

Scott Boettcher

From: Scott Boettcher
Sent: Tuesday, July 3, 2018 2:43 PM
To: 'Darci Twining'
Cc: Kim Ashmore; colronjanaverill@comcast.net
Subject: RE: China Creek Project Phase 2 Application

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

Scott Boettcher, Staff
Chehalis River Basin Flood Authority
360/480-6600
scottb@sbgh-partners.com

From: Darci Twining <DTwining@cityofcentralia.com>
Sent: Tuesday, July 3, 2018 2:31 PM
To: Scott Boettcher <scottb@sbgh-partners.com>
Cc: Kim Ashmore <KASHMORE@cityofcentralia.com>; colronjanaverill@comcast.net
Subject: China Creek Project Phase 2 Application

Dear Scott,

Please find attached the 2019-21 Local Projects Recruitment Form Chehalis Basin Local Flood Relief from the City of Centralia for the China Creek Project Phase 2. If you need any other information or have any questions please contact Public Works Director Kim Ashmore at 360-330-7512.

Regards,

Darci Twining

Administrative Services Manager
Centralia City Light and Public Works
1100 N Tower Avenue
Centralia, WA 98531
Phone: 360-330-7512
Fax: 360-330-7516



**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 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.

Part I General	
1. Date:	July 3 2018
2. Project Name:	China Creek Flood and Habitat Mitigation Project Phase 2
3. Project Location -- Please identify location of the project as precisely as possible, including providing decimal degree latitude/longitude coordinates.	The approximate center of the project is located at: Latitude: 46.727475° N Longitude: -122.946513° W
4. Project Contact -- Please identify who will be responsible for overseeing and managing the project (i.e., name, email, telephone number, etc.).	Kim Ashmore Public Works Director, City of Centralia kashmore@cityofcentralia.com 360-330-7512 Jan Stemkoski City Engineer, City of Centralia jstemkoski@cityofcentralia.com 360-330-7512
5. Sponsor -- 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.	City of Centralia

Part II Description, Timing, and Cost	
6. Project Description -- 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.).	<p>Centralia applied and received funds to construct upstream storage on China Creek Phase 1 modeled after the Johnson Creek Brookside Wetland project in Portland, OR. It is intended to use excavated naturally shaped landforms, stream channel friction and natural in stream fish habitat features to slow down and store runoff from the upper China Creek watershed during high flow runoff events. Delaying the peak flow runoff from the upper basin (approximately 70% of the watershed, generating 40% of the runoff flow) will allow China Creek to transport runoff from the urbanized middle basin (approximately 15% of watershed, generating 50% of runoff flow) reducing the frequency and/or intensity of flooding downtown.</p> <p>Phase 2 of this project will raise the storage level of the Agnew mill ponds to enhance storage downstream of the Phase 1 project.</p> <p>The flood benefits of the project include reduced/eliminated flooding of downtown businesses, preserving access along main travel corridors for emergency vehicles and the public, and improved</p>

