

## 2017-19 Local Projects Recruitment Form

### Chehalis Basin Flood Relief

**A. What are local flood relief projects?** -- In general, local projects are those projects that provide predominantly localized and quantifiable benefit, are capable of being completed within the funding cycle, are supported by the jurisdiction within which the project is proposed, and are vetted and advanced through a public entity like a City, County, Conservation District, Agency, etc. Furthermore, local projects are envisioned as helping with flooding, not adverse to fish or habitat and (where possible) providers of multiple, quantifiable benefits.

**B. What kinds of local flood relief projects are likely to be logical funding candidates for 2017-19?**

- Projects that complete an effort previously funded/started.
- Projects that advance improved emergency response.
- Projects that advance improved public infrastructure protection.
- Projects that advance improvements in local or community flood hazard reduction, including local flood proofing projects (e.g., elevations, buy-outs, foundation venting/opening, etc.).
- Projects that advance Conservation District initiated flood hazard reduction (e.g., farm pads, evacuation routes, bank erosion/bank stabilization, etc.)
- Projects that demonstrate innovation (e.g., thinking beyond traditional bank stabilization techniques in favor of natural system designs), partnerships, cost-sharing/leveraging resources, multiple benefits, and proactive vetting with agencies and tribes.
- Projects typically not in excess of \$3M for the stage/phase being funded.

**C. Are there projects that would not be good candidates?**

- Projects that seek to utilize State Capitol Budget dollars for uses not typically allowed (e.g., maintenance and repair work, cost-sharing under select circumstances, etc.).
- Projects likely to increase potential for flood damage upstream or downstream.
- Projects with unmitigable adverse environmental impacts or significant uncertainty regarding potential environmental impacts.
- Projects not sponsored by a public entity.

#### Instructions:

- Please submit local flood relief project requests (via this form) to Scott Boettcher ([scottb@sbgh-partners.com](mailto:scottb@sbgh-partners.com)) no later than 5:00 p.m., Friday, January 12, 2018.
- Please submit one request form for each project proposed, even those past projects previously or partially funded.
- Note: Parts III and IV below [marked by "(\*\*)"] will be scored as part of the Flood Authority Projects Committee's review and evaluation. Part I and II will not be scored.

Part I General	
1. <b>Date:</b>	January 12, 2018
2. <b>Project Name:</b>	Independence Road Flood Reduction Feasibility Study
3. <b>Project Location</b> -- Please identify the location of the project as precisely as possible, including providing decimal degree latitude/longitude coordinates.	On Independence Road west of Albany St SW, south Thurston County, roughly longitude -123.10572, latitude 46.86615. Flooding extends for several hundred feet along Independence Road.
4. <b>Project Contact</b> -- Please identify who will be responsible for overseeing and managing the project (i.e., name, email, telephone number, etc.).	Application contact: Jeanne Kinney, Environmental Coordinator <a href="mailto:kinneyj@co.thurston.wa.us">kinneyj@co.thurston.wa.us</a> , 360-867-2344 Authorizing and managing the project: Scott Lindblom, County Engineer, <a href="mailto:lindbls@co.thurston.wa.us">lindbls@co.thurston.wa.us</a> , 360-867-2329
5. <b>Lead Organization</b> -- Please identify the lead organization, agency, entity, etc. responsible for this project. Please identify key partners responsible for assisting in the delivery or implementation of the project.	Thurston County Public Works 9605 Tilley Rd SW Olympia, WA 98512-9140 360-867-2300  No monetary partners, but will use FEMA RiskMap hydrologic studies for the Chehalis, currently under development, and data from others such as the Army Corps of Engineers as appropriate.

Part II Description, Timing and Cost	
6. <b>Project Description</b> -- Please describe the project, what is intended to be accomplished, the benefits to be accrued, and to whom.	The site experiences repeated, chronic flooding that closes Independence Road, up to several times per year for several days at a time. Residents and through traffic must then detour into Lewis or Grays Harbor County, a 20-30 mile detour, to reach schools, businesses or essential services. Emergency services are cut off from the southwest part of Thurston County. Currently, there is an effort by FEMA through the RiskMap program to remodel and remap the Chehalis River Basin. Our understanding is the remapping and remodeling has been completed for the Chehalis River and Scatter Creek and a final report is in the preliminary draft phase, but the data should be available for use by our consultant for the project. Hydrologic flows in this area have been evaluated

