

**WRIA 9 Implementation Technical Committee**  
**Meeting Summary – April 17, 2019, 9:00am – 12:00pm**  
Tukwila Community Center, Banquet Room C

**Attendees:** Kerry Bauman, King County; Katie Beaver, King County; Elizabeth Butler, RCO; Sophie Chiang, King County; David Casey, City of Maple Valley; Jeanette Dorner, Mid Sound Fisheries; Dan Eastman, King County; Stephanie Eckard, Mid Sound Fisheries; Larry Fisher, WDFW; Matt Goehring, WRIA 9; Chris Gregersen, King County; Kollin Higgins, King County; Josh Kahan, King County; Dani Kendall, Seattle Aquarium; Darcy Larson, Seattle Aquarium; Mike Mactutis, City of Kent; Kathy Minsch, City of Seattle; Cleo Neculae, Ecology; Brandon Parsons, American Rivers; Mike Perfetti, City of Tukwila; Greg Rabourn, King County; Suzanna Smith, King County; Kelly Steffen, Environmental Science Center

### **Overview of Available Funding**

Suzanna gave an overview of funding that is available, and reminded the ITC that WRIA 9 staff are requesting its recommendation for funding to the forum on the projects represented in this budget sheet and being presented today. The final version of the budget sheet will be available at the next ITC meeting on May 15<sup>th</sup>.

### **High Priority Project Implementation Funding**

Project sponsors presented on high priority projects that are being proposed for funding this year.

- Dan Eastman, King County- **Lones Levee Setback**

The purpose of this project is to setback the Lones levee in the middle Green River immediately below a large section of unconstrained floodplain. Dan presented an overview of the project area, showing the acquisitions, orthoimagery, and topography of the site showing how the levee is cutting off a large area of the floodplain. Currently, the levee is protecting the Coates tree farm, while outlying areas are beyond the scope of the project therefore won't need protection. There is currently channel migration occurring, therefore there is already risk to those nearby areas that is not the responsibility of the project. The oxbow habitat that is located behind the levee is currently very disconnected, with only a small connection at the downstream end above 4000cfs. Below 4000cfs fish are not able to get out of the wetland area.

Three components of the project:

- 1) Levee Removal- remove the riprap, breach several areas, and leave some alluvium for the river to recruit. Also promote side channels
- 2) Tree Removal- will need to remove trees along the current levee prior to construction
- 3) Bank protection- will use ballasted engineered log jams along the oxbow to protect from erosion. The design maximizes space between jams

Estimated future conditions

- Dan presented flow maps with modeled water speeds in the project under current conditions as well as built conditions. Promoted conditions create low velocity habitats and side channels behind the current levee facility. The project has the potential to restore process in about 60 acres within the project reach.

Cost. Cost saving measures are being followed to reduce this as much as possible.

- \$6-\$6.5M total project cost
- \$4.5-\$5M for construction
- \$1.5M for design, permitting, outreach

- David Graves, City of Seattle- **Lowman Beach**

The project is located just north of Lincoln Park in southwest Seattle. The park has a failing seawall adjacent to a restored beach. There are two pipes going underneath the park and under the seawall. This is listed as a priority site for WRIA 9, which is important as it would remove this armored site that is located within an important drift cell along the WRIA 9 shoreline.

The south part of the project was armored historically, but removed. Over time, a beach has built up in this area- so with this project they expect to see the beach to continue to build in a northward direction. This is also the outlet for Pelly creek, which is currently piped underneath the park and the failing seawall. The project will daylight the creek and allow for an open confluence, though the design will include step pools where it is daylighted as well some features to keep the stream from moving into the park area. Likely no wood installed in the daylighted stretch. Also, will be planting near the stream for both habitat as well as buffer for the neighboring property. The project is targeting nearshore Chinook rearing and likely a food source input to the nearshore.

Currently at 30% design, will have 60% design by the end of the month. David presented conceptual design and 30% design of the project with overview, cross sections, and 3D conceptual images of the site. They are also considering increasing flows to the stream from upstream sources that are currently going into stormwater. Some portion of the stream is currently being routed into King County stormwater facilities, so they will be exploring the potential for re-routing that stream as well as incorporating that potential into design.

Cost: Estimated \$750,000 to 1M for total project costs.

