

Agency Comments: Comprehensive Flood Hazard Management Plan

All public comments received from January 3rd to February 3rd have been grouped in this summary by commenter, comments specific to the Comprehensive Flood Hazard Management Plan, and general comments. A summary of each specific comment is followed by staff review and a recommendation, while the general comments has only a staff review and comments.

Acronyms:

Flood Control Zone District: FCZD, the District

Comprehensive Flood Hazard Management Plan: Comprehensive Plan or Plan

Chelan PUD (Bill Christman), Email dated January 10, 2017

1. Some of the numbers associated with Chelan PUD's Hydroelectric Projects within Table 8-8 are not correct. Here are the numbers we use:

Lake Chelan

- 30 ft high, from deck (1109) to riverbed (apron at 1079)
- Storage capacity between the minimum reservoir elevation allowed by the operating license and the maximum normal high lake elevation (1100) is 677,400 acre-ft

Rock Island

- 80 ft high from deck (616) to foundation of north abutment wall (536)
- Gross storage capacity 113,700 acre-ft

Rocky Reach

- 135 ft high from parapet wall (720) down to foundation (585)
 - a. **Staff Review and Comment:** *Table 8-8 needs to contain accurate information.*
 - i. **Recommendation:** Table 8-8 will be updated to reflect the above information provided by the Chelan PUD.

2. The foot note at the bottom of Table 8-8 stating "Dams listed are those with Downstream Hazard Class 1 (>300 lives at risk)." We have, many times over many decades, completed dam break studies accepted by the Federal Energy Regulatory Commission. The dam break studies have been performed many times in response to regulation revisions, updates, better modeling techniques, and to support relicensing processes. The results have consistently, and continue to exhibit that the water surface/flood wave resulting from dam-break and/or severe hydrologic events is maintained within each of the Hydroelectric Project's very wide Project Boundaries, which we own. There is no expected loss of life from a dam failure on any of these 3 Hydroelectric Projects. The Projects are classified as high hazard by the Federal system because of the "loss" of power, and owner/regulator esteem is too great to be considered a low hazard. The Projects' extreme dam break results exhibit no flooding of occupied structures, very little park inundation, no camping inundation, and no loss of roads or bridges. I realize the data was provided to you by Washington Department of Ecology, but it's not correct. The life loss potential is at, or approaching zero.

a. **Staff Review and Comments:** *Comment is noted.*

- i. **Recommendation:** A footnote will added to Chelan PUD's three hydroelectric project dams. This footnote will read "According to Chelan County PUD dam break studies, in an event of a dam-break, the water

surface/flood wave will be maintained within the PUD's project boundaries which places the loss of life near zero."

3. The Tumwater Project is not classified as high hazard in either of the Washington DOE or the Federal systems. However, we've received inquiries from time to time about its potential hazards, and we've therefore completed dam-break studies, downstream inundation mapping, and an embankment erosion assessment for the State Highway. And, although the Tumwater Project performed well during the 1996 Wenatchee River's record runoff, the State Highway embankment downstream of the Project failed and the WSDOT contended at that time the Project contributed to the highway embankment failure. Consequently, I estimate you will hear from your Upper Valley and some Agency stakeholders that Tumwater Project should have been included. If you want to include it, I'll be happy to provide you with the pertinent information.

- a. **Staff Review and Comment:** *For the reasons outlined above, it is advantageous for Chelan County to place the Tumwater Dam within this table.*

- i. **Recommendation:** The Chelan PUD provided the following information for the Tumwater Dam and should be added to Table 8-8.

- ◆ The facility construction commenced in 1907 and was completed in 1909. Upgrades/major maintenance was performed in 1986 with addition of the fishway on the left bank, and in 1997 with spillway reinforcing.
- ◆ The crest length is about 400 feet.
- ◆ The height is about 20 feet.
- ◆ The storage capacity is less than 10 acre-feet as a result of the gradual and nearly complete infilling of the forebay with sandy-gravel material.
- ◆ The drainage area is about 686 square miles.

4. Whether or not Tumwater is included, as a result of the information noted above for Chelan, Rock Island, and Rocky Reach I encourage you to consider re-titling Table 8-8 from "High Hazard Dams" to something more like "Significant Dams". I believe that would be consistent with existing Federal System and State system (e.g. ASDSO) designations.

