



**Technical Advisory Group Meeting #4
Meeting Report**

November 2, 2016

Puyallup Library

The fourth meeting of the Technical Advisory Group (TAG) for the Farming in the Floodplain Project (FFP) was held on November 2nd, 2016 at the Puyallup Library. Over 30 people participated, including Clear Creek area farmers and residents, a Drainage District 10 commissioner, 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.

Topics discussed at the meeting included sediment in the Puyallup river system, sediment in Clear Creek and its tributaries, and findings from the drainage inventory of the Clear Creek area conducted by ESA. Discussions at the meeting are summarized below.

Sediment Presentations

Kris Jaeger, Geomorphologist at USGS presented on research and available information on sediment in the Puyallup River. Kris' presentation offered a broad context of USGS studies specific to the Puyallup River Basin, describing the importance of sediment in the system, what we know about sediment in the system, and what information is still needed. Spencer Easton of ESA presented on sediment in Clear Creek and its tributaries. Information from both presentations will be included in a memorandum on sediment conditions that will be released in December 2016.

Sediment Discussion

After Kris and Spencer's presentations TAG members discussed the available information. Questions and comments included:

- Is there regular maintenance of the retention ponds on the tributaries? Helmut Schmidt of Pierce County SWM responded that there is regular maintenance of the retention ponds.
- Who is responsible for the maintenance of the Port of Tacoma mitigation sites? TAG members responded clarifying that the mitigation sites are not meant to have sediment removed.
- If the Swan Creek detention ponds help keep the mitigation site clear, is too much sediment in the system bad for fish as well as agricultural drainage? If so, is there a way to clear out drainage that would be good for both farms and fish? Is there a possibility of a multi-benefit solution? Some of the habitat experts replied that sediment is more of a problem for spawning habitat and that the Clear Creek area below the railroad is primarily rearing habitat. Shaded riparian areas were suggested as a multi-benefit approach to improve both drainage and fish habitat.
- Does a higher sediment load year mean it will be a high sediment deposition year, or is that dependent on other factors? Does a big storm event with a higher sediment load cause greater

deposition or scouring? Kris Jaeger answered that in years with atmospheric river events, there tends to be more sediment but that a lot of that sediment transports quickly through the system. There is also a lag where coarser sediment works its way through the system more slowly.

- How will climate change and sea level rise impact the dynamics of Clear Creek? Marty Ereth said sea level rise will move the sand/gravel area of the Lower Puyallup upstream. Kris Jaeger said more monitoring results and studies are needed to understand how sea level rise will affect sediment conditions.
- Would a ring levee create a depositional environment within the levee? Marty Ereth said the area inside the levee would become a depositional area. Lisa Spurrier suggested that these effects need to be modelled before we can speculate on results.
- How would a ring levee affect drainage on the outside of the levee? Helmut Schmidt stated that this is something SWM needs to look into but that their eventual plan will incorporate a way for water to drain through the levee.
- Is modelling of the effects on drainage typically done for this kind of project? Helmut Schmidt said that this type of modelling could be looked into.
- Is there information on how to control sediment within wildlife habitats? Tom Nelson responded that there is not enough information available at this time.
- Pierce County is doing a pilot study for sediment removal not far from the confluence of the White River.

Drainage Inventory Update

The drainage inventory conducted by ESA was a result of a request from the Clear Creek Farmers Collective letter and a recommendation of the Existing Conditions Report. It will be important to incorporate drainage needs into the design of any future floodplain project. ESA's field crew spent 6 days in the field and recorded 116 data sheets which were split 55% / 45% between ditches and culverts. Field crew methodology included collecting GPS data, measuring channel width and depth, recording channel conditions, noting any maintenance needs and taking photos. Diameter and length were also recorded at culverts. ESA is currently wrapping up a Preliminary Findings Memo which will share observations from the field work and which will be released in November 2016. A full memorandum including additional evaluation and synthesis of the data collected will be released in the spring.

General observation from the inventory include:

- Reed canarygrass is the biggest maintenance issue.
- Silty sediment is found along the beds of most ditches.
- Many culverts appear to be at least partially obstructed with sediment, reed canary grass and blackberries.
- At the time of the inventory, South Ditch no longer drains to Clear Creek, instead it goes through private ditches to Nancy's Ditch.

The next steps of the inventory are to:

- complete an additional day of observation during higher water level conditions to observe direction of flow and maintenance issues;

- research drainage ownership and responsibility;
- evaluate collected data;
- develop recommendations, and
- release a draft drainage inventory memo.

Some questions from the TAG include:

- What maintenance activities were done by Drainage District 10 and were they done before or after the inventory? Maintenance was done before the inventory to mow to enable access, and to remove reed canarygrass from the Clear Creek channel along the railroad tracks.
- Will the County get a copy of the raw data? The preliminary findings memo will have an appendix of data sheets that will be made available to anyone who is interested.
- Is there anything to say about ownership of ditches at this point? There is not additional information at this point.
- Some TAG members expressed interest in County Roads staff presenting at a TAG meeting.

Upcoming

Jordan Jobe of PCC Farmland Trust let the TAG know of a potential partnership between the Pierce Conservation District and PCC Farmland Trust to look into targeted plantings on creeks and ditches of native plants to shade out reed canary grass and improve drainage and habitat. This is still preliminary but it is being considered with hopes to make it happen.

The next TAG meeting will be on February 1st, 2017 from 10am-1pm.