



WASHINGTON STATE
DEPARTMENT OF
E C O L O G Y

Application for a 2015-2017 Floodplains by Design Project Grant

Submitted applications will be rated to create a ranked list in support of Ecology's FY 2015-2017 Floodplains by Design budget request.

Applications must be submitted electronically via email to Ecology by 5:00 pm, **September 8, 2014**. Send applications to:

Adam Sant at Adam.Sant@ecy.wa.gov

With the Subject line: 2015-2017 Floodplains by Design Project Grant Application

You will receive confirmation that your application has been received by close of business on September 15.

Applicants must use this form as provided. No alterations will be accepted.

Project Title **Flood Hazard Reduction and Multiple Benefit River Assessments**

Organization/Jurisdiction Name KITTITAS COUNTY FLOOD CONTROL ZONE DISTRICT
Contact Name CHRISTINA WOLLMAN
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Legislative District(s) 13th
County KITTITAS
WRIA(s) 39, 40
Congressional District(s) 8TH

Specific Project Location **Project location varies**

Section **Numerous** Township **19, 20, 21 N** Range **15, 16 E** River Mile
Latitude -120.85 Longitude 47.17 GPS coordinates, if available ☐
Major Watershed Project is in YAKIMA RIVER

***Full project (or phase proposed herein) should be completed in 3-4 years.
Project Narrative and Budget are limited to 20 pages.***

Scope of Work, Schedule, Maps and Photos can be in addition to those 20 pages.

1. Short Description of Project (500 words or less)☐

Please describe the overall goals for this floodplain area that is the focus of your proposal. Include in the description all major components of the project or activity such as breaching a levee, constructing a new levee, restoring a specific number of acres of floodplain, wetland creation or fill, restoration planting, project design planning, public process, or any other appropriate major component. Please indicate if funding is being requested for a phase of a larger multi-year project.

Kittitas County has a diverse river system that has been significantly altered over time and, as in most areas, the road system follows the river system. This creates both foreseen and unforeseen risk to the transportation system. In upper Kittitas County, three areas stand out in regards to their risk. These areas are a county bridge over the North Fork Teanaway River, the South Cle Elum Way bridge over the Yakima River, and the Hanson Ponds along side the Yakima River.

The county has a Comprehensive Flood Hazard Management Plan (CFHMP) that was developed in the early 1990s through joint funding from the Flood Control Assistance Account Program and Kittitas County. The plan, while receiving approval from the Department of Ecology, contains only basic information about the county's water systems, wildlife, plant life, and methods to reduce flood hazards, and contains no specific provisions or recommendations for projects to actually achieve the goals of the plan.

The CFHMP should identify the areas of risk within the county, but it does not and gives no guidelines on how to move forward with risk reduction projects in the county.

The Kittitas County Flood Control Zone District (FCZD) has begun to perform smaller assessments throughout the county that focus on flood hazard reduction and habitat improvements. These assessments will achieve the intent of the CFHMP while including habitat improvement projects. Assessments completed to date include Manastash Creek and the Yakima River (Hansen Pits to Ringer Loop). An assessment of the entire Naneum and Wilson Creek watershed is just beginning.

This proposal is to provide funding to solve the three known issues within the county and to update the CFHMP by performing small assessments on the Yakima River and Teanaway River and Forks. The end result will be three sets of engineered plans for the above stated projects that have been thoroughly investigated for feasibility along with a multiple benefit plan with a detailed list of current condition and projects that will improve habitat and reduce flood hazards. The top three projects from the multiple benefits plan will also be designed to be "shovel ready." The planning process will include landowner and agency involvement in order to develop permissible projects when funding comes available.

2. Flood hazard / risk reduction (60 points)

Describe your project and how it will reduce the magnitude or frequency of flood damages to people, structures or infrastructure.

This project will be broken into two tasks, each with a flood hazard and risk reduction element.

Task 1: Upper Yakima River Bridge Protection, Hanson Ponds Levee Protection, and Multiple Benefit River Assessment

- The Yakima River, from the confluence with the Teanaway River to Easton, is a mix of constraint and natural shoreline. Some areas of the river are highly constrained between levees and others are sinuous and full of natural log jams and woody debris.

