



Technical Advisory Group Meeting #3 Meeting Report

July 12th, 2016
Puyallup Library

The third meeting of the Technical Advisory Group (TAG) for the Farming in the Floodplain Project (FFP) was held on July 12th, 2016 at the Puyallup Library. About 23 people participated, including Clear Creek area farmers and residents, Pierce County staff, Farming in the Floodplain Project staff, and regional technical experts. The meeting was led by PCC Farmland Trust and by ESA, the technical contractors working on the project.

Attendees discussed the public draft of the Existing Conditions Report and the plan for Phase 2 Scope of Work and heard an update on the Floodplains by Design 3 Grant Application. Discussions are summarized below.

Existing Conditions Report:

ESA staff presented key findings from the public draft of the Existing Conditions Report (ECR). The ECR examines trends in physical conditions and their relationship to agriculture in three overlapping study areas: the Puyallup Watershed, the Clear Creek Basin, and the Clear Creek area. The ECR discusses agricultural viability, basin settings, water resources, climate change, and the integration of agriculture into floodplain projects. It uses the framework of “risk” to address these issues, and concludes with recommendations and next steps for meeting information needs and conducting research in the coming years. Feedback from the Clear Creek community and FFP partners will be incorporated into a final draft.

ESA developed an interactive web map to view some of the figures and data from the ECR. This map is available at: <http://arcg.is/29zQVMi>

Key findings from the ECR include:

- Agriculture in Clear Creek reflects the trends in agriculture in Pierce County as a whole. Agriculture in the county is shifting from large wholesale farms to smaller direct market farms. The shift is caused by urbanization and fragmentation of the land base but is also made possible by the favorable climate and soil in the county. Clear Creek has both larger, wholesale farms and smaller, direct-market farms. The agriculture in the Clear Creek area is the type of agriculture that is starting to thrive in the county.
- The ECR presents **risks** rather than **thresholds**. Conditions are so varied between farms that identifying specific, quantified thresholds for those physical conditions under which farms would

no longer be viable is not possible or useful. Farmers in the area explained that they deal in risks (such as weather, flooding, and market conditions). Farmers in the Clear Creek area experience a range of risks, and future conditions are anticipated to increase these risks, introduce new risks, and in some cases lessen risks. The ECR presents current and projected risks, actions to increase or decrease risk, and areas where more information is needed.

- Flood risk in the area is complicated and not well understood outside of the Pierce County Surface Water Management department. In the area, there is a limited understanding of the performance and function of tide gates and levees, flood risk from Clear Creek and tributaries and the effect of aggradation on flood risk, among other issues.
- Drainage is the biggest limiting factor for agriculture in the area at this time. Farmers expressed that there is a difference between being flooded and being wet. Flooding recedes after a relatively short period of time, but drainage problems last for extended periods. Poor drainage can keep cover crops from being planted or limit access to a field. Drainage ditches in the area are hindered by intrusion of reed canary grass, accumulation of sediment and lack of maintenance. Drainage District 10 has recently been reactivated and is beginning to address these problems. Increased runoff from development in upstream basin may also be contributing to drainage issues.
- Sediment is a concern for drainage and will likely be a bigger concern in the future. The Puyallup River is the third largest contributor of sediment to Puget Sound. Portions of the Puyallup River are experiencing severe aggradation. Aggradation increases flooding risk and can exacerbate drainage problems. Glacier retreat on Mt. Rainier could increase sediment load in the river.
- Climate Change represents many risks to agriculture in Clear Creek. Direct impacts to agriculture from changes in air temperature and the freeze-free period are anticipated to be neutral or positive. However, precipitation is projected to decline while occurrence of winter heavy rainfall events are expected to increase. Drainage problems could increase due to sea level rise. Climate change information tailored to the Clear Creek area is limited.
- Reclaiming residential development for farmland would be complicated and expensive but is possible. Top soil is removed prior to development, therefore, reclaiming land would require full replacement of topsoil and remaining soil would need to be loosened. A 2004 report by American Farmland Trust estimated costs for 50 acres of reclamation (in Pierce County) at \$4 million for demolition and another \$4 million to replace topsoil. This cost is not inclusive of all work that would be needed to reclaim farmland. Additional research on potential soil contamination would also be needed.

ECR Discussion

TAG members discussed the draft ECR. Comments and questions included:

- Clear Creek farmers and landowners felt the ECR was representative of their concerns, questions, and interests.
- TAG members asked why the report didn't include more information on the co-existence of habitat projects and farming. ESA staff explained that relevant examples were very limited.

