

## Oregon Hydrography Framework Implementation Team Meeting

Thursday, January 4, 2018

Rogue conf. rm., Oregon Water Resources Dept., 725 Summer St. NE, Salem

### Attendees (\*via web/phone):

Bob Harmon, OWRD

Meredith Carine, OWRD

Theresa Burcsu, OSCIO GEO

Lowell Anthony, DOGAMI

Dick Lycan, PSU

Jay Stevens, BLM

\*Anita Stohr, WA Dept. of Ecology

\*Christopher Clinton, WA Dept. of Ecology

\*Brad McMillan, WA Dept. of Ecology

\*Janet Bretz, USFS

\*Emmor Nile, ODF

\*Don Pettit, DEQ

\*Jon Bowers, ODFW

### Notes:

#### 1) Intros, agenda changes?

#### 2) Announcements

- a. Bill Smith is the new USGS technical Point of Contact (POC) for Oregon (& Washington), as of December 1 (2017). He takes over from Kristiana Elite.
- b. The [NHDPlus High Resolution](#) (HR) project is underway in Region 17 (Columbia River) which means that the sub-basins in selected sub-regions (4-digit HUs) are blocked from editing while the USGS performs their own editing in preparation for the beta build.

Jay asked the USGS to take a snapshot of 1710 (OR side) and work from that, thus freeing the sub-region for editing. The USGS agreed. Jay thinks they're done with most of the others. The USGS is working in 1709.

Anita updated the group on the subregions in Washington. They were working in 1710 (WA side delivered in December) and 1711 (due to be delivered this Friday) while the USGS worked in the rest of the state. The USGS is looking at WBD boundary issues between 1708 and 1710 near the mouth of the Columbia (on the WA side). Anita noticed a lot of final QC work being done in 1701 (by the USGS).

Dick asked when the NHDPlus HR product would be ready, but the group wasn't sure—few months to a year?

Lowell has been talking to folks at the USGS also since it could affect his project (#4), but they said it shouldn't.

#### 3) Oregon Framework elements review

Theresa provided background on the review of all of the Oregon Framework data elements. It stems from passage of the data sharing bill, HB 2906, in the last legislative session. The Oregon Geographic Information Council (OGIC) was set into statute. Its composition has changed and

the members are appointed by the governor. The law stipulates that framework data be shared between government bodies in a cost effective and efficient way. This evaluation is part of a larger evaluation of the entire state spatial data infrastructure. A survey of each element will be filled out by each framework team for the elements in its domain which should start within a couple of weeks. Bob will take the lead, on behalf of the Hydro FIT, to fill out the survey, but he will consult with members of the group before and after the process. The results will be quantified and analyzed to help understand better where elements lie in their life cycle and highlight those that need more funding.

Bob listed the elements currently under the Hydro FIT's domain:

- NHD Flowlines
- NHD Waterbodies/Areas
- NHD Points
  - Stream gages: OWRD has a data set of all stream gages in the state (USGS, USBOR, OWRD, and others) with over 60 attributes. The locations and hydrologic record are maintained by staff at the OWRD in cooperation with the USGS and USBOR.
  - Water wells: the state has a location/identification standard with only OWRD located wells in the repository.
- Watershed Boundary Dataset (WBD; a.k.a. HUCs, 2 – 12 digits)

Bob also suggested adding “dams” to the list of point themes. Jon said that there should be more discussion around adding dams to Hydro's list of elements. Anita noted that the USGS has been putting gages and dams in the NHD point event feature class. She will approach the USGS about incorporating mean annual flow data into the NHDPlus from Washington's stream gages. There was a good discussion around documenting the business case for all of the data elements associated with streams and improving the location of the streams (NHD flowlines) statewide.

#### **4) NHD & WBD updates from lidar in the north central coast, project kick off presentation by Lowell Anthony, DOGAMI**

Lowell gave an overview of the project that he will be starting in February to update the WBD and the NHD in 5 HU8s (sub-basins) or 111 HU12s (sub-watersheds). He will start with adjustment of the WBD in early February which he estimates will take him through June, at which point, he will start the NHD editing with another NHD editor at DOGAMI. Lowell will update the existing line work to streams captured by DOGAMI from heads-up digitizing against the lidar-derived elevation data. He will also maintain existing reach codes on the NHD flowlines. He will consult and use data from the BLM and others. Emmor offered up Forestry's line work. Jay suggested having a meeting in Portland to also look at the BLM and Forest Service's line work, too [see outcomes].

