Alaska Hydrography Technical Working Group Meeting
Meeting Minutes
USGS Glenn Olds Hall RD Conference Room, Anchorage and Online
1/27/2015

In Attendance
In Person
Becci Anderson (USGS)
Kacy Krieger (AK Hydro)
Brett Christensen (USFWS)

Online
Jim DePascuale (The Nature Conservancy)
Branden Bournemann (Kenai Watershed Forum)
Wendy Steinberger (Alaska DNR)
Chris Lund (USGS)
Andy Robertson (Saint Mary’s University of Minnesota)
Cliff Jones (Alaska DEC)
Erik Johnson (USFS – Alaska Region)
Mike Plivelich (AK Hydro/SEAK GIS Library)
Thalassa Smith (Alaska DFG)
Kristen Reed (NPS Alaska)
Al Rea (USGS)
Sheryl Boyack (USGS)

Welcome
Kim Homan (UA representative) has taken a position with the AK DOT, Mike Plivelich will be filling in as the acting representative from SEAK GIS Library/UA.

Future Meetings and Trainings
AHTWG Quarterly Meeting        April 27, 2015  1:00-3:00pm
USGS, Anchorage, AK

Dena’ina Civic and Convention Center, Anchorage, AK
Thursday Feb 12, 9:00 am Mapping Alaska’s Water: The Alaska Hydrography Database (Kacy Krieger)

Alaska Surveying and Mapping Conference February 16-20, 2015
Anchorage Hilton, Anchorage, AK
Wednesday Feb 18, 1:30 pm Statewide Mapping Overview: Hydro (Kacy Krieger)
Thursday Feb 19, 3:30 pm NHD Techniques (Andy Robertson)
Friday Feb 20, 1:30 pm A Mean High Water Composite Shoreline for SE AK (Frances Biles)

Alaska Mapping Executive Committee March ??, 2015
Conference Call/Webinar (Invitation Only)
**Agency Updates**

**BLM**
No representative present. No updates to report

**NOAA**
No representative present. No updates to report

**NPS (Kristen Reed)**
Nothing super-specific to report. Andy (Glacier Bay) – Not part of the beta test for the new toolset. Been working with the old toolset, but having to turn over to USGS - this pertains to the Arctic work. Working on editing and densification of GLBAY now. Will be going thru AK Hydro. Mat-Su- submitted first test area, now in The NHD (goose bay Huc10) have started work on the remainder of the basins. Process going on through next fall. **WBD discussion needed to discuss issues in the Mat-SU**- Sheryl agrees to get on a call and discuss (pull Karen Hansen) Send invite out to the whole group to get participants (Branden wants to participate).

Jim – Mat-Su: Plan on developing NHDPlus in the Mat-Su.

**USFS (Erik Johnson)**
Kim moved on to DOT, Mike Plivelich is filling in during the Interim. No further updates.

**USFWS (Brett Christensen)**
Nothing to report.

**USGS (Becci Anderson)**

_AL Rea_: Have launched effort to begin High Resolution NHDPlus for the nation. Initially working on the toolset used to generate NHDPlus. Taking the tools from the medium resolution NHDplus and adapting to the high resolution data model. Tool development should be completed in the coming month(s). Testing to follow. NHDPlus production plan includes finishing six hydro regions in 2015 (does not include AK). Initial work will happen on Horizons Systems infrastructure. Plans include developing the tools that are transferable and moved to production at the NGTOC. Goal is to have NHDPlus production in Denver (USGS) with 3 year goal for L48, Hawaii and Puerto Rico. Alaska to follow.

_Sheryl Boyack_ – Stream stats (with Janet), Alaska will be a pilot testing area for national stream stats project. Testing script against Alaska for accuracy. WBD edits have been made and submitted, but have not been posted
(HUC 14s causing the problem), but unsure when these new HUC’s will be available. A student is working on NPRA.

Chris Lund: Spot/ortho imagery has not come out. 634 cells for FY 15 program of work, may grow if imagery becomes available. Updated hydro for about 40% of the cells. 20% in process right now.

Caixia Wang (UA) – working on updates in the Nushagak/Kvichak region of SW AK with student intern.

UA (Mike Plivelich)
Still working on Prince of Wales Island (POW) in SE (already processed half of the island). POW has some of the most complex stream geometries in Southeast Alaska. Processing required splitting the submitted data into smaller pieces and processing as separate updates. Attempted to process the current region with the new geoconflation tool, but hit a roadblock. Processing now through old AML tool. Ketchikan is next update for SEAK. Mike participated in the Geoconflation beta testing. The improved tool is more intuitive for a new user. This new toolset will be available in mid-February.
Helped with the initial update in the Mat-Su pilot region, the process was nearly seamless.
Beginning to work on Western Aleutian Islands where no data existed in the NHD. Just now working with the data, and will work to get something into the NHD short.