- a. **Staff Review and Comment:** *Comment is noted.*

- i. **Recommendation:** Table 8-8 will be renamed "Significant Dams in Chelan County". Section 8.3.2 – Dams will be updated to reflect this change.

Washington Fish and Wildlife (Amanda Barg), Emailed letter dated February 3, 2017.

- 1) Section 1.3.3 Chelan County FCZD Interim Operating Guidelines. This section of the plan mentions the proposed development of a 5-year FCZD capital facilities plan to reduce potential flood risks in the following areas: Slide Ridge, Number One Canyon, Number Two Canyon and flood plain reconnection. The actions proposed by the County would meet the definition of "hydraulic project" under RCW 77.55.011(11) "...the construction or performance of work that will use, divert, obstruct, or change the natural flow or bed of any of the salt or freshwaters of the state", and therefore fall under the jurisdiction of WDFW. The drainages are tributaries to the Columbia River and Lake Chelan, which are fish-bearing waters. Therefore, a Hydraulic Permit Approval (HPA) application and

permit is required to ensure that construction or performance of hydraulic project work is conducted in a manner that is protective of fish life.

a. **Staff Review and Comment:** *Comment is noted.*

i. **Recommendation:** Chelan County will be cognizant of local, state, and federal permitting requirements when capital projects are proposed. Early communication on these projects will minimize any potential miscommunications regarding necessary permitting requirements.

2) Section 4.2 Washington State Relevant Programs and Regulations. This section clearly outlines State-level programs and regulations that relate to the Comprehensive Flood Hazard Management Plan. WDFW requests the addition of a paragraph referencing the Hydraulic Code (RCW 77.55) and recommends the following language: "The Washington State Hydraulic Code (RCW 75.55 and WAC 220-660) is administered by WDFW to ensure that construction or performance of hydraulic project work is conducted in a manner protective of fish life. Hydraulic projects are defined as "the construction or performance of work that will use, divert, obstruct, or change the natural flow or bed of any waters of the salt and fresh waters of the state" (RCW 77.55.011(11)). Similar plans in other counties, such as the Yakima County Naches River Comprehensive Flood Hazard Management Plan, include extensive references to WDFW's Hydraulic Code authority and the HPA permitting process.

a. **Staff Review and Comment:** *Comment is noted*

i. **Recommendation:** Section 4.2.13 – Washington State Hydraulic Code will be added to the Comprehensive Plan and will read: The Washington State Hydraulic Code (RCW 75.55 and WAC 220-660) is administered by WDFW to ensure that construction or performance of hydraulic project work is conducted in a manner protective of fish life. Hydraulic projects are defined as "the construction or performance of work that will use, divert, obstruct, or change the natural flow or bed of any waters of the salt and fresh waters of the state" (RCW 77.55.011(11)).

3) Section 8.3.2 Levees. The section makes reference to the three levee segments in Chelan County, all located within the City of Cashmere along the Wenatchee River. The Draft Comprehensive Flood Hazard Management Plan states: "None of these levee segments are currently accredited by FEMA or have been accepted under the U.S. Army Corps of Engineers Program (PL 84-99) as discussed in Section 4.1.16." WDFW recommends considering removing or re-wording the following sentence: "Lack of adequate and regular maintenance to correct these problems also contributes to levee failure, including vegetation." Since addressing levee vegetation is not mentioned elsewhere the Draft Comprehensive Flood Hazard Management Plan this could be confusing and does not clarify what is meant by this statement. WDFW recommends the following language:

"Chelan County FZCD is facilitating and funding the interagency coordination of a Vegetation Management Plan to reduce potential factors that may possibly lead to levee failure, including riparian vegetation." Since the coordination has not officially commenced, WDFW recommends providing information in the Comprehensive Flood Hazard Plan regarding when this vegetation plan is scheduled to be drafted and implemented. WDFW appreciates Chelan County's inclusion of WDFW in the interagency coordination for the development of this Vegetation Management Plan.

- a. **Staff Review and Comment:** *The second paragraph details numerous causes of levee failure, one of which is lack of adequate and regular maintenance. This includes vegetation.*

- i. **Recommendation:** It is recommended that the language within the paragraph remain as-is. Detailing all potential causes of levee failure is important.
- ii. Chelan County will continue to assist in the coordination between the City of Cashmere, WDFW, and all other applicable agencies as it relates to the potential maintenance of vegetation along the City of Cashmere levee system.