	under RiskMap. We understand that the Army Corps of Engineers has also undertaken a study of the Chehalis and this data may also be useful to our consultant. This grant request would build on those efforts by determining at least three alternatives to alleviate flood risk in the area, and select a preferred alternative, with costs, for future funding.
7. <b>Project Timeline</b> -- Please describe the overall timeline for completion of the project as well any interim stages or phases.	We anticipate the feasibility study could be completed by June, 2019, if funding is received by June, 2018. This allows for 2-3 months to recruit and select a qualified consultant and 9-12 months for them to obtain and analyze the data, determine at least three alternatives with costs, select a preferred alternative and complete their report. Delays in receipt of funding will delay the timeline accordingly.
8. <b>Project Cost and Funding</b> -- What is the cost of this project? What are the on-going maintenance and operation requirements and costs? Is it clear who will be responsible for covering on-going maintenance and operation costs?	<p>Amount requested: \$100,000. Costs will cover consultant time and expertise to develop at least three alternatives with costs and select a preferred alternative using data available from the FEMA RiskMap model of the river system for the Chehalis River and Scatter Creek; the Army Corps of Engineers Chehalis flood study and other information available. The preferred alternative must be able to be permitted by the Army Corps of Engineers, Ecology, WDFW and other jurisdictions as applicable, and must meet Thurston County's Critical Areas Ordinance, including the passage of flood waters and debris to the 100 year flood elevation.</p> <p>The preferred alternative must also be cost effective as far as the benefits received.</p> <p>Independence Road is owned and maintained by the county. Ongoing maintenance and operations will continue to be the county's responsibility.</p>
9. <b>Other Funding</b> -- Please explain the extent to which other funding sources or funding partners are available.	No other funding has been secured.

**Part III (\*\*)**  
**Completion and Doability by June 30, 2019**

10. <b>Project Completion</b> -- Does the funding requested complete (or substantially complete) a project that has already been started? If so, please explain.	No, however, it will build on the remodeling, remapping and hydrologic studies currently underway for the Chehalis River and Scatter Creek under FEMA's RiskMap program and other sources.
11. <b>Project Doable</b> -- Can this project or the stage/phase for which funding is sought be completed by June 30, 2019? Please describe any circumstances with potential to impact the project's doability or timeline (e.g., permitting or regulatory unknowns, lack of availability of other cost-share funding resources, etc.). Please describe any advance coordination or vetting with agencies, tribes, other entities, etc. and the outcomes of that effort.	We understand that this funding is part of the state capital budget, which has not been approved to date. We anticipate the feasibility study could be completed by June, 2019, if funding is received by June, 2018. We anticipate that this project will be contracted out rather than done in house, which will take several months to develop a scope of work, recruit and select a consultant under county contracting policy, followed by 6-9 months for the consultant to obtain the data, develop alternatives and costs and complete the report. The design for the preferred alternative will be to the conceptual stage, but may be developed further if time and funding allow.
12. <b>Project Impacts</b> -- Please identify how any project impacts will be mitigated, funded and if that mitigation will be accomplished by June 30, 2019?	NA- feasibility study with no impacts.

Part IV (**) Benefits Stated and Quantified	
13. <b>Emergency Response Benefits</b> -- Please describe (and quantify) how this project enhances emergency response in a flood emergency (e.g., does it keep critical access roads and transportation facilities open and functional, does it enable easy movement of cattle, equipment and farm chemicals out of harm's way, etc.).	The site is close to where Scatter Creek enters the Chehalis River, but is not a direct stream crossing. This section of Independence Road is at a lower elevation and local topography allows water to collect here, causing flooding even when the rest of the road is passable. Frequently, water over the roadway one- three feet deep closes the road, usually for several days. Most recent data shows that this section was closed once in 2017, zero days in 2016 and three days in December, 2015. Between 2002- 2014, Independence Road was closed seven times, usually for several days at a time. This does not include times when water is over the road, but not considered deep enough to close. Freezing temperatures, combined with water over the road adds to the dangers to drivers traveling this section. An earlier successful grant application on another section of Independence Road documented that residents had to detour over 20 miles to into Lewis or Grays Harbor Counties to obtain food, fresh water or medical supplies or to get to school or work, with