AK DEC (Cliff Jones)
Has been involved in discussion of NHDplus implementation in Alaska. Determining what can be done about catchments. Reported on catchment evaluation efforts by Drew Grant: still evaluating the use of HUC12/14 where available for use as catchments.
Additional concerns about the hse of HEM tool and EPA add-on for the tool that have not been updated recently. Current HEM tool requires earlier versions of ArcGIS. What can be done about that? Chris L.: will take comments to Michael Tinker (lead of HEM tools) to discuss what is going on.

AK DFG (Thalassa Smith)
Nothing to report

AK DNR (Wendy Steinberger)
Nothing to report

AHTWG Charter Updates
AHTWG charter has the additions discussed and voted on during October AHTWG Meeting. The charter was sent to ACCER leadership. ACCER acknowledged the changes and views the changes are minor. ACCER will raise the proposed revisions during the next ACCER meeting for approval. In the interim, AHTWG will move forward as documented in the charter. Kacy Krieger, Alaska Hydrography Coordinator will become a co-chair, and charter text will strengthen AK Hydro-AHTWG relationship.

AK Hydro Program Coordinator Updates

Summary of Activities
Kacy Krieger, gave an update of activities, outreach, and updates occurring since the October AHTWG meeting. The coordinator participated in numerous outreach and engagement activities including: Shorezone Annual Meeting, Conservation and Community in Alaska and Northwest Canada Conference, Mat-Su Salmon Basin Salmon Habitat Partnership 2014 Symposium, monthly NHD Advisory Team Meeting (presented during December), monthly AK Hydro/NHD Technical Coordination Call and contributions to the monthly USGS NHD Newsletter. Additionally, white papers focused on securing funding for hydro updates included: UAF Center for Salmon and Society Pre-proposal white paper (details in the Funding FG comments) and North Slope Science Initiative white paper. Additionally, status of hydrography updates was reviewed and opened for comments and additions. There are many different projects, working at different levels of quality throughout the state. The goal is to get all updates coordinated and meeting modern mapping standards. Less than 10% of Alaska currently does.

**NHD National Update:** NHD Standards discussions begin soon. Of importance to Alaska are discussions on multiple shorelines and 1:24,000 scale (density and accuracy). AHTWG will need to address AK Hydro Standards to keep in line with updates to the NHD standards.

**Hydrography Requirements and Benefits Study (HRBS):** A new Hydrography Requirements and Benefits Study (HRBS) is being sponsored by the U.S. Geological Survey (USGS) and the Natural Resources Conservation Service (NRCS). The goal of the assessment is to develop program alternatives for more effectively meeting the mission uses of hydrography data for users in the United States and its territories. As a basis for these alternatives we are collecting a comprehensive set of Federal, State, local, tribal, and other organization business requirements for hydrography data, and the benefits associated with meeting these requirements. State, local, regional, NGO’s, look for more information in your inbox.

**Strategic Plan Review:** A draft version of the strategic plan was reviewed by the working group. Comments were incorporated into the strategic plan and will be addressed and included in the next draft that will be presented at the April quarterly meeting. Agreement on need to prioritize goals/objectives based on a timeline and to plan for the next five (5) years, 2015-2020.

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**Focus Group Updates**

**Data Editing**

Discussion of Lakes vs. Salt Chucks occurred during a Data Model Focus Group Call. **Mike has made provision of how to accommodate freshwater lakes that intersect the coastline in the documentation.**

Additionally, the USGS NHD Program is engaged in standards discussions. These standards will be discussed during the weekly NHD/WBD advisory team calls. AK Hydro/AHTWG will need to keep standards in line with NHD standards changes that may be happening.

Mike and Kacy will keep the group updated on immediate needs.

**NHD Plus**

There have been several advancements with NHDPlus since the last AHTWG meeting. NHDPlus remains an end goal of many update efforts across the state. Part of the limits for NHDPlus in Alaska is the lack of catchments. A call between the EPA, AK Hydro, DEC and others occurred where the EPA discussed their need for NHDPlus in regions where there are impaired waters. Most of these are in SC AK (Mat-Su, Kodiak Is, Kenai) and Southeast. The issue of catchments was discussed extensively. There are external investigations ongoing looking at the different options.