- 4) Section 12.4 River Channel Maintenance Policies, Policy CM-1, CM-2, CM-3 and CM-4. The actions listed in these policies are all subject to prior approval from WDFW through the application and issuance of an HPA permit. WDFW recommends coordinating in the initial planning stages to facilitate permitting. Early and often coordination ensures the approved actions will be protective of fish life and fish habitat.

- a. **Staff Review and Comment:** *Comment is noted.*

- i. **Recommendation:** Chelan County agrees with WDFW regarding the above comment. Nothing further is needed at this time.

- 5) Section 12.5 Flood Warning and Emergency Response Policies, Policy FW-4: Agency Coordination. Please include WDFW as a coordinating agency. During flood warnings and as part of emergency response procedures, WDFW is available to provide public and county government sector support, such as issuance of Emergency and Expedited/Imminent Danger HPAs. In the event there is an immediate threat to life, the public, property, or environmental degradation, WDFW can issue an emergency HPA permit using verbal approval for activities necessary to protect or repair property immediately threatened by flood waters or related debris flows. RCW 77.55.021(12)(b); WAC 220-660-050(4). Some of these water bodies may also meet the standards for a "chronic danger" HPA. WAC 220-660-050(6).

- a. **Staff Review and Comment:** *Comment is noted.*

- i. **Recommendation:** Washington Fish and Wildlife and the Department of Ecology are to be added under other entities as needed.

- 6) Section 13.1.3 Government Section Actions (for mitigation). WDFW supports and encourages the actions listed by Chelan County to reduce their vulnerability to flooding hazard through the replacement of undersized culverts and to retrofit, protect or replace scour critical bridges. WDFW recommends that this same language also be included in Section 13.1.1 Public Sector Actions. WDFW has witnessed many private land owners in Chelan County face serious threat to safe access to their homes because of flood damage to their private water crossing structures.

- a. **Staff Review and Comment:** *Comment is noted.*

- i. **Recommendation:** "Replace undersized culverts" and "Retrofit, protect, or replace scour critical bridges" will be added to Section 13.1.1 – Public Sector Actions, Reduce vulnerability to the flooding hazard.

- 7) Section 13.1.3. WDFW appreciates Chelan County's efforts to develop outreach materials, educate residents on types of projects that may increase flood risk, and educate residents on the nexus between water conservation, drought and flood. WDFW wishes to support Chelan County in your

outreach and education efforts and hope you will contact us to work with you on developing the materials.

a. **Staff Review and Comment:** *As this effort progresses, support by WDFW would be appreciated.*

i. **Recommendation:** Nothing further is required.

8) Section 13 Mitigation Actions. The mitigation actions described have the ability to make a significant difference in the flood risk to Chelan County infrastructure and Chelan County residents. However, many of the types of mitigation actions suggested are potentially expensive. Infrastructure improvements that reduce flood risks are critical but can be expensive, e.g. replacing undersized culverts and scour critical bridges. WDFW would like to emphasize the administrative alternatives and policies such as zoning regulations, buy outs and flood-proofing (mentioned in Section 12) can be less expensive alternatives to reducing flood risks.

a. **Staff Review and Comment:** *All options are needed to be considered when mitigation funding is available.*

i. **Recommendation:** Nothing further is required.

General Comments

1) WDFW recommends researching basins similar to Chelan County flood risk areas on how altered flow regimes have affected sediment transport, flooding, and geomorphology. A variety of local, state and federal agencies, Native American tribes, and other non-governmental organizations are involved in key river issues such as fishery resources, wildlife habitat, and public use. The presence of fishery resources, including salmon and steelhead, is a key consideration in performing any flood hazard management activities in and around the waters of the State of Washington. The potential loss of fish habitat resulting from construction in and next to rivers has been a major concern of fisheries agencies, sports fishermen, salmon recovery organizations and Native American tribes. To ensure that fishery resources are maintained, the WDFW is a willing partner to provide review of any proposed actions that would result from policies in the Comprehensive Flood Hazard Management Plan.

a. **Staff Review and Comment:** *The county is familiar with WDFW's ability to provide input on projects and will contact WDFW when any work is proposed that may impact fisheries.*

2) The floodplains of Chelan County enrich its citizens and Washington State by providing visually pleasing landscapes, filtering pollutants, ameliorating flood effects, and providing irreplaceable habitat for fish and wildlife. WDFW's comments on the draft Chelan County Comprehensive Flood Hazard Management Plan are intended to support Chelan County's efforts to reduce the risk to people and property from river flooding and alluvial fan and channel migration in Chelan County while preserving the beneficial functions in flood prone areas.

