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To: Isabel Ragland, Pierce Conservation District

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Subject: **Summary Themes from Floodplain Health Stakeholder Interviews**

Introduction

In September, October, and November 2016 the ESA and Ross team designed and carried out approximately 35 interviews with stakeholders in the Puyallup River watershed participating in the *Floodplains for the Future – Puyallup, White and Carbon Rivers* (FFTF) partnership. The FFTF is a cross-sector and inter-organizational partnership hosted by Pierce County to recover floodplain functions and protect the health and safety of communities around floodplains. FFTF partners have developed a long-term vision that healthy floodplains in the Puyallup watershed will support sustainable salmon populations through their natural physical and biological processes, the long-term viability of agricultural lands, and communities with reduced risk to regular and catastrophic flooding.

The purpose of the stakeholder interviews was to inform development of a shared set of floodplain health metrics to be tracked over time as part of a broad monitoring plan. The monitoring plan will be focused on measuring the contribution of capital projects that employ an integrated approach to floodplain management toward progress on goals for salmon recovery, agricultural viability, and flood risk reduction. Interviews explored individual stakeholder's goals for floodplain health, perspectives on monitoring, and ideas about metrics that would help to clearly understand floodplain health and evaluate the success of past and current floodplain projects (Note: Interview questions are Attachment 1). This memo provides a summary of the main themes gathered during all of the interviews.

Themes

1. A shared high-level vision. Overall interviews confirmed that stakeholders share clear and strong support for a high-level vision of floodplain health that includes:

- Safeguarding people and infrastructure from flooding and flood damage
- Viable agriculture
- Sustainable / harvestable fish populations (and the habitat to support them)

Interviewees described a floodplain where these values coexist in a mutually reinforcing way.

2. Most floodplain function has already been lost and losses continue. Across the board interviewees observed that the vast majority of floodplain and estuarine function in the Puyallup watershed already has been lost to development and other human alterations. Interviewees observed that this development has already happened and communities already exist within the floodplain; there was a variety in the amount of interest in removing development from the floodplain and carrying out restoration actions. Some interviewees were quite interested in removing development from the floodplain in frequently flooded areas; others were quite interested if the restoration actions were those needed to support salmon recovery. Overall interviewees acknowledged the difficult nature of these choices and observed (with concern and in some cases exasperation) that development in the floodplain continues to this day.

3. There is not uniform understanding for the initial slate of 17 Floodplains for the Future projects and some stakeholders feel frustration at the pace of floodplains by design work. A number of interviewees were unaware of the project list. Other interviewees expressed lack of enthusiasm. The Clear Creek project is the project most often mentioned by interviewees and some expressed a lack of support. At the same time, a number of interviewees also expressed frustration at what they see as the slow pace of the work and the need for individual communities of interest to do the work to develop their values and desired outcomes so all communities could work together on the shared monitoring plan.

Interviewees observed that different communities of interest have made differing amounts of progress on this, with the agricultural community perceived as the one which has had the most support and is the farthest along. (***Note***: at the time of the Interviews – fall 2016 – the above description was accurate; however, since the interview there has been extensive outreach about the project list and work to address stakeholder concerns as well as meetings of the individual interest groups, which has resulted in greater understanding and support).

4. Coordinating the Floodplains for the Future effort with Federal actions is important and there are questions about how this is happening. A number of interviewees observed that the US Army Corps of Engineers also is considering actions in the Puyallup River floodplain, particularly along River Road. Interviewees suggested that coordination with the Corps will be important so that projects undertaken complement one another and are consistent with community values, but they were unsure how that coordination was happening or who was responsible for it.

5. A shared sense of opportunity. Although interviewees expressed concern about ongoing development in the floodplain and did not have a common understanding or support (and in some cases felt opposition) for identified floodplain restoration projects, they also, in general, expressed a sense of opportunity and of excitement about the potential in the Puyallup watershed. People described a vibrant functioning floodplain with walking trails, public recreation facilities, thriving agriculture and salmon, and watershed education. In the agricultural community in particular a number of interviewees emphasized the quality of the Puyallup River valley soil and the importance of the chance to have productive, community-scale agriculture close to major urban markets.

6. Metrics should be representative, simple, and clear. Stakeholders emphasized the need for metrics to be simple, clearly tied to values and/or desired results related to floodplain management, and easy to communicate. Ideally metrics will speak to the individual goals of each community of interest and, when taken together, tell us something about both the overall health of the floodplain and how well the needs of different communities of interest are being met and balanced.

7. Thinking about measurement baseline, data sources, and monitoring is a key part of metrics selection. Interviewees emphasized the need to reach agreement not only on metrics that represent community values and goals but also to agree on how and where to set the baseline against which progress will be measured against. Interviewees also emphasized the need to link metrics to reliable data sources that are updated regularly. Across interviews it became clear that a complete, commonly shared "picture" of existing data sets and data collection is not readily available. There was very little sense of capacity for collection of new data for metrics, particularly if data collection would need to continue on an ongoing basis, although there were a number of types of information, on fish habitat and usage especially, that interviewees thought would be interesting.

8. Surveying as a measurement technique is of some interest but also has challenges. Interviewees expressed some interest in periodic surveys related to individual perceptions (e.g., whether agriculture is "viable" or whether people are more knowledgeable or supportive of floodplain issues) and using responses to measure progress. However, interviewees (including those interested in surveying) also expressed concern that representative surveys could be difficult to design and expensive to implement, and that participation in surveys might be difficult to achieve. Overall, although there was some interest, surveying did not emerge as a preferred method of measuring metrics during the interviews. After the interview process, in subsequent discussions working to refine metrics a yearly survey came forward as the preferred method to gather information from farmers about whether drainage conditions are improving.