	<p>emergency response time during flood events. The project will also enhance fish and wildlife habitat of the China Creek ecosystem within the project boundary. The beneficiaries are local business owners, the public and the public employees who serve the public during flood events, and those who enjoy fishing and wildlife viewing</p> <p>The need for additional work will be evaluated once the effects of this project can be measured.</p>
7. Project Timeline -- 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.	<p>Property was donated to the City of Centralia in 2014 ; Phase 1: Hydraulic modeling and design: January 2017; Cultural Resources Assessment: January 2017; SEPA: January - February 2017; JARPA and permitting: March - December 2017; Preparation of bid documents: January 2018; Bid project May: 2018; Bid award: June 2018; Construction: July – October 2018.</p> <p>Phase 2: Hydraulic modeling and design: summer & fall 2019; SEPA: Spring - Fall 2019; JARPA and permitting: Fall 2018 – Spring 2019; Preparation of bid documents: winter/spring 2020; construction: 2020-2021</p>
8. Project Cost and Funding -- 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 maintenance and operation requirements and costs? Is it clear who will be responsible for covering on-going maintenance and operation costs?	<p>The estimated cost of construction for Phase 2 is estimated at \$2.5 million. Maintenance and operation will be the responsibility of the City of Centralia.</p> <p>This project is being designed to incorporate characteristics of natural stream channels and natural water storage features so there should be minimal on-going maintenance and operation requirements for the flood mitigation components of the project. The flood mitigation M&O requirements that do exist will be performed by the City of Centralia, owner of the project area.</p> <p>Habitat re-created by the project will be monitored for effectiveness and stability by the City and its partners. Habitat enhancements will be incorporated over time as necessary.</p>
9. Other Funding -- Please explain the extent to which other funding sources, funding partners are available for this phase and any other phase of the project.	<p>City of Centralia acquired the property and will pay for wetland delineation, hydraulic modeling, design and permitting through potential grant funding.</p>

Part III (**) Completion, Doability, Alternatives, and Impacts	
10. Project Completion -- Does the funding requested complete, substantially complete, or continue a project already started? If so, please explain.	<p>Yes, this request is for funds to actually construct the project. This project will enhance the phase 1 project being constructed in 2018.</p>

<p>11. Project Doable -- 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>Yes. Current plans are to complete design, permitting, SEPA and all other pre-construction activities by December 31, 2019. The project will be bid in early 2020 and construction is expected to be done by the end of 2021. Permits may affect this schedule but construction will be completed before September 30, 2020</p>
<p>12. Project Alternatives -- Please describe alternatives to the project that were considered (including doing nothing), and the rationale for selecting the project described, proposed here.</p>	<p>This project is being designed to provide a net benefit to both fish and water quality. China Creek was channelized decades ago to flow in a ditch along the south side of Little Hanaford Road. Restoring China Creek to something approximating its original meandering channel through property purchased in 2014 by the City for this project, along with restoration of fish friendly channel characteristics will benefit fish and water quality.</p> <p>Riparian planting will eventually grow to mature size stabilizing the banks, providing shade to cool the water and a source of nutrients for the aquatic ecosystem. The temporary storage of high flows will help extend flows in China Creek farther into the summer when it typically goes dry.</p>
<p>13. Project Impacts Avoided, Mitigated -- Please identify how project impacts will be avoided and mitigated, and if that mitigation will be accomplished by June 30, 2021?</p>	<p>There should be no negative impacts to water quality or fish habitat from this project during construction and will be long-term benefits to water quality, habitats, fish and wildlife. Construction will occur during the dry season and China Creek won't be connected until the channel enhancements have been completed. All work will be done under conditions specified in the applicable permits</p>

<p style="text-align: center;">Part IV (**) Benefits Stated and Quantified</p>	
<p>14. Emergency Response Benefits -- 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.).</p>	<p>This project will help reduce flooding in downtown Centralia. China Creek flooding closes several main emergency travel routes in downtown Centralia including Main Street, Pearl and Tower, Maple, Silver, Iron and Rock Streets. Pearl Street and Tower Avenue are Highway 507 through Centralia.</p>
<p>15. Essential Infrastructure Protection Benefits -- Please describe (and quantify) how this project</p>	<p>This project will help protect transportation infrastructure along China Creek and areas downstream.</p>

