

AK Hydro Editing and Workflow Training

Feb 3-5 2014 | Anchorage, AK

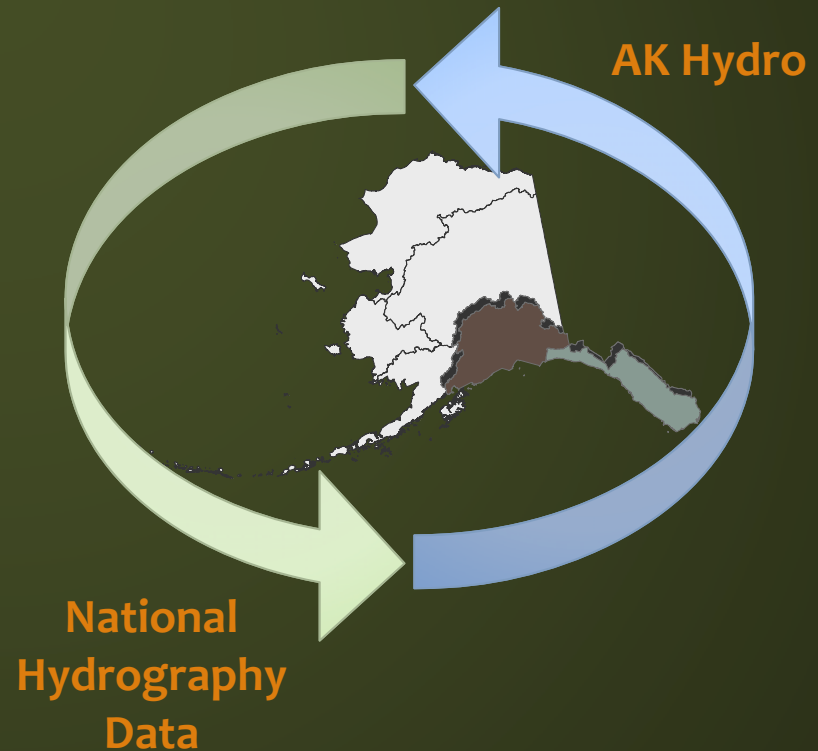
AK HYDRO: A REGIONALIZED APPROACH TO NHD STEWARDSHIP IN ALASKA

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MAIN DISCUSSION POINTS

- *The National Hydrography Dataset*
- *The AK Hydro Stewardship Model*
- *Current Statewide Coordination*
- *Participant Workflow*
- *Requirements for Collaboration*
- *Statewide Hydrography Standards*





NHD and AK Hydro

NHD IN ALASKA

Importance to Alaska:

- Core catalog of hydrographic geometries
- Ubiquitous application
- Provides critical infrastructure
- Robust support
- National significance



NHD IN ALASKA

Challenges for Alaska:

- Unique Alaskan Landscapes
- Agency-specific Hydrography Goals
- Unmet Local Business Needs
- Coordinated and Timely Updates



THE AK HYDRO SOLUTION

A collaborative database housed and managed by the University of Alaska and funded by federal and state partners; which is used to store local attributes and generate updates for the NHD



WHY AK HYDRO?

