

APPENDIX F. MEETING SUMMARIES

November 16, 2007 Meeting Summary

Attendee	Affiliation
Julius Ledgett	Landowner
Mark Wilson	Port of Kalama
Donna (Hale) Bighouse	WDFW
Patrick Powers	Waterfall Engineering
Marnie Tyler	Ecolution
Bernadette Graham Hudson	LCFRB
Hal Mahnke	LCFEG
Nello Picinich	LCFEG
Rich Yahrmarkt	LCFEG & Kalama Landowner

Pat Powers (Consultant Hired by LCFEG) opened the meeting by reviewing status of the project to date and provided an overview of the project kick-off meeting on April 18, 2007. Pat also introduced Marnie Tyler of Ecolution who will be assisting Waterfall Engineering with the project.

Project Review

Pat reviewed the project goals and objectives, which are, in short, to develop a list of viable projects, prioritize them, and prepare 30% engineering design for the top few projects. The role of this stakeholder group will be to make recommendations in this process.

Because the SRFB proposal only referenced property owned by Julius Ledgett, the group focused on the Julius Ledgett lands initially, but subsequently expressed interest in expanding the scope of the areas considered. The LCFEG is surveying the Ledgett property and has reviewed prior surveys of the property. Information has already been collected on Lake Kress, and two ponds on the Ledgett property. Over the winter of 2007-2008, during high water levels, the team will be collecting additional data and surveying potential project areas to obtain data necessary for the engineering design. We will also be installing piezometers. The additional data will enhance our ability to describe groundwater linkages between surface water bodies and strengthen our understanding of which potential projects have the greatest likelihood of success. Based on HEC2 data from Mark Wilson, which shows 100-year flood data throughout the Lower Kalama area, Pat plotted the outline and extent of the 100 year flood. Pat presented this information, as well as information on the water temperature and water surface elevations over the project area.

Potential Restoration Project List

Pat presented the first iteration of the list of potential restoration projects, which was developed from a float of the river by several stakeholder members and follow-up ground reconnaissance. The October 11 Field Reconnaissance Summary provides a brief description of several of the sites. At the November meeting, the group briefly discussed each project on the list and identified its location on aerial photography. The following table incorporates group discussion related to each potential project site at the 11/16 meeting. The nomenclature is as follows:

KR = Kalama River; the L or R following identifies which bank when looking downstream. The number identifies the river mile, from the mouth of the river. SC refers to Spencer Creek, a tributary to the Kalama River. Therefore, KRL0.0 refers to river mile 0.0 of the Kalama River, on the left bank as floating downstream.

Project #	Name	11/16 Discussion
KRL 0.0	Low Water Fish Passage	<ul style="list-style-type: none"> • Tidal flat at mouth.
KRL 0.1	Port Tidal and Backwater Channels	<ul style="list-style-type: none"> • Port has documented juvenile salmonid usage in these channels. • Mark Wilson has 4 years of quarterly monitoring data for these areas, including water levels, vegetation, salmonid usage, and presence of freshwater clams • Amphibian usage has also been observed in this area.
KRR 0.7	WDFW Tidal and Possible Groundwater Channels	<ul style="list-style-type: none"> • Need additional water level monitoring data to evaluate off-channel opportunities on WDFW lands. • Need further discussion on whether or not to consider Tier 4 reaches, even if Tier 1 reaches would benefit from the project elsewhere. • Should consider alternative funding sources for lower Tier reaches, if it can be demonstrated that there is a benefit to fish. • Long-term data are needed to revise tier rankings.
KRL 1.4	Groundwater Channel	<ul style="list-style-type: none"> • Wall-based channel • Possible chum channel • Elevation change present here, providing head for groundwater flow.
KRR 1.8	Active Side Channel	<ul style="list-style-type: none"> • Observed but not explored further.
SC 0.5	S. Branch Side channel rearing	<ul style="list-style-type: none"> • This area currently serves as juvenile salmonid refuge, but lacks wood. • A pump test here would further identify groundwater connectivity and flow.

SC 1.0	Fish Passage Culvert	<ul style="list-style-type: none"> • This culvert is actually passable and will be removed from the project list.
SC 1.8	Fish Passage Culvert	
KRR 2.2	GW Channel System	
KRL 2.2	Pipeline removal and LWD	<ul style="list-style-type: none"> • Pipeline is visible at low flows and affects channel morphology • LWD to include 3-4 small logjams
KRR 2.4	Riprap removal/floodplain reconnection	<ul style="list-style-type: none"> • Riprap was placed in 1970 as agricultural initiative. • Removing riprap could require mitigation with existing homes and properties downstream.