	<p>increased travel times of up to 45 minutes. For this earlier grant application, USGS flood data for the Chehalis at Grand Mound between 1970 and 2002 was reviewed and determined that the average annual road closure was three days. (The Grand Mound USGS gage is the closest one to the project site). Some local residents in low lying areas have no other access and are stranded until flood waters recede. Emergency evacuation by helicopter has occurred during extreme flood events in this area in the past.</p>
<p><b>14. Essential Infrastructure Protection Benefits --</b> Please describe (and quantify) how this project protects essential infrastructure and the risks or consequences of not acting this funding cycle.</p>	<p>Independence Road is classified as a rural minor collector and is the main transportation link connecting southwest Thurston County with Lewis and Grays Harbor Counties. This project will directly enhance flood emergency response by keeping a key transportation corridor open and functional. Currently, water over the roadway creates frequent hazardous driving conditions. Flooding combined with freezing conditions creates extreme hazards for the public as well as emergency vehicles. Frequent flooding of the road undermines the shoulders and base of the road, leading to premature road failure. (See photo). There is currently a flood erosion control structure on the north edge of the road, consisting of curb at the pavement edge, then a paved steep slope down to a flat paved section that resembles a sidewalk three feet below the road. This structure extends for about 300 feet along the north side of the road. As floodwaters cover the road, flows cascade over the curb, down the slope and sheetflow across the pavement, protecting the road embankment from undercutting and erosion. While effective at dispersing the floodwaters while reducing erosion, it doesn't directly reduce flooding and the steep drop-off is very hazardous to vehicles that may inadvertently leave the road at that site (see photos). The feasibility study will determine the most effective solution to alleviate flooding and protect the road, while providing a safer alternative to the present structure. At least three alternatives, including costs, will be developed with a preferred alternative selected. With a solution and associated costs identified, construction funding can be sought.</p>
<p><b>15. Public Health, Safety and Welfare Benefits --</b> Please describe (and quantify) how this project protects public health, safety and welfare.</p>	<p>Several hundred homes are affected on side roads accessing Independence Road as well as the main road. When this section of road floods, there are limited</p>

	<p>alternative routes, and for some residents, there are no alternative routes, so residents cannot get out and emergency services cannot get in. School busses cannot operate and residents cannot get to work, causing significant economic impacts. As noted above, detours of up to 45 minutes are necessary to access schools, businesses and essential services. Identification of a preferred alternative is the first step toward reducing frequent flood impacts and improving public health, safety and welfare.</p>
<p>16. <b>Residential, Commercial and/or Agricultural Protection Benefits</b> -- Please describe (and quantify) how this project protects residential, commercial and/or agricultural interests and communities and the benefits of acting (or consequences of not acting) this funding cycle. Consider factors like number of structures at risk, number of people at risk, historic frequency of flood damage, magnitude of benefit to be gained for the cost, etc.).</p>	<p>This feasibility study will determine the best way to provide access to homes and farms in the area as well as access for school buses, log trucks, agricultural equipment, delivery vehicles and emergency vehicles that otherwise would have to make a 20-30 mile detour.</p> <p>Most of the vulnerable structures affected by flooding in this area have been elevated. Thurston County Emergency Management has grant applications pending to elevate three more homes. The major impact from flooding in this area is to the transportation network and the flow of goods and services. While this project will not protect life and property for extreme events such as the floods of 1996-7, it will address the almost yearly road closures in this local area. The preferred alternative design will pass 100-year flood events and associated debris, as required under the Thurston County Critical Areas Ordinance and Washington Department of Fish and Wildlife. Thurston County has one of the strongest Community Rating System scores in the nation (2, one of only a handful of communities in the nation this highly rated), in part because of our strong Critical Areas Ordinance which prohibits new building in the floodplain and seeks to move structures out of or above the floodplain. This project will serve as a demonstration of ways existing infrastructure can be retrofitted to avoid hazard damage.</p> <p>The project will not only reduce the use of detours of over 20 miles that are currently experienced by Thurston County residents living in the area, but will also provide better access for Lewis County and Grays Harbor County traffic that uses this roadway. Lewis County, in particular, is experiencing growth in the Independence</p>