Origins in SE Alaska with
ADF&G and USFS

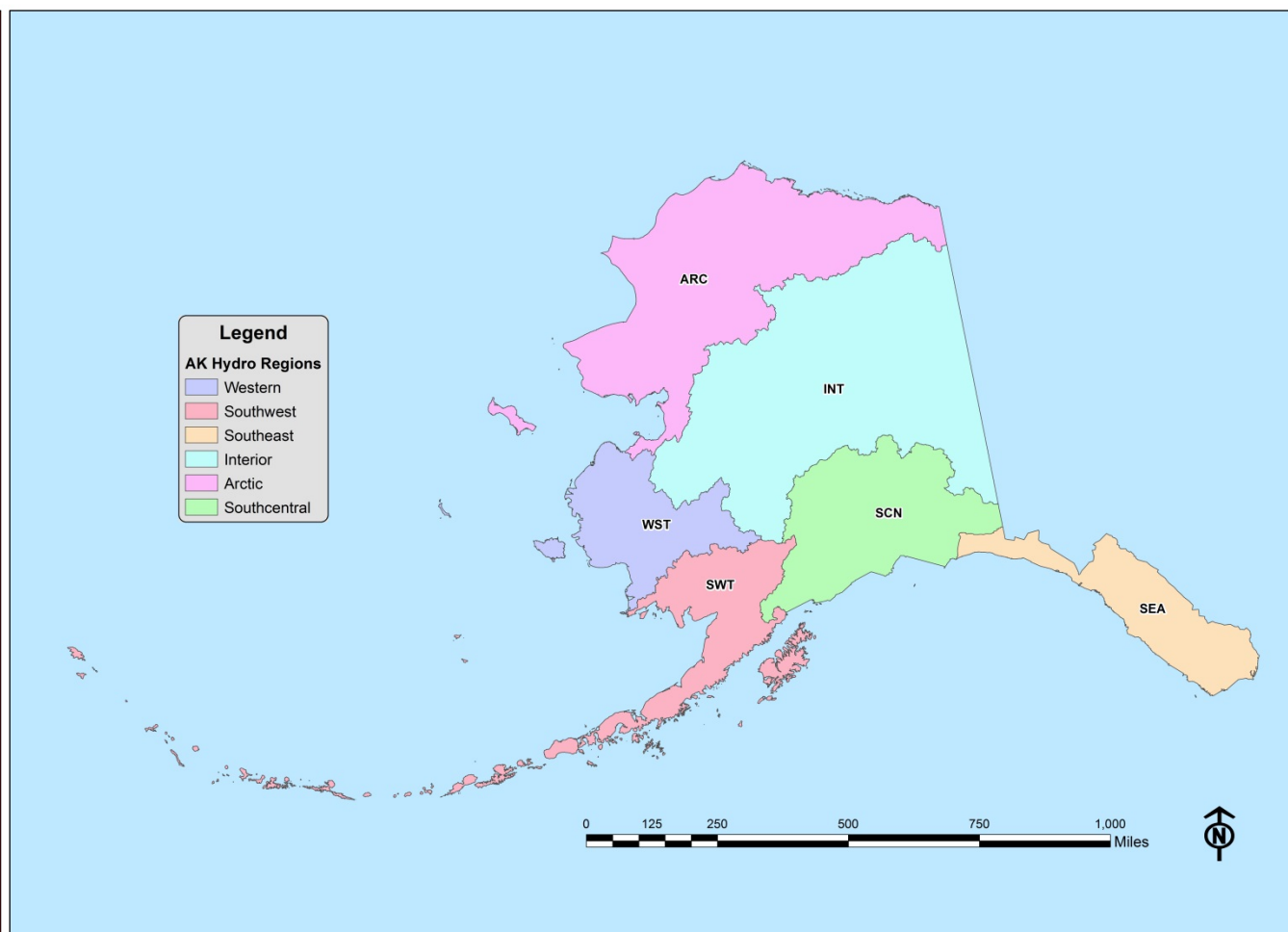
Addresses a backlog of
hydrography updates