Ultimately, the most successful projects will be identified based on biological and logistical factors. On the biological side, groundwater sources, the species and life stages affected, proximity to existing suitable habitat, tier ranking, priority level within the 6-Year Habitat Work Schedule, and other factors may all be taken into account. Logistical considerations, including landowner willingness, structural complexity, and cost effectiveness are also important factors. Several landowners still need to be contacted to gauge their support of restoration activities on their property. We will use a matrix incorporating these factors to aid in evaluating and ranking the potential projects and will review this approach at the March meeting.

Project Timeline

The overall aim in 2008 is to prepare one to two projects to 30% engineering design in order to apply for SRFB funding. A 30% design completed by May 2008 could be submitted as a pre-proposal in the next grant round. Funding would be available in January 2009 if approved. Construction could then begin, within approved work windows. There is some risk in moving forward with projects and not having the final report done. SRFB in the past has often wanted sponsors to wait until the assessment is complete. Any project proposed need to be clean, and not dependent upon additional assessment.

Additional projects could be taken to a 30% design level if the projects are less complex. For example, it would be realistic to take one complex project, or two or three straight forward projects to this design level in 2008. However, it is unlikely the SRFB would approve funding for more than one project in the same area in the next grant round. Additional designs could be used in subsequent grant rounds. It is not cost-effective to develop designs beyond the 30% level until funding is approved.

Next Steps

- Link potential restoration projects with the 6-Year Habitat Work Schedule, which supplements the Lower Columbia Salmon Recovery and Fish and Wildlife Subbasin Plan;
- Identify fish species and life stages benefiting from each project;
- Contact landowners to gauge willingness to participate;
- Develop a matrix to evaluate biological and logistical success factors for each potential project site.

Individual Tasks

- Donna will check HPA requirements for the Olympic Pipeline.

March 20, 2008 Meeting Summary

Attendee	Affiliation
Bryce Glaser	WDFW
Bernadette Graham-Hudson	LCFRB
Hal Mahnke	LCFEG
Nello Picinich	LCFEG
Patrick Powers	Waterfall Engineering
Marnie Tyler	Ecolution
Chris Wegemann	WDFW
Steve West	WDFW
Mark Wilson	Port of Kalama
Rick Yahrmarkt	LCFEG, Kalama Landowner

Nello Picinich opened the meeting by asking Pat Powers to provide a status report on the project, and to review developments on each potential project site discussed at the November 16, 2007 meeting.

Project Status

The project is progressing on schedule. Data have been collected for evaluating potential sites and developing design plans. Additionally a matrix has been developed that links each project site with the LCFRB 6-Year Habitat Work Schedule and provides the basis for ranking the projects.

Data Collection & Monitoring

Pat has collected several background documents and data sources describing past conditions or work in the area that will inform the study and will be referenced in the report:

- Updated 6-Year Habitat Work Schedule (LCFRB, 2008)
- Habitat Assessment Report (R2 and Moberg, 2004)
- Groundwater Report prepared for Washington Department of Ecology (CH2M Hill, 2002)
- Groundwater Report (Port of Kalama)
- Ecology Instream Flow Report
- HEC 2 Flood Study
- Aerial Photos
- LIDAR

Both of the groundwater reports (Port of Kalama and the CH2M Hill groundwater logs) document high potential of groundwater flow in this area and this is also supported by field data. We have actively been collecting field data on water surface elevations and temperature. Pat shared a graphic of water surface elevations at all data points collected that depicts relative differences of these key locations at the same point in time. Data were collected October

through February, so information is available on both low and high flows. It is most important now is to see how this changes between now and September as we continue to monitor these sites. Pat emphasized that if there are additional projects to be considered, it is critical that they be identified right away for data collection and ranking among other potential projects to occur. No projects were identified. Mark Wilson did present some ideas about the area south of the Kalama River Road on a private drive which has water flowing in the winter. Chris noted that DOE takes flow data from Modrow Bridge several times per month and have been doing so for the past eight years. It is believed this data may be available on the Internet. It was also noted that the river is tidally influenced up to river mile 1.3 to 1.4.

