

## 2019-21 Local Flood Hazard Reduction Project Proposals (ordered, prioritized)

4. Chehalis -- Flood Storage and Habitat Enhancement Master Plan (Phase II)	<p>* Planning process builds off earlier scoping phase and will evaluate storage volumes, costs. Hydraulic modelling will determine flows, storage, reductions in stage and done in iteration with design. Final design will quantify benefits, including # of people/structures benefitting, level of flood stage reduced, and will include recreation, habitat restoration, off-channel habitat for fish species.</p> <p>* Project will include restoration of riparian habitat, development of off-channel habitat, reconnection of the river to historic floodplain (removal of fill), and creation/restoration of riparian wetlands.</p> <p><b>Note -- As this is a planning project, the City can accommodate and scale to reduced funding.</b></p>	<p>* Restoration of riparian habitat, removal of infrastructure from the floodplain, creation of off-channel habitat, and creation/restoration of riparian wetlands.</p>	\$ 406,498	\$ 81,493
5. GHC -- Keys Road Flood Protection	<p>* This funding would provide for the design of a project to reduce flooding on Keys Road.</p> <p>* Keys Road is key infrastructure providing access to multiple residences, farms, and businesses. Provides 700+ vehicle trips per day, 20%+ being commercial trucks for agricultural, commercial businesses. Provides one of two access routes to Satsop Business Park (400+ jobs, 200+ acres developable land, ~547,000 sq. ft. commercial, warehouse buildings).</p> <p>* Keys Road is threatened with loss, damage due to oncoming Satsop River. Loss of Keys Road would be very costly.</p> <p>* Keys Road is part of larger Lower Satsop planning process being implemented like Timberworks process.</p> <p><b>Note -- As this is a planning project, the County can accommodate and scale to reduced funding.</b></p>	<p>* Likely proposed future work will be located above ordinary high water mark and designed to minimize any impact to fish and/or fish habitat.</p>	\$ 200,000	\$ 175,000

## Scott Boettcher

---

**From:** Scott Boettcher  
**Sent:** Tuesday, July 3, 2018 4:52 PM  
**To:** 'Rob Wilson'  
**Cc:** colronjanaverill@comcast.net  
**Subject:** RE: Local Project Recruitment

Thank you Rob. Your proposal has been rec'd on time.  
Scott

Scott Boettcher, Staff  
Chehalis River Basin Flood Authority  
360/480-6600  
[scottb@sbgh-partners.com](mailto:scottb@sbgh-partners.com)

---

**From:** Rob Wilson <RWilson@co.grays-harbor.wa.us>  
**Sent:** Tuesday, July 3, 2018 4:37 PM  
**To:** Scott Boettcher <scottb@sbgh-partners.com>  
**Subject:** Local Project Recruitment

Scott,

Attached is Grays Harbor County's formal project recruitment form for the 2019-21 funding cycle.

Thanks,

Rob Wilson, PE  
County Engineer  
Grays Harbor County Public Works  
360-249-4222



**2019-21 Local Projects Recruitment Form  
Chehalis Basin Local Flood Relief**

**A. What are local flood relief projects?** -- In general, local projects provide predominantly localized, 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, Port, etc. Local projects are additionally envisioned as helping with local flood relief (reducing flood damage and impacts), not adverse to fish, wildlife, or habitat, and (where possible) providers of multiple, quantifiable benefits (per Part IV below).

**B. What kinds of local flood relief projects are likely to be logical funding candidates for 2019-21?**

- 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, 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, public engagement and community planning, and proactive vetting with agencies and tribes.
- Projects that demonstrate informed decision-making through hydraulic analysis/understanding.
- Projects that demonstrate early planning involvement, information exchange with regulatory agencies.
- 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, significant uncertainty regarding potential environmental impacts, or significant concerns about obtaining regulatory approval.
- Projects not sponsored by a public entity.
- Projects not located in the Chehalis Basin.
- Projects that do not show quantifiable benefit.