WDFW welcomes the opportunity to work with Chelan County on further development of the Draft Comprehensive Flood Hazard Management Plan and implementation of the Final Comprehensive Flood Hazard Management Plan. Please keep WDFW apprised of the status of any changes to the plan.

a. **Staff Review and Comment:** *Chelan County appreciates the time WDFW took to review and comment on the Comprehensive Plan. The county looks forward to a strong working relationship implementing items within this Plan.*

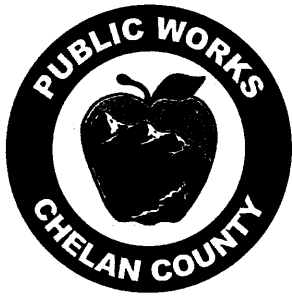
City of Cashmere (Mark Botello), Email dated January 10, 2017

General Comments

- 1) I briefly looked over the Plan and don't have any comments.
 - a. **Staff Review and Comment:** *Thank you for your time in reviewing the Comprehensive Plan.*

City of Wenatchee, Letter dated February 3, 2017

- 1) Chelan County responded to a majority of comments received from the city through a letter dated February 27, 2017 written by Eric Pierson and addressed to Mayor Frank Kuntz.
- 2) Section 1.3.2 – Last bullet – Department of Community, Trade, and Economic Development is now the Department of Commerce.
 - a. **Staff Review and Comments:** *Comment noted.*
 - i. **Recommendation:** Remove reference to Department of Community, Trade, and Economic Development and replace with the Department of Commerce.
- 3) Section 4.2.5 – Remove Ventilation and Indoor Air Quality Code. This code no longer exists.
 - a. **Staff Review and Comments:** *Comment noted.*
 - i. **Recommendation:** Remove reference to the Ventilation and Indoor Air Quality Code



CHELAN COUNTY

FLOOD CONTROL ZONE DISTRICT

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ERIC PIERSON, PE
ADMINISTRATOR

February 27, 2017

Frank Kuntz, Mayor
City of Wenatchee
PO Box 519
Wenatchee, WA 98807-0519

Dear Mayor Kuntz,

Chelan County's Flood Control Zone District is in receipt of the City of Wenatchee's February 3rd letter, which provided comments on Chelan County's Comprehensive Flood Hazard Management Plan. As you are aware, in 2014 in response to the growing frequency and severity of flash and stage flooding in greater Chelan County and the resulting impacts and risks to public infrastructure and critical facilities, the Board of County Commissioners determined it was in the best interest of Chelan County to implement a countywide Flood Control Zone District. The Board of County Commissioners found it advantageous to define that the primary purpose of District funding is to protect public infrastructure, in order to minimize flood-related impacts to dwindling available funding for maintaining said infrastructure. With this direction; the Interim Guidelines and most recently in the Comprehensive Plan, emphasized that one of the primary purposes of the District is to locate flood prone and repetitive loss areas involving public infrastructure within Chelan County and identify solutions for flood control mitigation in those areas. Now, by having a dedicated funding source for flood-related activities, the impact to the agencies' road and street funds have substantially decreased – keeping needed dollars where they belong – maintaining the agencies' road and street systems.

With the Commissioner's direction, the scope of work for the Comprehensive Plan was to develop a holistic approach to flood control issues that encompasses both flood control management and floodplain management within Chelan County. The intent of this document is to be the catalyst for providing guidance on how to most effectively meet the goals and objectives of the county's Flood Control Zone District. To ensure success of this Comprehensive Plan, at the first stakeholders meeting, ground rules were laid out and unanimously approved by the all Steering Committee members. This approval included the requirement of every stakeholder appointing a secondary member to attend stakeholder meetings if the primary member could not attend. If this were to occur, to achieve a seamless transition, the secondary member was to receive all Steering Committee materials throughout the entire Comprehensive Plan process in order to stay informed. The City's confusion on numerous parts of the Comprehensive Plan process and chapters within the Plan, as detailed in your February 3rd letter, may be as a result of Wenatchee staff turnover, as the City sent five different representatives to the final five stakeholder meetings. Regrettably, the city chose not to involve their secondary member in any of these five meetings. Deviating from Steering Committee ground rules may be a leading factor in the confusion.