The woody debris causes issues with bridges in the reach by collecting on piers and causing scour and excessive force. Plans to place additional wood in the river upstream of the South Cle Elum Way bridge concerns the Public Works Department due to existing issues with naturally occurring wood. The South Cle Elum Way Bridge is a vital bridge within the upper Kittitas County Transportation. It serves as a connection between Cle Elum and South Cle Elum and serves 4,446 trips per day. The closure of this bridge would create a significant impact on the residents as it is the only county or city bridge crossing within the Upper County road system. The bridge also carries vital infrastructure including the water and sewer lines that serve all city residents on the south side of the river.

This project proposes to study the possible solutions to prevent debris from collecting on the bridge piers. A thorough analysis and feasibility study will be performed in order to prepare engineering plans and permits.

- The Hanson Ponds are a popular recreation area for residents of upper Kittitas County. The ponds are located in between I-90 and the Yakima River, and are protected from the river by a levee. In 2005, the levee was breached to allow fish to access the ponds, creating high quality juvenile rearing habitat for salmon and other fish. A pedestrian bridge was placed over the breach to allow continued access along the levee and shoreline of the river.

During the first flood after the levee was breached, significant damage occurred at the site. The pedestrian bridge was washed off its foundation and erosion occurred along the levee. While plans were made for repair of the bridge and placement of rip rap to protect the remaining levee, this work was never completed. Due to the placement of the pond inlet on the outside curve of the river and the erosion that is occurring at the site, there is significant risk and possibility that the river will avulse through the ponds and become stuck between a levee and the interstate.

This project proposes to study the possible solutions for levee and bank protection and determine what is needed in order to keep the river from avulsing in the future. A thorough analysis and feasibility study will be performed in order to prepare engineering plans and permits.

- Multiple Benefit River Assessment: In conjunction with the bridge debris analysis and levee protection analysis, an assessment of the river system is also proposed. The study will look at the river system above and below the project sites in order to identify the areas at the highest risk for flood damages and develop projects that will reduce or remove the risk of flooding. Although these higher risk areas are well known for their frequent flooding, no risk analysis has ever been performed.

The type of projects that can be done to reduce flooding is unknown. The top three flood hazard reduction projects will go through feasibility and design in order to create plans that are ready for construction and permitting.

Task 2: Teanaway River Bridge and Multiple Benefit River Assessment

Bridge #16203 is the only county bridge crossing the North Fork of the Teanaway River. This bridge, which currently spans 50 feet, is too small for the crossing and scour and erosion are occurring upstream of the bridge. Because the river curves under the road, the exact needs are unknown for bridge replacement.

This project proposes to study the possible solutions for bridge replacement. A thorough analysis and feasibility study will be performed in order to prepare engineering plans and permits.

In conjunction with the bridge analysis, a multiple benefit assessment of the river system is also proposed. The study will look at the Teanaway River system in order to identify the areas at the highest risk for flood damages and develop projects that will reduce or remove the risk of flooding. The top three flood hazard reduction projects will go through feasibility and design in order to create plans that are ready for construction and permitting.

Task 3: Naneum, Wilson, and Cherry Creek Watershed Assessment

This project is in the beginning stages and is focusing on a large area surrounding the City of Ellensburg. The project funding is only focused on salmon recovery, and activities related to flood hazard assessment are not funding. This project will provide funding to study the flood hazards of this stream system which is very complex and impacts the City of Ellensburg, City of Kittitas, many acres of farm land, dozens of bridges, irrigation structures and other public facilities. The scope of the flood hazard assessment is small due to limited funding from local sources. Broadening the scope of the flood hazard assessment will create a much more functional plan with true multiple benefits. For more information on the Naneum project, visit:

<https://secure.rco.wa.gov/prism/search/ProjectSnapshot.aspx?ProjectNumber=13-1315>

3. Floodplain ecosystem protection or restoration element (60 points)

Describe the ecological benefit of the project, its significance, and the ability of the solution to address the overall need in the project area or watershed. Examples include, but are not limited to, reconnecting floodplains, salmon recovery actions, habitat restoration, Channel Migration Zone protections, etc. Evidence of ecosystem benefits include floodplain (including estuary) habitat type (e.g., wetland, side channel, forest) and area restored (# acres), floodplain area protected from bank armoring (# of acres), floodplain area protected from development or other land use change (# acres), hardened bank removal or levee/riprap removal (linear feet), levee setbacks constructed (linear feet, # acres), new side channels or reconnection of old side channels (linear feet or storage volume), salmon species benefitted (# of listed, non-listed species). Secondary evidence includes culvert replaced to restore fish passage or increase conveyance, logjam and or wood structures installed, riparian area planted, and other project-specific goals.

