

**WRIA 9 Implementation Technical Committee**  
**Meeting Summary – October 17<sup>th</sup>, 2018, 9:00 am –12:00 am**  
King Street Center, 6<sup>th</sup> Floor- King/Chinook Rooms

**Attendees:** Bryan Anderson, Boeing; Katie Beaver, King County; Dave Beedle, Seattle City Light; Karen Bergeron, WRIA 9; George Blomberg, Port of Seattle; Sophie Chiang, King County; Larry Fisher, King County; Matt Goehring, WRIA 9; Chris Gregersen, King County; Kollin Higgins, King County; Kathy Minsch, City of Seattle; Amber Moore, PSP; Mike Perfetti, City of Tukwila; Jen Rice, King County; Dennis Robertson, City of Tukwila; John Sloan, Port of Seattle.

**Introductions- Matt Goehring**

The group introduced Dave Beedle to the WRIA 9 ITC. Dave is a new hire to Seattle city light, but has spent last 25 years working in the Cedar and Tolt with Seattle public utilities. In the past Dave worked for the Muckleshoot tribe, and understands the Green River system very well. Dave's job is working in the science policy group. Dave replaces Scott Powell, and will be participating in WRIA's 7 and 9.

**Juvenile Chinook Use of Non-Natal Tributaries in the Lower Green- Chris Gregersen**

Chris presented the findings from his CWM monitoring study from this spring. This study investigated the use of non-natal rearing (fish that hatched in the middle Green) tributaries. The study focused on 9 streams throughout the lower Green that represent a wide range of basin sizes, stream types, and conditions. Sampling was conducted over 3 sampling dates in March, April, and May of 2018, and over the course of that sampling he found Chinook using 8 of the 9 tributaries, and fish utilizing them for the entire rearing period sampled (3 months). Chinook catch varied spatially, as certain streams had much higher catch than others (Mullen, Midway being two of the highest CPUE). Chinook catch also varied temporally, as fish were found in the highest densities in March, which generally tapered off into May.

Overall, fish were found in both unconstrained tribs and those with flapgates. Some interesting patterns were found for those with a flapgate: fish were present above flapgates only in the streams that had a protected alcove near the flapgate, and had a high flapgate elevation. These factors likely allowed fish to be able to access habitats above the flapgate. The stream that had no Chinook present- Johnson Creek- had a flapgate that extended to the water line, meaning there was fast current in front that could prevent fish from entering as they are just swept downstream, as well as being set low in the river so it was underwater for much of the sampling. Additionally, fish on average were longer in the upstream reaches for the first two sampling events. This could mean that fish are finding better rearing conditions and/or are older fish that are staying there.

Part of this study included longitudinal sampling to determine the upstream extent of fish. While this isn't rigorous sampling, it does allow us to see general fish distributions and give us insight to how they distributed. Overall, fish were found closer to the trib mouth in Olsen creek, which had the steepest gradient. Fish were found in other tributary systems up to about 500 meters upstream, but could be further.

From this project, there are some salmon recovery implications that we can take away. First, now we know that Chinook rear in tribs and the lower Green, so investing in these projects will benefit Chinook (especially since we know that rearing habitat is limited in the Green).

Next, we know that juvenile barriers are important. Focus is put on adult passage barriers, but in the case of these tributaries they are too small for adult spawning Chinook, so their use is mainly for juvenile rearing. Juvenile passage is more difficult to achieve than adult passage, and will have different requirements. Future work should analyze this, and promote retrofits and fixes for these barriers.

Also, from this work we know that flapgates are not all created equal. There are variables that control accessibility for fish. Future work should identify the extent of flapgates, accessibility for fish, and potential retrofits that could be done.

There are many more details from the presentation, which will be posted online.

### **Port of Seattle Habitat Restoration- John Sloan and George Blomberg**

Port of Seattle gets involved with habitat due to natural resource damage liability and mitigation. Also, part of their goal is stewardship. This presentation focused on estuarine habitat. The Duwamish estuary is a heavily used economic area with high amount of impervious surface, and supports a local economy. This is good in that it allows us to shape the area in an ecological and community perspective. This area can also be managed in a way that was different historically. We have 8.2 square miles of industry in place of about 8.2 square miles of estuary. We have lost 99% of estuarine habitat. The watershed has been changed and reduced dramatically with the alteration and changing of tributaries like the Cedar and White.

George presented examples of habitat restoration projects that have bene successful in the Duwamish Estuary:

- Turning basin #3. This was a site that the port owned. The port removed abandoned structures such as derelict vessels and debris. They removed 3500 yards of fill and planted native vegetation. This was a proof of concept to see if this in fact worked to restore habitat. 3 years later, there's marsh and riparian vegetation. In 1999, they returned to turning basin 3 and excavated 44,000 tons of material fill and planted vegetation as mitigation for a project. 8 years later, the site has grown up with a native vegetation and is not eroding, while also providing habitat. This illustrates that a large scale habitat restoration the Duwamish can be successful, and monitoring work has shown that fish and native species are using the site.
- In 1996 the port did the terminal 105 project with a grant to provide recreation access and provide valuable habitat. The project excavated an intertidal channel, planted with native plants. The site features functional riparian, emergent marsh, and mudflat- as well as fish using the site.
- Terminal 108. In the case of the Duwamish, much of the land is publicly owned, so there are things that we can do to help habitat in between the river and the industrial areas. In terminal 108, they replaced an eroding armored wall with native vegetation, logs, and a more natural bank. This was not a compensatory project.

- South Riverside Drive demonstration project, this was another demonstration project to rehabilitate a shoreline about 300 feet long that had an armored bank.