Pelly creek currently flows through some fairly natural areas, so they believe that the water quality is good. As far as the current tennis court that will be removed, there are some people who are not happy about the removal- though there are some courts nearby (including Lincoln park) which will help offset the impact. Also there will be interactive and educational signs installed at the park.

- Greg Rabourn, King County- **Point Heyer Drift Cell Preservation**

The Point Heyer drift cell is on the east shore of Vashon Island. It's over 2 miles long and about 90% of the shoreline is natural. Comparatively, over 50% of Vashon is armored.

Long range goal is to preserve 90% of the drift cell and sustain the lagoon at the end of the drift cell. Kollin found that Chinook from 8 different basins were found using nearshore areas of Vashon. This area provides low traffic good habitat with natural banks and beach habitats with good vegetation.

The overall strategy is to protect the sediment supply, prefer fee ownership, prioritize northern tier 1 parcels, and to be opportunistic on what properties are available. There are 4 tiers for prioritizing acquisitions in this 2 mile section of beach. So far, they've got 8 tier 1 parcels, 2 tier 2 parcels, 1 tier 3 parcels, and 2 unranked parcels. So far, 72 acres have been protected along the shoreline with over 3.8M spent to date.

For this funding round, they are proposing acquiring the Carlstedt and Sinclair properties (Sinclair is the KVI beach lagoon). Carlstedt is over 100 feet of shoreline just north of this and includes a house that will likely be surplus to recover some of the costs. This would provide 2650 feet of shoreline. 3.5 riparian acres.

Budget. The Sinclair parcel is appraised at \$675k. Carlstedt appraised at \$850k, and removal of the bulkhead at \$212. Total of 1,737,000.

- Mike Perfetti, City of Tukwila- **Riverton Creek Flapgate Removal Project**

This ongoing project is just asking for a cost increase due to increases in labor. Feasibility showed that this flapgate is currently not protecting any infrastructure, so the city of Tukwila will be removing it to provide access to a section of the stream as well as a ¼ acre salt marsh area.

They have been working with SRFB and WSDOT to address stormwater runoff issues, as well as responding to comments regarding habitat components. Currently, they are looking at a step down section near the current flapgate, as well as a feature to allow the marsh area to create a backwater pool at low flows. Mike presented several alternatives that they will be considering for the lower portion of the stream regarding LWD addition and placement.

The total requested will be ~\$121,125. Overall, this project will be just shy of \$1M in total. Group agreed that the best course of action would be to use PSAR return funds for this since this is partially in regards to SRFB comments.

## **Education & Stewardship Fund**

- Kelly Steffen, Environmental Science Center – Salmon Heroes and Beach Heroes

The Environmental Science Center goals are to increase public awareness through student field studies, salmon hero and beach hero programs, education outreach, and community events. The purpose is to encourage people to make positive behavioral changes to improve water quality. Currently, they outreach to over 5000 people. These programs are reaching out to schools with a high percentage of free or reduced price meals, which is indicative of low income families.

- Salmon Heroes 66 classes, 1552 students (additional programs in king county as well). Program consists of:
  - Pre-field study classroom visit: An interactive education about salmon life history and water quality.
  - 3 hour field study: Take the students out to the stream to test water quality, look at habitat features and riparian areas, look for salmon, look at the anatomy of salmon, play interactive games about the salmon life cycle

- Post field study classroom visit: Look at the water quality data that the class collected and upload to the EarthEcho International website. They also then discuss common stormwater pollutants, brainstorm solutions, and test a natural filter.
- Student pledge: Each student gets an official salmon hero card, with a pledge on what they will do to help salmon.
- Teacher feedback and student assessments: Have students draw a picture of good salmon habitat before and after to show what information was obtained and what was learned.
- Beach Heroes- 100 classes, 2375 students (additional programs throughout king county).
  - 1 hour classroom presentation, 2 hour field visit about the importance of beaches and beach habitats.
- Dani Kendall and Darcy Larson, Seattle Aquarium – **Beach Naturalist Program**

Dani discussed the program in general. This is a public education and outreach program to give citizens an opportunity to explore beaches and learn about the animals who live there. This is an opportunity to reach a diverse group of people around King County in WRIA 8 and WRIA 9. These beach walks focus on park areas, and include both daytime and nighttime beach walks. The program currently has ~300 volunteers that are trained each year to engage beach visitors and educate them on beach communities, nearshore areas, and salmon. Last year, volunteers tracked over 60,000 conversations about salmon and nearshore areas.