	<p>Road area and an increase in logging activity, both of which contribute to higher traffic volumes in the project vicinity. We have files going back 30 years that document concerns by the local school district and residents about the hazards and inconvenience of flooding at this site. Residents petitioned the county commissioners to elevate the roadway in the past, but the county road fund was not sufficient to pay for such an undertaking. Other impacts and benefits are discussed above.</p>
<p>17. <b>Other Project Impacts</b> -- Please explain how this project impacts or is potentially impacted by another project.</p>	<p>This project will benefit from the RiskMap and other studies, but is not tied to any other project</p>
<p>18. <b>Anything Else</b> -- Please feel free to offer any additional information (e.g., photos, maps, video, drawings, etc.) that would help to better understand the scope, timing and benefits of this project.</p>	<p>Attached are a vicinity map and representative photos from the past 10 years showing flooding, the flood erosion control structure next to the road, floodwaters going over that structure , a flood gauge in the area and flooding in the surrounding area. Thurston County has recently hired a grants manager, Ariana Lawson, who reviewed the application and had some questions. Attached is the response to those questions, since it provides more detail about how we came up with the amount requested, and what we will do if the costs come in higher or lower than the grant amount.</p>

## Appendix A

Process/Schedule (current as of 7-22-2017)	
July 21, 2016 (FA In-Person Mtg.)	<ul style="list-style-type: none"><li>• Post and distribute <b>local projects recruitment</b> request on 7/22/2016 following Flood Authority review/discussion at their 7/21/2016 meeting.</li><li>• Allow three weeks for project proposals/submittals (i.e., due no later than 5:00 p.m., Friday, August 12, 2016).</li></ul>
August 18, 2016 (FA Conf. Call Mtg.)	<ul style="list-style-type: none"><li>• Receive proposals/submittals.</li><li>• <b>Update Flood Authority</b> at their 8/18/2016 meeting on number received, type of projects received, distribution, etc.</li></ul>
September 15, 2016 (FA In-Person Mtg.)	<ul style="list-style-type: none"><li>• <b>Update Flood Authority</b> at their 9/15/2016 meeting on status of Projects Committee's effort to review, rank, discuss with Tribes, discuss with agencies, preliminarily sort and rank, etc.</li></ul>
October 20, 2016 (FA In-Person Mtg.)	<ul style="list-style-type: none"><li>• Review/discuss <b>DRAFT ranked and prioritized list</b> with Flood Authority at their 10/20/2016 meeting.</li></ul>
November 17, 2016 (FA Conf. Call Mtg.)	<ul style="list-style-type: none"><li>• Seek Flood Authority approval of <b>FINAL ranked and prioritized list</b> at their 11/17/2016 Flood Authority meeting.</li></ul>

