OREGON HYDROGRAPHY FRAMEWORK MEETING
June 9, 2009
Oregon Agriculture Dept., Salem

Meeting Notes

Attendees:

Bob Harmon, OWRD
Dan Wickwire, BLM
Tamiko Stone, BLM
Jay Stevens, BLM
Malavika Bishop, DEQ
David Pray, DEQ
Diana Walker, ODA
Bill Kaiser, USFS
Jon Bowers, ODFW
Emmor Nile, ODF
Ashley Siem, OWEB
Milt Hill, GEO
John English, DOGAMI
Randy Dana, OCMP
Sheri Schneider, USGS

Introductions:

Bob opened the meeting. He stated that the meeting was intended to provide a common understanding of the National Hydrography Dataset (NHD) data structure, its maintenance in the Pacific Northwest (PNW), and to develop a strategy for state agencies to begin migrating their business practices to make use of the NHD. This is the start of an ongoing process that will vary by agency according to their business requirements, staffing, and budget.

Everyone introduced themselves and reported on the status of hydrography data use in their respective agency.

Stewardship:

Dan began with an overview of hydrography framework efforts in the Pacific Northwest—lakes, rivers, and the watershed boundary dataset (WBD). Lake and river features are maintained in the NHD by the PNW Hydrography Framework partners. The WBD is also maintained by the PNW hydro partnership. It is certified for the PNW, and country, which means that it has been reviewed and accepted by the U.S. Geological Survey (U.S.G.S.) and Natural Resources Conservation Service (NRCS), its national stewards. Emmor asked if we could make edits to the WBD, especially with delineations derived from LiDAR. Dan answered that we're still figuring out the process. Both Dan and Emmor agreed that this required a good communication component.

Dan also gave an overview of the recently signed MOA between the PNW partners—Oregon, Washington, and the regional federal agencies (BLM, USFS, USGS, & NRCS). There is a need to identify "stewards" and interested parties at the watershed (5^{th}-field (10-character)) hydrologic unit (HU).

Dan introduced an important diagram of the stewardship process, or communication flow, when an edit to either the NHD or WBD is proposed. This version has been generic for application by stewards in other states. Randy proposed putting names to the boxes to help users get a better idea who the stewards are in Oregon and the PNW. Dan and Emmor worked after the meeting to simplify the diagram and they will be working together to test the process with a proposed WBD edit. Latest version of flow diagram:
http://www.odf.state.or.us/gis/docs/PNWHF_Steward_Flow_20090611.pdf

NHD Primer:

Bill gave a primer on the NHD. He noted that WBD (HU) boundaries are included with lake & stream data downloads from the NHD, but these represent *pre*-certified boundaries and not the new WBD boundaries currently available. Dan and Bill will bring this to the attention of the NHD national group. In the meantime, users should download the most current WBD data from the PNW Clearinghouse (http://hydro.reo.gov/hu.html) or the NRCS (http://www.ncgc.nrcs.usda.gov/products/datasets/watershed/).

Other issues were raised: the definitions of shoreline(s) for Oregon and estuaries in the NHD. Dan, Bill, and Randy cited new efforts to update the delineation of the Oregon shoreline(s). The current shoreline in the NHD came from U.S.G.S. 1:24,000-scale (7.5') quad maps (1960s-70s?). The NHD is also addressing the definition of estuaries across the entire data set. The PNW hydro group is working with others across the country on this

issue.

Ongoing/future issues:

NHD Plus: This is an enhanced version of the NHD, currently available for the 1:100,000-scale data set. It provides additional attributes to NHD streams that include flow volume and velocity estimates, and elevation derived watersheds, to name a few. There are plans to extend this down to the 1:24,000-scale level, but it will take time and a considerable amount of funding. For more information see: http://www.horizon-systems.com/nhdplus/

LiDAR: LiDAR derived elevation data provides a more accurate method for deriving stream channels, but it still requires a lot of end user involvement to define stream initiation points and periodicity. The Oregon Hydrography Framework group is funding a pilot project to test methodologies using off-the-shelf software and tools (COTS), along with available ancillary themes such as soils and climate data.

Generalization tool & cartographic representation: Varying density of the stream network in the PNW still poses a big problem when it comes to regional analysis and cartography. Hopefully, stream locations derived from LiDAR will fix some of these issues, but it will take a while before LiDAR derived streams form a statewide dataset. In the meantime, there is a need to clean up or attribute the more densely populated areas so that they can be removed for analytical or map production purposes.

NHD integration w/ the WBD: There is still more work to be done with integration between the NHD and the WBD. For example, edits made to one theme may affect the other which would initiate notification of the appropriate steward.

For more information on the NHD/WBD projects:

- In the PNW region, visit the PNW Hydro Clearinghouse site at http://hydro.reo.gov/. Notes from the latest Steering Committee meeting are at http://hydro.reo.gov/documentation/2007_01_24_PNWHF_Meeting.doc.
- At the national level email Jeff Simley, USGS-NHD, at jdsimley@usgs.gov and ask to receive the monthly NHD newsletter.

BLM NHD maintenance process & centralized editing:

Jay gave an overview of the process for maintaining the NHD in the BLM Oregon State Office. Tamiko covered centralized editing of the NHD at the State Office from submissions made by the district offices. The BLM has is using templates as a simple, effective method for communicating changes that need to be made to the NHD. State agencies are interested in this approach.

Migration to the NHD - the BLM example:

Jay presented the BLM's event table migration, notably ARIMS, from the PNW-LLID route system to the NHD. They used the HEM event manager tool, which they codeveloped. See the attached PDF of his slide show.

Next:

- Stewardship: Working out the communication flow and testing the process.
- Tech meetings: A fall workshop(s) for discussing and working out issues for specific agencies.
- NHDPlus: How to move forward with implementation in the PNW at 24K+. A proposal to the EPA for pilot high resolution NHDPlus project may be in order.
- NHD as the "standard" for Oregon: The Oregon Hydrography Framework group has to update its state standard through the OGIC process.