

<p>Chelan County</p> <p>Comprehensive Flood Hazard Management Plan</p> <p>Annual Progress Report</p>	<p>2021</p>
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Annual report on evaluating progress toward implementing flood hazard mitigation benefits in unincorporated Chelan County. The progress report must be submitted to the governing body, released to the media, made available to the public and will be included as part of the community's annual Community Rating System (CRS) recertification.



Chelan County Flood Control Zone District
316 Washington Street, Suite 402 | Wenatchee, WA | 98801 | (509) 667-6415

Prepared By
Jason Detamore | Environmental Manager

Approved By
Eric P. Pierson, P.E. | District Administrator

Reporting Period: *January 2021 – December 2021*

Background: Chelan County developed a Comprehensive Flood Hazard Management Plan (CFHMP) to reduce risk from flooding through identified resources, information, and strategies. To prepare the plan, Chelan County organized resources, assessed risks from flooding, developed planning goals and objectives, reviewed mitigation alternatives, and developed an action plan to address probable impacts from floods to public infrastructure. The plan can be viewed online:

<http://www.co.chelan.wa.us/flood-control-zone-district>

Purpose: The purpose of this report is to provide an annual update on the implementation of the action plan identified in the CFHMP. The objective is to ensure that there is a continuing and responsive planning process that will keep the floodplain management plan dynamic and responsive to the needs and capabilities of Chelan County and its stakeholders. This report discusses the following:

- Flood events that have occurred within the last year
- Changes in risk exposure within the planning area
- Mitigation success stories
- Changes in capabilities that could impact plan implementation
- Review of the action plan
- Recommendations for changes/enhancement

Flood Events within the Planning Area: During the reporting period, Chelan County did not experience any high intensity rainfall events that typically would send water, mud, rock, and woody debris over and on top of numerous roadways, leading to plugged culverts, filled/eroded ditches, cause public and private property damage and other similar problems that are typically witnessed during flood events of this nature. As a result, the Board of County Commissioners did not have to issue any emergency flood declarations for Chelan County, and in turn, have cost recovery reimbursement requested by the Public Works Department. The FCZD Board of Supervisors did not have to approve any dollars out of the Emergency Response and Recovery budget to recover from these type of events in 2021.

Changes in Risk Exposure in the Planning Area: Two substantially sized forest fires occurred in Chelan County in 2021; the Red Apple Fire was first reported on July 13, 2021 and burned over 12,200 acres and the Twenty-Five Mile Fire was first reported on August 15, 2021 and burned over 22,200 acres. As with most fires of this nature, fire-damaged soils have high root mortality, exhibit increased rates of water runoff, sediment transport, and erosion. This creates a concern for roads, culverts, bridges, channels, and public/private property along the drainage paths of the burned watersheds in that they may plug, be overtopped, washed away, or impacted by increase in runoff/sediment on a more frequently basis than under pre-fire conditions.

Mitigation Success Stories: Chelan County continues its efforts to better understand the exposure to risk due to flooding and provide outreach material to the public about these risks. In 2021, these efforts included:

- Continuing to update Flood Control Zone District webpage
- Continued the permitting process for development within the floodplain
- Outreached to homeowners identified in FEMA's Community Assistance Visit that had deficient flood certifications and coordinated correction requirements
- Developed a 2021 FCZD newsletter
- Continued to manage seven (7) rain gages and one (1) stream gage in Mad River all as emergency alert systems linked to the National Weather Service. Moved one rain gage to Grouse Mountain near the Twenty-Five Mile Fire parameter to assist the National Weather Service with rainfall data and emergency alerts.

Several mitigation projects are either under development or have been completed during this reporting period:

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- Slide Ridge (Lake Chelan) – Final stages of construction to replace undersized culvert with a bridge, improve conveyance of flood debris, and enlarge berms/side slopes (FEMA Hazard Mitigation Grant awarded for construction). Project is anticipated to be complete in spring 2022.
 - No. 1 Canyon Debris Basins #2 – Approximately at 90% design completed, which includes four basins to detain and release flood waters. A FEMA Hazard Mitigation Grant preliminarily awarded for construction, awaiting contract. Construction of project is anticipated in fall 2022. Public notification of the project will occur.
 - Ski Hill Basin Analysis – Phase 2 has begun, which is intended to investigate opportunities to improve conveyance and decrease flooding in this basin. A design report is anticipated in early 2022 with a community meeting to discuss the preferred alternative(s).
 - Antoine Creek (Chelan) – Completed the replacement of three undersized culverts that, as a result of the Chelan Complex Fire, were causing roadway damage during high water events. A FEMA Hazard Mitigation Grant was awarded for this project.
 - No. 2 Canyon Mitigation Strategy – The FCZD received a Department of Ecology Flood Control Assistance Account Program (FCAAP) grant for this project. Request for Qualifications is being advertised and will close in early January 2022.