Darcy discussed the audience within the beach naturalist program. This includes Puget Sound residents, school groups, camp groups, community partners.

Ripple effects from this program:

- Volunteers, 83% of volunteers reported sharing their knowledge with people outside the public who they meet on the beach.
- 4,118 visitors reported learning at least one thing after speaking with a beach naturalist.
- 62% of volunteers reported changing behaviors to be more environmentally friendly.
- 3,932 visitors reported that they would take one or more actions to keep Puget Sound healthy.

The Aquarium has a calendar for the beach naturalist program that has locations, dates, and times to go out and talk to beach naturalists.

For those that would like to follow up on the discussion with our education and stewardship sponsors about the possibility of integrating engagement with local representatives about salmon recovery, please get in touch with Suzanna soon. If there is interested, she would like to put a meeting together sometime in May to explore possibilities.

### **Downy Farmstead Project Update – Mike Mactutis**

Downy did not make it on the list for funding for this coming year. However, with the funding that's available we'll be out to bid for the next phase of the project. The project has been in the que for 10 years now, and consists of 20 acres site with a side channel. This phase of the project will be relocating Frager Road from the riverfront to the back side of the project area. Last year they moved over 40,000

yards of material. This year will also include digging out an additional 10,000 yards. This project is a high priority for the city, and requested \$5.3 M from state funding. The group mentioned that we need a much greater emphasis on advocating for more project funding from legislature, which has not increased funding due to lack of interest from the public. Suzanna proposed that we list Downey as an alternative to the current project list so that if any of the other projects fall through or we had some additional funding, that it would be put towards Downey.

**Revegetation Grant Updates- Suzanna Smith**

Suzanna went over the outcome of the grants that were discussed in the past meeting. For Re-Green the Green, there were 4 applications that came to \$265k, which was reduced to fit the \$250k grant amount available. For the 1 Million Trees project, there were two applicants for this for a total of \$175,595. Together, these 2 proposals will put over 15k trees in the ground.

CORRECTION: Due to an error in the total versus requested funding by each project, the final total award for each project will be:

Sponsor	Final award
Newaukum	\$62,424.02
Green River	\$65,151.96
Midsound	\$62,424.02
Forterra	\$60,000.00
<b>TOTAL</b>	<b>\$250,000.00</b>

There will be no reductions in the scope, but rather scope enhancements that can be supported by the slight increase in funding.

**2019 Monitoring Priorities- Kollin Higgins**

We have \$120k available for monitoring projects. In total, there are 7 project on the table, 2 of them are projects recycled from last year’s monitoring proposals.

The 7 projects being proposed are:

1. WDFW. Smolt Trap. \$40K request of total \$170K to run smolt trap.  
 WRIA 9 has contributed to the smolt trap for the past 5 years as part of a cost-sharing arrangement between WDFW, ACOE, and the city of Tacoma. The smolt trapping effort has occurred for approximately 20 years. The ITC has previously stated collecting this data is of the highest importance. This will be funded first, with the remaining \$80k used for the other proposals.
2. WRIA 9 NTA-Effects of PCB exposure of juvenile Chinook salmon survival, \$90K  
 The project provides tools that will enhance the ability to evaluate Chinook contaminant exposure and impacts to their health and survival throughout Puget Sound. Chinook fry rearing in the Duwamish estuary experience extremely low survival, limiting productivity in the Green/Duwamish watershed. Limited tissue chemistry data indicate juvenile Chinook are bioaccumulating contaminants while in the Duwamish and that PCB exposure may be causing adverse health effects. However, effect thresholds are sparse or lacking for evaluating chemical contaminants. Effect thresholds provide context for evaluating chemical toxicity to salmon and

can be highly variable depending on assumptions used in their development. This project will use the WRIA 9 stakeholder process to establish assumptions, including screening criteria, for Puget Sound Chinook effects threshold development, develop a tissue effect threshold for PCBs, and provide inventory of dose-response studies for other contaminant thresholds.

