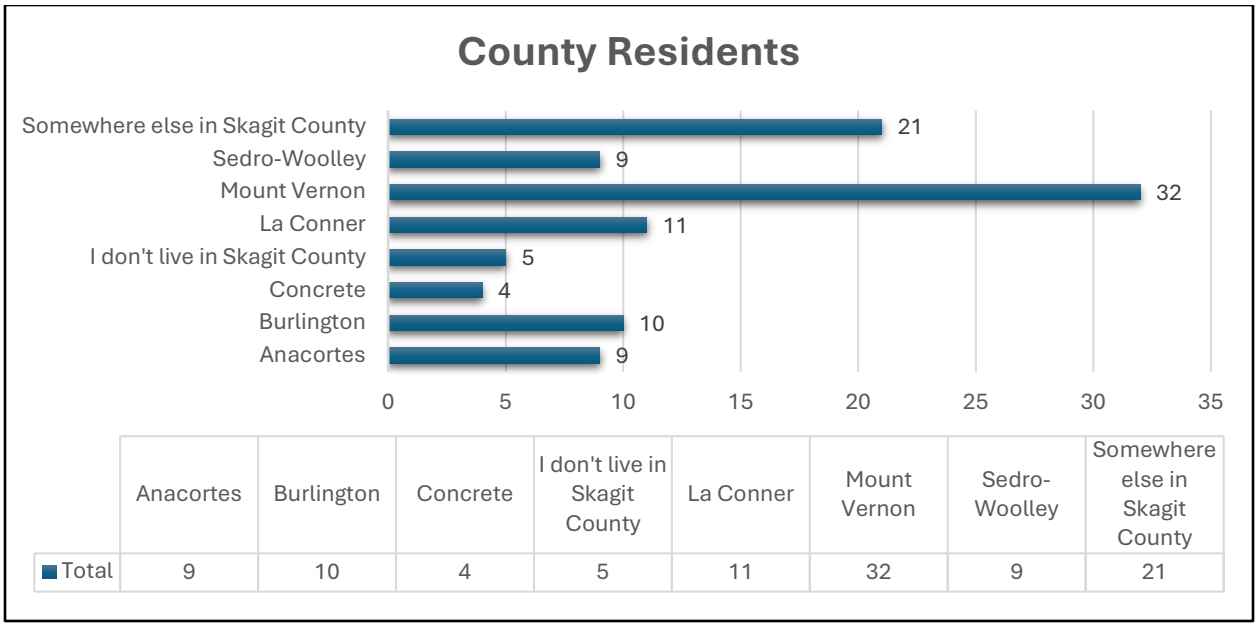


Input for the survey was collected to provide qualitative data for the draft HMP update, including feedback on the public's relationship to the County and a personal sense of risk and preparedness.

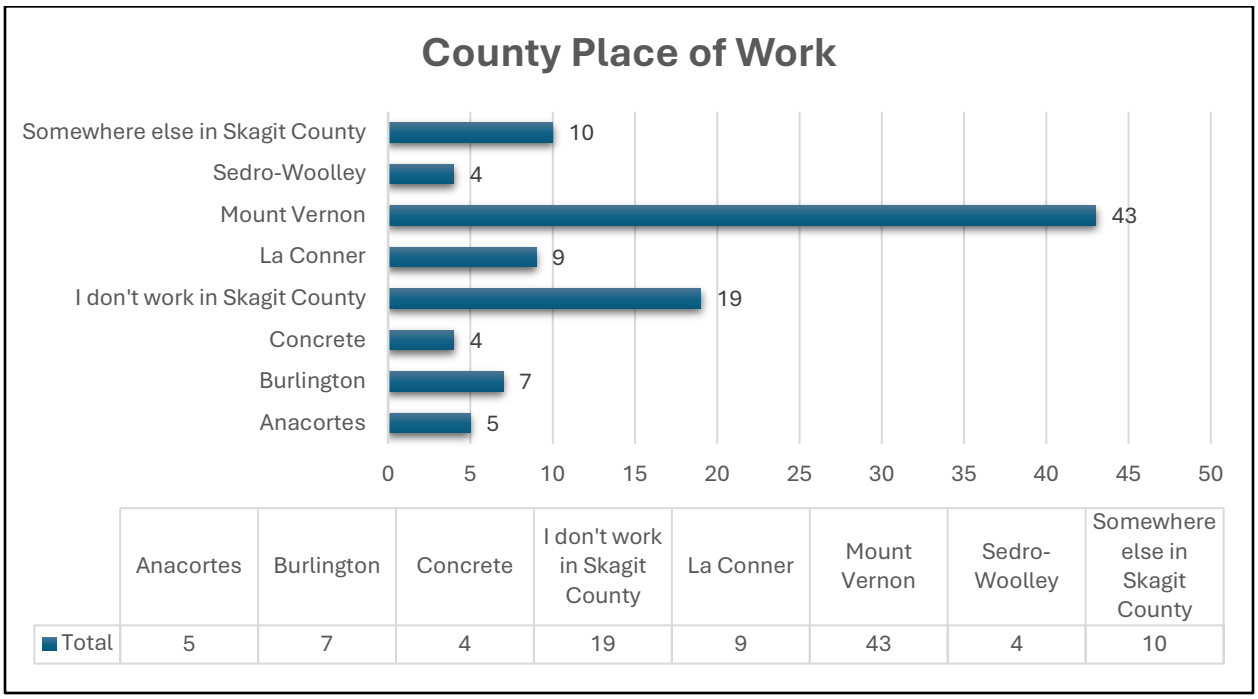
3.1.3 Survey Results

A total of 101 responses were collected over 77 days. A majority of respondents live and work in the County. Some respondents who live in the County do not work in the County, indicating that respondents commute to work outside of the County. No individuals from Hamilton and Lyman responded to the survey.

The survey also asked for household information and asked for non-identifiable information to maintain confidentiality. All survey respondents answered the demographic questions. Out of 101 responses, 85% of respondents were over the age of 36 while 15% were between the ages of 26 and 35. There were no respondents younger than 26 years old. 24% are from zip code 98273, 12% are from 98274, and 10% are from 98284, 98232, and 98233.

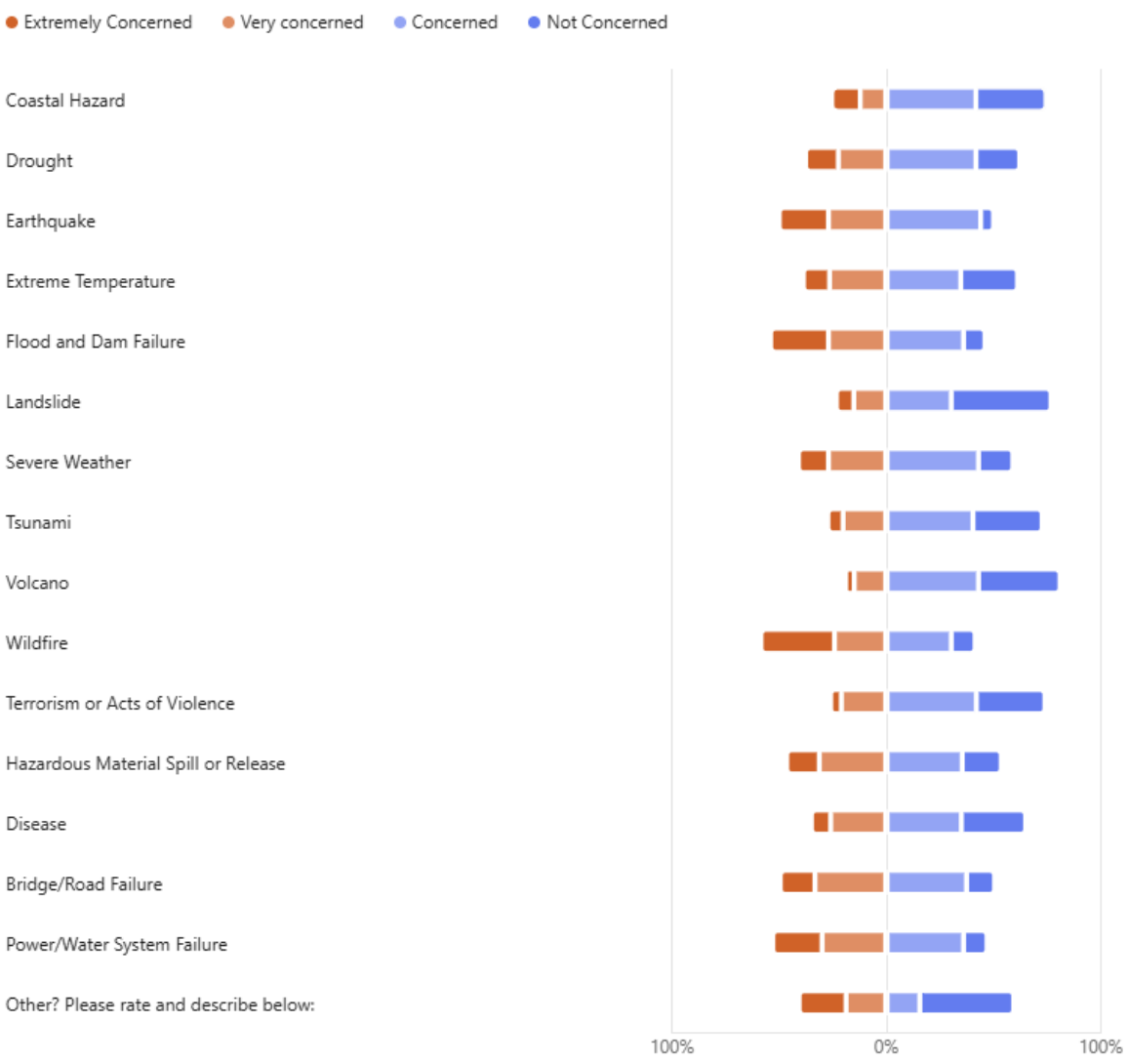


	Anacortes	Burlington	Concrete	I don't live in Skagit County	La Conner	Mount Vernon	Sedro-Woolley	Somewhere else in Skagit County
Total	9	10	4	5	11	32	9	21



	Anacortes	Burlington	Concrete	I don't work in Skagit County	La Conner	Mount Vernon	Sedro-Woolley	Somewhere else in Skagit County
Total	5	7	4	19	9	43	4	10

Most respondents listed wildfire hazard as the largest concern (58.5%), followed by respondents extremely concerned and very concerned about flood & dam failure (54.0%) and power & water system failure (53.0%).



The public survey responses are generally aligned with stakeholder responses when asked which hazards they are concerned about. The figure below illustrates hazards of concern that annex leaders and natural resource agencies provided in the first stakeholder meeting.

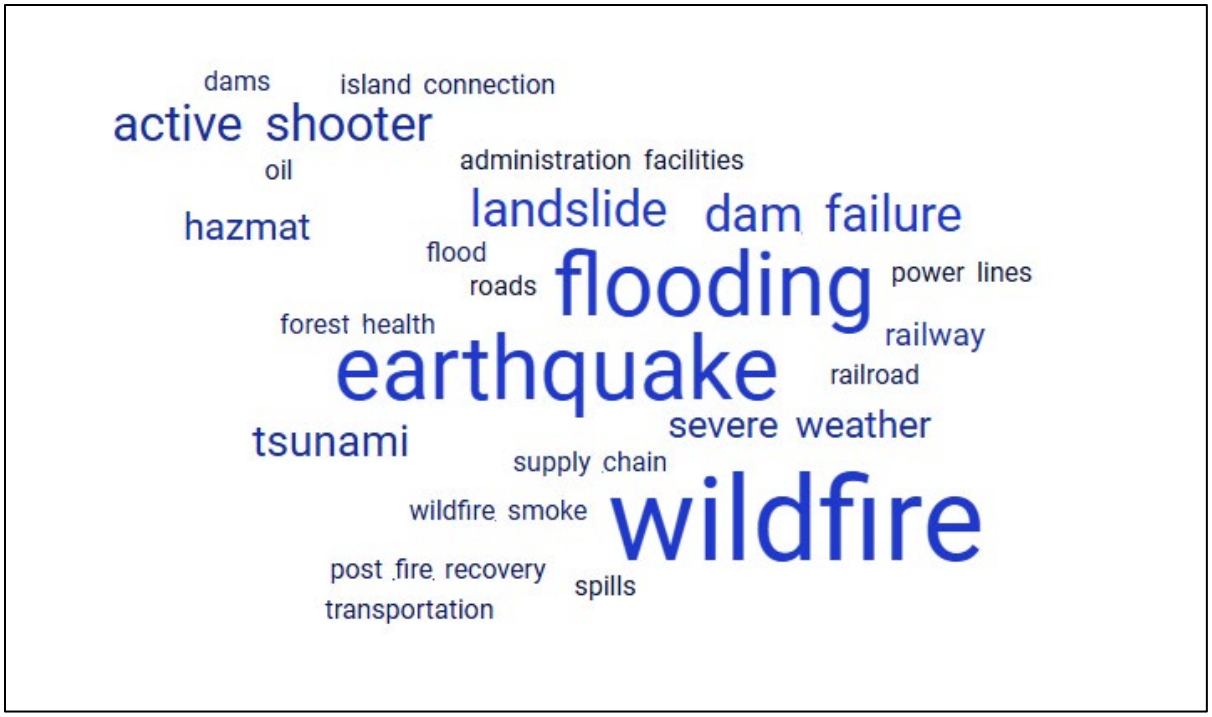


Figure 23. Wordcloud of Most Concerning Hazards for Stakeholders (Kimley-Horn)

Respondents were also asked to describe other hazards not listed that they are concerned about. In addition to respondents emphasizing concerns about hazards such as sea level rise, infrastructure failure, and dam failure, other concerns include:

- Lack of public education and awareness of clear evacuation routes;
- Services available for evacuation;
- Train derailments resulting in ecosystem impacts;
- Supply chain disruptions;
- Fire department capacity in response to various hazard events i.e., refinery fire, pipelines failure, hazardous material spills.

When asked to rank which community assets were most important to protect, 33% of respondents listed hospitals as the most important, followed by critical communication centers and bridges and roads. In addition, 45% of respondents listed fire & police stations as their top three most important assets.

When asked to describe other assets not listed, respondents noted that water infrastructure (i.e., dams/reservoirs, treatment plants, transmission and distribution pipelines), food retailers and/or farms for food security, domestic and farm animals, residences, and utilities continuity are important assets that should also be protected.

Respondents were also asked to rate how prepared they felt in mitigating hazards. About 50% of respondents listed wildfire, flood & dam failure, and power & water system failure as the most concerning hazard that needs to be prioritized and addressed. Other notable concerns include bridge & road failure, earthquake, and drought.

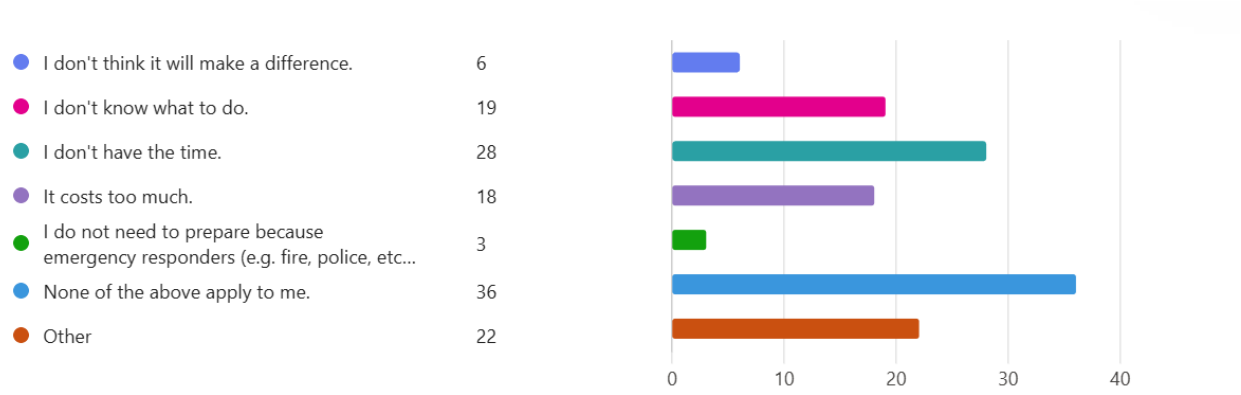
About half of the respondents provided suggestions towards enhancing community resilience and preparedness. Many unique and individual recommendations were provided, highlighting multiple areas of concern:

- Emergency preparedness
- Infrastructure improvements
- Training and regulation
- Communication systems
- Climate and environmental initiatives
- Public safety and disaster response
- Community support

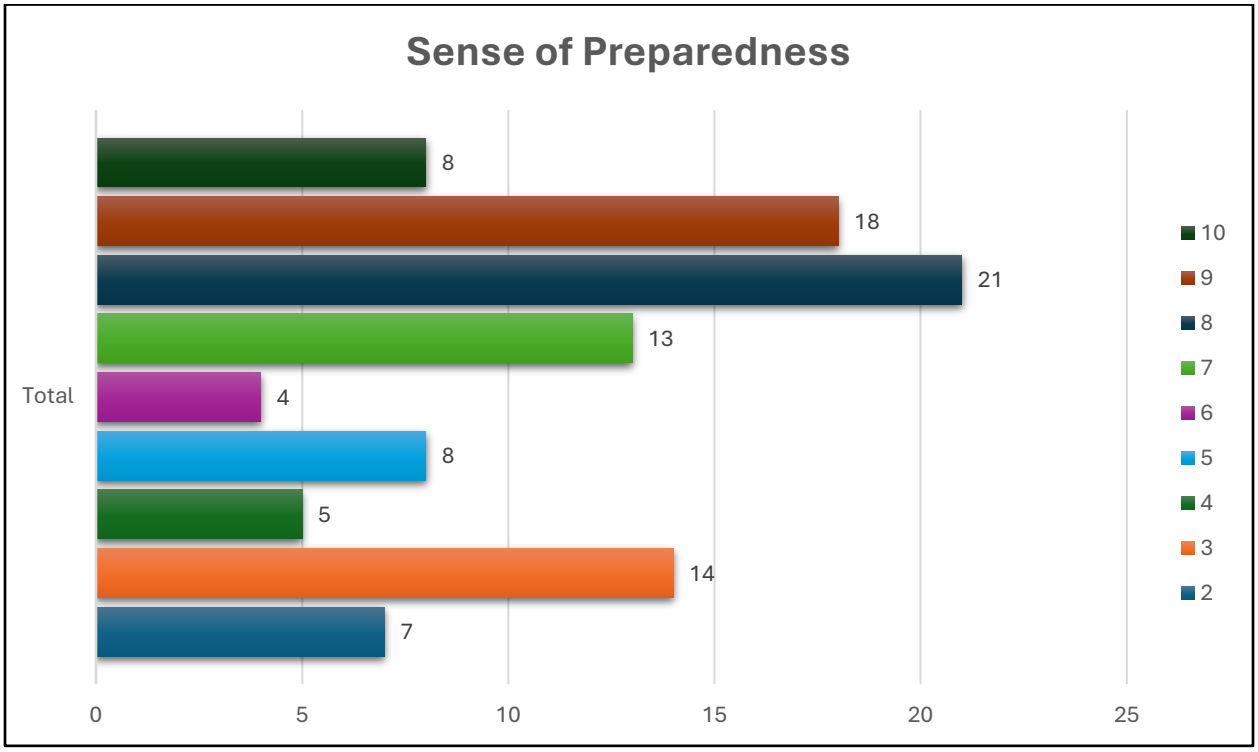
The public survey results emphasize the need for comprehensive emergency preparedness and infrastructure resilience. Key recommendations include educating the public on emergency procedures in response to a variety of hazards, developing effective communication systems (commuters vs residents), and extensive training for local fire departments. Integrated flood control, improved infrastructure, and climate change adaptation measures are highlighted. There is a push for utilizing technology, such as predictive analytics and grid battery backup, to enhance response and resilience. Community involvement is crucial, with suggestions for accessible training opportunities in public spaces/community centers, reliable warning systems, and farm disaster preparedness. The survey also calls for stricter land use regulations, robust community resources, and safety enhancements.

An AI tool was used to synthesize and summarize anonymous survey results. The summary was backchecked by staff to ensure accuracy and integrity of the results.

Respondents were also asked to rank how prepared they felt on a scale from 1 (Least Prepared) to 10 (Most Prepared). Although most respondents feel prepared, some are aware that more education is needed to feel more prepared and citing a combination of cost and lack of time or priority as the biggest barriers to preparedness.



Out of the 98 responses received, 60% noted that websites are the best form of communication, followed by social media and email newsletters. 24% of respondents also noted that public workshops or meetings are an effective method for receiving information on preparedness. Regardless the County should consider a variety of communication methods to effectively inform residents, including those with disabilities and living in rural and remote areas.



The survey and open house results were used to update and revise 2020 mitigation measures. Measures were prioritized and ranked based on open house results. More tallies and votes resulted in higher prioritization of the measure – see each Annex of the HMP.

Appendix B: Community Wildfire Protection Plan

SKAGIT COUNTY
COMMUNITY WILDFIRE PROTECTION PLAN (CWPP)
2024 UPDATE

Prepared by:

Community Wildfire Resilience & Forestry Programs

Skagit Conservation District

Approval of the Skagit County Community Wildfire Protection Plan 2024 Update

The applicable local government, local fire departments or their representative, and the state entity responsible for forest management approve the Skagit County Community Wildfire Protection Plan (CWPP). This plan is an update from the original document that was completed in 2009.

This plan is intended to serve as a planning tool for fire and land managers and residents to assess risks associated with wild land fire, and identify strategies and make recommendations for reducing those risks.

03/10/2026

George Geissler, Washington State Forester
Washington State Department of Natural Resources

Date

Josh Carpenter
Josh Carpenter (Dec 2, 2025 05:14:38 PST)

Josh Carpenter, President
Skagit County Fire Chiefs Association Chief, Skagit County Fire District 8

Date

Randal Johnson
Randal Johnson (Nov 18, 2025 16:37:54 PST)

Randy Johnson, Skagit County Building & Development
Skagit County

Date

12-4-2025

Dave Malsed, Board Supervisor
Skagit Conservation District

Date

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Preface

This Community Wildfire Protection Plan (CWPP) is the second update to the original 2009 Skagit County Community Wildfire Protection Plan. The previous update in 2019 built upon the process that was laid out in the original plan while also using a new landscape-scale assessment method of identifying areas of increased susceptibility to wildfire. This update provides continuity while adapting a new approach to the development process. This version was updated in 2024 in sync with Skagit County's 5-year Natural Hazard Mitigation Plan update that will be completed in 2025 and is slated to become a section of that plan as an addendum. The next update will occur in 2029 and will involve a much more robust process to align with FEMA guidelines and incorporate any updated Washington Department of Natural Resources guidance.

This CWPP is just one component of the larger effort of wildfire resilience in Skagit County. The figure below shows the different components and ongoing activities that are part of a community effort to build resilience and continually adapt to living with wildfire as part of our ecosystem.

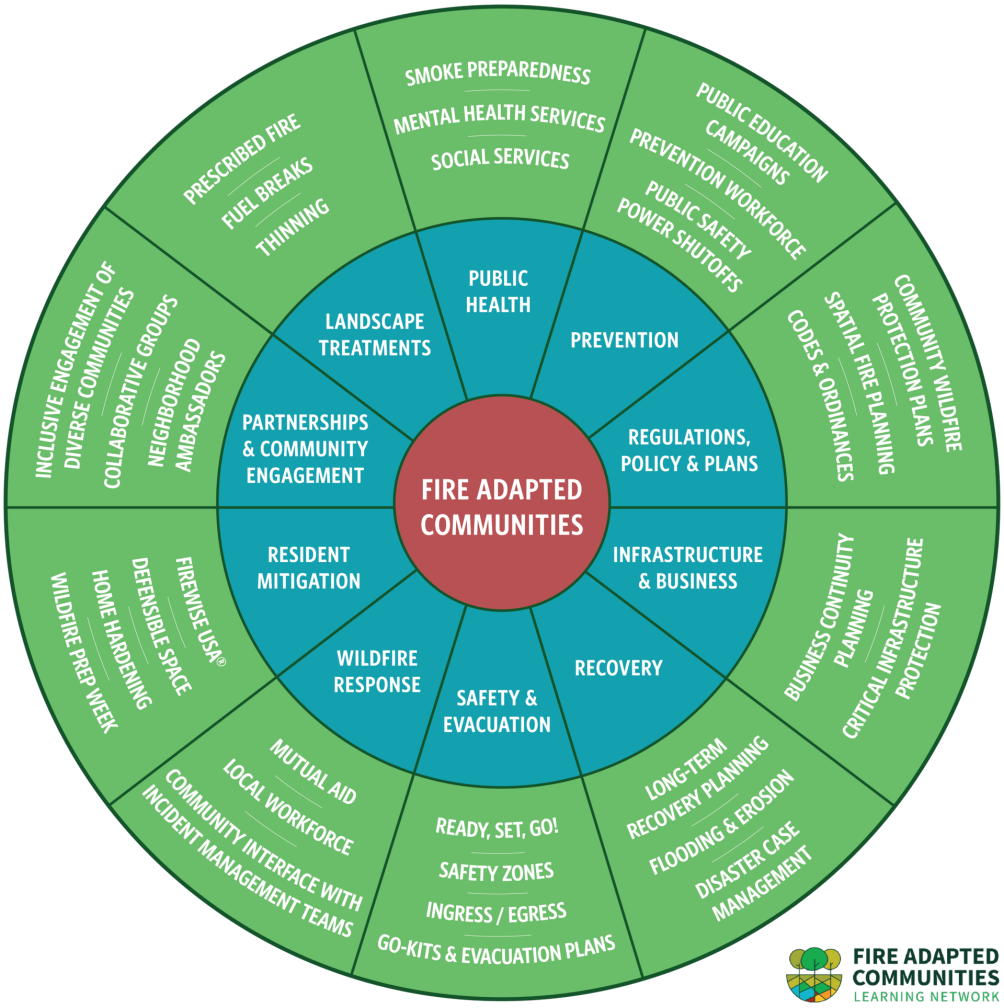

Figure 1. Fire Adapted Communities Learning Network graphic

Skagit County is changing. Environmental conditions, demographics, and economic conditions all must be acknowledged and addressed as we work towards increased preparedness and resiliency. The CWPP must allow for adaptive management as the tools and methods for addressing wildfire resilience are created, updated, and improved. This update seeks not only to incorporate new methodologies and understandings but also to adapt them as they are updated and/or include them in planning/mitigation efforts.

The Skagit Conservation District and our partners anticipate that this updated CWPP will be used as a tool for understanding wildfire susceptibility in communities in Skagit County, inform the prioritization of mitigation measures and land-use planning decisions, as well as provide resources and tools for communities to address their risk on a reduced, neighborhood-specific scale.

Introduction

In Washington State, 80% of the population resides west of the Cascade Mountain Range. A common misperception is that because the moisture levels are higher on the west side of the state there is little or no danger of wildfire occurrence. This is not the case during dry summer months, especially with climatic trends towards higher temperatures, lowered snowpack levels, and even years of declared drought conditions. Add this to abundant dry fuels in forested lands and conditions for the threat of wildfire are greatly increased. The very recent fire history in not only Skagit, but in many other "west-side" areas, reinforces this shift in fire frequency west of the Cascades.

Throughout history, the residents of Skagit County have dealt with various natural hazards affecting the area. Photographs, journal entries, and newspapers from the mid 1800's to the present show residents of the area dealing with natural disasters, including wildfire. Although there were fewer people in the area many years ago, wildfires did at times adversely affect the lives of those who depended on the land for food, shelter, and welfare. Past wildfires have threatened homes in Skagit County causing concern among residents about the potential for damage to their property, and the safety of their families.

The ever-increasing population will continue to expose the wildland-urban interface to a greater wildland fire risk than experienced historically. In addition, our nation's history of suppressing fires has resulted in many of our woodlands becoming dense with fuel buildup. Often fuels accumulate to extreme conditions in areas where forest management is inactive. With the population moving out into the forested areas, development of resource lands, and changing environmental conditions, the impact of wildfire hazards will continue to escalate.

It is impossible to predict exactly when a wildfire will occur, or the extent to which it will affect the county, but they will occur – it is only a matter of time. Most people do not think of wildfire as a natural disaster they can effectively protect against; however, there are things we can do as stakeholders to prepare for and lessen the effects of wildfire.

Community Wildfire Protection Plans

In 2009, Congress passed the Federal Land Assistance, Management, and Enhancement Act (FLAME Act), which directed the U.S. Department of Agriculture (USDA) and the Department of Interior (DOI) to develop a national cohesive wildland fire management strategy.

The National Cohesive Wildland Fire Management Strategy is a collaborative process to seek national, all-lands solutions to wildland fire management issues. The Cohesive Strategy focuses on three key areas: (1) Resilient Landscapes, (2) Fire Adapted Communities and (3) Safe, Effective, Risk-based Wildfire Response.

The Cohesive Strategy has a long list of goals and performance measures establishing a common understanding among all entities interacting in the wildland-urban interface. All wildland fire protection entities are to assist in the development and implementation of Community Wildfire Protection Plans (CWPPs) and comparable land resource management plans to create fire-adaptive communities.
www.forestsandrangelands.gov/documents/strategy/strategy/CSPhaseIIINationalStrategyApr2014.pdf

In 2023, the Wildland Fire Leadership Council (WFLC) released an Addendum Update, to spotlight wildland fire critical emphasis areas and challenges that were not identified or addressed in depth in the 2014 National Cohesive

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Wildland Fire Management Strategy (Cohesive Strategy) framework. It includes enhanced strategic direction and approved modifications to address the identified areas and challenges to Cohesive Strategy implementation over the decades to come.

The Cohesive Strategy is the solid, strategic framework for implementing significant, meaningful change that reduces the risk of loss from wildfire across the nation. While the implementation of the Cohesive Strategy looks different at all levels, the strategy itself remains the same. Stakeholders are challenged to reach beyond individual, organizational, and historical silos to collectively define and understand their risk; set landscape-level and community-wide priorities; share and co-manage risk across boundaries and jurisdictions; accept some short-term risk for long-term benefit; and collectively invest in outcome-based approaches and activities, rather than outputs.

The updated goals for the Cohesive Strategy are depicted in the graphic below:

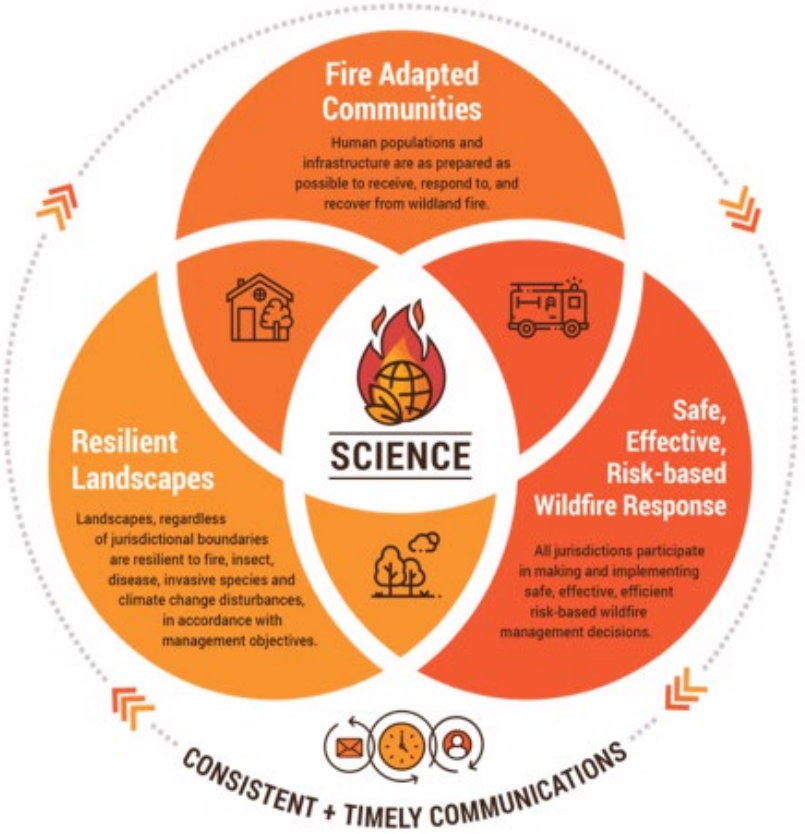

Fig. 2 National Cohesive Strategy Addendum Graphic 1

In addition, four new critical emphasis areas that are significantly affecting the behavior, duration and impacts of wildland fire; and five key challenges to implementing the Cohesive Strategy were identified.

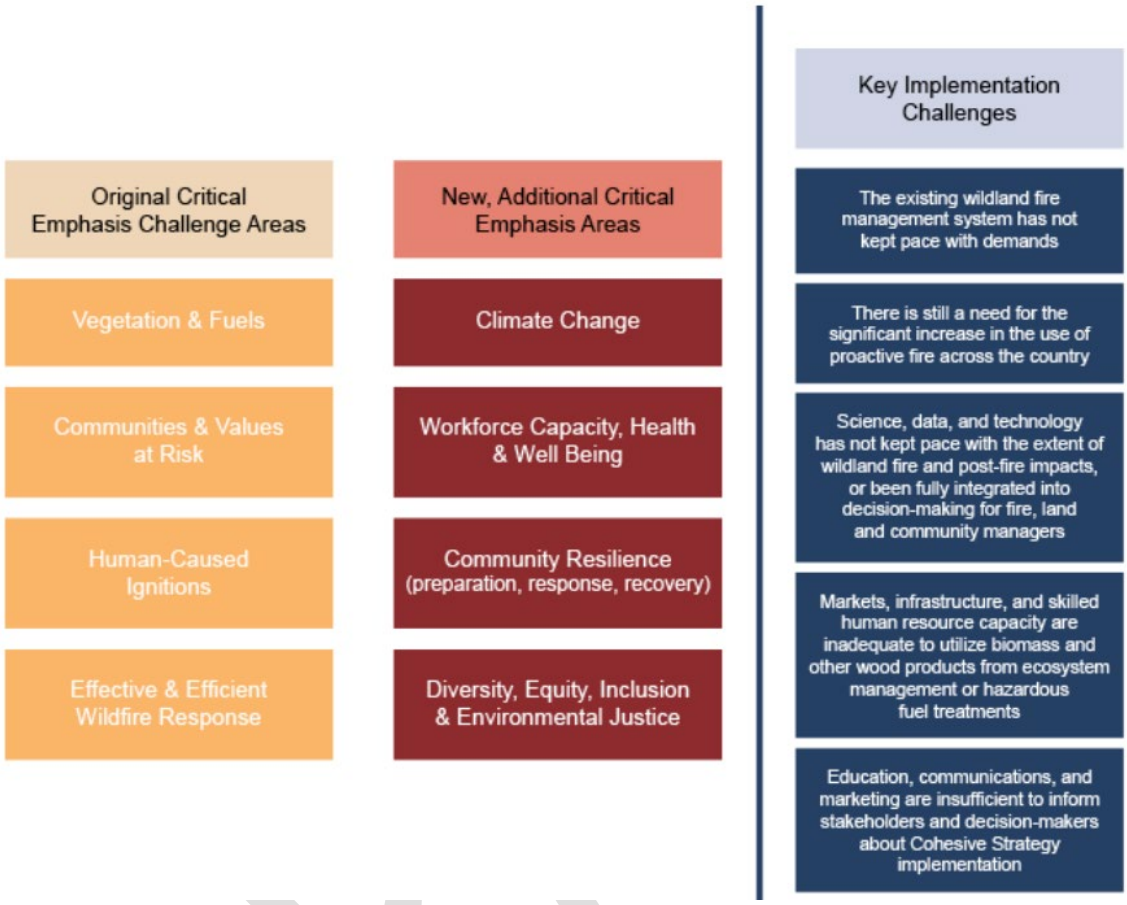

Figure 3. National Cohesive Strategy

Community wildfire protection plans are the primary tool that communities use to prioritize wildfire risk reduction and resilience. They can bring together multiple sources of information, activities, and interests into one document. There are three minimum requirements for a CWPP according to HFRA:

1. **Collaboration:** A CWPP must be collaboratively developed by local and state government representatives, in consultation with federal agencies and other interested parties.
2. **Prioritized Fuel Reduction:** A CWPP must identify and prioritize areas for hazardous fuel reduction treatments and recommend the types and methods of treatment that will protect one or more at-risk communities and essential infrastructure.
3. **Treatment of Structural Ignitability:** A CWPP must recommend measures that homeowners and communities can take to reduce the ignitability of structures throughout the area addressed by the plan.

Benefits of Developing and Updating a CWPP?

- Reducing the direct and indirect social, economic, and environmental costs of wildfire
- Coordinating wildfire risk reduction with other community values & priorities
- Bringing together diverse interests to tackle local wildfire challenges and opportunities
- Identifying potential resources and funding for mitigation activities
- Increasing community awareness and engagement in risk reduction

Initially, in 2008, Skagit County government recognized the need for cooperative county-wide wildfire planning and requested the Skagit Conservation District to lead efforts on the development of this plan. The planning area boundary was established to include all of Skagit County based on the wide-spread areas of wildland-urban interface within the county as well as the pre-defined planning area boundaries in the Natural Hazard Mitigation Plan that this document is a component of. There were no changes to the original established planning boundary in the 2019 update, nor are there any changes to that boundary in this update.

In a 2012 USFS Technical Report NRS-89, it was recommended that a CWPP should fit into the larger picture of county-level planning for natural disasters as a best practice. A county-level CWPP should be nested within the Natural Hazards Mitigation Plan (NHMP).

According to FEMA's guidance document on *Integrating Community Wildfire Protection Plans and Natural Hazard Mitigation Plans*, "both Natural Hazards Mitigation Plans and Community Wildfire Protection Plans benefit communities striving to reduce risk to natural hazards, their process and content requirements are very similar. There are many benefits to integrating CWPPs into NHMPs. Primarily, these benefits are fully realized when the two planning processes are unified and not separated."

Additional guidance from the Washington Department of Natural Resources has also been implemented for this update. In addition to a published CWPP Overview and Guidance document, DNR has a Wildland Fire Protection 10-Year Strategic Plan and works collaboratively to help implement the National Fire Plan through Community Wildfire Protection Plans and Community Assistance Grants. The 10-year Strategic Plan can be found here:

https://www.dnr.wa.gov/publications/rp_wildfire_strategic_plan.pdf

The specifics on the process of developing this CWPP update are provided in Appendix 1.

Planning Area Description

Overview

Skagit County is located in northwest Washington and stretches from Puget Sound in the western portion of the county to the Mount Baker-Snoqualmie National Forest in the eastern part of the County. It sits between Snohomish County to the south and Whatcom County to the north and is approximately 60 miles from the Canadian border to the north. Skagit County comprises an area of approximately 1,109,112 acres, runs 95 miles west to east and 24 miles north to south. (Figure 4.)

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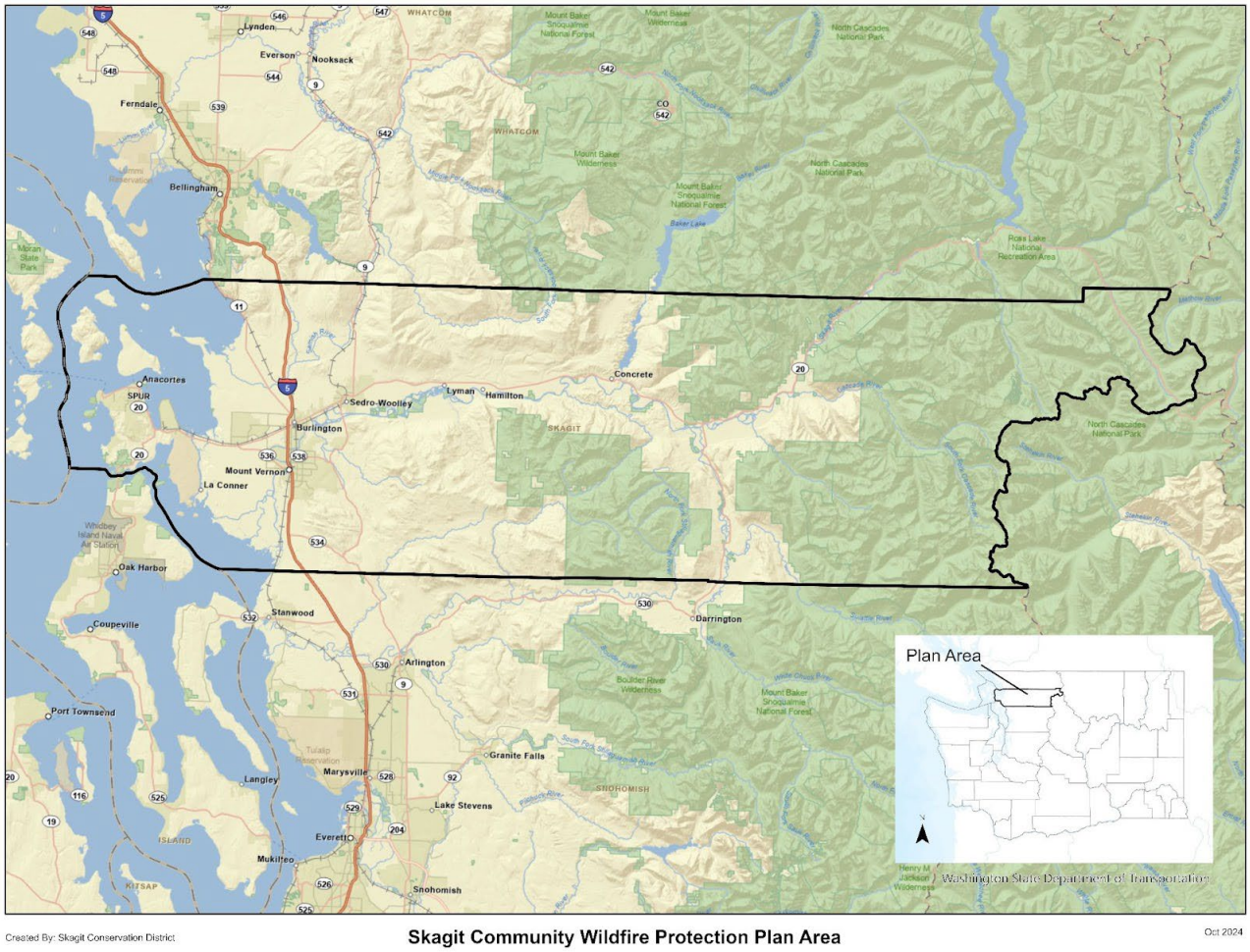

Figure 4. Skagit CWPP Planning Area

Land Ownership

Skagit County is a mosaic of land management and ownership.

- U.S. Forest Service manages 282,812 acres, (26%)
- The National Park Service manages 214,378 acres, (20%)
- The Washington State Department of Natural Resources (WA DNR) manages 131,206 acres,
- (12%)
- Private forest lands (investment trusts, industrial lands, and family forest owners) own 331,700 acres, (30%) in Skagit County

The largest area of contiguously owned land is in the Mount Baker-Snoqualmie National Forest managed by the U.S. Forest Service. The Department of Natural Resources also manages large areas of land, but the ownership is non-contiguous across the county. The National Park Service controls lands in North Cascades National Park and the Ross Lake National Recreation Area in the northeastern portion of the county. (Figure 5.)

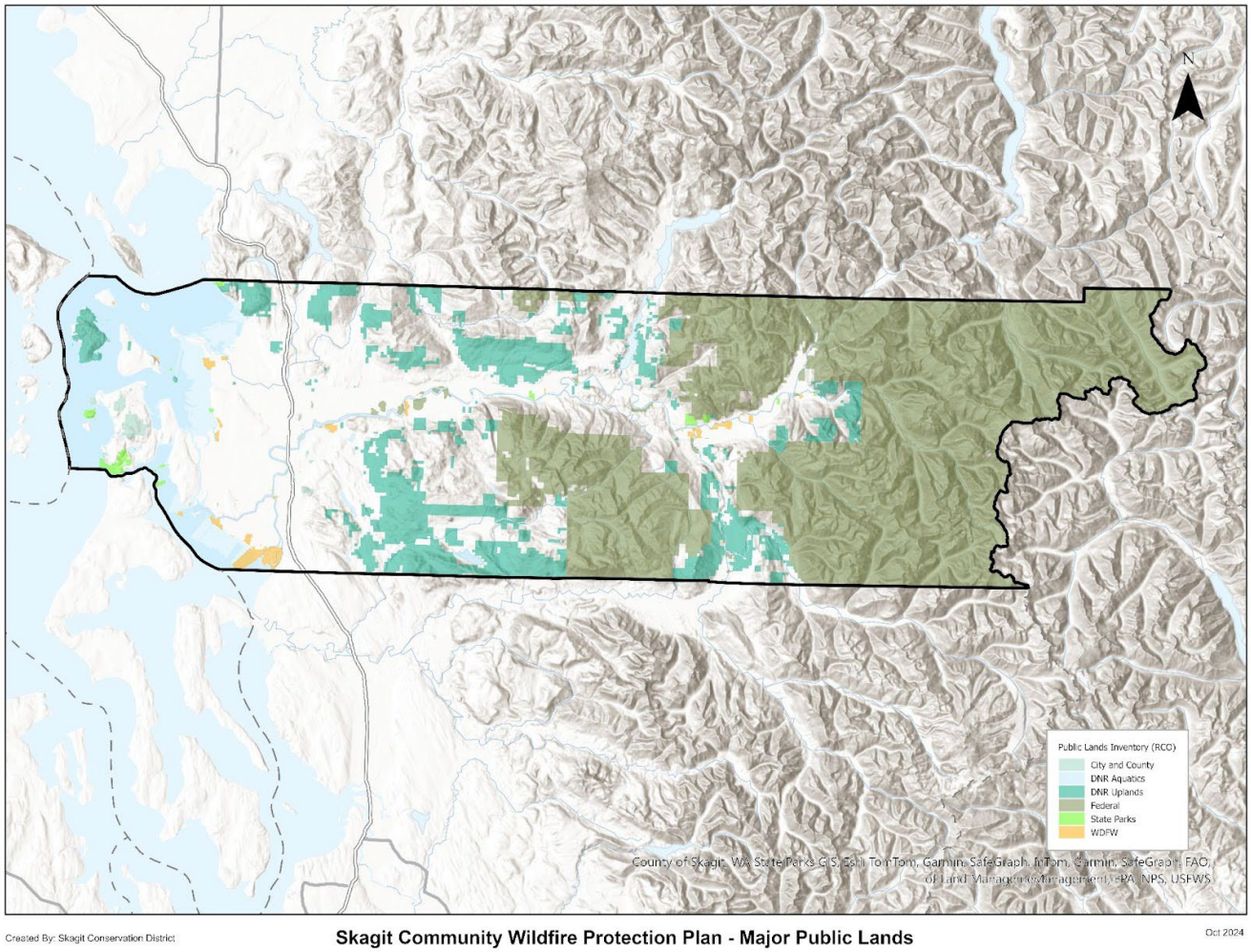

Figure 5. Skagit County Major Public Lands

Demographics

Skagit County's population was estimated to be 131,179 in 2022. That's a 12.2% increase from 2010. The population density of Skagit County is 67.5 inhabitants per square mile, which is a slight decrease from a density of 72 people per square mile in 2018.

In Skagit County, the planning goal is to have 80% of the growth occur in the incorporated areas, and 20% occur in the unincorporated areas. This is to discourage urban sprawl and preserve the character of rural areas. Also, public services and facilities such as fire protection can be most efficiently provided within the Urban Growth Areas (UGAs).

Building within Industrial Forest – Natural Resource Lands (zoned for minimum lot sizes of 80 acres), and all fee simple (private ownership) areas, requires meeting zoning regulations and certain building codes. Per Skagit County Code 14.16.410, a permitted use may include single family residential dwellings, together with the usual accessory buildings and uses, only when all of the following criteria are met:

- The residence is located within 200 feet of an existing County road or State highway.
- The residence is located within the existing, as of July 26, 2005, boundaries of a fire district.
- The residence is an accessory use to timber resource management activities.
- Ingress and egress for fire vehicles meets the standards of the International Fire Code Section 503, as amended.

- There is a 200-foot slash abatement maintained around the exterior portion of the dwelling.
- There is a safety zone cleared of flammable vegetation 30 feet from any portion of the exterior of any structure on level ground and 100 feet downhill on sloped ground.
- The dwelling or any accessory structure is constructed of a noncombustible roofing material; and
- There is availability of 300 gallons of water on site, 400 feet of 1-inch fire hose with nozzle, and an internal combustion engine powered pump.

Any new residential development proposed within Industrial Forest zoned areas is limited to those within an existing fire protection district and within 200 feet of a county road or state highway. Skagit County requires owners of all structures built in these areas to address wildfire preparedness, reduction and control.

The majority of the Industrial Forest NRL zoned lands are located outside of a fire district with few localized areas provided with protection. In comparison, Secondary Forest - NRL zoned lands predominately buffer the Industrial Forest- NRL from Rural zoned areas with a greater percentage of the acreage located within a fire district. This transitional area between industrial forest and rural zoned lands is designated primarily for forestry with some residential uses allowed at a housing density of 1 development right per 20 acres. Regardless of the zoning district, Skagit County Code provides additional restrictions for construction proposed outside of a fire district within the General Provisions code section (SCC 14.16.850(6)), which states, in part:

"Nonissuance of Building Permits Outside of a Fire District.

(a) *Within any zoning district, building permits shall not be issued for residential and/or commercial structures that are not determined to be within an official designated boundary of a Skagit County Fire District."*

And provides exceptions for certain uses and for construction on saltwater islands that are not within a fire protection district.

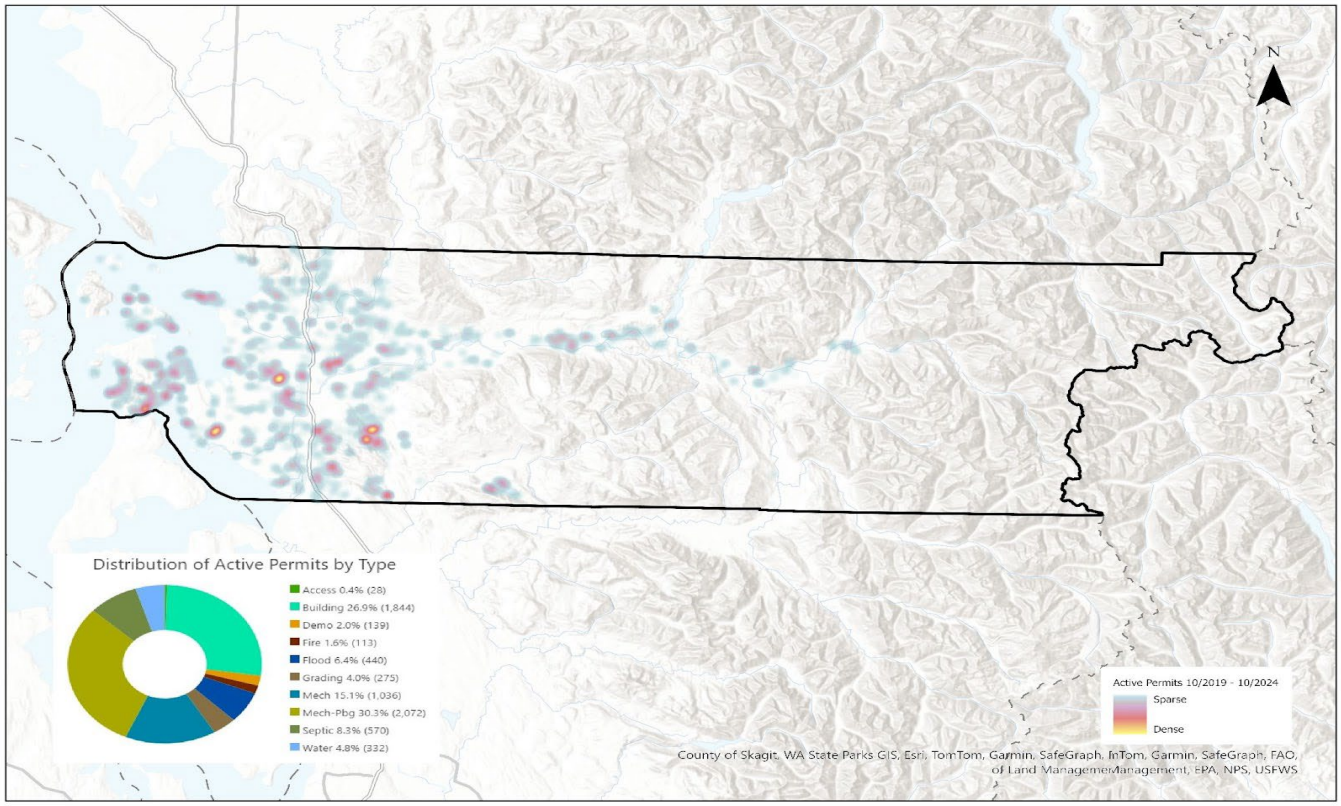

Figure 6. Active building permits

Environment

Skagit County is geographically diverse from west to east. The Cascade Mountains stand to the east, overlooking a fertile agricultural valley. Carving through the valley is the Skagit River flowing westward toward the Puget Sound. Climate differences between western and eastern Skagit County are notable. The average annual rainfall in the County ranges from 26 inches in the west to 65 - 80 inches (rain/snow) in the eastern part of the county. Approximately 80% of Skagit County is forested with the majority of forested land in the eastern half of the county. Overall, the climate is considered moderate; but temperature extremes are not uncommon.

Dominant vegetation ranges from Douglas fir, Western hemlock, Pacific silver fir in higher elevations, and Western red cedar. Red alder and big leaf maple occur in lower elevations in mixed stands.

Ecological Sites

Looking across any landscape, it is not difficult to recognize that some parts are different from other parts in regard to the kinds and amounts of vegetation. To understand this variation across the landscape, we classify these different parts into units called ecological sites. An ecological site is defined by the USDA Natural Resources Conservation Service (NRCS) as a distinctive kind of land with specific characteristics that differs from other kinds of land in its ability to produce a distinctive kind and amount of vegetation. The Ecological Site Description describes the ecological dynamics and the common plant communities comprising the various vegetation states of the site. Fire is a disturbance factor that causes a shift from one state of the plant community to another vegetative state. Any environmental inventory, analysis, and resulting management decisions require knowledge of these individual sites and their interrelationships to one another on the landscape.

The data comprising an ecological site description (ESD) is presented in four major categories:

Site Characteristics - Identifies the site and describes the physiographic, climate, soil, and water features associated with the site.
Plant Communities - Describes the ecological dynamics and the common plant communities comprising the various vegetation states of the site. The disturbance factors that cause a shift from one state to another are also described.
Site Interpretations - Interpretive information pertinent to the use and management of the site and its related resources.
Supporting Information - Provides sources of information and data utilized in developing the site description and the relationship of the site to other ecological sites.

Criteria used to differentiate one ecological site from another include:

- Significant difference in the species or species groups that are in the plant community.
- Significant differences in the relative proportion of species or species groups in the plant
- community.
- Soil factors that determine plant production and composition, the hydrology of the site, and
- function of the ecological processes of the water cycle, mineral cycles, and energy flow.
- Differences in the kind, proportion, and production of the overstory and understory plants due
- to differences in soil, topography, climate, and environment factors, or the response of
- vegetation to management.

According to the USDA NRCS, the dominant ecological site type in Skagit County is Douglas-fir/Hemlock (902). (esis.sc.egov.usda.gov).

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Figure 7. Douglas Fir-Western Hemlock/Cascade Oregon Grape Bald Hip Rose/Western Bracken Fern

Fire plays a major role in this dominant ESD. The stand will typically regenerate after wildfire in partial shade cast by fire-killed trees. Seed is provided by scattered surviving trees or islands of trees. Often young stands are so dense that competition over time results in an unhealthy forest condition.

At this point, stands become susceptible to attack by insects, disease, wind and catastrophic fires.

Historically, there were two successional pathways for this moderately dry to slightly moist ecological site. One pathway has Douglas fir as the dominate species in the overstory, while Western hemlock is in the understory and would eventually dominate. The second pathway is later successional stages that can consist of both Douglas fir and Western hemlock in dominant positions. Recent studies have shown that while these are the two most common end results, there are multiple successional pathways and varying successional stages. Additionally, fire return is more frequent than historically believed and this largely impacts the compositional structure of these successions.

Other types of disturbance are insects and disease outbreaks. Western Hemlock is a shallow rooted species. Wind events can cause destruction to stands that contain a majority of this species. Western hemlock is also thin barked and cannot withstand fires of more than moderate intensity. Many young stands are overstocked and are under stress due to competition for moisture, nutrients, and light. As stands develop to pole size or larger, the trees become stressed, and mortality occurs. Ideal conditions are created for bark beetles, root pathogens, windthrow, suppression and catastrophic wildfires. These sites have understory vegetation, most of which is shade tolerant. Salal is the primary abundant understory species with various percentages of Oregon grape, sword fern, and red huckleberry.

Other Ecological Site Descriptions within Skagit County include:

901: Douglas-fir / Pacific Madrone / Oceanspray / Rattlesnake Plantain
903: Western red cedar / Douglas-fir / salal / sword fern
904: Sitka Spruce / Red Alder / salmonberry / field horsetail
906: Western Hemlock / Western Redcedar / red huckleberry / salal / sword fern
----: Pacific Silver fir / Western Hemlock
----: Mountain Hemlock / Pacific Silver fir

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Fish & Wildlife

This plan covers a large and geographically diverse area, and the wildlife presence is also very diverse. From birds of prey such as the bald eagle, to the many species of salmon, to large mammals like the Roosevelt elk, there is a dependence on healthy forest ecosystems within Skagit County to support these species and their habitat. It is important to recognize the wide-reaching impacts that a catastrophic wildfire in Skagit County could have on the fish and wildlife species here. A catastrophic wildfire can kill animals, destroy their habitat and food source, and displace them. Depending on the characteristics of the fire, certain species of wildlife can benefit from the burned landscape by taking advantage of things like new vegetation growth and uncovered, opened seeds.

Fuel treatments can substantially affect stand structure and, as a consequence, habitat quality. Fires generally have a more extreme impact on habitat than any treatment option. While the no-action alternative might seem to benefit some species of wildlife, it assumes an unlikely eventuality of no fire and produces unhealthy overstocked stand conditions. Small periodic fires of low intensity were part of the pre-settlement forest, with a more frequent fire interval. Large stand replacement fires would have been low in frequency (100 years), but moderate to high intensity. Habitat strategies associated with fire risk reduction are inherently local and should be integrated into other site-specific wildlife objectives.

Economics

In 1990 the majority of the industrial forestlands were sold to investment trusts. These forest lands had been managed for decades by large industrial integrated forest products companies. Since then the industrial lands have been sold and re-sold many times. Previously, residents of Skagit County worked primarily in forestry-related industries. Employment shifted toward agriculture, tourism/retail trade, home-based construction and service businesses, and government entities.

It is costly to remove small trees that make up fuel loads in dense stands. Large trees can be removed for lumber and other products as reflected in the market. The market value for the smaller logs often is less than the harvest and hauling costs.

In some locations forest products can be removed economically through commercial timber sales, thus reducing the fuel load and the risk to catastrophic fire; however, in many locations the material that needs to be removed is low value small wood or material that has no current market value. Currently, firewood is being generated and material less than 6 inches is being chipped and spread on the forest floor. Developing markets for woody biomass have the potential to offset the costs of non-commercial hazard reduction.

Much research has been done to analyze the economics of different fuel treatment strategies. The USFS Research Station examined fuel management activities in the WUI measuring fire risk reduction, economic cost, habitat protection and carbon sequestration to develop an optimal treatment guideline.

Taking the above factors into account, the optimal thinning treatment was to thin from below, removing 50% of the original basal area. The treatment removed all trees with a Diameter at Breast Height (DBH) less than or equal to nine inches and retained the largest trees with thick bark. An average Westside stand with 238 sq. ft. basal area would be thinned to a 114 – 118 sq. ft. basal area (the number of trees per acre removed varies depending on DBH). This treatment produced the greatest risk reduction and, with low-cost assumptions, provided a positive net return. Removal of all trees over 12 inches DBH provided the highest revenue alternative, but not a significant fire risk reduction. *Ager, A.* (2011).

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Assessing Susceptibility to Wildland Fire

Overview

Skagit County experiences three types of fire threats: structure fires, wildland fires, and wildland-urban interface fires. Structure fires do not typically pose a great threat to the community except when the fire spreads to other nearby structures and quickly expands to a size that could threaten large numbers of people and overwhelm local fire resources.

Wildland fires are a natural part of the ecosystem in Washington State; however, wildfires can present a substantial hazard to life and property. Although wildfire statistics are not readily available at the county level, the statewide trends illustrate the increasing risk. "We are experiencing nearly a four-fold increase from 117,000 average annual acres burned (2000 to 2011) to 460,500 average acres burned (2012 to 2017). In 2018, 48 large fires burned over 355,000 acres throughout Washington. Non-forested areas are not exempt from these trends; Washington's largest fire in 2016 burned 176,600 acres of mostly grassland.

The cost to manage large wildland fires in Washington State averaged nearly $37 million per year between 2008 and 2012. Between the years of 2013 and 2018, the average annual expense quadrupled ($153 million).

By the 2040s, the median annual area burned in the Northwest could more than double relative to 1916-2006. *Littell et al. (2010*).

As noted in WADNR's 2019 Wildland Fire Protection 10-Year Strategic Plan, "as the climate changes, forested areas of western Washington face the potential for increasing risks from wildland fire along with associated management challenges, costs, and consequences. The 2017 Norse Peak fire illustrates the potential costs and losses of wildland fire on the west side of Washington. This fire, located near Mt. Rainier, consumed 52,000 acres in heavy timber and cost nearly $20 million to suppress. While measures to reduce wildland fire risk are well understood in fire-prone forests such as those found on the eastern slopes of the Cascade Mountains, adaptation options are much less well understood on western slopes. Recent studies indicate adaptation measures for forests that historically experience stand-replacing wildland fire differ from those with a low-severity fire regime, with an emphasis on postfire adaptation actions as opposed to pre- fire mitigation actions."

Most wildland fires are started by human causes including outdoor burning, discarded cigarettes, the discharge of fireworks, and deliberate acts of arson. Many of these fires are usually extinguished in their initial stages being less than one acre in area. Depending upon temperature, wind, topography, and other factors, wildland fires can spread rapidly to over 100,000 acres and may require thousands of firefighters and equipment working several weeks to extinguish.

2024 Updated Data

As previously noted, wildfire statistics on a county level are difficult to come by. Provided below are some figures from a 5-year review, (2019-2023), of Region 3 which included San Juan, Island, Whatcom, and Skagit Counties.

- Aside from Structure Fires, the top three most common incidents in Region 3 in the last 5 years were Natural Vegetation fires, Outside Rubbish fires, and Vehicle fires.
    - Natural Vegetation Fires: 2,231 incidents
    - Outside Rubbish Fires: 1,869 incidents
    - Vehicle Fires: 1,026 incidents
- Again, aside from Structure fires, the top three costly types of fires in Region 3 over the last 5 years were Vehicle fires, Fixed Mobile Property Fires, and Natural Vegetation Fires.
    - Vehicle Fires: $8,250,164

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    - Fixed Mobile Property Fires: $1,916,098
    - Natural Vegetation Fires: $1,026,125
- The type of property use where fires (not wildfires) most occur in Region 3 over the last 5 years are Residential (3,835 incidents) and Outside or Special properties (3,423).
- The most common fire incidents by known area or origin include vehicle areas and outside areas.

Additional statistics from USDA and the USFS Wildfire Risk to Communities website:

- 88% (218) of wildfires were determined to be human caused from 2010-2020 in Skagit County, and 12% (29) of wildfires were caused by lightning.
- The top 5 human ignition types are as follows: Recreation and ceremony cause (94), undetermined human causes (39), Debris and open burning (37), Smoking (14)m and Fireworks (10).
- Skagit County experiences fire year-round. Over the last 5 years June through September has been our peak fire season with July being the busiest month for fire starts. In 2024 April has been the busiest month for wildfire starts in Skagit County.
- Homes in Skagit County have, on average, greater risk than 44% (Medium) of counties in the US. Risk is determined by wildfire likelihood and consequences.
- Wildfire likelihood in Skagit County, on average, has a greater wildfire likelihood than 39% of counties in the US.
- Skagit County has on average a high rate of risk reduction zones (relative exposure to homes to wildfires and areas where mitigation may be most effective). 25% of buildings in Skagit County have minimal exposure to wildfires, 32% have indirect exposure, and 43% have direct exposure. Skagit County is covered by almost 1 million acres of forest land, roughly 89,000 acres of ag land. As wildfire become more common on the West side of Skagit County we should expect to see increases in the loss of life and property.

Defining the Wildland-Urban Interface

The formal definition of the wildland-urban interface (WUI) can be found in the Federal Register and describes conditions under which humans and their development meet or intermix with wildland fuel. This definition uses levels of structure density or population density to subdivide WUI into ***Interface*** and ***Intermix*** categories. *Interface* refers to areas where structures directly abut wildland fuels, but there is a clear line of demarcation between developed and wildland areas. *Intermix* refers to areas where structures are scattered throughout a wildland area. Geographically defining the WUI with a set of criteria that can be mapped is still a relatively vague process with no clear definitions. That said, this CWPP references the best available wildland-urban interface and intermix map that DNR has created as of summer 2019.

In Figure 8. below, the areas defined as intermix are more widespread than areas defined as interface. In addition, there are areas of both intermix and interface that do not currently show up on this map, which is why it is important to identify those at the local level. Because this WUI map was created at a statewide level, it does not capture all of the interface and intermix areas within Skagit County known to those that work and live in the county. The information in this map is being presented as a general reference in order to show the difference between interface and intermix areas.

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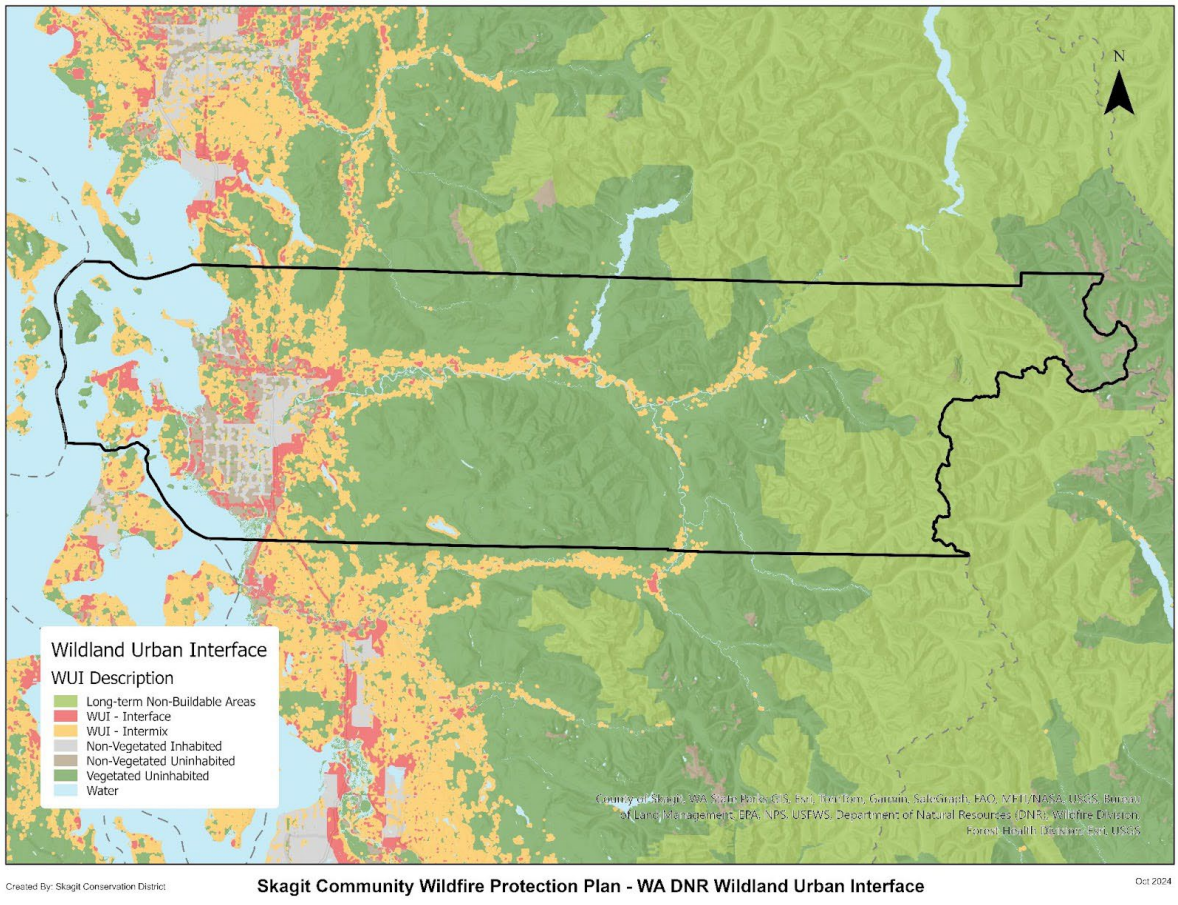

Figure 8. Most recent WA DNR WUI map for Skagit County

Fire Regime & History

The west side of the Cascades is often perceived as not having a wildfire problem. History tells a different story; major events are not every year, but more like every 20 years.

A combination of factors is required for a large wildfire to occur: (fuel accumulation, fuel moisture, weather patterns, and ignition source). Fire spread rate is influenced by vegetation type, slope, aspect, and topography.

The historic fire regime would have been relatively low in frequency (100 to 200 years), but moderate to high intensity. These fires would be stand-replacing, although individual trees would survive and provide a seed source. Recent findings may indicate that this frequency was higher in some areas than historically believed, with lower intensity fires occurring in many areas of the western Cascades. Modern fire control methods have contained most fires to smaller burns, but the potential for large fires of high intensity has increased because of these efforts. Fuel loads are also higher than historic levels of accumulation.

Western hemlock, with its thin bark and shallow root system, is not able to tolerate fire while Western red cedar is only somewhat more tolerant. Douglas-fir is well adapted to withstand fire. Even a moderate fire would likely change the species composition.

Skagit County typically has numerous fires that occur in forestlands each year, but almost all of these fires are extremely small (less than .2 acres in size) and remain so due to the relatively high moisture content in fire fuels. Although in past years most of the fires have been very small, larger fires still occur that are costly and dangerous. The largest fire was the McAllister Creek Fire in 2022, and it burned 2289.53 acres. Also in 2022 the lightning ignited Boulder Lake Fire that burned 2316.54 acres. The Easy Fire, which was still active at the time of this CWPP

update process had consumed 2130.38 acres as of late September 2024 and had also already experienced a landslide across Highway 20, within the fire's footprint. The Jordan Creek Fire) occurred near the community of Marblemount in 1998 and burned 1,162 acres of forestland and threatened several homes in the area. The costs to fight this fire were in excess of 3 million dollars. The Goodell Creek fire threatened the towns of Newhalem and Diablo and cost Seattle City Light $2.2M in damages, response and labor, along with $900,000 of power purchases and generation loss.

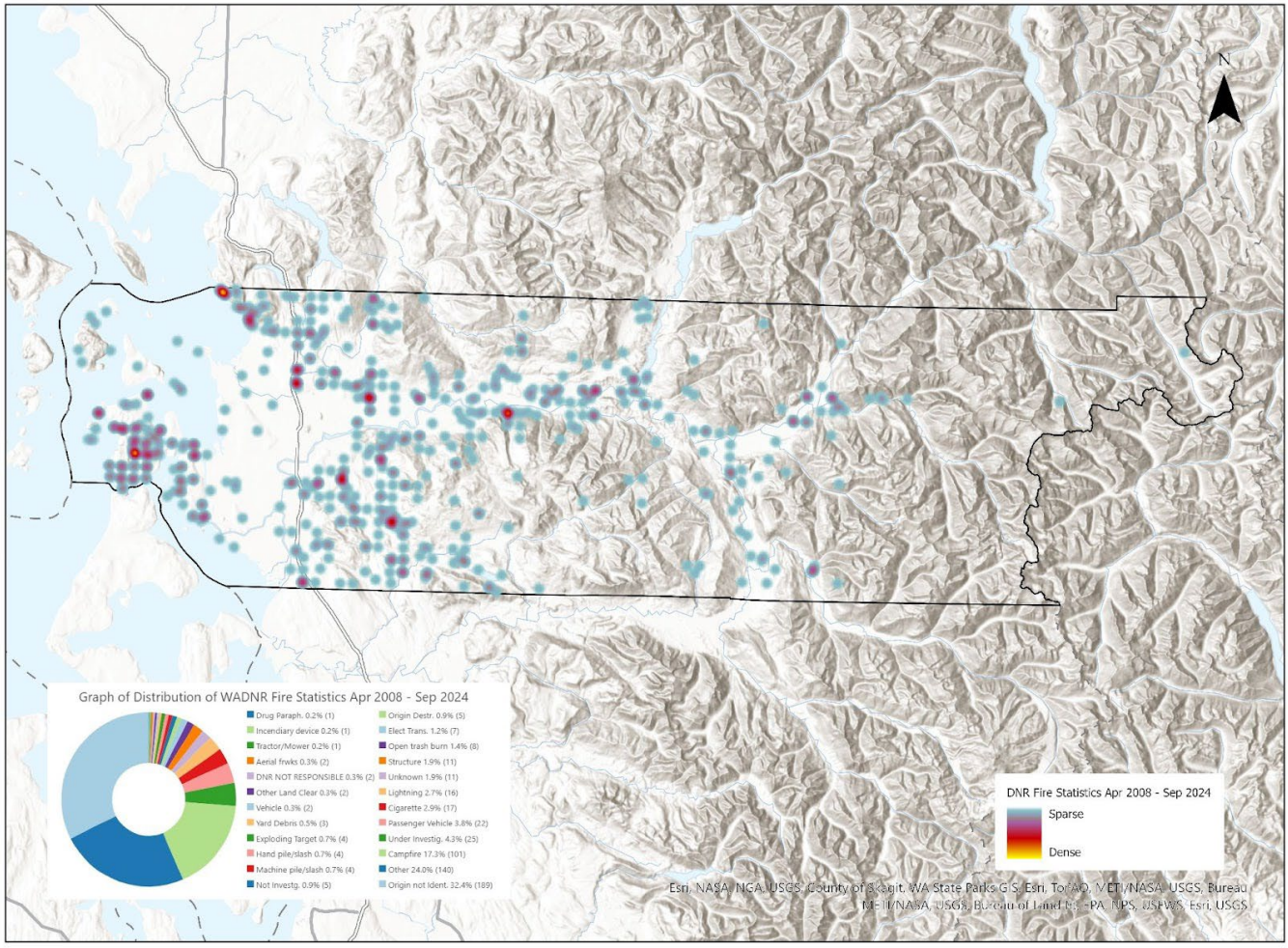

Figure 9. Skagit County Wildfires 2008-2024

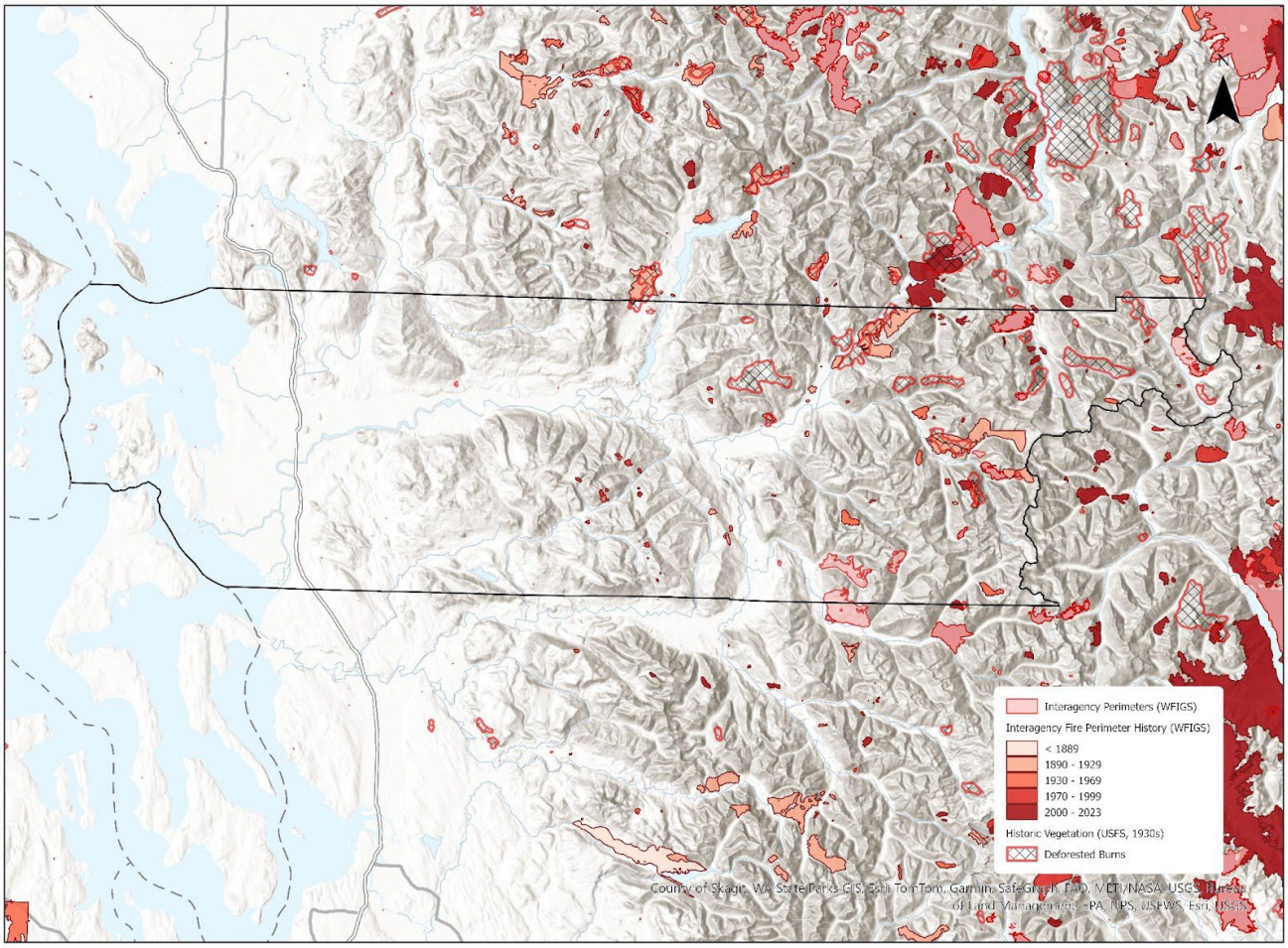

Figure 10. Skagit Fire Perimeters 1889-Present

Environmental Impacts

As wildfires trend toward being more catastrophic, forest animals are less able to escape their detrimental effects. Catastrophic fires can also increase water temperatures to lethal levels and cause death to aquatic life. It is most often smoke inhalation as opposed to the heat that kills animals. Clouds of smoke can stretch far ahead of a fire suffocating mammals and birds in its path. Smoke and ash in the air also result in poor air quality and cause public health issues. Burning forests release a large amount of carbon monoxide pollution that can trigger ozone production. When a forest is not burning, it is helping to clean the air by absorbing greenhouse gases, approximately 17% of the total annual U.S. greenhouse gas emissions. Healthy Pacific Northwest forests sequester carbon at the rate of 8.3 metric tons per acre per year.