Changes That May Impact Implementation of the CFHMP: No significant changes in the planning area in 2021 that would have a profound impact on the implementation of the CFHMP or with public outreach efforts. No technical or financial capabilities identified during the plan's development have changed.

A 2015, Community Assistance Visit (CAV) by the Department of Ecology identified the lack of a Flood Development Permit as a deficiency in the county's flood program and, as a result, is not in compliance with the National Flood Insurance Program (NFIP). The FCZD assisted Chelan County Community Development Department to create and implement a Flood Development Permit based upon Chelan County Code chapter 3.20. On August 1, 2018, the Department of Ecology closed the CAV and found the county in compliance with the NFIP.

Following the Department of Ecology's CAV, FEMA conduct a follow up CAV in July 2019 and found deficiencies in a number of the county's building permits issued within the special flood hazard area (i.e. 100-year floodplain). As a result of this finding, Chelan County has revised internal permitting procedures, began to reach out to homeowners alerting them of required repairs to adhere to building codes, and keeping FEMA apprised of progress made towards correcting these deficiencies. FEMA has indicated that they are satisfied with the progress the county is making at this time.

COMPREHENSIVE FLOOD HAZARD MANAGEMENT PLAN PROGRESS

Summary Overview of the Flood Plan's Progress: The performance period for the floodplain management plan became effective on November 13, 2017, with the adoption of the CFHMP by the Chelan County FCZD Board of Supervisors. The initial performance period for this plan will be 5 years, with an anticipated update to the plan to occur before November 2022. The CFHMP has targeted 38 flood hazard mitigation actions to be pursued during the 5-year performance period. As of the reporting period, the following overall progress can be reported:

23 out of 38 actions (61%) reported ongoing action toward completion.

2 out of 38 actions (5%) were reported as being complete.

13 out of 38 actions (34%) reported no action taken.

The Floodplain Management Plan Steering Committee: The CFHMP steering committee, made up of stakeholders within the planning area, determined through the plan's development process that a steering committee would remain in service to oversee maintenance of the plan. At a minimum, the Steering Committee 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 Steering Committee membership is as indicated in Table 1.

Table 1: Steering Committee Members

Name	Title	Jurisdiction/Agency
Tom Wachholder	Director of Public Works	City of Leavenworth
Lilith Vespier	Development Services Director	City of Leavenworth
Steve Croci	Director of Operations	City of Cashmere
Jessica Shaw	Deputy Public Works Director - Utilities	City of Wenatchee
Mark Botello	Community Development Director	City of Entiat
Bob Goedde	Mayor	City of Chelan
Chris Young	Interim Director/Floodplain Administrator	Chelan County Community Development Department
Mike Kaputa	Director	Chelan County Natural Resource Department
Jason Reinfeld	Sergeant	Chelan County Emergency Management
Eric Pierson	FCZD Administrator	Chelan County FCZD / Public Works
Jason Detamore	Environmental Manager	Chelan County FCZD / Public Works
Sandra Floyd	Floodplain Management Specialist	Department of Ecology
Ryan Williams	Director	Cascadia Conservation District
David Morgan	Watershed Coordinator	Chelan-Douglas Land Trust
Vacant	Hydraulics Engineer	WSDOT
Robin Fox	Service Hydrologist	National Weather Service
Vacant	Engineering Staff Officer	U.S. Forest Service
Jennifer Burns	Environmental Coordinator	Chelan PUD
Bob Whitehall / Aaron Young / Phylisha Olin		Citizens

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 CFHMP for more detailed descriptions of each initiative and the prioritization process.