9. Many suggestions for specific metrics that represent interests of individual communities. Individual communities of interest have different degrees of convergence around specific metrics to represent their view of floodplain health. Many metrics were suggested over the course of the interviews. These include:

Farm/Agriculture

1) Gross and net revenue for farming
2) # farm businesses, # acres in production
3) # acres farmland protected by levees and dikes
4) # of ag economy infrastructure/facilities/support services
5) # farm jobs
6) # acres of ag easement
7) # farm date sales
8) # of new marketing opportunities
9) Farm infrastructure - farmers markets, food co-ops, cold storage, processing centers
10) # farms with buffers (acreage)
11) #TMDLs
12) # economically viable farms
16) # economically viable farms affected by drainage ditches
17) Contiguousness of protected farmland
18) Some measure of how drainage functions
19) Number of "seasons" farmers can plant (as a measure of how drainage is functioning)
20) Loss of ag land ("no loss")
21) Some measure of the effect on local/micro economy related to nationally-recognized "organic hot spot" measures.
22) Number of farms implementing BMPs
23) A metric that measures successful stewardship of natural resources
24) Payments to farmers for conservation activities

13) # acres in active ag (or percent in active ag of total ag acres)
14) # of fields farmers unable to use (too wet)
15) # of fields where cover crops are planted
25) Farmer participation in voluntary programs
26) Average size of farms (in acres)

Fish and Habitat

1) Acreage of reconnected floodplain at a variety of flows
2) Restoration plant survival / sustainability of projects
3) Habitat quality
4) Amount of habitat types (estuary, riparian)
5) Culvert inventory
6) # acres intertidal/mudflats
7) Miles of natural vegetated stream channels
8) #stream miles with riparian buffer
9) Amount of large woody debris
10) WQ - turbidity, temperature, fecal coliform
11) Amount of restored habitat/side channel habitat
12) Water temperatures
13) Channel depth/pool habitat
14) Riparian stand density, total basal area
15) Redd counts
16) #wild fish returning
17) # of large trees (riparian)
18) Riparian species composition/height
19) # acres aquatic habitat available at range of flows
20) Type of habitat - channel, edge, secondary channel, FP
21) # of farms acres with salmon-safe certification
22) Fish population measures

Flood Risk

1) # of homes removed from floodplain
2) Community rating system ratings (for jurisdictions)
3) # days at flood stage
4) Amount of land use compatible with FP (i.e., can the land use withstand periodic flooding)
5) Depth of flooding
6) Amount of flood damage and losses due to flooding (dollars)
7) Amount saved from removing homes in the floodplain (dollars)

10. Access and community vibrancy also are of interest. In addition to discussing the three primary communities of interest (farms, fish, flood), interviewees described a number values and goals related to public use of the floodplain, public access, and public education. Suggested metrics related to this set of values include:

1) # trail users
2) # opportunities to connect to place based education
3) Amount of community access
4) Outcomes of community access (e.g., increased health)

11. Some cross-cutting metrics suggested. Several metrics that would intend to represent multiple benefits and cut across communities of interest also were suggested. These include:

1) Did parcel acquisition produce multiple benefits?
2) # of farm plans/BMPs installed
3) # acres lost to development
4) # acres acquired land & type
5) #acres restored providing multiple benefits - ag, habitat connectivity
6) Amount of pervious surfaces within X ft of river (or in the watershed)
7) Community perception of projects / community satisfaction
8) Rate at which floodwaters recede
9) Changes in water temperature
10) Changes in turbidity levels

Overall interviewees were mixed in their responses to the idea of cross-cutting metrics. Some were supportive, while others were less interested in the complexity that cross-cutting metrics would bring.

12. Reach-scale understandings. Many interviewees observed that different sections of the watershed will present different opportunities and have different challenges. They discussed that not all metrics might need to be monitored throughout the watershed but, instead, that the suite of metrics that are monitored and reported should be tailored to different watershed reaches (e.g., measures of estuary restoration are not relevant in the upper watershed).

Summary

The information, ideas, and perspectives gathered during the stakeholder interviews provide a foundation for the programmatic monitoring plan as well as a road map for developing metrics that will best reflect investments made toward improving floodplain health. A key element of the foundation is the shared high-level vision of floodplain health. Across the board, interviewees generally want to see rivers in a more natural state than they currently exist. There was also convergence around the barriers that prevent or slow progress toward this goal (i.e., lack of funding, sediment and channel geomorphology, and existing development in floodplain). We believe this agreement on the high-level vision and the most common barriers to achieving that vision is encouraging for the monitoring plan in terms of the initial support and long-term viability. In addition, stakeholder desire to focus on simple and clear metrics provides a solid direction for identifying and selecting metrics, which has already begun.

ATTACHMENT 1 – Stakeholder Interview Questions

- What is your main focus / relationship to the floodplain?
- From your area of focus, what is your vision of how a healthy, functioning floodplain would look? To what extent do you feel other groups share your vision?
- How would we recognize a healthy, functioning floodplain?
- How close are we to your vision of a healthy, functioning floodplain?
- What do you see as the main barriers /impediments to achieving a healthy, functioning floodplain?
- From your perspective what is the most important type of project that should be undertaken to more towards your vision of a healthy, functioning floodplain. Is this the same throughout the watershed or are different types of project more or less important in different areas?
- What is the largest threat to the work being done in the watershed; where is there opportunity?
- What could we look at and measure to understand whether we are making progress towards the vision for a healthy, functioning floodplain? Do you know if anyone is tracking any of those things already?
- What are the biggest unknowns for you? How are they important to making good decisions about floodplain use and management? How might we begin to fill those knowledge gaps?
- Do you see the monitoring data being useful to you? In what way would you use it?