Intense fires can increase soil erosion and create hazardous mud and debris flows on some soil and geologic formations. This can cause dangerous conditions that threaten infrastructure and communities. It is suggested a model be developed for the Geology section of the NHMP to identify potential risk areas. A future model could be developed for this section on highly erodible soils as a result of fire.

Based on studies done by the PNW Research Station in 2010, soil exposed to prolonged intense heat during a wildfire forms a crust-like hydrophobic layer that greatly reduces the penetration of water. Since water cannot seep into the ground, topsoil, ash, and debris is washed into streams. The heat volatilizes soil nutrients and kills subterranean microbial communities. The heating process oxidizes the upper soil layers reducing soil permeability.

Severe burning is associated with reduced soil productivity by killing the soil-dwelling fungi, bacteria, and other microorganisms that are required for tree growth. The beneficial relationship between below ground mycorrhizal fungi and tree growth is well documented. Mycorrhizae connect with plant and tree roots, helping them absorb soil nutrients and water. In turn, the fungi obtain carbon and sugars from trees and shrubs. The potential for severely burned soils increases where substantial areas of land have large amounts of down, dead wood before a fire. Plant cover is slow to return to severely burned soils.

Catastrophic fires can damage wildlife populations such as the spotted owl and Pacific fisher. It can burn den trees and destroy food sources and cover. Soil erosion can increase greatly without any forest cover. Soil erosion can clog up waterways and cause damage to fish and other aquatic species.

High-intensity fires can have severe effects on the health of a watershed.

> *High intensity fire burns away the vegetation and duff that protect and build soils. Unnatural fuel accumulations lead to catastrophic, high intensity fires. High intensity fires create a crust like hydrophobic layer below the surface, an oil-based film that greatly slows the penetration of water. When rain follows catastrophic fire, water quickly saturates the exposed topsoil and hits the hydrophobic layer about 2 inches underground. Since the water cannot seep into the ground any further, the topsoil, ash and debris gets washed away. Mud fills nearby watercourses. Well-managed forests can reduce the threat of catastrophic high intensity wildfire that can leave a costly mark on watersheds. (Pillsbury, 2008).*

Fire related damage does not stop when the fire is out. High severity fire can have profound long-term soil impacts and may result in soils void of almost all biological activity. Loss of vegetation can result in hill slope erosion and leaching causing post-fire damage. Soils are fundamental to a healthy and functioning ecosystem. Appendix 2 summarizes potential fire damage hazard to soil which affects long-term recovery.

Wildfire Susceptibility Assessment

In order to best facilitate the assessment of the wildland fire susceptibility in the county, the Skagit Conservation District and partners conducted a landscape level assessment using scientific data from a number of sources, local expert input, and wildland-urban interface data for Skagit County from the original CWPP and from the 2019 CWPP update.

The result of this assessment is a map (Figure 11.) that shows areas of increased susceptibility to wildfire. The map was created by filtering out data from NRCS research (see explanation in Appendix 2) and overlaying various GIS layers and selecting for the areas where they intersect.

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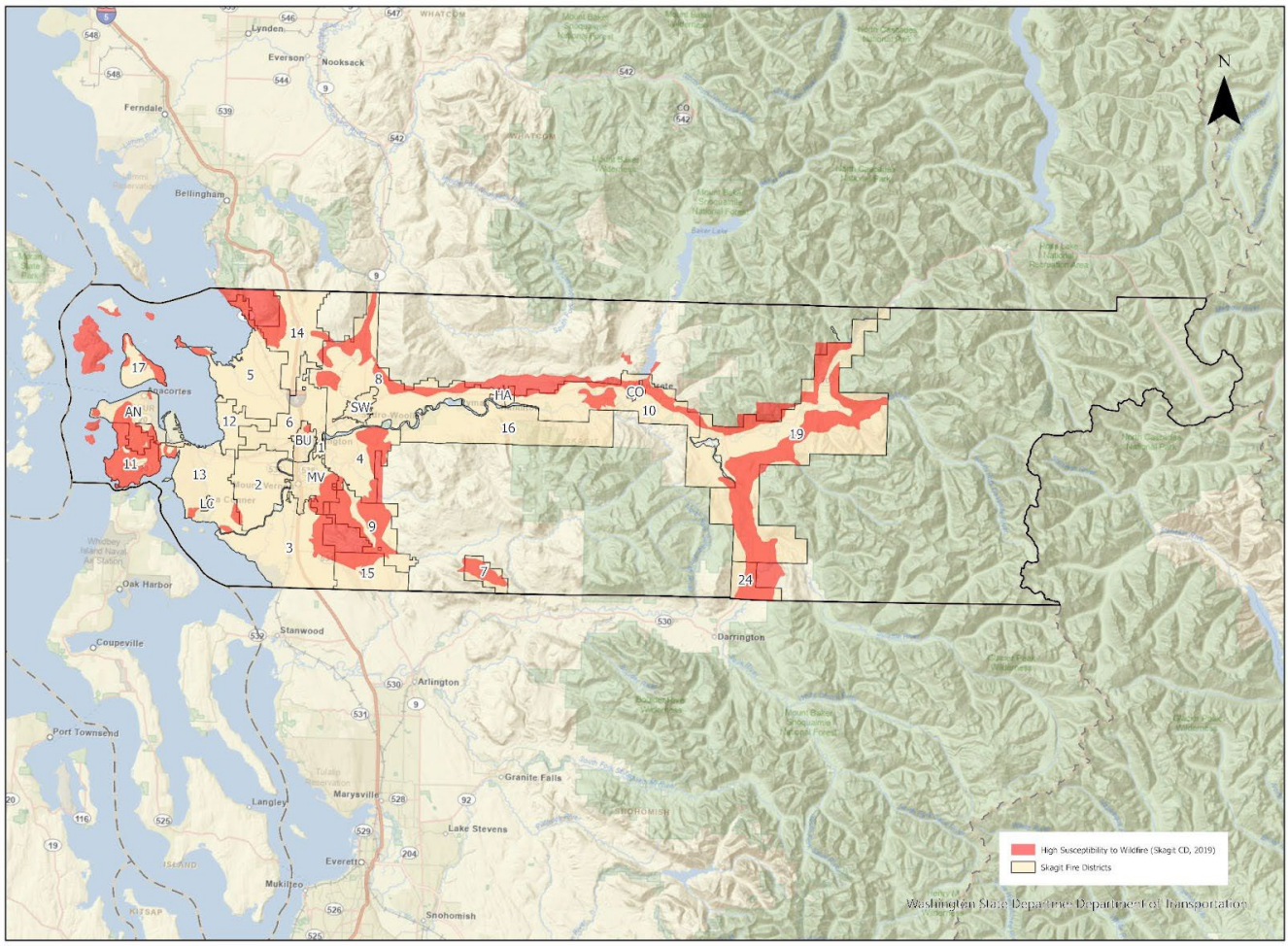

Figure 11. Skagit County Areas of Higher Susceptibility

The GIS information used to create this map includes the following:

1. Department of Natural Resources Geologic Map of Washington

Geologic units where bedrock or sedimentary rock is at or near the surface with shallow soil depth were selected. These geologic units included:

- Mesozoic (Mzv) Volcanic rock
- Paleozoic (Pzs), Mesozoic (Mzs) Sedimentary rocks
- Quaternary Sediments (Qg) Unconsolidated deposits

Source: https://www.dnr.wa.gov/geology

2. NRCS Soil Data – Available Water Capacity Rating

Soil types were sorted out based on the Available Water Capacity Data (AWC). The soils found in Skagit County have an AWC range of 0.05 inches/in to 0.40 inches/in. The soils selected for this map have an **AWC rating of equal to or less than (0.15 inches/ in.)** because at that AWC rating, the vegetation experiences moisture stress and the flammability is elevated. The AWC available water capacity affects the degree to which soils are heated. The more water in the soil (i.e. finer textured soils) the more insulating capacity it has.

Source: https://websoilsurvey.nrcs.usda.gov

3. Aspect

All solar aspects were included in the data for this map except for north-facing aspects which were excluded.

Sources: https://www.usgs.gov/products/maps/overview
https://datagateway.nrcs.usda.gov/GDGOrder.aspx

4. Slope/Topography

Slopes of 15% or greater were included in the map. Slope mainly affects the rate of fire spread once it starts.

Sources: https://www.usgs.gov/products/maps/overview
https://datagateway.nrcs.usda.gov/GDGOrder.aspx

5. Population

- ❑ Skagit County 2023

  Sources: https://www.skagitcounty.net/Departments/PlanningAndPermit/main.htm

This assessment was developed in consultation with the following partners: Washington State Department of Natural Resources (WADNR); the U.S. Forest Service (USFS); Skagit County Department of Emergency Management (DEM); the Skagit County Commissioner's Office; Skagit County Rural Fire Districts; the University of Washington Climate Impacts Group and affiliated professors.

Feedback and input were gathered through the following activities:

- ❑ Wildfire risk and response surveys were sent to all Fire Districts in the county (letter to fire chiefs and survey questions can be found in Appendix 3)
- ❑ Core Team meetings were held with Skagit County Department of Emergency Management, Skagit County Fire Marshal, Skagit County Fire Chiefs Association, Skagit CD Forester, WCRD consultant, Skagit CD Wildfire Resilience Program
- ❑ Public Meetings were attended on Skagit County Natural Hazards Mitigation Plan & DRAFT
- ❑ Wildfire Susceptibility Map was presented to several stakeholders
- ❑ Meeting and coordinating with Department of Natural Resources
- ❑ Consultation with U.S. Forest Service
- ❑ Consultation with Natural Resources Conservation Service
- ❑ Stakeholder meetings with multiple entities
- ❑ Coordination with Skagit County DEM during NHMP update process

Out of the results of the survey previously mentioned, as well as verbal recommendations throughout the planning process, a list of areas/communities of the most concern due to wildfire susceptibility was created and updated. This list includes both organized neighborhoods in the interface as well as areas with shared risk in the intermix. Some of the residents in these areas have already been working to address their wildfire risk.

Communities/Areas in Skagit County with High Susceptibility to Wildfire

(A star next to the community's name symbolizes that the community is an active recognized Firewise USA® site.)

☐ Communities adjacent to Anacortes Community Forest Lands
☐ Big Lake area
☐ Bow Hill area – Colony Mountain*
☐ Butler Hill/Valley View Estates*
☐ Burlington Hill
☐ Cape Horn area
☐ Cascade Ridge
☐ Cascade River Park*
☐ Chuckanut Ridge*
☐ Eagle's Nest
☐ Fidalgo Island – Fidalgo Estates, The Point, Seaview
☐ Guemes Island – Guemes Mountain, Island Crest Lane, Island View Rd, Holiday Hideaway*
☐ Lake Cavanaugh
☐ Lake McMurray area -Camp Korey, Norway Park
☐ Lake Tyee
☐ Little Mountain area
☐ Marblemount Area - Emerald Lane, Honeysuckle Lane, Diobsud Creek areas*
☐ Newhalem, Diablo, Environmental Learning Center (technically in Whatcom County but accessed via Skagit County)***
☐ Pinelli Road area

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☐ Rockport/Darrington area-Jenkins Lane*
☐ Samish Island
☐ Shelter Bay*

Wildfire Risk

To borrow from others that have dealt with wildfire on a different scale, the 2018 Missoula County CWPP states, "wildfire risk is a measure of both the probability and consequences of uncertain future wildfire events." There are three components of wildfire risk – likelihood, intensity and susceptibility.

Figure 11. Wildfire Risk Triangle excerpted from Missoula County's 2018

It is challenging to assess wildfire risk at the county-wide scale with accuracy given the amount of variability within even the smallest areas throughout the county. Delineating varying wildfire risk levels (Low to High or Extreme) should be done at the neighborhood scale so that site specific data can be incorporated, and mitigation/management plans can be based on the best available science.

A useful tool for understanding varied risk potential and informing mitigation/management decisions at the neighborhood scale are the NRCS Ecological Site Descriptions (ESDs) previously described.

Not all sites within a community are at the same risk level. The following photos show very different ecological sites within Skagit County. ESDs vary by plant species, relative proportion of plant species, soil factors, hydrology, mineral cycles, and energy flow, the kind, proportion, and production of the overstory and understory plants due to differences in soil, topography, climate, and environment factors, or the response of vegetation to management.

Figures 12., 13., &14. Examples of different ecological sites in Skagit County

As an example, stand density can affect the intensity of a wildfire, thereby increasing risk. Because of lack of vigor, dense forests are highly susceptible to insects and diseases and, consequently, increased tree mortality. Excess tree mortality causes increased fuel loading, resulting in hazardous wildland fire conditions that can put homes, watersheds, wildlife habitat, and other forest values at risk. These conditions also increase fire suppression costs and make wildfire control more difficult.

Site specific prescriptions and practices can be employed to manage stand density, reduce vulnerability to insects and diseases, and reduce tree mortality, thereby reducing the buildup of hazardous fuels and the risk of catastrophic wildfire.

Assessing the likelihood of a wildfire start will be based on understanding where ignition sources could come (lightning, human-caused) from and how they could influence the surrounding area. Focusing on prevention measures can reduce the likelihood of a human-caused ignition source.

A number of community/neighborhood level CWPPs have been developed in Skagit County. They include:

- Butler Hill
- Colony Mountain
- Cascade River Park
- Diobsud Creek Area
- Guemes Island
- Seattle City Light – Newhalem & Diablo
- Hoxie Lane/Gibraltar Road
- Jenkins Lane

These plans are currently housed with the Skagit Conservation District and the communities.

Beyond ecological considerations for wildfire risk, there should also be societal and demographic factors considered when weighing the level of risk and subsequent mitigation planning. According to Headwaters Economics, via wildfirerisk.org, nearly 22% of the population in Skagit County is over the age of 65. While some of this group would most likely be defined as vulnerable, certainly not all. If we remove this category, we still have >15% of the Skagit County population that fall under the criteria for a vulnerable population. Census data and mapping show that a high percentage of these vulnerable populations do reside along the Highway 20 and Highway 9 corridors. While the actual numbers are difficult to ascertain, awareness of the need for concern in these areas has long been known on a “local knowledge” basis. These areas have been the focus of many

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outreach campaigns that resulted in numerous technical assistance visits for risk assessments and risk reduction planning.

Mitigation Strategies & Prioritization of Wildfire Risk Reduction Projects

In Skagit County, all aspects of wildland fire are addressed at an inter-agency cooperative level. Collaboration between federal, state, and local fire agencies results in strong cooperative relationships among the partnering agencies as well as the mobilization of a unified command. As part of the interagency cooperation process, basic fire prevention and mitigation strategy consists mainly of pre-suppression. Pre-suppression involves interagency training and communication; wildfire awareness, prevention and preparedness outreach and education; and collaboration among fire agencies.

Because Skagit County is a large area that encompasses many different land ownership and management types, the mitigation strategies in this CWPP have been written from a broad perspective. Recommendations and mitigation strategies for each of the major land ownership and management groups are provided below.

Homeowners & Private Forest Landowners

332,000 acres in private forest lands

The wildland-urban interface and intermix (WUI) is an area of great concern to the wildland fire fighting community. The lush, forested setting of Skagit County is often what draws people to live there, but it is also a cause for much concern. The WUI areas in Skagit County are areas where fire preparedness and education activities can have the greatest positive impact. Individual property owners have the power to enhance their property's wildfire resilience by implementing wildfire risk reduction and home hardening practices around their home. Home hardening focuses on treating the home ignition zone (HIZ) in three sections: 0 to 5 feet (the immediate zone), 5 to 30 feet (the intermediate zone), and 30 feet to 100 feet or more (the extended zone) with specific practices for each zone. These practices include:

- ❑ Using non-combustible building materials
- ❑ Regular maintenance and clearing of debris from roof and gutters
- ❑ Adding 1/8-inch mesh screening to vents
- ❑ Remove flammable material within 5 feet of wall exteriors
- ❑ Fire-resistant native plants and landscaping that can act as fire breaks
- ❑ Non-combustible landscaping features such as gravel and pavers to break the line of fuels
- ❑ Prune lower limbs of trees and eliminate ladder fuels

Implementing these practices will help prevent the ability of fire to travel from the wildlands to the home, prevent the ignitability of the home from embers, and maintain a defensible space around the home so firefighters can safely defend it or it can survive on its own. (See Appendix 4 for more Home Ignition Zone treatments.)

By educating people and providing them with the tools to do this, they are empowered to protect themselves and their property from wildfire damage. While it is the government's responsibility to provide for the protection of public health, safety, and welfare, it is everyone's responsibility to protect homes, neighborhoods, and communities from the hazard of wildfire. We all have a role to play.

Identification of the vital role private landowners play in building wildfire resilience in the original Skagit CWPP has been important. It has served as a guide for outreach in identifying geographic and demographic areas of focus. Inclusion of home hardening and defensible space practices along with public education and outreach has also provided a strong reference point for project funding opportunities.

Fire is a natural part of the ecosystem. But when fuel levels are unnaturally high, after a century of aggressive fire suppression, recent drought, and insect outbreaks that have weakened or killed trees, a spark can lead to a fire much more severe than might have burned through the area historically. Thinning to reduce stand density is one way to make forests more resilient to fire, drought, and insects. Thinning treatments can be designed to reduce hazardous fuels so that when

a fire does ignite, it remains a low intensity surface fire rather than becoming a more severe crown fire, moving through the treetops. In dense stands, thinning not only lowers the amount of flammable material, it also reduces competition for water and nutrients among the remaining trees so they can better withstand a surface fire. (PNW Research Station, July 2008).

Wildland Fire Mitigation Strategies

1. Building awareness of risk through education and outreach throughout communities. Outreach efforts should be provided through collaborative partnerships between local, state, and federal agencies and organizations as well as communities. Education topics should focus on the following:
    - Understanding local wildland fire risk and behavior as well as changing risk due to a changing climate
        i. Provide current wildfire information through websites, social media, print materials
            1. Information should be based on the best available science and research.
    - Forest health, forest stewardship and the relationship between healthy forests and wildfire risk reduction
        i. Community presentations
        ii. Forest health events
        iii. Forest health assessments & plan development
    - Creating survivable space within the different home ignition zones
        i. Neighborhood and community presentations
        ii. Free wildfire risk assessments and wildfire mitigation plans for individual landowners (See Appendix 5 for the wildfire risk assessment form)
    - Red card training for fire district personnel
    - Wildfire risk assessment training for fire district personnel
    - Outreach to professionals, i.e. contractors/builders, real estate businesses, insurance agents, nursery professionals on interface between wildfire preparedness and their business/clientele.

2. Empowering and assisting communities to work together to take action to mitigate wildfire risk.
    - Encourage participation in the Firewise USA® program that provides a framework for communities to assess and address shared wildfire risk.
    - Assist communities in meeting the requirements of participation in the Firewise USA® program.

3. Promote the Ready, Set, Go! Program messaging to help communities prepare for wildfires and evacuations.

4. Assist communities in developing and updating neighborhood scale Community Wildfire Protection Plans.

5. Fuels reduction projects around individual homes and within community greenbelt areas for forest health and wildfire safety improvement.

6. Promote implementation of policies and regulations regarding building and survivable (defensible) space within communities and at the county planning level: community boards/committees, Skagit County PDS.
    - Use wildfire susceptibility maps to help guide growth decisions that avoid growth in the higher hazard areas and steer it toward more appropriate areas.
    - Evaluate effectiveness of building codes, subdivision and zoning regulations to help determine whether new measures are necessary for fire protection, such as the adoption of the wildland-urban interface (WUI) code.

Wildland Fire Mitigation Strategies in Family Forests

1. Education, outreach/awareness
    - Skagit County Forest Advisory Board
    - Farm Forestry Association events
    - Forest Stewardship short courses
    - Forest Owners Field Days

- Provide EQIP information to landowners

2. Forest Stewardship Plans and associated activities
    a. Thinning
    b. Pruning
    c. Reduction of disease in stands
    d. Removal of ladder fuels
    e. Forest trails and landings
    f. Critical area seeding
    g. Pest control
    h. Fuel breaks
    i. Fire-resistant planting
    j. Use of a chipper for slash rather than burning
    k. Biomass utilization for slash treatment

3. Suppression
    - Payment of Forest Patrol Assessment tax for WADNR suppression

U.S. Forest Service

282,812 acres of land in Skagit County, (26%).

Wildland Fire Mitigation Strategies

1. Fire management/suppression

2. Education, outreach/awareness in heavy recreational use areas
    - Wildfire prevention education
    - Using media to promote prevention messages

3. Risk Assessment and Mitigation Strategies (RAMS) to analyze wildland fuels, hazard, risk, value, and suppression capabilities from a holistic approach

4. Collaborate with WADNR, Counties and Conservation Districts as updates are made to the Skagit County CWPP.

5. Identify fuels reduction opportunities as needed and work with partnering agencies and communities to implement fuels reduction projects

6. Implement fire-resistant landscaping and construction practices around vulnerable structures on U.S. Forest Service lands

National Park Service

214,378 acres within Skagit County, (20%).

Wildland Fire Mitigation Strategies

1. Fire management/suppression

The NPS manages wildland fire to protect the public, communities and infrastructure, and to restore and maintain ecological health. The program manages fire based on the best scientific information and monitors programs to ensure that objectives are being met. NPS fire program managers work in coordination with other natural resource disciplines and interagency partners to ensure that park resources and values are preserved, protected, and enhanced through the appropriate response to wildfire and the application of fuels treatments.

Fire is an essential part of the ecosystem and is an important natural disturbance that is vital for healthy ecosystems. Rather than put out every fire, the park plans carefully to use it as a tool. The goal: to take advantage of fire's benefits while minimizing risks to people, property, and the health of the forest.

Minimum Impact Tactics (MIT) are guidelines to significantly reduce environmental impacts. The use of natural barriers rather than constructing fire line are examples of MIT to help confine and contain fires. This helps to minimize the long-term effects of fires on the park's landscape.

Fire suppression may be utilized when there are threats to resources or boundaries. Resources that need protection could include: structures, data collection equipment, campgrounds or trail infrastructure, populated areas, highways, or endangered species habitat. Suppression could be utilized during wildfires or prescribed fires.

2. Education, outreach/awareness in heavy recreational use areas
    a. Fire prevention education
    b. Safe campfires
    c. Use of media to promote prevention messages
3. Implement fire-resistant landscaping and construction practices around vulnerable structures on Park Service lands
    a. This includes the vegetation management underneath the Seattle City Light owned transmission lines that run through North Cascades National Park
4. Hazardous fuels reduction around structures
    a. A fuels reduction project was designed and implemented in partnership with Seattle City Light and the Environmental Learning Center around student cabins at the Learning Center.
    b. The Park continues to work in partnership with Seattle City Light on fuels reduction projects that include fire behavior modeling of fuel treatment options to develop plans for future treatment implementation in areas around the hydroelectric infrastructure and residential structures in the Upper Skagit Valley.
5. Use of prescribed fire

    Prescribed fire is a management-ignited fire during specified fuel weather conditions, with a signed burn plan to pre-determined boundaries. It is used for hazardous fuels reduction and/or ecosystem restoration. Prescribed burns have specific goals and objectives. Fire Managers at NOCA have been using prescribed fire since 1991 and will continue to do so where appropriate.

    Prescribed fire projects in the Skagit Valley have included hazardous fuels reduction burns around the Environmental Learning Center.

State Managed Timberlands (DNR)

131,206 acres in Skagit County, (12%).

Wildland Fire Mitigation Strategies

1. Fire management/suppression
2. Active abatement of fire hazards by removing and/or burning buildup of logging slash on state managed lands
3. Reduction of diseased stands and control of pests
4. Active management of both dispersed and developed outdoor recreation on state lands

Skagit Land Trust

8,200 acres owned, managed, and/or under easement in Skagit County

Wildland Fire Mitigation Strategies

The Skagit Land Trust does not currently have policies or wildfire mitigation strategies that they are implementing; however, they have expressed interest in working with partners to develop those in the future.

Tribal Lands

This includes the Upper Skagit, Swinomish, Samish & Sauk-Suiattle Tribes. Mitigation strategies are not currently identified. If information becomes available in the future, this section should be updated.

Major Travel Corridors/ Recreational Uses

I-5, Hwy 20, Hwy 530, Hwy 9

It is important to include temporary/short term visitor use of areas such as travel corridors and recreational use areas in this planning process because these areas are accessed by high volumes of people. Wherever there is a high volume of people in the proximity of forested areas, the potential for wildfire danger grows. In eastern Skagit County this is the case along the well-traveled Highway 20 corridor as well as the Highway 530 and Highway 9 corridors that are bordered by forestlands in many areas. Highway 20 closes in the winter but the towns of Marblemount and Rockport remain accessible year-round for travelers coming from the west. This highway experiences high volumes during the summer months when most of the traffic consists of travelers from the west heading east to the drier side of the mountains for recreation. In general, these highways are busier during the summer months due to people wanting to access the outdoor recreational activities that make this area so appealing. Most of these recreational use areas are managed by agencies that have previously been addressed above.

Wildland Fire Mitigation Strategies

1. Education/Outreach
2. Coordinate “Cross Cascades Prevention” efforts along Hwy 20 during fire season
3. Promote car maintenance to prevent oil leaks and car fires
4. Use of the media to promote fire prevention and safety messaging during wildfire season
5. Fire danger signs
6. Clear burn restriction/ban information
7. No littering signs/cigarette butts
8. Fuel reduction projects along travel corridors where risk areas are highest

Prioritization Process for Community Wildfire Risk Reduction Projects

The process for identifying wildfire risk reduction projects was developed in 2009 in the original CWPP and has now been updated.

- Reference Areas of Higher Susceptibility to Wildfire map/list of communities/areas identified through the map, and input from local experts
    - Identify new areas of risk based on field work and tracking future potential wildland urban interface and intermix areas
- Coordinate with agency partners
    - Discuss priorities and resources with WADNR, USFS, NPS, Skagit County
- Consider proximity to federal lands
    - Title III funds support prioritization of communities susceptible to wildfire within a certain distance of federal lands.
- Assess social factors of high-risk communities
    - Consider community interest
- Willingness of the community to participate in mitigation efforts and keep moving forward
- Assess ecological impacts/benefits
    - Example: consider current health of the forest
- A fuels reduction project should not only reduce wildfire but also improve the health of the forest and wildlife.

There are communities and/or areas in Skagit County that are considered to have “High Susceptibility to

Wildfire" and who have been working to reduce their risk. Some have been working at it for more than 15-20 years. The following communities have or are currently working in some capacity to address wildfire risk as of this 2024 update.

Butler Hill/Valley View Estates

Fire District 8 was very involved in forming this Firewise USA® site in 2013. Community meetings were held at the Hickson Fire Hall and community leaders hosted demonstration fuels-reduction projects in partnership with the Conservation District and DNR. They also hosted and monitored a fire weather station in the community. As of 2024, they are working to renew their Firewise USA® membership with talks of splitting this one Firewise USA® site into three separate ones because of neighborhood expansion and varying levels of community engagement.

Cascade River Park

Cascade River Park is a community in the eastern part of Skagit County that is bordered by very steep heavily forested hillsides owned by both a private timber company and the U.S. Forest Service. This community has been identified repeatedly by fire officials as having an extreme risk for wildfire. This community was threatened by the Jordan Creek wildfire in 1998. A CWPP was completed for Cascade River Park in September of 2006 with the most recent action plan update occurring in 2024. Cascade River Park became a Firewise USA® site in 2010 and has continued to maintain participation in the Firewise USA® program.

Chuckanut Ridge

Spread across the base of this mountain are train tracks and very popular recreation areas. The entire built area on Chuckanut Mountain has been identified by the Washington State Department of Natural Resources as high-risk wildfire hazard area. The Chuckanut Ridge neighborhood, which borders Larrabee State Park became Skagit County's first recognized Firewise USA® site in 2003. This community is one of the pioneers of Firewise USA® program in WA State and has implemented some innovative projects within their neighborhood including using a prison crew to do fuels reduction around homes and purchasing a chipper for the community to use once or twice a year to deal with down debris. They last updated their Firewise USA® membership in 2022 and continued to meet their community project goals. As of 2024, they are in need of renewal.

Colony Mountain

Fire District 14 was instrumental in forming this Firewise USA® site in 2017. Fire District personnel were trained to complete home risk assessments at a 2-day training held at the Alger Community Hall and hosted by the Conservation District, DNR, and an NFPA consultant in November 2016. They are still an active Firewise USA® community.

Fidalgo Island & Communities Adjacent to ACFL

Meetings were held at the Anacortes Fire Department in January 2017. Organization efforts picked up following the Cranberry Lake fire of 2016. In 2019, the City of Anacortes Fire Dept. hosted a wildfire information night in July. Some Fidalgo Island residents also hosted a community potluck and wildfire information night. A number of small forest landowners in this area are looking for forest health assistance and are concerned about wildfire risk. There is a lot of potential for future collaboration and community engagement around wildfire risk reduction out here. No additional action has been taken since the 2019 update. This is an area of concern for wildfire and Skagit Conservation will reach out to community leaders to re-engage.

Guemes Island

Not all of Guemes Island has increased susceptibility to wildfire. The high-risk areas on the island are identified in the community hazard assessment that was written in 2012. The Fire Chief has typically taken the lead on educating homeowners about wildfire risk reduction but has recently reached out to Skagit Conservation District to more complete individual home risk assessments and assist in community enrollment into the Firewise USA® program. Various neighborhood wildfire risk reduction presentations and individual home risk assessments have been made over the years. Holiday Hideaway is Guemes' only Firewise USA® community thus far with their most recent renewal in 2023.

Jenkins Lane

This small community was identified by one of the Fire District 19 Commissioners in the original 2009 CWPP Fire District Survey as being a concern for wildfire because of its poor accessibility, topographic features that adversely affect wildland

fire behavior, the condition of the structures, and health of the forest. The residents of Jenkins Lane have showed strong interest in improving their wildfire safety and the health of their forests.

This community is bordered by Washington State Dept. of Natural Resources and U.S. Forest Service lands. Jenkins Lane became a Firewise USA® site in 2009 and has continued to maintain their participation in the program. As of 2023, they have had a community educational activity, fuels reduction event, and met their community investment goals. They are due for an update to their community action plan in 2024.

Lake Cavanaugh

This community is identified as having an extreme wildfire hazard by fire officials. Lake Cavanaugh is nestled in a remote area of Skagit County, surrounded by very steep forested hills. The surrounding land is owned by the DNR. Several homes in this neighborhood are nestled deep in the forest with no survivable space in high density. This community has expressed interest in Firewise concepts in the past, specifically past fire department personnel, but no actions have been taken thus far. This is a community that should be a high priority for wildfire risk reduction education and participation in the Firewise USA® program, among other preparedness activities. They have not been enrolled in Firewise USA® as of this update.

Lyman

This community is identified as a concern for wildfire. The community was threatened by the April 2024 Lyman wildfire that broke out near homes and structures. Following this wildfire, community members reached out to Skagit Conservation District for community wildfire resilience assistance in the form of community presentations and risk assessments. This community is not yet enrolled in Firewise USA® but is interested in starting the process.

Marblemount area / Diobsud Creek/Marblegate

On the north side of Highway 20 in Marblemount there are multiple properties tucked back against the base of steep U.S. Forest Service land. This is a classic example of intermix. A lot of this area is heavily forested with evidence of disease. These areas also get very dry in the summer, with fuel moisture levels dropping below 20% toward the end of summer. The population density is lower in this part of the county; however, the structural ignitability tends to be greater. The Diobsud community became a Firewise USA® site in 2011 and continues to actively address their wildfire concerns and stay connected with agency and organization partners on their progress. They hosted and monitored a fire weather station within the community. Marblegate is another Firewise USA® community with their most recent renewal and fuels mitigation project occurring in 2024.

Newhalem / Diablo/ NPS Environmental Learning Center

These Seattle City Light communities started an extensive process with the Skagit Conservation District in 2012 to incorporate the Firewise USA® program into the existing fire and safety programs. Newhalem became a Firewise USA® site in 2013. Diablo became a Firewise USA® site in 2014. The following year the Goodell Creek fire burned 7,300 acres and threatened both communities, as well as the Environmental Learning Center (ELC). Work done prior to the fire had a significant impact on reducing damage to the communities. Although these communities are technically located in Whatcom County, Skagit Conservation District has worked with them because of ease of access and available resources. The Whatcom Conservation District was brought in as a partner to help assist Diablo and the ELC in their efforts.

Diablo has been inactive since 2022 and Newhalem has been inactive since 2023. Whatcom Conservation District and Skagit Conservation District plan to work with them to help re-enroll these communities in Firewise USA®.

Samish Island

Concerned residents have reached out for wildfire risk assessments on their properties over the years as well as community presentations regarding wildfire risk reduction. As of this update, they are not enrolled in Firewise USA®.

Shelter Bay

This community is perched on a steep, wind-exposed hill with one narrow, steep and windy road. Part of this community is located on the hill above a beach that allows recreational fires. The Shelter Bay Community became a Firewise USA® site in 2005 and has since participated in numerous innovative projects and community engagement over the years. Some examples of these projects include a fire-resistant landscape demonstration planting in one of their greenbelts, the use of

goats to clear brush, and filming a Firewise Communities video with Ciscoe Morris. Shelter Bay also participated in the fire weather monitoring for a limited time. They are still an active Firewise community as of this 2024 update. They also conducted a large common areas fuel reduction project in 2024 with assistance from the WA DNR micro-grant program.

There are numerous other communities that have been actively working to address their wildfire risk that either used to participate in the Firewise USA® program or have participated in some wildfire risk reduction activities.

Impacts of the Covid-19 Pandemic

From March 2020 to May 2023, the world experienced the Covid-19 pandemic. During this time, there was a demographic shift where more people, especially those in the 25-65 age bracket, were now working remotely and buying houses that expanded into the WUI. During the pandemic, many active Firewise sites became inactive due to social distancing practices limiting community engagement opportunities, economic instability limiting funding, and turnover in community residency and leadership. Following this 2024 CWPP update, Skagit Conservation District will re-engage current and former Firewise USA communities and continue to evaluate the wildfire risk of newer WUI communities.

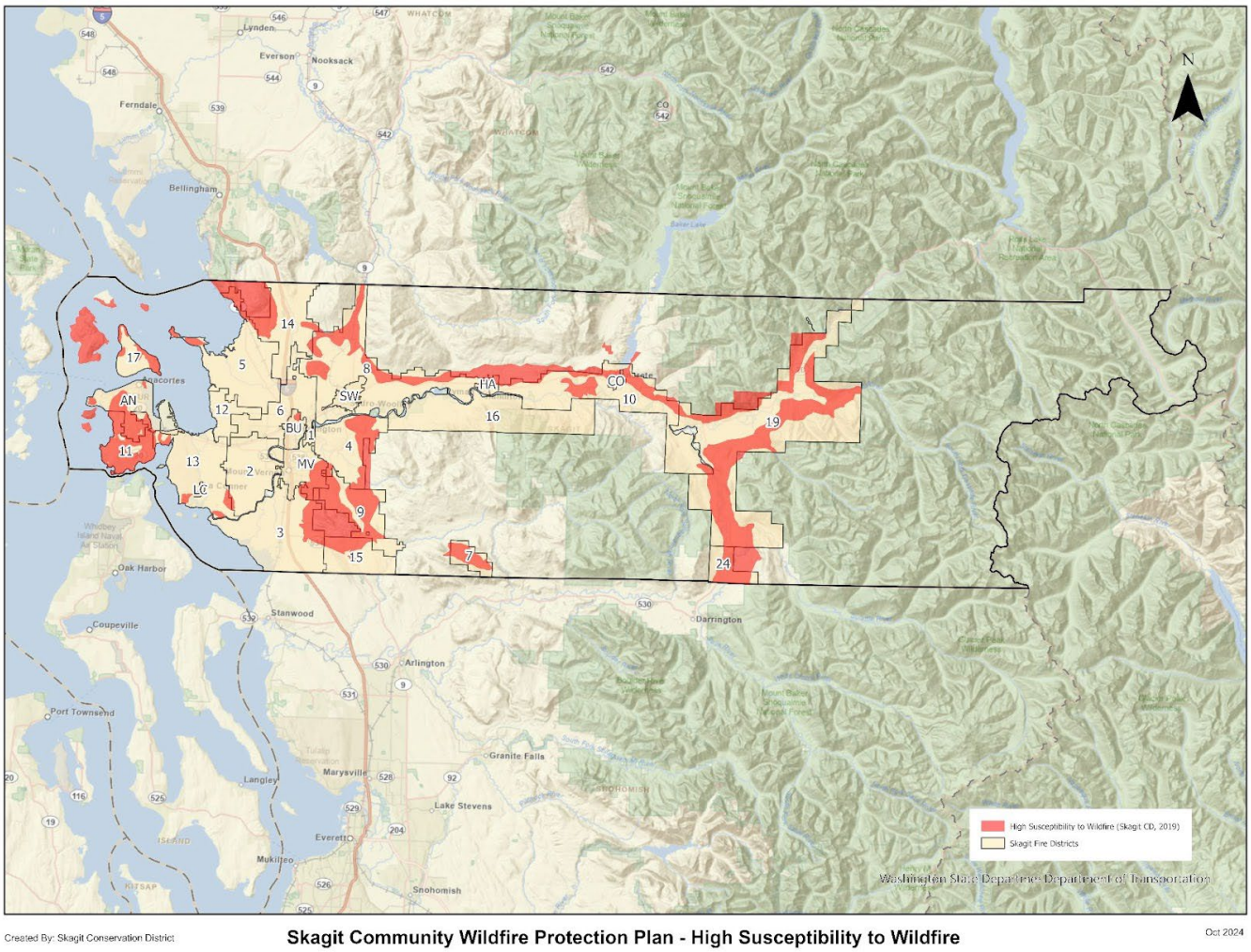

Figure 15. Skagit Firewise Communities

Monitoring and Evaluation

Because the biggest concern for wildfire safety occurs in the wildland-urban interface areas of Skagit County, a majority of the mitigation efforts should be focused at this level. Efforts to date have been focused mainly on educating and working

with homeowners in the WUI areas using the Firewise USA® concepts and recognition program as well as the Fire Adapted Communities concept.

Measuring how successful wildfire resilience work is can be challenging unless a disaster has occurred, and the response and recovery is tracked and compared in relative terms. The concept of a Fire Adapted Community is one that is working toward building resilience. There is no endpoint, or program, but rather an ongoing effort to continually adapt before, during and after wildfire. This concept is depicted in the infographic below. (Figure 16.)

Figure 16. The Washington State Fire Adapted Communities graphic depicts the idea of working to adapt to living with fire before, during and after.

One tool that can provide some level of measurement of success is the Firewise USA® recognition program. This program focuses on reducing the ignition potential around individual homes and in within communities. This program has proven successful all over the country and is well supported by local fire fighters and fire officials. When residents and communities take responsibility for mitigating their wildland fire risk, it helps save lives, homes, and resources. Fuels reduction efforts in the county thus far have focused on the creation of defensible space, shaded fuel breaks, reducing structural ignitability, and the implementation of forest stewardship and greenbelt plans. There are currently 8 nationally recognized Firewise USA® sites in Skagit County. Washington State has 141 recognized Firewise USA® sites. These communities perpetuate their success by renewing their membership in the program each year and promoting their accomplishments to other communities. The number of communities involved in this program is a partial measurement of success.

Acreage treated and number of fuel reduction projects are both great metrics for monitoring progress and evaluating effectiveness. This data, while somewhat readily available for treatments on public lands, is difficult to acquire and confirm for privately held lands. It's most likely that the majority of fuels mitigation projects on private lands in Skagit County occurred within Firewise USA® communities, but there is no current mechanism for recording these "other" projects. The Living CWPP tool, discussed later in this document, would greatly increase this capability. It will also provide a more secure and reliable repository for historic projects. The data to quantify these metrics for this update was not verifiable, so it was not included.

Post-wildfire Resilience

Planning and Recommendations

Post-fire planning has been identified as an area of high concern for stakeholders in Skagit County. This update attempts to identify areas for improvement in the next update due in 2029 as well as steps than can be taken in the interim to increase capacity for dealing with post-wildfire issues.

Wildfire resilience isn't just about home hardening, fuels treatments and having evacuation plans in place. Beyond all of these critical actions are more understated post-fire recovery actions that can be overlooked, especially in the Community Wildfire Protection Plan (CWPP) process—things like developing relationships and interagency coordination *pre-fire*, updating existing hazard and vulnerability maps to identify areas at-risk to both wildfire and post-fire impacts, identifying priority areas for potential post-fire mitigation, and implementing those mitigating actions—which can all improve the efficiency of recovery actions in the often tenuous post-fire environment.

Below are recommendations to reduce some of the most extreme post fire impacts—namely, catastrophic debris flows—which were directly informed by the experiences of community leaders, fire officials, geologists, public utility employees and others who have experienced the challenges of wildfire recovery first-hand. These recommendations are not hard-and-fast requirements—rather, they are an opportunity to start conversations amongst county officials and other stakeholders in order to consider what post-fire challenges may exist in Skagit County and to, therefore, be more prepared to face those challenges in the immediate aftermath of extreme wildfire impacts.

1. Bolster Operational Coordination Pre-Fire

Primary Points of Emphasis

1. Important relationships and opportunities for collaboration should be mapped out *before* a fire. Developing these relationships as early as possible will improve response and recovery time in a post-fire situation.

Action items:

1. Coordinate meetings/workshops that include key members of the community. This might include local fire/emergency management folks, contractors, Firewise representatives, agency representatives or anyone else who is identified as needing a seat at the recovery table.
2. As part of CWPP, identify a committee of local officials that can be committed to post-fire preparedness and recovery. This committee could easily be rolled into (or exist as part of) a Community Organization Active in Disaster, which will be discussed more in the next recommendation.
3. Consider applying for grants to support post-fire planning, training, meetings and coordination amongst the identified Post Fire Preparedness and Recovery committee.
4. Seek funding to support a coordinator who can help develop pre-plans, coordinate/facilitate meetings and identify/help develop relationships important to long-term recovery.
5. Consider designating and training recovery liaisons who can operate at multiple levels, from the community to local government to state or regional entities. These folks can help facilitate communication, resource sharing, and collaboration across all levels of government and with non-governmental organizations.

2. Formalize Post-Fire Planning Process with a Disaster Recovery Collaborative(s)

Primary Points of Emphasis

1. Having already-established relationships with individuals, agencies, community organizations and others is known to improve recovery timelines (see above recommendation).
2. A thorough and regularly updated contact list is one of the most important ingredients in effective post-fire recovery. Knowing who to call for specific needs is extremely important in the immediate aftermath of a large, catastrophic wildfire.
3. Building local recovery capacity and creating connections will help everyone navigate the post-fire landscape and dynamic more seamlessly. Having this framework in place will also benefit everyone in the event of other natural disasters or emergencies.

Action items:

1. Work towards establishing a community resilience or disaster preparedness collaborative (such as a Community Organization Active in Disaster (COAD) group) *before* the fire. At the very least have a contact list of those who need to be collaborating before, during and after wildfires. This information should be available in a central and easily accessible location and in other languages as appropriate.
2. Identify critical post-fire roles and who may be able to fill these roles. Apply for grants to bolster this emergency workforce with training and support to build capacity as needed.
3. Have Memorandums of Understanding (MOUs) signed and in place pre-fire. These will identify assigned duties to specific organizations/entities/businesses, and will outline what, when and how those services or supplies will be provided by those organizations/entities/businesses.
4. Establish (or source) a list of contractors, consultants, engineers and others who can provide technical assistance in the immediate aftermath of a wildfire. Technical assistance could include engineers, geotechnical consultants, conservation districts or BAER (Burned Area Emergency Response) teams.
5. After the fire, begin to transition collaborative entities/resources into a Long-Term Recovery Group, (LTRG), structure as quickly as possible.
6. Ensure access to Critical Incident Stress Management (CISM) resources for Community Organizations Involved in Disaster, (COAD) and LTRG members, or other members of the community who were involved in potentially traumatic events in the fire response or post-fire environment.

3. Seek Opportunities For Cross-Functional Mitigation and Landscape Resilience Actions

Primary Points of Emphasis

1. Wildfire resilience efforts—including post-fire mitigation work—can overlap significantly with other conservation efforts, including salmon habitat restoration, forest health, carbon storage and others.
2. It can be helpful to leverage these overlaps in order to build more support for wildfire resilience and fund projects that can achieve two seemingly disparate goals with one action.

Action Items:

1. Consider opportunities for "multidisciplinary" approaches that would provide positive outcomes for multiple departments or agencies. Examples could include mitigation efforts that benefit salmon habitat and also improve forest resilience to wildfire. Another would include installing larger culverts to prevent road damage/flooding during heavy rain events but would be doubly effective in reducing potential impacts during post-fire debris flow events.
2. Seek funding to support a pre-fire mitigation analysis project. Coordinators of this type of project would seek out opportunities to accomplish projects with other organizations, departments, or agencies. The pre-fire mitigation analysis could also identify where wildfire could actually be beneficial towards these shared goals. Having these things pre-identified could allow for more productive and informed conversations with a responding wildfire Incident Management Team, which could then, potentially, manage the fire in a way that allows the fire to benefit the landscape or other values positively.

4. Plan For and Coordinate Post-Fire Assessments Across Jurisdictions

Primary Points of Emphasis

1. Not all fires burn on or into federal- or state-owned lands. It's no less important to have similar post-fire processes in place, where possible, for private land assessments to assess for potential debris flows, landslide hazards and potential priority areas for interventions and implementation of rehabilitation methods.

Action Items:

1. Identify geologists, geotechnical consultants, conservation district staff, and other relevant professionals who can provide post-fire burned area assessments on impacted private lands as well as resources for restoration. This can include utility-owned lands, trust lands, private timber land and other jurisdictions. Assessments should include potential mitigations or recommendations for burned areas to reduce downstream impacts.
2. Private lands restoration is also vital at this stage. Identify the processes necessary to help private landowners replant, reseed, and restore their land. Identify local and regional contractors or nurseries who may be able to assist with this.

Where federal and state jurisdictions often have things like BAER (Burned Area Emergency Response) teams or Washington State's WALERT (Wildfire-Associated Landslide Emergency Response Team), private landowners rarely have access to such assessments following wildfires. However, it's just as important to understand post-fire risks in these jurisdictions as it would be anywhere else, especially when these jurisdictions abut areas at increased risk for wildfire or wildfire-associated debris flows. As an example, the Tunnel Five fire—which burned primarily on private and utility-owned lands near White Salmon in 2023—did not have a burned area assessment team assigned to it following the fire, namely because it did not burn on state or federal lands, which would normally require such assessments. Lacking these landscape and hazard assessments post fire meant that it was harder to know which drainages—and, thus, which homes and infrastructure—were most at risk.

"(On the Sourdough and the Bolt Creek Fire areas), the Forest Service owned part of the land and did BAER assessments and the Washington Geologic Survey did their WALERT, and without those, it would have been way harder to come up with our mitigations in those areas, because we relied heavily on that information," a Washington Department of Transportation employee said. "So, if the fire burns in an area that's not owned by the US Forest Service or [WA DNR], you may not have a report, and you'd probably have to have a local agency or county hire a geologist or a geotechnical consulting firm to come up with that data."

5. Develop Risk Analysis for Wildfire *and* Post-Fire Debris and Floods

Primary Points of Emphasis

1. Hazard mapping for debris flows is often already available at the county level. Overlaying this mapping with fire potential can help planners, utilities, emergency managers and others to identify priority areas for both pre- and post-fire interventions, if needed.
2. Understanding your vulnerability is critical in planning other potential post-fire interventions.
3. While this is not a direct recommendation, hazard mapping can also inform new development—and hopefully reduce development in high-risk areas, such as on top of alluvial fans or at the base of steep drainages that could be catastrophically destabilized by a fire.

Action items:

1. Ensure that hazard maps for the overlapping risks of debris flows and wildfires exist for your jurisdiction. If they don't exist, consider applying for grants that could support the creation of these maps.
2. Request relevant maps and data from relevant agencies to provide a complete picture during vulnerability assessments.
3. Include comprehensive debris flow hazard/wildfire risk maps as components of the post-fire recovery section of the next CWPP update.
4. Seek out funding to support risk-assessment teams to identify areas at most risk.

6. Identify potential priority areas for post-fire interventions based on hazard maps

Primary Points of Emphasis

1. Counties/jurisdictions that utilize hazard and vulnerability mapping have a better understanding of their most at-risk areas. Utilizing available hazard data from utilities, transportation and other entities can also be a useful tool to build context around potential risks.
2. Developing an inventory of high-risk drainages and potential assets (and contractors) available for mitigation can speed up the application of emergency interventions post-fire.
3. In areas determined to be at high risk for wildfire and subsequent debris flows, pre-fire mitigations can be considered, if financially feasible. The alternative is to identify these at-risk areas as priority areas to take action post-fire.

Action items:

1. Verify emergency operations plans for public utilities such as water, power, and natural gas providers. Ensure that the county emergency management office has copies of all relevant emergency operations plans.
2. Identify at-risk places where planning could be more useful/meaningful.

Long-term Success

According to the USFS document, "Best Management Practices for Creating a Community Wildfire Protection Plan" it is important to document accomplishments, share those accomplishments with those who have an interest in the goals of the plan, and identify how it fits into the bigger scope of planning within the County. Communities telling their story of how they're building resilience to wildfire and sharing it with others also helps perpetuate long-term successes. They can connect to others doing similar things and learn from each other.

The USFS document mentioned above states that it's important to *"help ensure long-term success by quickly showing progress on CWPP goals, linking the CWPP to other plans and frameworks, and allowing the CWPP to evolve as conditions change."* Suggested methods for ensuring long-term success include the following:

- Incorporate projects into the CWPP that can be accomplished quickly to foster homeowner buy-in and broaden support for the longer-term effort.
- Nest local CWPPs within broader plans or link them with other types of plans to augment resources, broaden support, and enhance implementation.
- Where possible, incorporate the CWPP into a formal government structure.
- Quickly identify changes affecting the CWPP and adapt the plan to new conditions as they arise.

The ability to check off all of those boxes may lie in the next couple of sections. As previously stated, this update was purposely delayed to coincide with the 2025 Skagit Natural Hazards Mitigation Update (NHMP) and for alignment with the launch of WA DNR's Living CWPP tool, described below. In addition to these enhancements, the 2029 comprehensive update should also seek to accomplish other advancements during the development process. Focus areas should include the following:

- Engaging in the social aspects of wildfire resilience by encouraging increased plan participation from those agencies and organizations that serve low-income and vulnerable populations. Mental health and wellness is also something to consider, particularly for post-fire. Including agencies with these areas of expertise in the planning process will only result in an improved plan.
    - The collaboration process for this update has proven invaluable. Outside of the document development, it has opened and improved lines of communication between agencies and organizations and greatly reduced the "siloing" of projects and information. It has created opportunities for collaborations in other areas of concern throughout the county.
- Public engagement and input. This update relied primarily on piggybacking on public comment on Skagit County's overall NHMP update process, which included the wildfire component. An increased time scale for the development process and use of the Living CWPP tool should make this a more achievable goal for the 2029 comprehensive update.
- Improved tracking, mapping, and sharing of mitigation projects by appropriate agencies and organizations. This area identified for improvement should be served well by the Living CWPP tool. Previously, tracking of projects identified that span ownership boundaries, including public and private land, has proven difficult. Skagit CD has tracked and reported on outreach and technical assistance efforts and outcomes. Adoption of the Living CWPP tool will enable real time tracking for on the ground, hazard reducing, fuels mitigation projects on both public and private lands.

Action Tables

This CWPP is a working document that will be used as a tool for approaching wildfire safety and forest health improvement efforts across Skagit County. It will be updated and expanded as needed. It will serve as a benchmark for future accomplishments. Progress in partnerships, hazardous fuels reduction, Firewise USA® program participation, and Fire Adapted Communities focused actions and successes will all be tracked in this document as it is updated and adapted. In

order to facilitate tracking and prioritization the use of Action Tables, as shown below, is recommended. These tables would be a component of a Living CWPP, see next section.

Immediate Action or Tier 1 Action	● Partners should begin work on this project within the CWPP publication year. ● Has the highest potential for immediate return-on-investment. ● It can be funded within the current capacity of responsible parties and partner organizations with some supplemental funding from grants available within the next 1-2 years. ● This can occur with the currently available local resources, labor force, and partner relationships.
Short Term Priority or Tier 2 Action	● Partners should begin work on the project 1-2 years after the CWPP publication year. ● Requires moderate expansion of financial and implementation capacity of responsible parties and partners. ● Requires new cooperative relationships with partners, a greater level of coordination, community discussion, and decision-making between partners.
Mid-Term Priority or Tier 3 Action	● Partners should start working on the project 3-4 years after the CWPP publication year. ● Requires multi-year planning and funding and extensive grant funding. ● Requires substantial expansion of financial and implementation capacity of responsible parties. ● Requires substantial coordination, community discussion, and decision-making between partners.
Long Term Priority or Tier 4 Action	● Partners are not expected to start on this project within five years of the publication of the CWPP. ● These projects are potentially good fits for the community but may not be as impactful as other listed priorities. ● These projects are potential starting places for the next CWPP Update Action Plan.

Example Mitigation Action Plan Table				
Action Topic (i.e. Landscape Restoration & Fuel Reduction Mitigation Treatments)				
Action Item:	Coordinating Organization:	Partner Organization(s):	Resource(s) Needed:	Priority:
A.1 …..	Conservation District	Fire Districts	Grant Funding (i.e. CWDG)	Short Term Priority/Tier 2

Example Action Plan Table:

Action Item	Prioritization		Responsible Parties	Mitigation Strategy
	Value	Feasibility		
A. 1 ….	High	Medium	Conservation District, Fire Department 1	Landscape Treatments

Living CWPP

During the updating of this document, Washington Department of Natural Resources Wildfire Division entered into contract with the Timmons Group to develop an online GIS based Living CWPP (LCWPP) application. The LCWPP is a tool that makes it easier for communities to develop consistent, straightforward, and actionable Community Wildfire Protection Plans whose projects can be readily tracked and kept current. The Living CWPP:

- Empowers local jurisdictions, fire departments, and state agencies to take ownership of wildfire planning.
- Supports planning through GIS tools, data visualization, and collaborative workflows.
- Enables action by tracking mitigation projects and implementation.
- Promotes adaptation by keeping CWPPs current and responsive to changing conditions.
- Enable facilitators to add participants to any planning process
- Enable planners to identify their “planning area”
- Provide statistics, using GIS, about the planning area (e.g., functional WUI, historical fire occurrences, demographics, etc.)
- Visualize spatial data to help in the planning and prioritization processes including mapped partner treatments, wildfire risk and hazard data, historical fire occurrences, etc.)
- Add “local knowledge” that might impact planning decisions and priorities
- Enable collaborators to identify “areas of concern” to prioritize actions.
- Plan mitigation and other (e.g., outreach) actions on the ground including timelines, estimated costs, and responsibly parties.
- Track and report on completed actions and impediments to planned work.
- Spatially track work completed for integration into State and Federal dashboards.
- Generate a CWPP report that includes community details, maps and all of the data identified during collaboration with the Living CWPP.

Skagit Conservation District (SCD) has been selected by WA DNR to pilot the LCWPP project. This will involve uploading this update as a starting point for developing a more functional and trackable plan utilizing the interfaces and inputs from the LCWPP application. It is the intention of SCD to fully utilize the LCWPP tool for the planned 2029 comprehensive update to the Skagit County CWPP. Currently, WA DNR is planning and budgeting for maintenance of this tool in perpetuity. The expectation is that other counties across Washington state will adopt using the application for CWPP creation and updating. This will introduce some consistency in CWPP’s statewide and make the development and updating processes more efficient and financially more attainable.

Works Cited, References, Partners

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Missoula County 2018 CWPP
Population and Employment Forecasting and Allocation, 2025 for Skagit County
Skagit County Comprehensive Plan
Skagit County Natural Hazards Mitigation Plan
Washington State Fire Adapted Communities Learning Network

Partners

National Parks Service, North Cascades National Park
Rivershed SPC
Skagit County Commissioners Office
Skagit County Department of Emergency Management
Skagit County Fire Chiefs
Skagit County GIS Department
Skagit County Planning and Permit Office
Skagit Land Trust
University of Washington Climate Impacts Group
U.S. Forest Service, Mt. Baker-Snoqualmie Headquarters
USDA Natural Resources Conservation Service
WAFAC (Washington Fire Adapted Communities Learning Network)
Washington Resource & Conservation Development Council
Washington State Department of Fish and Wildlife
Washington State Department of Natural Resources
Western Governors' Association
Whatcom Conservation District

Appendix B.1

6 Major Steps to Developing a CWPP

There are six major steps to developing a CWPP, but because this is an update, the way the steps have been carried out varies from the initial effort. They include the following:

Step 1: Convene Decision Makers

The Skagit Conservation District (SCD) lead the plan update process for this Community Wildfire Protection Plan (CWPP). SCD consulted with our partners including the Washington State Department of Natural Resources (WADNR), the U.S. Forest Service (USFS), Skagit County Department of Emergency Management (DEM), the Skagit County Commissioner's Office, Skagit County Rural Fire Districts, the University of Washington Climate Impacts Group and affiliated professors, Skagit Land Trust, and the public.
To gather feedback and input on this update we have participated in the following:

- Letters & surveys sent to all Fire Districts
- Meetings with Skagit County Department of Emergency Management
- Consultation meetings with UW Climate Impacts Group and affiliated professors
- Public meetings and events about the Skagit County Natural Hazards Mitigation Plan
- Meeting and coordination with Department of Natural Resources
- Meetings with U.S. Forest Service
- Meetings with Natural Resources Conservation Service
- Neighborhood meetings

Step 2: Involve Federal Agencies

See above.

This Community Wildfire Protection Plan (CWPP) identifies the various landowners/managers, stakeholders, and assesses and prioritizes risk areas, and recommends mitigation strategies. This plan is to be considered a working document that will allow for expansion and incorporation as well as monitoring of the changing risk levels over time.

Step 3: Engage Interested Parties

See above. The public has been invited to offer input throughout the development of this CWPP through the process of updating the NHMP. Steps 3 and 4 were combined since it was determined that the CWPP should cover all of Skagit County. The wildfire hazard map has been updated (2019) with data from the USDA Natural Resources Conservation Service (NRCS) and Washington State Department of Natural Resources (DNR) and reclassified as a Susceptibility to Wildfire map. The map identifies areas that have a higher susceptibility to wildfire on a landscape level. Best available science was used to inform the updated wildfire susceptibility map. The original map used the state's RAMS tool, which is no longer applicable. In the original 2009 CWPP hazard assessment development process, a letter and survey were sent to Skagit County fire chiefs. The survey requested identification of specific areas of wildland urban interface concern, information regarding the current protection resources available, level of community awareness regarding wildfire risk and preparedness, an opportunity to identify specific projects and provide input on changes to wildland fire prevention and protection approaches. For this CWPP update, a new letter and survey were sent out updated and emailed out. The letter and survey results can be found in Appendix 2.

Step 4: Establish a Community Basemap

A map from DNR showing wildland-urban interface and intermix areas was used in developing this document; however, an additional map that shows areas with high susceptibility to wildfire was created through the analysis process as described on pages 17-19.

Step 5: Establish Community Hazard Reduction Priorities and Recommendations to Reduce Structural Ignitability

Based on results from the survey of the rural fire districts, local citizen input, and the map showing areas with higher susceptibility to wildfire, the CWPP team created a list of areas and communities to focus on for reduction of hazardous fuels and structural ignitability. Many of the communities on the list have already been working hard to reduce their risk.

Step 6: Communicate Wildland Fire Protection Plan Information to Property Owners

Efforts to educate the public and inform them of the CWPP update have been ongoing and part of the outreach portion of the NHMP 5-year update. Using newsletter articles, public meetings, posters, and other types of outreach materials at local events, and neighborhood gatherings, this information has been made available to a wide audience.

Appendix B.2

Skagit County Fire Chiefs' Letter, Survey & Results

Letter to Skagit County Fire Chiefs

May 2024

Dear Local Fire District Chief,

The original Skagit County Community Wildfire Protection Plan, (CWPP), was developed in 2009 and updated in 2019 by the Skagit Conservation District in partnership with local fire districts, WA Department of Natural Resources, United States Forest Service, Skagit County, and local communities. This document is part of the County's Natural Hazard Mitigation Plan and provides an in-depth analysis of wildfire risk in Skagit County as well as recommendations for how to mitigate that risk.

As part of the original and updating process to gather feedback from Skagit County fire districts, the Skagit Conservation District conducted surveys collecting information on each districts' wildfire hazards and concerns. We are now working on the 5-year update and so it is time to ask for your valuable, first-hand input again.

Skagit Conservation District and our partners are inviting you and your fire district to share information on the wildfire hazards that are faced within your district boundaries by completing a survey.

The survey can be completed by hand or accessed online at: https://55rworv790k.typeform.com/to/OZJXUN8n; or by scanning the QR code at the bottom of this page.

It is very important that local fire districts be part of this process as you are the experts on the risks in the communities you serve. Thank you for taking the time to fill out this survey. Your input is valuable and essential to updating Skagit County's Community Wildfire Protection Plan.

We ask that you complete this survey at your earliest convenience as the information gathered from this survey is crucial in informing the CWPP update, and we are under a deadline of presenting the draft document to the Skagit Board of Commissioners on July 30th of this year. If at all possible, please complete the survey within two weeks of receiving.

Please do not hesitate to call me if you have any questions or would like more information. To reference the most recent edition of the Skagit County CWPP, visit: https://www.dnr.wa.gov/publications/rp_burn_cwpp_skagit_update2019.pdf

Kindest regards,

Robert Walters
Community Wildfire Resilience Specialist
Skagit & Whatcom Conservation Districts
360-592-2386
rwalters@whatcomcd.org

Fire District Survey Questions

1. Please list any communities/neighborhoods/geographic areas that are a concern to your fire district regarding wildfire hazards. Please provide any specifics on the concerns with each area, if applicable.

_____

_____

_____

_____

_____

_____

2. Are there other groups of vulnerable populations you are concerned about when a wildland fire occurs? (homeless who camp, people without cars, people who don't speak English, mobile home, or trailer home parks, etc.):

_____

_____

_____

_____

3. Please list the number of hospitals, schools, elder care facilities, and homeless shelters in your district:

- Hospitals: _____
- Schools: _____
- Elder Care Facilities: _____
- Homeless Shelters: _____

4. Please indicate which wildfire protection resources are currently available within your district (Yes/Y or No/N). If your district has the designated resource, please indicate how many.

- Brush Trucks: **Y or N** Qty. _____
- Fire Engines: **Y or N** Qty. _____
- Water Tenders: **Y or N** Qty. _____
- Red card certified personnel: **Y or N** Qty. _____

5. Could you estimate the quantity of the following:

- % of homes with adequate defensible space: _____%
- % of homes with Class A roofs and fire-resistant siding: _____%
- Number of one-way-in, one-way-out neighborhoods: _____

6. Are there any roads in your district that cannot be accessed by a type 3 engine? List these roads if applicable:

_____

_____

7. Are there any roads in your district that have significant vegetation along them (potentially non-survivable conditions)? List these roads if applicable:

_____

_____

8. Do most roads and addresses have clear, reflective street and address signs (circle Yes or No)?

Y or N

9. Are there any significant evacuation concerns in your district? Please explain these concerns:

_____

_____

_____

_____

10. Please indicate whether you have the following resources/infrastructure within your district and if applicable, estimate the quantity below:

- Haz-Mat facilities or sites: **Y or N** Qty. _____
- Hydrants or draft/dip sites: **Y or N** Qty. _____
- Above-ground powerlines: **Y or N** Qty. _____
- Safety zones: **Y or N** Qty. _____

11. On a scale of 1-10 (1 being no-little risk and 10 being very high risk) How would you rate your fire district's preparedness to respond to wildland fire and why?

_____

_____

_____

_____

12. On a scale of 1-10 (1 being low risk and 10 being high risk) how would you rate your fire district on how aware of wildfire risk and prevention practices the communities in your Fire District are and why?

_____

_____

_____

_____

13. Additional comments on the previous two questions?

_____

_____

_____

_____

_____

_____

14. Are there any communities or individuals you know who would like and/or need assistance with wildfire preparedness planning? Please identify the area/neighborhood or specific contact information.

_____

_____

_____

_____

_____

15. Please circle Yes (Y) or No (N) to the following questions:

A. What changes, if any, would you like to see in the county regarding wildland fire prevention and protection? [Stricter building codes]

Y or N

B. What changes, if any, would you like to see in the county regarding wildland fire prevention and protection? [Ban on fireworks]

Y or N

C. What changes, if any, would you like to see in the county regarding wildland fire prevention and protection? [Improved resources for fire districts in wildfire-prone areas]

Y or N

D. What changes, if any, would you like to see in the county regarding wildland fire prevention and protection? [Individuals taking more responsibility for their safety (better education)]

Y or N

E. Are you interested in any partnership opportunities for the below programs with DNR and/or Skagit Conservation District? [Wildfire Risk Awareness & Education]

Y or N

F. Are you interested in any partnership opportunities for the below programs with DNR and/or Skagit Conservation District? [Wildfire Hazard Reduction Projects]

Y or N

16. What changes, if any, would you like to see in the county regarding wildland fire prevention and protection that was not mentioned above? Please list/describe below:

_____

_____

_____

17. What neighborhood keeps you up at night regarding wildland fire hazards? Why?

_____
_____
_____
_____

18. Are there any partners of yours that we should get in contact with to help us gain meaningful knowledge to implement in the CWPP update?

_____
_____
_____

19. Is there anything that you feel we should investigate or get more understanding of for wildfire protection planning that you would like more information on?

_____
_____
_____

20. If you have any outreach events or project ideas that you'd like to partner with DNR and/or Skagit Conservation District on, please describe them below.

_____
_____
_____

---END---

Thank you for your participation in the updating of the Skagit County CWPP. If you have any questions or would like to collaborate more, please contact Skagit CD.
Skagit CD Contact: Robert Walters, rwalters@whatcomcd.org

Fire Chief Survey Results

Purpose and Respondents:
This survey, conducted as part of the Skagit County Community Wildfire Protection Plan (CWPP) update, gathered input from local Fire Chiefs to identify areas of concern, vulnerabilities, resources, and preparedness levels within their districts. Nine fire Chiefs participated, representing various regions within Skagit County.

Key Findings:

1. **Areas of Wildfire Concern:**
   Fire districts identified several high-risk areas due to dense forests, limited access, and proximity to residential neighborhoods. Notable areas of concern include Walker Valley, Lake Cavanaugh, Swinomish Reservation, Shelter Bay, Samish Island, and Chuckanut Mountain. These areas have a combination of dense vegetation, steep terrain, and limited water resources.
2. **Vulnerable Populations:**
   Multiple districts reported concerns about vulnerable populations, including elderly residents, Spanish-speaking communities, homeless individuals, and those living in mobile home parks. Limited mobility and potential communication barriers heighten the risk for these groups during wildfire events.
3. **Critical Infrastructure and Resources:**
   Districts highlighted the presence of critical infrastructure, such as schools, elder care facilities, and United General Hospital. Firefighting resources vary, with some districts having limited brush trucks, fire engines, water tenders, and Red Card Certified personnel. Resource constraints were frequently noted, including the need for more personnel, training, and funding.
4. **Defensible Space and Building Materials:**
   Estimates of homes with adequate defensible space varied, ranging from 10% to 80% across districts. Additionally, only a small percentage of homes were reported to have Class A roofs or fire-resistant siding, which increases the risk of structure loss in a wildfire.
5. **Evacuation Challenges:**
   Numerous districts reported concerns with one-way-in, one-way-out neighborhoods, which complicate evacuation efforts during a wildfire. Certain roads, particularly in rural and mountainous areas, may not support larger firefighting vehicles and are lined with dense vegetation, creating non-survivable conditions.
6. **Community Awareness and Preparedness:**
   Chiefs rated their districts' preparedness to respond to wildfires at an average of 5.3 out of 10. Community awareness of wildfire risks and prevention was rated lower, averaging 4.3 out of 10. Chiefs expressed a desire for improved community education, with suggestions to promote defensible space initiatives and organize outreach events.
7. **Changes Since 2019 Update:**
   Chiefs indicated little change over their neighborhoods/communities of concern. While there has been an increase in wildland fire-fighting equipment throughout the County, more wildland equipment is still on the wish list for all districts with WUI concerns. Although multiple districts have had several volunteer and career staff train for the wildland "red card" certification, the overall number of "red card" certified personnel county-wide has decreased from 2019. Turnover, advancement, and relocation have contributed greatly to this statistic.

Recommendations and Suggestions from Fire Chiefs:

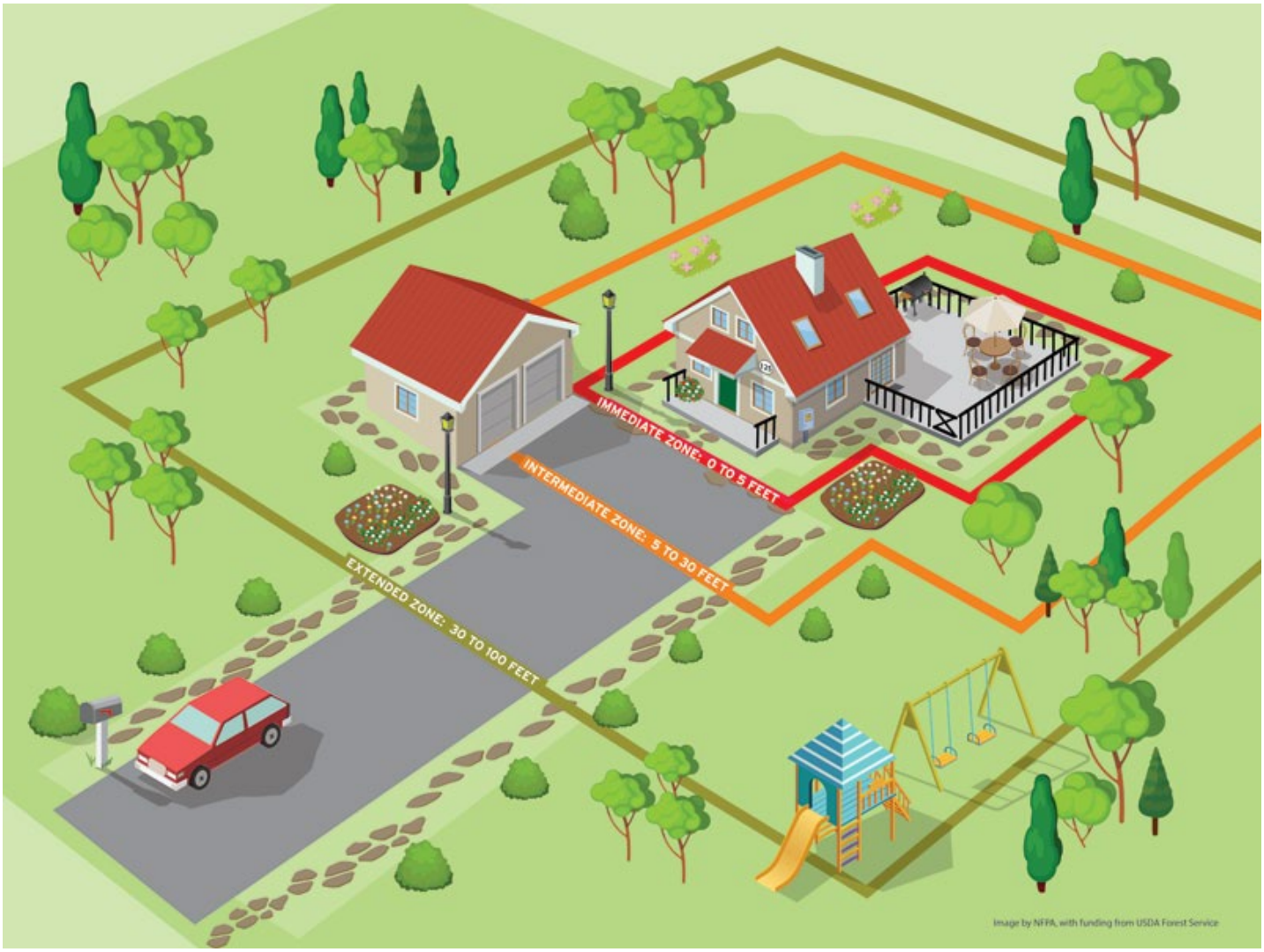
- **Increased Support for Prevention and Training:** Chiefs recommended improved networking between fire districts, enhanced mutual aid protocols, and increased support for firefighter training specific to wildland fires.
- **Public Education and Outreach:** Suggestions included developing Firewise programs, increasing outreach on accessible driveways for emergency vehicles, and collaborating with agencies like the Department of Natural Resources (DNR) on public education efforts.
- **Additional Resources and Infrastructure Improvements:** Chiefs advocated for better resources, including brush trucks and personnel, and support from the Fire Marshal's office for enforcing fire safety standards.