Table 2: Action Plan Matrix

Action Taken (Yes/No)	Description	Priority	Timeline	Status (X, O, ✓)
1	Define regional flood hazard management consistency pursuant to RCW 86.12 for the planning area. This definition will strive to exceed minimum National Flood Insurance Program standards and will be developed thru a facilitated planning effort with all cities within Chelan County.			
Yes	Chapter 5 of Chelan County's Comprehensive Flood Hazard Management Plan details regional consistency and are further expanded upon within the policies (Chapter 12). Cities within Chelan County should review regional consistencies to ensure compliance.	High	Ongoing	O
2	Chelan County will continue with the Community Rating System (CRS) application and classification process and will mentor Chelan County cities that show interest in CRS participation.			
Yes	The Insurance Service Office (ISO) conducted a CRS verification visit on August 1, 2018. Joining the CRS program is anticipated to occur in future years once all deficiencies are addressed.	High	Ongoing	O
3	Define floodplain mapping criteria that takes into account future flood hazard conditions and/or expected worst case conditions to be applied to all future flood studies within the planning area.			
No	This action item has yet to begin.	High	Unknown	X
4	Identify alternative sources of funding to leverage Flood Control Zone District funding to perform new flood studies in identified areas of need based on risk.			
Yes	The FCZD continually seeks out alternative sources of funding through agencies such as FEMA, Department of Ecology, Army Corps of Engineers, and the Chelan County Surface and Stormwater Management Utility.	High	Ongoing	O
5	Inform all future mapping by maintaining a database on known flood risk that tracks historical flood conditions to include, but not limited to: high water marks, recorded damages, photos, observed flood conditions, etc.			
No	The FCZD anticipates developing a protocol for mapping and maintaining a database on known flood risks.	Medium	2022	O

Action Taken (Yes/No)	Description	Priority	Timeline	Status (X, O, ✓)
6	Continue to implement the Stormwater Management Program that includes facility identification, design, construction and maintenance within the stormwater utility jurisdictional authority.			
Yes	Chelan County's Stormwater Management Program was updated in 2018 and will be again in 2022. The County continues to improve upon asset management tracking within the utility boundary. Stormwater infrastructure continues to be added to a new GIS tracking system.	High	Ongoing	O
7	For areas outside of the Stormwater Utility, clearly define the stormwater management program based on existing programs and capabilities.			
Yes	Chelan County Code chapter 13.16 – Stormwater Management for Chelan County, provides stormwater guidance on development projects throughout the county. Stormwater infrastructure data is gathered as time allows and entered into GIS as a means for asset management.	Medium	Ongoing	O
8	Develop a facility maintenance operations and maintenance protocol for Flood Control Zone District funded facilities as they are developed.			
Yes	As part of the new debris basins being designed for the No. 1 Canyon basin, an Operation and Maintenance plan will be developed.	Medium	Ongoing	O
9	Investigate solutions to issues associated with modification to the landscape that increase runoff, including sediment, to adjacent properties and infrastructure.			
No	A type of a land use modification tracking system combined with new regulations may be considered in the near future as a means to minimize sediment-laden runoff leaving properties.	Medium	Unknown	X
10	When requested, the Flood Control Zone District may act as the applicant agent for mitigation grant opportunities for private property requesting to participate in the grant program.			
No	At this time there hasn't been an opportunity to act as the applicant agent for a private property mitigation grant. If the opportunity presents itself, the District Administrator and Board of Supervisors may consider this opportunity.	Medium	Not Applicable	X

Action Taken (Yes/No)	Description	Priority	Timeline	Status (X, O, ✓)
11	Develop a flood informational website on the Flood Control Zone District web page.			
Yes	In 2021, the FCZD webpage continued to be updated in order to provide useful information to the citizens of Chelan County. It can be accessed at www.co.chelan.wa.us/food-control-zone-district	High	Ongoing	O
12	Deploy public information and outreach program targeting at risk properties within the planning area.			
Yes	The County continues to disseminate flood risk information through its website; support direct mailings to properties within the special flood hazard area (100-year floodplain); online newsletter, press releases to local media; and personal interaction through phone calls, permit counter inquiries and during the permit application and/or review process.	High	Ongoing	O
13	Coordinate with FEMA Region X on deploying flood insurance workshops for agents, lenders and citizens within the performance period for this plan.			
No	At this time, coordination with FEMA Region X has not occurred. The county is attempting to correct deficiencies as a result of the CAV. Once complete, opportunities may change.	High	Not Applicable	X
14	Investigate feasible, cost-effective solutions to flood issues within No. 1 Canyon.			
Yes	Currently, the FCZD is at 90% design for four new debris basins within the drainway. A FEMA grant has been awarded for \$1 million for the construction of this project, which may as soon as 2022. Additionally, the No. 1 Canyon Gap Analysis was completed in 2020, which details system deficiencies in both Chelan County and the City of Wenatchee.	High	2022	O
15	Identify a feasible, cost-effective solution to Slide Ridge debris flow issues.			
Yes	In 2021, the FCZD is near 90% complete with construction to improve Slide Ridge and to correct debris flow issues. Construction should be complete in spring 2022.	High	2021	O