**Instructions:**

- a. Please submit project requests (via this form) to [scottb@sbgh-partners.com](mailto:scottb@sbgh-partners.com) no later than 5:00 p.m., 7/03/2018.
- b. Please submit one request form for each project proposed, even past projects previously or partially funded.
- c. Note: Parts III and IV [marked by "(\*\*)"] will be scored for review/evaluation. Parts I, II, and V will not be scored.
- d. See Appendix A for overview of 2019-21 Local Projects Recruitment Process (and schedule), or [https://www.ezview.wa.gov/site/alias\\_1492/37282/2019-21-Local-Projects-Recruitment-Process.aspx](https://www.ezview.wa.gov/site/alias_1492/37282/2019-21-Local-Projects-Recruitment-Process.aspx).

Part I General	
1. <b>Date:</b>	7/3/2018
2. <b>Project Name:</b>	Keys Road Flood Protection
3. <b>Project Location</b> -- Please identify location of the project as precisely as possible, including providing decimal degree latitude/longitude coordinates.	Keys Road M.P. 0.50 to M.P. 1.55 Lat: 46.995202, Long: -123.481714 to Lat: 46.980460, Long: -123.480390
4. <b>Project Contact</b> -- Please identify who will be responsible for overseeing and managing the project (i.e., name, email, telephone number, etc.).	Rob Wilson Grays Harbor County Engineer <a href="mailto:rwilson@co.grays-harbor.wa.us">rwilson@co.grays-harbor.wa.us</a> 360-964-1663
5. <b>Sponsor</b> -- Please identify the sponsor, lead organization, primary entity, etc. responsible for this project. Please identify key partners responsible for assisting in delivery or implementation of project.	Grays Harbor County Public Works

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 (flood hazard reduction and otherwise) and to whom. Please also identify what phase/stage of the project funding is being sought for (e.g., planning, preliminary engineering, final design and permitting, construction, etc.).	The Lower Satsop River has seen significant migration in recent years. Keys Road, Port of Grays Harbor property, WDFW property and private properties are all threatened by the continuing movement of the river. A previously approved Flood Authority project, the Lower Satsop Planning, Visioning, and Priority Setting Project, will develop a master plan for the Lower Satsop and effected stakeholders in the area. The intent of this project is to perform the preliminary engineering, final design and permitting for flood protection measures along Keys Road. The design approach will be based on the results of the ongoing planning project. Maul Foster & Alongi, Inc. (MFA) has been selected by Grays Harbor County as the lead consultant for the planning project. The scope of work and other information related to this project can be found at <a href="https://www.ezview.wa.gov/site/alias_1973/library/37263/library.aspx">https://www.ezview.wa.gov/site/alias_1973/library/37263/library.aspx</a>
7. <b>Project Timeline</b> -- Please describe the timeline and phases for completion of the overall project and describe the timeline for completion of the phase to be funded by 19-21 funding.	Design work will begin as soon as funding is available with the intent to have PS&E complete in time to submit for construction funds during the 2021-23 funding cycle.
8. <b>Project Cost and Funding</b> -- What is the cost of the overall project (or anticipated cost)? What is the cost of the phase to be funded by 19-21 funding? What are the on-going	\$375,000  This is a conservative estimate based on similar projects recent performed by the County. A more complete idea of project design costs will be determined after a preferred alternative is

<p>maintenance and operation requirements and costs? Is it clear who will be responsible for covering on-going maintenance and operation costs?</p>	<p>established by the ongoing Lower Satsop Planning Project.</p>
<p>9. <b>Other Funding</b> -- Please explain the extent to which other funding sources, funding partners are available for this phase and any other phase of the project.</p>	<p>None</p>