Award winning and
sanctioned by the NHD



AK HYDRO: A REGIONAL APPROACH

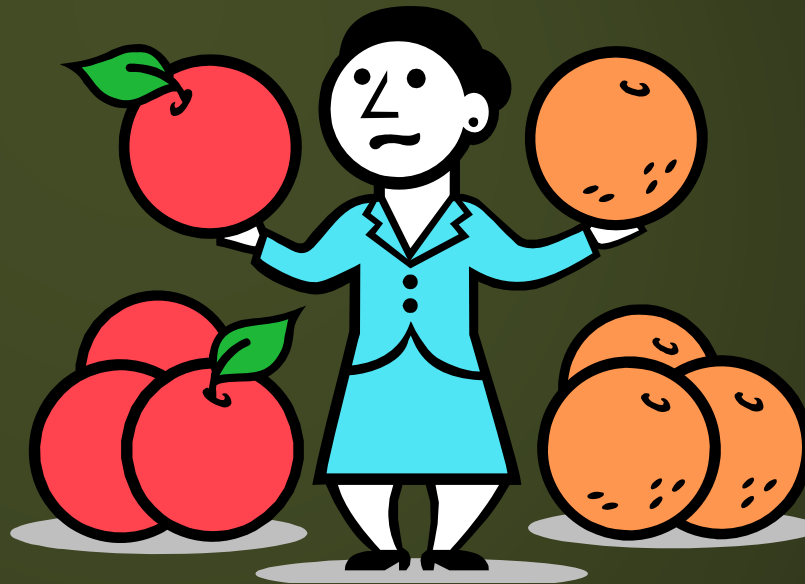
AK Hydro Regions



AK HYDRO AND THE NHD

Similar, but not the same

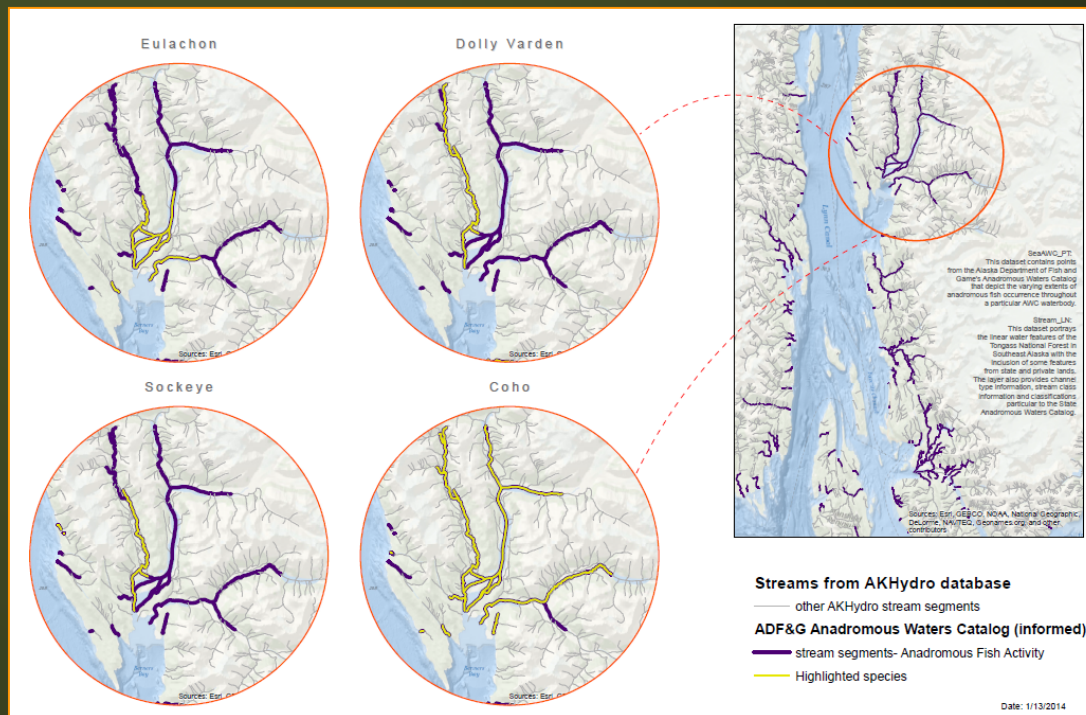
- Local requirements vs. national requirements
- Featureclasses vs. Feature Types
- Sharing consistent geometry
- Updates can go in either direction



“In support of” NOT “In addition to”

BENEFITS OF AK HYDRO

- Elastic data model
- Basic editing requirements
- Shared update effort
- Clear lines of coordination and communication
- Centralized NHD stewardship
- Untapped analytical potential



Hydrography Coordination

**ALASKA
HYDROGRAPHY
TECHNICAL
WORKING GROUP**

Created under Alaska Climate Change Executive Roundtable (ACCER)

Created for hydrography data and editing standard operating procedure coordination and collaboration, including outreach and communication with to the broader mapping community

6 Federal agencies (BLM, NPS, NOAA, USFS, USFWS, USGS) and 4 AK State entities (ADFG, ADEC, ADNR, UA), plus invited technical advisors

Charter signed by ACCER Co-Chairs

Could possibly move to Alaska Geospatial Council (per ACCER's direction)

AHTWG REPRESENTATIVES

Agency	Primary Member	Primary Email
Alaska Department of Environmental Conservation	Cliff Jones	cliff.jones@alaska.gov
Alaska Department of Fish and Game	J Johnson	j.johnson@alaska.gov
Alaska Department of Natural Resources	Wendy Steinberger	wendy.steinberger@alaska.gov
Bureau of Land Management	Matt Varner	kpeck@blm.gov
National Oceanic and Atmospheric Administration	Matt Forney	Matthew.forney@noaa.gov
National Park Service	Joni Piercy	joni_piercy@nps.gov
University of Alaska	Kim Homan	krhoman@uas.alaska.edu
U.S. Fish and Wildlife Service	Bill Rice	William_Rice@fws.gov
U.S. Forest Service	Erik Johnson	ejohnson02@fs.fed.us
U.S. Geological Survey	Becci Anderson	rdanderson@usgs.gov