<p>protects essential infrastructure and the risks or consequences of not acting this funding cycle.</p>	<p>Reducing the frequency and magnitude of flooding will reduce the scouring risk to the 20 bridges crossing China Creek through downtown Centralia. It will also help protect the recently restored section of China Creek flowing through the "Knoll" on the Centralia College campus. China Creek floods about once every 3.5 years so not acting during this funding cycle will result in at least one flooding event affecting Centralia. The magnitude of that event is impossible to predict with certainty.</p>
<p>16. Public Health, Safety and Welfare Benefits -- Please describe (and quantify) how this project protects public health, safety, and welfare.</p>	<p>Public Health, Safety and Welfare depends upon access. By preventing or reducing flooding on main traffic corridors emergency response vehicles will have access, or quicker access to visitors, students, residents and areas of town needing assistance</p>
<p>17. Residential, Commercial and/or Agricultural Protection Benefits -- 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.</p>	<p>China Creek flooding has direct and indirect impacts in the community. Direct impacts include flooding of businesses and homes adjacent to the creek channel. Indirect impacts include loss of business revenue, disruption of travel and disruption of emergency services during the times streets are impassible. China Creek flooding has historically been observed when 2.5 inches of rain falls during a 24-hour period. This occurs at a frequency of once every 3.5 years. This project will reduce the magnitude of flooding and may reduce the frequency. Once the effects have been measured project enhancements may be scheduled.</p>
<p>18. Habitat Benefits – Please describe (and quantify) how this project benefits or improves existing or future habitat conditions.</p>	<p>Other benefits would include enhancing native fish and wildlife habitat, including coho salmon that use the creek. The stream will be constructed to simulate the original meandering channel (~3,500 feet long). The natural channel and the planting of native riparian vegetation will provide for better habitat for all native species of fish due to improved habitat and water quality. The restored channel and upland floodplain areas will also benefit native wildlife, especially amphibian and reptile species. The current habitat is highly modified and encourages invasive plant and animal species.</p>
<p>19. Costs and Benefits – 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):</p> <ol style="list-style-type: none"> Funds requested. Costs avoided if funded (and on what frequency, time-scale). Costs incurred if funded (and on what frequency, time-scale). 	<p>China Creek flooding has direct and indirect impacts in the community. Direct impacts include flooding of businesses and homes adjacent to the creek channel. Indirect impacts include loss of business revenue, disruption of travel and disruption of emergency services during the times streets are impassible.</p> <ol style="list-style-type: none"> \$ 2,500,000.00 Labor for closing streets, setting up sandbag stations, flooded businesses, detour routes, emergency evacuations. These can last for a few days. Operation and Maintenance. Quarterly

<p>d. Benefits gained if funded (and on what frequency, time-scale).</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>d. This project will reduce the magnitude of flooding and may reduce the frequency. Once the effects have been measured project enhancements may be scheduled.</p> <p>e. Operation and Maintenance will be schedules as needed. City crews will monitor and complete maintenance that is required.</p> <p>f. China Creek flooding has direct and indirect impacts in the community. Direct impacts include flooding of businesses and homes adjacent to the creek channel. Indirect impacts include loss of business revenue, disruption of travel and disruption of emergency services during the times streets are impassible</p>
<p>20. Other Project Benefits -- 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>Improved populations of coho salmon, which has had substantial declines in recent years</p> <p>Improved populations of rare species such as Olympia mud minnow.</p> <p>Improved opportunities for fishing and wildlife viewing and other aspects of recreation.</p> <p>Improvement in aesthetics</p>
<p>21. Anything Else -- 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>	

Part V
Summary of Benefits, Impacts, Costs

	22. Benefits – Please summarize, tally project economic and non-economic benefits as described.	23. Impacts -- Please summarize, tally project economic and non-economic impacts as described.	24. Costs -- Please summarize, tally project economic and non-economic costs as described.
Quantify	Counting the returning salmon in the fall would quantify improvements in China Creek. Visual impacts of bank erosion would be visible.	Surveying businesses on the reoccurrence of flooding could show project reduces impacts such as disruption of services or loss of revenues. Number of times roads are closed along china creek should be reduced.	Engineers estimate for design, construct is \$2,500,000.00. Upon completion of project, total cost will be quantified.
Describe	Benefits would include enhancing native fish and wildlife habitat, including coho salmon. Reducing flooding of businesses.	Direct impacts include flooding of businesses and homes adjacent to the creek channel. Indirect impacts include loss of business revenue, disruption of travel and disruption of emergency services during the times streets are impassible	Engineers estimate for design, construct is \$2,500,000.00