<p><b>Part III (**)</b> <b>Completion, Doability, Alternatives, and Impacts</b></p>	
<p>10. <b>Project Completion</b> -- Does the funding requested complete, substantially complete, or continue a project already started? If so, please explain.</p>	<p>Yes, this project will serve as an extension of the Lower Satsop Planning Project being performed by MFA.</p>
<p>11. <b>Project Doable</b> -- Can this project or the stage/phase for which funding is sought be completed by June 30, 2021? 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.</p>	<p>Based on current conditions, this project should easily be completed by June 30, 2021. The project will utilize relationships with the permitting agencies and engage them in early consultation to ensure the project can be permitted effectively and within the required timeline.</p>
<p>12. <b>Project Alternatives</b> -- Please describe alternatives to the project that were considered (including doing nothing), and the rationale for selecting the project described, proposed here.</p>	<p>Alternatives to protecting Keys Road include relocating the road or do nothing and reacting to the migration of the river once it reaches the roadway. Relocating the roadway is cost prohibitive and is only a temporary fix. Lidar imagery indicates that the river will continue to migrate east unless some mitigation measures are put in place. Constructing a new roadway is a very costly endeavor and would be very difficult based on the orientation of the current bridge that crosses the Chehalis River. The other option is to wait until the River reaches Keys Road and react to the situation. This can be very costly and permitting will not be as straight forward as planning ahead. At this point we would be dealing with mitigation measures being placed below ordinary high water, opening the door to a more difficult and time consuming and costly permitting process.</p>
<p>13. <b>Project Impacts Avoided, Mitigated</b> -- Please identify how project impacts will be avoided and mitigated, and if that mitigation will be</p>	<p>The need for mitigation is not anticipated at this time.</p>

accomplished by June 30, 2021?	
--------------------------------	--

<b>Part IV (**)</b> <b>Benefits Stated and Quantified</b>	
14. <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/functional, does it enable easy movement of cattle, equipment and farm chemicals out of harm's way, is it part of a larger hazard mitigation plan, etc.).	This project will protect Keys Road from erosion due to flooding on the Satsop River. Based on recent river migration, Keys Road will eventually be lost if nothing is done to protect it. In the event that Keys Road is closed due to erosion from the Satsop River, emergency response times from GHC Fire District 5 would increase from 5 to 16 minutes for those private residences on the south side of the Chehalis River.
15. <b>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.	Keys Road is a major collector road and serves the Satsop Development Park and many private residents. Use of Keys Road is expected to increase as the Port of Grays Harbor adds tenants to the Satsop Development Park increasing the need to protect this vital infrastructure.
16. <b>Public Health, Safety and Welfare Benefits</b> -- Please describe (and quantify) how this project protects public health, safety, and welfare.	The safety of the residents that live south of the Chehalis River on Keys Road and the employees that work at the Satsop Development Park is diminished by the extended emergency response times that would result from the closure of Keys Road.
17. <b>Residential, Commercial and/or Agricultural Protection Benefits</b> -- Please describe (and quantify) how this project protects residential communities, commercial, and/or agricultural interests and benefits of acting (or consequences of not acting) this funding cycle. Consider factors like number of structures and people at risk, historic frequency of flood damage, magnitude of benefit for the cost, etc.	Although this project does not directly protect any properties it does protect the infrastructure that is vital to the residential, commercial and agricultural users in the area south of the Chehalis River to the Satsop Development Park.
18. <b>Habitat Benefits</b> -- Please describe (and quantify) how this project benefits or improves existing or future habitat conditions.	none
19. <b>Costs and Benefits</b> -- Project funders (and the public they represent) value cost-effective, sound funding decisions. To that end, please describe (and quantify) in general terms benefits gained for funds requested and frequency, time-scale benefits will be realized. Please also describe (and quantify): a. Funds requested. b. Costs avoided if funded (and on what frequency, time-scale). c. Costs incurred if funded (and on what frequency, time-scale). d. Benefits gained if funded (and on what frequency, time-scale).	<p>Costs of the construction of protection measures for Keys Road are difficult to determine until the planning project currently underway is completed.</p> <p>There are many benefits to proactively protecting Keys Road in its current location. Two main costs that would be incurred if the road was not protected would be building a new road and detour costs for the vehicles that use Keys Road. A rough estimate for moving Keys Road is around \$2,000,000 for the construction of approximately 1.15 miles of new roadway. This does not include the cost of design, right-of-way acquisition and permitting. There is also the cost to the public that</p>