This survey reveals significant areas for enhancement in Skagit County's wildfire preparedness, highlighting the need for additional resources, focused public education, and strategic infrastructure improvements to address the identified risks.

Appendix B.3

Home Ignition Zones & Treatments

The concept of the home ignition zone (HIZ) was developed by retired USDA Forest Service fire scientist Jack Cohen in the late 1990s, following some breakthrough experimental research into how homes ignite due to the effects of radiant heat. The HIZ is divided into three zones.



HOME IGNITION ZONE TREATMENT

Immediate zone (0 TO 5 FEET)

The home and the area 0-5' from the furthest attached exterior point of the home; defined as a non-combustible area. Science tells us this is the most important zone to take immediate action on as it is the most vulnerable to embers. START WITH THE HOUSE ITSELF then move into the landscaping section of the Immediate Zone.

- Clean roofs and gutters of dead leaves, debris and pine needles that could catch embers.
- Replace or repair any loose or missing shingles or roof tiles to prevent ember penetration.
- Reduce embers that could pass through vents in the eaves by installing 1/8-inch metal mesh screening.
- Clean debris from exterior attic vents and install 1/8-inch metal mesh screening to reduce embers.

- Repair or replace damaged or loose window screens and any broken windows Screen or box-in areas below patios and decks with wire mesh to prevent debris and combustible materials from accumulating.
- Move any flammable material away from wall exteriors – mulch, flammable plants, leaves and needles, firewood piles – anything that can burn. Remove anything stored underneath decks or porches.

Intermediate zone (5 TO 30 FEET)

5-30' from the furthest exterior point of the home. Landscaping/hardscaping- employing careful landscaping or creating breaks that can help influence and decrease fire behavior

- Clear vegetation from under large stationary propane tanks.
- Create fuel breaks with driveways, walkways/paths, patios, and decks.
- Keep lawns and native grasses mowed to a height of four inches.
- Remove ladder fuels (vegetation under trees) so a surface fire cannot reach the crowns. Prune trees up to six to ten feet from the ground; for shorter trees do not exceed 1/3 of the overall tree height.
- Space trees to have a minimum of eighteen feet between crowns with the distance increasing with the percentage of slope.
- Tree placement should be planned to ensure the mature canopy is no closer than ten feet to the edge of the structure.
- Tree and shrubs in this zone should be limited to small clusters of a few each to break up the continuity of the vegetation across the landscape.

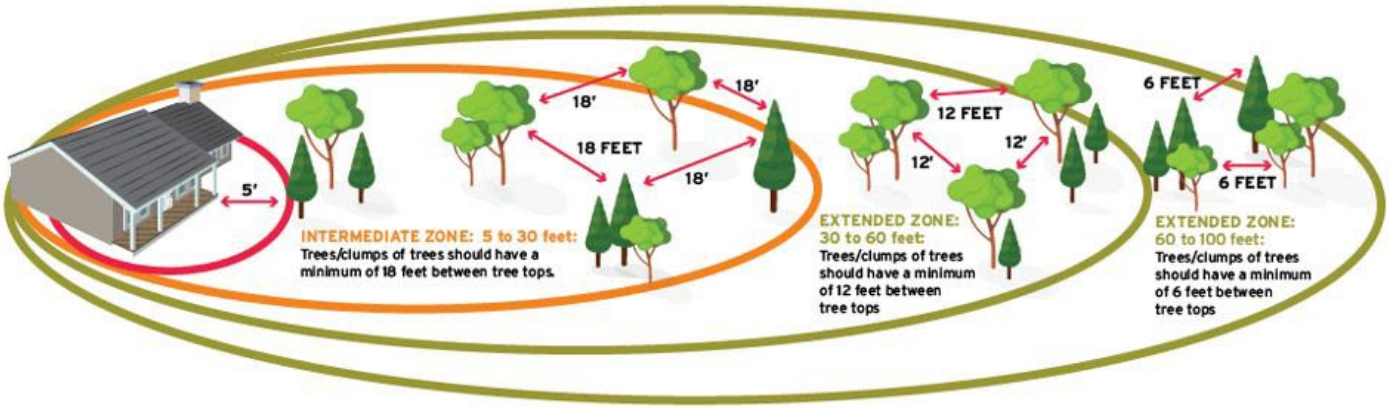
Extended zone (30 TO 100 FEET)/ FORESTED ZONE OUT TO 200 FEET

30-100 feet, out to 200 feet. Landscaping – the goal here is not to eliminate fire but to interrupt fire's path and keep flames smaller and on the ground.

- Dispose of heavy accumulations of ground litter/debris.
- Remove dead plant and tree material.
- Remove small conifers growing between mature trees.
- Remove vegetation adjacent to storage sheds or other outbuildings within this area.
- Trees 5 to 30 feet from the home should have at least 18 feet between canopy tops*.
- Trees 30 to 60 feet from the home should have at least 12 feet between canopy tops.*
- Trees 60 to 100 feet from the home should have at least 6 feet between the canopy tops.*
- Thin forest stands to improve forest health.
- Pruning lower limbs in lifts over time, depending upon the size of the tree. Do not remove more than 50% of live crown.
- Remove dead material, slash and snags that are danger trees.
- Remove excess vegetation along roads.
- Construct trails on topographic breaks as fuel breaks.
- Prevent ladder fuels from developing.
- Allow adequate access for emergency vehicles.

**The distances listed for crown spacing are suggested based on NFPA's Firewise USA® guidance. Crown spacing needed to reduce/prevent crown fire potential could be significantly greater due to slope, the species of trees involved and other site-specific conditions. Check with your local forestry professional to get advice on what is appropriate for your property.*

TREE SPACING



Appendix B.4

Structure Assessment Guide

Date of Assessment: ___

Assessor: _____

Property Address: _____

Property Owner: _____

1. OVERVIEW OF SURROUNDINGS (Include supporting images) *Possible considerations: structure position in relation to severe fire behavior and type of construction*	
Items Assessed:	Mitigation Recommendations:
2. CHIMNEY TO EAVES (Include supporting images) *Possible considerations: the roof, and gutters*	
Items Assessed:	Mitigation Recommendations:
3. TOP OF THE EXTERIOR WALL TO FOUNDATION (Include supporting images) *Possible considerations: attic; eaves; soffit vents; crawl spaces; windows; decks; fences; flammable and combustible materials stored on, under, or near structure; nooks and other small spaces*	
Items Assessed:	Mitigation Recommendations:

STRUCTURE ASSESSMENT GUIDE (continued)

4. IMMEDIATE ZONE 0-5 feet from structure (Include supporting images) *Possible considerations: landscaped vegetation – hardscape materials, plant selection, propane tanks, vehicles,*	
Items Assessed:	Mitigation Recommendations:
5. INTERMEDIATE ZONE 5 – 30 feet (Include supporting images) *Possible considerations: ladder fuels and crown separations, lawns mowed and watered*	
Items Assessed:	Mitigation Recommendations:
6. EXTENDED ZONE 30 – 100 feet (Include supporting images) *Possible considerations: ladder fuels and crown separations, accumulation of litter/debris and dead plant and tree material,*	
Items Assessed:	Mitigation Recommendations:

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Appendix C: Template For Future Progress Reports

Skagit County Hazard Mitigation Plan
Annual Progress Report

Reporting Period: (Insert reporting period)

Background: Skagit County and participating cities and special purpose districts in the county developed a hazard mitigation plan to reduce risk from all hazards by identifying resources, information, and strategies for risk reduction. The federal Disaster Mitigation Act requires state and local governments to develop hazard mitigation plans as a condition for federal disaster grant assistance. To prepare the plan, the participating partners organized resources, assessed risks from natural hazards within the county, developed planning goals and objectives, reviewed mitigation alternatives, and developed an action plan to address probable impacts from natural hazards. By completing this process, these jurisdictions maintained compliance with the Disaster Mitigation Act, achieving eligibility for mitigation grant funding opportunities afforded under the Robert T. Stafford Act. The plan can be viewed on-line at:

Insert web address

Summary Overview of the Plan's Progress: The performance period for the hazard mitigation plan became effective on __, YYYYY, with the final approval of the plan by FEMA. The initial performance period for this plan will be 5 years, with an anticipated update to the plan to occur before _____, YYYY. As of this reporting period, the performance period for this plan is considered to be ___ percent complete. The
hazard mitigation plan has targeted __hazard mitigation initiatives to be pursued during the 5-year performance period. As of the reporting period, the following overall progress can be reported:

- __ out of __ initiatives (__%) reported ongoing action toward completion.
- __ out of __ initiatives (__%) were reported as being complete.
- __ out of __ initiatives (__%) reported no action taken.

Purpose: The purpose of this report is to provide an annual update on the implementation of the action plan identified in the Skagit County Hazard Mitigation Plan. The objective is to ensure that there is a continuing and responsive planning process that will keep the hazard mitigation plan dynamic and responsive to the needs and capabilities of the partner jurisdictions. This report discusses the following:

- Hazard events that have occurred within the last year
- Changes in risk exposure within the planning area (all of Skagit County)
- Mitigation success stories
- Review of the action plan
- Changes in capabilities that could impact plan implementation
- Recommendations for changes/enhancement.

The Hazard Mitigation Plan Planning Team: The Hazard Mitigation Plan Planning Team, made up of planning partners and stakeholders within the planning area, reviewed and approved this progress report at its annual meeting held on ____, YYYY. It was determined through the plan's development process that a Planning Team would remain in service to oversee maintenance of the plan. At a minimum, the Planning Team will provide technical review and oversight on the development of the annual progress report. It is anticipated that there will be turnover in the membership annually, which will be documented in the progress reports. For this reporting period, the Planning Team membership is as indicated in Table 1.

TABLE 1
PLANNING TEAM MEMBERS

Name	Title	Jurisdiction/Agency

Natural Hazard Events within the Planning Area: During the reporting period, there were natural hazard events in the planning area that had a measurable impact on people or property. A summary of these events is as follows:

- _____
- _____

Changes in Risk Exposure in the Planning Area: *(Insert brief overview of any natural hazard event in the planning area that changed the probability of occurrence or ranking of risk for the hazards addressed in the hazard mitigation plan)*

Mitigation Success Stories: *(Insert brief overview of mitigation accomplishments during the reporting period)*

Review of the Action Plan: Table 2 reviews the action plan, reporting the status of each initiative. Reviewers of this report should refer to the hazard mitigation plan for more detailed descriptions of each initiative and the prioritization process.

Address the following in the "status" column of the following table:

- *Was any element of the initiative carried out during the reporting period?*
- *If no action was completed, why?*
- *Is the timeline for implementation for the initiative still appropriate?*
- *If the initiative was completed, does it need to be changed or removed from the action plan?*

TABLE 2
ACTION PLAN MATRIX

Action Taken? (Yes or No)	Time Line	Priority	Status		Status (X, O,✓)
Initiative #__—			[description]		
Initiative #__—			[description]		
Initiative #__—			[description]		
Initiative #__—			[description]		
Initiative #__—			[description]		
Initiative #__—			[description]		
Initiative #__—			[description]		
Initiative #__—			[description]		
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Initiative #__—			[description]		
Initiative #__—			[description]		
Initiative #__—			[description]		
Initiative #__—			[description]		
Initiative #__—			[description]		
Initiative #__—			[description]		
Initiative #__—			[description]		
Initiative #__—			[description]		

TABLE 2
ACTION PLAN MATRIX

Action Taken? (Yes or No)	Time Line	Priority	Status		Status (X, O,✓)
Initiative #__—			[description]		
Initiative #__—			[description]		
Initiative #__—			[description]		
Initiative #__—			[description]		
Initiative #__—			[description]		
Initiative #__—			[description]		
Initiative #__—			[description]		
Initiative #__—			[description]		
Initiative #__—			[description]		
Initiative #__—			[description]		
Initiative #__—			[description]		
Initiative #__—			[description]		

Completion status legend:
✓= Project Completed
O = Action ongoing toward completion
X = No progress at this time

Changes That May Impact Implementation of the Plan: *(Insert brief overview of any significant changes in the planning area that would have a profound impact on the implementation of the plan. Specify any changes in technical, regulatory and financial capabilities identified during the plan's development)* **Recommendations for Changes or Enhancements:** Based on the review of this report by the Hazard Mitigation Plan Planning Team, the following recommendations will be noted for future updates or revisions to the plan:

- _____
- _____
- _____
- _____

Public review notice: The contents of this report are considered to be public knowledge and have been prepared for total public disclosure. Copies of the report have been provided to the governing boards of all planning partners and to local media outlets and the report is posted on the Skagit County hazard mitigation plan website. Any questions or comments regarding the contents of this report should be directed to:

INSERT NAME AND
ADDRESS

Appendix D: Top 20 Most Vulnerable Roads

Figure 1. Overview of Roadway Segments Evaluated

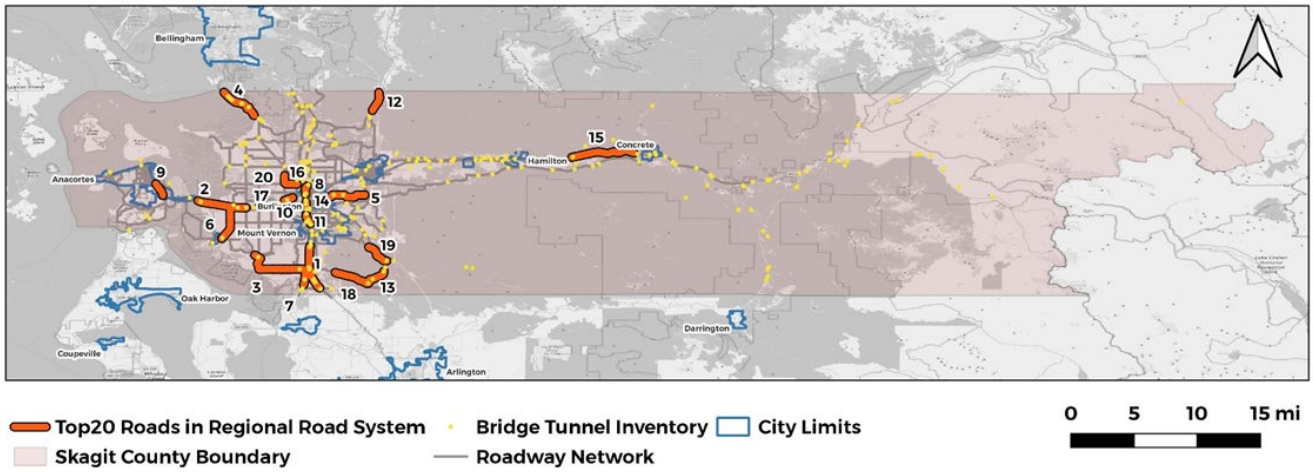
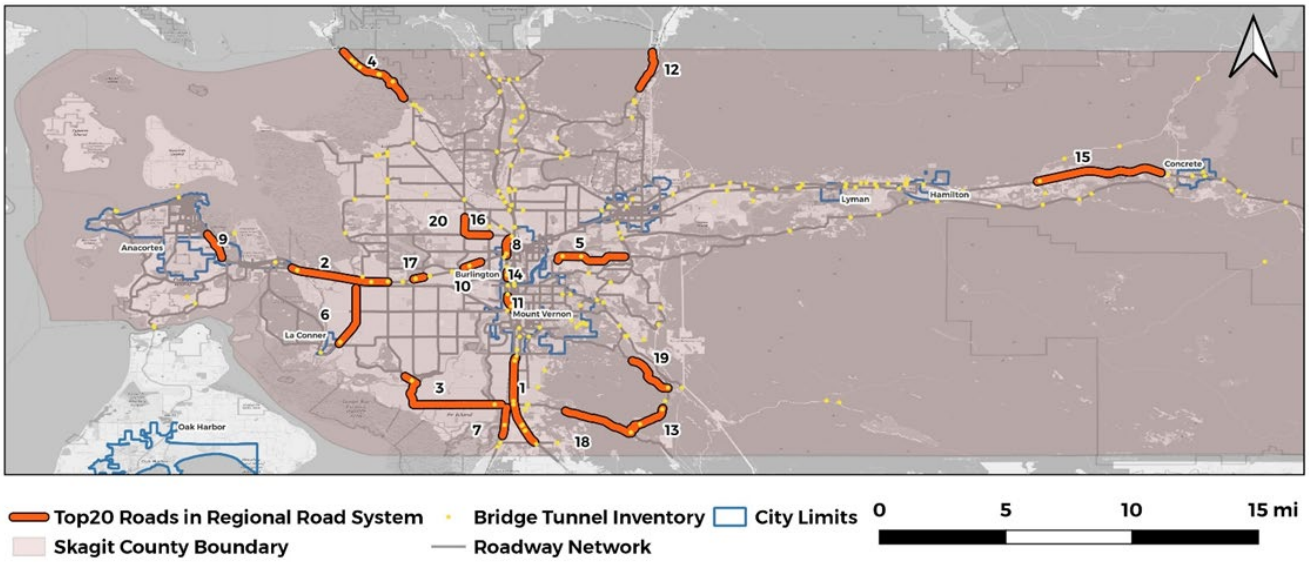


Figure 2. Zoomed-in view of the Top 20 Segments



Regionally Significant Transportation Resilience Project Locations

The top 20 assets facing the highest risks from all hazards were further reviewed as candidate project sites for future mitigation of potential climate-related hazard impacts. The following sections summarize key characteristics and natural hazard exposure for roadway segments identified as having the highest potential losses within the Skagit County regional roadway system. These candidate project site descriptions provide an “at-a-glance” reference to support regional conversations about transportation risk, resilience needs, and potential areas for further evaluation. Each roadway segment description includes:

- Segment length and location
- Roadway functional classification
- Exposure to select natural hazards based on available data and modeling

The information presented is designed to complement, not replace, more detailed technical analyses. The candidate project site descriptions are not intended to establish project scopes, rank projects for funding, or prescribe specific mitigation actions. Instead, the intent is to:

- Provide a clear and consistent snapshot of hazard exposure across the highest risk roadway segments.
- Support a comparative review and discussion among member agencies.
- Inform screening-level prioritization, planning, and coordination efforts.
- Help identify locations that may warrant more detailed study, project development, or integration into future planning and funding efforts.

These candidate project site descriptions should not be used as the sole basis for investment decisions, design standards, emergency response planning, or damage assessments at any specific location. Percentages, depths, and hazard metrics represent modeled or mapped conditions at a regional screening level. Local conditions, design features, and future changes may not be fully reflected. The information presented is based on available datasets and regional-scale models. Actual local hazard impacts and damages may differ from those shown.

I-5 (No. 1)

1.1 Length

- 5.11 miles

1.2 Start and End Location

- Start: South of Mount Vernon Road
- End: North of Starbird Road

1.3 Hazard Information

Coastal Flooding

- 2020: 0.1% of the road segment is exposed to the maximum flood depth of 1.64 ft, 16.7% of the bridges are exposed to the maximum flood depth of 1.10 ft
- 2040: 0.1% of the road segment is exposed to the maximum flood depth of 1.66 ft, 16.7% of the bridges are exposed to the maximum flood depth of 1.12 ft
- 2080: 0.1% of the road segment is exposed to the maximum flood depth of 2.03 ft, 16.7% of the bridges are exposed to the maximum flood depth of 1.49 ft

Dam/Levee Breach

- Exposed maximum inundation depth: 17.8 ft

Fluvial Flooding

- 77% of segment is located in the 100-year and 79% of segment is located in 500-year flood plain

Landslides

- Highest landslide susceptibility: 6.61 out of 81 (the higher value represents higher landslide risks)

Seismic

- The road segment is exposed to peak ground acceleration (PGA-975) of 0.45g to 0.46g

Liquefaction

- 8% of the road segment is exposed to very low liquefaction susceptibility
- 15% of the road segment is exposed to low to moderate liquefaction susceptibility
- 45% of the road segment is exposed to moderate to high liquefaction susceptibility
- 32% of the road segment is exposed to high liquefaction susceptibility

1.4 Roadway Classification

- Interstate

SR 20 (No. 2)

2.1 Length

- 3.90 miles

2.2 Start and End Location

- Start: South Marchs Point Road
- End: Best Road

2.3 Hazard Information

Coastal Flooding

- 2020: 3.3% of the road segment is exposed to the maximum flood depth of 36.93 ft, 33.3% of the bridges are exposed to the maximum flood depth of 5.65 ft
- 2040: 3.3% of the road segment is exposed to the maximum flood depth of 37.39 ft, 33.3% of the bridges are exposed to the maximum flood depth of 5.67 ft
- 2080: 0.001% of the road segment is exposed to the maximum flood depth of 38.14 ft, 33.3% of the bridges are exposed to the maximum flood depth of 5.67 ft

Dam/Levee Breach

- Exposed maximum inundation depth: 10.3 ft

Fluvial Flooding

- 83% of the road segment is located in the 100-year and 500-year flood plain

Landslides

- Highest landslide susceptibility: 9.55 out of 81 (the higher value represents higher landslide risks)

Seismic

- The road segment is exposed to peak ground acceleration (PGA-975) of 0.46g to 0.47g

Liquefaction

- 46% of the road segment is exposed to moderate to high liquefaction susceptibility
- 54% of the road segment is exposed to high liquefaction susceptibility

2.4 Roadway Classification

- Freeway

Fir Island Road and Best Road (No. 3)

3.1 Length

- 7.59 miles

3.2 Start and End Location

- Start: Dike Road
- End: Summers Drive

3.3 Hazard Information

Coastal Flooding

- 2020: 0.9% of the road segment is exposed to the maximum flood depth of 33.12 ft, none of the bridges are exposed to coastal flooding
- 2040: 2.1% of the road segment is exposed to the maximum flood depth of 33.61ft, 50% of the bridges are exposed to the maximum flood depth of 0.37 ft
- 2080: 2.3% of the road segment is exposed to the maximum flood depth of 34.41 ft, 50% of the bridges are exposed to the maximum flood depth of 3.02 ft

Dam/Levee Breach

- Exposed maximum inundation depth: 20.99 ft

Fluvial Flooding

- 89% of the road segment is located in the 100-year and 500-year flood plain

Landslides

- Highest landslide susceptibility: 29.84 out of 81 (the higher value represents higher landslide risks)

Seismic

- The road segment is exposed to peak ground acceleration (PGA-975) of 0.46 g to 0.48g

Liquefaction

- 35% of the road segment is not exposed to liquefaction susceptibility
- 1% of the road segment is exposed to very low liquefaction susceptibility
- 61% of the road segment is exposed to low to moderate liquefaction susceptibility

- 2% of the road segment is exposed to moderate to high liquefaction susceptibility

3.4 Roadway Classification

- Major Collector

Chuckanut Drive (No. 4)

4.1 Length

- 4.18 miles

4.2 Start and End Location (estimated using Milepost Locator map)

- Start: Milepost 9.65
- End: Milepost 13.94

4.3 Hazard Information

Coastal Flooding

- 2020: 33.3% of the bridges are exposed to the maximum flood depth of 8.37 ft
- 2040: 33.3% of the bridges are exposed to the maximum flood depth of 8.37 ft
- 2080: 33.3% of the bridges are exposed to the maximum flood depth of 8.37 ft

Fluvial Flooding

- 3% of the road segment is located in the 100-year and 500-year flood plain

Landslides

- Highest landslide susceptibility: 70.92 out of 81 (the higher value represents higher landslide risks)

Seismic

- The entire road segment is exposed to peak ground acceleration (PGA-975) of 0.43g

4.4 Roadway Classification:

- Major Collector

Francis Road (No. 5)

5.1 Length

- 3.07 miles

5.2 Start and End Location

- Start: Thillberg Road
- End: Near the roundabout of State Route 9 and Francis Road

5.3 Hazard Information

Coastal Flooding

- 2020: 0.5% of the road segment is exposed to the maximum flood depth of 1.88 ft
- 2040: 0.5% of the road segment is exposed to the maximum flood depth of 1.89 ft
- 2080: 0.5% of the road segment is exposed to the maximum flood depth of 1.92 ft

Dam/Levee Breach

- Exposed maximum inundation depth: 49.4 ft

Fluvial Flooding

- The entire segment is located in the 100-year and 500-year flood plain

Landslides

- Highest landslide susceptibility: 4.02 out of 81 (the higher value represents higher landslide risks)

Seismic

- The road segment is exposed to peak ground acceleration (PGA-975) of 0.41g to 0.43g

5.4 Roadway Classification

- Major Collector

La Conner Whitney Road (No. 6)

6.1 Length

- 3.44 miles

6.2 Start and End Location

- Start: 14142 La Conner Whitney Road
- End: Near the roundabout of La Conner Whitney Road, Chilberg Road, and Morris Street

6.3 Hazard Information

Coastal Flooding

- 2020: 0.2% of the road segment is exposed to the maximum flood depth of 2.74 ft

- 2040: 0.2% of the road segment is exposed to the maximum flood depth of 3.66ft
- 2080: 0.3% of the road segment is exposed to the maximum flood depth of 7.58 ft

Dam/Levee Breach

- Exposed maximum inundation depth: 11.3 ft

Fluvial Flooding

- The entire segment is located in the 100-year and 500-year flood plain

Seismic

- The road segment is exposed to peak ground acceleration (PGA-975) of 0.47g to 0.48g

Liquefaction

- The entire road segment is exposed to moderate to high liquefaction susceptibility

6.4 Roadway Classification

- Major Collector

Pioneer Highway (No. 7)

7.1 Length

- 1.67 miles

7.2 Start and End Location

- Start: Near the roundabout of Pioneer Highway, Main Street, Fir Island Road, and Conway Frontage Road
- End: 0.45 miles north of Milltown Road

7.3 Hazard Information

Coastal Flooding

- 2020: 0.9% of the road segment is exposed to the maximum flood depth of 7.36 ft,100% of the bridges are exposed to the maximum flood depth of 10.29 ft
- 2040: 0.9% of the road segment is exposed to the maximum flood depth of 7.63ft, 100% of the bridges are exposed to the maximum flood depth of 10.71 ft
- 2080: 0.03% of the road segment is exposed to the maximum flood depth of 8.22 ft, 100% of the bridges are exposed to the maximum flood depth of 11.15 ft

Dam/Levee Breach

- Exposed maximum inundation depth: 17.9 ft

Fluvial Flooding

- The entire segment is located in the 100-year and 500-year flood plain

Landslides

- Highest landslide susceptibility: 5.28 out of 81 (the higher value represents higher landslide risks)

Seismic

- The entire road segment is exposed to peak ground acceleration (PGA-975) of 0.46g

Liquefaction

- 98% of the road segment is exposed to moderate to high liquefaction susceptibility
- 2% of the road segment is exposed to high liquefaction susceptibility

7.4 Roadway Classification

- Major Collector

I-5 (No. 8)

8.1 Length

- 0.96 miles

8.2 Start and End Location (estimated using Milepost Locator map)

- Start: South of State Highway 11
- End: Milepost 230.06

8.3 Hazard Information

Dam/Levee Breach

- Exposed maximum inundation depth: 34.4 ft

Fluvial Flooding

- The entire segment is located in the 100-year and 500-year flood plain

Landslides

- Highest landslide susceptibility: 5.03 out of 81 (the higher value represents higher landslide risks)

Seismic

- The road segment is exposed to peak ground acceleration (PGA-975) of 0.43g to 0.44g

8.4 Roadway Classification

- Interstate

SR 20 – Spur (No. 9)

9.1 Length

- 1.50 miles

9.2 Start and End Location

- Start: Milepost 48.2
- End: Milepost 49.7

9.3 Hazard Information

Landslides

- Landslide susceptibility: 52.34 out of 81 (the higher value represents higher landslide risks)

Seismic

- The entire road segment is exposed to peak ground acceleration (PGA-975) of 0.48g

Roadway Classification

- Freeway

SR 20 (No. 10)

10.1 Length

- 0.74 miles

10.2 Start and End Location (estimated using Milepost Locator map)

- Start: Milepost 57.78
- End: Milepost 58.52

10.3 Hazard Information

Dam/Levee Breach

- Exposed maximum inundation depth: 25.6 ft

Fluvial Flooding

- The entire segment is located in the 100-year and 500-year flood plain

Seismic

- The entire road segment is exposed to peak ground acceleration (PGA-975) of 0.44g

10.4 Roadway Classification

- Principal Arterial

I-5 (No. 11)

11.1 Length

- 1.07 miles

11.2 Start and End Location

- Start: South of West College Way
- End: North of Broad Street

11.3 Hazard Information

Dam/Levee Breach

- Exposed maximum inundation depth: 40.1 ft

Fluvial Flooding

- 54% of the road segment is located in the 100-year and 74% of the road segment is located in the 500-year flood plain

Landslides

- Highest landslide susceptibility: 18.58 out of 81 (the higher value represents higher landslide risks)

Seismic

- The entire road segment is exposed to peak ground acceleration (PGA-975) of 0.44g

11.4 Roadway Classification

- Interstate

SR 9 (No. 12)

12.1 Length

- 2.25 miles

12.2 Start and End Location (estimated using Milepost Locator map)

- Start: Milepost 67.78
- End: Milepost 65.53

12.3 Hazard Information

Landslides

- Highest landslide susceptibility: 55.90 out of 81 (the higher value represents higher landslide risks)

Seismic

- The entire road segment is exposed to peak ground acceleration (PGA-975) of 0.39g

Liquefaction

- 20% of the road segment is exposed to low to moderate liquefaction susceptibility
- 80% of the road segment is exposed to moderate to high liquefaction susceptibility

12.4 Roadway Classification

- Major Collector

SR 9 (No. 13)

13.1 Length

- 2.04 miles

13.2 Start and End Location (estimated using Milepost Locator map)

- Start: Milepost 40.4
- End: Milepost 42.44

13.3 Hazard Information

Landslides

- Highest landslide susceptibility: 52.96 out of 81 (the higher value represents higher landslide risks)

Seismic

- The entire road segment is exposed to peak ground acceleration (PGA-975) of 0.43g

13.4 Roadway Classification

- Major Collector

I-5 (No. 14)

14.1 Length

- 0.34 miles

14.2 Start and End Location (estimated using Milepost Locator map)

- Start: Milepost 228.71
- End: Milepost 229.11

14.3 Hazard Information

Dam/Levee Breach

- Exposed maximum inundation depth: 35.1 ft

Fluvial Flooding

- The entire segment is located in the 100-year and 500-year flood plain

Landslides

- Highest landslide susceptibility: 9.09 out of 81 (the higher value represents higher landslide risks)

Seismic

- The entire road segment is exposed to peak ground acceleration (PGA-975) of 0.44g

14.4 Roadway Classification

- Interstate

North Cascades Highway (No. 15)

15.1 Length

- 5.15 miles

15.2 Start and End Location

- Start: Baker Lake Road
- End: Grassmere Road

15.3 Hazard Information

Coastal Flooding

- 2080: 100% of the bridges are exposed to the maximum flood depth of 1.49 ft

Dam/Levee Breach

- Exposed maximum inundation depth: 169.4 ft

Fluvial Flooding

- 13% of the road segment is located in the 100-year and 30% of the road segment is located in the 500-year flood plain

Landslides

- Highest landslide susceptibility: 18.69 out of 81 (the higher value represents higher landslide risks)

Seismic

- The road segment is exposed to peak ground acceleration (PGA-975) of 0.31g to 0.33g

15.3 Roadway Classification

- Minor Arterial

15.4 Supplemental Note: South Skagit Highway

- South Skagit Highway functions as a parallel roadway to North Cascades Highway and faces similar hazard impacts. If SR 20 or North Cascades Highway is impacted during a hazard event, South Skagit Highway becomes vitally important to transportation redundancy. South Skagit Highway has been identified as a detour for traffic rerouting from SR 20 during hazard events. South Skagit Highway should be considered for comparable resilience improvements with North Cascades Highway.

Josh Wilson Road (No. 16)

16.1 Length

- 0.84 miles

16.2 Start and End Location

- Start: East of Avon Allen Road
- End: Pulver Road

16.3 Hazard Information

Dam/Levee Breach

- Exposed maximum inundation depth: 25.0 ft

Fluvial Flooding

- The entire segment is located in the 100-year and 500-year flood plain

Seismic

- The road segment is exposed to peak ground acceleration (PGA-975) of 0.43g to 0.44g

16.4 Roadway Classification

- Minor Arterial

SR 20 (No. 17)

17.1 Length

- 0.41 miles

17.2 Start and End Location

- Start: Higgins Airport Way
- End: Bradshaw Road

17.3 Hazard Information

Dam/Levee Breach

- Exposed maximum inundation depth: 17.3 ft

Fluvial Flooding

- The entire segment is located in the 100-year and 500-year flood plain

Seismic

- The road segment is exposed to peak ground acceleration (PGA-975) of 0.45g to 0.46g

Liquefaction

- The entire road segment is exposed to high liquefaction susceptibility

17.4 Roadway Classification

- Principal Arterial

SR 534 (No. 18)

18.1 Length

- 2.99 miles

18.2 Start and End Location

- Start: Estate Drive
- End: SR 9

18.3 Hazard Information

Landslides

- Highest landslide susceptibility: 33.14 out of 81 (the higher value represents higher landslide risks)

Seismic

- The road segment is exposed to peak ground acceleration (PGA-975) of 0.44g to 0.45g

18.4 Roadway Classification

- Major Collector

West Big Lake Boulevard (No. 19)

19.1 Length

- 2.37 miles

19.2 Start and End Location

- Start: West Lakeview Lane
- End: SR 9

19.3 Hazard Information

Fluvial Flooding

- 2% of the road segment is located in the 100-year and 500-year flood plain

Landslides

- Highest landslide susceptibility: 40.94 out of 81 (the higher value represents higher landslide risks)

Seismic

- The road segment is exposed to peak ground acceleration (PGA-975) of 0.42g to 0.43g

19.4 Roadway Classification

- Minor Collector

Avon Allen Road (No. 20)

20.1 Length

- 0.89 miles

20.2 Start and End Location

- Start: Benson Road
- End: North of Josh Wilson Road

20.3 Hazard Information

Dam/Levee Breach

- Exposed maximum inundation depth: 24.1 ft

Fluvial Flooding

- The entire segment is located in the 100-year and 500-year flood plain

Seismic

- The entire road segment is exposed to peak ground acceleration (PGA-975) of 0.44g

20.4 Roadway Classification

- Major Collector

Exhibit B

Skagit County HMP 2026 Volume 2

Skagit County Multi-Jurisdictional Hazard Mitigation Plan 2026 Update

Volume 2 – Municipal and Tribal Jurisdiction Annexes

Nature's Fury created by Chat GPT

Adopted: DATE

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Executive Summary

Hazard mitigation is the short- and long-term strategies that aim to reduce or alleviate the loss of life, personal injury, and property damage that can result from a disaster. It involves strategies such as planning, policy changes, programs, projects, and other activities that can mitigate the impacts of hazards. Mitigation planning provides a basis for risk reduction investments that increase community resilience to future hazard events. The planning process involves various stakeholders and public involvement, including property owners, business owners, and local, state, and federal agencies representatives to guide planning for resilience, land use, and economic development.

A planning partnership made up of Skagit County, local government, Tribes, Fire Districts, Dike and Drainage Districts, and a few special districts worked together to complete this plan. We appreciate their time and effort to make this plan usable as a guide for current and future projects to increase our community resilience. Each of the partner agencies has an Annex with analysis and mitigation actions for their jurisdiction.

Updates from the 2020 Natural Hazard Mitigation Plan include adding man-made disasters, making this an all-hazards plan, and expanding the planning partners to include Fire Districts.

Information regarding hazard history was already completed by mid 2025. Events happening after that (including the flooding event in December 2025), while influencing some jurisdiction Annex mitigation actions, were not included in this update.

Volume 1 is hazard descriptions, county-wide goals and County mitigation actions. Volume 2 is municipal and tribal governments. None of the jurisdictions in Volume 3 have National Flood Insurance Program or land use code authority.

Skagit County and its planning partners thank and acknowledge the Washington Military Department's Emergency Management Division and the Federal Emergency Management Agency (FEMA) for financial support of the plan development through the Hazard Mitigation Grant Program.

Annex 1 City of Anacortes

Introduction

This Annex details the hazard mitigation planning elements specific to the City of Anacortes, a participating jurisdiction to the Skagit County Hazard Mitigation Plan Update. This Annex is not intended to be a standalone document, but rather appends to and supplements the information contained in the base plan document. As such, all sections of the base plan, including the planning process and other procedural requirements apply to and were met by the City of Anacortes. For planning purposes, this Annex provides additional information specific to the jurisdiction, with a focus on providing greater details on the risk assessment and mitigation strategy for this community only. This document serves as an update to the previously completed plan. All relevant data has been carried over and updated with new information as appropriate and as identified within the planning process discussed in Volume 1.

Hazard Mitigation Planning Team Point/s of Contact

The City of Anacortes followed the planning process detailed in Section 2 of the Base Plan. In addition to providing representation on the County's Planning Team, the City of Anacortes also formulated their own internal planning team to support the broader planning process. Individuals assisting in this Annex development are identified in **Table 1** below, along with a brief description of how they participated.

Table 1. Local Planning Team Members

Name	Position, Title	Planning Tasks
Bill Harris	Fire Chief/Emergency Manager	Coordinate functions throughout jurisdiction
Andy Rheaume	Public Works Director	Review, comment, and update
Rob Frisinger	Building Official	Review, comment, and update

Public Engagement

The City of Anacortes engaged the public through the following means:

- Public workshop held in Anacortes on September 9th, 2025.
- Responses from local respondents to the County's public survey collected between July 2025 and August 2025

- Responses from Proposed Mitigation Actions Survey collected October 2025 to November 2025

Suggestions and responses from the engagement activities were taken into consideration in the preparation of this Plan.

Review of Existing Documents

For this process the City of Anacortes reviewed the previous versions of the Hazard Mitigation Plan as well as the Comprehensive Plan. The Whistle Lake Dam Hydraulic Analysis report dated June 2025 by Watershed Science & Engineering was also reviewed.

Community Profile

The following is a summary of key information about the jurisdiction and its history:

Date of Incorporation— 1891

Current Population— 18,121

Population Growth— Anacortes has grown steadily over the past 20 years, according to U.S. Census and Washington State Office of Financial Management (OFM) data. The city's population increased from approximately 14,557 in 2000 (U.S. Census) to 17,637 in 2020, representing a 21% increase over two decades. Based on OFM April 1, 2025 population estimates, the population has continued to rise since the 2020 Census, reaching 18,350 in 2025

Location and Description— The City of Anacortes is located in western Skagit County on the northern portion of Fidalgo Island and encompasses approximately 15 square miles (9,800 acres). The city features about 20.4 miles of saltwater shoreline along Burrows Bay, Guemes Channel, Fidalgo Bay, and Padilla Bay. Nearly half of Anacortes' land area is dedicated to parks and the Anacortes Community Forest Lands, a forested preserve of nearly 3,000 acres that includes wetlands, meadows, and extensive trail systems. The city contains four freshwater lakes—Little Cranberry Lake, Heart Lake, Whistle Lake, and a portion of Lake Erie—that contribute to local recreation and habitat. Elevations within the city range from sea level to 1,273 feet at the summit of Mount Erie, the highest point on Fidalgo Island.

For thousands of years before incorporation, the area now known as Anacortes was home to Coast Salish peoples, including the Samish, who relied on the abundant marine and terrestrial resources. In 1855, representatives of the tribes signed the Treaty of Point Elliott, ceding large tracts of land while reserving fishing and hunting rights and establishing reservations such as Swinomish and Lummi. American and European settlement increased in the late 19th century, and a real estate boom occurred around 1890 based on speculation that Fidalgo Island would become the western terminus of a transcontinental railroad. Anacortes was incorporated in 1891, and although a local electric railway began operation, the failure to secure the railroad terminus caused the boom to collapse by

the early 1890s. The city's economy through the 1890s was based on lumber, fishing, and canneries until the mid-20th century, when these industries began to decline. During the 1950s, two oil refineries were built on March Point, reshaping the local economy. Today, Anacortes is the largest seaport in Skagit County and the county's second-largest city. A note of clarification: the Treaty of Point Elliott did not specifically reserve any portion of Fidalgo Island for reservation use.

Climate— Anacortes, Washington, has a marine west coast climate characterized by mild, wet winters and cool, relatively dry summers. Located on Fidalgo Island, the city experiences moderate temperatures year-round, with average highs ranging from the mid-40s °F (around 7°C) in winter to the mid-70s °F (about 24°C) in summer. Annual precipitation averages around 30 to 35 inches, mostly occurring between October and March, while summers tend to be sunnier and drier. Seasonal prevailing winds shift from southeast in winter to southwest in summer, influenced by Pacific Ocean airflows and local geographic features. Winter conditions can bring occasional strong winds and moderate snowfall, but overall weather remains relatively mild. This climate supports the region's evergreen forests and marine ecosystems and is classified as warm-summer Mediterranean, typical of coastal Pacific Northwest areas. These characteristics are documented by data from the National Oceanic and Atmospheric Administration and the Western Regional Climate Center.

Governing Body Format— The City of Anacortes operates under a strong mayor–council form of government. The governing body consists of a Mayor and seven City Council members, who are responsible for establishing policy and providing oversight of the city's various departments.

Development Trends— Over the past two decades, Anacortes has seen development primarily in single-family residential housing, which accounts for approximately 24% of the city's land use, while multifamily residential development remains limited at around 2%. Significant undeveloped or underutilized commercial and industrial lands include the central Fidalgo Bay area—commonly referred to as the MJB Property—located between 17th and 34th Streets east of R Avenue, and industrial zones adjacent to State Route 20 extending from Reservation Road to Sharpe's Corner. The MJB Property, a former industrial site represents a key redevelopment opportunity emphasized in the City's 2025 Comprehensive Plan draft, aiming to support mixed-use development, increase public access to the waterfront, and foster economic revitalization. The city's unincorporated Urban Growth Area encompasses two refineries on March Point, along with vacant and partially developed land and scattered industrial uses along Padilla Heights Road.

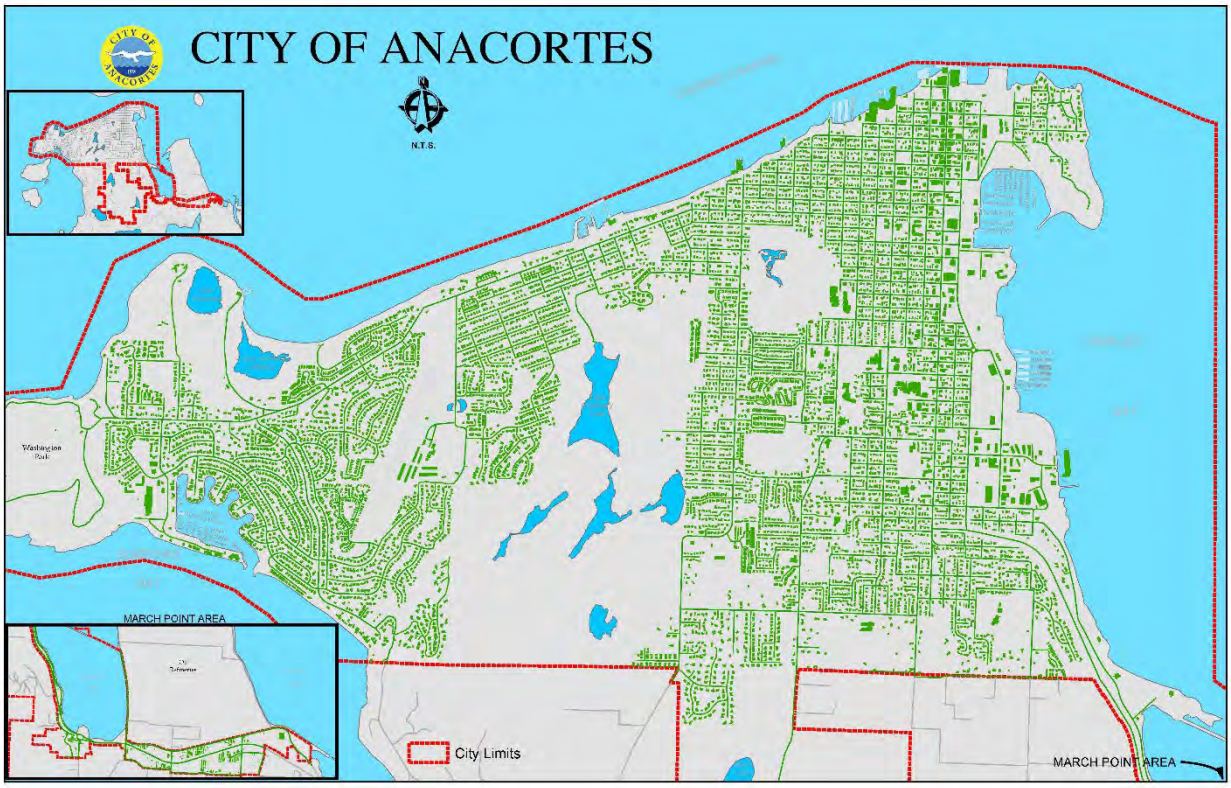
Population projections indicate growth to approximately 22,293 residents by 2036. To accommodate this, the 2025 Comprehensive Plan draft includes updates to zoning and land use policies designed to encourage higher-density residential and mixed-use developments, particularly in proximity to downtown and Commercial Avenue. The plan also prioritizes infill development in lower-density residential neighborhoods to address housing affordability and diversity objectives.

Since 2014, Anacortes has undertaken numerous street and roadway projects designed to improve stormwater management. New infrastructure incorporates enhanced curbing, drainage systems, and runoff control features that effectively manage stormwater flows and protect local waterways. As the

city is responsible for its own street maintenance and stormwater system, proactive efforts have been made to reduce runoff-related issues such as erosion and localized drainage problems. The city's updated Planning, Zoning, and Development guidelines, adopted in 2019, incorporate best practices consistent with State and Federal regulations to regulate land use and minimize stormwater impacts associated with new development. Staff from Public Works and Planning, Community & Economic Development departments—including engineers, planners, and surveyors—continually assess stormwater infrastructure and implement solutions to protect the environment while supporting sustainable growth. These coordinated efforts have enhanced stormwater management capacity without introducing new vulnerabilities related to recent development.

Economy – The economy of Anacortes is multifaceted, with a strong emphasis on tourism, maritime industries, and small business development. Tourism plays a vital role, supported by the city's natural beauty, parks, waterways, and abundant outdoor recreational opportunities. Visitors are attracted to activities such as boating, whale watching, hiking, and cultural events, which sustain a vibrant hospitality sector including hotels, restaurants, and retail businesses. Maritime industries also contribute significantly, with commercial fishing, boat building, and marine services centered in the city's active port facilities. While the nearby March Point oil refineries lie outside city limits, Anacortes focuses on diversifying its economy by revitalizing the downtown commercial district and fostering small business growth through updated planning and economic development initiatives.

The jurisdiction boundaries are identified in the map below.



Hazard Event History

Within the Base Plan, the Planning Team identified all hazard events which have occurred within the City of Anacortes. In the context of the planning region, it was determined that there are no additional hazards unique to the jurisdiction. **Table 2** lists all past occurrences of hazards within the jurisdiction. If available, dollar loss data is also included.

Table 2. Previous Hazard Occurrences

Type of Event	FEMA Disaster # (if available)	Date	Dollar Losses (if available)
Wildfire in the Anacortes City Forest Lands	N/A	08/2016	None
COVID-19 Pandemic	DR-4481-WA	March 2020 – 7/30/2025	Unknown – Federal assistance received (e.g., CARES Act, ARPA funds)
Flooding – Water Treatment Plant	None	January 2022	Approx. $50,000 (equipment and operations impacted)
Wildfire – Cranberry Lake Forest Lands	None	August 2016	Minimal – No structures damaged

The recorded history of hazard events, as mentioned above, can indicate what the likelihood would be of a hazard occurring in the future. **Table 3** below is the rating for probability of hazards according to the parameters described in Volume 1.

Table 3. Probability of Future Hazards Occurrence		
Hazard	**Impact Factor**	**Impact ID**
Coastal Hazards	Medium	3
Drought	Low	2
Earthquake	Low	2
Flooding	Low	2
Landslides	Medium	3
Severe Weather	High	4
Tsunami	Low	2
Volcano	Low	2
Wildfire	Medium	3
Acts of Violence	Medium	3
Hazardous Material Spill or Release	Medium	3
Disease	Medium	3
Bridge/Road Failure	Low	2
Power/Water System Failure	Low	2
Dam Failure	Low	2
Other hazards		

Hazard Area Extent and Location

This section describes the type, location, and extent of all hazards that can affect the jurisdiction

Table 4. Geographic Extent		
Hazard Type	Impact Factor	Impact ID
Coastal Hazards	Moderate	2
Drought	Extensive	4
Earthquake	Extensive	4
Flooding	Moderate	2
Landslides	Limited	1
Severe Weather	Extensive	4
Tsunami	Moderate	2
Volcano	Extensive	4
Wildfire	Moderate	2
Acts of Violence	Limited	1

Hazardous Material Spill or Release	Moderate	2
Disease	Extensive	4
Bridge/Road Failure	Extensive	4
Power/Water System Failure	Extensive	4
Dam Failure	Limited	1
Other hazards		

Hazard Risk and Vulnerability Ranking

The jurisdiction's Planning Team reviewed the hazard list identified within the Base Plan and identified hazards that are most likely to have the highest impact within the City of Anacortes. **Table 5** presents the ranking of the hazards of concern based on their CPRI score. A qualitative vulnerability ranking was then assigned based on a summary of potential impact determined by: past occurrences, extent, damage, casualties, and continuity of government. The assessment is categorized into the following classifications:

- **Extremely Low** – No or very limited impact. The occurrence and potential cost of damage to life and property is very minimal-to-nonexistent. No impact to government functions with no disruption to essential services.
- **Low (Negligible)** – Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal. Government functions are at 90% with limited disruption to essential services.
- **Medium (Limited)** – Moderate potential impact. This ranking carries a moderate threat level to the general population and /or built environment. The potential damage is more isolated, and less costly than a more widespread disaster. Government functions are at 80% with limited impact to essential services.
- **High (Critical)** – Widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread. Hazards in this category may have occurred in the past. Government functions are at ~50% operations with limited delivery of essential services.
- **Extremely High (Catastrophic)** – Very widespread with catastrophic impact. Government functions are significantly impacted for more than one month.

Table 5. Vulnerability Ranking by Hazard Type

Hazard Rank	Hazard Type	CPRI Score	Vulnerability Rank
1	Severe Weather	3.25	High
2	Power/Water System Failure	2.85	High
3	Disease	2.85	Medium

4	Earthquake	2.80	Extremely High
5	Bridge/Road Failure	2.70	Medium
14	Wildfire	2.60	Low
7	Hazardous Material Spill or Release	2.60	Medium
8	Coastal Hazards	2.55	Medium
9	Volcano	2.45	High
10	Tsunami	2.30	Medium
11	Drought	2.25	Low
12	Acts of Violence	2.15	Low
13	Landslides	2.10	Low
6	Dam Failure	2.85	Medium
15	Flooding	1.85	Low
16			

National Flood Insurance Information (NFIP)

This section identifies the number of repetitive loss or severe repetitive loss properties which have occurred within the City of Anacortes as specified in 44 CFR 201.6(c)(3)(ii). A repetitive loss (RL) property is defined as a structure covered by a contract for flood insurance made available under the NFIP that:

(i) Has incurred flood-related damage on two occasions, in which the cost of the repair, on the average, equaled or exceeded 25 percent of the market value of the structure at the time of each such flood event; and
(ii) At the time of the second incidence of flood-related damage, the contract for flood insurance contains increased cost of compliance coverage.

A severe repetitive loss (SRL) property is a structure that:

(i) Is covered under a contract for flood insurance made available under the NFIP; and
(ii) Has incurred flood related damage for which:
    a. Four or more separate claims payments (includes building and contents) have been made under flood insurance coverage with the amount of each such claim exceeding $5,000, and with the cumulative amount of such claims payments exceeding $20,000, or
    b. At least two separate claims payments (includes only building) have been made under such coverage, with the cumulative amount of such claims exceeding the market value of the insured structure.

The City of Anacortes entered the NFIP on 09/17/2003. The effective date for the current countywide FIRM is December 1, 1981. There is one Letter of Map Amendments issued by FEMA for removal of properties erroneously identified as being within the floodplain.

Since 2003, no structures within Anacortes have been removed, in which the land is being returned to native habitat, further reducing risk. There have been no permits granted for permanent structures that increase flood risk since 2014.

The two outstanding compliance violations at the time of this writing do not impact the flood risk since the time of the last Natural Hazard Mitigation Plan approval (one is a ground disturbance issue; one is a 2003 building with approved flood openings). By complying with the NFIP standards, risk in the City of Anacortes has been reduced.

Management of the NFIP program for the City of Anacortes falls on many shoulders. The City of Anacortes does have a floodplain manager. The Director of Planning, Community and Economic Development is a Certified Floodplain Manager. Building permits and flood development permits go through the Building Official, who has experience with floodplain properties and also does the permit inspections.

As a brief overview, the only development currently permitted in the floodplain is not allowed to raise ground levels and cannot increase the amount of water on neighbors during flood events. Developing property, all or a portion of which is in a regulated floodplain, requires a Floodplain Development Permit. This permit identifies the specific requirements for each proposed project. Prior to Floodplain Permit release, all plans must be reviewed to ensure that they meet the requirements of the Flood Ordinance. For purposes of development, development includes, but is not limited to: buildings, homes, manufactured and mobile homes, other structures, bridges, culverts, dredging, filling, grading, paving, excavation, docks, etc. Structures may also require floodproofing under the ordinance, which requires that residential homes be elevated above the level of the base flood elevation (BFE) and commercial structures have the option to flood proof above the BFE. A licensed engineer must design the flood proofing. The flood ordinance also requires Elevation Certificates. The purpose for an Elevation Certificate is to document compliance with permit conditions as Elevation Certificates are the only official document used by FEMA to determine whether a structure is inside or outside a floodplain, and are also used to determine the proper rate when purchasing flood insurance. Elevation Certificates must be completed and stamped by a surveyor licensed in the State of Washington. Properties that fall out of compliance with NFIP standards are dealt with using the same process as nuisance violations, which are administered by code enforcement.

Additional information on the community's National Flood Insurance Program (NFIP) compliance is presented in **Table 6**. This identifies the current status of the jurisdiction's involvement with the NFIP. Repetitive flood loss records are as follows:

- Number of FEMA-Identified Repetitive Loss Properties: 0
- Number of FEMA-Identified Severe Repetitive Loss Properties: 0
- Number of Repetitive Flood Loss/Severe Repetitive Loss Properties That Have Been Mitigated: 0
- Total FEMA payments: $ 0

Table 6. National Flood Insurance Compliance	
What department is responsible for floodplain management in your community?	PCED
Who is your community's floodplain administrator? (department/position)	Rob Frisinger
Do you have any certified floodplain managers on staff in your community?	John Coleman
What is the date of adoption of your flood damage prevention ordinance?	2005 first adoption, 7/11/2022 last amendment
When was the most recent Community Assistance Visit or Community Assistance Contact?	6/3/2020
To the best of your knowledge, does your community have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are.	No
Do your flood hazard maps adequately address the flood risk within your community? (If no, please state why)	No.
Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of assistance/training is needed?	
Does your community participate in the Community Rating System (CRS)? If so, is your community seeking to improve its CRS Classification? If not, is your community interested in joining the CRS program?	No
Source: Federal Emergency Management Agency	

Capability Assessment

Coordination with other community planning efforts is paramount to the successful implementation of this plan. This section provides information on how planning mechanisms, policies, and programs are integrated into other on-going efforts. It also identifies the jurisdiction's capabilities with respect to preparing and planning for, responding to, recovering from, and mitigating the impacts of hazard events and incidents.

Capabilities include the programs, policies and plans currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. The capabilities are divided into the following sections: National Flood Insurance Information; regulatory capabilities which influence mitigation; administrative and technical mitigation capabilities, including education and outreach, partnerships, and other on-going mitigation efforts; fiscal capabilities which support mitigation, and classifications under various community programs.

Regulatory Capability Assessment

The assessment of the jurisdiction's legal and regulatory capabilities is presented in **Table 7**. This includes planning and land management tools, typically used by local jurisdictions to implement hazard mitigation activities and indicates those that are currently in place.

Table 7. Legal and Regulatory Capability

	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Codes, Ordinances & Requirements				
Building Code IBC and IRC Version Year 2021				
Zoning Ordinance	Yes		Yes	AMC Title 19 Unified Development Code
Subdivision Ordinance	Yes		Yes	AMC Title 19 Unified Development Code
Floodplain Ordinance	Yes		Yes	AMC 17.70, Article II
Stormwater Management	Yes		Yes	AMC 19.76
Post Disaster Recovery	No		Yes	
Real Estate Disclosure	No			
Growth Management	Yes		Yes	Comp Plan
Site Plan Review	Yes		No	AMC Title 19 Unified Development Code
Public Health and Safety	Yes		Yes	
Coastal Zone Management	Yes		Yes	Shoreline Master Program
Climate Change Adaptation	Yes			
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire, etc.)	Yes		Yes	AMC 17.70, Article IV, Geologically Hazardous Areas Shoreline Master Program
Environmental Protection	Yes		Yes	AMC 18.04 State Environmental Policy Act AMC 17.70 Critical Areas Regulations Shoreline Master Program
Planning Documents				

Table 7. Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
General or Comprehensive Plan	Yes			Comp Plan
Is the plan equipped to provide linkage to this mitigation plan?				Yes, Policy EC-3.9
Floodplain or Basin Plan		Yes		
Stormwater Plan	Yes	No	Yes	
Capital Improvement Plan	Yes	No	Yes	Capital Facilities Plan
Habitat Conservation Plan	Yes	No	No	Anacortes Community Forestland Comprehensive Plan
Economic Development Plan	No	No	No	
Shoreline Management Plan	Yes	No	Yes	Shoreline Master Program
Community Wildfire Protection Plan	Yes	No	No	As part of the HMP update process, this serves as our wildfire chapter.
Transportation Plan	Yes	No	Yes	Anacortes Comp Plan
Response/Recovery Planning				
Comprehensive Emergency Management Plan	Yes		Yes	
Threat and Hazard Identification and Risk Assessment	Yes		Yes	
Terrorism Plan	Yes		Yes	
Post-Disaster Recovery Plan	No		Yes	
Continuity of Operations Plan	Yes			
Public Health Plans	Yes	Yes	Yes	Skagit County Provided
Boards and Commission				
Planning Commission	Yes			
Mitigation Planning Committee	Yes			The City participated in the 2015 and the 2020 update to the Hazard Mitigation Plan as a Committee Member. In accordance with the Plan Maintenance Strategy, the City will remain a member in good standing on the Committee, and will assist as necessary to ensure the HMP remains a viable document.

Table 7. Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems, chipping, etc.)	Yes		Yes	
Mutual Aid Agreements / Memorandums of Understanding	Yes	Yes	Yes	
Other				

Administrative and Technical Capabilities Assessment

The assessment of the jurisdiction's administrative and technical capabilities, including educational and outreach efforts, and on-going programmatic efforts are presented in **Table 8**. These are elements which support not only mitigation, but all phases of emergency management already in place that are used to implement mitigation activities and communicate hazard-related information.

Table 8. Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	PW/PCED
Professionals trained in building or infrastructure construction practices (building officials, fire inspectors, etc.)	Yes	PW/PCED
Engineers specializing in construction practices?	Yes	PW
Planners or engineers with an understanding of natural hazards	Yes	PW/PCED
Staff with training in benefit/cost analysis	Yes	PW
Surveyors	Yes	PW
Personnel skilled or trained in GIS applications	Yes	PW
Personnel skilled or trained in Hazus use	No	
Scientist familiar with natural hazards in local area	No	
Emergency Manager	Yes	
Floodplain Manager (NFIP compliance)	Yes	John Coleman

Table 8. Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Grant writers	No	
Warning Systems/Services (Reverse 9-1-1, outdoor warning signs or signals, flood or fire warning program, etc.?)	Yes	Skagit County DEM
Hazard data and information available to public	Yes	Fire/Planning
Maintain Elevation Certificates	Yes	PCED
Education and Outreach		
Local citizen groups or non-profit organizations focused on emergency preparedness?	YES	AFD, CERT, SAREC, Red Cross
Local citizen groups or non-profit organizations focused on environmental protection?	Yes	Friends of the Forest Lands
Organization focused on individuals with access and functional needs populations	Yes	AFD/AFC Outreach
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	AFD, Stormwater
Natural disaster or safety related school programs?	No	
Public-private partnership initiatives addressing disaster-related issues?	No	
Multi-seasonal public awareness program?	No	
Other		
On-Going Mitigation Efforts		
Hazardous Vegetation Abatement Program	Yes	
Noxious Weed Eradication Program or other vegetation management	Yes	
Fire Safe Councils	No	
Chipper program	No	
Defensible space inspections program	Yes	Fire, Parks
Creek, stream, culvert or storm drain maintenance or cleaning program	Yes	PW, Parks
Stream restoration program	No	

Table 8. Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Erosion or sediment control program	Yes	PW
Address signage for property addresses	Yes	PW
Other		

Fiscal Capability Assessment

The assessment of the jurisdiction's fiscal capabilities is presented in **Table 9**. These are the financial tools or resources that could potentially be used to help fund mitigation activities.

Table 9. Fiscal Capability	
Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	Yes
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	

Community Classifications

The jurisdiction's classifications under various hazard mitigation programs are presented in **Table 10**. Each of the classifications identified establishes requirements which, when met, are known to increase the resilience of a community.

Table 10. Community Classifications		
	Participating (Yes/No)	Date Enrolled

Community Rating System	Yes	Unk
Building Code Effectiveness Grading Schedule	5	
Storm Ready	No	
Firewise	Yes	2003
Tsunami Ready (if applicable)	Yes	2003

Mitigation Goals and Objectives

This section identifies the mitigation goals, policies, and implementation actions for the updated HMP. The measures described below aims to identify, prioritize, and act to reduce risk. They are visions for reducing or avoiding losses from the identified hazards over a broad, long-term time frame.

Hazard Mitigation Action Plan

The Planning Team for the jurisdiction identified and prioritized a wide range of actions based on the risk assessment, and their knowledge of the jurisdiction's assets and hazards of concern. The table below lists the action items or strategies that make up the jurisdiction's hazard mitigation plan. Background information and information on how each action item will be administered, responsible agency/office (including outside the district), potential funding sources, the timeframe, who will benefit from the activity, and the type of initiative associated with each item are also identified Prioritization of Mitigation Initiatives

Once the mitigation initiative items were identified, the Planning Team followed the same process outlined within Volume 1 to prioritize their initiatives. Table 11 identifies each initiative based on priority, where the highest priority initiative is listed at the top.

The City's top priority Initiative 1 focuses specifically on evaluating and strengthening the resilience of Whistle Lake Dam. The City of Anacortes commissioned Watershed Science & Engineering to better understand the potential consequences of a dam failure and to evaluate how the dam performs during very large storm events. As noted by the Washington State Department of Ecology in its 2017 Periodic Inspection Letter-Report for Whistle, Lake Dam, the dam is aging, constructed of earth, and its existing condition assessment is considered to be Poor. While the dam is not currently failing, a failure could result in significant downstream impacts.

In the Whistle Lake Dam Hydraulic Analysis report dated June 2025 by Watershed Science & Engineering, Engineers modeled a worst-case dam failure scenario using two accepted methodologies. Their analysis found that, in the event of a failure, floodwater would move downstream rapidly, reaching nearby areas within approximately 20 to 25 minutes. The modeling indicates that four homes could be affected, placing an estimated 12 people at risk. Based on these findings, the dam is classified as Hazard Class 1C (High Hazard), which requires the highest level of safety standards under state regulations.

In addition, engineers evaluated the dam's performance under several extreme storm scenarios to assess potential lake level rise. Even during the most severe modeled storm event, the lake level remained approximately 2.75 feet below the top of the dam, indicating that overtopping would not occur under current conditions. However, the spillway, which allows water to flow out of the lake, is only capable of safely passing approximately 640 cubic feet of water per second, which is limited.

Overall, Watershed Science & Engineering analysis concluded that while the dam meets required safety standards for extreme storm events under current regulatory criteria, the consequences of a failure would be severe due to the speed and force of downstream flooding. Given the potential risk to people and property, state regulations require the City to apply the most conservative design standards (Design Step 5). These findings support the continued evaluation and implementation of mitigation measures, such as dam reconstruction or reinforcement, to reduce long-term risk and improve overall resiliency.

Table 11.
Mitigation Strategy and Priority Schedule

Priority No.	# of Objectives met	Hazards Mitigated[1]	Lead Agency	Can project be funded under existing programs/ budgets?	Estimated Cost	Is Project Grant Eligible? Yes/No	Timeframe	Included in Previous Plan? Yes/No	Who or What Benefits
[1]Hazards: Coastal Hazard-CZ/ Drought-D/ Earthquake-EQ/ Flooding-Fl/ Landslide-LS/ Severe Weather-SW / Volcano-Vol/ Wildfire-WF/ Tsunami-T/ Acts of Violence-AV/ Hazardous Sites or Materials Spill-HazMat/ Disease-D/ Dam Failure-DF/ Infrastructure Failure-IF									
[INITIATIVE/ACTION # 1 Evaluate/Strengthen the resiliency of Whistle Lake Dam									
1	1,8,9	EQ, SW, DF	COA	No	High	Yes	Long Term	No	Local
[INITIATIVE/ACTION # 2 Shore-Up City facilities and Buildings for Seismic/Structural Protection									
2	1,4, 8	EQ	COA	No	High	Yes	Long Term	Yes	Facility, Local
[INITIATIVE/ACTION # 3 Develop/enhance a system to manage stormwater runoff, increase potable water pipelines and replace/upgrade outdated water/wastewater infrastructure and water/wastewater treatment plants, including storm system restoration/upgrade and pond restoration.									
3	1,7,8	CZ, Fl, SW, T	COA	No	High	Yes	Long Term	Yes	Local
[INITIATIVE/ACTION # 4 Provide protection for steep slopes (land slide)									
4	1,8,9	LS, SW, T	COA	No	Medium	Yes	Long Term	Yes	Local, County
[INITIATIVE/ACTION # 5 Flood protection for water treatment plant and emergency generator									
5	1,7,8,9	Fl, IF	COA	Yes	Medium	Yes	Long Term	Yes	Local
[INITIATIVE/ACTION # 6 Fire protection of municipal buildings									
6	1,8,9	EQ, WF, AV	COA	Yes	Medium	Yes	Long Term	Yes	Facility, Local
[INITIATIVE/ACTION # 7 Reduce community risks associated with wildfire									
7	1,4,5,7,8	LS,SW, WF	COA	Yes	Low	Yes	Long Term	no	Local County

Status of Previous Plan Initiatives

Table 12 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 12.
Current Status of Previous Hazard Mitigation Action Plan

Mitigation Strategy	Project Status	Completed	Continual/ On-Going Nature	Removed/ No Longer Relevant/ No Action	Carried Over
Install Tsunami Sirens/Signs	Completed	☒	☐	☐	☐
Shore Up City Facilities	No progress	☐	☐	☐	☒
Enhance Communications Countywide	Removed	☐	☐	☒	☐
Construct an EOC Building	Removed	☐	☐	☒	☐
Develop Enhance Water Systems	In-progress	☐	☐	☐	☒
Provide Protection for Steep Slopes	No progress	☐	☐	☐	☒
Flood Protection for Water Treatment Plan	No progress				x
Fire Protection for Municipal Buildings	No progress				x
Install Alternate Fuel Source for Generators	Removed			x	

Plan Maintenance and Updates

The City of Anacortes continues to seek feedback from members of the public, even after the plan has been approved.

The criteria below will be utilized to evaluate the plan:

- Continually evaluate plan for effectiveness by utilizing the annual progress report. This should be conducted once a year or after a disaster by the Skagit County Department of Emergency Management (DEM) and/or lead annex partner.
- Utilize an annual progress report to track implementation and effectiveness of mitigation initiatives and their actions. This should be conducted once a year by DEM personnel.
- Conduct regular check-ins with stakeholders and partner agencies by DEM personnel.
- Review and revise the plan at least once every five years by DEM personnel and lead annex partner.

County staff at the Department of Emergency Management will be the primary agency responsible for maintaining the plan and monitoring mitigation initiatives. Staff will utilize the report provided in **Volume 3 Appendix C** to track progress. The report will also include sections to document any changes that have been made to initiatives, outreach efforts, hazard mapping, Countywide development changes, successful implementation instances, and other changes relevant to the HMP.

The City of Anacortes has not experienced recent changes in development in hazard-prone areas.

Plan Adoption

The City of Anacortes provides proof of documentation that the City Council/Board of Commissioners has formally adopted the plan under Resolution XX pursuant to 44 CFR § 201.6(c)(5).

Annex 2 City of Burlington

Introduction

This Annex details the hazard mitigation planning elements specific to the City of Burlington, a participating jurisdiction to the Skagit County Hazard Mitigation Plan Update. This Annex is not intended to be a standalone document but rather appends to and supplements the information contained in the base plan document. As such, all sections of the base plan, including the planning process and other procedural requirements apply to and were met by the City of Burlington. For planning purposes, this Annex provides additional information specific to the jurisdiction, with a focus on providing greater details on the risk assessment and mitigation strategy for this community only. This document serves as an update to the previously completed plan. All relevant data has been carried over and updated with new information as appropriate and as identified within the planning process discussed in Volume 1.

Hazard Mitigation Planning Team Point/s of Contact

The City of Burlington followed the planning process detailed in Section 2 of the Base Plan. In addition to providing representation on the County's Planning Team, the City of Burlington also formulated their own internal planning team to support the broader planning process. Individuals assisting in this Annex development are identified in **Table 1** below, along with a brief description of how they participated.

Table 13. Local Planning Team Members

Name	Position, Title	Planning Tasks
Brad Johnson	Community Development Director	Provide technical assistance
		Review, comment, and update
Steven Riggs	Fire Department Operations Chief	Provide technical assistance
		Assist with developing mitigation strategies
		Present to city council for adoption

Public Engagement

The City of Burlington engaged the public through the following means:

- Direct mailer advertising the preparation of the HMP
- Social media, such as Facebook
- Jurisdiction's website: www.burlingtonwa.gov
- Public workshop held in Burlington on September 19th, 2025.

- Responses from local respondents to the County's public survey collected between July 2025 to September 2025.
- Responses from local respondents to the County's second round of the public survey collected from 23rd of October 2025 to 7th of November 2025.

Suggestions and responses from the engagement activities were taken into consideration in the preparation of this Plan.

Review of Existing Documents

City of Burlington Municipality Update (2019)

Community Profile

The following is a summary of key information about the jurisdiction and its history:

Date of Incorporation— 1902

Current Population— 11,100 as of 2025.

Population Growth— Population expected to be 14,272 in the year 2036.

Location and Description— Burlington is located in Skagit County in the State of Washington. The Skagit River forms the southern border of the City and separates Burlington from the City of Mount Vernon.

Brief History— Burlington was incorporated in 1902 and grew incrementally to its current size.

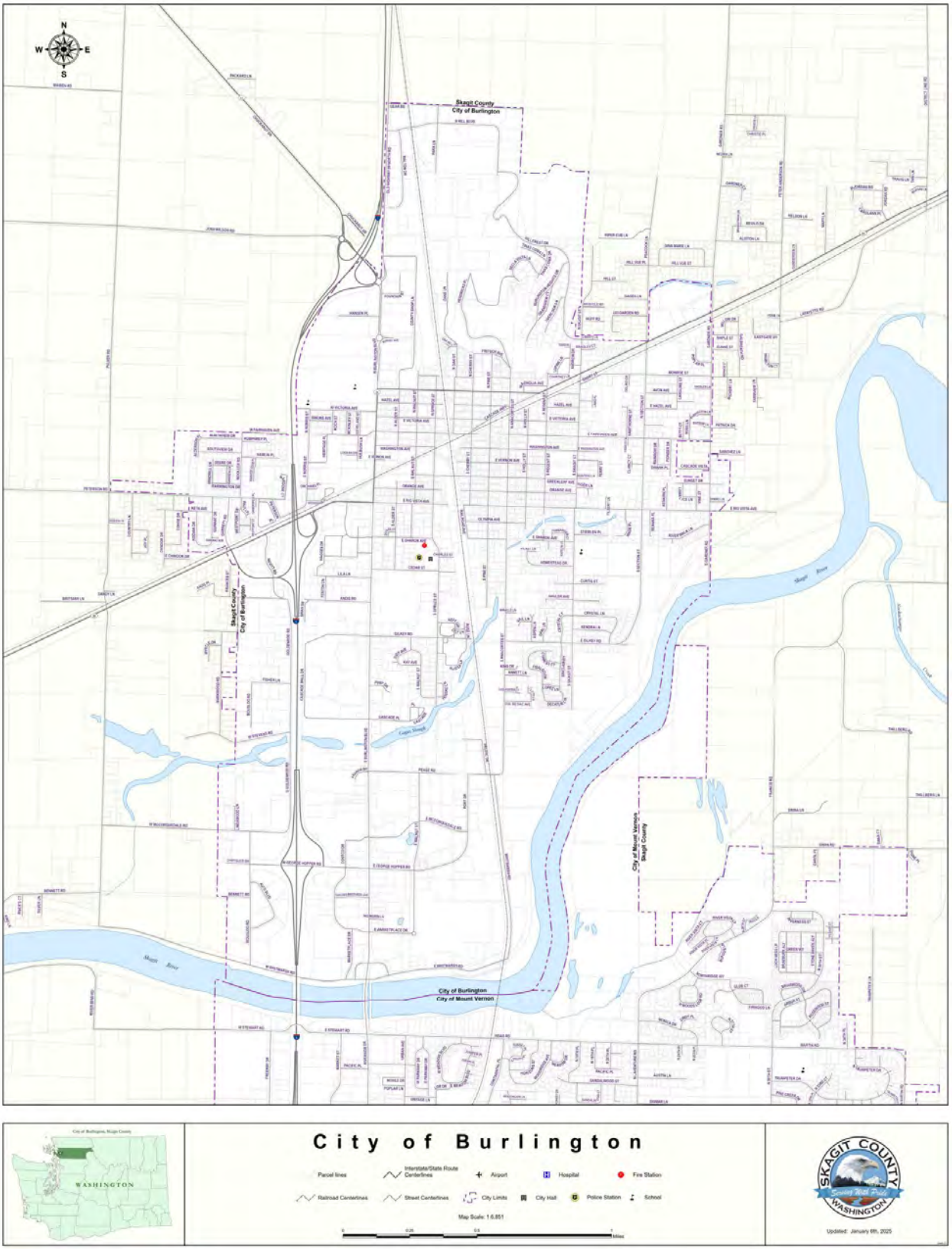
Climate— Burlington's climate is much like the climate in other parts of Skagit County.