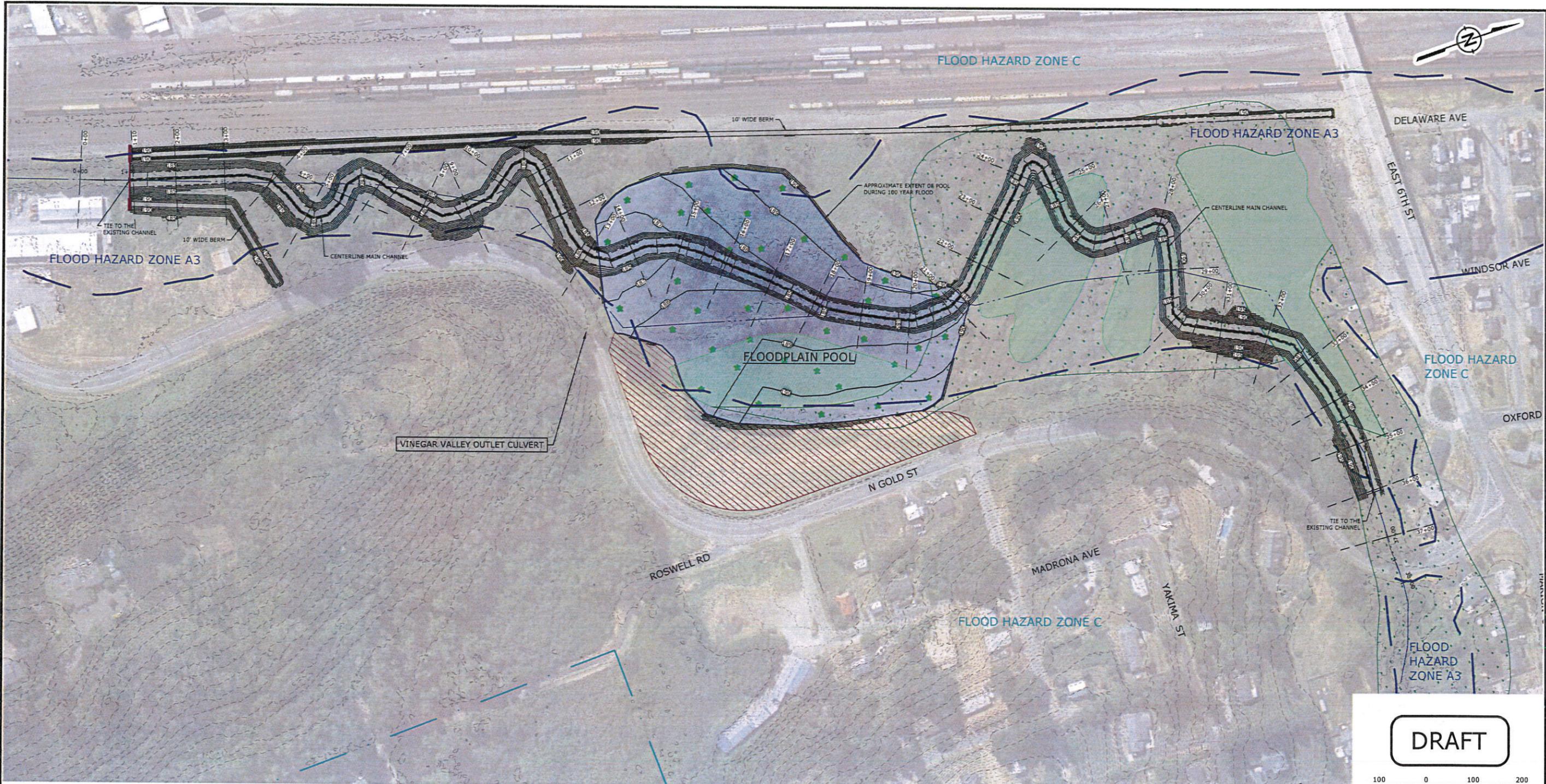
Appendix A

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

Legend:

