Oregon Hydrography Framework Implementation Team (OR Hydro FIT)

MS Teams Meeting, May 14,2024

Attendees:

Bob Harmon, OWRD (OR Hydro FIT lead, scribe)
Lana Bizeau, USFS
Jon Bowers, ODFW
Reed Burgette, DOGAMI
Meredith Carine, OWRD
Cathy Power, NV5
Melissa Foltz, DAS GEO
Melissa Christie, NV5
Erin Gilbert, ODFW
Ed Hall, USFS
Kimberly Jones, USGS
Carol Lydic, USGS
Tara Mckinnon, USFS
David Pray, DEQ
Rachel Smith, DAS GEO
Carl Swanson, ODF

Notes:

- **Intros**
- **OR Lidar Consortium (OLC), lidar status**, Reed, DOGAMI
    - Status of current coverage; west coverage, expanding east
    - Other group data from the USGS, NRCS, USFS; fills out more
    - In progress at OLC (collected 2022 & 2023), should be available in next few months
    - Rest of area getting filled in by USGS, esp. in east and southeast, and west, to complete 3DEP, started last fall; release? (USGS may know)
        - Rachel, USGS collection 43% complete for western OR
    - "majority" collected at QL1 (8 pts/m^2)
    - Looking at NE OR (Wallowas) for possible new project to update 2015 collection
    - Many places with repeat coverage up to 3X repeat coverage
    - OLC statewide mosaic web service available; looking to update documentation
    - Example of repeat flight along Umatilla R. after 2020 flood
    - Bathymetry; ex. From McKenzie R. (2021); depth depends on clarity
        - Coastal & riverine applications: tsunami and flood modeling, coastal processes, aquatic habitat, shoreline and channel migration
        - Topo-bathymetry status: along coast, Willamette main course, and several streams in the Umatilla
    - Q&A
        - Jon, status of OR collection?: Reed, started fall 2023
            - Carol (USGS), OR data gathering broken in work units; release timeframe typically 18-24 months, depending on weather at acquisition
        - Rachel, from conversations w/ USGS, should have complete QL1 coverage by 2026/2027
        - Melissa (NV5), lidar data needs to be reviewed by USGS before can be used in DCA process
- **3DHP status**, Kimberly, USGS
    - 1st complete remapping of hydro since (old) quad maps
    - 20+ years of steward program for NHD

- 3DHP (3D Hydrography Program), program to acquire new hydrography standardized to align vertically, horizontally and temporally with our 3DEP data and pulling our different data holdings together so that we have this nationally consistent data set so they can be used together seemlessly
- 3DHP lifecycle, phases
    - Planning phase, looking for funding
    - Acquisition (of EDH data)
    - Validation
    - Publication
    - Access
- Leveraging 3DEP best practices
- Built on partnerships
- State opportunities through DCA (Data Collaboration Announcement) process
    - Option for state to partner with federal agencies
- Goal to eliminate duplicate effort
- SeaSketch app identifies federal priority areas; doesn't always mean that funding is available
- 3DHP state coordination through NSGIC
- DCA process
    - Open to everyone
    - Applicants are encouraged to build funding coalitions to pool resources to fund 50% or more of project costs
    - 3DHP "matching" funds added to cover remaining costs
    - USGS managing the contract is the preferred method, but there are options for states to manage, but encourage keeping communication open with USGS
- OR Status (3DHP acquisition)
    - USFS along Cascades; will probably go in as "provisional" because didn't have 3DEP
    - Applegate River pilot
- Collection by HUs, some states working at HU8; USFS project at HU12; USGS trying for HU10
- Hydro specs available
- Products
    - Web services: currently WMS, WFS soon
    - Goal to have new version once a year
    - Final snapshot of NHD has been loaded into 3DHP as placeholder until EDH available
    - WBD will be loaded in as initial snapshot into 3DHP, also
    - One sample dataset from pilot in AK, 19050401, based on 5m IFSAR DEM
- Q&A
    - Catchment process a little bit different in 3DHP; should be similar to NHDPlus catchment; collection area for a stream reach (betw. tribs)
    - NHD & WBD products are static, and will be available for a while
        - Mike Tinker, USGS, working on tools to transform events from NHD to 3DHP
    - Linear referencing in 3DHP?