Governing Body Format— Burlington is a City and is governed by a City Council and Mayor.

Development Trends— Burlington is growing. In 2036 the population is expected to be 14,272. In 2036 there will be approximately 13,412 employees working at businesses in Burlington.

Economy – The City of Burlington economic base consists of a variety of commercial enterprises including but not limited to retail sales and services; recreational and healthcare services; agricultural; and light manufacturing.

The jurisdiction boundaries are identified in the map below.



City of Burlington

Hazard Event History

Within the Base Plan, the Planning Team identified all hazard events which have occurred within the City of Burlington. In the context of the planning region, it was determined that there are no additional hazards unique to the jurisdiction. **Table 2** lists all past occurrences of hazards within the jurisdiction. If available, dollar loss data is also included.

Table 14. Previous Hazard Occurrences			
Type of Event	FEMA Disaster # (if available)	Date	Dollar Losses (if available)
Severe Storms, Flooding, Landslides, and Mudslides	4539	1/20/2020	Unknown
Flooding and Mudslides	4635	11/25/2021	$32,011,462
Severe Winter Storms, Snowstorms, Straight-line Winds, Flooding	4650	12/26/2021	$16,094,227

The recorded history of hazard events, as mentioned above, can indicate what the likelihood would be of a hazard occurring in the future. **Table 3** below is the rating for probability of hazards according to the parameters described in Volume 1.

Table 15. Probability of Future Hazards Occurrence		
Hazard	Impact Factor	Impact ID
Coastal Hazards	Unlikely	1
Drought	Likely	3
Earthquake	Likely	3
Flooding	Possible	2
Landslides	Unlikely	1
Severe Weather	Likely	3
Tsunami	Unlikely	1
Volcano	Possible	2
Wildfire	Unlikely	1
Acts of Violence	Possible	2
Hazardous Material Spill or Release	Likely	3
Disease	Possible	2
Bridge/Road Failure	Possible	2
Power/Water System Failure	Likely	3
Dam Failure	Unlikely	1
Other hazards*	Likely	3

*Other hazards: Military aircraft with ordinances, commercial passenger jet crash or train derailment, passenger or cargo (oil, coal, or another chemical)

Hazard Area Extent and Location

This section describes the type, location, and extent of all hazards that can affect the jurisdiction.

Table 16. Geographic Extent		
Hazard Type	Impact Factor	Impact ID
Coastal Hazards	Limited	1
Drought	Significant	3
Earthquake	Extensive	4
Flooding	Extensive	4
Landslides	Limited	1
Severe Weather	Significant	3
Tsunami	Limited	1
Volcano	Limited	1
Wildfire	Limited	1
Acts of Violence	Moderate	2
Hazardous Material Spill or Release	Moderate	2
Disease	Significant	3
Bridge/Road Failure	Moderate	2
Power/Water System Failure	Limited	1
Dam Failure	Limited	1
Other hazards*	Significant	3

*Other hazards: Military aircraft with ordinances, commercial passenger jet crash or train derailment, passenger or cargo (oil, coal, or another chemical)

Hazard Risk and Vulnerability Ranking

The jurisdiction's Planning Team reviewed the hazard list identified within the Base Plan and identified hazards that are most likely to have the highest impact within the City of Burlington. **Table 5** presents the ranking of the hazards of concern based on their CPRI score. A qualitative vulnerability ranking was then assigned based on a summary of potential impact determined by: past occurrences, extent, damage, casualties, and continuity of government. The assessment is categorized into the following classifications:

- **Extremely Low** – No or very limited impact. The occurrence and potential cost of damage to life and property is very minimal-to-nonexistent. No impact to government functions with no disruption to essential services.
- **Low (Negligible)** – Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal. Government functions are at 90% with limited disruption to essential services.
- **Medium (Limited)** – Moderate potential impact. This ranking carries a moderate threat level to the general population and /or built environment. The potential damage is more isolated, and less costly than a more widespread disaster. Government functions are at 80% with limited impact to essential services.
- **High (Critical)** – Widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread. Hazards in this category may have occurred in the past. Government functions are at ~50% operations with limited delivery of essential services.
- **Extremely High (Catastrophic)** – Very widespread with catastrophic impact. Government functions are significantly impacted for more than one month.

Table 17. Vulnerability Ranking by Hazard Type

Hazard Rank	Hazard Type	CPRI Score	Vulnerability Rank
1	Earthquake	3.40	High
2	Flood/Dam	2.85	Medium
3	Hazmat spill release	2.80	Medium
4	Severe weather	2.55	Medium
5	Bridge Road power failure	2.55	Medium
6	Drought	2.50	Medium
7	Disease	2.30	Medium
8	Other hazards	2.25	Medium
9	Act of Violence	2.00	Medium
10	Volcano	2.00	Medium
11	Wildfire	1.50	Low
12	Landslides	1.50	Low
13	Coastal hazard	1.35	Extremely Low
14	Tsunami	1.20	Extremely Low

National Flood Insurance Information (NFIP)

This section identifies the number of repetitive loss or severe repetitive loss properties which have occurred within the City of Burlington as specified in 44 CFR 201.6(c)(3)(ii). A repetitive loss (RL) property is defined as a structure covered by a contract for flood insurance made available under the NFIP that:

(iii) Has incurred flood-related damage on two occasions, in which the cost of the repair, on average, equaled or exceeded 25 percent of the market value of the structure at the time of each such flood event; and
(iv) At the time of the second incidence of flood-related damage, the contract for flood insurance contains increased cost of compliance coverage.

A severe repetitive loss (SRL) property is a structure that:

(iii) Is covered under a contract for flood insurance made available under the NFIP; and
(iv) Has incurred flood related damage for which:
    a. Four or more separate claims payments (includes building and contents) have been made under flood insurance coverage with the amount of each such claim exceeding $5,000, and with the cumulative amount of such claims payments exceeding $20,000, or
    b. At least two separate claims payments (includes only building) have been made under such coverage, with the cumulative amount of such claims exceeding the market value of the insured structure.

The City of Burlington entered the NFIP 1n 1985. The effective date for the current countywide FIRM is December 1, 1981. There is one Letter of Map Amendments issued by FEMA for removal of properties erroneously identified as being within the floodplain.

There have been no permits granted for permanent structures that increase flood risk since 2014.

The two outstanding compliance violations at the time of this writing do not impact the flood risk since the time of the last Natural Hazard Mitigation Plan approval (one is a ground disturbance issue; one is a 2003 building with approved flood openings). By complying with the NFIP standards, risk in the City of Burlington has been reduced.

Management of the NFIP program for the City of Burlington falls on many shoulders. The City of Burlington does not have a floodplain manager per se, but does have a contract with the County floodplain manager for work as needed. Building permits go through a different contractor, who has experience with floodplain properties and also does the permit inspections.

As a brief overview, the only development currently permitted in the floodplain is not allowed to raise ground levels and cannot increase the amount of water on neighbors during flood events. Developing property, all or a portion of which is in a regulated floodplain, requires a Floodplain Development Permit. This permit identifies the specific requirements for each proposed project. Prior to Floodplain Permit release, all plans must be reviewed to ensure that they meet the requirements of the Flood Ordinance. For purposes of development, development includes, but is not limited to: buildings, homes, manufactured and mobile homes, other structures, bridges, culverts, dredging, filling, grading,

paving, excavation, docks, etc. Structures may also require floodproofing under the ordinance, which requires that residential homes be elevated above the level of the base flood elevation (BFE) and commercial structures have the option to flood proof above the BFE. A licensed engineer must design the flood proofing. The flood ordinance also requires Elevation Certificates. The purpose for an Elevation Certificate is to document compliance with permit conditions as Elevation Certificates are the only official document used by FEMA to determine whether a structure is inside or outside a floodplain and are also used to determine the proper rate when purchasing flood insurance. Elevation Certificates must be completed and stamped by a surveyor licensed in the State of Washington. Properties that fall out of compliance with NFIP standards are dealt with using the same process as nuisance violations, which are administered by code enforcement.

Additional information on the community's National Flood Insurance Program (NFIP) compliance is presented in **Table 6**. This identifies the current status of the jurisdiction's involvement with the NFIP. Repetitive flood loss records are as follows:

- Number of FEMA-Identified Repetitive Loss Properties: None
- Number of FEMA-Identified Severe Repetitive Loss Properties: None
- Number of Repetitive Flood Loss/Severe Repetitive Loss Properties That Have Been Mitigated: None Community Development Director
- Total FEMA payments: $ XX

Table 18. National Flood Insurance Compliance	
What department is responsible for floodplain management in your community?	Community Development
Who is your community's floodplain administrator? (department/position)	Community Development Director
Do you have any certified floodplain managers on staff in your community?	No
What is the date of adoption of your flood damage prevention ordinance?	Unknown
When was the most recent Community Assistance Visit or Community Assistance Contact?	2017
To the best of your knowledge, does your community have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are.	Yes (various ESA documentation issues)
Do your flood hazard maps adequately address the flood risk within your community? (If no, please state why)	We're not in a position to answer this question as it requires us to make a conclusion based on information we don't have. I suspect the answer is NO. Nationwide flood hazard maps are thought to underestimate the risk posed by flooding. Floodplain maps for the City do not account for

	displacement effects of development and fill since the maps were adopted. The maps also don't consider the impacts of climate change. In all likelihood the probability of flooding, and the depth and spatial extent of the floodplain is greater than depicted on the current maps.
Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of assistance/training is needed?	Unknown
Does your community participate in the Community Rating System (CRS)? If so, is your community seeking to improve its CRS Classification? If not, is your community interested in joining the CRS program?	Yes, as of 2019 the City participates in the CRS program; however, due to budget constraints the City will not be actively participating in 2020.
Source: Federal Emergency Management Agency	

Capability Assessment

Coordination with other community planning efforts is paramount to the successful implementation of this plan. This section provides information on how planning mechanisms, policies, and programs are integrated into other on-going efforts. It also identifies the jurisdiction's capabilities with respect to preparing and planning for, responding to, recovering from, and mitigating the impacts of hazard events and incidents.

Capabilities include the programs, policies and plans currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. The capabilities are divided into the following sections: National Flood Insurance Information; regulatory capabilities which influence mitigation; administrative and technical mitigation capabilities, including education and outreach, partnerships, and other on-going mitigation efforts; fiscal capabilities which support mitigation, and classifications under various community programs.

Regulatory Capability Assessment

The assessment of the jurisdiction's legal and regulatory capabilities is presented in **Table 7**. This includes planning and land management tools, typically used by local jurisdictions to implement hazard mitigation activities and indicates those that are currently in place.

Table 19. Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Codes, Ordinances & Requirements				
Building Code Version Year	Yes			
Zoning Ordinance	Yes			
Subdivision Ordinance	Yes			
Floodplain Ordinance	Yes			
Stormwater Management	Yes			
Post Disaster Recovery	No			
Real Estate Disclosure	Yes			
Growth Management	Yes			
Site Plan Review	Yes			
Public Health and Safety				
Coastal Zone Management				
Climate Change Adaptation				
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire, etc.)	Yes			
Environmental Protection	Yes			
Planning Documents				
General or Comprehensive Plan *Is the plan equipped to provide linkage to this mitigation plan?*				Yes
Floodplain or Basin Plan	No			
Stormwater Plan	Yes			
Capital Improvement Plan	Yes			
Habitat Conservation Plan	No			
Economic Development Plan	No			
Shoreline Management Plan	Yes			

Table 19. Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Community Wildfire Protection Plan	No			
Transportation Plan	No			
Response/Recovery Planning				
Comprehensive Emergency Management Plan	No			Draft plan for the City of Burlington
Threat and Hazard Identification and Risk Assessment	No			
Terrorism Plan	No			
Post-Disaster Recovery Plan	No			
Continuity of Operations Plan	No			
Public Health Plans	No			
Boards and Commission				
Planning Commission	Yes			
Mitigation Planning Committee	No			
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems, chipping, etc.)	Yes			
Mutual Aid Agreements / Memorandums of Understanding	Yes			Fire Dept Under Mutual Aid and auto responses
Other				

Administrative and Technical Capabilities Assessment

The assessment of the jurisdiction's administrative and technical capabilities, including educational and outreach efforts, and on-going programmatic efforts are presented in **Table 8**. These are elements which support not only mitigation, but all phases of emergency management already in place that are used to implement mitigation activities and communicate hazard-related information.

Table 20. Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	City of Burlington
Professionals trained in building or infrastructure construction practices (building officials, fire inspectors, etc.)	Yes	City of Burlington
Engineers specializing in construction practices?	Yes	City of Burlington
Planners or engineers with an understanding of natural hazards	Yes	City of Burlington
Staff with training in benefit/cost analysis	Yes	City of Burlington
Surveyors	No	
Personnel skilled or trained in GIS applications	No	
Personnel skilled or trained in Hazus use	Not sure	
Scientist familiar with natural hazards in local area	No	
Emergency Manager	Yes	City of Burlington
Floodplain Manager (NFIP compliance)	No	
Grant writers	Yes	Burlington has 911 service
Warning Systems/Services (Reverse 9-1-1, outdoor warning signs or signals, flood or fire warning program, etc.?)	Yes	City of Burlington
Hazard data and information available to public	Yes	City of Burlington
Maintain Elevation Certificates	Yes	City of Burlington
Education and Outreach		
Local citizen groups or non-profit organizations focused on emergency preparedness?	No	
Local citizen groups or non-profit organizations focused on environmental protection?	No	
Organization focused on individuals with access and functional needs populations	No	
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	

Table 20. Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Natural disaster or safety related school programs?	No	
Public-private partnership initiatives addressing disaster-related issues?	No	
Multi-seasonal public awareness program?	No	
Other	No	
On-Going Mitigation Efforts		
Hazardous Vegetation Abatement Program	No	
Noxious Weed Eradication Program or other vegetation management	No	
Fire Safe Councils	No	
Chipper program	No	
Defensible space inspections program	No	
Creek, stream, culvert or storm drain maintenance or cleaning program	Yes	City of Burlington
Stream restoration program	Yes	City of Burlington
Erosion or sediment control program	Yes	City of Burlington
Address signage for property addresses	Yes	City of Burlington
Other	No	

Fiscal Capability Assessment

The assessment of the jurisdiction's fiscal capabilities is presented in **Table 9**. These are the financial tools or resources that could potentially be used to help fund mitigation activities.

Table 21. Fiscal Capability	
Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	No
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Unknown
Withhold Public Expenditures in Hazard-Prone Areas	Yes
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	No

Community Classifications

The jurisdiction's classifications under various hazard mitigation programs are presented in **Table 10**. Each of the classifications identified establishes requirements which, when met, are known to increase the resilience of a community.

Table 22. Community Classifications		
	Participating (Yes/No)	Date Enrolled
Community Rating System	Yes	1994
Building Code Effectiveness Grading Schedule	Yes	Unknown
Storm Ready	Yes	2025
Firewise	No	Unknown
Tsunami Ready (if applicable)	NA	NA

Mitigation Goals and Objectives

The City of Burlington adopts the hazard mitigation goals and objectives developed by the Planning Team as described in Volume 1.

Hazard Mitigation Action Plan

The Planning Team for the jurisdiction identified and prioritized a wide range of actions based on the risk assessment, and their knowledge of the jurisdiction's assets and hazards of concern. The table below lists the action items or strategies that make up the jurisdiction's hazard mitigation plan. Background information and information on how each action item will be administered, responsible agency/office (including outside the district), potential funding sources, the timeframe, who will benefit from the activity, and the type of initiative associated with each item are also identified

Prioritization of Mitigation Initiatives

Once the mitigation initiatives items were identified, the Planning Team followed the same process outlined within Volume 1 to prioritize their initiatives. Table 12 identifies each initiative based on priority, where the highest priority initiative is listed at the top.

Table 23.
Mitigation Strategy and Priority Schedule

Priority Ranking	Objectives Met	Type of Initiative(s)	Hazards Mitigated[1]	Lead Agency/ Agencies	Can project be funded under existing programs/ budgets?	Estimated Cost	Is Project Grant Eligible?	Timeframe	Included in Previous Plan?	Who or What Benefits
[1]Hazards: Coastal Hazard-CZ/ Drought-D/ Earthquake-EQ/ Flooding-Fl/ Landslide-LS/ Severe Weather-SW / Volcano-Vol/ Wildfire-WF/ Tsunami-T/ Acts of Violence-AV/ Hazardous Sites or Materials Spill-HazMat/ Disease-D/ Dam Failure-DF/ Infrastructure Failure-IF										
Radio Communication upgrade - In coordination with Skagit County radio infrastructure upgrade										
1	1,7,9	Emergency Response, Communication	All	BFD	No	$100,000	Unk	Short	No	Local/County
Obtain hazardous materials training and protective gear for personnel to improve response capability and safety.										
2	1,7,8,9	Emergency Response	Haz-mat	BFD/DEM	No	$50,000	Yes	Short	No	City/County
Acquire and maintain heavy-lifting equipment and training to enhance response to structural collapse incidents.										
3	1,9	Emergency Response	EQ, SW	BFD	No	$75,000	Possibly	Med	No	City County
Implement a wildland education program to promote defensible space and reduce wildfire risk.										
4	1,4,5	Prevention	WF, SW	BFD/DNR	No	$125,000	No	Long	No	City
Implement community development initiatives to enhance hazard mitigation, preparedness, and local resilience.										
5	1,3,4,8	Policy, Preparedness, Mitigation	D, FL, IF	CD, ED	No	High	Possibly	Long	No	City

Status of Previous Plan Initiatives

City of Burlington was not included in the previous plan

Plan Maintenance

The City of Burlington continues to seek feedback from members of the public, even after the plan has been approved.

When looking at the hazards associated with our area, community participation is essential to the plan impact and success. Education on the variety of hazards we can or could experience, local jurisdictions providing tools and resources to our communities and providing guidance to our citizens on how to help project and prepare for such emergencies.

The criteria below will be utilized to evaluate the plan:

- Continually evaluate plan for effectiveness by utilizing the annual progress report. This should be conducted once a year or after a disaster by the Skagit County Department of Emergency Management (DEM) and/or lead annex partner.
- Utilize an annual progress report to track implementation and effectiveness of mitigation initiatives and their actions. This should be conducted once a year by DEM personnel.
- Conduct regular check-ins with stakeholders and partner agencies by DEM personnel.
- Review and revise the plan at least once every five years by DEM personnel and lead annex partner.

County staff at the Department of Emergency Management will be the primary agency responsible for maintaining the plan and monitoring mitigation initiatives. Staff will utilize the report provided in Volume 3 Appendix C to track progress. The report will also include sections to document any changes that have been made to initiatives, outreach efforts, hazard mapping, Countywide development changes, successful implementation instances, and other changes relevant to the HMP.

Plan Update

The City of Burlington has experienced changes in development in hazard-prone areas. Dike work continues on an as needed basis or as planned by the Core of Engineers. Continued assessment of our diking system to occur and repairs or improvements as needed

Future Needs/Additional Comments

Plan Adoption

The City of Burlington provides proof of documentation that the City Council/Board of Commissioners has formally adopted the plan under Resolution XX pursuant to 44 CFR § 201.6(c)(5).

Annex 3 Town of Concrete

Introduction:

This Annex details the hazard mitigation planning elements specific to the Town of Concrete a participating jurisdiction to the Skagit County Hazard Mitigation Plan Update. This Annex is not intended to be a standalone document, but rather appends to and supplements the information contained in the base plan document. As such, all sections of the base plan, including the planning process and other procedural requirements apply to and were met by the Town of Concrete For planning purposes, this Annex provides additional information specific to the jurisdiction, with a focus on providing greater details on the risk assessment and mitigation strategy for this community only. This document serves as an update to the previously completed plan. All relevant data has been carried over and updated with new information as appropriate and as identified within the planning process discussed in Volume 1.

Hazard Mitigation Planning Team Point/s of Contact:

The Town of Concrete followed the planning process detailed in Section 2 of the Base Plan. In addition to providing representation on the County's Planning Team, the Town of Concrete also formulated their own internal planning team to support the broader planning process. Individuals assisting in this Annex development are identified in **Table 1** below, along with a brief description of how they participated.

Table 24. Local Planning Team Members

Name	Position, Title	Planning Tasks
Kevin Cricchio	Town Planner	Provide technical assistance
		Review, comment, and update
		Assist with developing mitigation strategies
		Coordinate functions throughout jurisdiction
Andrea Fichter	Clerk Treasurer	Review, comment, and update
		Assist with developing mitigation strategies
		Coordinate functions throughout jurisdiction

Public Engagement:

The Town of Concrete in coordination with Skagit County engaged the public through the following means:

- Jurisdiction's website: townofconcrete.com
- Open House held in Concrete on August 1,2025.
- Responses from local respondents to the County's public survey collected between July 2025 to September 2025.
- Responses from local respondents to the County's second round of the public survey collected from 23rd of October 2025 to 7th of November 2025.

Suggestions and responses from the engagement activities were taken into consideration in the preparation of this Plan.

Review of Existing Documents:

The Town of Concrete reviewed the Concrete Municipal Code and Comprehensive Plan to assist with the development of the Hazard Mitigation Plan Update.

Community Profile:

The following is a summary of key information about the jurisdiction and its history:

Date of Incorporation— May 9, 1909

Current Population— 815 as of April 1, 2025

Population Growth— Based on data tracked by the Washington State Office of Financial Management, population has increased by approximately 10% within the town since 2019.

Location and Description— The Town of Concrete is located in the Western Cascade Mountains In Washington, within Eastern Skagit County, at the confluence of the Baker and Skagit Rivers. The Town of Concrete offers a window into the spectacular Cascade Mountain Range.

Brief History— Prior to incorporation as the Town of Concrete there was a settlement on the west side of the Baker River originally known as Minnehaha. The east side of the river was known as Baker. The initial settlers to the area realized on timber from the mountains to build homes and run their mills. The settlers soon discovered the mountains yielded more important products for the town's future, limestone, and clay. The settlers of Minnehaha change their town's name to Cement City when the Washington Portland Cement Plant began construction in 1905. The production of cement was so profitable that second company, the Superior Portland Cement Company opened for business in 1908. The influence of these companies was so great that when the two towns were incorporated into a single town in 1909, they named the town after their most important business, concrete.

Climate— The Town of Concrete climate most closely matches that of the Cascade Mountains West with more snow and annual precipitation and increased summer temperatures than that of western Skagit County.

Governing Body Format— The Town of Concrete is governed by a mayor-council form of government. The mayor-council form consists of an elected mayor who serves as the Town's Chief Administrative Officer and a council, which serves as the town's legislative body. The council has the authority to formulate and adopt policies and the mayor is responsible for carrying them out. The Mayor attends and presides over council meetings but does not vote, except in the case of a tie.

Development Trends— Development in Concrete has been slow and is consistent with a small rural town. The community is actively engaged in developing a welcoming environment to attract new businesses and to improve the aging housing stock. Land Use regulations in place have allowed growth to occur without negative impact or increase to vulnerability.

Economy – The Town of Concrete's economic base consists of educational, health and social services, manufacturing, utilities, and retail sales. The largest employers include: Concrete School District and Puget Sound Energy.

The jurisdiction boundaries are identified in the map below.

Hazard Event History:

Within the Base Plan, the Planning Team identified all hazard events which have occurred within the Town of Concrete In the context of the planning region, it was determined that there are (no) additional hazards unique to the jurisdiction. **Table 2** lists all past occurrences of hazards within the jurisdiction. If available, dollar loss data is also included.

Table 25. Previous Hazard Occurrences			
Type of Event	FEMA Disaster # (if available)	Date	Dollar Losses (if available)
Severe Storms, Flooding, Winter Storm, Landslides, and Mudslides	#1817	01/30/2009	$594,706.00
Severe Weather	#1825	12/08/2008	Unknown
Landslides		11/23/1939	Unknown
Landslide		05/18/1965	Unknown
Landslide		01/10/1990	Unknown
Flooding	#1100-DR-WA	02/1996	Unknown
Winter Storm	#0883-DR-WA	1997	Unknown
Landslide		Jan/Feb 1997	Unknown

The recorded history of hazard events, as mentioned above, can indicate what the likelihood would be of a hazard occurring in the future. **Table 3** below is the rating for probability of hazards according to the parameters described in Volume 1.

Table 26. Probability of Future Hazards Occurrence		
Hazard	**Impact Factor**	**Impact ID**
Coastal Hazards	Unlikely	1
Drought	Low	2
Earthquake	Medium	3
Flooding	High	4
Landslides	High	4
Severe Weather	High	4
Tsunami	Unlikely	1
Volcano	Medium	3
Wildfire	Medium	3
Acts of Violence	Low	2
Hazardous Material Spill or Release	Low	2
Disease	Low	2
Bridge/Road Failure	Medium	3

Power/Water System Failure	Medium	3
Dam Failure	Low	2
Other hazards		

Hazard Area Extent and Location:

This section describes the type, location, and extent of all hazards that can affect the jurisdiction.

Table 27. Geographic Extent

Hazard Type	Impact Factor	Impact ID
Coastal Hazards	*NR*	0
Drought	Extensive	4
Earthquake	Extensive	4
Flooding	Moderate	2
Landslides	Limited	1
Severe Weather	Significant	3
Tsunami	Limited	1
Volcano	Extensive	4
Wildfire	Limited	1
Acts of Violence	Limited	1
Hazardous Material Spill or Release	Limited	1
Disease	Moderate	2
Bridge/Road Failure	Moderate	2
Power/Water System Failure	Moderate	2
Dam Failure	Extensive	4
Other hazards		

Hazard Risk and Vulnerability Ranking:

The jurisdiction's Planning Team reviewed the hazard list identified within the Base Plan and identified hazards that are most likely to have the highest impact within the Town of Concrete. **Table 5** presents the ranking of the hazards of concern based on their CPRI score. A qualitative vulnerability ranking was then assigned based on a summary of potential impact determined by: past occurrences, extent, damage, casualties, and continuity of government. The assessment is categorized into the following classifications:

- **Extremely Low** – No or very limited impact. The occurrence and potential cost of damage to life and property is very minimal-to-nonexistent. No impact to government functions with no disruption to essential services.
- **Low (Negligible)** – Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal. Government functions are at 90% with limited disruption to essential services.
- **Medium (Limited)** – Moderate potential impact. This ranking carries a moderate threat level to the general population and /or built environment. The potential damage is more isolated, and less costly than a more widespread disaster. Government functions are at 80% with limited impact to essential services.
- **High (Critical)** – Widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread. Hazards in this category may have occurred in the past. Government functions are at ~50% operations with limited delivery of essential services.
- **Extremely High (Catastrophic)** – Very widespread with catastrophic impact. Government functions are significantly impacted for more than one month.

Table 28. Vulnerability Ranking by Hazard Type

Hazard Rank	Hazard Type	CPRI Score	Vulnerability Rank
1	Volcano	3.45	Extremely High
2	Earthquake	3.25	Extremely High
3	Severe Weather	3.15	Extremely High
4	Dam Failure	3.10	Extremely High
5	Landslides	2.85	High
6	Flooding	2.80	High
7	Drought	2.55	Medium
8	Power/Water System Failure	2.55	Medium
9	Bridge/Road Failure	2.55	Medium
10	Wildfire	2.30	Medium
11	Disease	2.05	Medium
12	Acts of Violence	1.70	Low
13	Hazardous Material Spill or Release	1.70	Low
14	Tsunami	1.00	Low
15	Coastal Hazards	.80	No Impact
16			

National Flood Insurance Information (NFIP):

This section identifies the number of repetitive loss or severe repetitive loss properties which have occurred within the Town of Concrete as specified in 44 CFR 201.6(c)(3)(ii). A repetitive loss (RL) property is defined as a structure covered by a contract for flood insurance made available under the NFIP that:

(v) Has incurred flood-related damage on two occasions, in which the cost of the repair, on the average, equaled or exceeded 25 percent of the market value of the structure at the time of each such flood event; and
(vi) At the time of the second incidence of flood-related damage, the contract for flood insurance contains increased cost of compliance coverage.

A severe repetitive loss (SRL) property is a structure that:

(v) Is covered under a contract for flood insurance made available under the NFIP; and
(vi) Has incurred flood related damage for which:
    a. Four or more separate claims payments (includes building and contents) have been made under flood insurance coverage with the amount of each such claim exceeding $5,000, and with the cumulative amount of such claims payments exceeding $20,000, or
    b. At least two separate claims payments (includes only building) have been made under such coverage, with the cumulative amount of such claims exceeding the market value of the insured structure.

The Town of Concrete entered the NFIP in 2004. The effective date for the current Town of Concrete FIRM is February 2, 1982..

Management of the NFIP program for the Town of Concrete falls on many shoulders. The Town of Concrete does/does not have a floodplain manager per se, but does have contracts in place for a Town Planner and Building Inspector who manage floodplain permitting and is managed in accordance with CMC 15.08.

- Additional information on the community's National Flood Insurance Program (NFIP) compliance is presented in **Table 6**.

Table 29. National Flood Insurance Compliance	
What department is responsible for floodplain management in your community?	Planning and Building Departments
Who is your community's floodplain administrator? (department/position)	Town Planner Kevin Cricchio, Building Inspector Doug Aamot
Do you have any certified floodplain managers on staff in your community?	No
What is the date of adoption of your flood damage prevention ordinance?	April 12, 2004
When was the most recent Community Assistance Visit or Community Assistance Contact?	2022

To the best of your knowledge, does your community have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are.	No
Do your flood hazard maps adequately address the flood risk within your community? (If no, please state why)	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of assistance/training is needed?	Yes, Training for staff to get certified as a Floodplain Manager
Does your community participate in the Community Rating System (CRS)? If so, is your community seeking to improve its CRS Classification? If not, is your community interested in joining the CRS program?	No
Source: Federal Emergency Management Agency	

Capability Assessment:

Coordination with other community planning efforts is paramount to the successful implementation of this plan. This section provides information on how planning mechanisms, policies, and programs are integrated into other on-going efforts. It also identifies the jurisdiction's capabilities with respect to preparing and planning for, responding to, recovering from, and mitigating the impacts of hazard events and incidents.

Capabilities include the programs, policies and plans currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. The capabilities are divided into the following sections: National Flood Insurance Information; regulatory capabilities which influence mitigation; administrative and technical mitigation capabilities, including education and outreach, partnerships, and other on-going mitigation efforts; fiscal capabilities which support mitigation, and classifications under various community programs.

Regulatory Capability Assessment

The assessment of the jurisdiction's legal and regulatory capabilities is presented in **Table 7**. This includes planning and land management tools, typically used by local jurisdictions to implement hazard mitigation activities and indicates those that are currently in place.

Table 30. Legal and Regulatory Capability

	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Codes, Ordinances & Requirements				

Table 30. Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Building Code Version International Building Code Year 2021	Local, CMC 15.04			
Zoning Ordinance	Yes			CMC Title 19
Subdivision Ordinance	Yes			CMC Title 17
Floodplain Ordinance	Yes			CMC Title 15.08
Stormwater Management	Yes		X	CMC 16.12, 16.04, 17.08 and 19.68
Post Disaster Recovery	Yes	FEMA/County		Rely on coordination with FEMA and Skagit County
Real Estate Disclosure	Yes			Rely on local real estate agents
Growth Management	Yes		X	Town Comprehensive Plan
Site Plan Review	Yes			CMC 19.68
Public Health and Safety	Yes	Skagit County		Rely on coordination with Skagit County
Coastal Zone Management	No		X	
Climate Change Adaptation	Yes		X	Town Comprehensive Plan
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire, etc.)	Yes			CMC 16.12
Environmental Protection	Yes		X	CMC Title 16
Planning Documents				
General or Comprehensive Plan	Comprehensive Plan			
Is the plan equipped to provide linkage to this mitigation plan?				Yes
Floodplain or Basin Plan	Yes			Rely on FEMA floodplain mapping
Stormwater Plan	Yes			Engineering Standards
Capital Improvement Plan	Yes			Comprehensive Plan Element
Habitat Conservation Plan	Yes			CMC 16.12
Economic Development Plan	Yes			Comprehensive Plan Element

Table 30. Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Shoreline Management Plan	Yes			Concrete SMP/Comprehensive Plan Land Use Element
Community Wildfire Protection Plan	Yes			Rely on coordination with neighboring Fire Districts and Department of Natural Resources.
Transportation Plan	Yes			Comprehensive Plan Element
Response/Recovery Planning				
Comprehensive Emergency Management Plan	Yes			Rely on coordination with Skagit County
Threat and Hazard Identification and Risk Assessment	Yes			Rely on coordination with Skagit County
Terrorism Plan	Yes			Coordinate with Skagit County Sheriff per contract with Town.
Post-Disaster Recovery Plan	Yes			Rely on coordination with FEMA and Skagit County
Continuity of Operations Plan	Yes			Rely on coordination with Skagit County
Public Health Plans	Yes			Town Council liaison with Community Action and other health care providers.
Boards and Commission				
Planning Commission	Yes			
Economic Development Commission	Yes			
Historic Preservation and Landmarks Commission	Yes			
Mitigation Planning Committee	Yes			The Town served on the countywide mitigation planning committee and will continue to serve on the committee during the life cycle of this plan in accordance with the mitigation strategy developed during the HMP process.

Table 30. Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems, chipping, etc.)	Yes			Town Public Works/PSE also contracts out for routine tree trimming around power lines.
Mutual Aid Agreements / Memorandums of Understanding	Yes	Multiple Jurisdictions within Skagit County		Mutual Aid for Fire and Emergency Services.
Other				

Administrative and Technical Capabilities Assessment

The assessment of the jurisdiction's administrative and technical capabilities, including educational and outreach efforts, and on-going programmatic efforts are presented in **Table 8**. These are elements which support not only mitigation, but all phases of emergency management already in place that are used to implement mitigation activities and communicate hazard-related information.

Table 31. Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Planning, Contracted, Town Planner
Professionals trained in building or infrastructure construction practices (building officials, fire inspectors, etc.)	Yes	Building, Contracted, Building Inspector
Engineers specializing in construction practices?	Yes	Admin, Gray & Osborne, Town Engineer
Planners or engineers with an understanding of natural hazards	Yes	Admin, Gray & Osborne, Town Engineer
Staff with training in benefit/cost analysis	Yes	Admin, Town of Concrete, Clerk Treasurer
Surveyors	No	
Personnel skilled or trained in GIS applications	Yes	Admin, Gray & Osborne, Town Engineer
Personnel skilled or trained in Hazus use	Yes	Skagit County has staff which are subject matter experts in the various hazard fields.
Scientist familiar with natural hazards in local area	Yes	Skagit County has staff which are subject matter experts in the various hazard fields.

Table 31. Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Emergency Manager	Yes	Skagit County assists the town with this service.
Floodplain Manager (NFIP compliance)	No	
Grant writers	Yes	Admin, Town of Concrete, Clerk Treasurer
Warning Systems/Services (Reverse 9-1-1, outdoor warning signs or signals, flood or fire warning program, etc.?)	Yes	PSE Dam Failure Warning Sirens, Fire Department Sirens, Community Text Notification System
Hazard data and information available to public	Yes	Admin, Town of Concrete, Clerk Treasurer
Maintain Elevation Certificates	Yes	Building, Town of Concrete, Building Inspector Admin, Town of Concrete, Clerk Treasurer
Education and Outreach		
Local citizen groups or non-profit organizations focused on emergency preparedness?	Yes	The County provides training throughout the area for CERT members.
Local citizen groups or non-profit organizations focused on environmental protection?	No	
Organization focused on individuals with access and functional needs populations	No	
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	County Emergency Management, Health Department and Conservation District provide this type of information as a continued process.
Natural disaster or safety related school programs?	Yes	The school districts provide this service to students and families.
Public-private partnership initiatives addressing disaster-related issues?	Yes	Red Cross assists in meeting this to some extent.
Multi-seasonal public awareness program?	Yes	Skagit County provides notices and awareness to the public
Other		
On-Going Mitigation Efforts		
Hazardous Vegetation Abatement Program	Yes	Skagit Fisheries Enhancement Group
Noxious Weed Eradication Program or other vegetation management	Yes	Skagit Fisheries Enhancement Group
Fire Safe Councils	No	
Chipper program	Yes	Town Public Works

Table 31. Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Defensible space inspections program	Yes	The various fire districts provide this service at time when requested. In some instances, the Conservation District also assists.
Creek, stream, culvert or storm drain maintenance or cleaning program	Yes	For creeks and streams, in coordination with Department of Fish and Wildlife and Skagit Fisheries Enhancement Group For culverts and storm drains, Town Public Works
Stream restoration program	No	
Erosion or sediment control program	No	
Address signage for property addresses	Yes	Skagit County
Other		

Fiscal Capability Assessment

The assessment of the jurisdiction's fiscal capabilities is presented in **Table 9**. These are the financial tools or resources that could potentially be used to help fund mitigation activities.

Table 32. Fiscal Capability	
Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Not at this time.
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	Yes
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	Yes

Community Classifications

The jurisdiction's classifications under various hazard mitigation programs are presented in **Table 10**. Each of the classifications identified establishes requirements which, when met, are known to increase the resilience of a community.

Table 33. Community Classifications		
	Participating (Yes/No)	Date Enrolled
Community Rating System	No	
Building Code Effectiveness Grading Schedule	5	
Storm Ready	No	
Firewise	No	
Tsunami Ready (if applicable)	No	

Mitigation Goals and Objectives:

The Town of Concrete adopts the hazard mitigation goals and objectives developed by the Planning Team described in Volume 1.

Hazard Mitigation Action Plan:

The Planning Team for the jurisdiction identified and prioritized a wide range of actions based on the risk assessment, and their knowledge of the jurisdiction's assets and hazards of concern. The table below lists the action items or strategies that make up the jurisdiction's hazard mitigation plan. Background information and information on how each action item will be administered, responsible agency/office (including outside the district), potential funding sources, the timeframe, who will benefit from the activity, and the type of initiative associated with each item are also identified.

Prioritization of Mitigation Initiatives

Once the mitigation initiatives items were identified, the Planning Team followed the same process outlined within Volume 1 to prioritize their initiatives. **Table 11** identifies each initiative based on priority, where the highest priority initiative is listed at the top.

Table 34.
Mitigation Strategy and Priority Schedule

Priority No.	# of Objectives met	Hazards Mitigated[1]	Lead Agency	Can project be funded under existing programs/ budgets?	Estimated Cost	Is Project Grant Eligible? Yes/No	Timeframe	Included in Previous Plan? Yes/No	Who or What Benefits
[1]Hazards: Coastal Hazard-CZ/ Drought-D/ Earthquake-EQ/ Flooding-FI/ Landslide-LS/ Severe Weather-SW / Volcano-Vol/ Wildfire-WF/ Tsunami-T/ Acts of Violence-AV/ Hazardous Sites or Materials Spill-HazMat/ Disease-D/ Dam Failure-DF/ Infrastructure Failure-IF									
Initiative #1 – Replacement of existing inefficient fire engines									
1	1,8	All	Town/Fire Department	No	$1M	Yes	1-5 Years	Yes	Local/County
Initiative #2 – Retrofit town owned facilities to better withstand damage from flood, earthquakes, or other severe weather.									
2	1,8,9	EQ, FL, SW, AV, DF, IF	Town	No	$1M	Yes	1-10 Years	Yes	Local/County
Initiative #3 – Modify existing electrical service and add generator for Town Hall and Skagit County Sheriff East Detachment Office									
3	1,7,9	EQ, LS, SW, VOL, WF, AV, HazMat, D, DF, IF	Town	Yes	$50,000	Yes	1-5 Years	Yes	Local/County
Initiative #4 – Continue to support and work with the County to maintain public awareness of the hazards of concern, and to seek out and apply for grant opportunities that will lessen the impact from the hazards of concern.									
4	1,5,6,7	All	Town/County	Unknown	Unknown	Yes	On-Going	Yes	Regional
Initiative #5 – Develop a town wide Emergency Action and Response Plan									
#5	1,5,8,9	All	Town	No	Unknown	Yes	1-5 Years	No	Local/County

Status of Previous Plan Initiatives:

Table 12 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 35.
Current Status of Previous Hazard Mitigation Action Plan

Mitigation Strategy	Project Status	Completed	Continual/ On-Going Nature	Removed/ No Longer Relevant/ No Action	Carried Over
Replace existing 1989 pumper engine to provide an increased level of fire protection for the Town of Concrete	On-going	☐	☐	☐	☒
Modify existing electrical service for Concrete Town Hall and SCSO East Detachment Office to allow for the rapid installation/connection of a 65KW generator in the event of power outages.	On-going	☐	☐	☐	☒
Retrofit existing town-owned facilities to better withstand damage from major, wind, flood, snow, earthquake, or another natural hazard event.		☐	☒	☐	☒
Develop a town wide Emergency Action and Response Plan		☐	☒	☐	☐
		☐	☐	☐	☐
		☐	☐	☐	☐

Plan Maintenance:

The Town of Concrete continues to seek feedback from members of the public, even after the plan has been approved.

The criteria below will be utilized to evaluate the plan:

- Continually evaluate plan for effectiveness by utilizing the annual progress report. This should be conducted once a year or after a disaster by the Skagit County Department of Emergency Management (DEM) and/or lead annex partner.
- Utilize an annual progress report to track implementation and effectiveness of mitigation initiatives and their actions. This should be conducted once a year by DEM personnel.
- Conduct regular check-ins with stakeholders and partner agencies by DEM personnel.
- Review and revise the plan at least once every five years by DEM personnel and lead annex partner.

County staff at the Department of Emergency Management will be the primary agency responsible for maintaining the plan and monitoring mitigation initiatives. Staff will utilize the report provided in **Volume 3 Appendix C** to track progress. The report will also include sections to document any changes that have been made to initiatives, outreach efforts, hazard mapping, Countywide development changes, successful implementation instances, and other changes relevant to the HMP.

Plan Update

The Town of Concrete has not experienced changes in development in hazard-prone areas.

Future Needs/Additional Comments

The town operates and maintains its municipal airport. Improvements for this area include the installation of water and sewer services as well as the relocation of a substandard helipad that was removed in 2021. In the event of a major incident the airport would serve as a primary staging location for the delivery of services or needed supplies. The airport is also currently used in medical emergencies where transportation by air is necessary.

At this time there is only one usable route to the town's airport. The town has secured partial funding for the construction of a secondary access to the airport, in case the one route is blocked or becomes unusable. The town will continue to seek additional funding for the completion of this project.

The Lower Baker Dam, which lies within the town limits, and the Upper Baker Dam that lies just above town limits, could potentially pose major concerns for the Town of Concrete as well as the rest of western Skagit County. The partial or complete failure of either of these dams could result in mass casualties and result in extensive difficulties for emergency and medical serves to reach the area.

Plan Adoption:

The Town of Concrete provides proof of documentation that the City Council/Board of Commissioners has formally adopted the plan under Resolution 25-XX pursuant to 44 CFR § 201.6(c)(5).

Annex 4 Town of Hamilton

Introduction

This Annex details the hazard mitigation planning elements specific to the Town of Hamilton a participating jurisdiction to the Skagit County Hazard Mitigation Plan Update. This Annex is not intended to be a standalone document but rather appends to and supplements the information contained in the base plan document. As such, all sections of the base plan, including the planning process and other procedural requirements apply to and were met by the Town of Hamilton. For planning purposes, this Annex provides additional information specific to the jurisdiction, with a focus on providing greater details on the risk assessment and mitigation strategy for this community only. This document serves as an update to the previously completed plan. All relevant data has been carried over and updated with new information as appropriate and as identified within the planning process discussed in volume 1.

Hazard Mitigation Planning Team Point (s) of Contact

The Town of Hamilton followed the planning process detailed in Section 2 of the Base Plan. In addition to providing representation on the County's Planning Team, the Town of Hamilton also formulated their own internal planning team to support the broader planning process. Individuals assisting in this Annex development are identified in **Table 1** below, along with a brief description of how they participated.

Table 36. Local Planning Team Members

Name	Position, Title	Planning Tasks
Mandy Bates 584 Maple Street Hamilton WA 98255 360-826-3027 mayorbateshamilton@outlook.com	Alternate Point of Contact	Present to city council for adoption
Kym Eldridge 584 Maple Street Hamilton WA 98255 360-826-2882 clerkhamilton@outlook.com	Primary Point of Contact	Review, comment, and update
Si Adams Public Works Supervisor 584 Maple Street Hamilton WA 98255 360-826-3027 Siadams1972@gmail.com		Review, comment, and update

Public Engagement

The Town of Hamilton engaged the public through the following means:

- Public Open House hosted by Skagit County Fire District 8 on August 28, 2025
- Responses from local respondents to the County's public survey collected between July 2025 to September 2025.
- Responses from local respondents to the County's second round of the public survey collected from 23rd of October 2025 to 7th of November 2025.

Review of Existing Documents

Hamilton Comprehensive Plan

Community Profile

The following is a summary of key information about the jurisdiction and its history:

Date of Incorporation—March 1891

Current Population— 295

Population Growth— Hamilton has had a stable population of around 300 since the 1930's. With Janicki Industries offering many job opportunities, the chance of population increase is expected.

Location and Description— The Town of Hamilton is located in Skagit County, approximately 12 miles east of the City of Sedro-Woolley and 12 miles west of Concrete on State Route 20. Hamilton is a small community located in central Skagit County on the banks of the Skagit River. The town is divided by S.R. 20, with the Sutton Annexation, Forterra Annexation and the Centennial Annexation lying to the north and the remaining area of town to the south. The fifteen-acre Sutton Annexation lies north of S.R. 20, west and south of Hamilton Cemetery Road and is residential housing. The Forterra Annexation is 43 acres to the east of Hamilton Cemetery Road and is undeveloped. The Centennial Annexation is a 260-acre tract of land that is currently used for industrial forestland, with an emerging gravel pit. This area extends north of S.R. 20 about 3/4 of a mile and then west 1/2 mile forming a large rectangle of land that is connected to Hamilton via Walder's Road and S.R. 20.

Hamilton is one of several communities in the Skagit Valley. The Skagit River shapes the physical landscape of the region forming the east-west valley. The low foothills of Mt. Josephine, north of town, roll down to the valley floor to the gently sloping floodway of the Skagit River. The significant bodies of water within the city limits are Carey's Lake and Alder Creek Slough that is fed by Carey's Creek and appears to be an abandoned path of the Skagit River.

The lowest elevation of the Town is about 50 feet above sea level.

Approximately 310 acres of the Town of Hamilton is located within the 100-year floodplain of the Skagit River. The Skagit has experienced severe flooding in recent years causing excessive property damage.

The last major flood to occur in Hamilton was in November 2021 and resulted in evacuations and damage to many homes. The majority of the residential structures, a few commercial buildings, and a handful of recreational vehicles are in the floodway.

Timber harvesting occurs in some areas outside the Town, and a gravel quarry is located at the north-east corner. Due to flood-plain conditions. future development is limited in the areas to the north.

Brief History— Hamilton's natural resources have been its asset throughout the history of the area. The Skagit River provided transportation routes and food resources for Native Americans making seasonal home sites in the area. The lush river valley provided game and native plants as a plentiful food source. The streams and river provided fresh water supply and bountiful catches of salmon and trout. The Upper Skagit tribes were a migratory population utilizing the valley as a late spring and early summer settlement area on their seasonal travels between the Pacific Coastal area and Eastern Washington. In addition to game and fish, the valley provided berry harvests. Their return in the fall coincided with the return of the salmon.

The Upper Skagit Valley in the Hamilton and Birdsview area was first settled in the 1870's. The Hamilton Town Site and Land Company was incorporated on January 17, 1891, with an estimated population of 1,500 or more. Hamilton entertained high hopes of becoming a mining and railroad center of Skagit County with investments by the Great Northern Railroad and Hamilton Iron and Coal Company. Despite the closing of the local mines, Hamilton did become a booming logging and timber center. The Skagit River and the Great Northern Railroad played a vital role in the transport of timber, equipment, goods and services. Logs floated down river to sawmills and there was also a strong riverboat commercial trade on the Skagit River.

The first school in Hamilton was built in 1884 by William Hamilton and remained the elementary school until 1943. The first high school was built in 1919, a large brick building that later became the grade school. This building remained an elementary school well into the 1970s when classes were finally moved to Lyman.

Enduring numerous major floods, Hamilton remained a bustling town with a rich industrial center and strong sense of community well into the 1940s. However, the slow decline in the timber industry and the rail traffic continued to dwindle the population. Hamilton is now one of the smallest rural communities in Skagit County but maintains a strong sense of community involvement. Currently Hamilton has stabilized with the expansion of Janicki Industries LLC, which is continuing to expand in the area of cutting-edge parts manufacturing for aerospace and other industries. Other future commercial focuses are recreation and ecotourism.

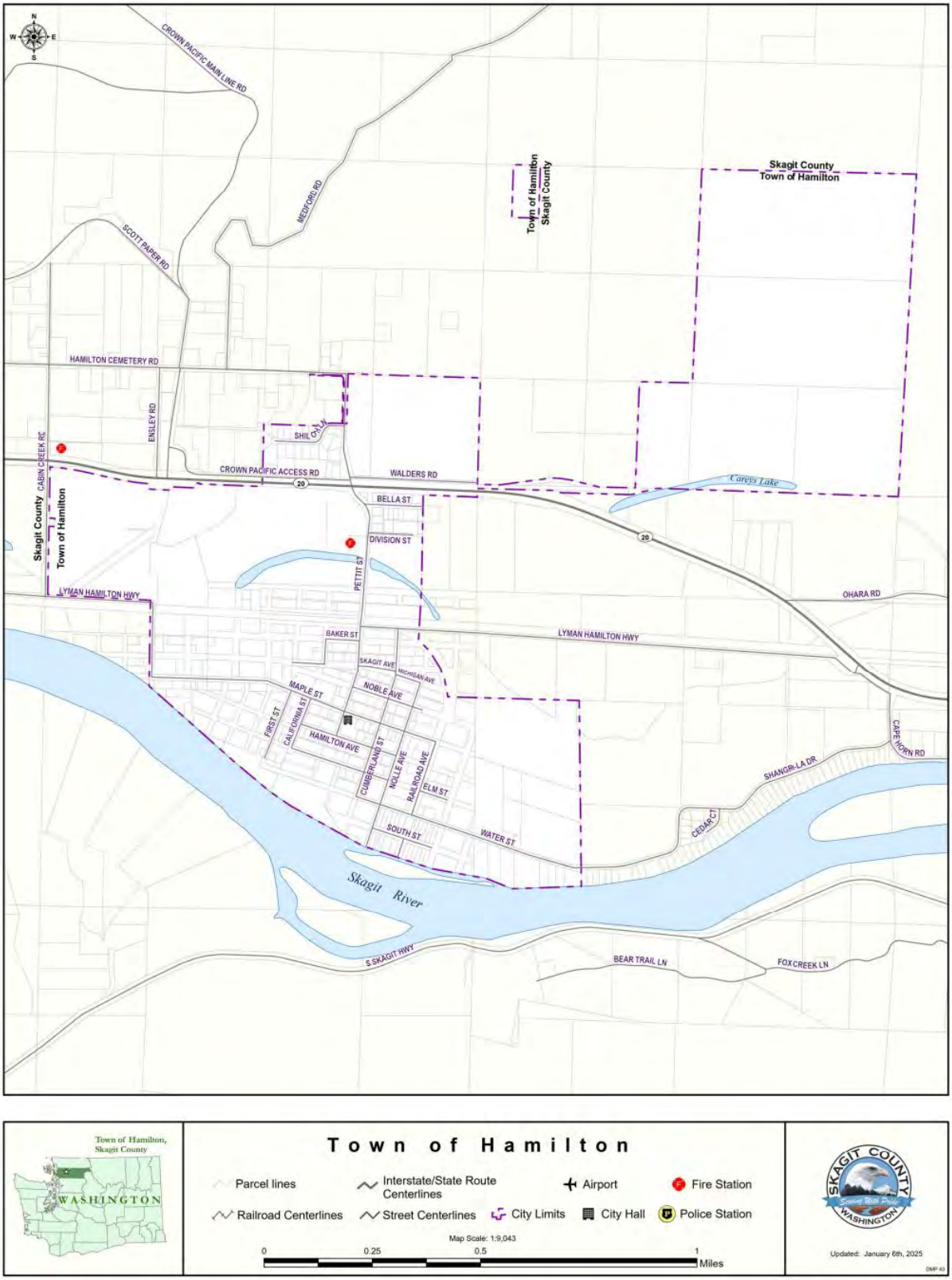
Climate— The Town of Hamilton experiences relatively mild temperatures, with relatively low amounts of precipitation falling in the form of snow. Winter months and the prevailing winds result in a wet season beginning in October or November, peaking in February, and gradually decreasing by late spring. Rainfall occurs on average approximately 150 days per year. The Town does experience some type of severe weather event annually, customarily the most damaging in the form of rain and wind.

Governing Body Format— Strong Mayor/Council. 5 Council members, all elected at-large.

Development Trends— Industry has been expanding. Housing has been declining.

Economy – The Town of Hamilton's economic base consists of manufacturing and food services. The largest employer is Janicki Industries.

The jurisdiction boundaries are identified in the map below.


CROWN PACIFIC MAIN LINE RD
MEDFORD RD
SCOTT PAPER RD
Skagit County
Town of Hamilton
Town of Hamilton
Skagit County
HAMILTON CEMETERY RD
ENSLEY RD
CABIN CREEK RD
SHILOH LN
CROWN PACIFIC ACCESS RD
WALDERS RD
Caress Lake
BELLA ST
DIVISION ST
PETTIT ST
LYMAN HAMILTON HWY
OHARA RD
BAKER ST
SKAGIT AVE
MICHIGAN AVE
NOBLE AVE
MAPLE ST
FIRST ST
CALIFORNIA ST
HAMILTON AVE
CUMBERLAND ST
HOLLE AVE
RAILROAD AVE
ELM ST
SOUTH ST
WATER ST
CAPE HORN RD
SHANGRI-LA DR
CEDAR CT
Skagit River
S SKAGIT HWY
BEAR TRAIL LN
FOX CREEK LN
Town of Hamilton, Skagit County
WASHINGTON
Town of Hamilton
Parcel lines
Interstate/State Route Centerlines
Airport
Fire Station
Railroad Centerlines
Street Centerlines
City Limits
City Hall
Police Station
Map Scale: 1:9,043
0
0.25
0.5
1
Miles
SKAGIT COUNTY
WASHINGTON
Updated: January 6th, 2025

Hazard Event History

Within the Base Plan, the Planning Team identified all hazard events which have occurred within the Town of Hamilton. In the context of the planning region, it was determined that there are no additional hazards unique to the jurisdiction. **Table 2** lists all past occurrences of hazards within the jurisdiction. If available, dollar loss data is also included.

Table 37. Previous Hazard Occurrences			
Type of Event	FEMA Disaster # (if available)	Date	Dollar Losses (if available)
Flood	4635	11/21/2021	
Severe Windstorm	4593	04/01/2021	
Flood		11/2017	
Severe Storm	1671	12/12/2007	
Coastal Storm	3227	9/7/2005	
Severe Storm	1499	11/7/2003	
Earthquake	1361	3/1/2001	
Severe Storm	1159	1/17/1997	
Flood	1100	2/9/1996	
Severe Storm	1079	1/3/1996	
Flood	896	3/8/1991	
Flood	883	11/26/1990	
Volcano	623	5/21/1980	
Flood	612	12/31/1979	
Flood	492	12/13/1975	
Flood	300	2/9/1971	

The recorded history of hazard events, as mentioned above, can indicate what the likelihood would be of a hazard occurring in the future. **Table 3** below is the rating for probability of hazards according to the parameters described in Volume 1.

Table 38. Probability of Future Hazards Occurrence		
Hazard	**Impact Factor**	**Impact ID**
Coastal Hazards	NR	0
Drought	Medium	3
Earthquake	Medium	3
Flooding	High	4
Landslides	Medium	3
Severe Weather	High	4
Tsunami	NR	0
Volcano	Medium	3

Wildfire	High	4
Acts of Violence	Low	2
Hazardous Material Spill or Release	Low	2
Disease	Low	2
Bridge/Road Failure	Medium	3
Power/Water System Failure	Medium	3
Dam Failure	Low	2
Other hazards		

Hazard Area Extent and Location

This section describes the type, location, and extent of all hazards that can affect the jurisdiction.

Table 39. Geographic Extent

Hazard	Impact Factor	Impact ID
Coastal Hazards	NR	0
Drought	Medium	3
Earthquake	Medium	3
Flooding	High	4
Landslides	Medium	3
Severe Weather	High	4
Tsunami	NR	0
Volcano	High	4
Wildfire	High	4
Acts of Violence	Low	1
Hazardous Material Spill or Release	Low	1
Disease	Low	1
Bridge/Road Failure	Medium	3
Power/Water System Failure	Medium	3
Dam Failure	High	4
Other hazards		

Hazard Risk and Vulnerability Ranking

The jurisdiction's Planning Team reviewed the hazard list identified within the Base Plan and identified hazards that are most likely to have the highest impact within Hamilton. **Table 5** presents the ranking of the hazards of concern based on their CPRI score. A qualitative vulnerability ranking was then assigned based on a summary of potential impact determined by: past occurrences, extent, damage, casualties, and continuity of government. The assessment is categorized into the following classifications:

- **Extremely Low** – No or very limited impact. The occurrence and potential cost of damage to life and property is very minimal-to-nonexistent. No impact to government functions with no disruption to essential services.
- **Low (Negligible)** – Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal. Government functions are at 90% with limited disruption to essential services.
- **Medium (Limited)** – Moderate potential impact. This ranking carries a moderate threat level to the general population and /or built environment. The potential damage is more isolated, and less costly than a more widespread disaster. Government functions are at 80% with limited impact to essential services.
- **High (Critical)** – Widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread. Hazards in this category may have occurred in the past. Government functions are at ~50% operations with limited delivery of essential services.
- **Extremely High (Catastrophic)** – Very widespread with catastrophic impact. Government functions are significantly impacted for more than one month.

Table 40. Vulnerability Ranking by Hazard Type

Hazard Rank	Hazard Type	CPRI Score	Vulnerability Rank
1	Flood	3.50	Extremely High
2	Dam Failure	3.35	Extremely High
3	Volcano	3.30	High
4	Earthquake	3.15	High
5	Wildfire	3.00	High
6	Severe Weather	2.95	Medium
7	Drought	2.65	Medium
8	Landslide	2.45	Medium
9	Power/Water System Failure	2.40	Medium
10	Acts of Violence	1.60	Low
11	Hazardous Material Spill or Release	1.55	Low
12	Disease	1.45	Low
13	Bridge/Road Failure	1.45	Low
14	Tsunami	0	Extremely Low
15	Coastal Hazards	0	Extremely Low

National Flood Insurance Information (NFIP)

This section identifies the number of repetitive loss or severe repetitive loss properties which have occurred within the Town of Hamilton as specified in 44 CFR 201.6(c)(3)(ii). A repetitive loss (RL) property is defined as a structure covered by a contract for flood insurance made available under the NFIP that:

(vii) Has incurred flood-related damage on two occasions, in which the cost of the repair, on the average, equaled or exceeded 25 percent of the market value of the structure at the time of each such flood event; and

(viii) At the time of the second incidence of flood-related damage, the contract for flood insurance contains increased cost of compliance coverage.

A severe repetitive loss (SRL) property is a structure that:

(vii) Is covered under a contract for flood insurance made available under the NFIP; and

(viii) Has incurred flood related damage for which:

a. Four or more separate claims payments (includes building and contents) have been made under flood insurance coverage with the amount of each such claim exceeding $5,000, and with the cumulative amount of such claim's payments exceeding $20,000, or

b. At least two separate claims payments (includes only building) have been made under such coverage, with the cumulative amount of such claims exceeding the market value of the insured structure.

The Town of Hamilton entered the NFIP in 1981 The effective date for the current countywide FIRM is December 1, 1981. There is one Letter of Map Amendments issued by FEMA for removal of properties erroneously identified as being within the floodplain.

Since 2020, within the Town of Hamilton 3 homes have been removed, in which the land is being returned to native habitat, further reducing risk. There have been no permits granted for permanent structures that increase flood risk since 2014.

The two outstanding compliance violations at the time of this writing do not impact the flood risk since the time of the last Natural Hazard Mitigation Plan approval (one is a ground disturbance issue; one is a 2003 building with approved flood openings). By complying with the NFIP standards, risk in the Town of Hamilton has been reduced.

Management of the NFIP program for the Town of Hamilton falls on many shoulders. The Town of Hamilton does/does not have a floodplain manager per se but does have a Town Building Code Enforcement person that goes by the rules of NFIP. Building permits go through this person who has experience with floodplain properties and also does the permit inspections.

As a brief overview, the only development currently permitted in the floodplain is not allowed to raise ground levels and cannot increase the amount of water on neighbors during flood events. Developing property, all or a portion of which is in a regulated floodplain, requires a Floodplain Development Permit. This permit identifies the specific requirements for each proposed project. Prior to Floodplain Permit release, all plans must be reviewed to ensure that they meet the requirements of the Flood

Ordinance. For purposes of development, development includes, but is not limited to: buildings, homes, manufactured and mobile homes, other structures, bridges, culverts, dredging, filling, grading, paving, excavation, docks, etc. Structures may also require floodproofing under the ordinance, which requires that residential homes be elevated above the level of the base flood elevation (BFE) and commercial structures have the option to flood proof above the BFE. A licensed engineer must design the flood proofing. The flood ordinance also requires Elevation Certificates. The purpose for an Elevation Certificate is to document compliance with permit conditions as Elevation Certificates are the only official document used by FEMA to determine whether a structure is inside or outside a floodplain and are also used to determine the proper rate when purchasing flood insurance. Elevation Certificates must be completed and stamped by a surveyor licensed in the State of Washington. Properties that fall out of compliance with NFIP standards are dealt with using the same process as nuisance violations, which are administered by code enforcement.

Additional information on the community's National Flood Insurance Program (NFIP) compliance is presented in **Table 6**. This identifies the current status of the jurisdiction's involvement with the NFIP. Repetitive flood loss records are as follows:

- Number of FEMA-Identified Repetitive Loss Properties: 34
- Number of FEMA-Identified Severe Repetitive Loss Properties: 0
- Number of Repetitive Flood Loss/Severe Repetitive Loss Properties That Have Been Mitigated: 1
- Total FEMA payments: $

Table 41. National Flood Insurance Compliance	
What department is responsible for floodplain management in your community?	Skagit County Planning **
Who is your community's floodplain administrator? (department/position)	Skagit County Planning **
Do you have any certified floodplain managers on staff in your community?	No **
What is the date of adoption of your flood damage prevention ordinance?	
When was the most recent Community Assistance Visit or Community Assistance Contact?	Nov 2017
To the best of your knowledge, does your community have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are.	No
Do your flood hazard maps adequately address the flood risk within your community? (If no, please state why)	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of assistance/training is needed?	No
Does your community participate in the Community Rating System (CRS)? If so, is your community seeking to improve its CRS	

Classification? If not, is your community interested in joining the CRS program?	
Source: Federal Emergency Management Agency	

Capability Assessment

Coordination with other community planning efforts is paramount to the successful implementation of this plan. This section provides information on how planning mechanisms, policies, and programs are integrated into other on-going efforts. It also identifies the jurisdiction's capabilities with respect to preparing and planning for, responding to, recovering from, and mitigating the impacts of hazard events and incidents.

Capabilities include the programs, policies and plans currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. The capabilities are divided into the following sections: National Flood Insurance Information; regulatory capabilities which influence mitigation; administrative and technical mitigation capabilities, including education and outreach, partnerships, and other on-going mitigation efforts; fiscal capabilities which support mitigation, and classifications under various community programs.

Regulatory Capability Assessment

The assessment of the jurisdiction's legal and regulatory capabilities is presented in **Table 7**. This includes planning and land management tools, typically used by local jurisdictions to implement hazard mitigation activities and indicates those that are currently in place.

Table 42. Legal and Regulatory Capability

	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Codes, Ordinances & Requirements				
Building Code Version Year	Yes ICC 2015			Ord 322, Building Codes, 2016
Zoning Ordinance	Yes			Ord 179 Zoning, 1994
Subdivision Ordinance	Yes			Ord 169, Subdivisions, 1994
Floodplain Ordinance	Yes		Yes	Ord 292 Flood Hazard Mitigation, 2011
Stormwater Management	No			
Post Disaster Recovery	No			
Real Estate Disclosure	No			
Growth Management	Yes	Yes	Yes	Ord Comprehensive Plan, 2025

Table 42. Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Site Plan Review	Yes			
Public Health and Safety	No			
Coastal Zone Management	No			
Climate Change Adaptation	No			
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire, etc.)	No			
Environmental Protection	Yes		Yes	Ord 317, Critical Areas, 2015
Planning Documents				
General or Comprehensive Plan	Yes			Ord , 2025
Is the plan equipped to provide linkage to this mitigation plan?				No
Floodplain or Basin Plan	No			
Stormwater Plan	No			
Capital Improvement Plan	Yes			Part of Ord , Comprehensive Plan, 2025
Habitat Conservation Plan	No			
Economic Development Plan	No			
Shoreline Management Plan	Yes			
Community Wildfire Protection Plan	No			
Transportation Plan	No			
Response/Recovery Planning				
Comprehensive Emergency Management Plan		Yes		Skagit County
Threat and Hazard Identification and Risk Assessment	Yes			
Terrorism Plan	No			
Post-Disaster Recovery Plan	**			
Continuity of Operations Plan	**			

Table 42. Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Public Health Plans	No			
Boards and Commission				
Planning Commission	No			
Mitigation Planning Committee	No			
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems, chipping, etc.)	Yes			
Mutual Aid Agreements / Memorandums of Understanding	Yes	Yes		With County, Fire Departments. Red Cross
Other				

Administrative and Technical Capabilities Assessment

The assessment of the jurisdiction's administrative and technical capabilities, including educational and outreach efforts, and on-going programmatic efforts are presented in **Table 8**. These are elements which support not only mitigation, but all phases of emergency management already in place that are used to implement mitigation activities and communicate hazard-related information.

Table 43. Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	No	
Professionals trained in building or infrastructure construction practices (building officials, fire inspectors, etc.)	Yes	Under Contract
Engineers specializing in construction practices?	Yes	Under Contract
Planners or engineers with an understanding of natural hazards	Yes	Under Contract
Staff with training in benefit/cost analysis		
Surveyors	No	
Personnel skilled or trained in GIS applications	Yes	Skagit County GIS
Personnel skilled or trained in Hazus use	No	

Table 43. Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Scientist familiar with natural hazards in local area	No	
Emergency Manager	Yes	Skagit County Dept of Emergency Management
Floodplain Manager (NFIP compliance)		
Grant writers	No	
Warning Systems/Services (Reverse 9-1-1, outdoor warning signs or signals, flood or fire warning program, etc.?)	Yes	Skagit 911, Skagit Dept. of Emergency Management
Hazard data and information available to public	Yes	Hamilton Clerk
Maintain Elevation Certificates	Yes	Hamilton Clerk
Education and Outreach		
Local citizen groups or non-profit organizations focused on emergency preparedness?	Yes	Red Cross, CERT
Local citizen groups or non-profit organizations focused on environmental protection?	Yes	Skagit Fisheries Enhancement Group, Skagit Land Trust
Organization focused on individuals with access and functional needs populations		
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	Hamilton Clerk
Natural disaster or safety related school programs?	No	
Public-private partnership initiatives addressing disaster-related issues?		*******
Multi-seasonal public awareness program?		**********
Other		
On-Going Mitigation Efforts		
Hazardous Vegetation Abatement Program	Yes	Hamilton Public Works
Noxious Weed Eradication Program or other vegetation management	Yes	Hamilton Public Works, Skagit Fisheries
Fire Safe Councils	No	
Chipper program	Yes	Hamilton Public Works

Table 43. Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Defensible space inspections program	No	
Creek, stream, culvert or storm drain maintenance or cleaning program	No	
Stream restoration program	No	
Erosion or sediment control program	No	
Address signage for property addresses	Yes	Hamilton Clerk
Other		

Fiscal Capability Assessment

The assessment of the jurisdiction's fiscal capabilities is presented in **Table 9**. These are the financial tools or resources that could potentially be used to help fund mitigation activities.

Table 44. Fiscal Capability	
Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	
Incur Debt through Special Tax Bonds	
Incur Debt through Private Activity Bonds	
Withhold Public Expenditures in Hazard-Prone Areas	
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	

Community Classifications

The jurisdiction's classifications under various hazard mitigation programs are presented in **Table 10**. Each of the classifications identified establishes requirements which, when met, are known to increase the resilience of a community.

Table 45. Community Classifications		
	Participating (Yes/No)	Date Enrolled
Community Rating System	No	
Building Code Effectiveness Grading Schedule	No	
Storm Ready		
Firewise	No	
Tsunami Ready (if applicable)	No	

Mitigation Goals and Objectives

The Town of Hamilton adopts the hazard mitigation goals and objectives developed by the Planning Team as described in Volume 1.

Hazard Mitigation Action Plan

The Planning Team for the jurisdiction identified and prioritized a wide range of actions based on the risk assessment, and their knowledge of the jurisdiction's assets and hazards of concern. The table below lists the action items or strategies that make up the jurisdiction's hazard mitigation plan. Background information and information on how each action item will be administered, responsible agency/office (including outside the district), potential funding sources, the timeframe, who will benefit from the activity, and the type of initiative associated with each item are also identified.

Prioritization of Mitigation Initiatives

Once the mitigation initiatives items were identified, the Planning Team followed the same process outlined within Volume 1 to prioritize their initiatives. **Table 12** identifies each initiative based on priority, where the highest priority initiative is listed at the top.

Table 46.
Mitigation Strategy and Priority Schedule

Priority Ranking	Objectives Met	Type of Initiative(s)	Hazards Mitigated[1]	Lead Agency/ Agencies	Can project be funded under existing programs/ budgets?	Estimated Cost	Is Project Grant Eligible?	Timeframe	Included in Previous Plan?	Who or What Benefits
[1]Hazards: Coastal Hazard-CZ/ Drought-D/ Earthquake-EQ/ Flooding-Fl/ Landslide-LS/ Severe Weather-SW / Volcano-Vol/ Wildfire-WF/ Tsunami-T/ Acts of Violence-AV/ Hazardous Sites or Materials Spill-HazMat/ Disease-D/ Dam Failure-DF/ Infrastructure Failure-IF										
1. Adopt and utilize the latest State adopted building and fire codes										
New	1	PREVENTATIVE	EQ,SW, WF,LS	HAMILTON	Yes	NONE	GENERAL FUND	LONG TERM	YES	LOCAL
2. The Floodway, Special Flood Risk Zone and the 100-year Flood Plain shall be regulated and flood mitigation activities implemented to maintain the Town's flood insurance eligibility while avoiding unnecessarily restrictive or administratively difficult regulations.										
Existing	1	Preventative Property Protection	FL	Hamilton	Yes	None	General Fund	Long Term	Yes	Local
3. Utilize best available science to develop the Critical Areas title to protect, to the greatest extent practical, life, property and the environment from loss, injury and damage by hazards, whether from natural causes or from human activity and related goals.										
New, Existing	1	Preventative Resource Protection	FL	Hamilton	Yes	Unknown	General Fund Grant	Long Term	Yes	Local
4. Coordinate with Skagit County through arrangements such as interlocal agreements, joint programs, consistent standards, and regional boards or committees.										
New, Existing	1, 4	Prevention Emergency Services, Recovery	FL, LS, EQ	Hamilton	Yes	Unknown	General Fund Grants	Long Term	Yes	Local

5. Encourage nonstructural solutions to flood hazards, including such things as open space, recreational uses, habitat expansion, agriculture, and public access.										
New	1	Prevention	FL	Hamilton	Yes	Unknown	General Fund Grants	Long Term	Yes	Local
6. The Building Official will continue to maintain elevation certificates.										
Existing	!	Property Protection	FL	Hamilton	Yes	Minimal	General Fund	Long Term	Yes	Local
7. Protect and restore the wetlands to remove to provide for efficient conveyance of water through the city during flood events.										
Existing	1	Property Protection	FL, SW	Hamilton	Yes	Unknown	General Fund	Long Term	Yes	Local
8. Develop and maintain an emergency plan that includes flood warning, earthquake response, and evacuation program for the Town.										
Existing, New	1,3,4	Emergency Property Protection Services	FL, EQ,VOL	Hamilton	Yes	Unknown	General Fund Grants	Long Term	Yes	Local
9. Maintain transportation levels of service within town limits that are critical for evacuation.										
New, Existing	1,3.4	Prevention Emergency Services Property Protection	FL, EQ, VOL	Hamilton	Yes	Unknown	General Funds Grants	Long Term	Yes	Local
10. Maintain Fire, Water Treatment and Community-owned Critical Facilities up to date with most current technology and standards to ensure operation during hazard events.										
New, Existing	1,4	Property Protection Emergency Protection	FL,EG, VOL	Hamilton	Yes	Unknown	General Funds Grants	Long Term	Yes	Local

11. Maintain existing dike system.										
Existing	1	Property Protection Structural Protection Emergency Services	FL	Hamilton	Yes	Unknown	General Fund Grants	Long Term	Yes	Local
12. Provide ongoing public education and outreach on local hazards.										
Existing	1	Protection Prevention	All	Hamilton	Yes	Unknown	General Fund	Long Term	Yes	Local

Status of Previous Plan Initiatives

Table 13 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared. Many of the initiatives in the previous plan were duplicative, and have been simplified into one mitigation action going forward.

Table 47.
Current Status of Previous Hazard Mitigation Action Plan

Mitigation Strategy	Project Status	Completed	Continual/ On-Going Nature	Removed/ No Longer Relevant/ No Action	Carried Over
Use preventive activities, such as zoning, stormwater management regulations, building codes, and preservation of open space and effectiveness of current regulatory and preventive standards and programs,	Regulations have been updated in the Comp Plan.	☐	☒	☐	☒
Review property protection actions, such as acquisition, retrofitting and insurance.	Forterra has purchased some properties and removed bu8ilding rights.	☐	☒	☐	☒
Review activities to protect the natural and beneficial functions of the floodplain, such as wetlands protection.		☐	☒	☐	☒
Review emergency services activities, such as warning and sandbagging.	Annual flood letter sent, flood alert siren tested.	☐	☒	☐	☒
Review structural projects, such as reservoirs and channel modifications.		☐	☒	☐	☒
Review public information activities, such as outreach projects and environmental programs.	Multiple opportunities for public education on flooding and other hazards in Hamilton	☐	☒	☐	☒

Plan Maintenance and Update

The Town of Hamilton continues to seek feedback from members of the public, even after the plan has been approved.

The criteria below will be utilized to evaluate the plan:

- Continually evaluate plan for effectiveness by utilizing the annual progress report. This should be conducted once a year or after a disaster by the Skagit County Department of Emergency Management (DEM) and/or lead annex partner.
- Utilize an annual progress report to track implementation and effectiveness of mitigation initiatives and their actions. This should be conducted once a year by DEM personnel.
- Conduct regular check-ins with stakeholders and partner agencies by DEM personnel.
- Review and revise the plan at least once every five years by DEM personnel and lead annex partner.