Jay stated that the BLM, USFS, and Forestry have similar objectives when mapping streams: have well defined channels and evidence of annual scouring and deposition. There is wild disparity in the density of the line work in northwestern Oregon that they would like to see evened out. The BLM models from a 1-meter DEM identifying areas with curvature that might be a stream initiation point and take a minimum flow accumulation threshold (the area above the point) to begin the delineation. A hydrologist reviews the product, makes any adjustments to the initiation point, and the line may be redelineated. The result is put into the NHD. Jay said that they would supply delineations for the areas shared by the BLM and Forest Service to

Lowell. Lowell stated his goal to have a product that everyone is happy with. Janet would like to review the line work before it's committed to the NHD.

Jay also provided an update on related lidar-update projects at the BLM. He's hired two people to work on this for two years. The district hydrologists have been providing lists of HU 12s that are a high priority for them. Jay has combined the lists and made statewide priorities. He'll be meeting with the district hydrologists to nail down the list. Unfortunately, the HU 12s are spread throughout all of the districts. Jay is looking for opportunities to collaborate in these areas with other partners with priorities in the same or adjacent areas. The upcoming meeting with USFS, DOGAMI, and Forestry will be a good starting point. The BLM has an interagency agreement with the USGS to update the WBD in these areas. It ends in June, but it should be extended. The NHD update to match the lidar is a high priority at the BLM. They have a "Service First" application in for more federal funding, but Jay hasn't heard back regarding its status. He noted that the BLM's Soil, Water, & Air lead in the OR/WA office is looking for funding mechanisms to pool smaller amounts of money. Interagency agreements tend to include high overhead amounts, however. A consortium like the Oregon Lidar Consortium may be an option—a hydro consortium? To be continued...

#### **5) Status of NHD/WBD related projects.**

##### **a. BLM (Jay)**

In addition to the previous update they are continuing work on their fish distribution theme in cooperation with Jon (ODFW). Working on improving workflow for incremental updates to the NHD—small, minor edits. Interest was expressed by others at the meeting regarding the last topic.

##### **b. USFS (Janet)**

Janet is busy working on the top 3 areas for hydro improvement from lidar from each of the Region's forests (not enough editors!). She is also working on a fish distribution layer for the Region. A user tool has been built that shows the stages of work for the lidar delineation projects around the Region. Theresa asked if it was public and Janet mentioned that that was discussed at a recent meeting with Jay and Clara Dair (USFS). The hope is to make it available for use by PNW partners so that all of our NHD efforts could be displayed. Jay mentioned that there is the matter of working through the various agency web security barriers, but he was hopeful.

##### **c. Washington (Anita)**

Focus for last 6 months on updating King County NHD line work. Got a grant to locate storm water outfalls on the NHD (King County is the pilot). Used county culvert data to condition new (2016) lidar coverage. The county field verified the outfalls.

Christopher Clinton, new hire, will be working on GNIS update in the state. Will be looking for more funding. Jay noted that the USGS's partnership grant program has ended.

##### **d. DEQ (Don)**

Don made a plug for OWRD's water right database in use in recent tanker spill (on the North Santiam River in December). Bob asked who at DEQ is working on NHD related projects. Steve Aalbers recently retired and David Pray would likely start attending the OR Hydro meetings. Bob will check with David.

##### **e. ODFW (Jon)**

Working on a Framework data grant related to fish distribution (through May 2019). They update the NHD as needed. Will be attributing lakes (area events) for the first time in this environment. Jay mentioned that synchronization of large event data sets with the updated NHD can become an issue. Jon said that it is built into this project and they aim to synchronize events on an annual basis.

Jon noted that stream habitat restoration projects also drives updates to the NHD.

**f. PSU (Dick)**

Starting on framework funded project to share bathymetric data and port the Lakes Atlas to open source code.

**g. OWRD (Bob)**

Bob reported that there's been very little NHD editing at OWRD in recent months. For the last four months he has been synchronizing OWRD's streamcodes to the NHD. This hasn't been done since the streamcodes were originally conflated to the NHD in HEM in 2014-15. He's about halfway through the state. OWRD stream codes are whole stream identifiers that link water right diversions and dams to the NHD and provide a basis for whole stream routes built with measures in miles (a business requirement of the agency). Bob has also been fixing other issues with the coded routes as he has been working through the state.

**6) Outcomes**

- a. Bob will write up the notes and get them out to folks to review.
- b. Jay will set up a meeting in February in Portland to discuss methodology for NHD updates to conform to lidar derived elevation data.

Theresa invited everyone to the next Oregon Framework Forum to be held in Roseburg the third week of March.