Action Taken (Yes/No)	Description	Priority	Timeline	Status (X, O, ✓)
16	Investigate feasible, cost-effective solutions to flood issues within No. 2 Canyon.			
Yes	The FCZD received a Department of Ecology Flood Control Assistance Account Program (FCAAP) grant for this project. It is anticipated that the mitigation strategy will be completed in 2023.	High	Unknown	O
17	Investigate feasible, cost-effective solutions to flood issues within Dry Gulch (south of City of Wenatchee).			
No	Work has not begun on this action item.	High	Unknown	X
18	Investigate feasible, cost effective solutions to flood issues within Mission Creek.			
No	Work has not begun on this action item.	High	Unknown	X
19	Investigate feasible solutions to flood issues within Ski Hill Basin.			
Yes	Phase 2 has been funded within the 2021 FCZD budget and will ultimately outline a number of solutions to minimize flooding within the Ski Hill Basin.	High	2019-2022	O
20	Coordinate with City of Cashmere on options for the maintenance and management of the levee system within the City and County.			
Yes	The Cashmere Levee Management Plan was completed in May 2018 and environmental permitting is completed.	High	Completed	✓
21	Maintain database of flood control needs within the planning area as needs become identified for incorporation into future updates and progress reporting to this plan.			
Yes	The FCZD attempts to investigate flood control needs throughout Chelan County when needed. If warranted, new information will be added to future updates and progress reporting.	High	Ongoing	O
22	Mitigate flood related risk to publicly owned county bridges.			
Yes	Chelan County maintains a robust bridge management program that includes inspection and a maintenance schedule on necessary bridges. Mitigating flood risk to county bridges is part of this program and is undertaken as funding allows.	Medium	Ongoing	O

Action Taken (Yes/No)	Description	Priority	Timeline	Status (X, O, ✓)
23	Maintain the county Critical Areas Ordinance (CAO) pursuant to the requirements of the State Growth Management Act.			
Yes	Chelan County's Critical Area Ordinance found in Title 11 of the county code is currently in compliance with the State Growth Management Act.	High	Ongoing	O
24	Identify feasible opportunities with like goals for natural resource protection within identified flood risk areas based on available funding.			
No	This opportunity has not presented itself and did not occur in 2021.	High	Unknown	X
25	Coordinate with watershed planning and program implementation to identify opportunities to leverage available funding for like goals between watershed and Flood Control Zone District plans and programs.			
No	In 2021, opportunities were lacking to coordinate with watershed planning units.	High	Unknown	X
26	Utilizing the best available data, science and technology, enhance the existing flood notification program, striving to identify a notification protocol within systems that have real-time flood threat recognition capability.			
Yes	Chelan County continues to maintain a series of rain gages that provide the National Weather Service with real-time data to issue emergency alerts. A stream gage was added to the Mad River drainage as a result of the Cougar Creek Fire and a rain gage to Grouse Mountain as a result of the Twenty-Fire Mile Fire. All are connected to the National Weather Service.	Medium	Ongoing	O
27	Update the County emergency response plan to reflect any changes to flood notification protocol within the County.			
No	Once Chelan County Emergency Management updates the county's emergency response plan, flood notification protocols will be added.	High	Unknown	X

