Fifteenmile Watershed Assessment 'Getting on the Same Page' Monitoring Meetings
December 16, 2014 update

What: two meetings in fall 2014 for people/groups interested in monitoring data from 15Mile watershed. Attendees described the types of monitoring they were doing, posed monitoring questions, and identified the top questions for the watershed. The next meeting will be some time in March. All are invited to participate.

Who: DEQ, ODA, NRCS, ODFW, OWEB, OWRD, WCSWCD, 15MWC, Portland State University, USFS, Wy'East RC&D
Facilitated by Ellen Hammond (ODA) 541-617-0017; ehammond@oda.state.or.us.

Why: multiple people are monitoring conditions in the 15Mile watershed. People were wondering what others were doing, hoping to avoid duplication, and answer their questions as efficiently as possible

Progress so far:

1. **How much has soil loss on farms been reduced since conversion to no-till?**
    - SWCD/NRCS will be doing RUSLE calculations, possibly using ODA's Erosion Index, as part of a Management Area wide assessment.
    - Cesium studies
    - *NEED: Long-term monitoring plan*

2. **How many streambank miles are providing adequate water quality functions?**
    - SWCD is mapping CREP buffers (35+ feet wide) in 15Mile for their Focus Area assessment
    - SWCD plans to map ODFW buffers (25+ feet wide)
    - SWCD will also do Class I-III riparian vegetation assessments on perennial streams as part of a Management Area wide assessment
    - ACTION: SWCD and ODFW will compare the water quality functions provided by 25 feet compared to 35 feet in 15Mile watershed
    - *NEED: Define 'adequate' and long-term monitoring plan.*

3. **Have we seen changes in sediment stored in the stream due to BMPs (no-till and riparian improvements to streambanks, removal of roads)**
    - 2014 RBS results showing some improvements; channel x-sections still need to be analyzed.
    - Derreck found 2001-2003 ODFW Aquatic Inventories for 15, 8, and 5Mile Creeks. These include width, depth, rapids, pools, riffles, actively eroding banks; the info can be used to characterize sediment load, etc.
    - Pebble count data (Bonnie thinks DEQ will move forward with pebble counts; create a database for the existing data, compare habitat types, and sample this coming year).
    - Macroinvertebrate work from 2008 5, 8, 15Mile Creeks (DEQ ran the data but doesn't have any lat/long info). Showed that bugs in 5Mile Creek were less impacted by sediment; no significant difference among creeks for temperature. DEQ continuing to work on these data. Would be good to redo in the future.
    - *NEED: long-term monitoring plan*

4. **When/where have BMPs been implemented?**
    - BMPs to catalog include: no-till acres, riparian buffer miles, acres of irrigated lands that meet IWM criteria, fish habitat (un-channelling, large wood), and streambank stabilization projects
    - *NEED: define subwatersheds that meet privacy concerns for aggregating data. Want the smallest geographic areas that provide us with necessary information while still protecting landowner privacy. Action: Shilah will work on this and send to group for comments.*

5. **How do we define "baseline" conditions for evaluating improvements?**
    - **Notill conversion**: Cesium =1954, RUSLE = 1975
    - **Streamside veg**: presence of buffers = late-1980s, SWCD Class 1-3 = unknown; will decide after the 2015 assessment whether feasible to go back in time, Heat Source = none, since the aerial photos were several years older than the water temperatures
    - **Instream sediment**: RBS = 2006, pebble counts = 1994/95; Aquatic inventory = 2001 for ODFW; other date for USFS

6. What types of restoration/BMPs are planned for the future? What will be the spatial extent of future work?
    - *NEED: How to track this?*

7. How close are we to meeting the temperature standard for aquatic life?

- The data are being collected as part of #13.
- *NEED: DEQ and ODA must answer this question at some point!*

8. Are temperatures in the stream lethal to steelhead during the irrigation season?
    - Being answered by #13

9. Where do stream flows change over time (related to temperature)?
    - Being answered by #13

10. Are pesticides an issue and, if so, where and associated with what land uses? Have hot spots been identified?
    - There has been PSP sampling for quite a while above Seufert Falls (below 8Mile near 15Mile mouth) and haven't found much, but aren't testing for common agricultural herbicides. PSP will include glyphosate testing this year.
    - Melanie's study
    - *NEED: testing herbicide further up in the watershed, which might be taken care of by the PSP.*
    - *NEED: find out about insecticides on orchards*
    - *NEED: comprehensive monitoring plan for the watershed*

11. Are bacteria an issue in the watershed?
    - ODA has ambient site at the mouth with 2 ½ years of data.

12. Are habitat and water quality conditions sufficient to keep the steelhead and lamprey populations viable?
    - TOUGH TO ANSWER; TABLE

13. What is the relationship between temperature and flow and how well does the FAST model predict it?
    - Need 3 or 4 more years of data to pin down the relationship. Don't need more monitoring sites. OWRD may add temperature probes to all of their gauges. Money for temperature probes could be part of the conductivity probe grant for #16.

14. How can we provide enough water (quantity and quality) for the beneficial uses in the watershed?
    - Can be answered by answering a bunch of the other questions on the list

15. Do riparian buffers really increase fish populations?
    - Tough to answer; table

16. What is the water budget for 15Mile? What and where are the interactions between surface water and ground water?
    - WC has grant from OWEB to do this with help from OWRD staff. ODFW is putting together long-range maps of steelhead distribution that may help identify where surface and ground water is interacting. ACTION: ODFW provide these maps to OWRD.
    - Would be helpful to add conductivity probes to the OWRD gauges. The entity interested in conductivity would need to find the money.

17. What opportunities are there to improve conveyance and on-farm irrigation water efficiencies?
    - Will be studied in conjunction with #18. There are unlined ditches in the watershed, e.g. Orchard Ridge.

18. Is there an opportunity to store water off-stream in winter?
    - WC has grant from OWRD. SWCD and WC just hired a contractor. They are moving forward and will coordinate with our group as needed. It would be helpful if ODA renewed the water reservations that will be sunsetting soon.

19. What do we do if the results of our assessments don't show improvements as a result of BMPs? What natural processes (gullies and ephemeral channels) and anthropogenic sources are we not accounting for?
    - Table