        - Plans for point, line, and possibly polygon features (& catchments); probably a ways off; work currently on point
    - Links
        - 3D Hydrography Program | U.S. Geological Survey (usgs.gov)
        - Elevation-Derived Hydrography Specifications | U.S. Geological Survey (usgs.gov)
        - Federal priority areas for 3DEP and 3DHP will be added to SeaSketch - Better decisions through global participation
        - 3DHP map service
        - Find Your National Map Liaison | U.S. Geological Survey (usgs.gov)
        - Data Collaboration Announcement Portal | U.S. Geological Survey (usgs.gov)
        - NHD, WBD and NHDPlus HR data access website Access National Hydrography Products | U.S. Geological Survey (usgs.gov)
- **Status by agency**
    - BLM, notes from Jay (read by Bob)
        - We continue to collect stream inception points, periodicity transitions, springs/seeps, and wetlands through field work on BLM lands.
        - We have a number of 6th field hucs that we delineated from lidar in SW Oregon that didn't make it into NHD before transactions shut down.
        - Our working copy of the NHD is a business view/publication view of the data that includes BLM attributes such as fish presence absence. We call it "Hyd_Pub"
        - We are currently working through some changes on attributes and domains for our "hyd_pub" dataset for OR/WA so that we can directly edit it. We're also updating with our backlog of changes since NHD shut down and doing some data cleanup so that stream order can be run on the data. Most of the edits we're making will be incremental changes on BLM lands plus the lidar hucs that didn't get into NHD.
        - We expect to implement direct editing of hydrography by field offices by the end of the summer.
        - Fish distribution will be kept in sync with stream linework using topology, probably edited once or twice a year.
        - We will continue to make our hydrography data available to the public through our data portal. We recently downloaded and prepared an OR/WA copy of WBD that we will also make available through the portal. Our stream location point data set is also shared through data portal.
        - We're interested in sharing data. We don't have any current large-scale plans for more lidar derived hydro development. We'll continue to refine what we have done and do an occasional huc in-house to support project work.
        - I'm curious about others plans for editing and how folks are collecting stream inception points.
    - USFS, Ed
        - USFS has large stream delineation acquisition in the Mt. Hood, Deschutes, and Winema Forests using NV5
        - FY25, next looking at west side of Cascades: McKenzie, Middle Fork Willamette, South and North Santiam

        - Updating NHD fish distributions & stream class data; not making edits to linework until 3DEP
        - Trying to get stream delineations put in regional data set that can be put into 3DHP as "provisional"
        - Q&A: Reed, question of USFS timeline for EDH creation in west Cascades
            - Next year?; looking for partners, but trying to put together in next 18 months
            - Melissa Christie will get info on east side projects to Reed
    - Jon, ODFW
        - Steward fish habitat data with HEM in ArcMap on NHD (Dec., '21); plans to synch with final NHD dataset
        - Looking at timeline for migration to 3DHP with tools; would like to continue with linear referencing
        - Coordinating w/ ODF re PFA work on streamsflow data
            - Streamflow permanence
            - May include stream initiation point
            - Survey protocol for private land owners; reviewed by ODFW staff
        - Jon & Erin, not making edits to geometry; in holding pattern until 3DHP (with EDH) ready
    - Carl, ODF
        - Mellony Hoskinson lead for PFA (Private Forest Accord) hydro work
        - Flowlines developed following PFA legislation , modeled using 2m lidar not collected through 3DEP; may not be eligible for 3DHP
        - No plans to create 3DHP or migrate to 3DHP at this time
        - Q&A: is ODF editing synthetic hydro (flowlines)?--> getting info from field divisions and land owners that's being incorporated into ODF streams; and, areas have been identified where edits needed
            - Jon, edits have been cataloged and not necessarily incorporated; esp. in areas with low relief, road crossings; edits made in Klamath; actual edits being driven by field operations
    - Bob, OWRD
        - Background on OWRD's "streamcoded" (whole stream) streams where water extracted under water rights
            - Mapped with HEM tools in ArcMap; last synchronization 2-3 years ago
            - No plans to synch with final NHD; wait for 3DHP (with EDH)
    - Notes from conversation with Josh Greenberg, WA Hydrography Steward
        - Final report on 3DHP/EDH pilot
        - Josh & Brian Staab discussed idea for an in-person meeting in Vancouver, WA (at Water Resources Education Center?) to discuss how to link data to the EDH, such as, including fish, temperature data, bank width, stream permanence, initiation points
- **Next?**
    - Invite Mike Tinker to OR Hydro meeting to present on his work for linking events to the 3DHP
    - OR state contribution to 3DHP?

        - Rachel, probably a Policy Option Package (POP) for the 27/29 biennium; little over a year (2026/27) before we have to develop a POP for funding 3DHP
            - Timing of lidar collection/processing figures into it
            - Ideas for working in areas where we have compliant lidar ready
            - Start working on a roadmap
            - Presentations on hydro to OGIC to "prime the pump"; education
    - Carol Lydic
        - Re timing; webinar in August to discuss DCA; September announcement; proposals due 6-7 weeks after