County staff at the Department of Emergency Management will be the primary agency responsible for maintaining the plan and monitoring mitigation initiatives. Staff will utilize the report provided in **Volume 3 Appendix C** to track progress. The report will also include sections to document any changes that have been made to initiatives, outreach efforts, hazard mapping, Countywide development changes, successful implementation instances, and other changes relevant to the HMP.

The Town of Hamilton has not experienced changes in development in hazard-prone areas.

Plan Adoption

The Town of Hamilton provides proof of documentation that the City Council/Board of Commissioners has formally adopted the plan under Resolution XX pursuant to 44 CFR § 201.6(c)(5).

Annex 5 Town of La Conner

Introduction

This Annex details the hazard mitigation planning elements specific to the Town of La Conner, a participating jurisdiction to the Skagit County Hazard Mitigation Plan Update. This Annex is not intended to be a standalone document but rather appends to and supplements the information contained in the base plan document. As such, all sections of the base plan, including the planning process and other procedural requirements apply to and were met by the Town of La Conner. For planning purposes, this Annex provides additional information specific to the jurisdiction, with a focus on providing greater details on the risk assessment and mitigation strategy for this community only. This document serves as an update to the previously completed plan. All relevant data has been carried over and updated with new information as appropriate and as identified within the planning process discussed in Volume 1.

Hazard Mitigation Planning Team Point/s of Contact

The Town of La Conner followed the planning process detailed in Section 2 of the Base Plan. In addition to providing representation on the County's Planning Team, the Town of La Conner also formulated their own internal planning team to support the broader planning process. Individuals assisting in this Annex development are identified in **Table 1** below, along with a brief description of how they participated.

Table 48. Local Planning Team Members

Name	Position, Title	Planning Tasks
i.e., Person 1	i.e., Position 1	Choose an item.
		Choose an item.
		Choose an item.
i.e., Person 2	i.e., Position 2	Choose an item.
		Choose an item.
		Choose an item.
		Choose an item.

Public Engagement

The Town of La Conner engaged the public through the following means:

- Direct mailer advertising the preparation of the HMP
- Social media, such as Facebook
- Jurisdiction's website: www.townoflaconner.org
- Public workshop was held in September on the 19th 2025.

- Responses from local respondents to the County's public survey collected between July 2025 and September 2025.
- Responses from local respondents to the County's second round of the public survey collected from 23rd of October 2025 to 7th of November 2025.

Suggestions and responses from the engagement activities were taken into consideration in the preparation of this Plan. Specific examples include.....

Review of Existing Documents

La Conner Comprehensive Plan

Community Profile

The following is a summary of key information about the jurisdiction and its history:

Date of Incorporation— La Conner was officially incorporated on November 20, 1883, during Washington Territory days. It disincorporated in 1886 but reincorporated in 1890. The town briefly served as Skagit County's first seat of government before Mount Vernon was selected in 1884.

Current Population— As of 2025, La Conner has an estimated population of 991 residents.

Population Growth— From 2020 to 2025, La Conner's population has grown by approximately 2.38%, reflecting a modest annual increase of about 0.51%.

Location and Description— La Conner is situated in western Skagit County, Washington, along the Swinomish Channel, which connects to the Salish Sea. The town is approximately 70 miles north of Seattle and 20 miles south of the Canadian border. It is known for its historic waterfront, art galleries, and annual events like the Skagit Valley Tulip Festival.

Brief History— Founded in the early 1860s, La Conner is Skagit County's oldest community. It developed as a hub for agriculture, fishing, and trade, benefiting from its strategic location along the Swinomish Channel. The town experienced growth in the late 19th and early 20th centuries, with logging and fishing industries playing significant roles.

Climate— La Conner experiences a temperate maritime climate characterized by mild, wet winters and cool, dry summers. The average annual precipitation is approximately 35 inches, and the average annual temperature is around 50°F.

Governing Body Format— La Conner operates under a mayor-council form of government. The Town Council consists of six members elected at large, and the mayor is elected by the council members. The council is responsible for legislative functions, while the mayor oversees executive duties.

Development Trends— Recent development in La Conner has focused on preserving the town's historic character while accommodating growth. There has been an emphasis on sustainable development practices, including the preservation of open spaces and the promotion of tourism-related businesses.

Economy – The economy of La Conner is primarily driven by tourism, agriculture, and the arts. The town attracts visitors with its historic downtown, art galleries, and annual events. Agriculture, particularly tulip farming, plays a significant role in the local economy, especially during the spring

season. The arts community, including galleries and studios, contributes to the town's cultural and economic vitality.

The jurisdiction boundaries are identified in the map below.

Hazard Event History

Within the Base Plan, the Planning Team identified all hazard events which have occurred within the Town of La Conner. In the context of the planning region, it was determined that there are no additional hazards unique to the jurisdiction. **Table 2** lists all past occurrences of hazards within the jurisdiction. If available, dollar loss data is also included.

Table 49. Previous Hazard Occurrences			
Type of Event	FEMA Disaster # (if available)	Date	Dollar Losses (if available)
Severe Storms, Flooding, Landslides, and Mudslides	4539	1/20/2020	Unknown
Flooding and Mudslides	4635	11/25/2021	$32,011,462
Severe Winter Storms, Snowstorms, Straight-line Winds, Flooding	4650	12/26/2021	$16,094,227

The recorded history of hazard events, as mentioned above, can indicate what the likelihood would be of a hazard occurring in the future. **Table 3** below is the rating for probability of hazards according to the parameters described in Volume 1.

Table 50. Probability of Future Hazards Occurrence		
Hazard	Impact Factor	Impact ID
Coastal Hazards	Medium	3
Drought	Unlikely	1
Earthquake	Medium	3
Flooding	Medium	3
Landslides	NR	0
Severe Weather	Medium	3
Tsunami	Medium	3
Volcano	Low	2
Wildfire	Unlikely	1
Acts of Violence	Unlikely	1
Hazardous Material Spill or Release	Low	2
Disease	Unlikely	1
Bridge/Road Failure	Unlikely	1
Power/Water System Failure	Medium	3
Dam Failure	NR	0
Other hazards	Unlikely	1

Hazard Area Extent and Location

This section describes the type, location, and extent of all hazards that can affect the jurisdiction.

Table 51. Geographic Extent		
Hazard Type	Impact Factor	Impact ID
Coastal Hazards	Extensive	4
Drought	Significant	3
Earthquake	Extensive	4
Flooding	Extensive	4
Landslides	Limited	1
Severe Weather	Significant	3
Tsunami	Extensive	4
Volcano	Extensive	4
Wildfire	Limited	1
Acts of Violence	Limited	1
Hazardous Material Spill or Release	Moderate	2
Disease	NR	0
Bridge/Road Failure	Moderate	2
Power/Water System Failure	Extensive	4
Dam Failure	Extensive	4
Other hazards	Extensive	4

Hazard Risk and Vulnerability Ranking

The jurisdiction's Planning Team reviewed the hazard list identified within the Base Plan and identified hazards that are most likely to have the highest impact within the Town of La Conner. **Table 5** presents the ranking of the hazards of concern based on their CPRI score. A qualitative vulnerability ranking was then assigned based on a summary of potential impact determined by past occurrences, extent, damage, casualties, and continuity of government. The assessment is categorized into the following classifications:

- **Extremely Low** – No or very limited impact. The occurrence and potential cost of damage to life and property is very minimal-to-nonexistent. No impact to government functions with no disruption to essential services.
- **Low (Negligible)** – Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal. Government functions are at 90% with limited disruption to essential services.
- **Medium (Limited)** – Moderate potential impact. This ranking carries a moderate threat level to the general population and /or built environment. The potential damage is more isolated, and

less costly than a more widespread disaster. Government functions are at 80% with limited impact to essential services.

- **High (Critical)** – Widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread. Hazards in this category may have occurred in the past. Government functions are at ~50% operations with limited delivery of essential services.
- **Extremely High (Catastrophic)** – Very widespread with catastrophic impact. Government functions are significantly impacted for more than one month.

Table 52. Vulnerability Ranking by Hazard Type

Hazard Rank	Hazard Type	CPRI Score	Vulnerability Rank
1	Coastal Hazards	2.30	Medium
2	Flooding	2.30	Medium
3	Severe Weather	2.25	Medium
4	Power/Water System Failure	2.60	Medium
5	Earthquake	2.60	Medium
6	Volcano	2.20	Medium
7	Tsunami	2.40	Medium
8	Dam Failure	1.40	Low
9	Hazardous Material Spill or Release	1.70	Low
10	Other Hazards	1.80	Low
11	Drought	1.10	Extremely Low
12	Wildfire	1.05	Extremely Low
13	Landslide	0.50	Extremely Low
14	Acts Of Violence	1.05	Extremely Low
15	Bridge/ Road Failure	1.25	Extremely Low
16	Disease	0.40	Extremely Low

National Flood Insurance Information (NFIP)

This section identifies the number of repetitive loss or severe repetitive loss properties which have occurred within the Town of La Conner as specified in 44 CFR 201.6(c)(3)(ii). A repetitive loss (RL) property is defined as a structure covered by a contract for flood insurance made available under the NFIP that:

(ix) Has incurred flood-related damage on two occasions, in which the cost of the repair, on the average, equaled or exceeded 25 percent of the market value of the structure at the time of each such flood event; and
(x) At the time of the second incidence of flood-related damage, the contract for flood insurance contains increased cost of compliance coverage.

A severe repetitive loss (SRL) property is a structure that:

(ix) Is covered under a contract for flood insurance made available under the NFIP; and
(x) Has incurred flood related damage for which:
    a. Four or more separate claims payments (includes building and contents) have been made under flood insurance coverage with the amount of each such claim exceeding $5,000, and with the cumulative amount of such claims payments exceeding $20,000, or
    b. At least two separate claims payments (includes only building) have been made under such coverage, with the cumulative amount of such claims exceeding the market value of the insured structure.

The Town of La Conner entered the NFIP in 1984. The effective date for the current countywide FIRM is December 1, 1981. There is one Letter of Map Amendments issued by FEMA for removal of properties erroneously identified as being within the floodplain.

Since 2020 within the Town of La Conner no buildings have been removed, in which the land is being returned to native habitat, further reducing risk. There have been no permits granted for permanent structures that increase flood risk since 2014.

There are no outstanding compliance violations at the time of this writing.

Management of the NFIP program for the Town of La Conner falls on many shoulders. The Town of La Conner does not have a floodplain manager per se, but does have a contract with the County floodplain manager for work as needed. Building permits go through a different contractor, who has experience with floodplain properties and also does the permit inspections.

As a brief overview, the only development currently permitted in the floodplain is not allowed to raise ground levels and cannot increase the amount of water on neighbors during flood events. Developing property, all or a portion of which is in a regulated floodplain, requires a Floodplain Development Permit. This permit identifies the specific requirements for each proposed project. Prior to Floodplain Permit release, all plans must be reviewed to ensure that they meet the requirements of the Flood Ordinance. For purposes of development, development includes, but is not limited to: buildings, homes, manufactured and mobile homes, other structures, bridges, culverts, dredging, filling, grading, paving, excavation, docks, etc. Structures may also require floodproofing under the ordinance, which requires that residential homes be elevated above the level of the base flood elevation (BFE) and commercial structures have the option to flood proof above the BFE. A licensed engineer must design the flood proofing. The flood ordinance also requires Elevation Certificates. The purpose for an Elevation Certificate is to document compliance with permit conditions as Elevation Certificates are the only official document used by FEMA to determine whether a structure is inside or outside a floodplain, and are also used to determine the proper rate when purchasing flood insurance. Elevation

Certificates must be completed and stamped by a surveyor licensed in the State of Washington. Properties that fall out of compliance with NFIP standards are dealt with using the same process as nuisance violations, which are administered by code enforcement.

Additional information on the community's National Flood Insurance Program (NFIP) compliance is presented in **Table 6**. This identifies the current status of the jurisdiction's involvement with the NFIP.

Table 53. National Flood Insurance Compliance	
What department is responsible for floodplain management in your community?	Planning
Who is your community's floodplain administrator? (department/position)	
Do you have any certified floodplain managers on staff in your community?	No
What is the date of adoption of your flood damage prevention ordinance?	
When was the most recent Community Assistance Visit or Community Assistance Contact?	
To the best of your knowledge, does your community have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are.	No
Do your flood hazard maps adequately address the flood risk within your community? (If no, please state why)	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of assistance/training is needed?	No
Does your community participate in the Community Rating System (CRS)? If so, is your community seeking to improve its CRS Classification? If not, is your community interested in joining the CRS program?	Yes
Source: Federal Emergency Management Agency	

Capability Assessment

Coordination with other community planning efforts is paramount to the successful implementation of this plan. This section provides information on how planning mechanisms, policies, and programs are integrated into other on-going efforts. It also identifies the jurisdiction's capabilities with respect to preparing and planning for, responding to, recovering from, and mitigating the impacts of hazard events and incidents.

Capabilities include the programs, policies and plans currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. The capabilities are divided into the following sections: National Flood Insurance Information; regulatory capabilities which influence mitigation; administrative and technical mitigation capabilities, including education and outreach, partnerships,

and other on-going mitigation efforts; fiscal capabilities which support mitigation, and classifications under various community programs.

Regulatory Capability Assessment

The assessment of the jurisdiction's legal and regulatory capabilities is presented in **Table 7**. This includes planning and land management tools, typically used by local jurisdictions to implement hazard mitigation activities and indicates those that are currently in place.

Table 54. Legal and Regulatory Capability

	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Codes, Ordinances & Requirements				
Building Code Version Year		X	X	
Zoning Ordinance		X	X	
Subdivision Ordinance		X		
Floodplain Ordinance		X		
Stormwater Management		X		
Post Disaster Recovery		X		
Real Estate Disclosure		X		
Growth Management		X		
Site Plan Review		X		
Public Health and Safety		X		
Coastal Zone Management		X		
Climate Change Adaptation		X		
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire, etc.)		X		
Environmental Protection		X		
Planning Documents				
General or Comprehensive Plan		X		
Is the plan equipped to provide linkage to this mitigation plan?				No
Floodplain or Basin Plan		X		

Table 54. Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Stormwater Plan		X		
Capital Improvement Plan		X		
Habitat Conservation Plan		X		
Economic Development Plan		X		
Shoreline Management Plan		X		
Community Wildfire Protection Plan		X		
Transportation Plan		X		
Response/Recovery Planning				
Comprehensive Emergency Management Plan		X		
Threat and Hazard Identification and Risk Assessment	X	X		
Terrorism Plan		X		
Post-Disaster Recovery Plan		X		
Continuity of Operations Plan	X			
Public Health Plans		X		
Boards and Commission				
Planning Commission		X		
Mitigation Planning Committee		X		
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems, chipping, etc.)		X		
Mutual Aid Agreements / Memorandums of Understanding	X			
Other				

Administrative and Technical Capabilities Assessment

The assessment of the jurisdiction's administrative and technical capabilities, including educational and outreach efforts, and on-going programmatic efforts are presented in **Table 8**. These are elements

which support not only mitigation, but all phases of emergency management already in place that are used to implement mitigation activities and communicate hazard-related information.

Table 55. Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Skagit County
Professionals trained in building or infrastructure construction practices (building officials, fire inspectors, etc.)	Yes	Skagit County
Engineers specializing in construction practices?	Yes	Skagit County
Planners or engineers with an understanding of natural hazards	Yes	Skagit County
Staff with training in benefit/cost analysis	Yes	Skagit County
Surveyors	Yes	Skagit County
Personnel skilled or trained in GIS applications	Yes	Skagit County/GIS/Mapping Services
Personnel skilled or trained in Hazus use	Yes	Skagit County
Scientist familiar with natural hazards in local area	No	
Emergency Manager	Yes	Skagit County/Department of Emergency Management
Floodplain Manager (NFIP compliance)	Yes	Skagit County
Grant writers	No	
Warning Systems/Services (Reverse 9-1-1, outdoor warning signs or signals, flood or fire warning program, etc.?)	Yes	Skagit County/Cascade Dispatch Center
Hazard data and information available to public	Yes	LEPC/Skagit County Emergency Management
Maintain Elevation Certificates	Yes	Skagit County
Education and Outreach		
Local citizen groups or non-profit organizations focused on emergency preparedness?	Yes	Skagit County C.E.R.T.
Local citizen groups or non-profit organizations focused on environmental protection?	Yes	Skagit CERT
Organization focused on individuals with access and functional needs populations	Yes	Skagit County Medical Reserve Corps (MRC)

Table 55. Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	Skagit County CERT and MRC
Natural disaster or safety related school programs?	No	
Public-private partnership initiatives addressing disaster-related issues?	No	
Multi-seasonal public awareness program?	No	
Other		
On-Going Mitigation Efforts		
Hazardous Vegetation Abatement Program	No	
Noxious Weed Eradication Program or other vegetation management	Yes	Skagit County/Noxious Weed Control Board
Fire Safe Councils	No	
Chipper program	No	
Defensible space inspections program	Yes	Skagit Conservation District
Creek, stream, culvert or storm drain maintenance or cleaning program	Yes	Skagit County Public Works
Stream restoration program	Yes	Skagit Fishery Enhancement
Erosion or sediment control program	Yes	Skagit Conservation District
Address signage for property addresses	Yes	Skagit County GIS Mapping
Other		

Fiscal Capability Assessment

The assessment of the jurisdiction's fiscal capabilities is presented in **Table 9**. These are the financial tools or resources that could potentially be used to help fund mitigation activities.

Table 56. Fiscal Capability	
Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No
Other	

Community Classifications

The jurisdiction's classifications under various hazard mitigation programs are presented in **Table 10**. Each of the classifications identified establishes requirements which, when met, are known to increase the resilience of a community.

Table 57. Community Classifications		
	Participating (Yes/No)	Date Enrolled
Community Rating System	Yes - County	2020
Building Code Effectiveness Grading Schedule	Unk	
Storm Ready	Yes - County	2025
Firewise	Unknown	
Tsunami Ready (if applicable)		

Mitigation Goals and Objectives

The Town of La Conner the hazard mitigation goals and objectives developed by the Planning Team described in Volume 1.

Hazard Mitigation Action Plan

The Planning Team for the jurisdiction identified and prioritized a wide range of actions based on the risk assessment, and their knowledge of the jurisdiction's assets and hazards of concern. The table below lists the action items or strategies that make up the jurisdiction's hazard mitigation plan. Background information and information on how each action item will be administered, responsible agency/office (including outside the district), potential funding sources, the timeframe, who will benefit from the activity, and the type of initiative associated with each item are also identified.

Prioritization of Mitigation Initiatives

Once the mitigation initiatives items were identified, the Planning Team followed the same process outlined within Volume 1 to prioritize their initiatives. **Table 11** identifies each initiative based on priority, where the highest priority initiative is listed at the top.

Table 58. Mitigation Strategy and Priority Schedule									
Priority No.	# of Objectives met	Hazards Mitigated[1]	Lead Agency	Can project be funded under existing programs/ budgets?	Estimated Cost	Is Project Grant Eligible? Yes/No	Timeframe	Included in Previous Plan? Yes/No	Who or What Benefits
[1]Hazards: Coastal Hazard-CZ/ Drought-D/ Earthquake-EQ/ Flooding-Fl/ Landslide-LS/ Severe Weather-SW / Volcano-Vol/ Wildfire-WF/ Tsunami-T/ Acts of Violence-AV/ Hazardous Sites or Materials Spill-HazMat/ Disease-D/ Dam Failure-DF/ Infrastructure Failure-IF									
Radio Communication upgrade – In coordination with Skagit County radio infrastructure upgrade.									
1	1,7, 9	All	LCFD	no	$100,000	N/I	ASAP	no	Town and county
Provide Public Education for general preparedness.									
2	1, 4, 5, 6	All	LCFD	25%	$15,000	N/I	Med-Long	yes	Town and Surrounding
Implement flood prevention measures to reduce property damage and protect public safety.									
3	1, 3, 4, 8	CZ,FL,T,DF	TOL	No	$500,000	N/I	Ongoing	yes	Town of La Conner
Develop and maintain an early warning system to notify the community of hazards and enhance public safety.									
4	1, 9	All	TOL	No	$75,000	N/I	Long	No	Town of La Conner

Status of Previous Plan Initiatives

Town of La Conner was not included in the previous plan.

Plan Maintenance

The Town of La Conner continues to seek feedback from members of the public, even after the plan has been approved.

The criteria below will be utilized to evaluate the plan:

- Continually evaluate plan for effectiveness by utilizing the annual progress report. This should be conducted once a year or after a disaster by the Skagit County Department of Emergency Management (DEM) and/or lead annex partner.
- Utilize an annual progress report to track implementation and effectiveness of mitigation initiatives and their actions. This should be conducted once a year by DEM personnel.
- Conduct regular check-ins with stakeholders and partner agencies by DEM personnel.
- Review and revise the plan at least once every five years by DEM personnel and lead annex partner.

County staff at the Department of Emergency Management will be the primary agency responsible for maintaining the plan and monitoring mitigation initiatives. Staff will utilize the report provided in **Volume 3 Appendix C** to track progress. The report will also include sections to document any changes that have been made to initiatives, outreach efforts, hazard mapping, Countywide development changes, successful implementation instances, and other changes relevant to the HMP.

Plan Update

The Town of La Conner has not experienced changes in development in hazard-prone areas.

Future Needs/Additional Comments

Plan Adoption

The Town of La Conner provides proof of documentation that the City Council/Board of Commissioners has formally adopted the plan under Resolution XX pursuant to 44 CFR § 201.6(c)(5).

Annex 6 Town of Lyman

Introduction

This Annex details the hazard mitigation planning elements specific to the Town of Lyman, a participating jurisdiction to the Skagit County Hazard Mitigation Plan Update. This Annex is not intended to be a standalone document but rather appends to and supplements the information contained in the base plan document. As such, all sections of the base plan, including the planning process and other procedural requirements apply to and were met by the Town of Lyman. For planning purposes, this Annex provides additional information specific to the jurisdiction, with a focus on providing greater details on the risk assessment and mitigation strategy for this community only. This document serves as an update to the previously completed plan. All relevant data has been carried over and updated with new information as appropriate and as identified within the planning process discussed in Volume 1.

Hazard Mitigation Planning Team Point/s of Contact

The Town of Lyman followed the planning process detailed in Section 2 of the Base Plan. In addition to providing representation on the County's Planning Team, the Town of Lyman also formulated their own internal planning team to support the broader planning process. Individuals assisting in this Annex development are identified in **Table 1** below, along with a brief description of how they participated.

Table 59. Local Planning Team Members

Name	Position, Title	Planning Tasks
Asher Schoepflin	EJ Municipal Assistant Planner	Provide technical assistance
	Consultant to Town of Lyman	Assist with developing mitigation strategies
		Plan and/or attend planning meetings
		Present to city council for adoption
Lacy Judd	Town of Lyman Clerk/Treasurer	Review, comment, and update
		Coordinate functions throughout jurisdiction
		Plan and/or attend planning meetings

Public Engagement

The Town of Lyman engaged the public through the following means:

- Direct mailer advertising the preparation of the HMP

- Jurisdiction's website: www.townoflyman.com
- Public workshop was held at Skagit Fire District #8 Department on August 28th, 2025.
- Responses from local respondents to the County's public survey collected between July 2025 to September 2025.
- Responses from local respondents to the County's second round of the public survey collected from 23rd of October 2025 to 7th of November 2025.

Suggestions and responses from the engagement activities were taken into consideration in the preparation of this Plan.

Review of Existing Documents

Lyman Comprehensive Plan

Community Profile

The following is a summary of key information about the jurisdiction and its history:

Date of Incorporation— May 8th, 1909

Current Population— 437 (2023 ACS)

Population Growth— Decline of 151 since 2013 (ACS)

Location and Description— The Town of Lyman is located along the north shore of the Skagit River, about 8 miles east of Sedro-Woolley. State Route 20 runs through the town. The foothills of the Cascade Mountains and the Skagit Valley create the setting for Lyman.

Brief History—

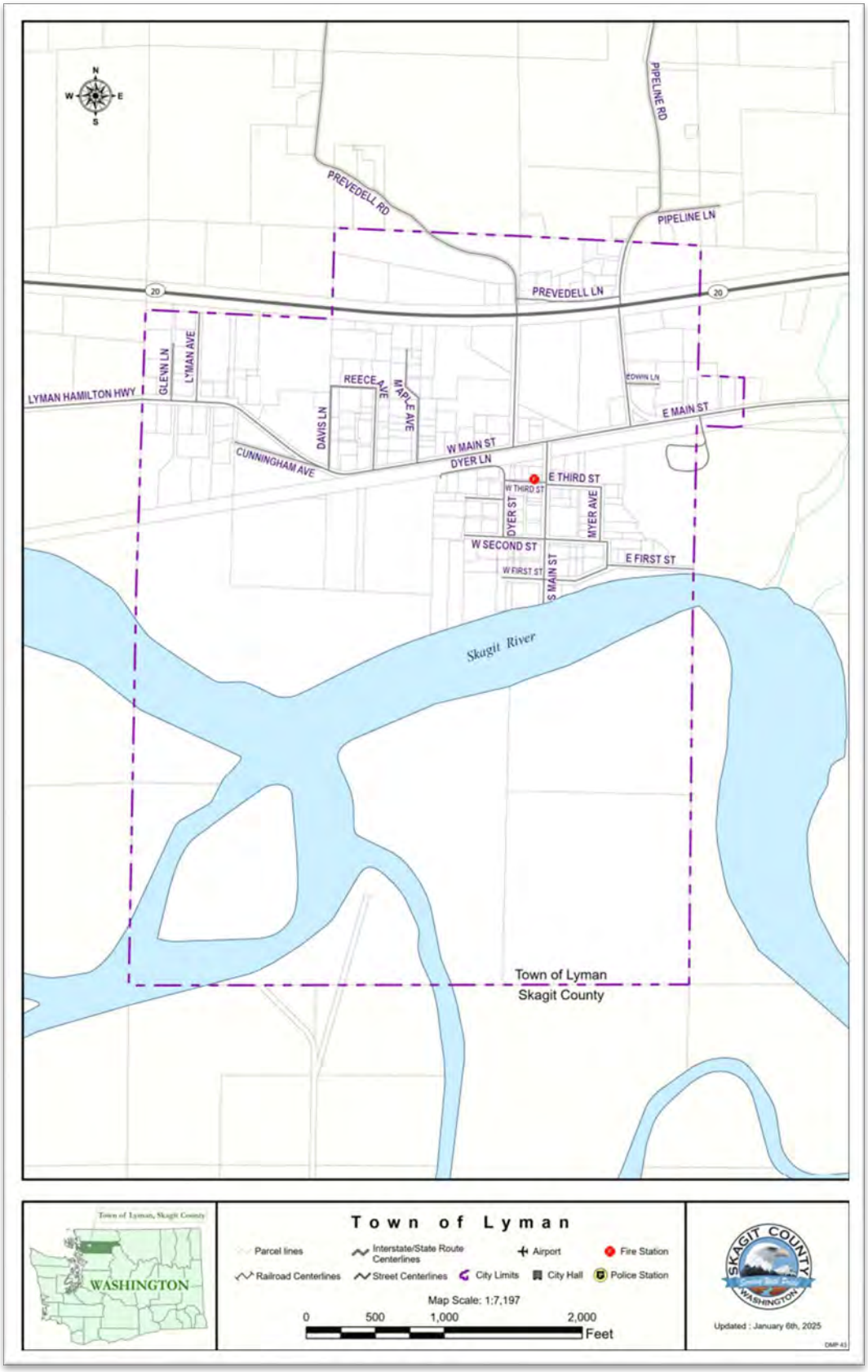
Climate— Mild, rainy winters and warm, dry summers; average annual precipitation ~37 inches

Governing Body Format—Mayor/Council

Development Trends— flat

Economy – Service industry

The jurisdiction boundaries are identified in the map below.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Skagit County
Town of Lyman, Skagit County
WASHINGTON
Town of Lyman
Parcel lines
Interstate/State Route Centerlines
Airport
Fire Station
Railroad Centerlines
Street Centerlines
City Limits
City Hall
Police Station
Map Scale: 1:7,197
0
500
1,000
2,000
Feet
SKAGIT COUNTY
WASHINGTON
Updated : January 6th, 2025

Hazard Event History

Within the Base Plan, the Planning Team identified all hazard events which have occurred within the Town of Lyman. In the context of the planning region, it was determined that there are no additional hazards unique to the jurisdiction. **Table 2** lists all past occurrences of hazards within the jurisdiction. If available, dollar loss data is also included.

Table 60. Previous Hazard Occurrences			
Type of Event	FEMA Disaster # (if available)	Date	Dollar Losses (if available)
Severe Storms, Flooding, Landslides, and Mudslides	4539	1/20/2020	Unknown
Flooding and Mudslides	4635	11/25/2021	$32,011,462
Severe Winter Storms, Snowstorms, Straight-line Winds, Flooding	4650	12/26/2021	$16,094,227

The recorded history of hazard events, as mentioned above, can indicate what the likelihood would be of a hazard occurring in the future. **Table 3** below is the rating for probability of hazards according to the parameters described in Volume 1.

Table 61. Probability of Future Hazards Occurrence		
Hazard	Impact Factor	Impact ID
Coastal Hazards	Unlikely	1
Drought	High	4
Earthquake	Low	2
Flooding	Medium	3
Landslides	Medium	3
Severe Weather	High	4
Tsunami	Unlikely	1
Volcano	Unlikely	1
Wildfire	Medium	3
Acts of Violence	Low	2
Hazardous Material Spill or Release	Low	2
Disease	Low	2
Bridge/Road Failure	Medium	3
Power/Water System Failure	Medium	3
Dam Failure	Unlikely	1
Other hazards		

Hazard Area Extent and Location

This section describes the type, location, and extent of all hazards that can affect the jurisdiction.

Table 62. Geographic Extent		
Hazard Type	Impact Factor	Impact ID
Coastal Hazards	NR	0
Drought	Extensive	4
Earthquake	Extensive	4
Flooding	Moderate	2
Landslides	Limited	1
Severe Weather	Extensive	4
Tsunami	NR	0
Volcano	Extensive	4
Wildfire	Extensive	4
Acts of Violence	Moderate	2
Hazardous Material Spill or Release	Moderate	2
Disease	Limited	1
Bridge/Road Failure	Moderate	2
Power/Water System Failure	Extensive	4
Dam Failure	Extensive	4
Other hazards		

Hazard Risk and Vulnerability Ranking

The jurisdiction's Planning Team reviewed the hazard list identified within the Base Plan and identified hazards that are most likely to have the highest impact within the Town of Lyman. **Table 5** presents the ranking of the hazards of concern based on their CPRI score. A qualitative vulnerability ranking was then assigned based on a summary of potential impact determined by past occurrences, extent, damage, casualties, and continuity of government. The assessment is categorized into the following classifications:

- **Extremely Low** – No or very limited impact. The occurrence and potential cost of damage to life and property is very minimal-to-nonexistent. No impact to government functions with no disruption to essential services.
- **Low (Negligible)** – Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal. Government functions are at 90% with limited disruption to essential services.
- **Medium (Limited)** – Moderate potential impact. This ranking carries a moderate threat level to the general population and /or built environment. The potential damage is more isolated, and

less costly than a more widespread disaster. Government functions are at 80% with limited impact to essential services.

- **High (Critical)** – Widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread. Hazards in this category may have occurred in the past. Government functions are at ~50% operations with limited delivery of essential services.
- **Extremely High (Catastrophic)** – Very widespread with catastrophic impact. Government functions are significantly impacted for more than one month.

Table 63. Vulnerability Ranking by Hazard Type

Hazard Rank	Hazard Type	CPRI Score	Vulnerability Rank
1	Wildfire	3.20	High
2	Severe Weather	3.20	High
3	Drought	3.10	High
4	Power/Water System Failure	2.70	Medium
5	Earthquake	2.65	Medium
6	Flooding	2.45	Medium
7	Volcano	2.40	Medium
8	Bridge/Road Failure	2.35	Medium
9	Dam Failure	2.35	Medium
10	Landslides	2.25	Medium
11	Disease	1.85	Low
12	Acts of Violence	1.55	Low
13	Hazardous Material Spill or Release	1.45	Low
14	Tsunami	0.60	Extremely Low
15	Coastal Hazards	0.55	Extremely Low

National Flood Insurance Information (NFIP)

This section identifies the number of repetitive loss or severe repetitive loss properties which have occurred within the Town of Lyman as specified in 44 CFR 201.6(c)(3)(ii). A repetitive loss (RL) property is defined as a structure covered by a contract for flood insurance made available under the NFIP that:

(xi) Has incurred flood-related damage on two occasions, in which the cost of the repair, on the average, equaled or exceeded 25 percent of the market value of the structure at the time of each such flood event; and

(xii) At the time of the second incidence of flood-related damage, the contract for flood insurance contains increased cost of compliance coverage.

A severe repetitive loss (SRL) property is a structure that:

(xi) Is covered under a contract for flood insurance made available under the NFIP; and
(xii) Has incurred flood related damage for which:
   a. Four or more separate claims payments (includes building and contents) have been made under flood insurance coverage with the amount of each such claim exceeding $5,000, and with the cumulative amount of such claims payments exceeding $20,000, or
   b. At least two separate claims payments (includes only building) have been made under such coverage, with the cumulative amount of such claims exceeding the market value of the insured structure.

The Town of Lyman entered the NFIP in 1982. The effective date for the current countywide FIRM is December 1, 1981. There is one Letter of Map Amendments issued by FEMA for removal of properties erroneously identified as being within the floodplain.

Since 2020, no buildings within the Town of Lyman have been removed, in which the land is being returned to native habitat. There have been no permits granted for permanent structures that increase flood risk since 2014.

Management of the NFIP program for the Town of Lyman falls on many shoulders. The Town of Lyman does not have a floodplain manager per se, but does have a contract with the County floodplain manager for work as needed. Building permits go through a different contractor, who has experience with floodplain properties and also does the permit inspections.

As a brief overview, the only development currently permitted in the floodplain is not allowed to raise ground levels and cannot increase the amount of water on neighbors during flood events. Developing property, all or a portion of which is in a regulated floodplain, requires a Floodplain Development Permit. This permit identifies the specific requirements for each proposed project. Prior to Floodplain Permit release, all plans must be reviewed to ensure that they meet the requirements of the Flood Ordinance. For purposes of development, development includes, but is not limited to: buildings, homes, manufactured and mobile homes, other structures, bridges, culverts, dredging, filling, grading, paving, excavation, docks, etc. Structures may also require floodproofing under the ordinance, which requires that residential homes be elevated above the level of the base flood elevation (BFE) and commercial structures have the option to flood proof above the BFE. A licensed engineer must design the flood proofing. The flood ordinance also requires Elevation Certificates. The purpose for an Elevation Certificate is to document compliance with permit conditions as Elevation Certificates are the only official document used by FEMA to determine whether a structure is inside or outside a floodplain and are also used to determine the proper rate when purchasing flood insurance. Elevation Certificates must be completed and stamped by a surveyor licensed in the State of Washington. Properties that fall out of compliance with NFIP standards are dealt with using the same process as nuisance violations, which are administered by code enforcement.

Additional information on the community's National Flood Insurance Program (NFIP) compliance is presented in **Table 6.** This identifies the current status of the jurisdiction's involvement with the NFIP. Repetitive flood loss records are as follows:

Table 64. National Flood Insurance Compliance	
What department is responsible for floodplain management in your community?	Skagit County Planning
Who is your community's floodplain administrator? (department/position)	Skagit County Planning
Do you have any certified floodplain managers on staff in your community?	No
What is the date of adoption of your flood damage prevention ordinance?	
When was the most recent Community Assistance Visit or Community Assistance Contact?	
To the best of your knowledge, does your community have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are.	No
Do your flood hazard maps adequately address the flood risk within your community? (If no, please state why)	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of assistance/training is needed?	No
Does your community participate in the Community Rating System (CRS)? If so, is your community seeking to improve its CRS Classification? If not, is your community interested in joining the CRS program?	No
Source: Federal Emergency Management Agency	

Capability Assessment

Coordination with other community planning efforts is paramount to the successful implementation of this plan. This section provides information on how planning mechanisms, policies, and programs are integrated into other on-going efforts. It also identifies the jurisdiction's capabilities with respect to preparing and planning for, responding to, recovering from, and mitigating the impacts of hazard events and incidents.

Capabilities include the programs, policies and plans currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. The capabilities are divided into the following sections: National Flood Insurance Information; regulatory capabilities which influence mitigation; administrative and technical mitigation capabilities, including education and outreach, partnerships, and other on-going mitigation efforts; fiscal capabilities which support mitigation, and classifications under various community programs.

Regulatory Capability Assessment

The assessment of the jurisdiction's legal and regulatory capabilities is presented in **Table 7**. This includes planning and land management tools, typically used by local jurisdictions to implement hazard mitigation activities and indicates those that are currently in place.

Table 65. Legal and Regulatory Capability

	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Codes, Ordinances & Requirements				
Building Code	Yes			
Version				
Year				
Zoning Ordinance	Yes			
Subdivision Ordinance	Yes			
Floodplain Ordinance	Yes		Yes	
Stormwater Management	No			
Post Disaster Recovery	No			
Real Estate Disclosure	No			
Growth Management	Yes	Yes	Yes	
Site Plan Review	Yes			
Public Health and Safety	No			
Coastal Zone Management	No			
Climate Change Adaptation	No			
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire, etc.)	No			
Environmental Protection	Yes		Yes	
Planning Documents				
General or Comprehensive Plan	Yes			
Is the plan equipped to provide linkage to this mitigation plan?				No
Floodplain or Basin Plan	No			
Stormwater Plan	No			
Capital Improvement Plan	Yes			

Table 65. Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Habitat Conservation Plan	No			
Economic Development Plan	No			
Shoreline Management Plan	Yes			
Community Wildfire Protection Plan	No			
Transportation Plan	No			
Response/Recovery Planning				
Comprehensive Emergency Management Plan		Yes		Skagit County
Threat and Hazard Identification and Risk Assessment	Yes			
Terrorism Plan	No			
Post-Disaster Recovery Plan	No			
Continuity of Operations Plan	No			
Public Health Plans	No			
Boards and Commission				
Planning Commission	No			
Mitigation Planning Committee	No			
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems, chipping, etc.)	Yes			
Mutual Aid Agreements / Memorandums of Understanding	Yes			
Other				

Administrative and Technical Capabilities Assessment

The assessment of the jurisdiction's administrative and technical capabilities, including educational and outreach efforts, and on-going programmatic efforts are presented in **Table 8**. These are elements which support not only mitigation, but all phases of emergency management already in place that are used to implement mitigation activities and communicate hazard-related information.

Table 66. Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	EJ Municipal Land Use Planning
Professionals trained in building or infrastructure construction practices (building officials, fire inspectors, etc.)	Yes	Under contract
Engineers specializing in construction practices?	Yes	Under contract
Planners or engineers with an understanding of natural hazards	Yes	EJ Municipal Land Use Planning
Staff with training in benefit/cost analysis	No	
Surveyors	No	
Personnel skilled or trained in GIS applications	Yes	Skagit County GIS
Personnel skilled or trained in Hazus use	No	
Scientist familiar with natural hazards in local area	No	
Emergency Manager	Yes	Skagit County Department of Emergency Management
Floodplain Manager (NFIP compliance)	No	
Grant writers	No	
Warning Systems/Services (Reverse 9-1-1, outdoor warning signs or signals, flood or fire warning program, etc.?)	Yes	Skagit 911, Skagit County Department of Emergency Management
Hazard data and information available to public	Yes	Town Clerk
Maintain Elevation Certificates	Yes	Town Clerk
Education and Outreach		
Local citizen groups or non-profit organizations focused on emergency preparedness?	Yes	Red Cross, Cert
Local citizen groups or non-profit organizations focused on environmental protection?	Yes	Skagit Fisheries Enhancement Group, Skagit Land Trust
Organization focused on individuals with access and functional needs populations		

Table 66. Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	Town Clerk
Natural disaster or safety related school programs?	No	
Public-private partnership initiatives addressing disaster-related issues?		
Multi-seasonal public awareness program?		
Other		
On-Going Mitigation Efforts		
Hazardous Vegetation Abatement Program	Yes	Lyman Public Works
Noxious Weed Eradication Program or other vegetation management	Yes	Lyman Public Works
Fire Safe Councils	No	
Chipper program	Yes	Lyman Public Works
Defensible space inspections program	No	
Creek, stream, culvert or storm drain maintenance or cleaning program	No	
Stream restoration program	No	
Erosion or sediment control program	No	
Address signage for property addresses	Yes	Town Clerk
Other		

Fiscal Capability Assessment

The assessment of the jurisdiction's fiscal capabilities is presented in **Table 9**. These are the financial tools or resources that could potentially be used to help fund mitigation activities.

Table 67. Fiscal Capability	
Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	
Incur Debt through Special Tax Bonds	
Incur Debt through Private Activity Bonds	
Withhold Public Expenditures in Hazard-Prone Areas	
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	

Community Classifications

The jurisdiction's classifications under various hazard mitigation programs are presented in **Table 10**. Each of the classifications identified establishes requirements which, when met, are known to increase the resilience of a community.

Table 68. Community Classifications		
	Participating (Yes/No)	Date Enrolled
Community Rating System	No	
Building Code Effectiveness Grading Schedule	Unknown	
Storm Ready	No	
Firewise	No	
Tsunami Ready (if applicable)	N/A	

Mitigation Goals and Objectives

This section identifies the mitigation goals, policies, and implementation actions for the updated HMP. The measures described in **Table 11** below aims to identify, prioritize, and act to reduce risk. They are visions for reducing or avoiding losses from the identified hazards over a broad, long-term time frame.

Table 69. Planning Area Mitigation Goals and Objectives	
Goal 1: Protect Life and Property	
Objective 1	Ensure evacuation procedures and routes are well established and clearly marked.
Objective 2	Work with local emergency responders to ensure correct procedures in the event of natural hazards.
Objective 3	Encourage homeowners and businesses to take preventative actions in areas that are vulnerable to natural hazards.
Objective 4	Implement mitigation activities that will assist in protecting lives and property by making buildings and infrastructure resilient to natural hazards.
Goal 2: Increase Public Awareness	
Objective 5	Work with local agencies and organizations to develop education and outreach programs to increase public awareness of natural hazards.
Objective 6	Provide residents with information and resources, when possible, to help spread awareness of natural hazards and mitigation efforts.
Goal 3: Provide for Emergency Services	
Objective 7	Strengthen interjurisdictional coordination with local emergency services providers, such as Skagit Fire District #8.
Objective 8	Encourage the establishment of policies to help ensure the prioritization and implementation of mitigation strategies and projects designed to benefit critical facilities and infrastructure.

Hazard Mitigation Action Plan

The Planning Team for the jurisdiction identified and prioritized a wide range of actions based on the risk assessment, and their knowledge of the jurisdiction's assets and hazards of concern. The table below lists the action items or strategies that make up the jurisdiction's hazard mitigation plan. Background information and information on how each action item will be administered, responsible agency/office (including outside the district), potential funding sources, the timeframe, who will benefit from the activity, and the type of initiative associated with each item are also identified.

Prioritization of Mitigation Initiatives

Once the mitigation initiatives items were identified, the Planning Team followed the same process outlined within Volume 1 to prioritize their initiatives. Table 12 identifies each initiative based on priority, where the highest priority initiative is listed at the top.

Table 70. Mitigation Strategy and Priority Schedule										
Priority Ranking	Objectives Met	Type of Initiative(s)	Hazards Mitigated[1]	Lead Agency/ Agencies	Can project be funded under existing programs/ budgets?	Estimated Cost	Is Project Grant Eligible?	Timeframe	Included in Previous Plan?	Who or What Benefits
[1]Hazards: Coastal Hazard-CZ/ Drought-D/ Earthquake-EQ/ Flooding-Fl/ Landslide-LS/ Severe Weather-SW / Volcano-Vol/ Wildfire-WF/ Tsunami-T/ Acts of Violence-AV/ Hazardous Sites or Materials Spill-HazMat/ Disease-D/ Dam Failure-DF/ Infrastructure Failure-IF										
Initiative 1: Work local agencies and organizations to host events and help spread information to Lyman residents regarding natural hazard risks and mitigation steps.										
	3, 5, 6	Public Information, Property Protection	D, Fl, LS, SW, WF, Vol	Lyman, Skagit County	Yes	Low	Yes	Medium	No	Region, residents
Initiative 2: Work with County, Regional, and State agencies to establish procedures, a chain of command and multiple routes in the event of evacuation caused by natural hazards.										
	1, 2, 7	Public Information, Emergency Services/ Response	WF, SW, Fl, Vol, DF	Lyman, Skagit Fire District 8	Yes	Low	Yes	Short	No	Region, residents
Initiative 3: In concert with Skagit County, develop a drought contingency plan to address public education and water conservation in times of drought or anticipated drought.										
	5, 6	Public Information, Education	D	Lyman, Skagit County	Yes	Low	Yes	Short	No	Residents, region
Initiative 4: Coordinate among neighboring jurisdictions to seek and apply for grants for hardening of the Skagit River riverbank to prevent damage to property from erosion.										
	3, 4, 6	Public Information,	CZ, Fl, LS	Lyman, Neighboring jurisdictions	Yes	Medium	Yes	Medium	No	Residents, Town

		Property Protection								
Initiative 5: Collaborate with the Washington State Department of Natural Resources and Skagit County Conservation District to implement and promote "FireWise" programs in the Lyman.										
	3, 4, 7, 8	Public Information, Property Protection	WF	Lyman, Skagit County, WSDNR	Yes	Low	No	Short	No	Residents, Town, Region
Initiative 6: Identify a designated meeting place for residents in the event of an evacuation.										
	1, 2, 7	Public Information, Emergency Response	WF, SW, Vol, DF	Lyman, Skagit Fire District 8, Skagit County	Yes	Low	No	Short	No	Residents, Emergency Responders
Initiative 7: Provide erosion control information and steep slope stability recommendations to citizens and homeowners within Lyman.										
	3, 4, 5	Public Information, Property Protection	LS, Fl	Lyman	Yes	Low	No	Medium	No	Residents
Initiative 8: Partner with the Washington State Department of Transportation and other municipalities to conduct earthquake assessment of roadways in town.										
	8	Infrastructure Protection	EQ	Lyman, WSDOT	Grants	Medium	Yes	Long	No	Residents, region
Initiative 9: Gather more information on severe weather, including mitigation strategies and methods for reduction of cost and extend of damage.										
	4, 8	Public information, Mitigation	SW	Lyman	Yes	Low	No	Short	No	Residents, Town
Initiative 10: Ensure that future infrastructure projects, upgrades to existing capital facilities, and maintenance of critical infrastructure is done in a way that is resilient to natural hazards.										

	4, 8	Infrastructure Protection	IF	Lyman	Yes, Grants	High	Yes	Long	No	Town, Residents

Status of Previous Plan Initiatives

The Town of Lyman was not in the previous plan.

Plan Maintenance

The Town of Lyman continues to seek feedback from members of the public, even after the plan has been approved.

The criteria below will be utilized to evaluate the plan:

- Continually evaluate plan for effectiveness by utilizing the annual progress report. This should be conducted once a year or after a disaster by the Skagit County Department of Emergency Management (DEM) and/or lead annex partner.
- Utilize an annual progress report to track implementation and effectiveness of mitigation initiatives and their actions. This should be conducted once a year by DEM personnel.
- Conduct regular check-ins with stakeholders and partner agencies by DEM personnel.
- Review and revise the plan at least once every five years by DEM personnel and lead annex partner.

County staff at the Department of Emergency Management will be the primary agency responsible for maintaining the plan and monitoring mitigation initiatives. Staff will utilize the report provided in **Volume 3 Appendix C** to track progress. The report will also include sections to document any changes that have been made to initiatives, outreach efforts, hazard mapping, Countywide development changes, successful implementation instances, and other changes relevant to the HMP.

Plan Update

The Town of Lyman has not experienced changes in development in hazard-prone areas.

Plan Adoption

The Town of Lyman provides proof of documentation that the City Council/Board of Commissioners has formally adopted the plan under Resolution XX pursuant to 44 CFR § 201.6(c)(5).

Annex 7 City of Mount Vernon

Introduction

This Annex details the hazard mitigation planning elements specific to the City of Mount Vernon of Mount Vernon, a participating jurisdiction to the Skagit County Hazard Mitigation Plan Update. This Annex is not intended to be a standalone document but rather appends to and supplements the information contained in the base plan document. As such, all sections of the base plan, including the planning process and other procedural requirements apply to and were met by the City of Mount Vernon of Mount Vernon.

For planning purposes, this Annex provides additional information specific to the jurisdiction, with a focus on providing greater details on the risk assessment and mitigation strategy for this community only. This document serves as an update to the previously completed plan. All relevant data has been carried over and updated with new information as appropriate and as identified within the planning process discussed in **Volume 1.**

Hazard Mitigation Planning Team Point/s of Contact

The City of Mount Vernon of Mount Vernon followed the planning process detailed in **Section 2** of the Base Plan. In addition to providing representation on the County's Planning Team, the City of Mount Vernon of Mount Vernon also formulated their own internal planning team to support the broader planning process. Individuals assisting in this Annex development are identified in **Table 1** below, along with a brief description of how they participated.

Table 71. Local Planning Team Members

Name and Title	Position	Planning Tasks
Bryan Harris, Fire Chief 1901 N LaVenture Road Mount Vernon, WA 98273 360-336-6277 bryanh@mountvernonwa.gov	Primary Contact	• Review, comment, and update • Assist with developing mitigation strategies • Coordinate functions throughout jurisdiction • Plan and/or attend planning meetings • Present to city council for adoption
Rebecca Lowell, Principal Planner 910 Cleveland Ave Mount Vernon, WA, 98273 360-336-6211 rebeccab@mountvernonwa.gov	Alternate / Secondary Contact Floodplain Administrator under Chapter 15.36 Mount Vernon Municipal Code (MVMC)	Completes/assists with the following specific to the FEMA established floodplain: • Assist with developing mitigation strategies • Review, comment, and update • Provide technical assistance

Rebecca Perkins, Associate Planner 910 Cleveland Ave Mount Vernon, WA, 98273 360-336-6211 rebeccap@mountvernonwa.gov	Data review and analysis	Completes/assists with the following specific to the FEMA established floodplain: • Review, comment, and update • Provide technical assistance

Public Engagement

The City of Mount Vernon of Mount Vernon engaged the public through the following means:

- Social media, such as Face Book
- Jurisdiction's website: www.mountvernonwa.gov
- Public workshop held at Mount Vernon Fire Station 2 1901 N Laventure RD on August 25,2025.
- Responses from local respondents to the County's public survey collected between July 2025 through September 2025.
- Responses from local respondents to the County's second round of the public survey collected from 23rd of October 2025 to 7th of November 2025.

Suggestions and responses from the engagement activities were taken into consideration in the preparation of this Plan.

Review of Existing Documents

Following is a list of the existing documents and resources used in updating this Annex:

- Skagit County Multi-Jurisdiction Hazard Mitigation Plan 2020 Update
- Volume 2: Planning Partner Annexes of the Skagit County Multi-Jurisdiction Hazard Mitigation Plan 2020 Update
- Community Rating System (CRS) program documents from 2020 to 2025
- Mount Vernon Municipal Code Chapter 15.36, Floodplain Management
- City of Mount Vernon Natural Hazards Mitigation Plan and associated Emergency Plan dated 2020
- City of Mount Vernon Emergency Plan

Community Profile

The following is a summary of key information about the jurisdiction and its history:

Date of Incorporation— 1890

Current Population— 36,050[1]

Existing Housing Units – 13,824[2]

Population and Housing Growth— Mount Vernon has historically and will continue to have a larger population and number of housing units than any other incorporated city/town within Skagit County. The table below summarizes growth projections for the City of Mount Vernon over the next 20-years (2025 to 2045).

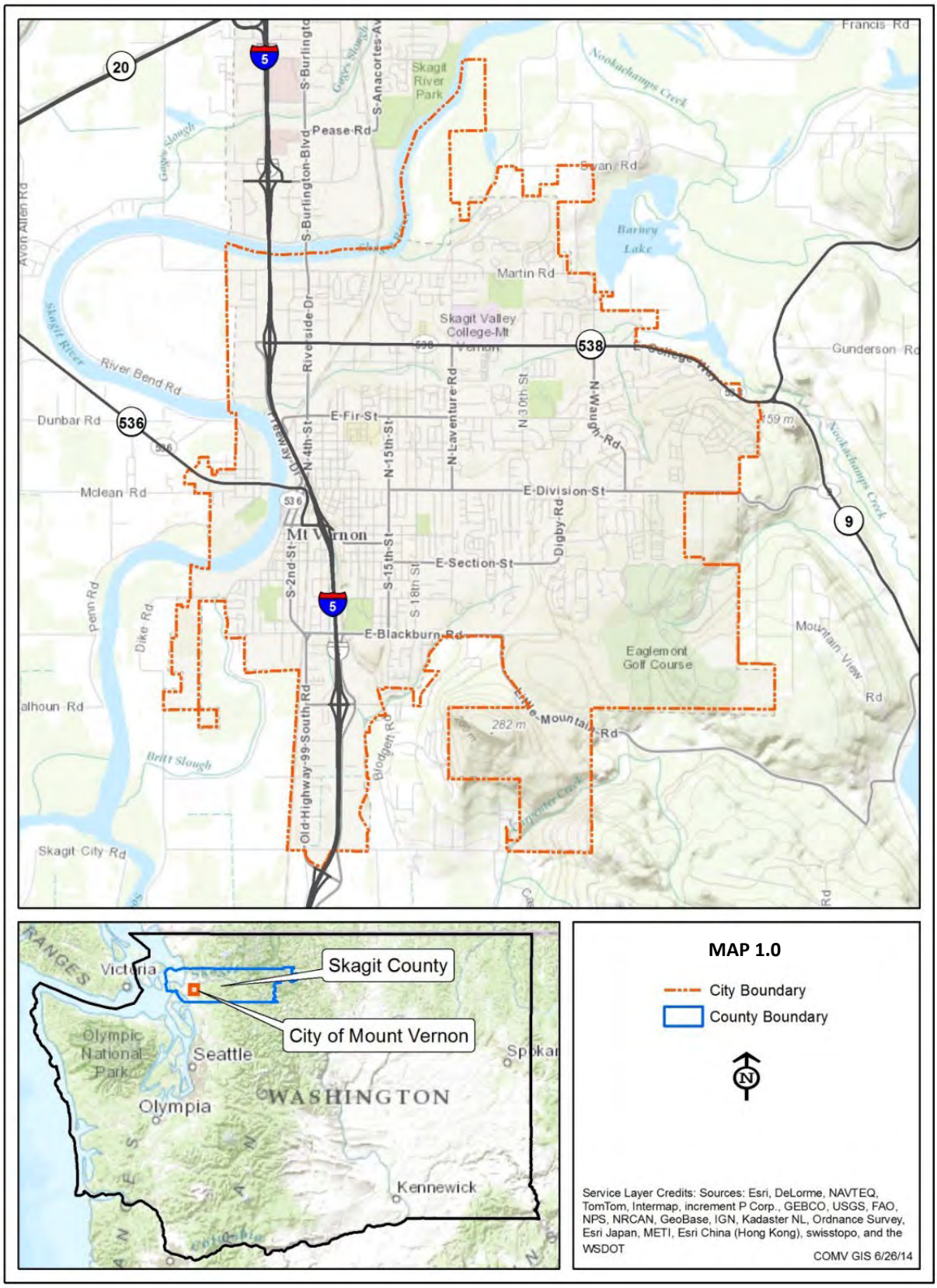
	2025[1]	**2045[3]**	**Delta and % Change**
Population	36,050	43,685	7,635, 21% increase
Housing Units	13,824	16,749	2,925, 21% increase

Location and Description— The City of Mount Vernon of Mount Vernon, Washington lies within the Skagit River Valley at elevations ranging up to approximately 200 feet above sea level. Mount Vernon occupies approximately 13 square miles (~8,320 acres) within the Skagit River watershed. The City of Mount Vernon is just six miles east of Puget Sound and has Interstate-5 and Burlington Norther Railway running north/south through the City of Mount Vernon and State Routes 536 and 538 running east/west through the City of Mount Vernon. **Map 1.0** identifies Mount Vernon's limits, Skagit County, and the State of Washington.

[1] WA State Department of Financial Management (April 1, 2025) April 1, 2025 population of Cities, Towns and Counties Used for Allocation of Selected State Revenues State of Washington. Retrieved from https://ofm.wa.gov/sites/default/files/public/dataresearch/pop/april1/ofm_april1_population_final.pdf on 08/212025

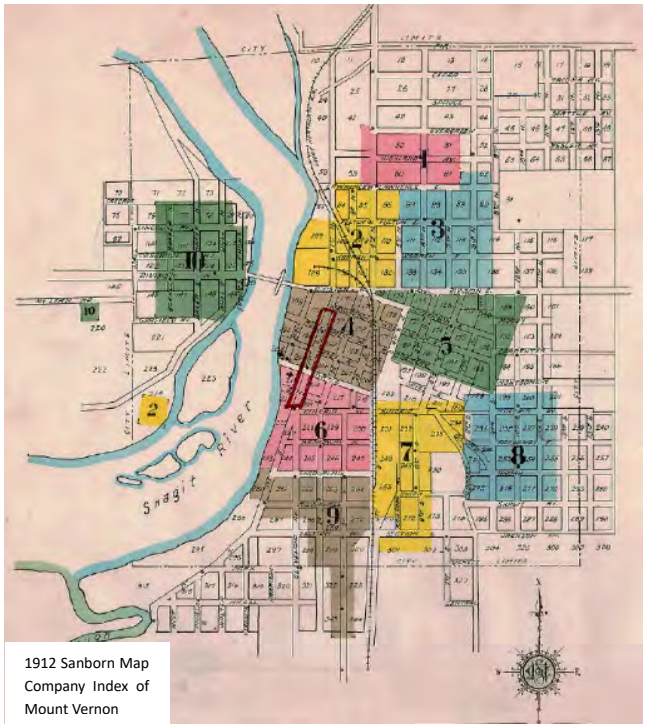
[2] WA State Department of Financial Management (June 27, 2025) Postcensal Estimates of Housing Units, April 1, 2020 to April 1, 2025. Retrieved from https://ofm.wa.gov/washington-data-research/population-demographics/population-estimates/april-1-official-population-estimates on August 21, 2025

[3] Skagit County (March 2025) Countywide Planning Policies.


Francis Rd
Nookachamps Creek
Skagit River Park
Pease Rd
S Burlington Blvd
S Anacortes Av
Swan Rd
Barney Lake
Martin Rd
Skagit Valley College-Mt Vernon
538
Gunderson Rd
E College Way
Riverside Dr
N 30th St
N Laventure Rd
N Walnut Rd
Avon Allen Rd
Skagit River
River Bend Rd
Dunbar Rd
536
E Fir St
N 4th St
N 15th St
459 m
Mclean Rd
E Division St
Digby Rd
Mt Vernon
S 2nd St
S 15th St
S 18th St
E Section St
9
Dike Rd
E Blackburn Rd
Eaglemont Golf Course
Mountain View Rd
Old Highway 99 South Rd
Blodgett Rd
282 m
Little Mountain Rd
Britt Slough
Skagit City Rd
Skagit County
City of Mount Vernon
Victoria
Olympic National Park
Seattle
Spokane
Olympia
WASHINGTON
Kennewick
MAP 1.0
City Boundary
County Boundary
N
Service Layer Credits: Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the WSDOT
COMV GIS 6/26/14

Brief History— The earliest recorded settlers in what would later become 'Mount Vernon' were Jasper Gates and Joseph F. Dwelley, in 1870. These two likely stopped in Mount Vernon because the Skagit River was not navigable beyond this point due to enormous log jams. In 1876 log jams were removed permitting river travel to the towns that had grown upriver from Mount Vernon. With the river being opened new logging activities and access to Ruby Creek (where gold had been found) were both possible. These two events reinforced Mount Vernon's position as an important transportation and trading center along the river. Until 1891, the City of Mount Vernon was dependent on the river for access to sternwheelers and steamers, fifteen of which connected it to Puget Sound. In 1891, a series of events turned the City of Mount Vernon away from its dependency. A huge fire destroyed most of the businesses and hotels situated along the waterfront, and many relocated to First Street. The railroad was also being laid through town, 4-5 blocks east of the river. Finally, the riverbank eroded, taking Front Street and the west side of Main Street. The construction of the revetment in the 1950s as a final attempt to stabilize the riverbanks was also the last blow to the City of Mount Vernon's increasingly tenuous relationship to the Skagit River.

In 1912, the Sanborn Map Company lists the City of Mount Vernon population at 2,600 (see image to the right). Expansion of the City of Mount Vernon continued until 1920, when the population decreased, and it was not until 1930 that the population again began to steadily increase. The construction of Interstate-5 during the mid-1950s, reinforced the existing separation of downtown and The Hill, but a replacement for the Second Street Viaduct, as well as the construction of the Blackburn Road Viaduct, possibly improved movement between these two areas. Though Mount Vernon's influence grew extensively during the 1940s and 1950s, it was not until the 1970s that major portions (2.32 square miles) of the County were annexed by the City of Mount Vernon. This inaugurated a conversion of the agricultural lands north and east of the City of Mount Vernon to significant new commercial and residential zones.



1912 Sanborn Map Company Index of Mount Vernon

Climate— The City of Mount Vernon of Mount Vernon, Washington, experiences a temperate marine climate, classified as Cfb under the Köppen climate system. This climate is characterized by mild, wet winters and cool, relatively dry summers. Situated in the Puget Sound lowlands between the Cascade and Olympic Mountains, Mount Vernon's weather patterns are influenced by regional topography and proximity to water. Average high temperatures during the summer reach around 72 degrees Fahrenheit, while winter lows typically drop to about 34 degrees. The annual average temperature is approximately 51 degrees, with extreme heat or cold rarely occurring. While freezing temperatures are common in winter mornings, significant snowfall is uncommon, averaging between five to ten inches per year.

Mount Vernon receives between 36 and 40 inches of precipitation annually, with the majority falling between November and January. Summers are generally drier, with July and August being the least rainy months. On average, the City of Mount Vernon experiences around 150 days of measurable precipitation per year, primarily in the form of rain. Prevailing winds come from the south and southwest, usually ranging from 5 to 15 miles per hour. Although most storms are moderate, winter events can bring strong winds and heavy rain, occasionally resulting in localized flooding, particularly in areas near the Skagit River.

The Skagit River is a central hydrological feature that contributes to seasonal flood risks, especially during prolonged rain events or snowmelt periods. Mount Vernon has implemented significant flood control infrastructure, including levees, to reduce this risk. However, parts of the City of Mount Vernon, particularly in low-lying areas and near the downtown core, remain vulnerable to flooding. While Mount Vernon itself is not typically prone to wildfires, the surrounding region can be affected by drought conditions during the summer months. Extended dry periods in July and August have become more common and may result in burn bans and increased pressure on water resources.

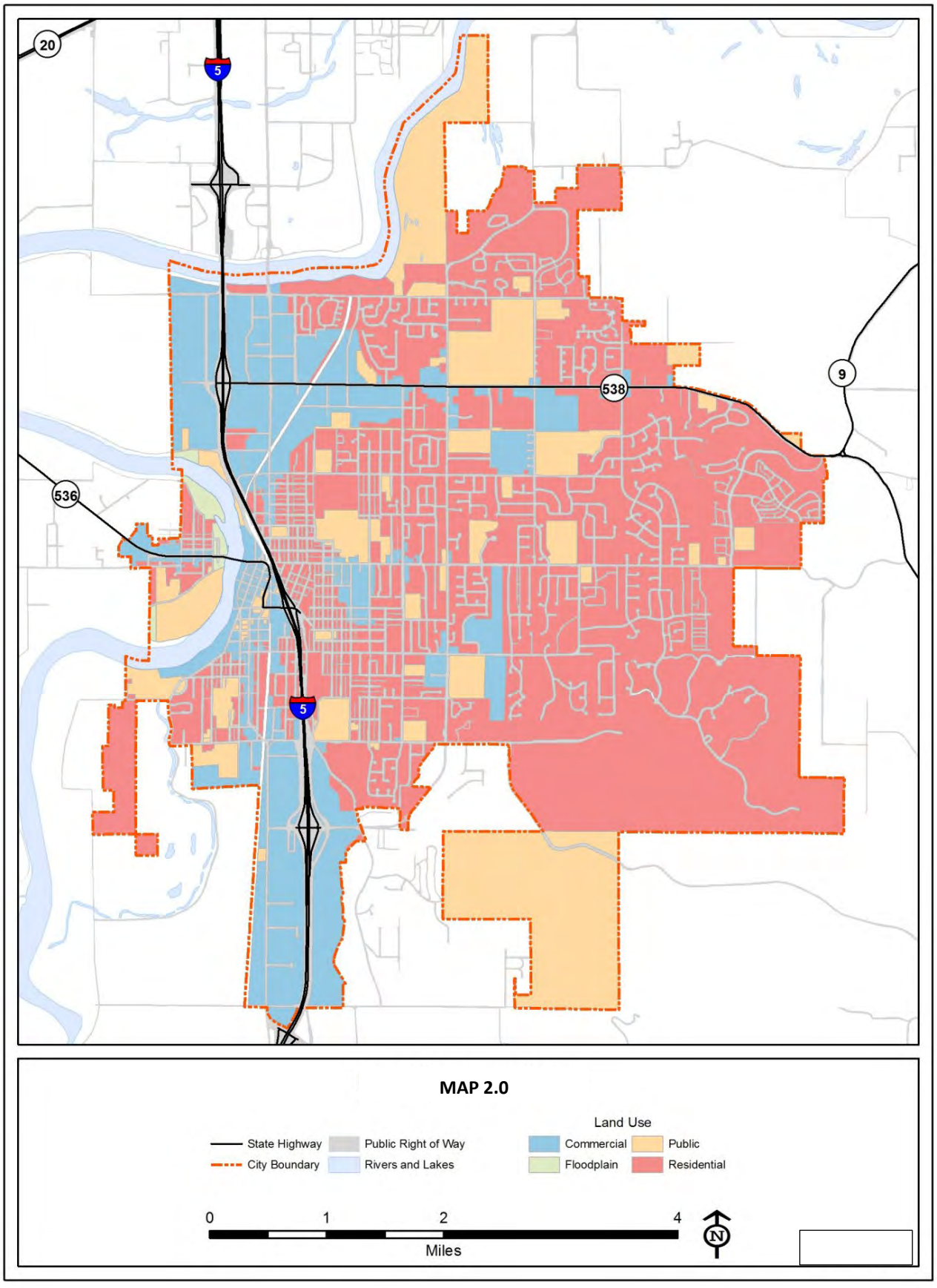
Climate change is expected to influence Mount Vernon's long-term weather patterns, with projections indicating increased winter rainfall intensity, warmer and drier summers, and heightened risks of flooding due to more extreme precipitation events. Although sea-level rise is not a direct threat to Mount Vernon because of its inland location, changes in the lower Skagit River delta and surrounding estuarine systems could have indirect impacts. The City of Mount Vernon’s evolving climate conditions underscore the importance of resilient infrastructure and proactive hazard mitigation planning.

Governing Body Format— The City of Mount Vernon is organized as a non-chartered code city that has a strong mayor-council form of government.

Development Trends— The City of Mount Vernon’s first business district was formed on the east side of the Skagit River where the City of Mount Vernon’s historic downtown district still exists today (generally between Division and Kincaid Streets). Additional business/commercial/industrial areas have developed around major transportation corridors such as Interstate-5, Riverside Drive, College Way (SR 536) and more recently in the South Mount Vernon area where both Old Highway 99 and Interstate-5 run north/south.

Historically natural disasters such as floods and fires spurred residential growth at higher elevations on the east side of the City of Mount Vernon moving away from the Skagit River and Interstate-5. In large part these land use patterns still exist today.

Map 2.0, below, identifies the transportation corridors and the location of the land uses described within this subsection.


20
5
538
9
536
5
MAP 2.0
Land Use
State Highway
Public Right of Way
Commercial
Public
City Boundary
Rivers and Lakes
Floodplain
Residential
0
1
2
4
Miles
N

Economy – Mount Vernon serves as the commercial and governmental center of Skagit County and plays a critical role in the regional economy of northwestern Washington. The City of Mount Vernon benefits from a diverse economic base anchored by healthcare, education, government services, advanced manufacturing, agriculture, and food processing. This economic diversity provides Mount Vernon with relative resilience to market fluctuations and supports a broad spectrum of employment opportunities across multiple skill levels.

In 2024 Mount Vernon had a total of 1,569 businesses[4], and the leading industries were Health Care and Social Services, Administrative and Support Services, Education, and Retail. The City of Mount Vernon's non-seasonally adjusted unemployment rate of approximately 4.6%[5], aligns closely with state and national averages. The City of Mount Vernon's labor force is supported by a combination of public-sector employment, regional medical facilities, educational institutions, and industrial employers. Notably, Mount Vernon is home to Skagit Regional Health, the county's largest employer, with over 2,600 employees. Other significant employers include Janicki Industries, the Mount Vernon School District, Draper Valley Farms, and Skagit County government[4].

The median household income in Mount Vernon is approximately $73,277, and the per capita income is $74,022[6]. While the City of Mount Vernon exhibits modest wage growth and strong job stability, the poverty rate remains elevated at 16.7%[6], indicating that a significant portion of the population may face economic vulnerability during times of disruption. This income disparity underscores the importance of inclusive economic strategies and access to essential services for lower-income households.

Mount Vernon's economy is also shaped by its role in the broader Skagit Valley agricultural region. The City of Mount Vernon supports a robust food production and distribution network, contributing to both local employment and statewide food security. Additionally, its proximity to Interstate 5, rail connections, and the Skagit Regional Airport enhances its accessibility and economic reach within the Puget Sound corridor.

The City of Mount Vernon's economic development efforts emphasize strategic infrastructure investment, business retention, workforce development, and land-use planning that supports balanced growth. Ongoing challenges include housing affordability, wage equity, and ensuring that economic development reaches historically underserved populations. However, the City of Mount Vernon's strong institutional presence, logistical advantages, and industry diversity position it well for continued economic stability and future expansion.

[4] Applied Geographic Solutions and FT Locations 2024, TaxFoundation.Org 2021 and FT Locations research. Retrieved from https://www.skagit.org/locate-here/communities-and-ports/mount-vernon on 08/21/2025

[5] U.S. Bureau of Labor Statistics (July 2025) Economy at a Glance, Mount Vernon-Anacortes, WA. Retrieved from https://www.bls.gov/eag/eag.wa_mountvernon_msa.htm on 08/27/2025

[6] U.S. Census Bureau (2023) Median Household Income in Mount Vernon city, Washington. S1901 2023 American Community Survey 5-Year Estimates. Retrieved from https://data.census.gov/profile/Mount_Vernon_city,_Washington?g=160XX00US5347560 on 08/21/2025

In summary, Mount Vernon's economy demonstrates healthy fundamentals, sustained by its regional importance in healthcare, manufacturing, education, and agriculture. Its stable employment base and diversified industry mix provide a solid foundation for long-term resilience and community well-being.

Hazard Event History

Within the Base Plan, the Planning Team identified all hazard events which have occurred within Mount Vernon. In the context of the planning region, it was determined that there are no additional hazards unique to the jurisdiction. **Table 2** lists all past occurrences of hazards within the jurisdiction. If available, dollar loss data is also included.

Table 72. Previous Hazard Occurrences

Type of Event	FEMA Disaster # (if available)	Date	Dollar Losses (if available)
Flooding	Unknown	1995, 1996, 2003, 2006	Unknown
Severe Storms, Flooding, Landslides, and Mudslides	4539	1/20/2020	Unknown
Flooding and Mudslides	4635	11/25/2021	$32,011,462
Severe Winter Storms, Snowstorms, Straight-line Winds, Flooding	4650	12/26/2021	$16,094,227
COVID-19	3427	1/21/2020	Unknown

The recorded history of hazard events, as mentioned above, can indicate what the likelihood would be of a hazard occurring in the future. **Table 3** below is the rating for probability of hazards according to the parameters described in **Volume 1.**

Table 73. Probability of Future Hazards Occurrence

Hazard	Impact Factor	Impact ID
Coastal Hazards	Low	2
Drought	Medium	3
Earthquake	Low	2
Flooding	Medium	3
Landslides	Low	2
Severe Weather	High	4
Tsunami	NR	0
Volcano	Low	2
Wildfire	Medium	3
Acts of Violence	Low	2
Hazardous Material Spill or Release	Low	2
Disease	Low	2

Bridge/Road Failure	Low	2
Power/Water System Failure	High	4
Dam Failure	Low	2

Hazard Area Extent and Location

This section describes the type, location, and extent of all hazards that can affect the jurisdiction.

Table 74. Geographic Extent

Hazard Type	Impact Factor	Impact ID
Coastal Hazards	Moderate	2
Drought	Extensive	4
Earthquake	Extensive	4
Flooding	Significant	3
Landslides	Limited	1
Severe Weather	Extensive	4
Tsunami	NR	0
Volcano	Significant	3
Wildfire	Significant	3
Acts of Violence	Limited	1
Hazardous Material Spill or Release	Limited	1
Disease	Extensive	4
Bridge/Road Failure	Limited	1
Power/Water System Failure	Limited	1
Dam Failure	Moderate	2
Other hazards	NA	NA

Hazard Risk and Vulnerability Ranking

The jurisdiction's Planning Team reviewed the hazard list identified within the Base Plan and identified hazards that are most likely to have the highest impact within Mount Vernon. **Table 5** presents the ranking of the hazards of concern based on their CPRI score. A qualitative vulnerability ranking was then assigned based on a summary of potential impact determined by past occurrences, extent, damage, casualties, and continuity of government. The assessment is categorized into the following classifications:

- **Extremely Low** – No or very limited impact. The occurrence and potential cost of damage to life and property is very minimal-to-nonexistent. No impact to government functions with no disruption to essential services.
- **Low (Negligible)** – Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal. Government functions are at 90% with limited disruption to essential services.
- **Medium (Limited)** – Moderate potential impact. This ranking carries a moderate threat level to the general population and /or built environment. The potential damage is more isolated, and less costly than a more widespread disaster. Government functions are at 80% with limited impact to essential services.
- **High (Critical)** – Widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread. Hazards in this category may have occurred in the past. Government functions are at ~50% operations with limited delivery of essential services.
- **Extremely High (Catastrophic)** – Very widespread with catastrophic impact. Government functions are significantly impacted for more than one month.

Table 75. Vulnerability Ranking by Hazard Type

Hazard Rank	Hazard Type	CPRI Score	Vulnerability Rank
1	Earthquake	3.20	High
2	Severe Weather	3.0	High
3	Wildfire	2.9	High
4	Power/Water System Failure	2.65	High
5	Drought	2.5	High
6	Disease	2.5	High
7	Flooding	2.45	Medium
8	Dam Failure	2.45	Medium
9	Volcano	2.4	Medium
10	Acts of Violence	2.0	Medium
11	Hazardous Material Spill	1.95	Medium
12	Landslides	1.75	Low
13	Bridge/Road Failure	1.65	Low
14	Coastal Hazards	1.6	Low
15	Tsunami	.85	Low

National Flood Insurance Program (NFIP)

This section summarizes Mount Vernon's involvement with the NFIP and identifies the number of repetitive loss or severe repetitive loss properties which have occurred within Mount Vernon as specified in 44 CFR 201.6(c)(3)(ii).