- TAG members discussed concerns about sediment, including the effects of climate change on sediment.
- TAG members discussed whether aggradation within the proposed levee could present drainage issues throughout the Clear Creek Area.
- One TAG member expressed concerns that the ECR presents speculative statements as conclusions.
- One TAG member asked how the report will inform the Clear Creek Floodplain Reconnection Project. Hans Hunger (Pierce County SWM) said the report will help SWM identify questions that still need to be answered as part of the project design process.
- One TAG member expressed interest for greater analysis and monitoring of groundwater.
- A Clear Creek farmer said the ECR should include a discussion of water quality risks from field contamination by industrial pollutants during flood events. This is particularly a concern for farmers whose farms are Certified Organic. Flooding can trigger additional testing from certifiers, the costs of which are carried by the farmer.
- TAG members discussed the recommendation in the ECR to have a separate forum for discussion of the Clear Creek Floodplain Reconnection Project. There is an identified need for more discussion space to address issues broader than agriculture and to discuss Clear Creek project designs. Conversations between Surface Water Management, the Floodplains for the Future Integrated Management Group, and TAG members will continue around this subject.

Phase 2 Scope of Work

ESA staff presented the proposed tasks to be completed under the Phase 2 Scope of Work. Proposed tasks include:

1. **Drainage System Inventory.** This would be a field reconnaissance task, gathering info on the locations, capacity and conditions of drainage ditches and culverts. It would include identification of barriers to maintenance and recommended next steps. Deliverables would include a map folio.
2. **Tide Gates Analysis.** ESA would conduct research on how the tide gates work currently and how they have worked in the past. Depending on existing information, this may include potential monitoring and observation of the tide gates. ESA would model current gate operations and potential alternative operations (new gates, modified gates, modified operations).
3. **Flood Risk Research.** This task would include research and coordination with SWM to increase understanding of flood risk in the Clear Creek area. The research would have a particular focus on the vulnerability of River Road levee to overtopping or breaching.
4. **Sediment Research.** ESA would facilitate a TAG meeting in the fall or winter to discuss sediment and would produce a memo updating the ECR with additional sediment information.
5. **Stormwater Analysis.** This task would include an analysis of historic and current aerial imagery to estimate the increase in impervious surface and storm water runoff from upstream areas in the Clear Creek basin.

6. **Farmland Impacts Analysis.** ESA would conduct a semi-quantitative analysis of farmland impacts from the proposed Clear Creek Floodplain Reconnection Project. The analysis would focus on changes to flood risk, groundwater, drainage, sediment, and water quality as they relate to farmland. The analysis would include impacts to potential farmland on the wet side of the proposed levee as well as impacts to the dry side of proposed levee.
7. **Findings and recommendations report.** ESA would develop a report synthesizing conclusion and recommendations from tasks 1 through 6.
8. **Technical Advisory Group.** PCC Farmland Trust and ESA would continue to hold meetings of the TAG (3 to 4 meetings, with the next meeting in late Fall).
9. **Coordination with Landowner Engagement.**
10. **Coordination with PCC Farmland Trust.**

Clear Creek Farmer Update

Clear Creek farmers gave their response to the proposed Phase 2 scope. One Clear Creek farmer expressed that the Phase 2 scope addresses many of the key questions identified in the ECR. Clear Creek farmers said they appreciated the work done by the Farming in the Floodplain Project to understand the needs of farmers in the area. Farmers emphasized the importance of soil types in understanding how individual farms react to different flooding and drainage conditions. Clear Creek area farmers encouraged TAG members to visit their farms and see the current conditions. This has been an excellent production year for many farmers in the area. Farmers expressed concern that building a levee through the farm ecosystem could have negative impacts on the drainage and beneficial water table of the area's prime soils.

Discussion of Phase 2 Scope of Work

The discussion of the Phase 2 Scope was opened up to all TAG members. Issues discussed included:

- Coordination between ESA and Pierce County SWM on Task 6, particularly on which conceptual levee alignments would be analyzed
- Potential future groundwater monitoring
- How the recent culvert legal decision might affect project options
- How the Phase 2 scope relates to the information needs identified in the ECR
- How ESA's technical work will be coordinated with SWM's flood model

Floodplains by Design Round 3 Grant Application

Jacob Pederson, the Puyallup Floodplain Reconnections Project Coordinator, presented an update on the Floodplains by Design Round 3 grant application. The application was submitted on July 1. The application requests a total budget of \$15.5 million, a 50 percent increase over the current round of funding. The current Puyallup Floodplains by Design grant (round 2) is funded at \$9.8 million.

Major components of the grant application include:

- Capital improvement projects, including acquisition, design, and construction. There are 17 identified projects throughout the watershed. Acquisitions would not include any currently farmed properties.
- Agricultural conservation easements.
- The Farming in the Floodplain Project, including continued work in the Clear Creek area, work in other areas proposed for capital improvement projects, a regional workshop, and precipitation modeling.
- A basin-wide monitoring project.

Next TAG Meeting

The next TAG meeting will be held in the late fall or winter.