Potential Restoration Project List: Update and Discussion

As the group moved into discussion of the potential projects Nello Picinich explained that the LCFEG is still openly considering all of these projects; no final selections have been made and that stakeholder input is needed for all of them. Bernadette added that the initial funding award had targeted the Ledgett property, but that the stakeholder group had seen the value of also looking at the lower two miles of the Kalama River to identify potential off-channel habitat opportunities. Pat indicated that creation of any instream habitat will follow WDFW protocols, which draw from empirical project data across Washington and British Columbia for evaluating the sufficiency of groundwater. Before any digging, location of utility lines would be identified. Pat displayed aerial photos of each potential project site and reviewed key elements of the Projects; group discussion included the following:

KRL 0.0 Low Water Fish Passage. Several options were discussed to address low water fish passage including: debris bunkers or LWD to maintain scour; continual dredging of a thalweg; re-meandering the mouth to project downstream into the Columbia River; and a bridge. It was agreed to by the group that all potential options should be listed but not pursued at this point in time.

KRL 0.1 Port Tidal and Backwater Channels. The proposed extension of tidal channels would add 1300 feet, or 0.36 acres, of habitat. Existing data indicates salmonids do use the tidal channels.

KRR 0.7 WDFW Tidal and Possible Groundwater Channels. Collected data strongly suggests the presence of groundwater flow: a three-degree temperature difference exists between the mainstem and the channels feeding into the mainstem. Creating additional habitat here would involve extending tidal channels upstream and into low areas, connecting swales that are currently disconnected from floodplain. The road currently acts as a low level dike and prevents some level of floodwater from reaching this area. A culvert could be installed or the road decommissioned to allow fish access to the created channels. This area is within the floodplain, however the road provides a certain level of protection from flooding (another argument for retaining the road and creating access by use of a culvert). Field reconnaissance and LIDAR suggest that there are low spots that would naturally drain the area during floods. If additional water entered the area by extending the tidal channels, it is possible that sufficient flows could exist to scour a distinct channel.

Mark suggested that the iron content could be too high for fish and the water quality poor. Water quality analysis (dissolved oxygen and iron) will be sampled to confirm site suitability.

KRL 1.4 Groundwater Channel. This project would add 1300 feet, or 0.3 acres of habitat. Higher elevations protect this area from frequent flooding. This area has not been surveyed with engineering equipment, however the potential for groundwater is high, based on river gradient and LIDAR data.

KRR 1.8 Active Side Channel. This site needs additional scoping before possible projects could be identified.

SC 0.5 S. Branch Side Channel Rearing. The concept here is to create rearing ponds adjacent to Spencer Creek. Cold water seeps and gravel may make for summer refuge area.

SC 0.7 Flow Splitter. This would take part of Spencer Creek and divert it to the ponds on Julius Ledgett's property. This concept would need to be explored further before this could be considered a viable project. The lack of certainty about what would be involved in the project will cause it to rank low in project scoring exercises.

SC 1.8 Fish Passage Culvert. A barrier culvert would be replaced on the Spencer Creek Road (County culvert). This is not the culvert closest to the mouth of Spencer Creek, which is passable.

KRR 2.1 Groundwater Channel System. This project was previously considered to be a part of KRR 2.2, but was separated due to different ownership. Based on high points and low points identified on LIDAR, groundwater would be channeled into an existing open side channel. A good groundwater source is key for the success of this project and KRR 2.2; a groundwater pump test is currently scheduled for the first week of April to confirm such a source.

Mark Wilson pointed out that the alignment depicted on the aerial photo would not be acceptable to the Port because it bisects the Port property at nearly its center. Pat suggested that a different alignment could be developed and the two agreed to work on this outside of the stakeholder group.

KRR 2.2 Groundwater Channel System. This project continues project KRR 2.1, but on private ownership. Landowner support needs to be secured before this could be evaluated any further.

KRL 2.2 Pipeline Removal and Engineered Logjams. The pipeline would be removed across the channel and floodplain for about 500 ft on either bank. Engineered logjams would provide habitat and have a secondary benefit for bank stability. Information is needed from the pipeline's HPA permit before this can be developed further. Donna Bighouse is planning to follow up on the HPA status.

KRR 2.4 Riprap Removal & Floodplain Reconnection. Would remove riprap and provide riparian vegetation. Mark suggested that heavy erosion could be a problem if riprap was completely removed. He suggested possibly softening the bank, but scour has historically taken a lot of soil. The previous owner lost 10 acres of property before hardening the bank. Chris Wegeman thought that removing the riprap could work if a channel were created and an outlet created for the water. Further site review is needed to identify the certainty of success and fish benefit.