Answer question 3 here:

Task 1: Upper Yakima River Bridge Protection, Hanson Ponds Levee Protection, and River Assessment

Upper Yakima River Bridge Protection: Woody debris within the river system is extremely important for the recovery and sustainability of salmon and other fish. Woody debris can be detrimental or at a minimum a nuisance to bridges with piers. This project proposes to look at options for protecting the bridge piers in order to mitigate for the additional wood that is planned to be placed within the Yakima River upstream of the bridge.

In addition to allowing for more wood within the river, the solution for the pier protection must also incorporate fish habitat. For example, creating the deflector out of a wooden crib wall which serves to both protect the bridge piers and create fish habitat.

Hanson Ponds Levee Assessment: The potential for losing the prime juvenile rearing habitat is great if nothing is done to protect the levee. An avulsion will significantly damage the levee, possibly to a point that ends the functionality of the ponds and causes a loss of over 50 acres of prime rearing habitat.

Multiple Benefit River Assessment: In conjunction with the bridge debris analysis and levee protection analysis, an assessment of the river system is also proposed. The study will look at the river system above and below the project sites in order to assess the current state of habitat and identify areas that can benefit from habitat protection (such as conservation easements) or habitat restoration. This part of the assessment will benefit from landowner involvement as much of the Upper Yakima River is in private ownership. The top three habitat restoration projects will go through feasibility and design in order to create plans that are ready for construction and permitting. These plans will have the support of the property owners if they are proposed on private property.

Task 2: Teanaway River Bridge and River Assessment

Bridge #16203 is the only county bridge crossing the North Fork of the Teanaway River. This bridge, which currently spans 50 feet, is too small and is constricting movement of the river. The Teanaway River system is a dynamic system that when left without constriction moves frequently. The constriction at this bridge has necessitated the placement of rip rap along the upstream banks and is harming the habitat and natural functions of the river.

This project proposes to study the habitat restoration that could occur along with a new bridge.

In conjunction with the bridge analysis, an assessment of the river system is also proposed. The study will look at the Teanaway River system in order to assess the current state of habitat and identify areas that can benefit from habitat protection (such as conservation easements) or habitat restoration. The top three habitat restoration projects will go through feasibility and design in order to create plans that are ready for construction and permitting. These plans will have the support of the property owners if they are proposed on private property.

This study area is within the Teanaway Community Forest. A committee is already looking at habitat functionality within the river system, but primarily on state owned land. This

process will coordinate with the Community Forest team to include the significant areas of private property, and collaborate on the tasks necessary to perform the study.

Task 3: Naneum, Wilson, and Cherry Creek Watershed Assessment

This assessment is funded by the Salmon Recovery Funding Board and has a primary focus on habitat and salmon recovery.

4. Is your project in a Puget Sound Partnership Priority Floodplain? (5 points)

(Deschutes, Dungeness, Duwamish/Green, Elwha, Hood Canal, Lake Washington, Lower Skagit, Nisqually, Nooksack, Puyallup, Sauk, Skokomish, Skykomish, Snohomish, Snoqualmie, Stillaguamish, Upper Skagit)

Answer question 4 here: Yes No

5. Other benefits (40 points)

Describe how your project maintains or improves agricultural viability, water quality, public open space/recreation access, economic development, or other important local benefits or values, and does not conflict with other objectives of this program. Projects receive points based on the importance of the result produced, the ability of the solution to address the overall stakeholder need and the long-term improvement.