Chehalis Basin Board	Flood Authority
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DRAFT



- NOTES:**
1. USE WILLOW, DOGWOOD, COTTON-WOOD, SALMON-BERRY AND PINE BARK TREES IN RIPARIAN BUFFER.
 2. USE RUSHES, SEDGES, FERNS AND LEGUMES IN HERBACEOUS PLANT ZONE.
 3. "THE CITY WILL EQUIP VINEGAR VALLEY / ROSWELL ROAD CULVERT WITH A FLAP GATE OPEN TOWARDS CHINA CREEK (AND PREVENTING BACKFLOW)".
 4. THE WESTERN TOE OF THE BERM FOLLOWS THE BNNR PROPERTY LINE.

- LEGEND**
- 100 --- LIDAR ELEVATION CONTOUR (MAJOR)
 - 150 --- LIDAR ELEVATION CONTOUR (MINOR)
 - 180 — PROPOSED ELEVATION CONTOUR (MAJOR)
 - 182 — PROPOSED ELEVATION CONTOUR (MINOR)
 - --- APPROXIMATE BOTTOM OF BANK
 - WETLANDS (FRESHWATER FORESTED/SHRUB)
 - WETLANDS (FRESHWATER POND)
 - RIPIARIAN VEGETATION
 - --- EXISTING CHANNEL
 - --- FEMA ZONE LIMITS
 - --- 100-YEAR FLOOD BOUNDARY

- SOURCES:**
1. AERIAL IMAGERY: Google Earth Pro®, Imagery Date: 7/16/2014.
 2. EXISTING TOPOGRAPHY: LIDAR DATA COLLECTED BY WATERSHED SCIENCES, INC. WHO CREATED THIS DATA SET FOR THE PUGET SOUND LIDAR CONSORTIUM. DATA SET: 2009 PUGET SOUND LIDAR CONSORTIUM PSLC TOPOGRAPHIC LIDAR LEWIS COUNTY WASHINGTON. THIS DATA IS ASSEMBLED INTO 7.5-MINUTE USGS QUADRANGLES AND FURTHER BROKEN DOWN TO 3.75-MINUTE QUARTER QUADS.
 3. WETLAND BOUNDARY: OBTAINED FROM THE U.S. FISH AND WILDLIFE SERVICE NATIONAL WETLANDS INVENTORY WETLANDS MAPPER WEB SITE. CHINA CREEK WETLANDS, DATED DEC. 3, 2014.
 4. FEMA FLOODPLAIN DESIGNATIONS: FIRM FLOOD INSURANCE RATE MAP, CITY OF CENTRALIA, WASHINGTON, LEWIS COUNTY, PANEL 1 OF 2, COMMUNITY PANEL NUMBER 530103 0001 B, EFFECTIVE DATE: JUNE 1, 1982. FIRM FLOOD INSURANCE RATE MAP, CITY OF CENTRALIA, WASHINGTON, LEWIS COUNTY, PANEL 2 OF 2, COMMUNITY PANEL NUMBER 530103 0002 B, EFFECTIVE DATE: JUNE 1, 1982.

REV.	DATE	DR.	CHK.	REVISION

**PRELIMINARY PLANS
OVERALL GRADING PLAN**

CHINA CREEK RESTORATION PROJECT
AGNEW MILL PONDS
LEWIS COUNTY, WASHINGTON



PREPARED BY: FK/GR	DATE: 11/23/2015	DRAWING
DRAFTED BY: BSC	SCALE: 1" = 100'	8
APPROVED BY: FK	PROJECT: 3034761D	