The Port has been utilizing alternative shoreline stabilization techniques. The port owns 16 miles of shoreline comprised of critical infrastructure as well as habitat, and represents a range of changing conditions. Matt- what is the overall opportunity for restoration on the port that isn't occupied by infrastructure? It's loaded with opportunity. There's about 900 acres of loading area that the port owns, not all of which were near the river. Much of the bank though is a small band of public land that could be worked with. The port is in a good place to help restore some of these.

John continued the presentation, showing that the port has been identifying areas within the 16 miles of shoreline, including the armored areas and places where we can make improvements. They've mapped all the armored banks that they have, about 6 or 8 types. Then, how can we take the characteristics of a natural environment and apply them to maintenance on our armored shorelines. When maintenance needs to be done, they will work to apply some of these natural restoration techniques rather than keep armoring them.

The terminal 117 habitat project is in the works right now through the NRDA process. This is working to provide both mainstem habitat as well as an area of off channel habitat. With this process going on, they now know what the settlement looks like so they are more capable of helping out with restoration. Since they know they won't need certain areas for the settlement, they can donate the land for restoration. The other NRDA site is the terminal 25 project. This will add 3 to 5 acres of off channel marsh along the east waterway where almost no habitat exists.

### **CWM Grants- Investment Retrospective – Karen Bergeron**

Karen gave a retrospective look at the recent history of CWM monitoring grants that have been given out for the lower Green. Karen gave out a handout of all funding that's gone through the program since 2012. With the 1.2 million for CWM annually (more now), 10% has gone to monitoring assessments and studies- so \$120k a year.

This program has helped fund monitoring such as the WDFW smolt trap that has been invaluable for the WRIA. This has been a total of \$280,000- and started due to budget shortfalls, but now may not be needed and Karen would like to advocate for WDFW to take over those costs. Karen will be getting this table online with the title of the grant (title of the report may be different), the sponsor, the description from the grant application, and the findings of the study.

This investment in monitoring work has paid off greatly, as the work has helped guide the strategies for projects and acquisitions- for example, the otolith data that shows fry are not surviving. We should try to honor that 10%, and this work supports why. Our CWM is 1.7 million annually, so we would like to keep 10% and try to increase our monitoring funds to 160-170k.

Karen said that the technical committee is a big component of a strong and effective lead entity group and praised the group for its hard work. She has kept ideas that the ITC comes up with for monitoring, then brings them to the ITC yearly in an organic way. Karen also requested that when she leaves- devote some of this funding to the upper watershed to develop restoration and acquisition strategies. Dennis-

what is the link between this work and making the projects happen? We need to take these ideas and take advantage of them by doing something.

### **WRIA 9 Salmon Plan Update Policy Discussion- Matt Goehring**

Matt has worked on revising innovated policies from the 2005 plan. The draft document includes the 2005 policies as well as the ITC's updates for the upcoming plan update. The following are edits that Matt ran by the ITC:

- The first policy IN1, focused on refugia. Based on these discussions, Matt updated the policy based on viable salmon population parameters. Are people comfortable with changing from the refugia wording to VSP? Overall group supported this change with a couple minor edits.
- Next was shoreline stabilization. The change was to update the techniques, and defining some of the aspects such as "primary structure" that may not have been clear.
- Levee and revetment setback policy- People generally like this one, not much feedback. This was the policy that was added last time. Once clarification was that people wanted to define a setback which involves relocation of the toe of the revetment and allows for channel migration.

Matt Knox- should we add flapgates or culverts to a policy? Matt- we have a fish passage policy that we can update with recent findings and Chris's study. Overall group thought that this was a good idea.

- Multi-benefit floodplain management- this was generally supported. People pointed out that we needed to reduce community flood risk and list this a specific benefit in multi-benefit definitions. Some minor edits added, also change the order to make salmon habitat more important.
- Mitigation policy- this is something the forum struggled with a few years ago. This is our attempt to revamp that and recognize the opportunities involved in mitigation. As long as we keep track of what's mitigation and what's not, these programs provide a significant benefit to meeting our goals. Add tracking these opportunities to expand and partner. We have the potential to be facilitators for this work, but there has been the question of whether the loss of other habitats for mitigation counts against our targets. In the past, other groups have wanted to use WRIA 9 projects for mitigation. From this though, there has been more collaboration on teaming up to do projects that enhance the overall net benefit. Important to note though that it is important to include in the plan that there are opportunities where mitigation money would be needed to help us meet our goals. From a funding source, can't mix the two (mitigation and grant funding), but we can have projects that are collaborative/complementary and work together.
- Parks and Natural Area Maintenance- the updates incorporate salmon-safe certification standards into best management practices for park and grounds maintenance procedures.

### **Round robin update**

Bryan Anderson – Amendment 3 is complete. They collected sediment, tissue and water samples as baseline to measure success going forward. Good news is we saw reductions over several projects,

which has reduced pcb and surface sediment contamination by over 50%, which is more than the models predicted in the feasibility study. This is good news, and shows they are making progress on the overall contamination. Now going forward with design for the upper segment, which is an opportunity for collaboration. Also, there is going to be a KUOW story on river otters in the next couple of weeks. We have some recent video at the south park site where they otters come up and use bathroom areas, but recently have some video of groups of 7 or 8 otters to come up and use that property. Part of the story is that otter scat has higher concentrations of contaminants than other places, but otters are there and there's more than there used to be.

Matt Goehring- Lower Green River corridor plan meeting last week. Dennis is the WRIA representative. Overall, Matt felt that it went well for an introductory meeting. In terms of recognizing the need for a multi benefit approach to the corridor planning process, it seems that this point was reflected well.