Mount Vernon adopted its first ordinance regulating activities in the floodplain in 1982; and on January 3, 1985, Mount Vernon entered the National Flood Insurance Program (NFIP). As such, the effective date for the City of Mount Vernon's initial and current Flood Insurance Rate Maps (FIRMs) is January 3, 1985. Since 1985 a total of 27 Letters of Map Amendment (LOMA) have been processed and approved by FEMA from 1985 to the present, and in 2019 FEMA approved a Letter of Map Revision (LOMR) removing approximately 127-acres and 498 structures from the 100-year floodplain.

Mount Vernon participates in the NFIP's Community Rating System (CRS), which is a voluntary incentive program recognizing and encouraging community floodplain management activities exceeding the minimum NFIP requirements. In 2023 FEMA documented a total of 472 NFIP policies in Mount Veron with $124,171,000 insurance in force, 109 paid claims worth $641,658.10 and 10 historic substantial damage claims to-date.

The City of Mount Vernon's Principal Planner in the Development Services Department manages the NFIP program in Mount Vernon. All development within the 100-year floodplain is required to be elevated and/or floodproofed. Following is a summary of the City of Mount Vernon's floodplain requirements codified as Chapter 15.36 of the MVMC:

1. All residential uses in A7, A21 and AH flood zones shall:
    a. Have the lowest floor, including basement, mechanical equipment and utilities elevated one foot or more above the base flood elevation (BFE).
    b. Have no new construction, substantial improvements, or other development (including fill) be permitted unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community.
2. All residential uses in AO flood zones shall:
    a. Have their lowest floor, including basement, mechanical equipment and utilities elevated above the highest adjacent grade to the structure, one foot or more above the depth number specified in feet on the community's FIRM.
3. All non-residential uses in flood zones A7, A21, and AH shall:
    a. Either have their lowest floor, including basement, elevated to the level of one foot or more above the base flood elevation (BFE), or, together with attendant utility and sanitary facilities, shall comply with the dry floodproofing requirements.
4. All non-residential uses in flood zones AO shall:
    a. Either have their lowest floor (including basement) elevated above the highest adjacent grade of the building site, one foot or more above the depth number specified on the

FIRM, or, together with attendant utility and sanitary facilities shall comply with the dry floodproofing requirements.

5. All Recreational Vehicles placed on sites in flood zones A7, A21, AH, and all AO zones are required to either:
    a. Be on site for fewer than 180 consecutive days; or,
    b. Be fully licensed and ready for highway use, on their wheels or jacking systems, attached to the site only by quick disconnect type utilities and security devices, and have no permanently attached additions; or,
    c. Meet the same requirements elevation, anchoring, and all other requirements for residential uses outlined above.

Mount Vernon uses Elevation Certificates (ECs) to document compliance with the elevation requirements for new and substantially improved structures. Violations to the City of Mount Vernon's floodplain management regulations codified under Chapter 15.36 MVMC are enforced as misdemeanors which can be subject to fines or imprisonment (MVMC 1.20.010).

Additional information on the community's National Flood Insurance Program (NFIP) compliance is presented in **Table 6**.

A repetitive loss (RL) property is defined as a structure covered by a contract for flood insurance made available under the NFIP that:

(xiii) Has incurred flood-related damage on two occasions, in which the cost of the repair, on the average, equaled or exceeded 25 percent of the market value of the structure at the time of each such flood event; and

(xiv) At the time of the second incidence of flood-related damage, the contract for flood insurance contains increased cost of compliance coverage.

A severe repetitive loss (SRL) property is a structure that:

(xiii) Is covered under a contract for flood insurance made available under the NFIP; and

(xiv) Has incurred flood related damage for which:
    a. Four or more separate claims payments (includes building and contents) have been made under flood insurance coverage with the amount of each such claim exceeding $5,000, and with the cumulative amount of such claims payments exceeding $20,000, or
    b. At least two separate claims payments (includes only building) have been made under such coverage, with the cumulative amount of such claims exceeding the market value of the insured structure.

Repetitive flood loss records are as follows:

- Number of FEMA-Identified Repetitive Loss Properties: Unknown, in 2021 FEMA thought there were three (3) RL properties within the City of Mount Vernon; however, staff has not been able to verify if these three (3) properties are actually located within unincorporated Skagit County.

- Number of FEMA-Identified Severe Repetitive Loss Properties: None
- Number of Repetitive Flood Loss/Severe Repetitive Loss Properties That Have Been Mitigated: the City of Mount Vernon received two grants from FEMA Region X in 1997 and 1998 resulting in existing development being removed and the properties having restrictive covenants placed on them restricting the placement of structures and requiring the property to be maintained in perpetuity for uses compatible with open space, recreational, and wetland management practices. The first grant was identified as 1079-HMGP Project 8 and the second grant was identified as 1100-HMGP Project 21.
- Total FEMA payments for repetitive flood losses is unknown because these losses occurred before 1997 and records of prior payments are not in the City of Mount Vernon's possession.

Table 76. National Flood Insurance Compliance	
What department is responsible for floodplain management in your community?	Development Services and Public Works
Who is your community's floodplain administrator? (department/position)	Development Services / Principal Planner
Do you have any certified floodplain managers on staff in your community?	Yes
What is the date of adoption of your flood damage prevention ordinance?	09/08/1982 (Ord. 2072)
When was the most recent Community Assistance Visit or Community Assistance Contact?	2024, Bradley Arkens
To the best of your knowledge, does your community have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are.	We have none
Do your flood hazard maps adequately address the flood risk within your community? (If no, please state why)	Unsure, Mount Vernon's FIRM maps were created in 1985 and have not been updated since this time. Using 40-year-old maps in conjunction with development that has occurred in the floodplain over this 40-year period leaves staff unsure as to whether or not the 1985 maps adequately address the flood risks within the City of Mount Vernon.
Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of assistance/training is needed?	Any/all training is always very much appreciated. Assistance and training surrounding floodplain inspections would be helpful.
Does your community participate in the Community Rating System (CRS)? If so, is your community seeking to improve its CRS Classification? If not, is your community interested in joining the CRS program?	Yes, Mount Vernon has earned a CRS class of 6
Source: Federal Emergency Management Agency	

Capability Assessment

Coordination with other community planning efforts is paramount to the successful implementation of this plan. This section provides information on how planning mechanisms, policies, and programs are integrated into other on-going efforts. It also identifies the jurisdiction's capabilities with respect to preparing and planning for, responding to, recovering from, and mitigating the impacts of hazard events and incidents.

Capabilities include the programs, policies and plans currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. The capabilities are divided into the following sections: National Flood Insurance Information; regulatory capabilities which influence mitigation; administrative and technical mitigation capabilities, including education and outreach, partnerships, and other on-going mitigation efforts; fiscal capabilities which support mitigation, and classifications under various community programs.

Regulatory Capability Assessment

The assessment of the jurisdiction's legal and regulatory capabilities is presented in **Table 7**. This includes planning and land management tools, typically used by local jurisdictions to implement hazard mitigation activities and indicates those that are currently in place.

Table 77. Legal and Regulatory Capability

	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Codes, Ordinances & Requirements				
Building Code Version, Year	Yes WA State Amendments, 2021	Yes	Yes	Chapter 15.04 MVMC and Chapter 19.27 RCW
Zoning Ordinance	Yes	No	Yes	Title 17 MVMC and RCW 36.70a.020, .030, 070, .635, and .680
Subdivision Ordinance	Yes	No	Yes	Title 16 MVMC, Chapter 58.17 RCW
Floodplain Ordinance	Yes	No	Yes	Chapter 15.36 MVMC and Chapter 86.16 RCW

Table 77. Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Stormwater Management	Yes	No	Yes	Chapter 13.33 MVMC, Public Works Department has a stormwater management plan, and stormwater requirements are regulated through the City of Mount Vernon's NPDES permit issued to the City of Mount Vernon by the WA State Department of Ecology
Post Disaster Recovery	Yes	No	No	
Real Estate Disclosure	No	No	Yes	Title 16 MVMC and Chapter 57.18 RCW
Growth Management	Yes	No	Yes	2016 Comprehensive Plan and Chapter 36.70a RCW
Site Plan Review	Yes	No	Yes	Chapters 14.05 and 17.90 MVMC, Chapter 58.17 RCW
Public Health and Safety	Yes	Yes	No	Skagit County Health Department serves Mount Vernon residents
Coastal Zone Management	No	No	No	Mount Vernon has no regulated coastal zone areas
Climate Change Adaptation	Yes	No	Yes	2016 Comprehensive Plan, Chapter 36.70a RCW
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire, etc.)	Yes	No	Yes	Chapter 13.33 (Stormwater), Chapter 15.40 (steep slopes) MVMC
Environmental Protection	Yes	No	Yes	Chapter 15.40 MVMC and Chapter 36.70a RCW
Planning Documents				
General or Comprehensive Plan	Yes	No	Yes	2016 Comprehensive Plan, Chapter 36.70a RCW
Is the plan equipped to provide linkage to this mitigation plan?				Yes
Floodplain or Basin Plan	Yes	No	Yes	Chapter 15.36 MVMC and Chapter 86.16 RCW

Table 77. Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Stormwater Plan	Yes	No	Yes	Chapter 13.33 MVMC, Public Works Department has a stormwater management plan, and stormwater requirements are regulated through the City of Mount Vernon's NPDES permit issued to the City of Mount Vernon by the WA State Department of Ecology
Capital Improvement Plan	Yes	No	Yes	2016 Comprehensive Plan and Chapter 36.70a RCW
Habitat Conservation Plan	Yes	No	Yes	2016 Comprehensive Plan and Chapter 36.70a RCW
Economic Development Plan	Yes	No	Yes	Economic Development Element of the 2016 Comprehensive Plan and Chapter 36.70a RCW
Shoreline Management Plan	Yes	No	Yes	Chapter 15.07 MVMC and Chapter 90.58 RCW
Community Wildfire Protection Plan	Yes	No	No	2024 Community Wildfire Protection Plan
Transportation Plan	Yes	No	Yes	Transportation Element of the 2016 Comprehensive Plan and Chapter 36.70a RCW
Response/Recovery Planning				
Comprehensive Emergency Management Plan	Yes	No	Yes	City of Mount Vernon Emergency Plan
Threat and Hazard Identification and Risk Assessment	Yes	No	No	Skagit County Hazard Mitigation Plan
Terrorism Plan	No	No	No	
Post-Disaster Recovery Plan	Yes	No	No	Skagit County Emergency Management Plan
Continuity of Operations Plan	Yes	No	No	City of Mount Vernon Emergency Plan
Public Health Plans	Yes	No	No	Skagit County provides these services to the City of Mount Vernon

Table 77. Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Boards and Commission				
Planning Commission	Yes	No	No	
Mitigation Planning Committee	Yes	No	No	The City of Mount Vernon was part of the 2015 and 2020 HMP planning process, as well as this 2025 update. As part of the adopted plan maintenance section, the City of Mount Vernon will remain a member in good standing of this committee, providing risk information to citizens as it becomes available, and is requested (Development Services).
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems, chipping, etc.)	Yes	No	No	Chapter 13.33 MVMC requires property owners (including HOAs) to clear privately owned drainage systems. Public Works Department completes regular maintenance to trees and drainage systems that are not privately owned within the City of Mount Vernon.
Mutual Aid Agreements / Memorandums of Understanding	Yes	No	No	The fire department has various agreements with state, county, and local fire jurisdictions that support the operations of fire and EMS services.

Administrative and Technical Capabilities Assessment

The assessment of the jurisdiction's administrative and technical capabilities, including educational and outreach efforts, and on-going programmatic efforts are presented in **Table 8**. These are elements which support not only mitigation, but all phases of emergency management already in place that are used to implement mitigation activities and communicate hazard-related information.

Table 78. Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Development Services and Public Works
Professionals trained in building or infrastructure construction practices (building officials, fire inspectors, etc.)	Yes	Development Services, Public Works and Fire Departments
Engineers specializing in construction practices?	Yes	Development Services and Public Works Departments
Planners or engineers with an understanding of natural hazards	Yes	Development Services and Public Works Departments
Staff with training in benefit/cost analysis	Yes	Development Services Department
Surveyors	Yes	Development Services and Public Works Departments
Personnel skilled or trained in GIS applications	Yes	Development Services and Public Works Departments
Personnel skilled or trained in Hazus use	Yes	Fire Department/Operations Level
Scientist familiar with natural hazards in local area	Yes	Development Services and Public Works Departments
Emergency Manager	Yes	Fire Department/Fire Chief
Floodplain Manager (NFIP compliance)	Yes	Development Services Department
Grant writers	Yes	Development Services, Public Works and Fire Departments
Warning Systems/Services (Reverse 9-1-1, outdoor warning signs or signals, flood or fire warning program, etc.?)	Yes	Skagit County 911 and Skagit County Department of Emergency Management
Hazard data and information available to public	Yes	Development Services Department
Maintain Elevation Certificates	Yes	Development Services Department
Education and Outreach		
Local citizen groups or non-profit organizations focused on emergency preparedness?	Yes	CERT/Skagit County Department of Emergency Management

Table 78. Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Local citizen groups or non-profit organizations focused on environmental protection?	Yes	Skagit Fisheries Enhancement Group, Skagit Watershed Council, Skagit Land Trust, ReSources for Sustainable Communities, Skagit County Marine Resources Committee, Skagit County Voluntary Stewardship Program, Clean Samish Initiative, North Cascades Institute, Padilla Bay National Estuarine Research Reserve, Skagit Audubon Society
Organization focused on individuals with access and functional needs populations	Yes	Community Action of Skagit County, Skagit County Human Services, YMCA
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	Fire Department/Public Educator
Natural disaster or safety related school programs	Yes	Fire Department/public Educator
Public-private partnership initiatives addressing disaster-related issues	No	NA
Multi-seasonal public awareness program	No	NA
On-Going Mitigation Efforts		
Hazardous Vegetation Abatement Program	No	NA
Noxious Weed Eradication Program or other vegetation management	Yes	Parks Department and Public Works Department
Fire Safe Councils	Yes	Safe Kids Washington, Snohomish County Fire Prevention Association, region 3 Task Force (Fire Marshals) Wahington State Association of Fire Marshals
Chipper program	No	NA
Defensible space inspections program	No	NA
Creek, stream, culvert or storm drain maintenance or cleaning program	Yes	Public Works Department
Stream restoration program	Yes	Development Services and Public Works Departments
Erosion or sediment control program	Yes	Development Services and Public Works Departments

Table 78. Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Address signage for property addresses	Yes	Development Services and Public Works Departments

Fiscal Capability Assessment

The assessment of the jurisdiction's fiscal capabilities is presented in **Table 9**. These are the financial tools or resources that could potentially be used to help fund mitigation activities.

Table 79. Fiscal Capability	
Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	Yes
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	

Community Classifications

The jurisdiction's classifications under various hazard mitigation programs are presented in **Table 10**. Each of the classifications identified establishes requirements which, when met, are known to increase the resilience of a community.

Table 80. Community Classifications		
	Participating (Yes/No)	Date Enrolled
Community Rating System	Yes	05/01/1997

Building Code Effectiveness Grading Schedule	No	NA
Storm Ready	Yes	2003
Firewise	No	NA
Tsunami Ready (if applicable)	No	NA

Mitigation Goals and Objectives

Mount Vernon adopts the hazard mitigation goals and objectives developed by the Planning Team described in **Volume 1.**

Hazard Mitigation Action Plan

The Planning Team for the jurisdiction identified and prioritized a wide range of actions based on the risk assessment, and their knowledge of the jurisdiction's assets and hazards of concern. The table below lists the action items or strategies that make up the jurisdiction's hazard mitigation plan. Background information and information on how each action item will be administered, responsible agency/office (including outside the district), potential funding sources, the timeframe, who will benefit from the activity, and the type of initiative associated with each item are also identified.

Prioritization of Mitigation Initiatives

Once the mitigation initiatives items were identified, the Planning Team followed the same process outlined within **Volume 1** to prioritize their initiatives. **Table 11** identifies each initiative based on priority, where the highest priority initiative is listed at the top.

Table 81.
Mitigation Strategy and Priority Schedule

Priority No.	# of Objectives met	Hazards Mitigated[1]	Lead Agency	Can project be funded under existing programs/ budgets?	Estimated Cost	Is Project Grant Eligible? Yes/No	Timeframe	Included in Previous Plan? Yes/No	Who or What Benefits
[1]Hazards: Coastal Hazard-CZ/ Drought-D/ Earthquake-EQ/ Flooding-Fl/ Landslide-LS/ Severe Weather-SW / Volcano-Vol/ Wildfire-WF/ Tsunami-T/ Acts of Violence-AV/ Hazardous Sites or Materials Spill-HazMat/ Disease-D/ Dam Failure-DF/ Infrastructure Failure-IF									
INITIATIVE # 1: Provide for an increased level of safety to the citizens of Mount Vernon.									
1	9	All	Mount Vernon	No	$10 – 50 million	Yes	Long	Yes	Public, Mount Vernon, Skagit County
INITIATIVE # 2: Excavate a portion of the Edgewater Landfill to provide increased flow capacity.									
2	3	F, SW	Mount Vernon	No	$2 – 10 million	Yes	Long	Yes	Public, Mount Vernon, Skagit County
INITIATIVE # 3: Increase capacity of the Kulshan Pump Station.									
3	3	F, E, SW, WF	Mount Vernon	No	$2 – 5 million	Yes	Long	Yes	Public, Mount Vernon, Skagit County
INITIATIVE #4: Provide for an increased level of protection for private property within the City of Mount Vernon limits.									
4	5	F, E, WF, T	Mount Vernon	No	$10 – 50 million	Yes	Long	Yes	Public, Mount Vernon, Skagit County
INITIATIVE #5: As needed raise existing streets/roads and sanitary pump stations above 100-year flood elevation									

5	5	F, E, SW, WF, T	Mount Vernon	No	$10 – 50 million	Yes	Long	Yes	Public, Mount Vernon, Skagit County

Status of Previous Plan Initiatives

Table 12 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 82.
Current Status of Previous Hazard Mitigation Action Plan

Mitigation Strategy	Project Status	Completed	Continual/On-Going Nature	Removed/ No Longer Relevant/ No Action	Carried Over
Provide 100 Year flood protection for downtown	The flood wall is complete and a FEMA map revision has been approved	☒	☐	☐	☐
Construct a ring dike around the waste water treatment plant	The dike has been completed	☒	☐	☐	☐
Remove existing unsafe revetment parking structure and buy-out properties to construct parking out of flood area	The properties have been purchased and the old facilities have been removed and new areas created that are safer for parking	☒	☐	☐	☐
Provide for an increased level of safety to the citizens	This is an ongoing program that requires funding and council support	☐	☒	☐	☒
Provide for increased maximum flow capacity within the river channel and/or floodway downstream of the Burlington Northern-Santa Fe railroad bridge	This is an ongoing task that requires coordination with the railroad and adequate funding	☐	☒	☐	☒
As needed, raise existing streets/roads and sanitary pump stations above 100-year flood elevation	Ongoing project requiring funding and support from city council	☐	☒	☐	☒

Plan Maintenance

Mount Vernon continues to provide information and seek feedback from members of the public, even after the plan has been approved. Following is a summary of this work completed by the City of Mount Vernon every year:

- Mailing flood information to all property owners and residents within the 100-year floodplain. This flood information details how to property people and property from flooding, as well as how to prepare for a flood and what to do should a flood occur.
- Mailing a letter to lenders, real estate agents and insurance agents once a year outlining how the City of Mount Vernon can assist them with obtaining floodplain information for clients they serve.
- Kiosk of floodplain information available at City Hall.
- Webpage devoted to providing the public with up-to-date and accurate floodplain and natural disaster information.

The criteria below will be utilized to evaluate the plan:

- Continually evaluate plan for effectiveness by utilizing the annual progress report. This should be conducted once a year or after a disaster by the City of Mount Vernon.
- Utilize an annual progress report to track implementation and effectiveness of mitigation initiatives and their actions. This should be conducted once a year by City of Mount Vernon personnel.
- Conduct regular check-ins with stakeholders and partner agencies with DEM personnel.
- Review and revise the plan at least once every five years by DEM personnel and City of Mount Vernon.

County staff at the Department of Emergency Management will be the primary agency responsible for maintaining the plan and monitoring mitigation initiatives. Staff will utilize the report provided in **Volume 3 Appendix C** to track progress. The report will also include sections to document any changes that have been made to initiatives, outreach efforts, hazard mapping, Countywide development changes, successful implementation instances, and other changes relevant to the HMP.

Plan Update

Mount Vernon has experienced changes in development in hazard-prone areas now that approximately 127-acres and 498 structures were removed from the 100-year floodplain in 2019.

Plan Adoption

Mount Vernon will provide a copy of the Resolution approved by the City of Mount Vernon Council approving the Hazard Mitigation Plan pursuant to 44 CFR § 201.6(c)(5).

Annex 8 City of Sedro-Woolley

Introduction

This Annex details the hazard mitigation planning elements specific to the City of Sedro-Woolley, a participating jurisdiction to the Skagit County Hazard Mitigation Plan Update. This Annex is not intended to be a standalone document, but rather appends to and supplements the information contained in the base plan document. As such, all sections of the base plan, including the planning process and other procedural requirements apply to and were met by the City of Sedro-Woolley. For planning purposes, this Annex provides additional information specific to the jurisdiction, with a focus on providing greater details on the risk assessment and mitigation strategy for this community only. This document serves as an update to the previously completed plan. All relevant data has been carried over and updated with new information as appropriate and as identified within the planning process discussed in Volume 1.

Hazard Mitigation Planning Team Points of Contact

The City of Sedro-Woolley followed the planning process detailed in Section 2 of the Base Plan. In addition to providing representation on the County's Planning Team, the City of Sedro-Woolley also formulated their own internal planning team to support the broader planning process. Individuals assisting in this Annex development are identified in **Table 1** below, along with a brief description of how they participated.

Table 83. Local Planning Team Members

Name	Position, Title	Planning Tasks
Charlie Bush Phone: 360-855-9921 Email: cbush@sedro-woolley.gov	City Administrator	Coordinate functions throughout jurisdiction
Nicole McGowan Phone: 360-855-0771 Email: nmcgowan@sedro-woolley.gov	Planner	Review, comment, and update
Ashton Sandoval Oaks Phone: 360-855-0771 Email: asandovaloaks@sedro-woolley.gov	Assistant Planner	Review, comment, and update
William Bullock Phone: 360-855-0771	Public Works Director	Plan and/or attend planning meetings

Email: bbullock@sedro-woolley.gov		

Public Engagement

The City of Sedro-Woolley engaged the public through the following means:

- Public workshop held at Central Skagit Library in Sedro-Woolley on August 26, 2025.
- Responses from local respondents to the County's public survey collected between July 2025 to September 2025.
- Responses from local respondents to the County's second round of the public survey collected from 23rd of October 2025 to 7th of November 2025.

Suggestions and responses from the engagement activities were taken into consideration in the preparation of this Plan. Specific examples include:

- At the August 26, 2025 public workshop, community members voted on the goals most important to them. The following were identified as the top priorities, with the first being the highest priority:
    - Developing a dam break response and recovery plan.
    - Assisting vulnerable populations by identifying areas of greater need and seeking grant funding for necessary preparedness and improvement programs.
    - Producing and distributing family and traveler emergency preparedness information about severe winter weather and earthquake hazards.
    - Reinforcing downtown buildings for earthquake safety.
    - Developing and implementing a multi-hazard public awareness program.
    - Determining necessity to retrofit City-owned facilities to better withstand damage from flood, wildfire, or earthquake events. Once need is determined, implementing tax levy and seeking grant funding to retrofit structures.

Review of Existing Documents

Key documents and past events that informed current planning efforts include:

- City of Sedro-Woolley Comprehensive Plan
- City of Sedro-Woolley Emergency Management Plan
- Skagit County Natural Hazards Mitigation Plan
- FEMA Flood Insurance Rate Map (FIRM)
- Previous disasters
- Draft Skagit River Modelling provided by SC2 and SRSC

Community Profile

The following is a summary of key information about the jurisdiction and its history:

Date of Incorporation— December 19, 1898

Current Population—13,360 as of April 1, 2025

Population Growth— Based on the data tracked by the Washington Office of Financial Management, the City of Sedro-Woolley has seen roughly a 21% increase in population over the last 10 years.

Location and Description— Sedro-Woolley is known as the "Gateway to the North Cascades" because it is located on the western edge of the Cascade Mountain Range in northwest Washington State. It is situated north of Seattle, Washington and south of Bellingham, Washington on Highway 20, along the banks of the Skagit River.

Brief History— Sedro-Woolley was originally two separate towns called “Sedro” and “Woolley” that merged together in 1889. Key to the development of the area were the three railroads serving the towns of Sedro and Woolley. The railroads and the logging industry contributed to the area's prosperity as local merchants catered to the needs of travelers visiting the area on the trains. Later on, when economics forced a slow-down in logging and related activities and in the closure of the manufacturing site, the city faced severe economic impacts. Likewise, the closure of the former Northern State Hospital heavily impacted the city with its loss of employment opportunities. The city is now attempting to develop a more diversified economic base along with an increase in the number of job opportunities. The Skagit Plant is now a vibrant industrial park, renting out portions of the facility to smaller, independent businesses.

Climate— In Sedro-Woolley, the summers are short, comfortable, and partly cloudy and the winters are cold, wet, and overcast. Over the course of the year, the temperature typically varies from 35°F to 76°F and is rarely below 23°F or above 85°F.

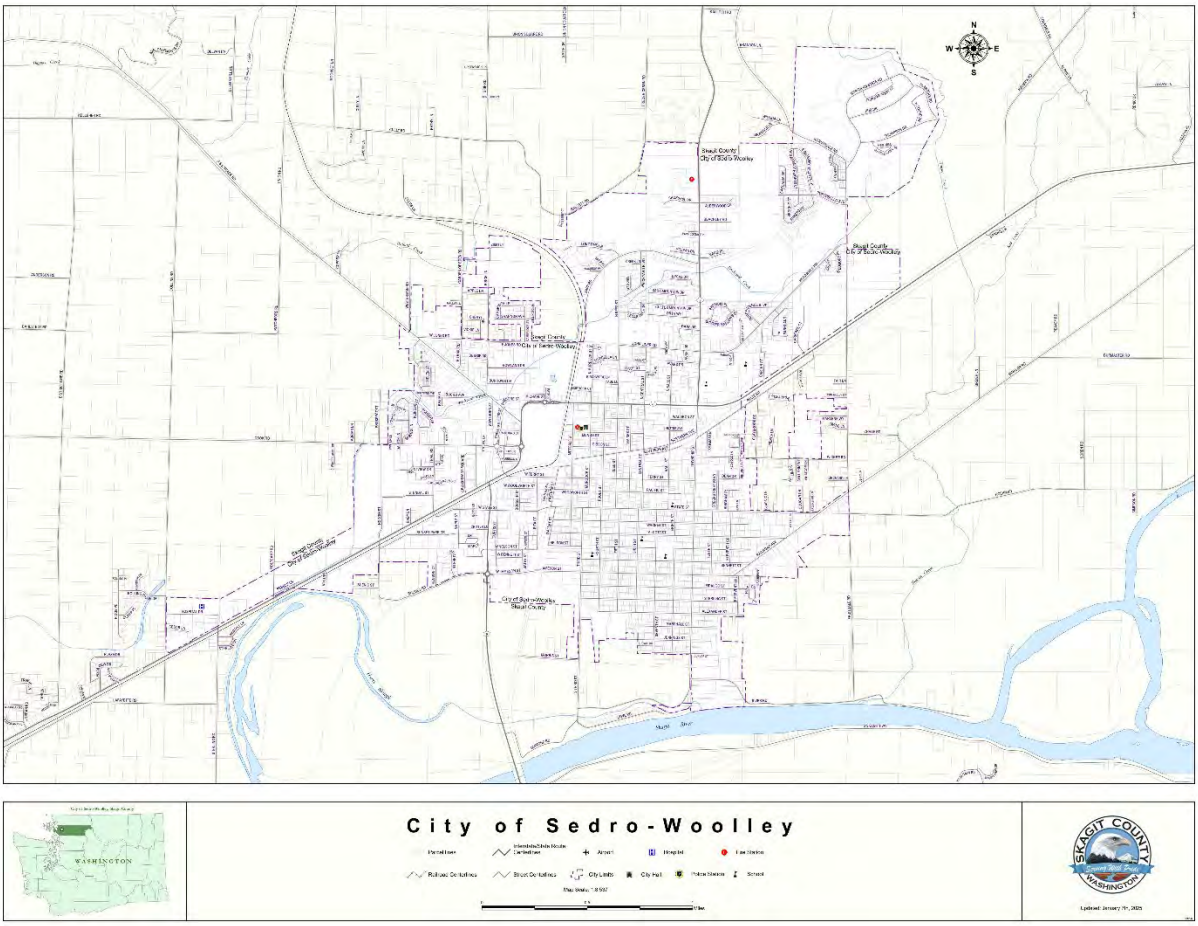
Governing Body Format— The City of Sedro-Woolley has a Mayor-Council form of government. The City Council consists of seven members, with six elected from wards and a seventh at large. The city consists of seven departments: Executive, Finance, Information Technology, Community Development, Public Works, Fire, and Police.

Development Trends— Anticipated development levels for Sedro-Woolley are moderate, consisting primarily of residential subdivisions, infill, and mixed-use development. The City of Sedro-Woolley has maintained the status quo for hazard vulnerability with respect to new development. Larger developments of over 30 units are required to provide at least two access points to meet Fire and Public Works department standards, and minimal development has occurred within the floodplain. Development that has occurred within the floodplain is strictly regulated by Chapter 17.66 SWMC – *Flood Damage Prevention*.

The City of Sedro-Woolley adopted its original comprehensive plan in 1977, most recently updated its plan in 2016, and is currently updating its plan again. The plan focuses on the issues of greatest concern to the community. City decisions and actions, such as those relating to land use allocations, annexation, zoning, subdivision, design review, development, re-development, and capital improvements, must be consistent with the comprehensive plan. Future growth and development in the city will be managed as identified in the comprehensive plan. The City has experienced no increase in vulnerability as a result of its growth and construction since completion of its last plan.

Economy – The City of Sedro-Woolley's economic base consists primarily of retail, commercial sales, and professional services. The largest employer is Janicki Industries, with over 1,250 employees-- the region's largest aerospace and technology firm. Other significant employers include the Sedro-Woolley School District, with over 600 employees, and the PeaceHealth United General Hospital Medical Center, with more than 300 employees.

The jurisdiction boundaries are identified in the map below.



Hazard Event History

Within the Base Plan, the Planning Team identified all hazard events which have occurred within the City of Sedro-Woolley. In the context of the planning region, it was determined that there are no additional hazards unique to the jurisdiction. **Table 2** lists all past occurrences of hazards within the jurisdiction. If available, dollar loss data is also included.

Table 84. Previous Hazard Occurrences			
Type of Event	FEMA Disaster # (if available)	Date	Dollar Losses (if available)
Severe Winter Storms, Snowstorms, Straight-line Winds, Flooding	4650	12/26/2021	Unknown
Flooding and Mudslides	4635	11/25/2021	$261,386.76
Pandemic	4481	3/23/2020	$3,610,460
Severe Storms, Flooding, Landslides, and Mudslides	4539	1/20/2020	Unknown
Flood	1817	2009	$1,978.25
Flood		2006	Unknown
Flood		2003	$10,583.00
Earthquake		2001	Unknown
Flood		1995	Unknown
Flood		1990	Unknown

The recorded history of hazard events, as mentioned above, can indicate what the likelihood would be of a hazard occurring in the future. **Table 3** below is the rating for probability of hazards according to the parameters described in Volume 1.

Table 85. Probability of Future Hazards Occurrence		
Hazard	Impact Factor	Impact ID
Coastal Hazards	Unlikely	1
Drought	Medium	3
Earthquake	Low	2
Flooding	Medium	3
Landslides	Low	2
Severe Weather	High	4
Tsunami	Low	2
Volcano	Low	2
Wildfire	Low	2
Acts of Violence	Medium	3
Hazardous Material Spill or Release	Medium	3
Disease	Low	2
Bridge/Road Failure	Low	2
Power/Water System Failure	Medium	3
Dam Failure	Low	2
Other hazards		

Hazard Area Extent and Location

This section describes the type, location, and extent of all hazards that can affect the jurisdiction (NR = Not Rated).

Table 86. Geographic Extent		
Hazard Type	Impact Factor	Impact ID
Coastal Hazards	NR	0
Drought	Extensive	4
Earthquake	Extensive	4
Flooding	Moderate	2
Landslides	Limited	1
Severe Weather	Extensive	4
Tsunami	Limited	1
Volcano	Extensive	4
Wildfire	Significant	3
Acts of Violence	Limited	1
Hazardous Material Spill or Release	Moderate	2
Disease	Extensive	4
Bridge/Road Failure	Limited	1
Power/Water System Failure	Significant	3
Dam Failure	Extensive	4
Other hazards		

Hazard Risk and Vulnerability Ranking

The jurisdiction's Planning Team reviewed the hazard list identified within the Base Plan and identified hazards that are most likely to have the highest impact within the City of Sedro-Woolley. **Table 5** presents the ranking of the hazards of concern based on their CPRI score. A qualitative vulnerability ranking was then assigned based on a summary of potential impact determined by: past occurrences, extent, damage, casualties, and continuity of government. The assessment is categorized into the following classifications:

- **Extremely Low** – No or very limited impact. The occurrence and potential cost of damage to life and property is very minimal-to-nonexistent. No impact to government functions with no disruption to essential services.

- **Low (Negligible)** – Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal. Government functions are at 90% with limited disruption to essential services.
- **Medium (Limited)** – Moderate potential impact. This ranking carries a moderate threat level to the general population and /or built environment. The potential damage is more isolated, and less costly than a more widespread disaster. Government functions are at 80% with limited impact to essential services.
- **High (Critical)** – Widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread. Hazards in this category may have occurred in the past. Government functions are at ~50% operations with limited delivery of essential services.
- **Extremely High (Catastrophic)** – Very widespread with catastrophic impact. Government functions are significantly impacted for more than one month.

Table 87. Vulnerability Ranking by Hazard Type

Hazard Rank	Hazard Type	CPRI Score	Vulnerability Rank
1	Severe Weather	3.10	Low
2	Dam Failure	3.10	Extremely High
3	Earthquake	3.05	Extremely High
4	Volcano	2.80	Medium
5	Power/Water System Failure	2.65	Low
6	Hazardous Materials Spill or Release	2.55	Medium
7	Drought	2.50	Low
8	Wildfire	2.50	Medium
9	Disease	2.45	Medium
10	Flooding	2.30	Low
11	Acts of Violence	2.15	Low
12	Landslides	1.80	Low
13	Bridge/Road Failure	1.70	Low
14	Tsunami	1.65	Low
15	Coastal Hazards	0.40	Extremely Low
16	Other Hazards		

National Flood Insurance Information (NFIP)

This section identifies the number of repetitive loss or severe repetitive loss properties which have occurred within the City of Sedro-Woolley as specified in 44 CFR 201.6(c)(3)(ii). A repetitive loss (RL) property is defined as a structure covered by a contract for flood insurance made available under the NFIP that:

(xv) Has incurred flood-related damage on two occasions, in which the cost of the repair, on the average, equaled or exceeded 25 percent of the market value of the structure at the time of each such flood event; and

(xvi) At the time of the second incidence of flood-related damage, the contract for flood insurance contains increased cost of compliance coverage.

A severe repetitive loss (SRL) property is a structure that:

(xv) Is covered under a contract for flood insurance made available under the NFIP; and

(xvi) Has incurred flood related damage for which:

a. Four or more separate claims payments (includes building and contents) have been made under flood insurance coverage with the amount of each such claim exceeding $5,000, and with the cumulative amount of such claims payments exceeding $20,000, or

b. At least two separate claims payments (includes only building) have been made under such coverage, with the cumulative amount of such claims exceeding the market value of the insured structure.

The City of Sedro-Woolley entered the NFIP on July 5, 1982. The effective date for the current countywide FIRM is December 1, 1981. There are five Letter of Map Amendments issued by FEMA for removal of properties erroneously identified as being within the floodplain.

Since the time of the last Natural Hazard Mitigation Plan approval, there have been no permits granted for permanent structures that increase flood risk and no known outstanding compliance violations at the time of this writing. By complying with the NFIP standards, risk in the City of Sedro-Woolley has been reduced.

Management of the NFIP program for the City of Sedro-Woolley falls on many shoulders. The City of Sedro-Woolley does not have a floodplain manager per se, but the Community Development Director serves as the floodplain administrator. The City of Sedro-Woolley may contract with the County floodplain manager for permitting and inspection assistance as needed.

As a brief overview, the only development currently permitted in the floodplain is not allowed to raise ground levels and cannot increase the amount of water on neighbors during flood events. Developing property, all or a portion of which is in a regulated floodplain, requires the applicant to demonstrate all plans submitted with a building permit are in compliance with the requirements of the Flood Ordinance codified under Chapter 17.66 of the Sedro-Woolley Municipal Code (SWMC). For purposes of development, development includes, but is not limited to: buildings, homes, manufactured and mobile homes, other structures, bridges, culverts, dredging, filling, grading, paving, excavation, docks, etc. Structures may also require floodproofing under the ordinance, which requires that residential homes be elevated above the level of the base flood elevation (BFE) and commercial structures have the

option to flood proof above the BFE. A registered professional engineer or architect must design the flood proofing. The flood ordinance also requires Elevation Certificates. The purpose for an Elevation Certificate is to document compliance with permit conditions as Elevation Certificates are the only official document used by FEMA to determine whether a structure is inside or outside a floodplain, and are also used to determine the proper rate when purchasing flood insurance. Elevation Certificates must be completed and stamped by a surveyor licensed in the State of Washington. Properties that fall out of compliance with NFIP standards are dealt with using the same process as nuisance violations, which are administered by code enforcement.

Additional information on the community's National Flood Insurance Program (NFIP) compliance is presented in Table 6. This identifies the current status of the jurisdiction's involvement with the NFIP. Repetitive flood loss records are as follows:

- Number of FEMA-Identified Repetitive Loss Properties: 3 (residential)
- Number of FEMA-Identified Severe Repetitive Loss Properties: 0
- Number of Repetitive Flood Loss/Severe Repetitive Loss Properties That Have Been Mitigated: 0
- Total FEMA payments: $ unknown

Table 88. National Flood Insurance Compliance	
What department is responsible for floodplain management in your community?	Sedro-Woolley Planning Department
Who is your community's floodplain administrator? (department/position)	Tom Glover, Community Development Director
Do you have any certified floodplain managers on staff in your community?	No
What is the date of adoption of your flood damage prevention ordinance?	July 10, 1989 (Ord. #1080)
When was the most recent Community Assistance Visit or Community Assistance Contact?	May 23, 2024
To the best of your knowledge, does your community have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are.	No
Do your flood hazard maps adequately address the flood risk within your community? (If no, please state why)	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of assistance/training is needed?	Yes, training in floodplain development permitting & inspections
Does your community participate in the Community Rating System (CRS)? If so, is your community seeking to improve its CRS Classification? If not, is your community interested in joining the CRS program?	No
Source: Federal Emergency Management Agency	

Capability Assessment

Coordination with other community planning efforts is paramount to the successful implementation of this plan. This section provides information on how planning mechanisms, policies, and programs are integrated into other on-going efforts. It also identifies the jurisdiction's capabilities with respect to preparing and planning for, responding to, recovering from, and mitigating the impacts of hazard events and incidents.

Capabilities include the programs, policies and plans currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. The capabilities are divided into the following sections: National Flood Insurance Information; regulatory capabilities which influence mitigation; administrative and technical mitigation capabilities, including education and outreach, partnerships, and other on-going mitigation efforts; fiscal capabilities which support mitigation, and classifications under various community programs.

Regulatory Capability Assessment

The assessment of the jurisdiction's legal and regulatory capabilities is presented in **Table 7**. This includes planning and land management tools, typically used by local jurisdictions to implement hazard mitigation activities and indicates those that are currently in place.

Table 89. Legal and Regulatory Capability

	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Codes, Ordinances & Requirements				
Building Code Version Year	Yes 2021	Yes	Yes	Ch. 15.04 SWMC adopted by reference
Zoning Ordinance	Yes		Yes	Title 17 SWMC; Ord. 1013 adopted May 13, 1985, and as subsequently amended
Subdivision Ordinance	Yes		Yes	Title 16 SWMC; Ord. 1104 adopted October 8, 1990, and as subsequently amended
Floodplain Ordinance	Yes		Yes	Ch. 17.66 SWMC; Ord. 976 adopted June 14, 1982, and as subsequently amended
Stormwater Management	Yes		Yes	Title 13, Div. II SWMC; Ord. 952 adopted February 9, 1981, and as subsequently amended

Table 89. Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Post Disaster Recovery				Ch. 2.40 SWMC; Ord. 1563-06 adopted December 13, 2006, and as subsequently amended
Real Estate Disclosure				RCW 64.06.020
Growth Management	Yes		Yes	Ord. 1311-98 adopted October 14, 1998, and as subsequently amended
Site Plan Review	Yes			Ch. 2.90 SWMC; Ord. 1449-03 adopted June 25, 2003, and as subsequently amended
Public Health and Safety	Yes			Title 8 SWMC; Ord. 1003 adopted May 14, 1984, and as subsequently amended
Climate Change Adaptation	Yes, in progress		Yes	Ch. 9 Comp Plan (Pending adoption)
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire, etc.)	Yes		Yes	Ch. 17.65 SWMC; Ord. 1523-05 adopted November 9, 2005, and as subsequently amended
Environmental Protection	Yes		Yes	Ch. 17.65 SWMC; Ord. 1523-05 adopted November 9, 2005, and as subsequently amended
Planning Documents				
General or Comprehensive Plan	Yes		Yes	Anticipated adoption December 2025
Is the plan equipped to provide linkage to this mitigation plan?				Yes
Floodplain or Basin Plan	Yes		Yes	Comp Plan Ch.2, Land Use Element
Stormwater Plan	Yes	Yes	Yes	Dept. of Ecology Stormwater Management Plan adopted 2024
Capital Improvement Plan	Yes		Yes	Comp Plan Ch. 7, Capital Facilities Element
Habitat Conservation Plan	Yes		Yes	Comp Plan Ch. 2, Land Use Element
Economic Development Plan	Yes		Yes	Comp Plan Ch. 8, Economic Development Element

Table 89. Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Shoreline Management Plan	Yes		Yes	Ord. 1847-16 adopted May 12, 2016
Community Wildfire Protection Plan		Yes		Wildfire Chapter of the County's HMP
Transportation Plan	Yes		Yes	Comp Plan Ch. 3, Transportation Element
Response/Recovery Planning				
Comprehensive Emergency Management Plan	Yes		Yes	City of Sedro-Woolley Emergency Operations Plan adopted April 10, 2019
Threat and Hazard Identification and Risk Assessment		Yes	Yes	Skagit County Natural Hazards Mitigation Plan adopted May, 2020
Terrorism Plan	Yes			City of Sedro-Woolley Emergency Operations Plan adopted April 10, 2019
Post-Disaster Recovery Plan		Yes		Skagit County Comprehensive Emergency Management Plan adopted August 8, 2022
Continuity of Operations Plan		Yes		Skagit County Comprehensive Emergency Management Plan adopted August 8, 2022
Public Health Plans		Yes		Skagit County Public Health Department and hospital districts
Boards and Commission				
Planning Commission	Yes			Ord. 1024 adopted April 14, 1986
Mitigation Planning Committee	Yes			The City served as part of the County's 2015, 2020, and 2025 HMP Committee
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems, chipping, etc.)		Yes		Skagit County Comprehensive Emergency Management Plan adopted August 8, 2022
Mutual Aid Agreements / Memorandums of Understanding	Yes			Ch. 2.40 SWMC; Ord. 1563-06 adopted December 13, 2006, and as subsequently amended
Other				

Administrative and Technical Capabilities Assessment

The assessment of the jurisdiction's administrative and technical capabilities, including educational and outreach efforts, and on-going programmatic efforts are presented in **Table 8**. These are elements which support not only mitigation, but all phases of emergency management already in place that are used to implement mitigation activities and communicate hazard-related information.

Table 90. Administrative and Technical Capability

Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Planning and Engineering Departments
Professionals trained in building or infrastructure construction practices (building officials, fire inspectors, etc.)	Yes	Building Department
Engineers specializing in construction practices?	Yes	Engineering Department
Planners or engineers with an understanding of natural hazards	Yes	Planning and Engineering Departments
Staff with training in benefit/cost analysis	Yes	Finance Department
Surveyors	Yes	Contracted with Third Party
Personnel skilled or trained in GIS applications	Yes	Engineering Department
Personnel skilled or trained in Hazus use	No	
Scientist familiar with natural hazards in local area	Yes	Contracted with Third Party
Emergency Manager	Yes	Administrative Department
Floodplain Manager (NFIP compliance)	Yes	Planning Department
Grant writers	Yes	Engineering and Fire Departments
Warning Systems/Services (Reverse 9-1-1, outdoor warning signs or signals, flood or fire warning program, etc.?)	Yes	Police and Fire Departments
Hazard data and information available to public	Yes	Planning and Engineering Departments
Maintain Elevation Certificates	Yes	Planning Department
Education and Outreach		
Local citizen groups or non-profit organizations focused on emergency preparedness?	Yes	The County provides training to citizens wishing to become CERT members

Table 90. Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Local citizen groups or non-profit organizations focused on environmental protection?	Yes	The County provides an extensive public outreach campaign that includes focus on environmental protection. The City works with the County to ensure its citizens are fully aware.
Organization focused on individuals with access and functional needs populations	Yes	Public outreach efforts include those with access and functional needs populations.
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	The County provides an extensive public outreach campaign for all hazards of concerns. The City works with the County to ensure its citizens are fully aware.
Natural disaster or safety related school programs?	Yes	The school district provides this service to students and families
Public-private partnership initiatives addressing disaster-related issues?	Yes	Provided by the County
Multi-seasonal public awareness program?	Yes	Provided by the County
Other		
On-Going Mitigation Efforts		
Hazardous Vegetation Abatement Program	No	
Noxious Weed Eradication Program or other vegetation management	Yes	Skagit County Noxious Weed Program
Fire Safe Councils	No	
Chipper program	No	
Defensible space inspections program	No	
Creek, stream, culvert or storm drain maintenance or cleaning program	Yes	Public Works Department
Stream restoration program	Yes	Public Works Department
Erosion or sediment control program	Yes	Public Works Department
Address signage for property addresses	Yes	Planning and Public Works Departments
Other		

Fiscal Capability Assessment

The assessment of the jurisdiction's fiscal capabilities is presented in **Table 9**. These are the financial tools or resources that could potentially be used to help fund mitigation activities.

Table 91. Fiscal Capability	
Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	No
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	

Community Classifications

The jurisdiction's classifications under various hazard mitigation programs are presented in **Table 10Error! Reference source not found.**. Each of the classifications identified establishes requirements which, when met, are known to increase the resilience of a community.

Table 92. Community Classifications		
	Participating (Yes/No)	Date Enrolled
Community Rating System	No	
Building Code Effectiveness Grading Schedule	Yes	9/2018
Storm Ready	No	
Firewise	No	
Tsunami Ready (if applicable)	No	

Mitigation Goals and Objectives

This section identifies the mitigation goals and policies for the updated HMP. The measures described below aims to identify, prioritize, and act to reduce risk. They are visions for reducing or avoiding losses from the identified hazards over a broad, long-term time frame.

The City of Sedro-Woolley adopts the hazard mitigation goals and objectives developed by the Planning Team described in Volume 1.

Hazard Mitigation Action Plan

The Planning Team for the jurisdiction identified and prioritized a wide range of actions based on the risk assessment, and their knowledge of the jurisdiction's assets and hazards of concern. **Table 11** below lists the action items or strategies that make up the jurisdiction's hazard mitigation plan. Background information and information on how each action item will be administered, responsible agency/office (including outside the district), potential funding sources, the timeframe, who will benefit from the activity, and the type of initiative associated with each item are also identified.

Table 11.
Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/ Medium/ Low) or $ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Response & Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
INITIATIVE #1: Develop a dam break response and recovery plan.									
Existing	DF	1, 4, 7, 8, 9	Skagit County	High	General Fund, PDM Grant	Long-Term	No	Response & Recovery Planning	Local/County
INITIATIVE #2: Assist vulnerable populations by identifying areas of greater need and seek grant funding for necessary preparedness and improvement programs.									
New	F, SW, F, E, L	1, 2, 3, 4	Community Action	Medium	PDM Grant	Long-Term	Yes	Public Information/Preventive Activities/Property Protection	Local
INITIATIVE #3: Produce and distribute family and traveler emergency preparedness information about severe winter weather and earthquake hazards									

Table 11. Hazard Mitigation Action Plan Matrix									
Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/ Medium/ Low) or $ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Response & Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
Existing	SW, E	1, 2, 3, 4, 5	County DEM	Low	General Fund, PDM Grant	Short-Term	No	Public Information / Preventive Activities / Property Protection	Local
INITIATIVE #4: Reinforce downtown buildings for earthquake safety.									
Existing	E	1, 4	City of Sedro-Woolley Council	High	General Fund, PDM Grant	Long-Term	No	Preventive Activities/Structural/Property Protection	Local
INITIATIVE #5: Develop and implement a multi-hazard public awareness program.									
Existing	F, SW, F, E, L	2, 3, 4, 5, 6, 8	Fire & Planning	Low	General fund, PDM Grant	Long-Term	Yes	Public Information/Preventive Activities/Property Protection	Local
INITIATIVE #6: Determine necessity to retrofit City-owned facilities to better withstand damage from flood, wildfire, or earthquake events. Once need is determined, implement tax levy and seek grant funding to retrofit structures.									
Existing	F, WF, E	1, 8, 9	City of Sedro-Woolley Council	High	Tax Levy, Capital Improvements Project Fund	Short-Term	Yes	Protection Planning/Mitigation/Structural	Facility / Local

Table 11. Hazard Mitigation Action Plan Matrix									
Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost (High/ Medium/ Low) or $ Figure if Known	Sources of Funding (List Grant type, General Fund, etc.)	Timeline (Long-Term, Short-Term)	Included in Previous Plan? Yes/No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Response & Recovery, Natural Resource Protection	Who or What Benefits? Facility, Local, County, Region
INITIATIVE #7: Make Public Works shops and offices more resilient to floods.									
Existing	F	1, 4	Public Works	High	Capital Improvements Project Fund	Long-Term	No	Preventive Activities/Property Protection	Facility
INITIATIVE #8: Construct a ring dike around the hospital as part of a settlement with Dike District 12.									
Existing	F	1, 2, 7, 8	Public Works	High	Dike District 12 to fund project as settlement	Short-Term	Yes	Preventive Activities/Property Protection/Emergency Services/Structural Project	Facility/ Local/Region
INITIATIVE #9: Map and assess vulnerability to wildfire. Seek FEMA or State technical assistance.									
Existing	F	1, 2, 3, 4, 5, 8, 9	Fire	Medium	PDM Grant	Long-Term	Yes	Public Information/Preventive Activities/Property Protection	Facility/ Local

Prioritization of Mitigation Initiatives

Once the mitigation initiatives items were identified, the Planning Team followed the same process outlined within Volume 1 to prioritize their initiatives. **Table 11** identifies each initiative based on priority, where the highest priority initiative is listed at the top.

Table 12.
Mitigation Strategy and Priority Schedule

Priority No.	# of Objectives met	Hazards Mitigated[1]	Lead Agency	Can project be funded under existing programs/ budgets?	Estimated Cost	Is Project Grant Eligible? Yes/No	Timeframe	Included in Previous Plan? Yes/No	Who or What Benefits
[1]Hazards: Coastal Hazard-CZ/ Drought-D/ Earthquake-EQ/ Flooding-Fl/ Landslide-LS/ Severe Weather-SW / Volcano-Vol/ Wildfire-WF/ Tsunami-T/ Acts of Violence-AV/ Hazardous Sites or Materials Spill-HazMat/ Disease-D/ Dam Failure-DF/ Infrastructure Failure-IF									
Initiative #1: Develop a dam break response and recovery plan									
1	5	DF	Skagit County	Yes	High	Yes	Long-Term	No	Skagit County
Initiative #2: Assist vulnerable populations by identifying areas of greater need and seek grant funding for necessary preparedness and improvement programs.									
2	4	F, SW, F, E, L	Community Action	Yes	Medium	Yes	Long-Term	Yes	Local
Initiative #3: Produce and distribute family and traveler emergency preparedness information about severe winter weather and earthquake hazards.									
3	5	SW, E	County DEM	Yes	Low	Yes	Short-Term	No	Local
INITIATIVE #4: Reinforce downtown buildings for earthquake safety.									
4	2	E	City of Sedro-Woolley Council	Yes	High	Yes	Long-Term	No	Local
INITIATIVE #5: Develop and implement a multi-hazard public awareness program.									
5	6	F, SW, F, E, L	Fire & Planning	Yes	Low	Yes	Long-Term	Yes	Local
INITIATIVE #6: Determine necessity to retrofit City-owned facilities to better withstand damage and operate during significant disaster events such as flood, wildfire, earthquake and other events. Once needs are determined (such as backup generator power), implement tax levy and seek grant funding to retrofit structures.									

6	3	F, WF, E	City of Sedro-Woolley Council	Yes	High	Yes	Short-Term	Yes	Local/Skagit County
INITIATIVE #7: Make Public Works shops and offices more resilient to floods.									
7	2	F	Public Works	Yes	High	Yes	Long-Term	No	Local/Regional
INITIATIVE #8: Construct a ring dike around the hospital as part of a settlement with Dike District 12.									
8	4	F	Public Works	No	High	No	Short-Term	Yes	Local/Skagit County/Regional
INITIATIVE #9: Map and assess vulnerability to wildfire. Seek FEMA or State technical assistance.									
9	7	F	Fire	Yes	Medium	Yes	Long-Term	Yes	Local

Status of Previous Plan Initiatives

Table 13 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 93.
Current Status of Previous Hazard Mitigation Action Plan

Mitigation Strategy	Project Status	Completed	Continual/ On-Going Nature	Removed/ No Longer Relevant/ No Action	Carried Over
Determine necessity to retrofit City-owned facilities to better withstand damage and operate during significant disaster events such as flood, wildfire, earthquake and other events. Once needs are determined (such as backup generator power), implement tax levy and seek grant funding to retrofit structures	Investigating feasibility and funding of providing generator power to key facilities. Carried over as Initiative #6.	☐	☐	☐	☒
Relocate Public Works Shops and Offices.	Relocating Public Works shops and offices is infeasible. Redirecting efforts toward retrofitting existing buildings as part of Initiative #7. The wastewater treatment plant is planned to be upgraded in 2028. Looking into feasibility of including a sheet-pile flood wall as part of that project to protect from 100-year flood elevation plus 3 feet of freeboard.	☐	☐	☒	☐
Produce and distribute family and traveler emergency preparedness information about severe winter weather and earthquake hazards.	No action. Carried over as Initiative #3.	☐	☐	☐	☒
Assist vulnerable populations by identifying areas of greater need and seek grant funding for necessary	No action. Carried over as Initiative #2.	☐	☒	☐	☒

preparedness and improvement programs.					
Map and assess vulnerability to wildfire, seek FEMA or State technical assistance.	No action. Carried over as Initiative #9.	☐	☐	☐	☒
Construct a ring dike around the hospital as part of a settlement with Dike District 12.	Carried over as Initiative #8. Project design phase is nearing completion. Construction start anticipated for 2027.	☐	☒	☐	☒
Develop and implement a multi-hazard public awareness program.	No action. Carried over as Initiative #5.	☐	☐	☐	☒

Plan Maintenance

The City of Sedro-Woolley continues to seek feedback from members of the public, even after the plan has been approved. Written comments or questions specific to the Sedro-Woolley Annex may be directed to any of the points of contact listed in Table 1. As projects implementing mitigation measures move forward, progress will be shared with City Council and community members through public meetings and other outreach channels. Mitigation actions will be incorporated into the City's planning mechanisms and community processes to ensure they become part of regular operations and long-term decision-making.

The City generally follows the plan maintenance procedures identified in Section I of the Base Plan but will also implement a localized tracking system specific to Sedro-Woolley's mitigation strategy. Each initiative will be assigned to a lead department responsible for reporting progress annually. These reports will include status updates (not started, in progress, completed, or deferred), key milestones, and barriers to implementation. Staff will compile these updates into an annual Hazard Mitigation Progress Report that will be reviewed by City leadership and will be made available to the public prior to the Skagit Natural Hazards Mitigation Planning Committee's annual evaluation.

Plan Update

The City of Sedro-Woolley has not experienced changes in development in hazard-prone areas, therefore, overall vulnerability has remained relatively stable. While vulnerabilities remain in already developed areas, continued enforcement of zoning and development regulations helps to limit exposure to natural hazards.

Future Needs/Additional Comments

The City recognizes the need for additional training and support related to natural hazards mitigation planning. In recent years, the department has experienced significant staff turnover, and many of our newer team members are not yet familiar with the requirements, processes, and best practices associated with hazard mitigation planning. This knowledge gap creates challenges in ensuring

continuity of work and in integrating hazard mitigation considerations into long-range planning, capital improvements, and daily permitting activities.

Keeping up with evolving hazard data, mapping tools, and risk modeling—such as updated floodplain maps, wildfire risk assessments, and landslide susceptibility studies—also presents an ongoing challenge. With staff transitions, it can be difficult to maintain the technical expertise necessary to interpret and apply this information effectively. Training opportunities, technical assistance, and guidance from state or federal partners would help build staff capacity, but equally important is the opportunity to partner with agencies, consultants, and organizations that specialize in hazard mitigation planning. These partnerships would allow staff to stay better informed on emerging data and best practices, strengthen collaboration with regional stakeholders, and ensure that the City's hazard mitigation efforts remain current and actionable.

Support in this area would not only strengthen our ability to maintain compliance with state and federal standards, but also improve our capacity to pursue grant funding, engage the community more effectively, and enhance overall community resilience in the face of natural hazards.

Plan Adoption

The City of Sedro-Woolley provides proof of documentation that the City Council/Board of Commissioners has formally adopted the plan under Resolution XX pursuant to 44 CFR § 201.6(c)(5).

Annex 9 Samish Indian Nation

Introduction

This Annex details the hazard mitigation planning elements specific to the Samish Indian Nation, a participating jurisdiction to the Skagit County Hazard Mitigation Plan Update. This Annex is not intended to be a standalone document but rather appends to and supplements the information contained in the base plan document. As such, all sections of the base plan, including the planning process and other procedural requirements apply to and were met by the Samish Indian Nation. For planning purposes, this Annex provides additional information specific to the jurisdiction, with a focus on providing greater details on the risk assessment and mitigation strategy for this community only. This document serves as an update to the previously completed plan. All relevant data has been carried over and updated with new information as appropriate and as identified within the planning process discussed in Volume 1.

Hazard Mitigation Planning Team Point/s of Contact

The Samish Indian Nation followed the planning process detailed in Volume 1 Section 2 of the Base Plan. In addition to providing representation on the County's Planning Team, the Samish Indian Nation also formulated their own internal planning team to support the broader planning process. Individuals assisting in this Annex development are identified in 2.1 below, along with a brief description of how they participated.

Table 2.1 Local Planning Team Members

Name	Position, Title	Planning Tasks
Randy Storms	Emergency Management Specialist	Review, comment, and update
		Coordinate functions throughout jurisdiction
		Plan and/or attend planning meetings
Todd Woodard	Infrastructure & Resources Executive Director	Review, comment, and update
		Assist with developing mitigation strategies
		Plan and/or attend planning meetings
		Present to city council for adoption

Public Engagement

The Samish Indian Nation engaged the public through the following means:

- Social media, such as Facebook (https://www.facebook.com/SamishIndianNation)
- Jurisdiction's website: https://www.samishtribe.nsn.us
- Public workshop held in Anacortes, WA, on September 9, 2025.
- Responses from local respondents to the County's public survey collected between July 22 and August 15, 2025

Review of Existing Documents

2021 Samish Indian Nation Hazard Mitigation Plan

2003 Skagit County Hazard Mitigation Plan

2023 Washington State Enhanced Hazard Mitigation Plan

Community Profile

The following is a summary of key information about the jurisdiction and its history:

Date of Incorporation— The Samish people have lived in their traditional territory near the Salish Sea since time immemorial. On January 22, 1855 The United States of America signed the Treaty of Port Elliot with Samish leaders, formally acknowledging the Samish Indian Nation as a federally recognized Tribe. This was re-affirmed by a court decision on October 15, 1996.

Current Population— 2,437 Citizens

Population Growth— Samish Tribal enrollment grows by 50-75 citizens each year, reflecting an estimated 1% population increase annually.

Location and Description— The Samish Indian Nation has headquarters located in Anacortes, Washington, with additional land in a variety of other locations. Anacortes is situated on Fidalgo Island, accessible by bridge to the mainland, and is often known as the gateway to the San Juan Islands via the Washington State ferry system. Seattle is 80 miles south, and Vancouver BC is 90 miles north.

The Samish Nation now owns more than 200 acres, including 117 acres held in trust on Fidalgo Island. This property includes:

- **Waterfront Cannery Building** adjacent to Seafarers Memorial Park, Anacortes
- **Summit Park** - Highway 20 in Anacortes
- **Fidalgo Bay RV Resort** - site of landings during the annual Canoe Journey
- **Samish Longhouse Preschool and Child Care Center** – Anacortes
- **Samish Early Head Start Center** – Anacortes
- **Samish Rapid Rehousing Program** - Anacortes
- **Xwch'angteng** – 14 unit Tribal housing development, 34th Street, Anacortes

- **Proposed Commercial Development Sites** – Highway 20 and Thompson Rd in Anacortes, and Commercial Avenue in downtown Anacortes.
- **Agricultural Land** on Thomas Creek near Sedro Woolley
- **Huckleberry Island** - granted to Samish by the Washington State Parks Department with the provision that it remain open for public use.
- **Uplands and Tidelands** on Mud Bay on Lopez Island.

Brief History— The Samish Indian Nation is the successor to the large and powerful Samish Tribe, a signatory to the Treaty of Point Elliott in 1855.

Linguistically and culturally, the Samish are a Coast Salish people, speaking a dialect of Coast Salish known as "Straits Salish," rather than a Lushootseed dialect as some of our immediate neighbors to the east. The Samish were historically comprised of four important social groupings: the family, the house group, the villages, and the tribe as a whole.

In 1847 the Tribe had over 2,000 citizens. Twelve years later at the time of Treaty of Point Elliott negotiations, raids from Northern Tribes and epidemics of measles, smallpox, tuberculosis, and influenza had decreased the Samish population to about 150. Documents show 113 Samish were present in Mukilteo at the time of the Point Elliott Treaty signing in 1855.

Because most Samish tribal citizens refused to relocate to one of the reservations established by the Point Elliott Treaty and instead remained in their traditional territory practicing their traditional lifestyle, the federal government had limited contact with the Tribe over the years.

In 1969 the Bureau of Indian Affairs inadvertently removed the Samish Tribe from the list of signatory Tribes to the treaty. Due to this clerical error, the Samish Tribe lost their status as a federally recognized Tribe, a situation that would persist for 27 years until the decision was ultimately reversed in 1996.

Climate— Samish Indian Nation enjoys a mild, maritime climate with moderate temperatures. The ocean currents that flow along Washington State's coast and the Pacific westerlies (also known as the jet stream or storm track) significantly influence the Samish Indian Nation's climate. Rainfall is sparse during the summer months and increases in the fall, with moderate to heavy rains occurring from November through January.

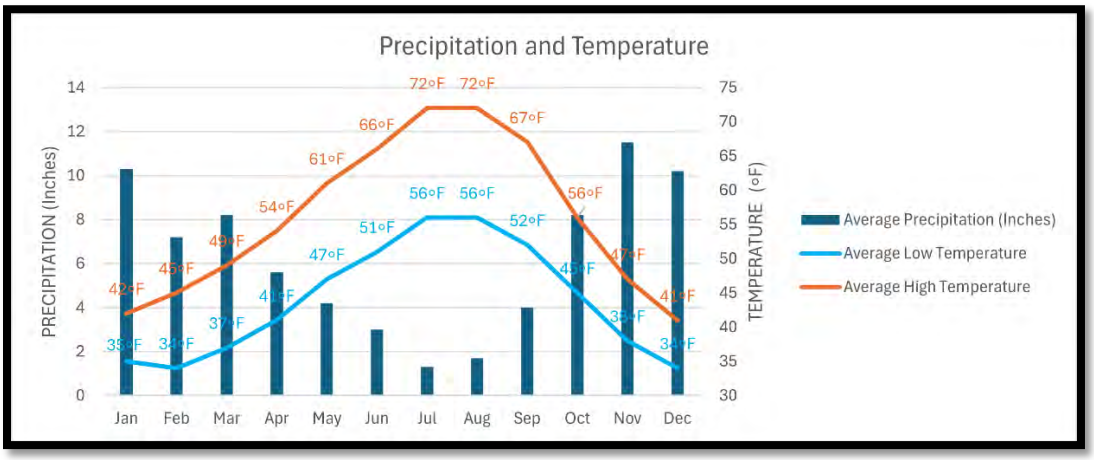
The prevailing wind direction is from the southeast in winter and southwest in summer. During late spring and summer, a prevailing westerly and northwesterly flow of air into Puget Sound brings a dry season beginning in May which reaches a peak in July. In late fall and winter, a prevailing southwesterly and westerly air flow from the Pacific Ocean results in a wet season beginning in October which lasts until the beginning of the dry season in May. During winter, the combined influence of low-pressure systems off the Pacific coast and cold air from the Fraser River Canyon produce strung northeasterly winds. Although it is not uncommon to have 30 to 40 knot winds under these conditions, the short fetch in the Anacortes area usually limits wind generated wave heights to not more than six feet. Wind

gusts up to 73 miles per hour and sustained westerly velocities up to 54 miles per hour have been recorded.

The air is generally moist, and the fluctuation in annual temperature is moderate. Summer highs can often be in the 80's to low 90's and winter lows may dip as low as 10°, with December and January being the coldest months, The annual average temperature is 50° and the frost-free growing season averages 193 days.

Rainfall is sparse during the summer months and increases during the fall months with moderate to heavy rains occurring from November through January. Historic annual temperatures and precipitation are illustrated in Figure 5.1, below.

Snowfall is seldom heavy and varies greatly from year to year.



Data from Meteoblue

Figure 5.1

Governing Body Format—

The Samish Indian Nation is a federally-recognized Tribe governed by a seven-member Tribal Council elected to oversee the welfare and resources of the Tribe: its constitution, economic development, policies, legislation, enrollment, and justice. A General Council comprised of all Samish Citizens of voting age maintains active participation in both the governance responsibilities and cultural gatherings of the Tribe. Today the leaders of the Tribe move both in the traditional Samish ways and use the tools of the modern-day world.

The Tribe's administrative structure includes departments and programs including Planning/Project Management, Social & Community Services, Essential Services/Housing, Purchase & Referred Care, Natural Resources, Elders, Education, Finance, Enforcement/Preparedness, Human Resources, Information Technology, as well as the Samcor business and commercial development entity.

Development Trends—

As a sovereign nation, decisions on land use are governed by Samish Government, who maintains legislative and policy-making authority. Although the Samish Indian Nation is not land-based, it does have properties in Trust and owns fee simple properties that have already been developed or are planned for development. The Samish Indian Nation does not currently have a defined Land Use Plan but does have improvement plans for existing developed areas and several undeveloped parcels.

Samish's Cultural Resource Protection Program provides protection to ancestral and sacred sites and landscapes in cooperation with federal, state, and local land management agencies, private developers, and landowners. As such, land development in these areas is either totally restricted or highly monitored. These factors reduce the amount of land available for economic development and community facilities.

The Samish require that all new buildings be built to minimum International Building Code (IBC) and International Fire Code (IFC) standards. Samish issues its own building permits for construction on Trust land, with the planning department enforcing the IBC and IFC standards, while consulting with city or county agents as necessary (e.g. county Fire Marshall). Buildings constructed prior to land being placed in trust were permitted through Skagit County or the City of Anacortes

Development trends for the Samish Indian Nation center around seven-generation visioning and focus on balancing responsible development that reflects community needs with the sustained protection of natural resources for future generations. This approach focuses on recovering the Tribe's land base within Samish traditional territory while prioritizing proper stewardship of that land. Recent development projects completed by the Tribe include the 2024 construction of a 14-unit housing development to serve the needs of Samish elder's and those with limited mobility, the construction of an Early Learning Center in 2025 that will serve as an education and childcare facility, as well as economic development projects like the construction of a convenience store and gas station that was completed in 2023.

Economy – In 2016, Samish Tribal Council established Samcor Inc. under Section 17 of the Indian Reorganization Act to operate the Fidalgo Bay Resort and Salish Landscape Services as Samish enterprises.

Samcor is responsible not only for maintaining current tribally-owned businesses, but also for planning future investments, businesses, and initiatives, and for the economic benefit of the Samish Indian Nation.

Samcor currently oversees the following businesses:

- The Fidalgo Bay Resort, which includes 142 RV slots, eight cabins, and a Convention Center among other amenities.
- Samcor Fuel and Tobacco
- Northwind Cannabis

In 2024 the Samcor managed over $44.4 million in business activities. Samish Indian Nation currently employs 119 people.

Jurisdictional Boundaries —

The Samish Indian Nation's traditional territory stretches over a wide, seven-county region of Northwest Washington. This area ranges from the mountain tops of the Cascades westerly along the hills, woodlands, and river deltas, arriving at the far western shores of the San Juan Islands.

The Samish Indian Nation has identified historically and archaeologically significant cultural use sites as part of this planning process. These sites are documented and considered proprietary, and thus not identified in any manner within this document; however, such areas were considered when conducting the risk assessment portion of this planning process.

For the purposes of this NHMP document only, Samish Indian Nation is defining its jurisdictional boundaries as those Samish-owned lands and properties located within Skagit and Island Counties. (see Figure 5.2, below).

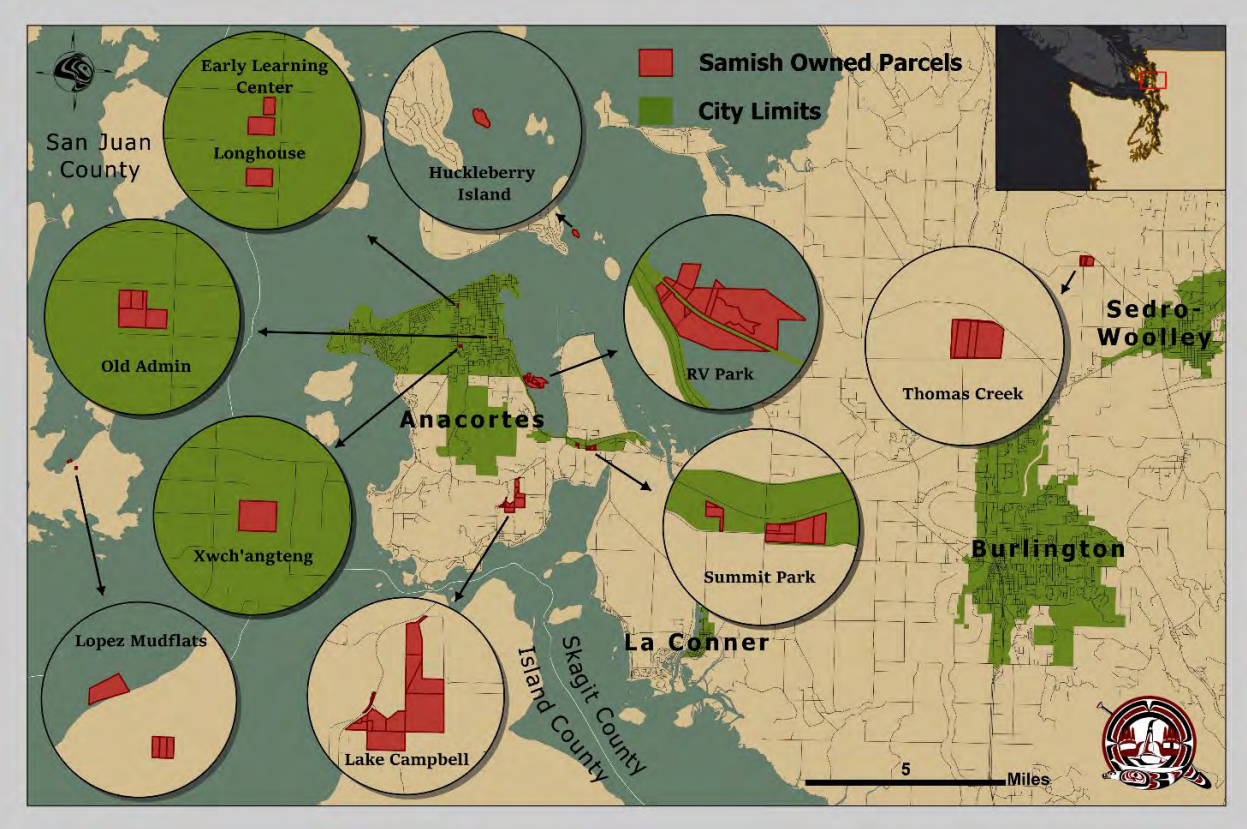


Figure 5.2

The Samish Nation now owns more than 200 acres, including **117 acres held in trust** on Fidalgo Island. This property includes:

- **Waterfront Cannery Building** adjacent to Seafarers Memorial Park, Anacortes
- **Summit Park** - Highway 20 in Anacortes
- **Fidalgo Bay RV Resort** – Anacortes.
- **Samish Longhouse Preschool and Child Care Center** – Anacortes
- **Samish Early Head Start Center** – Anacortes
- **Samish Rapid Rehousing Program** - Anacortes
- **Xwch'angteng** – 14 unit Tribal housing development, 34th Street, Anacortes
- **Proposed Commercial Development Sites** – Highway 20 and Thompson Rd in Anacortes, H Avenue in Anacortes, and Commercial Avenue in downtown Anacortes.
- **Agricultural Land** on Thomas Creek near Sedro Woolley
- **Huckleberry Island** - granted to Samish by the Washington State Parks Department with the provision that it remain open for public use.
- **Uplands and Tidelands** on Mud Bay on Lopez Island in San Juan County.

Hazard Event History

Within the Base Plan, the Planning Team identified all hazard events which have occurred within the Samish Indian Nation. In the context of the planning region, it was determined that there are (no) additional hazards unique to the jurisdiction. Tables 6.11- 6.13, below list all past occurrences of hazards within the jurisdiction. If available, dollar loss data is also included.