<p>e. Impacts incurred if funded (and on what frequency, time-scale).</p> <p>f. Impacts and implications of not funding (and on what frequency, time-scale).</p> <p>Guidance Note (1): For this question, it will be helpful to think in terms of what will be the dollar value of assets protected, dollar value of impacts avoided, dollar value of monies retained or recouped, etc. for the amount of public monies invested.</p> <p>Guidance Note (2): Part V is intended to help project reviewers concisely summarize, compare funding requests. Answers here (and in related questions on this form) should be consistent with Part V.</p>	<p>regularly uses Keys Road. It is estimated to cost the public more than \$1500 per day that Keys Road is closed. This estimate is based on detour length and travel time added due to the detour. Something that should also be considered but is hard to quantify costs, is the added emergency response time. An increase of 10 minutes of travel time can be very costly in the event of an emergency.</p>
<p>20. <b>Other Project Benefits</b> -- Please describe (and quantify) any other project benefits not already discussed. This could include how this project compliments, leverages, or implements another project or planning process already underway.</p>	<p>Keys Road is one part of a large area that is affected by the migration of the Satsop River. The Port of Grays Harbor, WDFW, and private residents are all impacted in one way or another. Design of any protection measures for Keys Road will take into account the effects they will have on other stakeholders and if possible will help mitigate issues other parties may have.</p>
<p>21. <b>Anything Else</b> -- Please offer any additional information (e.g., photos, maps, video, drawings, drone, etc.) that would help to better understand the scope, timing, and benefits of this project.</p>	<p>A map showing the migration patterns of the Satsop River is attached.</p>

<b>Part V</b> <b>Summary of Benefits, Impacts, Costs</b>			
	<b>22. Benefits</b> – Please summarize, tally project economic and non-economic benefits as described.	<b>23. Impacts</b> -- Please summarize, tally project economic and non-economic impacts as described.	<b>24. Costs</b> -- Please summarize, tally project economic and non-economic costs as described.
<b>Quantify</b>	<p>Benefits include savings of roughly \$2 million for the construction of a new road plus \$1500 per day of costs to the public if Keys Road were to be closed.</p>	<p>Impacts will be seen after a design approach is decided.</p>	<p>\$375,000</p>
	<p>These benefits will be realized if Keys Road is proactively protected from the migration of the Satsop River.</p>	<p>N/A</p>	<p>Estimated cost of the design and permitting of the selected design approach. The approach will be decided on based on the results of MFA's planning project.</p>