3. King County-Chris Gregersen. Green River Flapgate Salmon Passability and Design Evaluation, \$40K. The purpose of this proposed project is to inventory current flapgate data, develop and implement flapgate monitoring technology to assess the functionality of existing flapgates, and pair fish sampling with flapgate monitoring to understand how flapgate function effects fish passage. This budget would allow for the study of 4-5 flapgates, their functionality, and fish passage associated with them. Recent work has provided evidence that fish passability of flapgates is variable and may be influenced by design criteria of flapgates (height, size, position relative to river). This project would seek to understand how those design criteria effect fish passage, and provide recommendations for future flapgate construction and retrofit of existing structures.
4. King County-Jen Vanderhoof. Implementing Plan Project U-1: Upper Green Connectivity Project. \$ 71k.

This proposal partially implements Salmon Plan project UG-1 as well as policy UG-2 (support forest harvest rotation programs that minimize impacts on salmonid habitat). This proposal represents the first phase in the development of a U-1 strategy to protect and restore habitat. This phase would thoroughly document, examine, and analyze the current conditions of the Upper Watershed with respect to biodiversity (fish and wildlife specifically) and propose a prioritization scheme for habitat protection. Deliverables from this phase would include a report with recommendations on future phases, including a suggested path forward to complete a strategy. Subsequent phase(s) may include further field study, if determined necessary, as well as the convening of a working group to pursue a public landownership protection plan based on the initial prioritization

5. American Rivers Economic Study of salmon restoration on Property Value in Puget Sound. Grant request is for \$15K of total \$75K.

The primary barriers to floodplain restoration in the Lower Green are a lack of funding and available land. Municipalities in the Lower Green receive approximately 1/3 of their annual revenue from property taxes. This tax base has made even the most blighted and under-utilized properties appear to be more economically productive than the healthiest public space.

However, research has shown that restoration of urban waterways has, on average, produced a substantial return on investment (ROI) in the form of increased value of adjacent property, increased investment, improved quality of life, increased willingness to pay and a variety of other social and environmental benefits.

American River's is seeking funding to develop a study to research the economic benefits of urban waterway, waterfront, greenway and salmon habitat improvements on residential and commercial property values in the Puget Sound Region. The study will build upon previous economic studies by WRIA 9 and identify sustainable funding mechanisms that can be used to finance and maintain improvements in perpetuity.

6. Lowman Beach pre project monitoring. Seattle/UW. \$54K.  
Proposes biological monitoring to take place in Spring-Summer 2019 at Lowman Beach Park and several reference sites in West Seattle along Puget Sound shoreline. We will collect before-construction baseline data on habitat conditions at the site's armored and un-armored

shoreline, including invertebrates that are used by juvenile salmon as prey resources. Habitat conditions that will be monitored are (1) beach wrack deposits (algae, eelgrass, terrestrial debris deposited on an ebbing tide), and (2) logs and riparian vegetation. This will be compared to another pair of armored and un-armored shorelines in the vicinity, providing a stable reference site for comparison after the Lowman Beach armor is replaced and parts of the beach restored

7. WDFW Otolith Study-\$33K

WDFW was able to collect 150 otoliths in 2018, reducing the budget ask from last year. However, they do not have the money to analyze these otoliths. WDFW has previously evaluated otoliths from 2015, 2016, and 2017 (the last two with WRIA CWM \$). WDFW would evaluate these otoliths to establish 1) which juvenile life history types are contributing to adult returns, 2) Any differential survival between Soos, Newaukum and the mainstem), 3) how many natural unmarked adults were actually Soos Creek Hatchery fish.

8. Lower Green River Trail survey. This idea/concept has been pulled for consideration in 2019. Effort will be put into further developing the proposal for the 2020 monitoring grant round.

Kollin brought up the upper watershed study and that it has been dropped off the list a couple of times now. The group agreed that this is very much needed and important, especially with the need to combine ownership in the watershed, conserve water, and prepare the habitat for when fish are going to have access. Suzanna mentioned that this is more aligned with the plan update and that we would pursue that route for at least partial funding.

After the proposals, the ITC agreed to fund project 3, 5, and 7 for \$87k. Suzanna stated that we would be able to cover the additional \$7k in order to make these 3 projects work. In the event that she cannot, the group agreed to request that the WDFW study make theirs scalable to match the reduced amount (\$25k vs. \$32k).