Action Taken (Yes/No)	Description	Priority	Timeline	Status (X, O, ✓)
28	Conduct annual exercises of the County Emergency Operations Plan in compliance with National Incident Management System standards, such that flood response actions of the County are reviewed, evaluated, and adapted based on observations from the exercises.			
Yes	The FCZD and its partner, the county's Public Works Department, cooperatively coordinate with Emergency Management and the Sheriff's Office in an annual tabletop exercise.	High	Ongoing	O
29	Draft a prioritized list of road segments and bridges that should be elevated above the 100-year flood hazard area and culverts that will fail under flood flow. Upgrade these structures if funding become available.			
No	Chelan County Public Works will need to complete a prioritized list of culverts, road segments, and bridges that should be elevated above the 100-year floodplain. Once this list is complete, prioritization will need to occur in order to determine where funding should be obligated. The county should also continue to work with FEMA, under RiskMAP program, for assistance on flood mapping.	Medium	Unknown	X
30	Integrate the Chelan County Comprehensive Flood Hazard Management Plan into other appropriate plans and programs that can support or enhance the County's efforts to reduce flood risk as these plans and programs are updated. Examples of such plans/programs would include, but are not limited to: Chelan County Hazard Mitigation Plan, Chelan County Comprehensive Plan, and Chelan County Shorelines Master Plan.			
Yes	In 2019, Chelan County completed the Hazard Mitigation Plan, which will utilize information found within the Comprehensive Flood Hazard Management Plan. The FCZD is an official annex or partner in the Hazard Mitigation Plan.	Medium	Ongoing	O
31	Utilizing the best available data, science and technology, maintain and enhance as data becomes available the Level 2, user-defined HAZUS-MH model that was constructed to support this planning effort.			
No	At this time, this action item has not been addressed.	Medium	Unknown	X
32	Establish a sediment management program that includes expanded channel monitoring, establishment of thresholds to trigger actions, and analysis of sediment management action alternatives.			
No	The FCZD has not begun to address this action item.	High	Unknown	X

Action Taken (Yes/No)	Description	Priority	Timeline	Status (X, O, ✓)
33	As Flood Control Zone District projects are constructed, monitor projects using identified performance measures and adaptive management to track the effectiveness of completed projects to inform the design and implementation of future projects.			
No	Since the FCZD inception in 2014 and the adoption of the Comprehensive Plan in 2017, construction projects funded by the FCZD have not yet been completed.	High	Not Applicable	X
34	Respond to inquiries and complaints from citizens and other public and private agencies and track per Community Rating System requirements.			
Yes	The county's Community Development and Public Works Departments, in coordination with the FCZD, field and respond to questions/complaints from other public and private agencies. A standard countywide tracking system per CRS requirements will continue to be implemented in 2022.	High	Ongoing	O
35	Maximize federal, state, and local funding opportunities through grant application submittals in support of capital improvement projects, technical studies, and other flood hazard management activities.			
Yes	Chelan County's FCZD staff continually seeks out applicable grant opportunities.	High	Ongoing	O
36	Continue to provide flood hazard management technical support to all Chelan County departments and cities proposing activities or projects that affect floodplain functions.			
Yes	The FCZD proactively coordinates with necessary departments within Chelan County to provide necessary flood hazard management technical support. Cities have the ability to contact the FCZD when activities or projects arise that may affect floodplain functions.	High	Ongoing	O
37	Continue to maintain good standing under the National Flood Insurance Program by implementing programs that meet or exceed the minimum National Flood Insurance Program requirements. Such programs include enforcing an adopted flood damage prevention ordinance, participating in floodplain mapping updates, and providing public assistance and information on flood hazard requirements and impacts.			
Yes	Chelan County continues to meet the NFIP requirements and will work to maintain compliance in 2022.	High	Ongoing	O

Action Taken (Yes/No)	Description	Priority	Timeline	Status (X, O, ✓)
38	Develop and implement a stand-alone floodplain development permit for all new development and/or substantial improvements within the unincorporated County regulated floodplain.			
Yes	Chelan County's Flood Development Permit was implemented August 1, 2018, and is being overseen by the Floodplain Administrator in the Community Development Department, with engineering support provided by the FCZD.	High	Completed	✓

Completion Status Legend:

✓ = Project completed

O = Action ongoing towards completion (These are actions that have continuing oversight, management, or are a specific task to be accomplished).

X = No progress at this time

Recommendations for Changes or Enhancements: Based on the review of this report by the floodplain management plan Steering Committee, the following recommendations will be noted for future updates or revisions to the plan:

- CFHMP expires in 2022. The FCZD will be investigating update requirements with FEMA.
- _____
- _____
- _____
- _____

PUBLIC REVIEW NOTICE

The contents of this report are considered to be public knowledge and have been prepared for public disclosure. Copies of the report have been provided to the FCZD Board of Supervisors and to local media outlets and the report is posted on the floodplain management plan website. Any questions or comments regarding the contents of this report should be directed to:

Chelan County Flood Control Zone District

C/O Chelan County Public Works Department

316 Washington St, Suite 402

Wenatchee WA 98801

(509) 667-6415

FCZD@co.chelan.wa.us