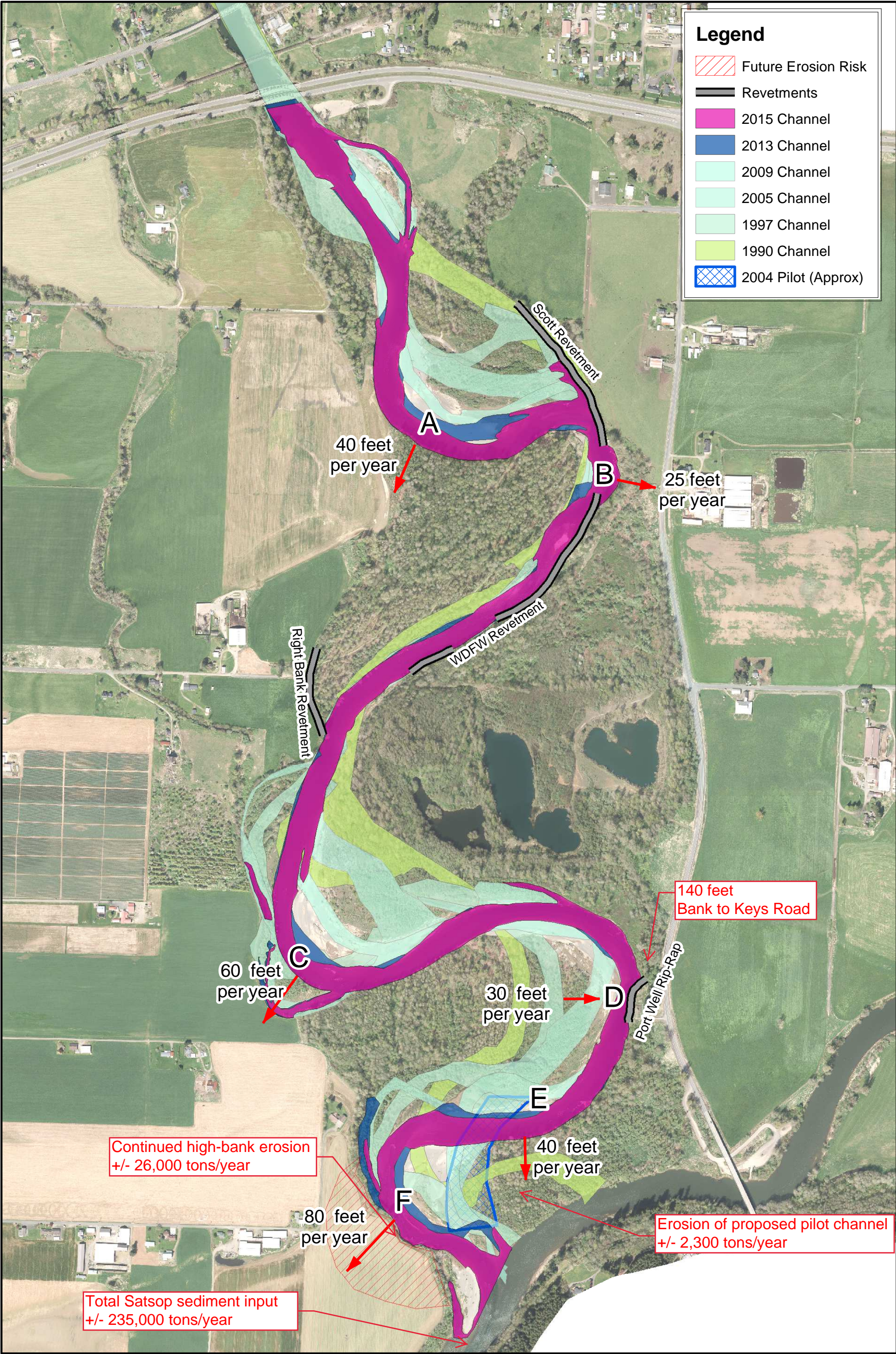
## Appendix A

<b>Process/Schedule Overview</b> (current as of 6-12-2018)	
June 12, 2018	<ul style="list-style-type: none"> <li>Post and distribute local projects recruitment request.</li> <li>Allow three weeks for project proposals/submittals (i.e., due no later than 5:00 p.m., Tuesday, July 3, 2018).</li> <li>Due to Scott Boettcher, <a href="mailto:scottb@sbgh-partners.com">scottb@sbgh-partners.com</a>.</li> </ul>
July 3, 2018	<ul style="list-style-type: none"> <li>Receive proposals/submittals.</li> </ul>
July 5, 2018 (or July 12, 2018)	<ul style="list-style-type: none"> <li>Update Chehalis Basin Board on numbers received, types of projects received, distribution, dollar value, etc.</li> </ul>
July 19, 2018 (or August 16, 2018)	<ul style="list-style-type: none"> <li>Update Flood Authority on numbers received, types of projects received, distribution, dollar value, etc.</li> </ul>
September 20, 2018	<ul style="list-style-type: none"> <li>Update Flood Authority on status of Projects Committee's effort to review, rank, discuss with Tribes, discuss with agencies, sort and rank, etc.</li> <li>Review/discuss PRELIMINARY DRAFT ranked and prioritized list.</li> </ul>
October 4, 2018	<ul style="list-style-type: none"> <li>Update Chehalis Basin Board on status of Projects Committee's effort to review, rank, discuss with Tribes, discuss with agencies, sort, and rank, etc.</li> <li>Review/discuss DRAFT ranked and prioritized list.</li> </ul>
October 18, 2018 (SPECIAL MEETING)	<ul style="list-style-type: none"> <li>Seek Flood Authority approval of FINAL ranked and prioritized list.</li> </ul>
November 8, 2018	<ul style="list-style-type: none"> <li>Seek Chehalis Basin Board approval of FINAL ranked and prioritized list.</li> </ul>
June 2018 through November 2018	<ul style="list-style-type: none"> <li>Work with agency, OCB, and CBB technical staff on refining and finalizing recruitment instrument, scoring criteria, scoring instrument, categorization, and ranking, developing draft and final lists, etc.</li> </ul>

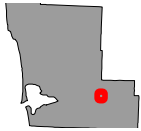
### Legend:

Chehalis Basin Board	Flood Authority
----------------------	-----------------





Grays Harbor County, WA



**Figure 7**  
**Recent Erosion Areas**

0 520 1,040 Feet

Scale: 1:8,000  
NAD83 Washington  
South ft

28 Jun 2017  
**WATERSHED**  
SCIENCE & ENGINEERING