AHTWG COORDINATION TO DATE

AHTWG meeting since May, 2013

**Data Model
Standards
Focus Group**

**Data Editing
Standards
Focus Group**

**Communications
Focus Group**

Early results

- **Data contributions:** ADNR and TNC have uncaptured data updates
- **Common editing standards:** Creation, implementation, outreach and revision
- **Enhanced coordination with USGS:** USGS federal, national lead for hydro mapping
- **Common way forward:** Agreement to use AK Hydro to update the NHD



CURRENT HYDROGRAPHY UPDATING

- **Kenai Watershed Forum: Updating NHD on Kenai Peninsula**
- **National Park Service: Updating NHD in Denali NPP and other lands**
- **USDA Forest Service: Updating Tongass and Chugach**
- **State of Alaska: Pilot project with State of Alaska in Port Clarence**
- **Bureau of Land Management: Updating NHD in NPR-A**
- **US Geological Survey: Working with partners on NHD updates**

NATIONAL LCC GRANT

**LCC/FHP/AHTWG/UA/USFS/FWS/USGS Alaska
hydrography mapping project funded by
National LCC Office for \$300k**

Funding to

- **Create a Hydrography Mapping Coordinator position**
- **Support Southern AK Hydro Steward**
- **Update hydrography data in select Western AK/Arctic LCC watersheds**

Participant Workflow



HOW AK HYDRO WORKS

Database Replication to Partners

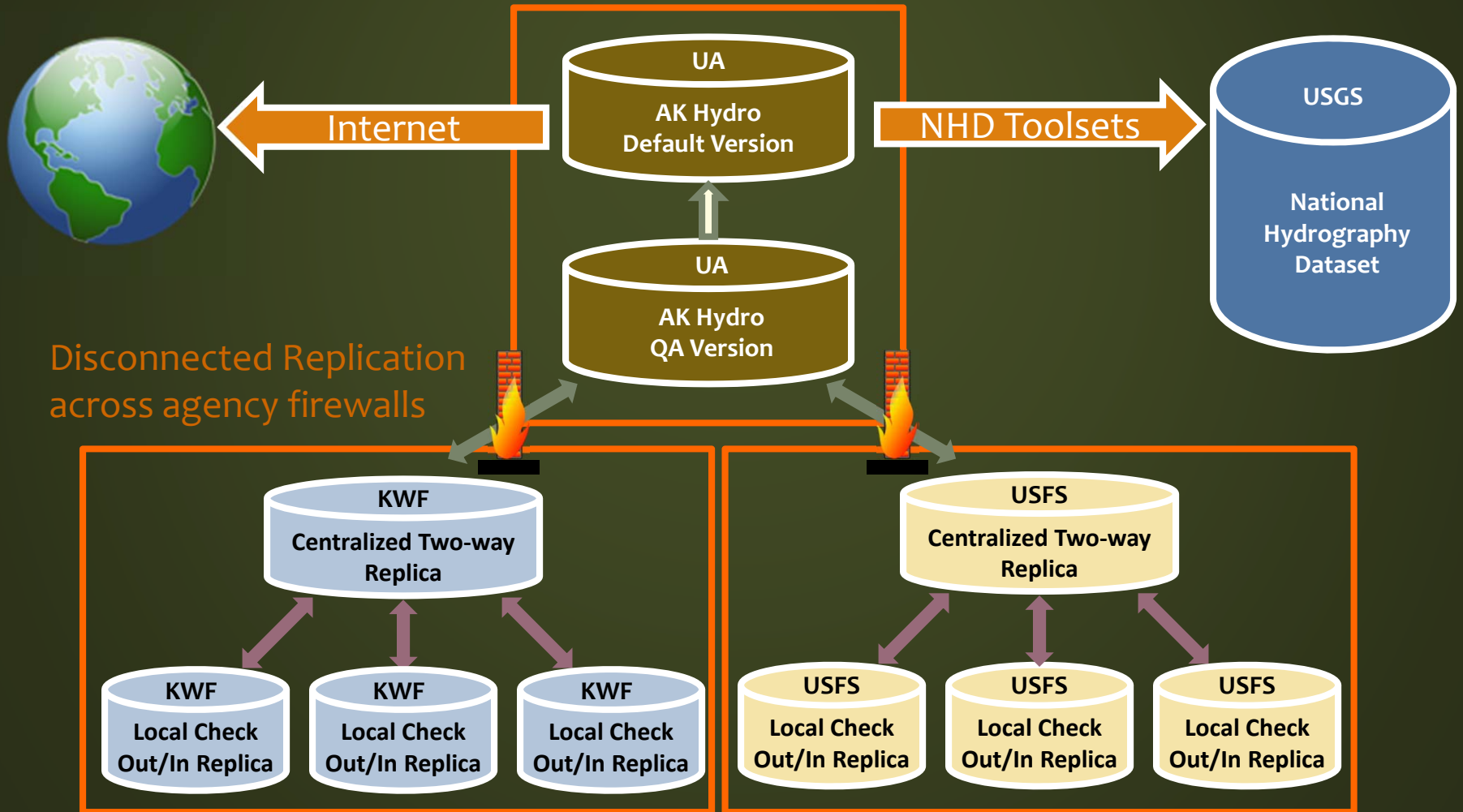
```
graph TD; A[Database Replication to Partners] --> B[Local Desktop Edits – check out/in]; B --> C[Database Synchronization to UA]; C --> D[Transform and Conflate to NHD];
```