KRL 2.5 Ledgett Side Groundwater Channel. This area was the initial focus of the project as funded by the SRFB. Channels would be excavated to connect ponds to initial fingers of channels where groundwater flow potential is very high. The expectation is that there would be sufficient flows to connect to the Kalama River. The upper portion of this project area would be groundwater fed, the lower portion surface fed. Ponds would be deepened to make them more fish friendly, but the most important aspect for success of the project is in the upper areas, and the groundwater-fed finger channels. The ponds are currently disconnected from groundwater in the summer and the pond temperatures get high. Through excavation, and connection to groundwater, they would have more constant flow, water level, and temperature. Additionally planned riparian planting and subsequent shading would improve temperatures. Salmonids are currently not present in the ponds. Chris Wegeman added that sticklebacks may be present. If the Flow Splitter project were also undertaken (SC 0.7), additional water from Spencer Creek would be added to the ponds.

Enough surveying has been conducted at this site for 30% design work to be completed if this project were selected by the stakeholder group. Pump tests are planned in the upper portion of the project. Before the design can move forward the LCFEG and Consultants need to meet to flush out design details.

Ranking Potential Projects

Marnie Tyler presented a preliminary approach to scoring projects and requested feedback from the group. She distributed a written summary of the project scoring approach, which adopts the same approach and scoring calculations used by the LCFRB Technical Advisory Committee. The data incorporated into the scoring matrix are drawn directly from the 6-Year Habitat Work Schedule.

As a starting point for generating scores, Marnie used a spreadsheet provided by LCFRB that was used in scoring projects in the Cowlitz assessment. This approach equally weights the benefits to fish (Benefits) and the certainty of success (Certainty). The initial Benefits and Certainty scores were developed by representatives from LCFEG, Waterfall Engineering, and Ecolution, with input on use of the scoring spreadsheet from LCFRB. The initial scoring approach included one modification to the spreadsheet intended to more precisely anticipate benefits to individual species and life history phases. Additionally, the project score without this modification was also retained within the scoring spreadsheet. Marnie distributed the resulting matrix that lists the projects in rank order.

Marnie requested feedback on the approach in general, the value of the modifications to the spreadsheet, and in particular, the Certainty component of the scoring. Pat requested direction

from the group on which projects he should begin to develop 30% conceptual designs. Bernadette Hudson noted that the top four projects (by both scoring approaches) were distinctly higher than the projects below them and deferred to LCFEG, Waterfall Engineering and Ecolution to make the final call on which projects would be moved forward among those four. Bryce Glaser asked if a focal species had been identified for each project, or if multiple species were being considered. He added that WDFW is interested in reintroducing chum in the Lower Kalama because they are known to have been present historically, and the agency would have added interest in Kalama projects that were aimed at chum. Nello responded that because the Recovery Plan lists a low viability goal for chum, identifying chum as a project focal species is not effective in securing SRFB funds. However, Bernadette added that if chum were reintroduced, then scoring algorithms would be reconsidered by LCFRB, even for T4 reaches, because the Recovery Plan emphasizes linkages between existing recovery actions.

Pat explained that projects would be designed somewhat differently for different species and life phases, however a water source is critical for all projects. Any projects that include groundwater channel in the description have a high potential for chum use. After 10 years of designing and implementing these projects while at WDFW, Pat has found that these projects have been more effective when designed for multiple species. Pat recommends starting with a multi-species approach in targeting sites, but then modifying the design to target individual species where appropriate.

Project Timeline

At the last meeting, the group determined that it would be desirable to develop 30% designs for one project by May 2008, for pre-proposal submittal in the next SRFB grant round, despite concerns mentioned at that meeting about this approach. SRFB in the past has often wanted sponsors to wait until the assessment is complete. After further consideration, Nello determined that we should wait until the report is finished and not develop any projects for SRFB funding This year.

Nello asked Pat if it were possible to develop a 30% design for one project (KRL 2.5), and a simplified “conceptual design” for five others: KRR 0.7, KRR 2.1, KRR 2.2, SC0.5, and KRL 2.2. The consultants agreed to consider this request and respond at the next work group meeting.

Next Steps

- April pump tests at two locations;
- Ongoing monitoring of water surface elevations and temperature;
- Site review of projects KRR 1.8 and 2.4, to firm up design concept;
- Develop draft report;
- Schedule next work group meeting for late summer.

Individual Tasks

- Donna will check HPA requirements for the Olympic Pipeline
- Nello will contact the County to discuss any possible actions they have planned for the Spencer Creek culvert
- Nello will contact the private landowner to assess supportiveness of project KRR 2.1