Table 6.11 Previous Hazard Occurrences – Skagit County

Type of Event	FEMA Disaster # (if available)	Date	Dollar Losses (if available)
Flooding and Mudslides	4635	11/25/2021	$32,011,462
Severe Winter Storms, Snowstorms, Straight-line Winds, Flooding	4650	12/26/2021	$16,094,227
Pandemic	4481	1/20/2020	$2,423,666,571.89
Severe Storms, Flooding, Landslides, and Mudslides	4539	1/20/2020	$46,632,716.63
Severe Storm(s)	1963	1/11/2011	$8,697,563

Severe Storm(s)	1825	12/12/2008	
Flood	1817	1/6/2009	
Severe Storm(s)	1734	12/1/2007	
Severe Storm(s)	1682	12/14/2006	
Severe Storm(s)	1671	11/2/2006	
Coastal Storm	3227	8/29/2005	
Severe Storm(s)	1499	10/15/2003	
Earthquake	1361	2/28/2001	
Severe Storm(s)	1159	12/26/1996	
Flood	1100	1/26/1996	
Severe Storm(s)	1079	11/7/1995	
Flood	896	12/20/1990	
Flood	883	11/9/1990	
Volcano	623	5/21/1980	
Flood	612	12/31/1979	
Flood	492	12/13/1975	
Flood	300	2/9/1971	

Table 6.12 Previous Hazard Occurrences – City of Anacortes			
Type of Event	FEMA Disaster #	Date	Dollar Losses
Landslide		Approx 1994	
Severe Storm(s)		1960's 1990's	
Severe Storm(s)		1997	
Winter Storm		Oct. 1962	
Flood		12/28/90	
Flood		1996	
Earthquake		1956	
Earthquake		1959	
Sever Storm(s)		1965	
Flood		2/28/01	
Flood			
Flood		1990	

Table 6.13 Previous Hazard Occurrences – Samish Indian Nation			
Type of Event	FEMA Disaster #	Date	Dollar Losses
Severe Weather / Flood	NA	11/2012	$120,000

The recorded history of hazard events, as mentioned above, can indicate what the likelihood would be of a hazard occurring in the future. Table 6.2 below is the rating for probability of hazards according to the parameters described in Volume 1.

Table 6.2 Probability of Future Hazards Occurrence

Hazard	Impact Factor	Impact ID
Coastal Hazards	High	4
Drought	High	4
Earthquake	Medium	3
Flooding	Medium	3
Landslides	Medium	3
Severe Weather	High	4
Tsunami	Low	2
Volcano	Low	2
Wildfire	Medium	3
Acts of Violence	Medium	3
Hazardous Material Spill or Release	High	4
Disease	High	4
Bridge/Road Failure	Medium	3
Power/Water System Failure	High	4
Dam Failure	Low	2
Other hazards	High	4

Hazard Area Extent and Location

This section describes the type, location, and extent of all hazards that can affect the jurisdiction.

Table 7.1 Geographic Extent

Hazard Type	Impact Factor	Impact ID
Coastal Hazards	*Significant*	3
Drought	Moderate	2
Earthquake	Extensive	4
Flooding	Moderate	2
Landslides	Moderate	2
Severe Weather	Significant	3
Tsunami	Significant	3
Volcano	Moderate	2
Wildfire	Moderate	2
Acts of Violence	Limited	1

Hazardous Material Spill or Release	Significant	3
Disease	Extensive	4
Bridge/Road Failure	Extensive	4
Power/Water System Failure	Moderate	2
Dam Failure	Limited	1
Other hazards	Moderate	2

Hazard Risk and Vulnerability Ranking

The Samish Planning Team reviewed the hazard list identified within the Base Plan and identified hazards that are most likely to have the highest impact within the Samish Indian Nation. Table 8.1 presents the ranking of the hazards of concern based on their CPRI score. A qualitative vulnerability ranking was then assigned based on a summary of potential impact determined by: past occurrences, extent, damage, casualties, and continuity of government. The assessment is categorized into the following classifications:

- **Extremely Low** – No or very limited impact. The occurrence and potential cost of damage to life and property is very minimal-to-nonexistent. No impact to government functions with no disruption to essential services.
- **Low (Negligible)** – Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal. Government functions are at 90% with limited disruption to essential services.
- **Medium (Limited)** – Moderate potential impact. This ranking carries a moderate threat level to the general population and /or built environment. The potential damage is more isolated, and less costly than a more widespread disaster. Government functions are at 80% with limited impact to essential services.
- **High (Critical)** – Widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread. Hazards in this category may have occurred in the past. Government functions are at ~50% operations with limited delivery of essential services.
- **Extremely High (Catastrophic)** – Very widespread with catastrophic impact. Government functions are significantly impacted for more than one month.

Table 8.1 Vulnerability Ranking by Hazard Type

Hazard Rank	Hazard Type	CPRI Score	Vulnerability Rank
1	Hazardous Materials Spill or Release	3.45	Medium
2	Earthquake	3.40	Extremely High
3	Disease	3.35	Medium
4	Coastal Hazards	3.30	High

5	Bridge/Road Failure	3.25	Medium
6	Power/Water System Failure	2.95	Medium
7	Severe Weather	2.80	Low
8	Other Hazards	2.80	Low
9	Tsunami	2.70	Medium
10	Wildfire	2.60	Low
11	Drought	2.55	Extremely Low
12	Landslides	2.40	Low
13	Acts of Violence	2.30	Low
14	Flooding	2.20	Low
15	Volcano	2.15	2.2
16	Dam Failure	1.85	Low

National Flood Insurance Information (NFIP)

This section identifies the number of repetitive loss or severe repetitive loss properties which have occurred within the Samish Indian Nation as specified in 44 CFR 201.6(c)(3)(ii). A repetitive loss (RL) property is defined as a structure covered by a contract for flood insurance made available under the NFIP that:

(xvii) Has incurred flood-related damage on two occasions, in which the cost of the repair, on the average, equaled or exceeded 25 percent of the market value of the structure at the time of each such flood event; and

(xviii) At the time of the second incidence of flood-related damage, the contract for flood insurance contains increased cost of compliance coverage.

NFIP Status and Severe Loss/Repetitive Loss Properties

The Samish Indian Nation currently is not a member of the NFIP but will continue to evaluate this opportunity as it feels appropriate. The Tribe has identified this as a potential future mitigation strategy.

The Tribe has previously been impacted by a King tide/high wind/storm surge. In November 2012, because of the King tide event, the Fidalgo Bay Resort Convention Center was flooded and damaged. The cost of damage and labor to repair the damage was approximately $120,000.

Repetitive Flood Claims

Residential or non-residential (commercial) properties that have received one or more NFIP insurance payments are identified as repetitive flood properties under the NFIP. Such properties are eligible for funding to help mitigate the impacts of flooding through various FEMA programs, subject to meeting certain criteria and maintaining a Repetitive Loss Strategy. Repetitive flood

claims provide funding to reduce or eliminate the long-term risk of flood damage to structures insured under the NFIP that have had one or more claim payments for flood damages.

A Repetitive Loss Strategy must identify the specific actions taken to reduce the number of repetitive loss properties, which must include severe repetitive loss properties, and specify how the Tribe intends to reduce the number of such repetitive loss properties. In addition, the hazard mitigation plan must describe the strategy it will take to reduce the number of these properties, including the development of Tribal hazard mitigation plan.

In preparation of this plan, the Planning Team did review Washington State's 2018 Hazard Mitigation Plan, which does contain a Repetitive Loss Strategy. While a sovereign nation and not required to adhere to state policies and procedures, the Nation, as appropriate, will continue to work with the state in its endeavor to reduce impact from flooding within the tribal planning area. At the Samish Indian Nation's election, this may include seeking opportunities for mitigation funds under the various Stafford Act Grant Programs.

Tribal Repetitive Loss Strategy:

The Samish Indian Nation will continue to address repetitive loss properties by ensuring that new construction is built to the highest building code standards required and also continue to view the mitigation plan for identified areas of risk. As was previously done, the Tribe will continue to mitigate structures within the floodplain, including, if feasible, to move structures out of the floodplain or to take other such corrective actions as appropriate.

Samish currently does not have extensive land use regulations in place. However, the Planning Team will use the five-year updates of this Hazard Mitigation Plan as an opportunity to evaluate hazard management laws, regulations, and policies, and work with the Tribe's legal department to create the most effective and efficient regulatory authority when necessary to do so in an effort to continue to mitigate flood issues on the properties owned by the Samish Indian Nation.

Severe Repetitive Loss Program

The severe repetitive loss program is authorized by Section 1361A of the National Flood Insurance Act (42 U.S.C. 4102a), with the goal of reducing flood damages to residential properties that have experienced *severe* repetitive losses under flood insurance coverage and that will result in the greatest savings to the NFIP in the shortest period of time. A severe repetitive loss property is a residential property that is covered under an NFIP flood insurance policy and:

- a) That has at least four NFIP claim payments (including building and contents) over $5,000 each, and the cumulative amount of such claims payments exceeds $20,000; or

- b) For which at least two separate claims payments (building payments only) have been made with the cumulative amount of the building portion of such claims exceeding the market value of the building.

For both (a) and (b) above, at least two of the referenced claims must have occurred within any 10-year period, and must be greater than 10 days apart.

The Samish Indian Nation has no severe repetitive loss properties.

Capability Assessment

Coordination with other community planning efforts is paramount to the successful implementation of this plan. This section provides information on how planning mechanisms, policies, and programs are integrated into other on-going efforts. It also identifies the jurisdiction's capabilities with respect to preparing and planning for, responding to, recovering from, and mitigating the impacts of hazard events and incidents.

Capabilities include the programs, policies and plans currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. The capabilities are divided into the following sections: National Flood Insurance Information; regulatory capabilities which influence mitigation; administrative and technical mitigation capabilities, including education and outreach, partnerships, and other on-going mitigation efforts; fiscal capabilities which support mitigation, and classifications under various community programs.

Regulatory Capability Assessment

The assessment of the jurisdiction's legal and regulatory capabilities is presented in Table 10.1.1. This includes planning and land management tools, typically used by local jurisdictions to implement hazard mitigation activities and indicates those that are currently in place.

Table 10.1.1 Legal and Regulatory Capability

	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Codes, Ordinances & Requirements				
Building Code Version: ?? Year: 2023?	Y	N	N	The State, Skagit County and City of Anacortes consistently adopt the most current standards established. The Samish Indian Nation adheres to those same standards. When construction occurs off trust land, permitting occurs through the County or City depending on its location. All IBC standards are met accordingly. The Nation also has standards established which it must meet at the Federal level for all federally funded projects.
Zoning Ordinance				
Subdivision Ordinance				

Table 10.1.1 Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Floodplain Ordinance	N	Y	Y	The City of Anacortes and Skagit County are both NFIP communities. As such, all construction meets established standards.
Stormwater Management	Y	Y		County and EPA
Post Disaster Recovery				
Real Estate Disclosure				
Growth Management	NA	Y	Y	The Tribe is not required to address growth management in the same manner as counties and cities in the state of Washington.
Site Plan Review	Y	Y	Y	Services provided by County/City as appropriate.
Public Health and Safety	Y	Y	Y	Health and Safety as it relates to public health of Samish Tribal Citizens is addressed to a large extent by Tribal Health, who administers programs but provides no direct medical services. For some matters the county also provides this service, as does the State Department of Public Health.
Coastal Zone Management				
Climate Change Adaptation	Y		Y	The Nation is very actively engaged in various climate change issues through, among other departments, Natural Resources. The Samish Department of Natural Resources maintains such information on the Tribe's Climate Change Resources webpage.
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire, etc.)				

Table 10.1.1 Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Environmental Protection	Y			Tribal programs as well as EPA regulated programs.
Planning Documents				
General or Comprehensive Plan				
Is the plan equipped to provide linkage to this mitigation plan?				No
Floodplain or Basin Plan	N			
Stormwater Plan				
Capital Improvement Plan	Y			
Habitat Conservation Plan	Y			
Economic Development Plan				
Shoreline Management Plan				
Community Wildfire Protection Plan	N	Y	Y	Some jurisdictions within the planning region are part of the Fire Wise program. Skagit County and the surrounding municipalities have a current CWPP in place, which was developed in 2020. Samish does participate in planning initiatives as available, and is working with the local fire suppression organizations to provide information to Samish Ccitizens concerning reducing fire risk. As land use ordinances are developed, it will also address wildland interface codes as appropriate.
Transportation Plan	Y			The Tribe's has a Long-Range Transportation Plan (LRTP) was , updated in 20227.
Response/Recovery Planning				
Comprehensive Emergency Management Plan	Y			
Threat and Hazard Identification and Risk Assessment	N			Currently Under Development
Terrorism Plan	N			

Table 10.1.1 Legal and Regulatory Capability				
	Local Authority	Other Jurisdictional Authority	State Mandated	Comments
Post-Disaster Recovery Plan	N			
Continuity of Operations Plan	Y			The Tribe addresses various aspects of a COOP plan, such as Samish Code 1.90, which provides for succession of tribal officers.
Public Health Plans				
Boards and Commission				
Planning Commission				
Mitigation Planning Committee	Y			A Hazard Mitigation Committee was established to develop the *Samish Indian Nation Hazard Mitigation Plan*. Those members will remain on the committee during the lifecycle of the plan and will conduct the annual reviews as identified in the plan maintenance section of that document.
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems, chipping, etc.)	Y			The Samish Indian Nation has several programs in place to reduce impact from the identified hazards of concern, including various environmental programs.
Mutual Aid Agreements / Memorandums of Understanding	Y	With City, County, and other area Tribes		The Tribe has MOUs with various entities from which are received and provided various services.
Other				

Administrative and Technical Capabilities Assessment

The assessment of the jurisdiction's administrative and technical capabilities, including educational and outreach efforts, and on-going programmatic efforts are presented in Table 10.2.1. These are elements which support not only mitigation, but all phases of emergency management already in place that are used to implement mitigation activities and communicate hazard-related information.

Table 10.2.1 Administrative and Technical Capability

Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Y	Planning Department Staff
Professionals trained in building or infrastructure construction practices (building officials, fire inspectors, etc.)	y	MOU/MOAs with City and County depending on location.
Engineers specializing in construction practices?	Y	Contracted services.
Planners or engineers with an understanding of natural hazards	Y	Several in various Tribal Departments.
Staff with training in benefit/cost analysis	Y	Tribe has performed BCAs.
Surveyors	Y	Contracted services as needed.
Personnel skilled or trained in GIS applications	Y	GIS Specialist on staff.
Personnel skilled or trained in Hazus use	N	
Scientist familiar with natural hazards in local area	Y	Department of Natural Resources.
Emergency Manager	Y	The Emergency Management Specialist is the designated emergency manager for the Nation, and has the authority to delegate duties and responsibilities as needed.
Floodplain Manager (NFIP compliance)		
Grant writers	Y	On Staff
Warning Systems/Services (Reverse 9-1-1, outdoor warning signs or signals, flood or fire warning program, etc.?)	Y	Internal **Samish Alert** SMS-Based Notification Service, as well as **Red Alert** (through Skagit County).
Hazard data and information available to public	Y	Risk assessment maps are available for review in person and on website.
Maintain Elevation Certificates	Y	The City or County (depending on location of property) provides this service as part of the NFIP program. The Samish do obtain elevation certificates for properties it constructs.

Table 10.2.1 Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Education and Outreach		
Local citizen groups or non-profit organizations focused on emergency preparedness?		West Skagit CERT, Anacortes ARC, Anacortes Salvation Army
Local citizen groups or non-profit organizations focused on environmental protection?	Y	Friends of the San Juans, Friends of Anacortes Forest, Friends of Skagit Beaches, Skagit Land Trust, San, Juan Preservation Trust
Organization focused on individuals with access and functional needs populations		
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Y	Skagit DEM
Natural disaster or safety related school programs?	Y	Anacortes Public Schools
Public-private partnership initiatives addressing disaster-related issues?	N	
Multi-seasonal public awareness program?	N	
Other		
On-Going Mitigation Efforts		
Hazardous Vegetation Abatement Program	Yes	Through various partnerships with the Forest Service
Noxious Weed Eradication Program or other vegetation management	Yes	Skagit County Noxious Weed Control Board, San Juan County Noxious Weed Control Board
Fire Safe Councils	Yes	While the Tribe itself is not a Fire Wise Community, surrounding jurisdictions are and the Tribe actively participates with the City of Anacortes Fire Department and the Skagit County Conservation District to identify areas at risk within Skagit County's existing CWPP, which includes the Tribal Planning Area.
Chipper program	No	
Defensible space inspections program	No	
Creek, stream, culvert or storm drain maintenance or cleaning program	Yes	Actively involved in management throughout the planning area.
Stream restoration program	Yes	Various on-going efforts as well as several completed efforts.

Table 10.2.1 Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Erosion or sediment control program	Yes	Actively involved in various restoration projects throughout the area in support of erosion and sediment control efforts.
Address signage for property addresses	No	
Other	No	

Fiscal Capability Assessment

The assessment of the jurisdiction's fiscal capabilities is presented in Table 10.3.1. These are the financial tools or resources that could potentially be used to help fund mitigation activities.

Table 10.3.1 Fiscal Capability	
Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Eligible within boundaries of trust land.
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	Yes
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Eligible within boundaries of trust land.
Other	

Community Classifications

The jurisdiction's classifications under various hazard mitigation programs are presented in Table 10.4.1. Each of the classifications identified establishes requirements which, when met, are known to increase the resilience of a community.

Table 10.4.1 Community Classifications		
	Participating (Yes/No)	Date Enrolled
Community Rating System	N	NA
Building Code Effectiveness Grading Schedule	N	NA
Storm Ready	N	NA
Firewise	N	NA
Tsunami Ready (if applicable)	N	NA

Mitigation Goals and Objectives

This section details the mitigation goals, policies, and implementation actions Identified by the Samish Indian Nation Planning Team for the updated HMP. The measures described below aim to identify, prioritize, and act to reduce risk. They are visions for reducing or avoiding losses from the identified hazards over a broad, long-term time frame, while providing for alignment with the various other surrounding Tribes and the County as a whole. The 2025 Goals and Objectives are described in Table 11.1, below.

Table 11.1 Goals and Objectives				
	Objective 1	***Objective 2***	***Objective 3***	***Objective 4***
Goal 1 ***Protect life, property, and the natural environment.***	*Increase disaster mitigation for the Samish Indian Nation through awareness, preparedness, response, planning, and reduction programs*	*Enable the Samish Indian Nation to be self-sufficient for at least 14 days after a disaster or during a significant event.*	*Relocate structures located in high-risk hazard areas.*	*Support low-impact mitigation efforts to reduce the impact on the natural environment.*
Goal 2 ***Ensure continuity of critical economic, governmental, and facilities infrastructure.***	***Objective 5*** *Support redundancy of critical government functions, structures, and economic hubs.*	***Objective 6*** *Retrofit or build to the highest standards, all critical facilities and infrastructure.*		
Goal 3 ***Promote and protect Tribal sovereignty and identity.***	***Objective 7*** *Protect culturally and historically significant Tribal sites, places, and materials.*			
Goal 4 ***Increase public awareness of natural***	***Objective 8*** *Encourage partnerships among organizations, businesses, and local*			

hazards and involvement in hazards planning.	*governmental agencies within the community.*

Hazard Mitigation Action Plan

The Planning Team for the jurisdiction identified and prioritized a wide range of actions based on the risk assessment and their knowledge of the jurisdiction's assets and hazards of concern. The table below lists the action items or strategies that make up the jurisdiction's hazard mitigation plan. Background information and information on how each action item will be administered, responsible agency/office (including outside the district), potential funding sources, the timeframe, who will benefit from the activity, and the type of initiative associated with each item are also identified. Samish Indian Nation's Hazard Mitigation Action Plan is described in Table 12.1, below.

Table 12.1 Hazard Mitigation Action Plan									
Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency (listed first) and others potentially involved	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?	Initiative Type: Emergency Services, Property Protection, Prevention, Recovery, Structural Projects, Public Info., Natural Resources	Who or What Benefits from Action? Facility, Tribal, Local, County, Region
1. Retrofit or move tribal facilities to better withstand impact from a natural hazard event. This includes structures within the floodplain, or areas impacted by flood events. This would include land acquisition and removal of structures to allow for open space and the return to natural environments.									
New and Existing	CZ, EQ, FL, LS, WF, T	1,3,4,6,7	Planning, Facilities	High	General Fund, BRIC?, HMGP, HUD	Long-Term	N	Structural, Natural Resource Protection, Recovery, Property Protection	Tribal
2. Working with county and state agencies as appropriate, seek flood reduction and steep slope stability project funding, reconstruction, or relocation funding for roads with histories of flooding and instability to ensure access to Tribal Facilities.									
Existing	EQ, F, LS, SW	1, 3, 4, 6, 7, 8	Planning, NR, County, and local jurisdictions	High	BRIC, HMGP, USDOT, WADOT	Long-Term	Y	Emergency Services, Protection, Prevention	Tribal, Local, County, Region
3. Seek grant funding for acquisition of properties within high-hazard areas to help restore the natural habitat of the area/watershed.									
Existing	CZ, LS, FL, WF, T	1, 3, 4, 7	Natural Resources	High	BRIC, HMGP	Long-Term	Y	All	Facility, Tribal
4. Identify facilities such as the convention center which require back-up power (e.g. solar, batteries, generators) to maintain use of structure for long-term incidents.									
New and Existing	IF	1, 2, 4, 5	Planning, Facilities	Low	General Fund	On-Going	N	Recovery	Facility, Tribal, Local
5. Continue to design and build facilities to meet or exceed seismic (or load) standards, including redundant essential equipment. Apply current IBC standards to all renovation or replacement of existing facilities, structures, and/or equipment.									
New and Existing	CZ, EQ, LS, WF, T	1, 3, 6	Planning, Facilities	Medium	BRIC, HMGP	Long-Term	Y	Prevention	Tribal
6. Implement various activities that support mitigation efforts to reduce the negative influence of natural hazards impacting the Tribal Planning Area.									
New and Existing	All	1, 3, 4, 6, 7	Natural Resources	High	General Fund, HLS, Health	On-Going	Y – Modified (#8)	All	All

Table 12.1 Hazard Mitigation Action Plan									
Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency (listed first) and others potentially involved	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?	Initiative Type: Emergency Services, Property Protection, Prevention, Recovery, Structural Projects, Public Info., Natural Resources	Who or What Benefits from Action? Facility, Tribal, Local, County, Region
7. Working with the Samish Emergency Planning and Management Team, utilize data gathered during risk assessment to identify capital facilities that, when modified, increase the resilience of the Samish structures and conveyances to damage, or that allow a more expedited process for recovery from the impact of disaster incidents.									
New and Existing	CZ, EQ, FL, LS, SW, V, WF, T, DF	1, 2, 3, 6	EM, Facilities	Low	General Funds, Grants	Long-Term	Y – Expanded (#8)	Recovery, Prevention, Structural	Tribal
8. Consider projects enhancing resistance of structures to impact from hazards of concern, such as seismic bracing of equipment, piping and fixtures, removal or retrofit of high hazard beams; increased load capacity from wind, snow, and volcanic ash; or access road reinforcement.									
New and Existing	CZ, EQ, FL, LS, SW, V, WF, T, DF	1, 2, 6, 7	Facilities, Planning	High	General Funds, OR DOT, US DOT, BRIC, HMGP	Long-Term	N	Emergency Services, Recovery, Prevention, Structural	Tribal
9. Implement a recovery system to ensure maximum FEMA reimbursement for disaster response, repair, mitigation and recovery, which will capture and track damages sustained, emergency activities, associated expenses (mileage, supplies, expendables, outside vendors, etc.), employee time, and dedicated resources.									
New and Existing	All	All	EM, Finance,	Medium	EMPG, General Fund	On-Going	N	Emergency Services, Response, Recovery	Tribal
10. Utilize data from the current risk assessment to update GIS data.									
New and Existing	All	1, 4	GIS/NR	Low	General Fund, HMGP	On-Going	Y – Modified (#3 and 4)	Emergency Services, Prevention, Protection	Tribal
11. Identify and train staff, youth, and volunteers that will be utilized for emergency management efforts. Training to be considered includes ICS classes for NIMS compliance, ATC 20/45, Disaster Site Worker Training, Emergency Response Training, Hazmat Response (basic), and Damage Assessment.									
New	All	3, 5, 8	EM, HR, Facilities	Medium	General Fund, HLS	On-Going	Y – Modified (# 7)	Emergency Services	Tribal

Table 12.1 Hazard Mitigation Action Plan									
Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency (listed first) and others potentially involved	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?	Initiative Type: Emergency Services, Property Protection, Prevention, Recovery, Structural Projects, Public Info., Natural Resources	Who or What Benefits from Action? Facility, Tribal, Local, County, Region
12. Work with transit organizations to develop an exercise related to evacuation of residents.									
New	All	1, 2, 8	Tribal Transportation	Medium	DOT, HMEP, EMPG, Fire Grants, HUD, DOH	Short-Term	N	Emergency Services, Recovery	Tribal, Local, County
13. Leverage resources and partnerships to train and exercise together to ensure continuity during real world events.									
New	All	1, 5, 8	EM, Planning	Medium	General Budget, HLS, DOJ Grants	On-Going	Y-Modified (#7)	Emergency Services, Prevention	All
14. Develop (or update) plans to ensure response and recovery efforts. This includes working with the county and local municipalities to look at communications and interoperability issues.									
New and Existing	All	1, 8	EM, Planning	Medium	Various depending on plan	On-Going	N	Prevention, Emergency Services, Recovery	All
15. Conduct public outreach on risk-reduction techniques for all hazards through public education campaigns which increase awareness of healthy behaviors, including during times when shelters are established.									
New	All	1, 2, 8	Tribal Health, County Health Department, Human Services	Low	General Fund	Short-Term	N	Public Education, Response, Recovery, Emergency Services	All
16. Develop programs and public outreach efforts which supports community participation in incentive-based programs, such as FireWise, StormReady Programs, and potentially the NFIP (if Samish chooses to enroll).									
New and Existing	All	1, 4, 7, 8	EM, Planning	Low	General Fund	Short-Term	Y – Modified (#1 and 5)	Emergency Services, Public Education	Tribal, Local, County

Table 12.1 Hazard Mitigation Action Plan									
Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency (listed first) and others potentially involved	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?	Initiative Type: Emergency Services, Property Protection, Prevention, Recovery, Structural Projects, Public Info., Natural Resources	Who or What Benefits from Action? Facility, Tribal, Local, County, Region
17. Use the Samish Hazard Mitigation Plan for comprehensive land use planning or development of regulations.									
New and Existing	CZ, D, EQ, FL, LS, SW, V, WF, T	1, 3, 4, 6, 7	Tribal Council, Planning	Low	General Fund	Long-Term	Y – Modified (#2 and 6)	Prevention, Public Information, Property Protection, Emergency Services, Natural Resource Protection	Tribal
18. Utilizing data from this HMP, update the Emergency Operations Plan (EOP) to include all hazards of concern and to establish management and operations during emergency or disaster situations.									
New and Existing	All	All	EM, Planning, NR	Low	General Fund, THLS	Short-Term	Y – Modified (#2)	Emergency Services, Recovery	Tribal
19. Develop a post-disaster action plan for all hazards of concern that addresses debris management, cultural/historical data gathering, substantial damage assessment, and grant management.									
New and Existing	All	All	EM, Planning, Cultural Heritage	Low	General Fund, BIA, THLS	Long-Term	N	Emergency Services, Recovery	Tribal
20. Create codes and ordinances which increase resiliency from the hazards of concern, such as land use development; landscaping ordinance for fuel reduction; building codes for minimum seismic stability; flood damage prevention ordinance to cumulatively track substantial improvements and damage, etc.									
New and Existing	CZ, EQ, FL, LS, V, WF, T	1, 3, 4, 6, 7	Tribal Council, Planning	Low	General Fund	Long-Term	Y – Modified (#2)	Prevention, Natural Resources, Structural	Tribal, Local, County

Table 12.1 Hazard Mitigation Action Plan									
Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency (listed first) and others potentially involved	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?	Initiative Type: Emergency Services, Property Protection, Prevention, Recovery, Structural Projects, Public Info., Natural Resources	Who or What Benefits from Action? Facility, Tribal, Local, County, Region
21. Acquire and install backup power (e.g. solar, batteries, generators) to maintain critical infrastructure, including for water systems/wells.									
New and Existing	IF	1, 2, 5, 6	Facilities	Medium	HMGP, THLS, BIA, DOH, General Fund	Short-Term	N	Emergency Services, Recovery	Facilities, Tribal
22. Construct or renovate shelter facility for use during disaster incident. Facility can also be used as a warming, cooling, or feeding shelter during extreme weather events. Shelter should be constructed large enough to enable sheltering of citizens visiting the Samish Planning Area, including guests who may be stranded as a result of sudden-onset incident (e.g., earthquake).									
New	All	1, 2, 5	EM	High	HUD Block Grants, General Fund, HMGP, BRIC, HLS, Fire Grants	Short-Term	Y	Prevention, Structural, Protection, Natural Resources	Tribal, Local, County, Region
23. Construct a small retaining wall around the Fidalgo Bay Resort (FBR) Convention Center to help reduce floodwaters entering the structure to ensure that this structure can serve as a shelter facility for Samish citizens and guests to the Resort if needed.									
New	CZ, FL, T	1, 4, 7	EM, Facilities	High	HUD, BRIC, HMGP, HLS	Long-Term	Y	Response, Recovery, Prevention, Structural, Protection, Natural Resources	Tribal, Local, County, Region
24. Construct two new structures outside of the hazard zone. The first is for a new archive building to maintain historic records of the Samish Nation. The second is for an IT building to help ensure continuity of government should the existing IT structure be impacted due to its age.									
New	CZ, EQ, FL, LS, SW, V, WF, T, DF	1, 3, 5, 6	EM, Facilities	High	HUD, BRIC, HMGP, HLS	Long-Term	Y	Response, Recovery, Prevention, Structural, Protection, Natural Resources	Tribal, Local, County, Region

Table 12.1 Hazard Mitigation Action Plan									
Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency (listed first) and others potentially involved	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?	Initiative Type: Emergency Services, Property Protection, Prevention, Recovery, Structural Projects, Public Info., Natural Resources	Who or What Benefits from Action? Facility, Tribal, Local, County, Region
25. Schedule CISA "Security Assessment at First Entry" (SAFE) site evaluations for all Samish facilities.									
New and Existing	AV	1, 4, 7, 8	EM, Planning	Low	NA	On-Going	N	Property Protection, Prevention	Tribal
26. Analyze current building infrastructure to evaluate security/safety and develop action plan to address identified vulnerabilities.									
New and Existing	AV	1, 4, 7	EM, Planning	Low	General Fund	On-Going	N	Property Protection, Prevention	Tribal
27. Maintain oil spill response capabilities with Samish DNR staff and vessels.									
New and Existing	Hazmat	1,4, 5, 8	DNR, EM	Low	General Fund	On-Going	N	Emergency Services, Property Protection, Natural Resources	Tribal, Local, County
28. Install resilient emergency power supplies and microgrids at key Tribal facilities and locations.									
New and Existing	IF	1,2,4	EM, Planning	High	BIA	Long Term	N	Emergency Services, Structural Projects, Recovery	Tribal
29. Ensure Firewise/Defensible Space practices are employed in future Samish development projects.									
New	WF	1,4,7	EM, Planning	Medium	CCA	On-Going	N	Structural Projects, Natural Resources	Tribal
30. Analyze need for and develop fuel modification projects to reduce fire hazard risks, such as clearing out dead vegetation in open spaces, right-of-way embankments, and other areas that could become fuel for fires.									
New and Existing	WF	1,4,7	DNR, EM, Planning	Medium	TBD	On-Going	N	Emergency Services, Property Protection, Natural Resources	Tribal, Local, County

Table 12.1 Hazard Mitigation Action Plan									
Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency (listed first) and others potentially involved	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?	Initiative Type: Emergency Services, Property Protection, Prevention, Recovery, Structural Projects, Public Info., Natural Resources	Who or What Benefits from Action? Facility, Tribal, Local, County, Region
31. Coordinate with surrounding jurisdictions, local health care providers, schools, the Washington Department of Public health, and the Centers for Disease Control to inform community members about current public health trends or issues, free and low-cost healthcare options, treatments, and where to find local healthcare facilities.									
New and Existing	D	1, 4, 7, 8	Health	Low	PHEP	On-Going	N	Emergency Services, Public Info	Tribal
32. Update response plans to address emerging infectious disease outbreaks.									
Existing	D	1, 2, 5, 8	Health	Low	PHEP	On-Going	N	Emergency Services, Recovery	Tribal
33. Coordinate with County/State agencies regarding critical bridge infrastructure on and off Fidalgo Island.									
Existing	IF	1, 4, 8	EM, Planning	Low	CCA	On-Going	N	Emergency Services	Tribal, Local, County
34. Evaluate Dam Failure risk to Samish Properties and Citizens									
New and Existing	DF	1, 3, 4, 7	EM, Planning, NR	Low	CCA	On-Going	N	Emergency Services, Natural Resources	Tribal
35. Evaluate and develop mitigation strategies relevant to sea-level rise and coastal erosion on Tribal properties.									
New and Existing	CZ, FL, T	1,2, 3, 7	EM, Planning, NR	Low	BIA CCA	On-Going	N	Emergency Services, Property Protection, Structural Projects, Natural Resources	Tribal
36. Coordinate with local agencies and participate in Earthquake/Tsunami awareness activities.									
New and Existing	EQ, T	1,8	EM	Low	CCA	On-Going	N	Public Info	Tribal, Local, County

Prioritization of Mitigation Initiatives

Once the mitigation initiatives items were identified, the Planning Team followed the same process outlined within Volume 1 to prioritize their initiatives. **Table 12.1.1** identifies each initiative based on priority, where the highest priority initiative is listed at the top.

Table 12.1.1
Mitigation Strategy and Priority Schedule

Priority No.	# of Objectives met	Hazards Mitigated[1]	Lead Agency	Can project be funded under existing programs/ budgets?	Estimated Cost	Is Project Grant Eligible? Yes/No	Timeframe	Included in Previous Plan? Yes/No	Who or What Benefits
[1]Hazards: Coastal Hazard-CZ/ Drought-D/ Earthquake-EQ/ Flooding-Fl/ Landslide-LS/ Severe Weather-SW / Volcano-Vol/ Wildfire-WF/ Tsunami-T/ Acts of Violence-AV/ Hazardous Sites or Materials Spill-HazMat/ Disease-D/ Dam Failure-DF/ Infrastructure Failure-IF									
1. Retrofit or move tribal facilities to better withstand impact from a natural hazard event. This includes structures within the floodplain, or areas impacted by flood events. This would include land acquisition and removal of structures to allow for open space and the return to natural environments.									
1	1,3,4,6,7	CZ, EQ,FL,LS, WF, T	Planning Facilities	Partial	High	Yes	Long Term	Yes	Tribal
2. Working with county and state agencies as appropriate, seek flood reduction and steep slope stability project funding, reconstruction, or relocation funding for roads with histories of flooding and instability to ensure access to Tribal Facilities.									
2	1,3,4,6,7,8	EQ, F, LS, SW	Planning NR Local County	No	Medium	Yes	Long Term	Yes	Tribal, Local, County, Region
3. Seek grant funding for acquisition of properties within high-hazard areas to help restore the natural habitat of the area/watershed.									
3	1,3,4,7	CZ, LS, FL, WF, T	NR	Partial	High	Yes	Long Term	Yes	Facility, Tribal
5. Continue to design and build facilities to meet or exceed seismic (or load) standards, including redundant essential equipment. Apply current IBC standards to all renovation or replacement of existing facilities, structures, and/or equipment.									
4	1,3,6	CZ, EQ, LS, WF, T	Planning Facilities	Yes	High	Yes	Long Term	Yes	Tribal
6. Implement various activities that support mitigation efforts to reduce the negative influence of natural hazards impacting the Tribal Planning Area.									
5	1,3,4,6,7	All	NR	Partial	High	Yes	Ongoing	Yes	All
7. Working with the Samish Emergency Planning and Management Team, utilize data gathered during risk assessment to identify capital facilities that, when modified, increase the resilience of the Samish structures and conveyances to damage, or that allow a more expedited process for recovery from the impact of disaster incidents.									
6	1,2,3,6	CZ, EQ,FL,LS,SW,Vol,WF,T, DF	EM Facilities	Yes	High	Yes	Long Term	Yes	Tribal
8. Consider projects enhancing resistance of structures to impact from hazards of concern, such as seismic bracing of equipment, piping and fixtures, removal or retrofit of high hazard beams; increased load capacity from wind, snow, and volcanic ash; or access road reinforcement.									
7	1,2,6,7	CZ,EQ,FL,LS, SW,Vol,WF,T ,DF	Facilities Planning	Yes	Medium	Yes	Long Term	Yes	Tribal
15. Conduct public outreach on risk-reduction techniques for all hazards through public education campaigns which increase awareness of healthy behaviors, including during times when shelters are established.									
8	1,2,8	All	Tribal	Yes	Low	Yes	Short Term	Yes	All

			Health, County HHS						
17. Use the Samish Hazard Mitigation Plan for comprehensive land use planning or development of regulations.									
9	1,3,4,6,7	CZ,D,EQ,FL, LS,SW,Vol,W F,T	Tribal Council Planning	Yes	Low	No	Long Term	Yes	Tribal
18. Utilizing data from this HMP, update the Emergency Operations Plan (EOP) to include all hazards of concern and to establish management and operations during emergency or disaster situations.									
10	All	All	EM, NR, Planning	Partial	Medium	Yes	Short Term	Yes	Tribal

Table 12.1.1 Mitigation Strategy and Priority Schedule									
Priority No.	**# of Objectives met**	**Hazards Mitigated[1]**	**Lead Agency**	**Can project be funded under existing programs/ budgets?**	**Estimated Cost**	**Is Project Grant Eligible? Yes/No**	**Timeframe**	**Included in Previous Plan? Yes/No**	**Who or What Benefits**
[1]Hazards: Coastal Hazard-CZ/ Drought-D/ Earthquake-EQ/ Flooding-Fl/ Landslide-LS/ Severe Weather-SW / Volcano-Vol/ Wildfire-WF/ Tsunami-T/ Acts of Violence-AV/ Hazardous Sites or Materials Spill-HazMat/ Disease-D/ Dam Failure-DF/ Infrastructure Failure-IF									
19. Develop a post-disaster action plan for all hazards of concern that addresses debris management, cultural/historical data gathering, substantial damage assessment, and grant management.									
11	All	All	EM Planning Cultural Heritage	Yes	Low	No	Long Term	Yes	Tribal
20. Create codes and ordinances which increase resiliency from the hazards of concern, such as land use development; landscaping ordinance for fuel reduction; building codes for minimum seismic stability; flood damage prevention ordinance to cumulatively track substantial improvements and damage, etc.									
12	1,3,4,6,7	CZ,EQ,FL,LS, Vol,WF,T	Tribal Council Planning	Yes	Low	No	Long Term	Yes	Tribal, Local, County
21. Acquire and install backup power (e.g. solar, batteries, generators) to maintain critical infrastructure, including for water systems/wells.									
13	1,2,5,6	IF	Facilities	No	High	Yes	Short Term	Yes	Facilities, Tribal
22. Construct or renovate shelter facility for use during disaster incident. Facility can also be used as a warming, cooling, or feeding shelter during extreme weather events. Shelter should be constructed large enough to enable sheltering of citizens visiting the Samish Planning Area, including guests who may be stranded as a result of sudden-onset incident (e.g., earthquake).									
14	1,2,5	All	EM	No	High	Yes	Ongoing	Yes	Tribal, Local, County, Region
23. Construct a small retaining wall around the Fidalgo Bay Resort (FBR) Convention Center to help reduce floodwaters entering the structure to ensure that this structure can serve as a shelter facility for Samish citizens and guests to the Resort if needed.									
15	1,4,7	CZ,FL,T,	EM Facilities	No	High	Yes	Long Term	Yes	Tribal, Local, County, Region
24. Construct two new structures outside of the hazard zone. The first is for a new archive building to maintain historic records of the Samish Nation. The second is for an IT building to help ensure continuity of government should the existing IT structure be impacted due to its age.									
16	1,3,5,6	CZ,EQ,FL,LS, SW,Vol,WF,T ,DF	EM Facilities	No	High	Yes	Long Term	Yes	Tribal, Local, County, Region
27. Maintain oil spill response capabilities with Samish DNR staff and vessels.									
17	1,4,5,8	HazMat	DNR EM	Partial	Medium	Yes	Ongoing	No	Tribal, Local, County
28. Install resilient emergency power supplies and microgrids at key Tribal facilities and locations.									
18	1,2,4	IF	EM Planning	Yes	High	Yes	Long Term	No	Tribal
35. Evaluate and develop mitigation strategies relevant to sea-level rise and coastal erosion on Tribal properties.									
19	1,2,3,7	CZ,FL,T	EM, NR Planning	Yes	Medium	Yes	Ongoing	No	Tribal
36. Coordinate with local agencies and participate in Earthquake/Tsunami awareness activities.									

20	1,8	EQ,T	EM	Yes	Low	Yes	Ongoing	No	Tribal, Local, County
4. Identify facilities such as the convention center which require back-up power (e.g. solar, batteries, generators) to maintain use of structure for long-term incidents.									
21	1,2,4,5	IF	Planning Facilities	Partial	Medium	Yes	Ongoing	Yes	Facility, Tribal, Local
9. Implement a recovery system to ensure maximum FEMA reimbursement for disaster response, repair, mitigation and recovery, which will capture and track damages sustained, emergency activities, associated expenses (mileage, supplies, expendables, outside vendors, etc.), employee time, and dedicated resources.									
22	All	All	EM Finance	Yes	Medium	M	Ongoing	Yes	Tribal
12. Work with transit organizations to develop an exercise related to evacuation of residents.									
23	1,2,8	All	Tribal Transport	Yes	Low	No	Short Term	Yes	Tribal, Local, County

Table 12.1.1
Mitigation Strategy and Priority Schedule

Priority No.	# of Objectives met	Hazards Mitigated[1]	Lead Agency	Can project be funded under existing programs/ budgets?	Estimated Cost	Is Project Grant Eligible? Yes/No	Timeframe	Included in Previous Plan? Yes/No	Who or What Benefits
[1]Hazards: Coastal Hazard-CZ/ Drought-D/ Earthquake-EQ/ Flooding-Fl/ Landslide-LS/ Severe Weather-SW / Volcano-Vol/ Wildfire-WF/ Tsunami-T/ Acts of Violence-AV/ Hazardous Sites or Materials Spill-HazMat/ Disease-D/ Dam Failure-DF/ Infrastructure Failure-IF									
13. Leverage resources and partnerships to train and exercise together to ensure continuity during real world events.									
24	1,5,8	All	EM Planning	Yes	Low	Yes	Ongoing	Yes	All
14. Develop (or update) plans to ensure response and recovery efforts. This includes working with the county and local municipalities to look at communications and interoperability issues.									
25	1,8	All	EM Planning	Partial	Medium		Ongoing	Yes	Tribal, Local, County
25. Schedule CISA "Security Assessment at First Entry" (SAFE) site evaluations for all Samish facilities.									
26	1,4,7,8	AV	EM Planning	NA	Low	NA	Ongoing	No	Tribal
26. Analyze current building infrastructure to evaluate security/safety and develop action plan to address identified vulnerabilities.									
27	1,4,7	AV	EM Planning	Yes	Low	Yes	Ongoing	No	Tribal
29. Ensure Firewise/Defensible Space practices are employed in future Samish development projects.									
28	1,4,7	WF	EM Planning	No	Medium	Yes	Ongoing	No	Tribal
30. Analyze need for and develop fuel modification projects to reduce fire hazard risks, such as clearing out dead vegetation in open spaces, right-of-way embankments, and other areas that could become fuel for fires.									
29	1,4,7	WF	DNR,EM Planning	No	High	Yes	Ongoing	No	Tribal, Local, County
10. Utilize data from the current risk assessment to update GIS data.									

30	1,4	All	GIS/NR	Yes	Low	No	Ongoing	Yes	Tribal
11. Identify and train staff, youth, and volunteers that will be utilized for emergency management efforts. Training to be considered includes ICS classes for NIMS compliance, ATC 20/45, Disaster Site Worker Training, Emergency Response Training, Hazmat Response (basic), and Damage Assessment.									
31	1,5,8	All	EM,HR Facilities	Yes	Low	No	Ongoing	Yes	Tribal
16. Develop programs and public outreach efforts which support community participation in incentive-based programs, such as FireWise, StormReady Programs, and potentially the NFIP (if Samish chooses to enroll).									
32	1,4,7,8	All	EM Planning	Yes	Low	No	Short Term	Yes	Tribal, Local, County
31. Coordinate with surrounding jurisdictions, local health care providers, schools, the Washington Department of Public health, and the Centers for Disease Control to inform community members about current public health trends or issues, free and low-cost healthcare options, treatments, and where to find local healthcare facilities.									
33	1,4,8	D	Health	Yes	Low	Yes	Ongoing	No	Tribal
32. Update response plans to address emerging infectious disease outbreaks.									
34	1,2,5,8	D	Health	Yes	Low	Yes	Ongoing	No	Tribal
33. Coordinate with County/State agencies regarding critical bridge infrastructure on and off Fidalgo Island.									
35	1,4,8	IF	EM Planning	Yes	Low	Yes	Ongoing	No	Tribal, Local, County
34. Evaluate Dam Failure risk to Samish Properties and Citizens									
36	1,3,4,7	DF	EM,NR Planning	Yes	Low	Yes	Ongoing	No	Tribal

Status of Previous Plan Initiatives

Table 13.1 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 943.1
Current Status of Previous Hazard Mitigation Action Plan

Mitigation Strategy	Project Status	Completed	Continual/ On-Going Nature	Removed/ No Longer Relevant/	Carried Over
1. Retrofit or move tribal facilities to better withstand impact from a natural hazard event. This includes structures within the floodplain, or areas impacted by flood events. This would include land acquisition and removal of structures to allow for open space and the return to natural environments.	Funding has been secured to construct a managed retreat plan for vulnerable Tribal properties	☐	☒	☐	☒
2. Working with county and state agencies as appropriate, seek flood reduction and steep slope stability project funding, reconstruction, or relocation funding for roads with histories of flooding and instability to ensure access to Tribal Facilities.	Seeking grant funding to stabilize/improve alternate transportation routes from Fidalgo Island.	☐	☐	☐	☒
3. Seek grant funding for acquisition of properties within high-hazard areas to help restore the natural habitat of the area/watershed.	No applicable funding opportunities have arisen.	☐	☐	☐	☒
4. Identify facilities such as the convention center which require back-up power (e.g. solar, batteries, generators) to maintain use of structure for long-term incidents.	Currently solar has been installed on the Samish Admin building, Natural Resource Building, and new Early Head Start Building, Additional solar installations currently underway at Samish Elder's Housing Community, Pre-School, and Planning Building. All projects include 48-hour battery storage.	☐	☒	☐	☐

5. Continue to design and build facilities to meet or exceed seismic (or load) standards, including redundant essential equipment. Apply current IBC standards to all renovation or replacement of existing facilities, structures, and/or equipment.	Recent Elder's Housing and Head Start Building were built to this standard.	☐	☒	☐	☐

Table 13.1
Current Status of Previous Hazard Mitigation Action Plan

Mitigation Strategy	Project Status	Completed	Continual/On-Going Nature	Removed/ No Longer Relevant/ No Action	Carried Over
6. Implement various activities that support mitigation efforts to reduce the negative influence of natural hazards impacting the Tribal Planning Area.	Updates underway to key documents/plans such as the Hazard Mitigation Plan and the Emergency Operations Plan.	☐	☒	☐	☐
7. Working with the Samish Emergency Planning and Management Team, utilize data gathered during risk assessment to identify capital facilities that, when modified, increase the resilience of the Samish structures and conveyances to damage, or that allow a more expedited process for recovery from the impact of disaster incidents.		☐	☒	☐	☐
8. Consider projects enhancing resistance of structures to impact from hazards of concern, such as seismic bracing of equipment, piping and fixtures, removal or retrofit of high hazard beams; increased load capacity from wind, snow, and volcanic ash; or access road reinforcement. influence of natural hazards impacting the Tribal Planning Area.		☐	☐	☐	☒
9. Implement a recovery system to ensure maximum FEMA reimbursement for disaster response, repair, mitigation and recovery, which will capture and track damages sustained, emergency activities, associated expenses (mileage, supplies, expendables, outside vendors, etc.), employee time, and dedicated resources.		☐	☐	☐	☒
10. Utilize data from the current risk assessment to update GIS data.	SLR analysis using latest NOAA-generated data.	☐	☒	☐	☐
11. Identify and train staff, youth, and volunteers that will be utilized for emergency management efforts. Training to be considered includes ICS	Samish DNR Crew, Emergency Management	☐	☒	☐	☐

classes for NIMS compliance, ATC 20/45, Disaster Site Worker Training, Emergency Response Training, Hazmat Response (basic), and Damage Assessment.	Specialist, and Conservation Law Enforcement Officer hold current Hazwoper certifications. Many staff with ICS 100/700 certs.				

Table 195.1
Current Status of Previous Hazard Mitigation Action Plan

Mitigation Strategy	Project Status	Completed	Continual/On-Going Nature	Removed/ No Longer Relevant/ No Action	Carried Over
12. Work with transit organizations to develop an exercise related to evacuation of residents.		☐	☐	☐	☒
13. Leverage resources and partnerships to train and exercise together to ensure continuity during real world events.	Samish EM Specialist participates in multiple inter-jurisdictional EM groups/consortia	☐	☒	☐	☐
14. Develop (or update) plans to ensure response and recovery efforts. This includes working with the county and local municipalities to look at communications and interoperability issues.	Samish now participates in the weekly Fidalgo Island Emergency Operations Net exercise.	☒	☒	☐	☐
15. Conduct public outreach on risk-reduction techniques for all hazards through public education campaigns which increase awareness of healthy behaviors, including during times when shelters are established.	Much public outreach and education during/following Covid pandemic.	☐	☒	☐	☐
16. Develop programs and public outreach efforts which supports community participation in incentive-based programs, such as FireWise, StormReady Programs, and potentially the NFIP (if Samish chooses to enroll).		☐	☐	☐	☒
17. Use the Samish Hazard Mitigation Plan for comprehensive land use planning or development of regulations.		☐	☐	☐	☒
18. Utilizing data from this HMP, update the Emergency Operations Plan (EOP) to include all hazards of concern and to establish management and operations during emergency or disaster situations.	EOP Update underway for 2025.	☐	☒	☐	☐

19. Develop a post-disaster action plan for all hazards of concern that addresses debris management, cultural/historical data gathering, substantial damage assessment, and grant management.		☐	☐	☐	☒
20. Create codes and ordinances which increase resiliency from the hazards of concern, such as land use development; landscaping ordinance for fuel reduction; building codes for minimum seismic stability; flood damage prevention ordinance to cumulatively track substantial improvements and damage, etc.		☐	☐	☐	☒

Table 13.1
Current Status of Previous Hazard Mitigation Action Plan

Mitigation Strategy	Project Status	Completed	Continual/On-Going Nature	Removed/ No Longer Relevant/ No Action	Carried Over
21. Acquire and install backup power (e.g. solar, batteries, generators) to maintain critical infrastructure, including for water systems/wells.	See Solar projects (Strategy 4) above.	☐	☒	☐	☐
22. Construct or renovate shelter facility for use during disaster incident. Facility can also be used as a warming, cooling, or feeding shelter during extreme weather events. Shelter should be constructed large enough to enable sheltering of citizens visiting the Samish Planning Area, including guests who may be stranded as a result of sudden-onset incident (e.g., earthquake).		☐	☐	☐	☒
23. Construct a small retaining wall around the Fidalgo Bay Resort (FBR) Convention Center to help reduce floodwaters entering the structure to ensure that this structure can serve as a shelter facility for Samish citizens and guests to the Resort if needed.		☒	☐	☐	☐
24. Construct two new structures outside of the hazard zone. The first is for a new archive building to maintain historic records of the Samish Nation. The second is for an IT building to help ensure continuity of government should the existing IT structure be impacted due to its age.	Archives relocated to 2nd floor Admin Building. IT migrated to cloud infrastructure – building no longer needed.	☒	☐	☐	☐

Plan Maintenance

The Samish Indian Nation continues to seek feedback from members of the public, even after the plan has been approved.

The criteria below will be utilized to evaluate the plan:

- Continually evaluate plan for effectiveness by utilizing the annual progress report. This should be conducted once a year or after a disaster by the Skagit County Department of Emergency Management (DEM) and/or lead annex partner.
- Utilize an annual progress report to track implementation and effectiveness of mitigation initiatives and their actions. This should be conducted once a year by Samish Indian Nation personnel.
- Conduct regular check-ins with stakeholders and partner agencies by DEM personnel.
- Review and revise the plan at least once every five years by DEM personnel and Samish Indian Nation.

County staff at the Department of Emergency Management will be the primary agency responsible for maintaining the plan and monitoring mitigation initiatives. Staff will utilize the report provided in **Volume 3 Appendix C** to track progress. The report will also include sections to document any changes that have been made to initiatives, outreach efforts, hazard mapping, Countywide development changes, successful implementation instances, and other changes relevant to the HMP.

Plan Update

The Samish Indian Nation has not experienced changes in development in hazard-prone areas.

Plan Adoption

The Samish Indian Nation provides proof of documentation that the Council has formally adopted the plan under Resolution XX pursuant to 44 CFR § 201.6(c)(5).

Annex 10 Swinomish Indian Tribal Community

Introduction

This Annex details the hazard mitigation planning elements specific to the Swinomish Indian Tribal Community (SITC Swinomish, or Tribe), a participating jurisdiction to the Skagit County Hazard Mitigation Plan Update. This Annex is not intended to be a standalone document but rather appends to and supplements the information contained in the base plan document. As such, all sections of the base plan, including the planning process and other procedural requirements, apply to and were met by the Swinomish Indian Tribal Community. For planning purposes, this Annex provides additional information specific to the jurisdiction, with a focus on providing greater details on the risk assessment and mitigation strategy for this community only. This document serves as an update to the previously completed plan. All relevant data has been carried over and updated with new information as appropriate and as identified within the planning process discussed in Volume 1.

Assurances

Full implementation of the recommendations of this plan will require time and resources. This plan reflects an adaptive management approach in that specific recommendations and plan review protocols are provided to evaluate changes in vulnerability and action plan prioritization after the plan is adopted. The true measure of the plan's success will be its ability to adapt to the ever-changing climate of hazard mitigation. Funding resources are always evolving, as are programmatic changes based on new mandates. The Swinomish Tribe has a long-standing tradition of proactive response to issues that may impact its members. The Tribe is forward-thinking and strives whenever possible to improve the lives of its members, and the residents living on tribal lands. This tradition is further reflected in the development of this plan, as it is not an easy task to accomplish.

The Tribal Emergency Management Council (TEMC) will assume responsibility for adopting the recommendations of this plan and committing tribal resources towards its implementation. The frameworks established by this plan will help identify a strategy that maximizes the potential for implementation based on available and potential resources. It commits the Tribe to pursue initiatives when the benefits of a project exceed its costs. Most importantly, the Tribe developed this plan with community input. These measures will set the stage for successful implementation of the recommendations of this plan.

Pursuant to 44 CFR § 201.7(c)(6), the Swinomish Indian Tribal Community will continue to comply with all applicable federal statutes and regulations in effect with respect to the periods for which the Tribe receives grant funding and will amend this plan whenever necessary to reflect changes in Tribal or Federal laws and Statutes. It is understood that the Tribe will submit those amendments for review and approval in coordination with FEMA Region VI.

Plan Implementation and Maintenance

The effectiveness of the hazard mitigation plan depends on its implementation and incorporation of its action items into existing local plans, policies, and programs. Together, the action items in the Plan provide a framework for activities that the Swinomish Indian Tribal Community can implement over the next 5 years. The Planning Team has established goals and objectives and has prioritized mitigation actions that will be implemented through existing plans, policies, and programs. Implementation of the long-term and short-term objectives /goals will be dependent on securing funding for each of the strategies identified in the plan. The Tribe will continue to actively pursue a variety of funding opportunities identified in the various plans and prioritized by various departments and programs under the direction of the Tribal Senate.

This Plan is also written with the intent to allow the Tribe to seek Presidential Declaration separate from the County, should it elect to do so. As such, requirements to achieve this goal are also identified within this planning effort

Public Defined

For these planning purposes only, because the SITC was part of the Skagit County multi-jurisdictional plan, the SITC elected to define “public” as including all planning partners, the surrounding local community, local tribes, Washington State and Federal Agencies, and relevant non-governmental organizations; however, discussion concerning culturally significant locations and structures remain confidential, occurring only within the identified internal planning team, comprised of Tribal members, Tribal government, and Tribal employees. The Tribal Senate maintains final authority on any and all decision-making related to this plan, its contents, and application as it relates to the SITC.

Hazard Mitigation Planning Team Point/s of Contact

The Swinomish Indian Tribal Community followed the planning process detailed in Section 2 of the Base Plan. In addition to providing representation on the County’s Planning Team, the Swinomish Indian Tribal Community also formulated its own internal planning team to support the broader planning process. Individuals assisting in this Annex development are identified in **Table 1** below, along with a brief description of how they participated.

Table 96. Local Planning Team Members

Name	Position, Title	Planning Tasks
Tim Ballew	Planning and Community Development Director	Present to Tribal Committees and Council for adoption

		Plan and/or attend planning meetings
Debra Bray	Permitting Manager, Transportation Manager	Coordinate functions throughout jurisdiction
		Assist with developing mitigation strategies
William Bethel	Associate Planner	Review, comment, and update
Ben Breshears	Associate Planner	Review, comment, and update

Public Engagement

The Swinomish Indian Tribal Community engaged the public through the following means:

- Virtual and in-person surveys to Reservation residents for their input on leadership approved HMP initiatives.
- The Tribal Newsletter "qyuuqs News" posting to inform Reservation Residents on the new HMP initiatives, completed action items, and future goals.

Suggestions and responses from the engagement activities were taken into consideration in the preparation of this Plan.

Review of Existing Documents

- **In 2009 Swinomish released its first report** describing the broad array of project impacts expected to bring significant changes to our ancestral homeland. The following year, in 2010 the Tribe prepared its first Swinomish Climate Change Initiative Climate Adaption Action Plan" CAAP", a document that has helped to lay a course for our community in meeting the daunting series of challenges in the upcoming years.
- **Climate Vulnerability Assessment for habitat and associated fisheries:** In collaboration with the Skagit River System Cooperative, the Tribe published a report analyzing the effects of climate change on habitats for tribally important fish and shellfish.
- **2015 study on Indigenous Health Indicators (IHI):** The Tribe published findings in the journal *Coastal Management* that linked climate change's effect on shellfish habitat to negative impacts on Indigenous community health and cultural identity.
- **2023 10+ Year Status Update to the CAAP:** The Tribe issued an update that evaluated the status of adaptation actions proposed in the 2010 Climate Adaption Action Plan. It also

included community workshop results and identified new strategies to help the tribe continue adapting.

- **Shellfish-specific Adaptation Report:** A report titled *Climate Change Adaptation Strategies for Shellfisheries* was developed to identify actions to reduce climate change and ocean acidification impacts on shellfish resources.
- **Coastal habitat modeling:** Swinomish developed and continues to use habitat modeling to examine how sea-level rise might impact clam habitats across the western shore of the Reservation.

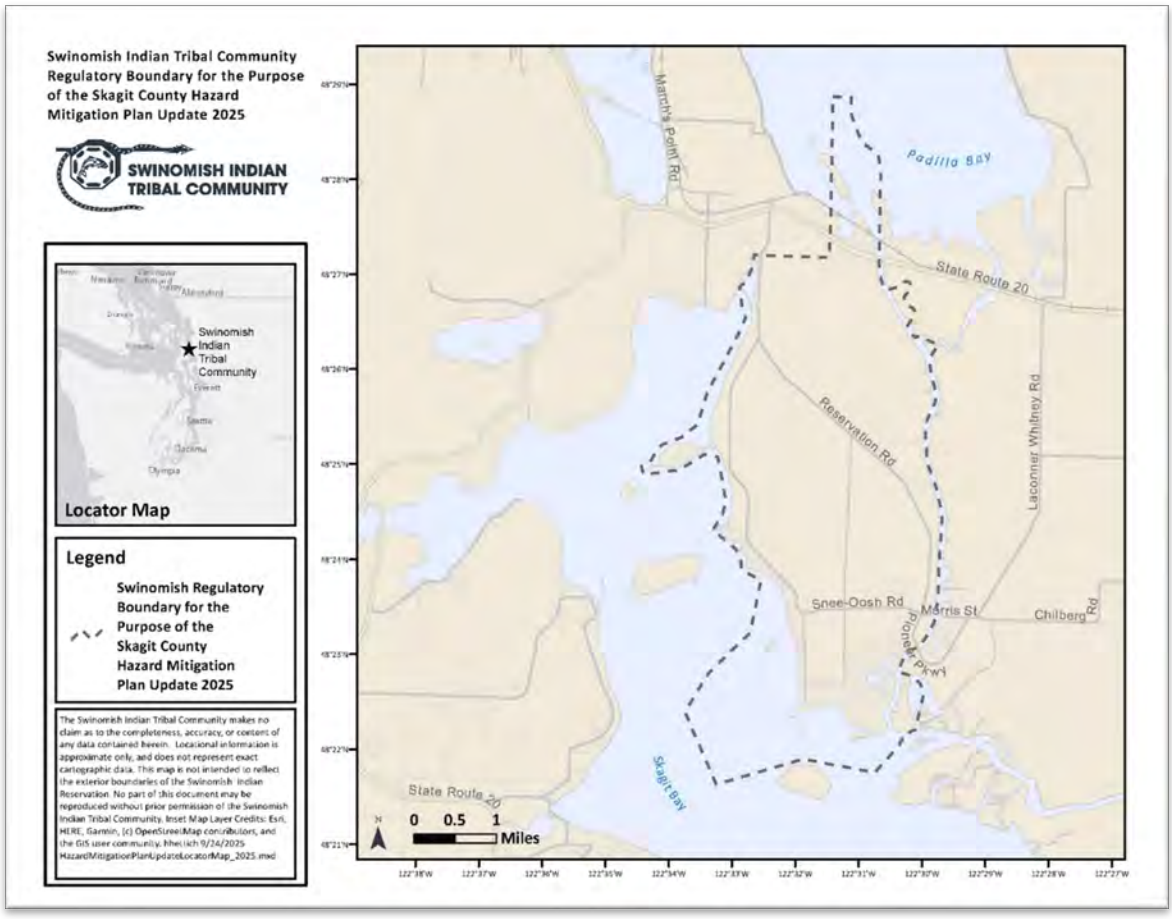
Tribal Profile

The following is a summary of key information about Swinomish and its history:

Date of Federal Recognition— Point Elliott Treaty of 1855-January 22nd, 1855

Current Population— 3,320 based on the 2020 census

Population Growth— Swinomish anticipates a 5% population growth, compared to Skagit County's 18%, due to the remote and rural nature of the reservation.



Brief History, Location, and Description— The Tribe is an adjudicated successor-in-interest to certain tribes and bands of Indians that treated with the United States in the Treaty of Point Elliott. Pursuant to the Treaty, the Tribe ceded its interest in vast areas of land in Western Washington in exchange for certain rights guaranteed by the United States in perpetuity. Among other things, these include the right to exclusively use and occupy the Swinomish Indian Reservation. The Swinomish Reservation is home to a community of Coast Salish peoples that descends from tribes and bands that lived in the Skagit and Samish River Valley, the coastal areas surrounding Skagit, Padilla, and Fidalgo bays, Saratoga Passage, and numerous islands including Fidalgo, Camano, Whidbey, and the San Juan Islands. For thousands of years, these Coast Salish tribes maintained a culture centered around abundant saltwater resources that included salmon, shellfish, and marine mammals, as well as upland resources such as cedar, camas, berries, and wild game. They lived in large villages during the winter and in summer encampments that followed the seasonal cycle of resources gathering; from the mouths and banks of rivers and streams where salmon were abundant and coastal shorelines where shellfish and herring and other forage fish could be found, to the fin fish and sea mammals inhabited marine waters and inland forests where wild game and berries were harvested. In October 2007 the Swinomish Senate issued a Proclamation declaring action to study the impacts of climate change on the lands, resources, and community of the Swinomish Reservation. The Proclamation acknowledged the potential for issues and impacts in the vicinity of the Swinomish Reservation and directs tribal departments and staff to undertake efforts and studies for promoting long-term proactive action. The Tribe continues to work with regional and federal partners expanding their work in combating the impacts of increased severe weather-related impacts to the region.

Governing Body Format— The Tribe is federally recognized and operates under Constitution and By-laws adopted in 1936 pursuant to the Indian Reorganization Act of 1934, and as most recently amended and ratified by the Tribe on May 23, 2017, and approved by the Secretary of Interior on July 7, 2017. The Swinomish Indian Tribal Community, led by the Tribal Chairman, is governed by an eleven-member senate that is elected by members of the Swinomish Indian Tribal Community. Senators serve five-year, staggered terms.

The mission of the Senate is to protect and enhance the quality of life for the Swinomish members by providing a combination of economic opportunity and safety net of social services; To protect the culture and traditional practices of the Swinomish people; To respect and protect the spirit of tribal ancestors and generations to come; To exercise the powers of self- government secured by the Treaty of Point Elliott; To protect and preserve the Swinomish Reservation homeland; to protect treaty rights both on and off the Swinomish Reservation; And to provide a safe and healthy environment for everyone living on the Swinomish Reservation and participating in the Swinomish Activities.

Development Trends — The Tribe has a long history of co-land use management, including on designated fee tracts of land within the Reservation. Within these zones, both Skagit and Swinomish land use codes apply, compelling cross jurisdictional cooperation and collaboration. Swinomish continues to buy lands back that were taken out of trust and converted to fee simple land status on the Reservation under federal allotment policies before 1934. The goal is to increase housing opportunities on the Reservation for the tribal members. SITC declared a housing crisis on the Reservation in 2021, noting that the Swinomish Reservation has economic vitality, health, and social qualities of life for the tribal members.

Economy — The Swinomish Indian Tribal Community operates a diversified economy, blending traditional enterprises like fisheries and shellfish with modern ventures such as a casino, a lodge, and retail markets. As a major employer in Skagit County, the Tribe employs hundreds of people in both its government and commercial enterprises. The Swinomish Indian Tribal Community's economic base consists of traditional fishing and shellfish harvesting, as well as the Swinomish Casino & Lodge, three fueling stations(C-Stores), Salish coast cannabis, Swinomish Shellfish Company, Swinomish RV park, Thousand Trails RV Resorts & Campgrounds, Latitude Marine and Swinomish Golf links. The Tribe is one of the five largest employers in Skagit County.

Cultural Resources and History — The Tribal Historic Preservation (THPO) department is responsible for protecting and preserving the cultural heritage, historical sites, and archaeological resources of a federally recognized Native American tribe. The department and its officer (THPO Officer) operate programs that have assumed the functions of State Historic Preservation Officers (SHPOs) on tribal lands under the National Historic Preservation Act (NHPA).

Climate – During the last decade, the Swinomish Indian Tribal Community has faced several significant hazard events, including frequent flooding, severe storms, heat waves, and potential wildfire threats, all of which have been intensified by climate change. These events have damaged property, threatened culturally significant sites, and harmed fisheries.

The Tribe is particularly vulnerable to the effects of climate change due to its low-lying coastal reservation. Since 2010, the community has seen an increase in events tied to the changing climate, which have prompted the development of a comprehensive climate adaptation plan.

- **Storm surges and flooding:** For the last 8 years we have experienced, and the National Oceanic and Atmospheric Administration (NOAA) has reported, severe storms in the Fidalgo Straits, which affronts the northern portion of our reservation. These storms have caused high tides to rise over expected levels, at times threatening to cut off the Reservation from the mainland. The Tribe has experienced increased coastal flooding and erosion from intense wind and wave action. The Lower Skagit River area, where the reservation is located, has been identified as a high-risk area for sea-level rise.
- **Fisheries impacts:** Fisheries, a core part of Swinomish life and economy, have been hit hard. Ocean acidification and warming air and sea temperatures have altered marine habitats, threatening salmon, shellfish, and other marine species. Severe storms have also destroyed valuable fishing equipment.
- **Heat waves and wildfires:** The Puget Sound area has experienced periods of unusually high summer temperatures, leading to heat-related illnesses and raising the risk of wildfires which has added to poor air quality. The tribe's climate adaptation plan has identified increased wildfire "smoke" as a risk.

Notable weather-related incidents:

- **Late 2016 severe storms:** A series of severe storms in late 2016 caused major damage to fishing equipment and other tribal resources. This came after the U.S. Geological Survey had partnered with the tribe to assess the impact of sea-level rise, confirming the vulnerability of key coastal resources.
- **Ongoing temperature pollution:** Swinomish has also had to contend with long-term ecological hazards. In February 2024, the Tribe requested that the EPA (Environmental Protection Agency) act to address temperature pollution in the Skagit River, which has been harming salmon populations for over two decades. The pollution is primarily caused by agricultural and other development that has removed the natural vegetation that previously shaded the river.

Hazard Event History

Within the Base Plan, the Planning Team identified all hazard events which have occurred within the Swinomish Indian Tribal Community. In the context of the planning region, it was determined that there are no additional hazards unique to Swinomish. **Table 2** lists all past occurrences of hazards within the Reservation. If available, dollar loss data is also included.

Table 97. Previous Hazard Occurrences			
Type of Event	FEMA Disaster # (if available)	Date	Dollar Losses (if available)
Severe Storms, Flooding, Landslides, and Mudslides	4539	1/20/2020	Unknown
Flooding and Mudslides	4635	11/25/2021	$32,011,462
Severe Winter Storms, Snowstorms, Straight-line Winds, Flooding	4650	12/26/2021	$16,094,227
Landslide	N/A	12/19/2017	N/A
Landslide	N/A	September 2019	N/A
Tidal Surge – Ray Paul Beach Area	N/A	2/5/2018	N/A
Multiple Windstorms	N/A	2005-2016	N/A
McGlinn Island Fire	N/A	2016	N/A
Severe Storm Surges	N/A	2016-2024	N/A
Excessive Heat Wave	N/A	2023	N/A

The recorded history of hazard events, as mentioned above, can indicate what the likelihood would be of a hazard occurring in the future. **Table 3** below is the rating for probability of hazards according to the parameters described in Volume 1.

Table 98. Probability of Future Hazards Occurrence		
Hazard	**Impact Factor**	**Impact ID**
Coastal Hazards	High	4
Drought	Unlikely	1
Earthquake	Low	2
Flooding	Medium	3

Landslides	Medium	3
Severe Weather	High	4
Tsunami	Unlikely	1
Volcano	Unlikely	1
Wildfire	Low	2
Acts of Violence	NR	0
Hazardous Material Spill or Release	Medium	3
Disease	NR	0
Bridge/Road Failure	Low	2
Power/Water System Failure	Medium	3
Dam or Dike Failure High Winds	Unlikely	1

Hazard Area Extent and Location

This section describes the type, location, and extent of all hazards that can affect the Swinomish Reservation. These hazards have been fully defined and discussed in Chapter XX (page XX).

Table 99. Geographic Extent

Hazard Type	Impact Factor	Impact ID
Coastal Hazards	Moderate	2
Drought	NR	0
Earthquake	Extensive	4
Flooding	Moderate	2
Landslides	Moderate	2
Severe Weather	Extensive	4
Tsunami	Significant	3
Volcano	Limited	1
Wildfire	Extensive	4
Acts of Violence	NR	0
Hazardous Material Spill or Release	Moderate	2

Disease	Moderate	0
Bridge/Road Failure	Significant	3
Power/Water System Failure	Extensive	4
Dam/Dike Failure	Limited	1

Hazard Risk and Vulnerability Ranking

The Swinomish Planning Team reviewed the hazard list identified within the Base Plan and identified hazards that are most likely to have the highest impact to the Swinomish Indian Tribal Community. **Table 5** presents the ranking of the hazards of concern based on their CPRI score. A qualitative vulnerability ranking was then assigned based on a summary of potential impact determined by: past occurrences, extent, damage, casualties, and continuity of government. The assessment is categorized into the following classifications:

- **Extremely Low** – No or very limited impact. The occurrence and potential cost of damage to life and property is very minimal-to-nonexistent. No impact to government functions with no disruption to essential services.
- **Low (Negligible)** – Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal. Government functions are at 90% with limited disruption to essential services.
- **Medium (Limited)** – Moderate potential impact. This ranking carries a moderate threat level to the general population and /or built environment. The potential damage is more isolated, and less costly than a more widespread disaster. Government functions are at 80% with limited impact to essential services.
- **High (Critical)** – Widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread. Hazards in this category may have occurred in the past. Government functions are at ~50% operations with limited delivery of essential services.
- **Extremely High (Catastrophic)** – Very widespread with catastrophic impact. Government functions are significantly impacted for more than one month.

Table 100. Vulnerability Ranking by Hazard Type

Hazard Rank	Hazard Type	CPRI Score	Vulnerability Rank
1	Severe Weather	3.20	3
2	Power/Water System Failure	3.10	6
3	Earthquake	3.05	1
4	Coastal Hazard	2.85	7
5	Landslide	2.60	8

6	Bridge/Road Failure	2.55	2
7	Wildfire	2.55	4
8	Flooding	2.55	5
9	Hazardous Material Spill or Release	2.45	11
10	Disease	1.45	10
11	Tsunami	1.40	12
12	Dam/Dike Failure	1.00	9
13	Acts of Violence	0.80	13
14	Drought	0.65	14
15			
16			

The Swinomish Indian Tribal Community ranks its hazard risk using a Calculated Priority Risk Index (CPRI) rating to quantify and summarize risk and vulnerability. CPRI is calculated using comprehensive assessments of hazard probability, magnitude/severity, geographic extent and location, warning time, and duration. In addition to public and privately available studies and sources, the tribe's ranking process uniquely incorporates Indigenous knowledge, cultural values, and traditional food sources into our risk evaluations.

In addition to the CPRI rated hazards, the Swinomish Indian Tribal Community has identified several specific vulnerabilities:

- **Sea level rise and storm surge:** These pose a significant threat to low-lying areas, increasing the risk of inundation and potentially affecting 15% of tribal land, including important economic and agricultural areas, shellfish beds, and fishing docks.
- **Climate change impacts:** Rising sea and air temperatures, altered precipitation patterns, and ocean acidification threaten the habitats of key marine species like shellfish and salmon. This has significant consequences for the tribe's food security and traditional practices.
- **Wildfire risk:** Upland areas with forest resources and developed property are at risk of destructive wildfires, a risk projected to increase with climate change.
- **Cultural and community health impacts:** Climate change threatens important cultural sites and traditional food sources. The Tribe uses its Indigenous Health Indicators (IHI) to measure potential impacts on community well-being and to develop adaptation strategies.

National Flood Insurance Information (NFIP)

Swinomish Indian Tribal Community does not participate in NFIP; however, internal floodplain management is conducted through the Planning Department, permitting division, Lands Management department, and Department of Environmental Protection. Building permits for flood-prone areas undergo internal and external review as necessary, with special attention to stormwater drainage. Projects that qualify for stormwater management plans undergo additional review by on-call consultants to ensure compliance with Swinomish's adopted 2019 Stormwater Management Manuel for Western Washington. Additionally, building permits for projects within inundation risk zones are reviewed for structural compliance against Swinomish's adopted 2015 International Building Code. Tools for assessing regulatory requirements are provided through the GIS (Geographic Information System) mapping division of the Lands Management department at Swinomish.

As a brief overview, developing property, all or a portion of which is in a regulated floodplain or inundation risk zone, requires extraordinary consideration provided by multiple internal and external agents. For purposes of development, development includes, but is not limited to: buildings, homes, manufactured and mobile homes, other structures, bridges, culverts, dredging, filling, grading, paving, excavation, docks, etc. Structures may also require floodproofing, per SITC building code ordinances, which requires that residential homes be elevated above the level of the base flood elevation (BFE) and commercial structures have the option to flood proof above the BFE. A licensed engineer must design the flood proofing.