Local Desktop Edits – check out/in

Database Synchronization to UA

Transform and Conflate to NHD

THE AK HYDRO STEWARDSHIP MODEL



AK HYDRO: COORDINATED EDITS

The screenshot displays the ArcMap interface with the following components:

- Table of Contents:**
 - Layers
 - AKHydro Editing Extents
 - AKHydro Editing Extents
 - Checked In
 - Not Checked In
 - WBD HUC 8 Subbasins

*use identify tool to query values for any polygon

- Identify Window:**
- Identify from: AKHydro Editing Extents
- AKHydro Editing Extents
 - EasternPWS
- Location: 388,017.209 1,268,726.479 Meters

Field	Value
OBJECTID	584
RequestDate	1/16/2014
CheckOutDate	1/16/2014
CheckInDate	Null
ParentGeodb	UAS_SCAK_QA_Version
CheckOutReplicaName	EasternPWS
Editor	Mike Plivelich
EditorPhoneNumber	616-920-7265
EditorEmail	mtpivelich@uas.alaska.edu
EditDescription	Add MHW and run Data Reviewer QA
Notes	Null
ReviewLocation	Null
LayerNamesEdited	All
DataSteward	Mike Plivelich
DataStewardDate	Null
DatabaseAdministrator	Null
DbDate	Null
DbComments	Null
DefaultDate	Null
Shape	Polygon



Requirements for Collaboration

AGENCY REQUIREMENTS FOR AK HYDRO COLLABORATION

**A Centralized
Spatial
Database**

**Basic DBA
Experience**

**Agency
Expertise**

**Basic
Desktop
Editing
Experience**

**Compatible
Software**

THE DIVISION OF STEWARDSHIP RESPONSIBILITIES

PARTNERS PROVIDE

- Agency Coordination
- Application of Standards
- Geometric Updates
- Editing QA
- Replica Admin and Mgmt.
- Replica Synchronization
- AHTWG participation

UA PROVIDES

- Stewardship Coordination
- Application of Standards
- Database QA
- NHD Updates
- Database Admin and Mgmt.
- Technical Support
- AHTWG participation

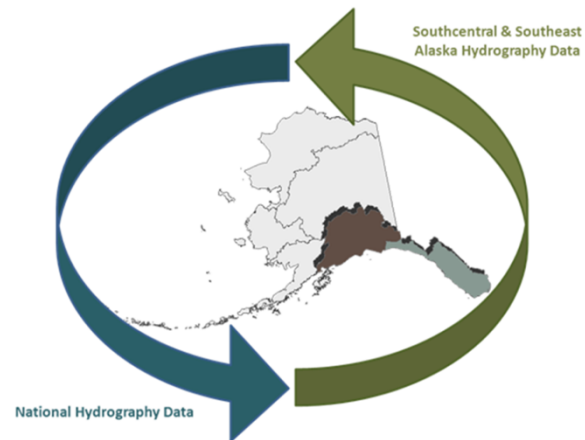


*Statewide
Hydrography
Standards*

AK HYDRO STANDARDS

- *AHTWG Database Standards*
- *AHTWG Editing Standards*
- *Agency Operating Procedures*

Southcentral & Southeast Alaska Hydrography Databases Standard Operations Manual



Prepared By	Mike Plivelich
Version	2.0
Status	Draft
Updates	As required
Release Date	July 2013

A photograph of a desert landscape featuring sand dunes and a dead tree silhouette. The sky is bright and hazy, and the word "QUESTIONS?" is overlaid in white text.

QUESTIONS?