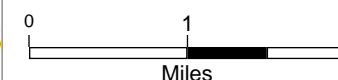


# Independence Road Flood Site

## Legend

- Townships
- Sections

Scale 1: 76,756



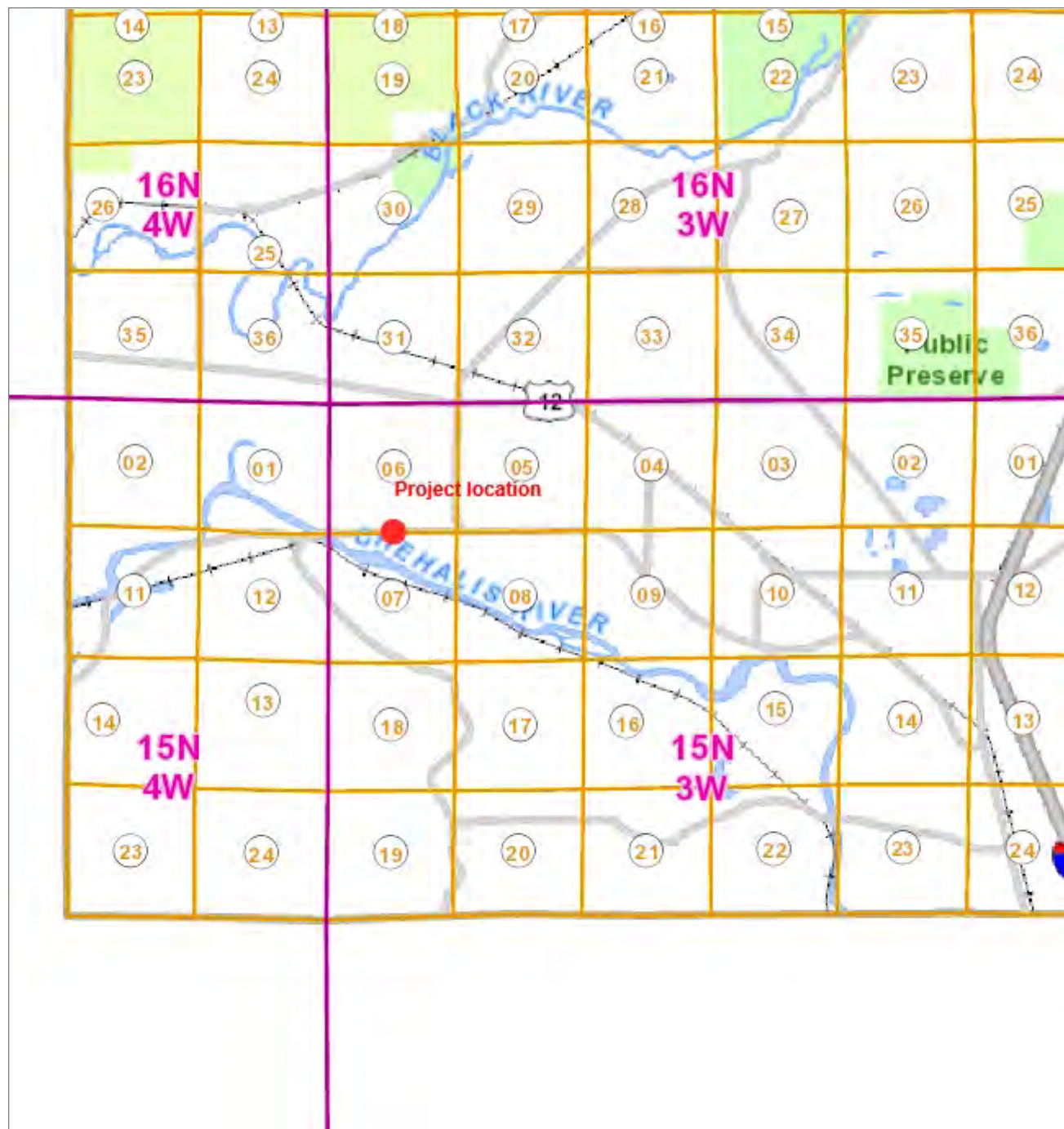
Author: Jeanne Kinney

Published: 8/9/2016

Note: Frequently flooded area west of Albany St, Rochester, WA



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- How was the request amount of \$100,000 determined?  
Public Works Design Engineering currently has three contracts with consultants, as part of the fish barrier removal program, which are very similar to what we propose with this grant. The consultants are conducting geotechnical and hydrologic studies at various locations, developing an alternatives analysis for each site, identifying alternatives with costs, recommending a preferred alternative and providing conceptual designs. Although we are in the middle of these contracts, costs to date indicate that we should be able to get a preferred alternative for \$100,000 and possibly get into the conceptual or preliminary design phases. Since we originally applied for the grant in 2016, several studies have been initiated or finalized, such as FEMA's RiskMap remapping and remodeling of the Chehalis, and the Army Corps of Engineers study of the Chehalis. These data will be available to the consultants, so they will not have to collect their own data, which should lower costs.
- The 100K is intended to cover consultant/engineering costs only, correct (no County personnel costs)?  
We anticipate charging 10-15% of the grant amount for contract administration, staff review and other administrative costs.
- What do you plan to do if the engineers' estimates for the study come in at greater than 100K? Have you identified alternative sources (general fund, other grants, etc.) to fund the difference? As we are doing with the fish barrier program contracts, we will tailor the scope of work to reflect the money available. As each stage of the consultants work is reviewed, we can modify the scope of work to reflect the grant funds remaining. For example, the geotechnical analysis and/or hydrologic analysis will be done first, then used to inform which alternatives are feasible for the site.
- If the County is awarded 100K and the study ends up costing less, are there other aspects of this project that you might be able to use the remaining funds for or would the balance be returned to the Authority for reallocation elsewhere?  
If the consultants provide a preferred alternative that is acceptable, and money is left in the grant, we would ask them to proceed with the design until time or money run out (The grant must be spent by June, 2019).
- You noted below that you plan to have one of the on-call engineering firm on board by the end of March. To avoid any questions regarding allowability of costs incurred outside the performance period, I recommend holding off on executing any agreement for these services until you have an executed grant agreement in place.

We agree and would not enter into contract services until the grant money is in hand. Since this grant is dependent on the state legislature allocating the funds after approval of a capital budget, it seems unlikely at this point that timing with the on-call consultants will be a problem.







MP 3.124

INDEPENDENCE RD SW -DEC

Attachement A  
18-1186  
1/12/2018



MP 3.106

INDEPENDENCE RD SW-IIC

Attachement A  
18-1186  
1/12/2018















**Flood erosion structure is about 3 ft deep and 5 ft wide, 300 ft long**