- a.a. Agricultural viability (evidence of agricultural benefits include reductions in flooding (acres), protection from development (acres), improvement of drainage infrastructure (acres), or other capital or non-capital benefits to agricultural productivity).
- a.b. Water quality improvement [e.g., through stormwater infrastructure upgrades, treatment of a TMDL or 303(d) issue, reduction in sediment, restoration of wetlands or riparian areas, implementation of related best management practices, etc.].
- a.c. Public access and recreation (e.g., through land acquisition, the development of trails or other recreational infrastructure, etc.)
- a.d. Other floodplain values or services of local importance.

Answer question 5 here:

The pedestrian bridge at the Hanson Ponds has been off its foundation since 2009, and is preventing access to a trails system on top of the levee separating the ponds from the river. As part of this project, bridge replacement will be analyzed.

The assessments will identify projects that will improve habitat, and will focus on projects that improve water quality, reduce sediment or restore wetlands along with reducing flood hazards. The Naneum project has a high focus on irrigation efficiency with a goal of improving the irrigation system within the study watershed.

6. Cost-effectiveness (20 points)

- a.a. Project will be judged on whether the budget is appropriate to the project scope, and designed for project success.
- a.b. Describe how the project will be continued or maintained after the grant has been completed.
- a.c. If project cannot be fully funded, explain how the project could be scaled downward.

Answer question 6 here: **This project will continue into the future as projects**

are implemented. The plans are living documents that can be updated and changed at any time, as long as there is concurrence by stakeholders. The plan will be used to secure future grant funding by showing a thoroughly vetted project selection process that involved stakeholder participation.

7. Long-term cost avoidance: (30 points)

- a. Describe how your project minimizes or eliminates future costs for maintenance, operation, or emergency response. **(15 points)**

Answer 7.a. here: This project will minimize future costs through many different methods. The projects that are being assessed and designed will reduce the chances of future damage to the transportation system, and the assessments will reduce future costs by determining what types of projects should be completed in the future. Instead of projects being proposed in a haphazardly manner by different organizations who may or may not be coordinating, this project will develop a plan that can be followed by all who are working within the county's streams and rivers and ensure a coordinated goal is worked towards.

- b. Describe how your project accounts for expected future changes to hydrology, sediment regimes, or water supply resulting from other floodplain management efforts, land use changes, extreme weather events, or other causes. **(15 points)**

Answer 7.b. here: The plans will address these future changes, especially as it relates to future development and changing climate. Climate change could affect the project areas through increased run off, flood frequency or drought. We are interested in collaborating with NOAA, the UW Climate Impacts Group, and other partners to evaluate and quantify climate change impacts that could affect the project area.

8. Demonstration of need and support (30 points)

- a. Describe how your project is consistent with the intent of existing floodplain management or habitat recovery plans or is specifically identified through existing plans or work programs. (Elements of the project may have been developed through more than one planning process. Please identify the planning process used for each major element if they are not from a common plan.) **(15 points)**

Answer question 8.a. here: This project will create the plans in which future projects are identified. The plans will be created within a public process that includes landowner, public and resource agency input.

- b. Describe which flood control authorities, Tribal Nations, local governments, lead entities, key stakeholders or decision-makers representing floodplain interests located within the river reach or affected by the project have provided letters of support explicitly endorsing the project and its outcomes for their interests. **(15 points)**

Answer question 8.b. Here: Letter of support are not due until the 22nd, but I have received positive notification that supports letters will be provided by WDFW, DNR, USFWS, BOR, Yakima Basin Fish and Wildlife Recovery Board, Yakama Nation, Dept of Ecology, Trout Unlimited, NOAA, and WSDOT.

9. Readiness to proceed and complete the proposed phase of the project (25 points)

Describe how your project is ready to proceed with the scope of work, and your capacity to complete the project successfully and maintain it over time, including your project schedule and deliverables. Describe your experience with similar projects. If your project is acquisition only, describe how you will complete floodplain restoration subsequent to the acquisition.

Answer question 9 here: The county is now very familiar with the process it takes in order to assess flood hazards and habitat and is ready to proceed with development of full scopes of work and consultant selection for the projects identified within this grant application. The county will act as project manager for all of the projects within this grant application. The county currently has two active assessments. One assessment will be completed in the next couple months, and the other is just getting started. The Naneum assessment, which is just getting started, is almost ready to be turned over to a consultant and the county's role will be reduced to project management and stakeholder coordination.