Table 101. National Flood Insurance Compliance	
What department is responsible for floodplain management in your community?	Planning/DEP
Who is your community's floodplain administrator? (department/position)	N/A
Do you have any certified floodplain managers on staff in your community?	No
What is the date of adoption of your flood damage prevention ordinance?	N/A
When was the most recent Community Assistance Visit or Community Assistance Contact?	N/A
To the best of your knowledge, does your community have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are.	N/A
Do your flood hazard maps adequately address the flood risk within your community? (If no, please state why)	No, most recent data is based on 2009 projections

Does your floodplain management staff need any aid or training to support its floodplain management program? If so, what type of assistance/training is needed?	N/A
Does your community take part in the Community Rating System (CRS)? If so, is your community looking to improve its CRS Classification? If not, is your community interested in joining the CRS program?	No
Source: Federal Emergency Management Agency	

10.1 Capability Assessment:

Coordination with other Tribal planning efforts is paramount to the successful implementation of this plan. This section provides information on how planning mechanisms, policies, and programs are integrated into other on-going efforts. It also identifies the jurisdiction's capabilities with respect to preparing and planning for, responding to, recovering from, and mitigating the impacts of hazard events and incidents.

Capabilities include the programs, policies and plans currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. The capabilities are divided into the following sections: National Flood Insurance Information; regulatory capabilities which influence mitigation; administrative and technical mitigation capabilities, including education and outreach, partnerships, and other on-going mitigation efforts; fiscal capabilities which support mitigation, and classifications under various community programs.

10.1.1 Regulatory Capability Assessment:

The Swinomish Indian Tribal Community is governed by the Tribal Senate, which is advised by internal subject-matter committees, with responsibilities assigned to various Tribal departments; and managed by a general manager. The Senate is an 11-member elected body that holds the constitutional power to create departments and appoint managers to direct and oversee specific activities and industries. The Tribal government operates through seven administrative departments and twelve direct service departments with 14 operating divisions. Key departments to hazard mitigation planning include Planning and Community Development, Public Works, Environmental Protection, Fisheries, Social Services, and additional entities such as the Tribal Court, Utility Authority, and Housing Authority. Key regulatory areas include law and justice, natural resources, economics, utilities and land use.

Table 102. Legal and Regulatory Capability				
	Tribal Authority	Other Jurisdictional Authority	State Mandated	Comments
Codes, Ordinances & Requirements				
Building Code Version: International Building Code Year: 2015	Yes			SITC Title 12 Last revised 2020
Zoning Ordinance	Yes			SITC Title 20-03; revised 2021
Subdivision Ordinance	Yes			SITC Title 20-04; revised 2018
Floodplain Ordinance	Yes			SITC Title 19; revised 2021
Stormwater Management	Yes			SITC Title 12-05; revised 2023
Post Disaster Recovery	Yes			Emergency services
Real Estate Disclosure	Yes			Lands Management, Tribal Reality
Growth Management	Yes			Comprehensive Plan
Site Plan Review	Yes			SITC Title 12-01; revised 2020
Public Health and Safety	Yes			SITC Title 10; revised 2018
Coastal Zone Management	Yes			SITC Title 19-04; revised 2021
Climate Change Adaptation	Yes			SITC CAAP 2010; updated 2021
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire, etc.)	Yes			SITC Title 19; revised 2021
Environmental Protection	Yes			SITC Title 19; revised 2021
Planning Documents				
General or Comprehensive Plan *Is the plan equipped to provide linkage to this mitigation plan?*	Yes			 No
Floodplain or Basin Plan	No			
Stormwater Plan	Yes			SWMMWW 2018

Table 102. Legal and Regulatory Capability				
	Tribal Authority	Other Jurisdictional Authority	State Mandated	Comments
Habitat Conservation Plan	No			
Economic Development Plan	Yes			SITC CEDS; revised 2014
Shoreline Management Plan	Yes			SITC SSA Title 19; revised 2021
Community Wildfire Protection Plan	No			
Transportation Plan	Yes			LRTP; Safety Plan; 2022
Response/Recovery Planning				
Comprehensive Emergency Management Plan	Yes			December 2018
Threat and Hazard Identification and Risk Assessment	Yes			2016
Terrorism Plan	No			N/A
Post-Disaster Recovery Plan	No			Some components identified in CEMP
Continuity of Operations Plan	No			N/A
Public Health Plans	Yes			Pandemic/Flu
Boards and Commission				
Planning Commission	Yes			Meets Monthly
Mitigation Planning Committee	Yes			
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems, chipping, etc.)	Yes			
Mutual Aid Agreements / Memorandums of Understanding	Yes			
Other				

10.2.1 Administrative and Technical Capabilities Assessment

The Swinomish Indian Tribal Community maintains strong administrative and technical capacity through its specialized departments, legal authority, and strategic partnerships, which together manage a broad range of government and enterprise functions. The Tribe leverages both internal expertise and external collaboration to govern the Reservation, manage natural resources, and provide comprehensive services to its community. In addition to staples such as environmental science, land management, planning and community development, IT (information Technology), and Legal, SITC also employs specialty departments such as dental, senior services, and childcare to better serve its unique population. To further expand capacity, Swinomish has partnered with multiple entities outside of its immediate jurisdiction such as the Skagit River System Cooperative (SRSC), a tribal consortium dedicated to Skagit Watershed habitat restoration and policy, and Skagit Council of Governments (SCOG), an organization dedicated to intergovernmental collaboration.

Table 103. Administrative and Technical Capability

Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	SITC Planning
Professionals trained in building or infrastructure construction practices (building officials, fire inspectors, etc.)	Yes	SITC Construction and on contract
Engineers specializing in construction practices?	Yes	SITC Construction
Planners or engineers with an understanding of natural hazards	Yes	On contract
Staff with training in benefit/cost analysis	Yes	SITC Planning
Surveyors	No	
Personnel skilled or trained in GIS applications	Yes	SITC Land Management
Personnel skilled or trained in Hazardous use	Yes	SITC First Responders
Scientist familiar with natural hazards in local area	Yes	SITC DEP
Emergency Manager	Yes	Law enforcement

Table 103. Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Floodplain Manager (NFIP compliance)	N/A	
Grant writers	Yes	SITC Accounting and Grants
Warning Systems/Services (Reverse 9-1-1, outdoor warning signs or signals, flood, or fire warning program, etc.?)	Yes	SITC Law Enforcement
Hazard data and information available to public	Yes	SITC Land Management
Maintain Elevation Certificates	No	
Education and Outreach		
Local citizen groups or non-profit organizations focused on emergency preparedness?	No	
Local citizen groups or non-profit organizations focused on environmental protection?	No	
Organization focused on individuals with access and functional needs populations	No	
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	No	
Natural disaster or safety related school programs?	N/A	
Public-private partnership initiatives addressing disaster-related issues?	No	
Multi-seasonal public awareness program?	No	
Other		
On-Going Mitigation Efforts		
Hazardous Vegetation Abatement Program	Yes	SITC DEP
Noxious Weed Eradication Program or other vegetation management	Yes	SITC DEP

Table 103. Administrative and Technical Capability		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Fire Safe Councils	Yes	Shelter Bay Fire Wise council
Chipper program	No	
Defensible space inspections program	No	
Creek, stream, culvert, or storm drain maintenance or cleaning program	Yes	Skagit River System Cooperative
Stream restoration program	Yes	Skagit River System Cooperative
Erosion or sediment control program	Yes	Skagit River System Cooperative
Address signage for property addresses	Yes	SITC Land Management
Other		

10.3.1 Fiscal Capabilities Assessment

Swinomish manages its fiscal capacity through a combination of tribally owned enterprises, taxation, and a strong financial and administrative infrastructure. The Tribe leverages its sovereign status to generate and manage revenue, which is then used to fund government services and support the well-being of the community. Funding sources include but are not limited to tribal taxation, federal and state grants, and tribal enterprise. The assessment of the Swinomish's fiscal capabilities is presented in **Table 9**. These are the financial tools or resources that could potentially be used to help fund mitigation activities.

Table 104. Fiscal Capability	
Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	No
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	Yes
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes

10.4.1 Community Classifications

Swinomish's classifications under various hazard mitigation programs are presented in **Table 10Error! Reference source not found.**. Each of the classifications identified establishes requirements which, when met, are known to increase the resilience of a community.

Table 105. Community Classifications		
	Participating (Yes/No)	Date Enrolled
Community Rating System	Yes	1855
Building Code Effectiveness Grading Schedule	Yes	1989
Storm Ready	No	
Firewise	No	
Tsunami Ready (if applicable)	No	

11.1 Mitigation Goals and Objectives

The Swinomish Indian Tribal community supports the hazard mitigation goals and objectives developed by the Planning Team. The Mitigation Goals were identified after reviewing the results of the risk assessment and are intended to reduce impacts to the people and property within the Swinomish Reservation. Swinomish's mitigation goals are applied uniquely to strengthen the Tribe's values; areas of applied focus include coastal and upland resources and community health and infrastructure. Foundational principles of treaty rights, sovereignty and self-determination, and integration of traditional knowledge overlay all tribal goals and actions. Since the Swinomish Indian Tribal Community has been an active participant in the hazard mitigation planning process over the last 15 years, the integration of the process with ongoing tribal planning efforts and FEMA programs and initiatives has been considered, primarily during the course of updating and adopting new land use codes and ordinances, such as the Swinomish Zoning Ordinance, Subdivision & Binding Site Plan Ordinance, Swinomish Building Code, Shorelines & Sensitive Areas Ordinance, and Land Clearing Ordinance to address future development in hazard areas. The goals identified in the 2020 plan were re-evaluated and re-affirmed for the 2025 update process. The goals are summarized below:

#1 Protect Life and Property – The Swinomish Tribal Indian Community mission statement emphasizes protecting treaty rights and traditional practices, including fishing and shellfish harvesting, which are central to its culture and food security.

#2 Increase Public Awareness – A core principle of the Swinomish planning is the "Seven Generations" approach which encourages consideration for the current generation, future three generations, and the previous three generations. This long-term view informs decisions and emphasizes sustainability over immediate returns. Considerations are brought to the Tribal Senate and committees by Tribal members, disseminated to department heads for action and implementation, and ultimately posted in the Tribal Newsletter qyuuqs.

#3 Encourage Partnerships – The Swinomish Indian Tribal Community encourages government partnerships through a combination of formal agreements, intergovernmental collaboration, environmental stewardship, and legal frameworks. Exemplified in the 2010 Swinomish Climate Change Initiative, Swinomish emphasized community involvement, scientific input, and incorporation of traditional ecological knowledge to build a tribal resilience framework. Partners included Center for Science in the Earth System University of Washington, Skagit County, Skagit River System Cooperative, Town of La Conner, and the Shelter Bay Community.

#4 Provide for Emergency Services – SITC empowers their emergency service providers through Office of Emergency Management collaboration and coordination with Swinomish Police Department, Swinomish Fire and Medical Services, and external agencies.

#5 Expanding the Tribe's geographic information system (GIS) database to include hazard information – Swinomish Lands Management employs GIS analysts who play a vital role in mapping, land management, emergency planning, and environmental stewardship. The services that SITC GIS provides are integral to the success and efficiency of numerous Swinomish Departments. Expanding GIS hazard database capacity enables more effective mitigation measures.

#6 Incorporating hazard profiles and mitigation actions into Tribal planning processes, including the Tribal comprehensive plan, transportation plan, safety plan, and forest management plans – The Swinomish Indian Tribal Community sets its mitigation goals and objectives through a holistic, community-led process that integrates scientific data with traditional Indigenous knowledge. Guided by the Swinomish Senate, this process ensures that mitigation efforts protect the community's way of life for future generations.

12.1 Hazard Mitigation Action Plan

The Swinomish Tribe handles its planning area mitigation through a comprehensive, multi-faceted strategy that emphasizes climate change adaptation, environmental protection, and emergency preparedness. In addition to the BAS, Swinomish integrates traditional knowledge, treaty rights, sovereignty and self-determination to protect its resources using a seven-generation planning range.

The table below lists the action items or strategies that make up the jurisdiction's hazard mitigation plan. Background information and information on how each action item will be administered, responsible agency/office (including outside the district), potential funding sources, the timeframe, who will benefit from the activity, and the type of initiative associated with each item are also identified

12.1.1 Prioritization of Mitigation Initiatives

The Swinomish Indian Tribal Community prioritizes mitigation initiatives based on their direct impacts on the region's natural resources and the Tribe's cultural values, community health, and economic stability. By integrating traditional knowledge with BAS, the tribe addresses a range of threats, from sea-level rise and flooding to food security and emergency preparedness. Once the mitigation initiatives items were identified, Swinomish Planning Team followed the same process outlined within Volume 1 to prioritize tribal initiatives. **Table 11** identifies each initiative based on priority, where the highest priority initiative is listed at the top.

Table 106. Mitigation Strategy and Priority Schedule										
Priority Ranking	Objectives Met	Type of Initiative(s)	Hazards Mitigated[1]	Lead Agency/ Agencies	Can a project be funded under existing programs/ budgets?	Estimated Cost	Is Project Grant Eligible?	Timeframe	Included in Previous Plan?	Who or What Benefits
[1]Hazards: Coastal Hazard-CZ/ Drought-D/ Earthquake-EQ/ Flooding-Fl/ Landslide-LS/ Severe Weather-SW / Volcano-Vol/ Wildfire-WF/ Tsunami-T/ Acts of Violence-AV/ Hazardous Sites or Materials Spill-HazMat/ Disease-D/ Dam Failure-DF/ Infrastructure Failure-IF										
INITIATIVE #1 Shelter in Place Establishment-Gathering Facility										
	1, 2, 6	Emergency Services, Management	SW, CZ, EQ, Fl, LS, Vol	EM, PD	Yes	Low	Yes	Ongoing	Yes	Tribal, Local
INITIATIVE #2 King Tides/storm surge-Snee-Oosh Beach										
	1,2,3, 5,6	Preventive Activities, Structural Projects, Property Protection	CZ, FL, SW, T	Planning, EM, DEP	Yes	Medium	Yes	Ongoing	Yes	Tribal, Local
INITIATIVE #3 Climate Resiliency-Sea Level Rise-Zoning and Future Development										
	1, 2, 3, 4, 5, 6	Preventive Activities, Structural Projects, Property Protection	CZ, FL, SW, T	Planning, DEP, EM	Yes	Medium	Yes	Ongoing	Yes	Tribal, Local
INITIATIVE #4 Code Update-Climate Resiliancy-2024 IBC IRC, Fire Ready, SSA Code										
	1, 2, 3, 4, 5, 6	Public Information, Preventive Activities	All	Planning, Legal	Yes/No	Low	Yes	Ongoing, periodic	Yes	Tribal, Local, County, Region

INITIATIVE #5 Community Emergency Ingress and Egress										
	1, 4	Preventive Activities, Structural Projects	All	Planning, DEP, Construction, WSDOT	Yes/No	High	Yes	Long	No	Facility, Tribal, Local, County, Region
INITIATIVE #6 COOP Development										
	3	Public Information, Preventive Activities	All	Planning, EM, PD, Fire	No	Low	Yes	Ongoing	Yes	Tribal, Local
INITIATIVE #7 Long-term Climate Resiliency Planning and Policy										
	6	Natural Resources Protection	All	DEP, Planning	Yes	Medium	Yes	Ongoing	Yes	Tribe, Local, County, State
INITIATIVE #8 Infrastructure Improvement/Replacement										
	1	Preventive Activities, Structural Projects, Property Protection	All	Construction, Planning, PW	Yes/No	High	Yes	Ongoing/Long	Yes	Tribe, Local
INITIATIVE #9 Community Wildfire Protection Plan										
	1, 5, 6	Property Protection, Emergency Services, Recovery, Natural Resource Protection	Fire	Planning, EM	Yes/No	Low	Yes	Medium	Yes	Tribe, Local, County, State
INITIATIVE #10 Landslide/Erosion resiliency										
	1, 5, 6	Preventive Activities, Structural Projects, Property Protection	CZ, EQ, LS	Planning, DEP, Construction	No	Medium	Yes	Long	Yes	Tribe, Local

13 Status of Previous Plan Initiatives

Table 12 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 107.
Current Status of Previous Hazard Mitigation Action Plan

Mitigation Strategy	Project Status	Completed	Continual/ On-Going Nature	Removed/ No Longer Relevant/ No Action	Carried Over
Rainbow Bridge study	Funded	☐	☐	☐	☒
Code updates	Funded	☐	☐	☐	☒
Space needs assessment	Ongoing	☐	☒	☐	☐
Capital facilities assessment	Ongoing	☐	☒	☐	☐

14 Plan Maintenance

Following the approval of the hazard mitigation plan, the planning team for STIC will sustain public engagement through publicly posted updates, Committee and Senate meetings, and stakeholder outreach and involvement. After receiving pre-adoption approval from FEMA, the Swinomish Senate formally re-adopts the updated plan through a resolution. Progress will be monitored over a five-year period with a published update at the 2.5-year mark. This formalizes the Tribe's commitment to the plan and ensures compliance with federal regulations.

14.1 Plan Update

The Swinomish Indian Tribal Community has experienced significant changes in its hazard-prone areas due to climate change, with increased threats from sea-level rise, coastal erosion, flooding, and wildfires. While development is regulated in these hazard prone areas, it still occurs. A Tribal impact assessment in 2007 identified these threats, and ongoing observation and study continue to reveal compounding effects on the reservation's low-lying coastal and forested areas. The Tribe's environmental code incorporates regulations designed to safeguard natural resources and shorelines from potentially damaging development activities, thereby preserving natural buffers that offer protection to developed areas against hazards. This code continues to be updated to more accurately reflect the recommendations of BAS and cultural priorities.

Development in hazard prone areas is regulated through the Permitting division of the Planning Department. Permit technicians, internal review staff, and contracted external experts apply code to projects to decrease risk and increase resiliency. This has become increasingly challenging in the face of increasing climate volatility, exponential destabilization of critical areas, and public disinformation

problems stemming from climate change. After permitting, construction is inspected for compliance with not only the building code, but critical area and stormwater codes. These are essential to the permitting process, otherwise the Tribe would have no recourse for residents intentionally or accidentally cutting corners.

Future plan and code updates intend to increase regulation of development in hazard prone and critical areas. Exemplified by SITC's cultural wetlands program, the Tribe regulates based on culturally significant functions in conjunction with BAS, producing a form of regulation that better suits the values of the Tribe.

15.1 Plan Adoption

The following Swinomish Tribal Resolution Re-Authorizes and designates Tribal Staff to participate in updating the Tribal Annex for the 2025 Skagit County Multi-Jurisdictional Hazard Mitigation Plan.

City Council Agenda Bill

August 10, 2026

Action Type: Contract Award **Item:** 6.c.

Title: Contract Award: Water Treatment Plant Intake Pump Station Alternatives Analysis #C2026-0218

Staff Contact(s): Logan Lee, Terry Nemeth

Approved for Submittal to Council by:
Tiffany Matson
Logan Lee

Summary:

City staff seeks City Council consent to award a contract in the amount of $158,700.00 to HDR Engineering, Inc. to analyze alternatives to retrofit the foundation of the Anacortes Water Treatment Plant's (WTP) Intake Station to improve its performance with the goal of identifying a system with capacities to accommodate a 2021 International Building Code design seismic event. This analysis will also consider the feasibility of implementing the retrofit on a facility which must remain in operation to maintain water delivery.

Budget Impact:

Consultant	HDR Engineering, Inc.
Contract Amount	$158,700.00
In CFP?	No
Funding Source	Rates/User Fees

Earmarked Funds	$158,700.00
BARS #	401.730.534.41.5342041.00.54100.
Budget Amendment Required?	No
Start Date	Contract execution
End Date	12/31/2026

Previous Action: N/A

Recommended Motion:

I move that City Council authorize the Mayor to sign contract C2026-0218 with HDR Engineering, Inc. in the amount of $158,700.00 to perform the WTP Intake Pump Station Alternatives Analysis.

Alternative Actions: Not award the contract.

Attachments (listed in order presented):
1. C2026-0218
2. WTP Intake Alternative Analysis Presentation

AGREEMENT #C2026-0218
Between
THE CITY OF ANACORTES
AND
HDR ENGINEERING, INC.

WTP INTAKE STATION ALTERNATIVES ANALYSIS

This Agreement, hereinafter referred to as “Agreement”, is made and entered into between the City of Anacortes, hereinafter referred to as the "City", and HDR Engineering, Inc., hereinafter referred to as the "Consultant".

WHEREAS the City requires the professional services of the Consultant;

NOW, THEREFORE, in consideration of mutual benefits accruing, it is agreed by and between the parties hereto as follows:

1. **Scope of Work**. Under this Agreement, the Consultant shall analyze alternatives to retrofit the foundation of the Anacortes Water Treatment Plant’s (WTP) Intake Station to improve its performance with the goal of identifying a system with capacities to accommodate a 2021 IBC design seismic event. This analysis will also consider the feasibility of implementing the retrofit on a facility which must remain in operation to maintain water delivery. The analysis will also consider the cost of the project and high-level permitting requirements. Work is detailed in Exhibit A, which is attached hereto and incorporated by reference, and will be performed under the direction of Isaac Brunk, or designee, hereinafter referred to as Project Manager.

2. **Price and Payment Terms.** The services provided under this Agreement shall be on a time and materials basis not-to-exceed **$158,700.00.** The billable rates for services provided shall be in accordance with Exhibit A.

3. **Period of Performance.** The period of performance under this Agreement is from inception to February 10, 2027.

4. **Subcontracts**. The Consultant shall not subcontract the Scope of Work (“Work”) unless detailed in this Agreement or the Project Manger approves in writing. If the Project Manager requests, the Consultant shall provide proof that the subcontractor has the experience, ability, and equipment the Work requires. “subcontractor” means an individual, partnership, firm, corporation, or joint venture who is sublet part of the Contract by the Consultant. Each request to subcontract shall include the following information (i) a description of the supplies or services to be subcontracted, (ii) identification of the type of subcontract to be used (iii) identification of the proposed subcontractor, (iv) proposed subcontract price, (v) identification of the percentage of work to be performed by subcontract. Approval of subcontract shall not:

a. Relieve the Consultant of any responsibility to carry out the Contract,
b. Relieve the Consultant of any obligations or liability under the Contract,
c. Create any contract between the City and the subcontractor, or
d. Convey to the subcontractor any rights against the City.

Consultant remains fully responsible for obligations, services, and functions performed by its subcontractor to the same extent as if such obligations, services, and functions were performed by Consultant’s employees, and for purposes of the Agreement such work will be deemed work performed by Consultant. The Consultant shall give immediate written notice, reference Clause Notices, of any action or suit filed and prompt notice of any claim made against the Consultant by any subcontractor or vendor that, in the opinion of the Consultant, may result in litigation related in any way to this Agreement, with respect to which the Consultant may be entitled to reimbursement from the City.

If dissatisfied with any part of the subcontracted Work, the Project Manager may request in writing that the subcontractor be removed. The Consultant shall comply with this request at once and shall not employ the subcontractor for any further Work under the Contract.

5. **Taxes.** The City will pay sales and use taxes imposed on goods or services acquired hereunder as required by law. The Consultant must pay all other taxes including, but not limited to: Business and Occupation Tax, taxes based on the Consultant's gross or net income, or personal property to which the City does not hold title. The City is exempt from Federal Excise Tax. Where applicable the City shall furnish a Federal Excise Tax Exemption certificate.

6. **Invoicing.** All invoices shall include a cover page that states: Company Name, Invoice Date, Due Date (30 days), Invoice Number, Invoice Period, Project Manager Name, **Agreement Number**, Agreement Price, amount requested per invoice and cumulative invoiced amount. Invoices shall include actual hours worked by Period, by Labor Category. The Consultant must invoice MONTHLY for quantities delivered during the invoice period, and no more frequently than monthly, and allow 30 calendar days from receipt of the invoice for payment. Invoices may be sent by US mail to City of Anacortes, Accounts Payable, PO Box 547, Anacortes, WA 98221, or by email to accountspayable@anacorteswa.gov. The City shall notify the Consultant within fifteen (15) calendar days from receipt of invoice if there are any objections or disputes with the invoice. The Consultant shall then resubmit a new invoice less the disputed amount and payment shall be made within 30 calendar days. Any disputed amounts may be submitted under the Disputes clause contained herein.

7. **Withholding Payment.** In the event the City determines that the Consultant has failed to perform any obligation under this Contract within the times set forth in this Contract, then the City may withhold from amounts otherwise due and payable to Consultant the amount determined by the City as necessary to cure the default, until the Contracting Officer determines that such failure to perform has been cured. Withholding under this clause shall not be deemed a breach entitling Consultant to terminate or damages, provided that the City promptly gives notice in writing to the Consultant of the nature of the default or failure to perform, and in no case more than 8 days after it determines to withhold amounts otherwise due. A determination of the City Attorney set forth in such notice to the Consultant of the action required and/or the amount required to cure any alleged failure to perform shall be deemed conclusive, except to the extent that the Consultant acts within the times and in strict accord with the provisions of the Disputes clause of this Contract. The City may act in accordance with any determination of the City Attorney which has become conclusive under this clause, without prejudice to any other remedy under the Contract, to take all or any of the following actions: (1) cure any failure or default, (2) to pay any amount so required to be paid and to charge the same to the account of the Consultant, (3) to set off any amount so paid or incurred from amounts due to become due the Consultant. In the event the Consultant obtains relief upon a claim under the Disputes clause, no penalty or damages shall accrue to Consultant by reason of good faith withholding by the City under this clause.

8. **Final Payment: Waiver of Claim.** The Consultant's acceptance of final payment shall constitute a waiver of claims, except those previously and properly made and identified by the Consultant as unsettled at the time request for final payment is made.

9. **Ownership and Use of Documents**. All finished and unfinished documents and material prepared by the Consultant with funds paid by the City pursuant to the terms of this Agreement shall become the property of the City and shall be forwarded to the City upon its request. Documents and materials shall include but not be limited to plans, specifications, reports, electronic and non-electronic data, and other design documents prepared by the Consultant. Pursuant to RCW 42.56.70, all information and documents produced under this Agreement may be subject to public disclosure. Any modification or reuse of such materials for purposes other than those intended by this Agreement shall be at City's sole risk and without liability to Consultant.

10. **Assistance Regarding Patent and Copyright Infringement.** In the event of any claim or suit against City on account of any alleged patent or copyright infringement arising out of the performance of this Contract or out of the use of any material furnished or work or services performed hereunder, Consultant shall defend City against any such suit or claim and hold City harmless from any and all expenses, court costs, and attorney's fees in connection with such claim or suit.

11. **Indemnification / Hold Harmless.** Consultant shall defend, indemnify and hold the City, its officers, officials, employees and volunteers harmless from any and all claims, injuries, damages, losses or suits including attorney fees, to the extent arising out of or resulting from the alleged negligent or wrongful acts, errors or omissions of the Consultant in performance of this Agreement, except for injuries and damages caused by the sole negligence of the City. However, should a court of competent jurisdiction determine that this Agreement is subject to RCW 4.24.115, then, in the event of liability for damages arising out of bodily injury to persons or damages to property caused by or resulting from the concurrent negligence of the Consultant and the City, its officers, officials, employees, and volunteers, the Consultant's liability, including the duty and cost to defend, hereunder shall be only to the extent of the Consultant's negligence. It is further specifically and expressly understood that the indemnification provided herein constitutes the Consultant's waiver of immunity under Industrial Insurance, Title 51 RCW, solely for the purposes of this indemnification. This waiver has been mutually negotiated by the parties. The provisions of this section shall survive the expiration or termination of this Agreement.

12. **General and Professional Liability Insurance**.

A. Insurance Term: The Consultant shall procure and maintain for the duration of the Agreement, insurance against claims for injuries to persons or damage to property which may arise from or in connection with the performance of the work hereunder by the Consultant, its agents, representatives, or employees.

B. No Limitation: Consultant's maintenance of insurance as required by this Agreement shall not be construed to limit the liability of the Consultant to the coverage provided by such insurance, or otherwise limit the City's recourse to any remedy available at law or in equity.

C. Minimum Scope of Insurance: Consultant shall obtain insurance of the types and coverages described below:

1. Automobile Liability insurance covering all owned, non-owned, hired and leased vehicles. Coverage shall be as least as broad as Insurance Services Office (ISO) form CA 00 01.
2. Commercial General Liability insurance shall be at least as broad as ISO occurrences form CG 00 01 and shall cover liability arising from premises, operations, stop-gap independent consultants and personal injury and advertising injury. The City shall be named as an additional insured under the Consultant's Commercial General Liability insurance policy with respect to the work performed for the City using an additional insured endorsement at least as broad as ISO CG 20 26.
3. Worker's Compensation coverage as required by the Industrial Insurance laws of the State of Washington.
4. Professional Liability insurance appropriate to the Consultant's profession.

D. Minimum Amounts of Insurance: Consultant shall maintain the following insurance limits:

1. Automobile Liability insurance with a minimum combined single limit for bodily injury and property damage of $1,000,000 per accident.
2. Commercial General Liability insurance shall be written with limits no less than $2,000,000 each occurrence and $2,000,000 general aggregate.
3. Professional Liability insurance shall be written with limits no less than $2,000,000 per claim and $2,000,000 policy aggregate limit.

E. Other Insurance Provision: The Consultant's Automobile Liability and Commercial General Liability insurance policies are to contain, or be endorsed to contain that they shall be primary insurance as respect the City. Any Insurance, self-insurance, or self-insured pool coverage maintained by the City shall be excess of the Consultant's insurance and shall not contribute with it.

F. Acceptability of Insurers: Insurance is to be placed with insurers with a current A.M. Best rating of not less than A:VII.

G. Verification of Coverage: The Consultant shall furnish the City with original certificates and a copy of the amendatory endorsements, including but not necessarily limited to the additional insured endorsements, evidencing the insurance requirements of the Consultant **within 10 days of contract execution and before scheduling of the work**. Upon request by the City, the Consultant shall furnish redacted copies of all required insurance policies, including endorsements, required in this contract and evidence of all subcontractor' coverage. Failure of the City to demand such verification of coverage with these insurance requirements or failure of the City to identify a deficiency from the insurance documentation provided shall not be construed as a waiver of Consultant's obligation to maintain such insurance.

Verification of coverage shall include:

1. An ACORD certificate or a form determined by the City to be equivalent.
2. Copies of all endorsements naming the City as additional insured, showing the policy number. The Consultant may submit a copy of any blanket additional insured clause from its policies instead of a separate endorsement.
3. Any other amendatory endorsements to show the coverage required herein.
4. **A notation of coverage enhancements on the Certificate of Insurance shall not satisfy these requirements – actual endorsements must be submitted.**

H. Notice of Cancellation: The Consultant shall provide the City with written notice of any policy cancellation within two business days of their receipt of such notice.

I. Failure to Maintain Insurance: Failure on the part of the Consultant to maintain the insurance as required shall constitute a material breach of contract, upon which the City may, after giving five business days' notice to the Consultant to correct the breach, immediately terminate the contract, or at its discretion, procure or renew such insurance and pay any and all premiums in connection therewith, with sums so expended to be repaid to the City on demand, or at the sole discretion of the City, offset against funds due the Consultant from the City.

13. **Certification Regarding Suspension, Debarment, Ineligibility or Voluntary Exclusion**. The Consultant, by signing this agreement, certifies that they are not suspended, debarred, proposed for debarment, declared ineligible or otherwise excluded from contracting with the federal government, or from receiving contracts paid for with federal funds.

14. **Registered or Licensed.** The City is prohibited from executing an Agreement with a Consultant who is not registered or licensed as required by the applicable laws of the state for their profession. In addition, Anacortes Municipal Code requires that every business located within the city limits of Anacortes register the business with the state and include a City of Anacortes Endorsement. Businesses from outside city limits with a gross annual income of $4,000 or more within Anacortes are also required to obtain a city endorsement. Business licenses and city endorsements can be obtained through the State of Washington Department of Revenue (DOR) Business Licensing Service (BLS) at bls.dor.wa.gov.

15. **Inspection.** The Project Manager shall have power to reject instruments of services which fail to comply with the requirements of this Agreement, but in case of dispute the Consultant may appeal to the City Attorney, whose decision shall be final, subject to the Disputes clause contained herein. The Consultant shall comply with any and all orders and instructions given by the representative of the particular Department administering the Agreement in accordance with the terms of the Agreement. Nothing herein contained shall be taken to relieve the Consultant of their obligations or responsibilities under the Agreement. However, the Consultant shall be responsible for their own methods and conduct during the period of performance.

16. **Standard of Care**. The Consultant represents that they have the necessary knowledge, skill, and experience to perform the Services required by this Agreement. Consultant, and any persons employed by Consultant, shall use their professional skill and efforts to perform the Work in a professional manner consistent with sound practices, in accordance with the usually and customary professional care required for services of the type described in the Scope of Work herein provided at the same time and in the same locale. The City's remedy for a failure to meet the above Standard of Care shall be the re-performance of the Service or an equitable adjustment in the monies paid for the services, at the City's discretion.

17. **Standard Title VI / Non-Discrimination Assurances.** During the performance of this contract, the Consultant, for itself, its assignees, and successors in interest agrees to the clauses in "Appendix A" and "Appendix E" of the Standard Title VI Assurances (USDOT1050.2A), which are hereby incorporated by reference and made a part hereof.

18. **Consultant is an Independent Contractor**. The parties intend that an independent contractor relationship will be created by this Agreement. No agent, employee or representative of the Consultant shall be deemed to be an agent, employee or representative of the City for any purpose. Consultant shall be solely responsible for all acts of its agents, employees, representatives and subcontractor during the performance of this Agreement.

19. **Acceptance.** Consultant acknowledges and agrees that these contract terms are incorporated in, and are a part of, each purchase order or other agreement relating to the provision of goods and/or related services by Consultant. These contract terms supersede all conflicting or additional terms pre-printed on any purchase order, quote, invoice, Consultant's website, or otherwise set forth on any release, acknowledgement, confirmation, requisition, work order, shipping instruction, specification and similar document or communication.

20. **No Third Party Beneficiary Rights**. This Agreement is not intended to and shall not be construed to give any Third Party any interest or rights (including, without limitation, any Third Party beneficiary rights) with respect to or in connection with any agreement or provision contained herein or contemplated hereby, except as otherwise expressly provided for in this Agreement.

21. **Right to Terminate Agreement.**

A. **Termination for Default:** If the Consultant defaults by failing to perform any of the obligations of the Agreement and fails to cure the default within a reasonable period of time following written notice thereof, or becomes insolvent or is declared bankrupt or commits any act of bankruptcy or insolvency or makes an assignment for the benefit of creditors, the City may, by depositing written notice to the Consultant in the U.S. mail, postage prepaid, terminate the Agreement, and at the City's option, obtain performance of the work elsewhere. If the Agreement is terminated for default, the Consultant shall not be entitled to receive any further payments under the Agreement until all work called for has been fully performed. Any extra cost or damage to the City resulting from such default(s) shall be deducted from any money due or coming due to the Consultant. The Consultant shall bear any extra expenses incurred by the City in completing the work, including all increased costs for completing the work, and all damage sustained, or which may be sustained by the City by reason of such default. If a notice of termination for default has been issued and it is later determined for any reason that the Consultant was not in default, the rights and obligations of the parties shall be the same as if the notice of termination had been issued pursuant to the Termination for Public Convenience paragraph hereof.

B. Termination for Public Convenience: The City may terminate the Agreement in whole or in part whenever the City determines, in its sole discretion that such termination is in the best interests of the City. Whenever the Agreement is terminated in accordance with this paragraph, the Consultant shall be entitled to payment for actual work performed at unit Agreement prices for completed items of work through the date of termination. If the City exercises its option under this Paragraph, the City shall not be responsible for payment for loss of anticipated profit on deleted or uncompleted work. Termination of this Agreement by the City at any time during the term, whether for default or convenience, shall not constitute a breach of Agreement by the City.

22. **Changes/Additional Work**. The City may engage Consultant to perform services in addition to those listed in this Agreement, and Consultant will be entitled to additional compensation for authorized additional services or materials. The City shall not be liable for additional compensation until and unless any and all additional work and compensation is approved in advance in writing and signed by both parties to this Agreement. If conditions are encountered which are not anticipated in the Scope of Services, the City understands that a revision to the Scope of Services and fees may be required. Provided, however, that nothing in this paragraph shall be interpreted to obligate the Consultant to render or the City to pay for services rendered in excess of the Scope of Services unless or until a modification to this Agreement is approved in writing by both parties.

23. **Non-waiver**. Waiver by the City of any provision of this Agreement or any time limitation provided for in this Agreement shall not constitute a waiver of any other provision.

24. **Non-assignable**. The services to be provided by the Consultant shall not be assigned or subcontracted without the express written consent of the City.

25. **Covenant Against Contingent Fees**. The Consultant warrants that they have not employed or retained any company or person, other than a bona fide employee working solely for the Consultant, to solicit or secure this Agreement, and that they have not paid or agreed to pay any company or person, other than a bona fide employee working solely for the Consultant, any fee, commission, percentage, brokerage fee, gifts, or any other consideration contingent upon or resulting from the award of making of this Agreement. For breach or violation of this warranty, the City shall have the right to annul this Agreement without liability or, in its discretion to deduct from the Agreement price or consideration, or otherwise recover, the full amount of such fee, commission, percentage, brokerage fee, gift, or contingent fee.

26. **Disputes**

A. General: Differences between the Consultant and the City, arising under and by virtue of this Agreement shall be brought to the attention of the City at the earliest possible time in order that such matters may be settled or other appropriate action promptly taken. The provisions of this Clause shall survive the expiration or termination of this Agreement.

B. Notice of Potential Claims: The Consultant shall not be entitled to additional compensation which otherwise may be payable, or to extension of time for (1) any act or failure to act by the Contracting Agent or the City, or (2) the happening of any event or occurrence, unless the Consultant has given the City a written Notice of Potential Claim within 10 days of the commencement of the act, failure, or event giving rise to the claim, and before final payment by the City. The written Notice of Potential Claim shall set forth

the reasons for which the Consultant believes additional compensation or extension of time is due, the nature of the cost involved, and insofar as possible, the amount of the potential claim. Consultant shall keep full and complete daily records of the Work performed, labor and all costs and additional time claimed to be additional.

C. Detailed Claim: The Consultant shall not be entitled to claim any such additional compensation, or extension of time, unless within 30 days of the accomplishment of the portion of the work from which the claim arose, and before final payment by the City, the Consultant has given the City a detailed written statement of each element of cost or other compensation requested and of all elements of additional time required, and copies of any supporting documents evidencing the amount or the extension of time claimed to be due.

D. Dispute Resolution: In the event of a dispute between the City and the Consultant arising of this Agreement, or any obligation hereunder the dispute shall first be referred to the representatives designated by the City and the Consultant to have oversight over the administration of this Agreement. Said representatives shall meet within thirty (30) calendar days of receipt of detailed claim, and the parties shall make a good faith effort to achieve a resolution of the dispute. In the event the parties are unable to resolve the dispute under the procedure set forth above, then the parties hereby agree that the matter shall be referred to mediation. The parties shall mutually agree upon a mediator to assist them in resolving their differences. Any expenses incidental to mediation shall be borne equally by the parties. If either party is dissatisfied with the outcome of the mediation, that party may then pursue any available judicial remedies.

27. **Force Majeure.** Neither party shall be liable to the other or deemed in breach or default for any failure or delay in performance under this Agreement during the time and to the extent its performance is prevented by reasons of Force Majeure. For the purposes of this Agreement, Force Majeure means an occurrence that is beyond the reasonable control of and without fault or negligence of the party claiming force majeure and which, by exercise of due diligence of such party, could not have been prevented or overcome. Force Majeure shall include natural disasters, including fire, flood, earthquake, windstorm, avalanche, mudslide, and other similar events; acts of war or civil unrest when an emergency has been declared by appropriate governmental officials; acts of civil or military authority; freight embargoes; epidemics; pandemics; quarantine restrictions; labor strikes; boycotts; terrorist acts; riots; insurrections; explosions; and nuclear accidents. A party claiming suspension or termination of its obligations due to force majeure shall give the other party prompt written notice of the impediment and its effect on the ability to perform, with such notice to be provided no more than two (2) working days after the force majeure event or reasonable discovery of the event's impact on performance. Failure to provide such notice shall preclude recovery under this provision. Such delay shall cease as soon as practicable and written notification of same shall be provided. The time of completion shall be extended by Agreement modification for a period of time equal to the time that the results or effects of such delay prevented the delayed party from performing in accordance with this Agreement. Rights Reserved: The City reserves the right to cancel the Agreement and/or purchase materials, equipment or services from the best available source during the time of force majeure, and Consultant shall have no recourse against the City

28. **Compliance with Laws**. The Consultant in the performance of this Agreement shall comply with all applicable Federal, State or local laws and ordinances, including regulations for licensing, certification and operation of facilities, programs and accreditation, executive proclamations, all applicable Washington Dept. of Labor & Industries (L&I) and Occupational Safety & Health Administration (OSHA) safety standards, and licensing of individuals, and any other standards or criteria as described in the Agreement to assure quality of services. The Consultant specifically agrees to pay any applicable business and occupation (B&O) taxes, which may be due on account of this Agreement.

29. **Severability.** If any term or condition of this Agreement or the application thereof to any person(s) or circumstances is held invalid, such invalidity shall not affect other terms, conditions or applications which can be given effect without the invalid term, condition or application. To this end, the terms and conditions of this Agreement are declared severable.

30. **Governing Law.** This Agreement shall be governed by and construed under the laws of the State of Washington. Any action brought under the Agreement or relating to the Project shall be brought in the Superior Court of the State of Washington in Skagit County Washington.

31. **Survival of Agreement Termination**. The articles relating to Indemnification / Hold Harmless, Taxes, Ownership and Use of Documents, Assistance Regarding Patent and Copyright Infringement, The City's Right to Terminate Agreement, Governing Law, and Disputes, shall survive completion of the services, payment in full of the compensation and termination of this Agreement.

32. **Notices**. All notices required or permitted to be given under this Agreement shall be in writing and shall be deemed to have been given and received (a) when personally delivered, or delivered by same-day courier; or (b) on the third business day after mailing by registered or certified mail, postage prepaid, return receipt requested; or (c) upon delivery when sent by prepaid overnight express delivery service (e.g., FedEx, UPS); or (d) when sent by email and upon the receipt by the sending party of written confirmation by the receiving party; provided, however, that an automated email confirmation of delivery or read receipt shall not constitute such confirmation. Notices shall be sent to the following addresses:

CITY:	CONSULTANT:
City of Anacortes Tiffany Matson 904 6th Street PO BOX 547 Anacortes, WA 98221 contracts@anacorteswa.gov	HDR Engineering, Inc. Olivia Williams 929 108th Ave NE, Suite 1300 Bellevue, WA 98004 olivia.williams@hdrinc.com

The parties acknowledge that there has been an opportunity to negotiate the terms and conditions of this Agreement and agree to each bind itself, its partners, successors, assigns, and legal representatives to the other party hereto, in respect of all covenants, agreements, and obligations contained in the contract documents. Each of the persons signing below on behalf of any party hereby represents and warrants that they are signing with full and complete authority to bind the party on whose behalf of whom they are signing, to each and every term of this Agreement.

CITY OF ANACORTES	**HDR ENGINEERING, INC.**
By _____	By _____
Title _____	Title _____
Date _____	Date _____

APPENDIX A

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Washington State Department of Transportation, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

2. **Non-discrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.

3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.

4. **Information and Reports:** The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the Washington State Department of Transportation to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the Washington State Department of Transportation, as appropriate, and will set forth what efforts it has made to obtain the information.

5. **Sanctions for Noncompliance:** In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the Washington State Department of Transportation may determine to be appropriate, including, but not limited to:

    a. withholding payments to the contractor under the contract until the contractor complies; and/or
    b. cancelling, terminating, or suspending a contract, in whole or in part.

6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the Washington State Department of Transportation may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

APPENDIX E

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

Pertinent Non-Discrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC§ 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures Non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of Limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

EXHIBIT A

Anacortes
Intake Pump Station – Alternatives Analysis

Scope of Services

January 2026

555 110th Avenue NE
Suite 1200
Bellevue, WA 98004-4361
(425) 586.5100

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SCOPE OF SERVICES

Background

The City of Anacortes (City) operates a single raw water intake pump station (IPS) that draws water from the Skagit River and pumps it to the City's water treatment plant. The IPS and the original 42-inch diameter raw water pipeline were constructed around 1970. This raw water pipeline crosses under the Skagit River making it inaccessible. A second raw water pipeline was installed in 2020 to provide redundancy for this section of the system. However, a short length of existing piping and the IPS itself remain as a single point of failure for the City's water system. If damaged to a point where a shutdown was necessary for repairs, the entire water supply system would be interrupted.

In 2025, HDR was retained by the City to perform a condition assessment of the existing IPS which included geotechnical and structural analysis of the facility. The assessment concluded that the pilings supporting the structure would fail in a 2021 International Building Code (IBC) design seismic event (risk-targeted Maximum Considered Earthquake, MCE_R, per ASCE 7) and this would lead to an overall failure of the IPS. The condition assessment concluded that other structural and mechanical components of the facility were in good condition.

The objective of this scope of services is to analyze alternatives to retrofit the foundation of the facility to improve its performance with the goal of identifying a system with capacities to accommodate a 2021 IBC design seismic event. This analysis will also consider the feasibility of implementing the retrofit on a facility which must remain in operation to maintain water delivery. The analysis will also consider the cost of the project and high-level permitting requirements.

Scope of Services

Task 100 Project Management

Objective

The purpose of this task is to monitor, control and adjust scope, schedule, and budget as well as provide monthly status reporting, accounting, and invoicing.

HDR Services

1. Prepare a Project Management Plan (Project Guide) outlining the project scope, team organization, schedule, and communications information.
2. Coordinate and manage the project team.
3. Prepare monthly status reports describing the following:
   A. Services completed during the month.
   B. Services planned for the next month.
   C. Needs for additional information.
   D. Scope/schedule/budget issues.

E. Schedule update and financial status summary.

4. Prepare monthly invoices formatted in accordance with contract terms.

Client Responsibilities

1. Timely processing and payment of invoices.
2. Review and process contract change requests and amendments, if needed.

Assumptions

1. The project duration will be 6 months.
2. Invoices will be HDR standard invoice format.

Deliverables

1. Monthly reports and invoices (e-mailed PDF file)
2. Monthly project schedule and budget updates.

Task 200 IPS Alternatives Development

Objective

Develop retrofit alternatives for the IPS.

HDR Services

1. Conduct an internal alternatives development workshop.
2. Identify up to five independent (5) alternatives to retrofit the IPS foundation.
3. Establish viable alternatives by determining the feasibility and methodology of maintaining the IPS operation throughout the implementation of each alternative.
4. Prepare a technical memorandum (TM) summarizing the alternatives development.
5. Present the alternatives to the City in a review meeting.

Client Responsibilities

1. Participate in review meeting.

Assumptions

1. Alternatives that cannot maintain IPS operations throughout implementation are not considered viable.
2. Alternatives will be documented in the TM but only viable alternatives will be analyzed further in Task 300.
3. It is assumed that three of the five independent alternatives will be considered viable.
4. The review meeting will be held in person at the Anacortes WTP. The review meeting will be 1 hour in duration. There will be two HDR attendees and four hours is budgeted for each for preparation, attendance and follow-up.

Deliverables

1. Draft Alternatives Analysis TM, emailed as a PDF.

Task 300 IPS Alternatives Analysis

Objective

Analyze retrofit alternatives for the IPS.

HDR Services

1. Prepare a finite element model of each of the three viable alternatives to assess the performance of the IPS under a 2021 IBC seismic event.
2. Consider and model up to two hybrid alternatives of two or more of the independent alternatives identified in Task 200.
3. Present the alternatives analysis results to the City in a review meeting.
4. Prepare an opinion of probable construction cost (OPCC) for up to three alternatives identified in the meeting with the City.
5. Update the TM prepared in Task 200 to summarize the alternatives analysis and provide the recommended option.
6. Present the conclusions of the alternatives analysis, including OPCCs, to the City in a review meeting.

Client Responsibilities

1. Participate in review meeting.
2. Select up to three alternatives to have OPCCs prepared.
3. Review the TM and provide a single set of consolidated and reconciled comments within two weeks of receipt.

Assumptions

1. OPCCs will be Class V as defined by the AACE International reflecting a planning level project definition.
2. The review meetings will be held in person at the Anacortes WTP. The review meeting will be 1 hour in duration. There will be two HDR attendees and four hours are budgeted for each for preparation, attendance and follow-up.

Deliverables

1. Draft and Final Alternatives Analysis TM, emailed as a PDF.

Task 400 Geotechnical Alternative Development

Objective

Provide geotechnical input to support the IPS alternatives development (Task 200).

Subconsultant Services

1. Support identifying five (5) independent alternatives under Task 200 to retrofit the IPS foundation.
2. Provide geotechnical input to evaluate the feasibility and methodology of each alternative to meet project objectives.
3. Provide input to the TM summarizing the alternatives development.

Client Responsibilities

1. Provide known geotechnical data not previously provided.
2. Review and provide comments on the draft geotechnical letter report.

Assumptions

1. No onsite geotechnical investigation, testing or analysis will be performed during alternative development.
2. Typical geotechnical parameters and relationships and engineering judgement based on local experience will be used to support the alternatives development and feasibility.

Deliverables

1. Draft geotechnical alternative development letter report, emailed as a PDF.
2. Final geotechnical alternative development letter report, emailed as a PDF, addressing comments from the Client, if any.

Task 500 Geotechnical Alternative Analysis

Objective

Provide geotechnical support to advance evaluation of the alternatives under Task 300.

Subconsultant Services

1. Develop geotechnical resistance values and springs for foundations elements.
2. Develop geotechnical resistance values for ground anchors, if included in an alternative analyzed.
3. Provide representative ground improvement/replacement ratios and associated reduced IPS loading and/or increased foundation resistance, if ground improvement is considered a viable alternative.

Client Responsibilities

1. Provide known geotechnical data not previously provided.
2. Review and provide comments on the draft geotechnical letter report.

Assumptions

1. No onsite geotechnical investigation or testing will be performed during alternative analysis.

2. Up to two sets of loads developed from up to two the finite element models developed in Task 300 (four load cases total) will be considered in the geotechnical alternative analysis.
3. Typical geotechnical parameters and relationships and engineering judgement based on local experience will be used to develop input for geotechnical analyses.
4. Static/pseudo-static analysis using conventional methods are suitable for supporting the Alternatives Analysis. Advanced geotechnical continuum modeling will not be utilized to support the Alternatives Analysis Report.

Deliverables

1. Draft geotechnical alternative analysis letter report, emailed as a PDF.
2. Final geotechnical alternative analysis letter report, emailed as a PDF, addressing comments from the Client, if any.

Schedule

Notice to proceed for this scope of work is assumed to be issued on August 10, 2026. The project is assumed to be 6 months in duration with a completion date of February 10, 2027.

Fee

The total budget included in this budget is $158,700. The table below is a summary of the fee for this project broken down by task. Expenses and subconsultants will be billed at a 5% markup.

Task #	Task Description	Total Labor	Total Expenses	Total Subconsultants	Total Fee
100	**Project Management**	$14,630	$0	$0	**$14,630**
200	**Alternatives Development**	$21,896	$46	$0	**$21,942**
300	**Alternatives Analysis**	$63,938	$46	$0	**$63,984**
400	**Alternatives Development**	$1,320	$0	$12,926	**$14,246**
500	**Alternatives Analysis**	$1,320	$0	$42,578	**$43,898**
		$103,104	**$92**	**$55,504**	**$158,700**

LABOR ESTIMATE, HDR ENGINEERING STAFF

City of Anacortes: Anacortes Intake PS Alt Analysis

		Packard, Kenneth H	Bromberg, Kevin Matthew	Bredehoeft, Peter R Jr. (Pete)	Johnson, Kirk A	Kemmerling, Chloe Leanne	Hijazi, Mohamad H	Rastogi, Astha	Ackerman, Lindsey Marie	Franke, Kevin William	Martin, Erik Paul	Dillon, Katherine Margaret Comer	Miller, Kyle Christian	Vu, Kim Dung Thi	Gipson, Chad A	Draheim, Daniel P (Dan)	Total Labor Hours	Total Labor Dollars
Contract Title / Project Role		Project Manager	Project Accountant	OPCC QC	Senior Estimator	EIT	Structural Lead	Structural EIT	Geotechnical Engineer	QA/QC	Group Manager	PIC	Project Coordinator	QRC	Structural QC	Technical Editor		
Billing Rate		305.38	127.78	354.43	294.24	139.46	351.01	179.90	253.86	304.10	418.37	376.93	121.70	200.03	319.23	166.05		
100	**Project Management**	**27**	**21**	**0**	**0**	**0**	**1**	**0**	**1**	**2**	**2**	**2**	**3**	**1**	**0**	**2**	**62**	**$ 14,629.54**
	Project Setup	2	2														4	$ 866.32
	Project Mgmt Plan / Quality Mgmt Plan / HASP	1	1										2			2	6	$ 1,008.66
	Coordination and Monitoring	8	2														10	$ 2,698.60
	Invoicing / Status Reporting / EV / WorkPlan	6	6														12	$ 2,598.96
	Subconsultant Management	8	8														16	$ 3,465.28
	Project Closeout	1	1														2	$ 433.16
	Management Review	1	1				1		1	2	2	2	1	1			12	$ 3,558.56
200	**Alternatives Development**	**15**	**0**	**0**	**0**	**51**	**8**	**0**	**18**	**4**	**0**	**0**	**0**	**0**	**4**	**2**	**102**	**$ 21,896.14**
	Kickoff Meeting	2				2	2		2								8	$ 2,099.42
	Alternatives Identification/Screening	4				4	4		4								16	$ 4,198.84
	Alternatives Development	2				2	2		2								8	$ 2,099.42
	Review Meeting With City	3				3											6	$ 1,334.52
	Draft TM	4				40			10	4					4	2	64	$ 12,163.94
300	**Alternatives Analysis**	**8**	**0**	**4**	**40**	**44**	**54**	**106**	**10**	**0**	**0**	**0**	**0**	**0**	**4**	**2**	**272**	**$ 63,938.16**
	Analyze Alternative 1						10	30									40	$ 8,907.10
	Analyze Alternative 2						10	30									40	$ 8,907.10
	Analyze Alternative 3						10	30									40	$ 8,907.10
	Analyze Combo Alt 1						4	8									12	$ 2,843.24
	Analyze Combo Alt 2						4	8									12	$ 2,843.24
	OPCC (3 Alts)			4	40												44	$ 13,187.32
	Final TM	4				40	16		10						4	2	76	$ 16,563.70
	Client Meeting	4				4											8	$ 1,779.36
400	**Alternatives Development (Subconsultant)**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**$ 1,319.54**
	Review Subconsultant Deliverables								4	1							5	$ 1,319.54
500	**Alternatives Analysis (Subconsultant)**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**$ 1,319.54**
	Review Subconsultant Deliverables								4	1							5	$ 1,319.54
	Task Total Hours	**50.00**	**21.00**	**4.00**	**40.00**	**95.00**	**63.00**	**106.00**	**37.00**	**8.00**	**2.00**	**2.00**	**3.00**	**1.00**	**8.00**	**6.00**	**446.00**	
	Task Total Fee	**$ 15,269.00**	**$ 2,683.38**	**$ 1,417.72**	**$ 11,769.60**	**$ 13,248.70**	**$ 22,113.63**	**$ 19,069.40**	**$ 9,392.82**	**$ 2,432.80**	**$ 836.74**	**$ 753.86**	**$ 365.10**	**$ 200.03**	**$ 2,553.84**	**$ 996.30**		**$ 103,102.92**

EXPENSES

City of Anacortes: Anacortes Intake PS Alt Analysis

		Mileage/mile (2026) IRS	Total ODC	ODC Markup	Total ODC + Markup
		Travel			
OTHER DIRECT COSTS		**Each**			
	Unit Cost	$0.725		5.00%	
100	**Project Management**				
	Quantity	0			
	Task Total	**$0.00**	$0.00	$0.00	**$0.00**
200	**Alternatives Development**				
	Quantity	60			
	Task Total	**$43.50**	$43.50	$2.18	**$45.68**
300	**Alternatives Analysis**				
	Quantity	60			
	Task Total	**$43.50**	$43.50	$2.18	**$45.68**
	Total ODC	**$ 87.00**	**$ 87.00**	**$ 4.36**	**$ 91.36**

***All mileage will be billed at the current IRS mileage rate**

SUBCONSULTANTS

City of Anacortes: Anacortes Intake PS Alt Analysis

		S&W	Total Subconsultants	Sub Markup	Total Subconsultants + Markup
SUBCONSULTANTS				5.00%	
400	**Alternatives Development (Subconsultant)**				
	Task Total	**$12,310.00**	$12,310.00	$615.50	**$12,925.50**
500	**Alternatives Analysis (Subconsultant)**				
	Task Total	**$40,550.00**	$40,550.00	$2,027.50	**$42,577.50**
	Total Subconsultants	**$ 52,860.00**	**$ 52,860.00**	**$ 2,643.00**	**$ 55,503.00**

Alternative Analysis

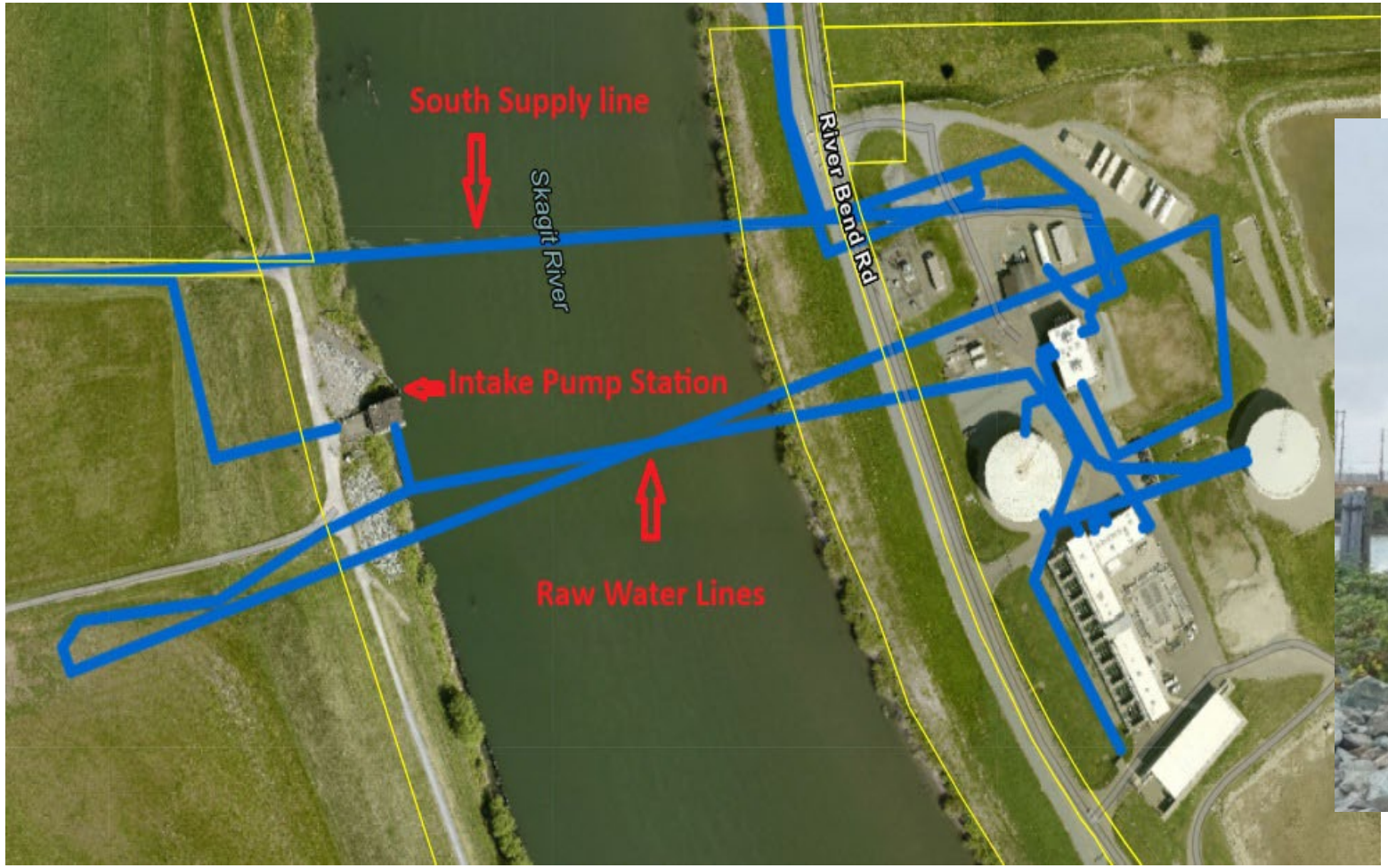
WTP Intake Station

1970 Intake Station

Terry Nemeth / Water System Manager

August 10th, 2026

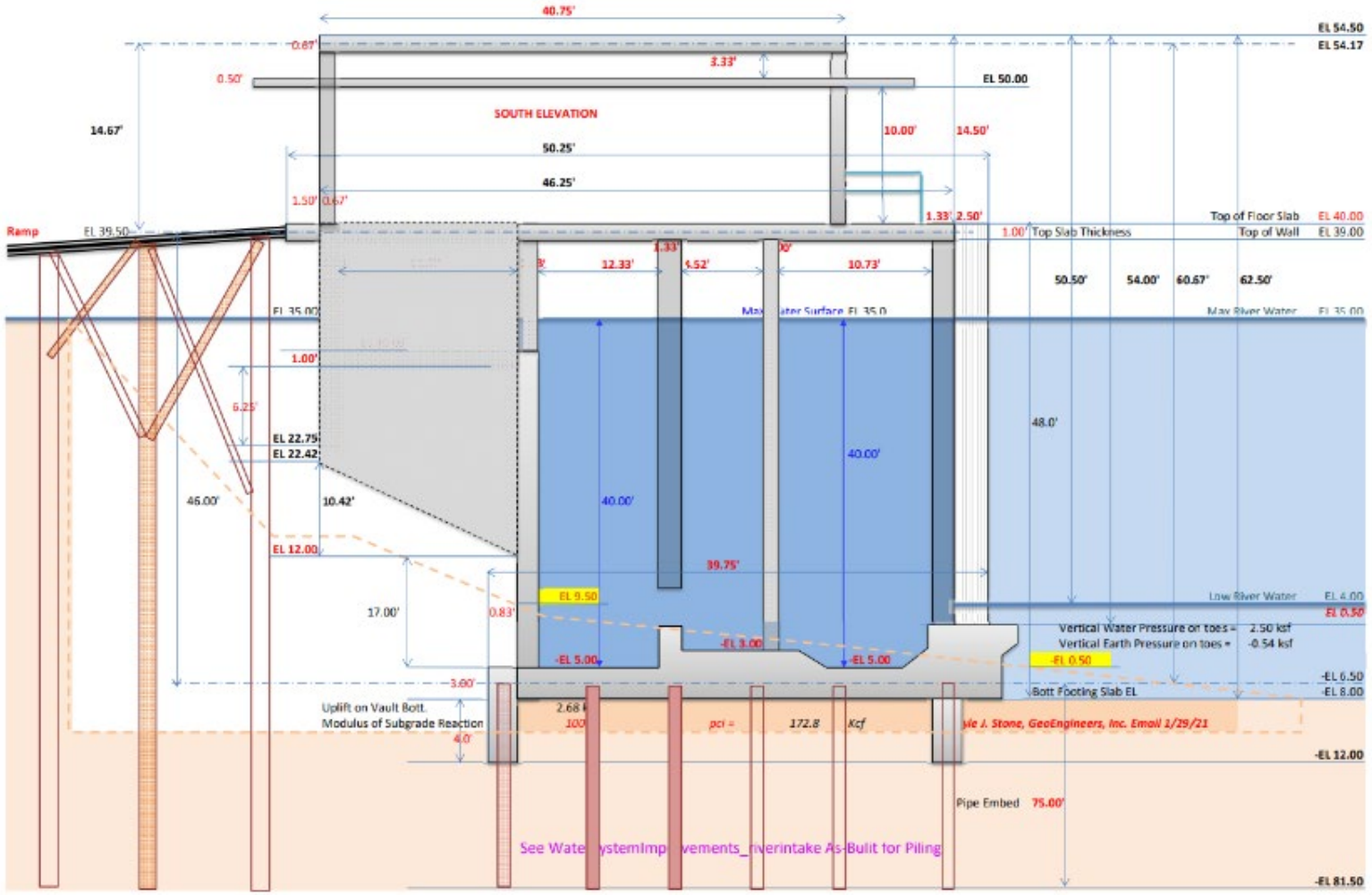
Location


South Supply line
Skagit River
River Bend Rd
Intake Pump Station
Raw Water Lines

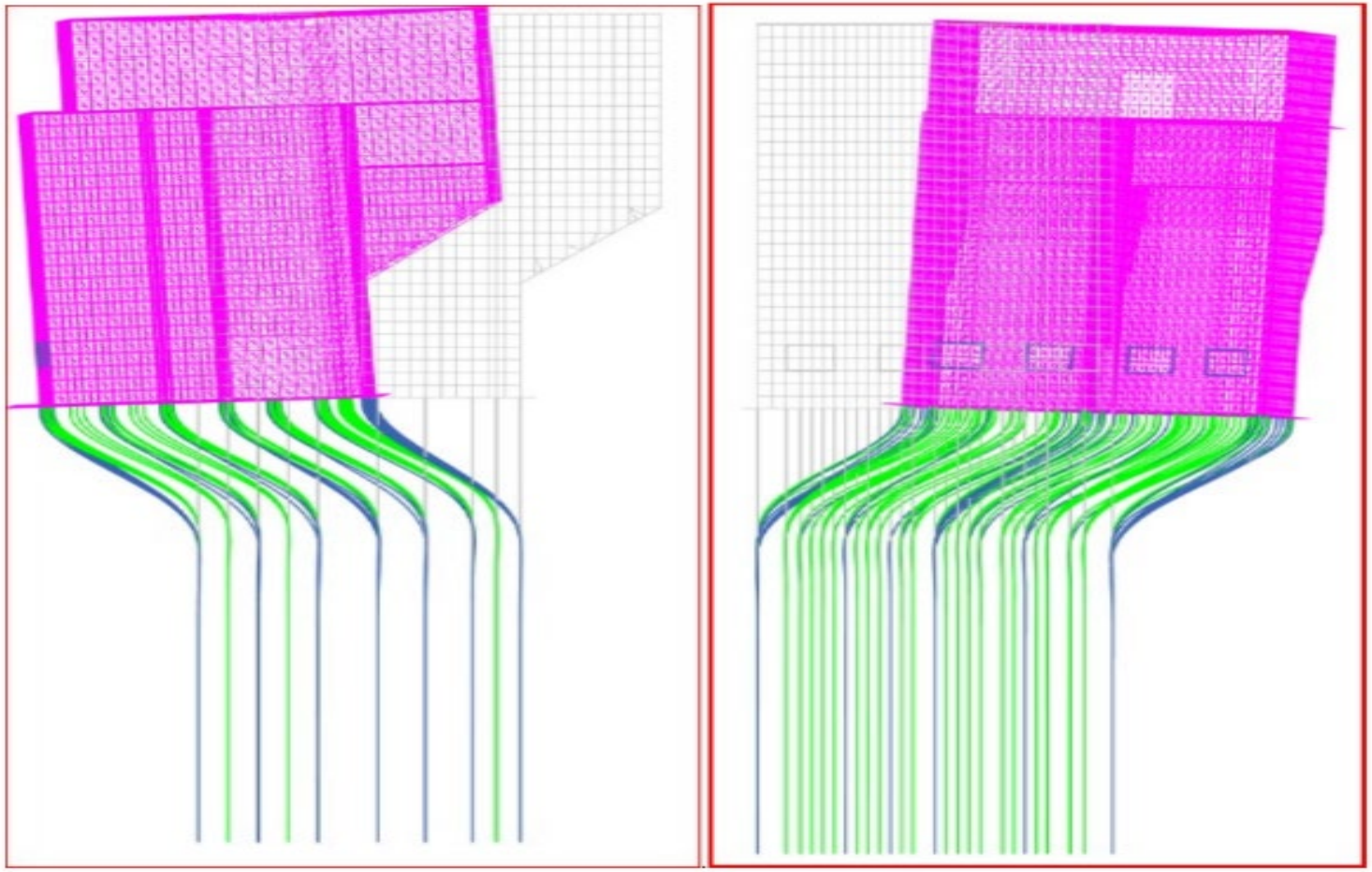
Previous Condition Assessment

- The 2025 condition assessment concluded that structural and mechanical components of the facility were in good condition.
- But the pilings supporting the structure would fail in a 2021 International Building Code (IBC) design seismic event.
- This would lead to an overall failure of the Intake pump station.

Intake Building profile



Expected Failure point



Building = Purple
Piles = Green

Sway
East/ West
North/ South

Goal Of The Analysis

- The objective of this scope is to analyze alternatives to retrofit the existing foundation
- To improve its performance with the goal of identifying capacities to accommodate a 2021 IBC design seismic event.
- This analysis will consider the feasibility of implementing the retrofit on a facility which must remain in operation to maintain water delivery.
- The analysis will also consider the cost of the project and high-level permitting requirements.

Asking for Approval to Award HDR not to exceed $158,700.00

Questions

City Council Agenda Bill

August 10, 2026

Action Type: Ordinance **Item:** 6.d.

Title: Ordinance 5035: Contract Numbering

Staff Contact(s): Darcy Swetnam

Approved for Submittal to Council by:
Darcy Swetnam
Steve Hoglund

Summary: While implementing the Tyler EERP software, the City learned that its contract numbering conventions were not allowable in the new software. Therefore, the City had to come up with a new contract numbering convention and renumber all existing contracts. Because the numbering convention is prescribed by the code, an update to AMC Chapter 1.30 is now necessary. While making that modification, it is a good time to clean up a couple of additional items, including the proper title of the Contracts and Grants Manager, and a clarification about the restrictions on delegation of authority over dark leases.

Because this is a non-regulatory ordinance, there is no requirement for two reads.

Budget Impact:
N/A

Previous Action: N/A

Recommended Motion: I move we adopt Ordinance 5035 to update the numbering system for city contracts.

Alternative Actions: Decline to adopt.

Attachments (listed in order presented):
1. 260805 Ord 5035

Ordinance 5035

An Ordinance amending AMC Chapter 1.30 to update the numbering system for city contracts

Whereas the City's newly-implemented Tyler EERP software includes restrictions on the format and number of characters that can be used for City contract numbers;

Whereas staff have identified a couple of cleanup items necessary to update Chapter 1.30, including correcting the title of the Contracts and Grants Manager position and clarifying that fiber lease modifications are included in the restrictions on delegated authority for dark fiber leases;

Whereas Council now wishes to update the Anacortes Municipal Code to address these items;

Now, therefore, the City Council does ordain as follows:

Section 1. The Anacortes Municipal Code is amended as shown in Exhibit A.

Section 2. Authority to Make Necessary Corrections. The City Clerk and the codifier of this Ordinance are authorized to make necessary corrections to this ordinance including, but not limited to, the correction of scrivener's clerical errors, references, ordinance numbers, section/subsection numbers and any references thereto.

Section 3. Severability. The various parts, sections, and clauses of this ordinance are hereby declared to be severable. If any section, subsection, paragraph, sentence, clause, or phrase of this ordinance is declared unconstitutional or invalid for any reason, such decision must not affect the validity of the remaining parts of this ordinance.

Section 4. Consistent with RCW 35A.12.130, this ordinance takes effect five days after passage, approval, and publication.

ADOPTED by the City Council of the City of Anacortes this ___ day of _____, 2026.

CITY OF ANACORTES:

_____
Ryan Walters, Mayor

Attest:

_____
Steven D. Hoglund, City Clerk-Treasurer

Approved as to Form:

Darcy Swetnam, City Attorney

Exhibit A - Chapter 1.30

The following sections of Chapter 1.30 are amended as follows:

Chapter 1.30 Contracts

1.30.030 Review.

A. All contracts must be reviewed by the following city staff members for consistency with the following criteria prior to approval:

1. The City Clerk-Treasurer must determine the contract is consistent with budget provisions and city finance policies and procedures. If the contract is within the current approved budget by the City Clerk-Treasurer may delegate the review to the department director.

2. The City Attorney must determine the contract is consistent with state, local, federal, and common law. If the contract is written on the City Attorney's pre-approved standard forms the City Attorney may delegate the review to the Contracts and Grants Manager ~~Specialist~~.

3. The department director responsible for the agreement must determine the contract is consistent with the department's budget, capital plan, and department objectives. If the contract is not consistent with one of the above, the department director must demonstrate the contract is necessary.

4. The City Contracts and Grants Manager ~~Specialist~~ must determine the contract is consistent with city procurement and contracting policies and procedures..

1.30.070 Numbering, recording, and retention.

A. The City Attorney's Office must assign every contract and modification a unique identifier. Contracts must be identified in the form CYYYY-#### where YYYY is the four-digit year of contract initiation and #### is a number with leading zeros incremented for each contract approved that resets to one at the beginning of each year. ~~The City Contract Specialist must assign every contract and modification a unique identifier. Contracts must be identified in the form YY-###-CAT-###, where YY is the two-digit year of project initiation and ### is the number with leading zeros incremented for each contract approved that resets to one at the beginning of each year. CAT is the category of the contract, and the final ### is the number of the instrument related to the project.~~ This subsection does not apply to contracts between the city and customers for residential or business-class internet service or to contracts for direct internet access.

B. Effective August 1, 2018, all contracts must be recorded in the city's electronic records management system and made available to the public on the city's website within five days of execution and receipt of all contract documentation. The requirement of posting contracts on the city's website in this subsection does not apply to contracts between the

city and customers for residential or business-class internet service or to contracts for direct internet access.

C. After recording in the city's electronic records management system and verification of imaging accuracy, the paper version of a contract may be destroyed consistent with Chapter 40.14 RCW.

1.30.080 Approval of municipal fiber contracts.

A. Mayor Approval.

1. The Mayor is authorized to approve the following contracts:

a. Dark Fiber Lease Agreements and Lease Agreement Modifications. Lease agreements and lease agreement modifications for customer use of unactivated deployed fiber within the city network through which the city transmits neither light nor any other signal; provided, that:

i. The lease is for no more than eight strands per each lessee;

ii. The aggregated lease term is for no more than five years;

iii. The requested lease will not interfere with the city's ability to provide residential and commercial fiber service to all potential subscribers;

iv. The lease is on a form approved by the City Attorney;

v. The lease is consistent with the requirements of AMC 13.56.050.

b. Telecommunication Contracts. Contracts for the provision of telecommunications services available through the city network, including contracts for point-to-point ethernet service, dedicated internet access service, and static IPv4 addresses; provided, that such contracts are on forms approved by the City Attorney.

2. Any contract that the Mayor is not authorized to approve pursuant to this section must be approved pursuant to the remaining provisions of this chapter.

B. Director of Fiber Manager Approval.

1. The Municipal Fiber Manager is authorized to approve contracts that meet all of the following criteria:

a. The contract is exclusively for the city's provision of residential and business-class internet services, and may include a right of entry for access to customer premises to complete connection work.

b. The contract includes the master service agreement approved by the City Attorney.

2. Any contract that the Municipal Fiber Manager is not authorized to approve must be approved pursuant to the remaining provisions of this chapter.