A call was held with Horizon Systems, developer of the previous NHDPlus datasets for the nation. During the call, an overview of what is NHDPlus, where it is going in the future and how it works was given. NHDPlus is a relatively static process, however in Alaska, there may be a need to update more frequently once NHD updates occur. Horizon Systems is developing tools with the USGS for the next round (high resolution) of NHDPlus nationwide. Many changes to NHDPlus coming in the future including the creation of High-Resolution NHDPlus.

There is interest with AHTWG and AK Hydro partners to build NHDPlus in select regions of the State. NHDPlus Pilot projects on the Kenai Peninsula and the Mat-Su basin are currently being investigated. Coordinating with
Horizon Systems to determine the cost of processing several HUC10. Funding will come from FHP through Kenai Watershed Forum. This process will give better insight into the process, applications, and how we can leverage NHDPlus as an event database in the future.

Additionally, we need to address and fix WBD to be consistent with hydrography and DEMs to assist in the processing of NHDPlus. Finally, IfSAR data is generally too rich for ESRI tools to run, large areas much be segmented to process with the current NHDPlus model. Segmenting works best if coming from elevation controlled HUC8 boundaries, which will require that the WBD be updated along with NHD to ensure that the two are consistent and create the best NHDPlus product.

Data Model
Statewide Coverage
Expansion to statewide coverage by creating AK Hydro data model for Interior and Arctic Alaska. Expansion into the remaining regions of the state has been a goal of AHTWG and AK Hydro for some time. Expansion will allow greater participation, particularly from agencies who manage lands in northern Alaska and not in southern Alaska. Statewide coverage is key to showing that what we are doing is viable and sustainable. Additional regions will allow for additional potential funding sources. These areas include necessary base data needed to generate hydro edits, the Arctic area has a lot of IfSAR available now! However, AK Hydro is maxed with the current extent, and will need additional personnel to handle the volume of edits that will come out of the Arctic and Interior regions.

Vote by steering committee members to create AK Hydro databases for Interior and Arctic regions: in favor by unanimous support from agencies present.

Regional database creation will be implemented during the 2015 AK Hydro service window (July 1-31, 2015) by AK Hydro Staff.

Statewide Database
Consolidation to single statewide database with the expansion to statewide coverage. Shall this occur in the summer service window, prior or after? Consolidation will require longer service window this year, but will simplify the process of maintaining the databases. There is a need to understand the implications of doing so.

Vote by steering committee members to migrate from regional to a single statewide data model: in favor by unanimous support from agencies present.

Statewide database creation will be implemented during the 2015 AK Hydro service window (July 1-31, 2015) by AK Hydro Staff.

NHD Issues Form
Discussion to submit NHD Issues Form for multiple shorelines. Agreement that this form should be submitted to USGS NHD program for consideration.

Funding
- Budget for base AK Hydro Operations
  - Funds Administration, Coordinator, Technical Steward, DBA/Technician
  - Need to address multiple funding sources likely to complicate matters, but is likely the best method to establish rates within the university. In reality, using CESU (17.5%) is not an option due to difficulties encounter during previous grants.
- Budget for Statewide Updates
  - This budget assumes similar workflow and product to the Mat-Su basin – IfSAR derived streams, with validation and conflation into the NHD. This number is accounts for completed work in the Mat-Su, but assumes that other regions of the state would be re-processed.
  - Does not include budget to create NHDPlus
- Center for Salmon and Society Pre-Proposal
  - Pre-proposal white paper submitted in mid-december for consideration of full proposal.
Proposal would provide ~50% funding for administration, coordinator, tech steward and DBA for 2 years.
Includes funds to complete hydrography updates in an unidentified region of the state (Cook Inlet, Gulf of Alaska, somewhere with IfSAR, important salmon habitat, and poor hydrography)
Will know status of the proposal by January 30, 2015.

- SEAKGIS Turnover and Stability of IT Systems
  - Kim has moved over to the DOT but hopefully a new GIS Library Coordinator will be in place shortly.
  - AK Hydro currently leveraging SEAK GIS Library infrastructure, however the hardware is antiquated and will need replaced in the coming years (within the planned future of AK Hydro)
  - Need for long-term IT home for AK Hydro. Ideal if we can preserve the data model, ie. Allow remote users access to download and upload replicas.

Next Meeting:
April 27, 2015
Becci: Set up stream stats call with Janet (USGS)
Kacy: Incorporate comments and distribute strategic plan for discussion.