10. Pilot project and leverage opportunities (25 points)

- a. If applicable, describe how your project could serve as a pilot effort or result in changes or results with broader impacts to the state. **(10 points)**

Answer question 10.a. here: Stream habitat assessments and CFHMPs are nothing new. What is new is combining the two together to make a plan that achieves two sets of goals with outcomes that are better and more successful than had either been done separately.

- b. If applicable, describe how your project leverages existing investments, such as SRFB, FCZDs, Dike Districts, TMDLs, WWRP, ESRP, NEP, and other funding sources. Evidence of this will be based on the amount and diversity of the leveraged funding sources. **(10 points)**

Answer question 10.b. here: The Naneum project has received \$254

- c. If applicable, describe how your project addresses inequity or social justice issue by benefitting underserved communities. **(5 points)**

Answer question 10.c. here: The communities along the Yakima River are a mixture of high and low income residents. The communities and residents cannot often afford the activities that are necessary to mitigate and/or protect their property. Flooding is common but nothing has been done to determine the best options to reduce or remove flood risks. The communities cannot afford to do these studies on their own, and risk reduction is not occurring.

11. Budget (add more tasks as needed).

Task	Amount Requested from Ecology*	Other Funding for Project** (20% of Total Cost Minimum)	Total Cost
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Task 1--Administration	25,000		25,000
Task 2--Yakima River Study, Designs and Assessment	600,000	25,000	625,000
Task 3--Teanaway River Study, Designs and Assessment	600,000	25,000	625,000
Task 4--Naneum, Wilson, and Cherry Creek Watershed Assessment	150,000	354,000	625,000
Total	1,375,000	404,000	1,779,000

*Amount requested from Ecology under this grant program

**Other sources of funding dedicated to this project. Insert narrative below that details what the source of funding is and whether or not it has been received or applied for but not yet received. Match must be at least 20% of Total Project cost.

Narrative and/or Table of other funding sources for project, here: Matching funds are from the Salmon Recovery Funding Board and YRBWEP. Additional funds are from local sources, including the Kittitas County Flood Control Zone District, Public Works Department and participating cities. Matching funds may be cash or in-kind services.

If it's not possible to fully fund this proposal, please describe a *phased* approach that would still significantly advance the effort:☐

12. **SCOPE OF WORK:** Please attach a Scope of Work and schedule. If your proposal is a phase of a larger multi-year project, please place this proposal in the context of the overall project and provide preliminary cost projects to complete the project.
13. **Maps:** Please attach at least two (2) maps to your application. The first map should be a vicinity map and the second should be a map of your project.
14. **Planting Maintenance/Survival:** If your project includes plantings, please provide a description of how you will ensure plant survival and maintenance.
15. **Photos:** Photos are not required, but if you think they enhance our understanding of your application, please include them. We are particularly interested in "before" photos that can be matched with "after" photos.
16. **Executive order 05-05, Archaeological and Cultural Resources** (online at http://www.governor.wa.gov/office/execorders/eoarchive/eo_05-05.pdf) directs state agencies to review all capital construction projects for potential impacts to cultural resources to make sure that reasonable action is taken to avoid adverse impacts to these resources. If this grant program is funded by the 2015 Legislature, successful grant applicants will be required to submit additional information to Ecology to comply with this Executive Order.

Additional factors in ranking and award: This is a very new funding source. To ensure that projects meet the objectives of the program, these additional factors will be considered in creating the proposed funding list:

- **Balance of project types:** Balance funding ready-to-proceed construction projects with funding pre-

construction activities. This balance in project types is vital to ensuring success over time.

- **Geography:** There is strong interest in ensuring that projects in all areas of the state receive funding.
- **Advancing multi-benefit floodplain management:** It is important that the project list advance the principles and practical application of multi-benefit floodplain management.

Certification

I certify to the best of my knowledge that the information provided above is true and correct and that I am legally authorized to sign and submit this information on behalf of the organization applying for this grant.


Signature


Date


Printed name and Title


Name of Organization Applying for Grant