It has been repetitively stated that the City does not think that it had the opportunity to fully participate in the development of this Comprehensive Plan. Chelan County respectfully disagrees with this assertion. Over a twelve month period, ten stakeholder meetings were held where the City of Wenatchee attended nine. Furthermore, during the first five meetings, the chosen City of Wenatchee representative was elected to be the Chairman of the Steering Committee. During this process, all Steering Committee members were treated as equal - leaving members in control of the development of the Comprehensive Plan. In so far, that specific chapters that provide direction to the FCZD such as the mission statement, goals, and objectives; policies; mitigation actions, plan maintenance strategy; and strengths, weaknesses, obstacles, and opportunities (SWOO); were all discussed, reviewed, and ultimately voted on to approve. As a result of this input and thorough vetting by all Steering Committee members, when voting commenced to place these sections in the Comprehensive Plan, not one "no" vote was received – including from the City of Wenatchee.

With annual revenue at over \$600,000 per year, at this time, any type of annual distribution to cities, even at a proportional basis, is not feasible. However, as reserves grow, an Opportunity Fund may be considered by the Board of County Commissioners, which would allow qualified entities to apply for flood related funding and utilize it to address their specific needs (public education and outreach, emergency reimbursement, capital projects/grant matching funds, community rating system implementation, etc.). As detailed in Chapter 13 of the Comprehensive Plan's Action Matrix, the District will be focusing this money on a vast range of activities that will reduce flooding impacts in Chelan County. For example, a second debris basin is currently under design within No. 1 Canyon. Though not within City limits, this facility intends to decrease flows, sediment loads, and debris the city typically receives during a flood event with the goal of minimizing damage to public infrastructure, and as a secondary benefit, assisting private property. In an added benefit, since this facility is located within the county, FCZD funds will be dedicated to the continual operation and maintenance of it. Another upcoming task is to conduct a basin wide (city and county) investigation within No. 1 Canyon, No. 2 Canyon, and Dry Gulch, in order to identify strategic project locations and other such measures that will improve the conveyance within these drainage – once again decreasing flow rates, the amount of sediment, and debris within the drainage benefiting both public and private properties.

Chelan County recognizes the confusion surrounding regional consistency and how it will be achieved. Identifying this difficulty, Policies G-9 (Cities Subject to Consistency Evaluation), Policy G-10 (Standards for Consistency Evaluation), and G-11 (Consistency Evaluation) within the Comprehensive Plan will either be updated or removed completely. In reviewing these Policies, it is not Chelan County's place to determine if cities are consistent with Chelan County's Comprehensive Flood Hazard Management Plan – rather, if needed, this effort will be deferred to the Department of Ecology. The Chelan County Flood Control District is not a regulatory agency and the comprehensive plan is a policy and planning document only. It is up to each city to determine how RCW 86.12 applies to them specifically and, if chosen to do so, the appropriate timeline to meet RCW 86.12.210.

The Comprehensive Plan is intended to be a fluid, dynamic document with the ability to adjust priorities on an annual basis. As detailed in Chapter 15 – Plan Maintenance Strategy, it was the Steering Committee's position that an oversight committee with representation similar to that of the Steering Committee should have an active role in the plan maintenance strategy. This means the City of Wenatchee will continue to have representation on the Steering Committee. It is expected that the Comprehensive Plan of Development will be updated every five years. However, progress of the plan will be monitored on an annual basis as detailed in Chapter 15.2. The principal role of a steering committee in this plan maintenance strategy will be to review the annual progress report and provide input on this to Chelan County's Flood Control Zone District. Chapter 15.3 details what is to be provided within the annual progress reports. This Plan Maintenance

Strategy allows all cities to have equal input on priorities on an annual basis and was approved by the Steering Committee.

It is Chelan County's request that the City of Wenatchee allow time for the newly formed Flood Control Zone District to mature and begin to sustain itself within the community. Flooding within Chelan County will continue as it has in the past, but the hope is that we can minimize its impact to both public infrastructure and the surrounding communities. When flooding does occur, it affects the entire regional economy and when public infrastructure such as roads are damaged, the cost of repair is borne by all residents. If you and/or your staff wishes to continue this discussion, please contact me at your earliest convenience.

Sincerely,

A handwritten signature in black ink, appearing to read 'Eric Pierson', with a stylized flourish at the end.

Eric Pierson, P.E.
Director/County Engineer