Hydro TWG Minutes 03/10/2016

Al Rea – NHDPlus High Resolution Update

History of the NHD Plus (See Slide 2.)

- A lot of state agencies were interested in a higher resolution than the 100K.
- NHD 24K was completed in 2007. at the same time, more functionality was added to the 100K
    - Network
    - Navigation
    - Catchments
- USGS is now working to add all that functionality to 24K, creating the NHDPlus High Resolution
- The goal is to get everyone working with the same data
- This process is going a little slower than anticipated.

Gathering data to produce this update (Slide 4)

- Using high resolution Lidar resampled to 10 meter DEMs
- VAA's used for navigation
- Switched to file geodatabase and TIFF
- Moved up to HUC4

Features of the NHD Plus

- Key feature is catchment areas for each flowline – done with 30 meter elevation grid for the current 100k NHDPlus
- The high res NHD Plus will have catchments done with the 10 meter elevation grid.
    - You will get a lot more detail with the high res.

How USGS is building this data (Slide 9)

- Cleaning up the code
- Emphasizing automation, so the process will go quickly once that parameters are in place
- Will use the NHD plus as quality control for the high res.
- This will be an process project, it will not be perfect all at once
- They will need users/stewards to help with the quality control
- There will be steps in place to be able to generalize the data so people can use it at any resolution
- They are working to get a seamless data set, by generalizing very dense areas to get a comparable density of flow lines.

Work flow (Slide 18)

- Beta version will come out
    - QC process
    - Results will go to update the NHD and WBD
    - Go back into tools and refresh
    - Assess the data on quality, update and refresh changes
- Team to do the Quality Control
    - National oversight team
    - Local experts
        - Stewards or editors
    - Web edit team will build tools that are web based
- Priorities
    - Region priorities – see slide

    - Idaho is priority 13
        - This means that we can work on the data in advance, resulting in a higher quality of data in the new NHDPlus High Res
    - 6 regions that are currently being worked on will be released soon
- At a previous Technical Exchange Meeting
    - They talked about quality control checks
    - You can contact Paul if you'd like more information

Mike Verdun – Treasure Valley NHD Photorevision

Why the Treasure Valley (See slide 2)

- Area covers the Boise River from Lucky Peak Dam to the Snake River
- 1.9 million acres of water in run off
    - Most goes to irrigation
- 1/3 of the state population live in the valley
- Land use has changed
    - From agriculture to subdivisions
- Very complicated system
    - Lots of canals and irrigation companies
- 13 different cities in valley
- Multiple Uses

Updates (Slide 4)

- Most edits were because of land use change

Sources

- 1979 Southwest Idaho Water Management Study including Plats
- NAIP2013

Statistics on updated features (Slide 9)

- Water bodies were easier to delete and insert a new one
- Many added water bodies were new subdivision aesthetic ponds

What's next

- Names for features will be provided from Boise Water Project
- Will be asking for local data
- Data has been loaded into the Arc9.3 model, but not on the 10.2 model yet
    - If you want the new data, please contact Danielle and she will make sure you get the best copy

Hawk Stone – Landscape Plumbing: Mapping the Water of the Treasure Valley

In order track water pollution, you need to know where water comes from and where it goes.

- Irrigation doesn't keep track of where it goes

Data sources used (Slide 3)

- Google Earth
- Canal Companies/City of Boise/ ACHD
- GIS Coverages
- Field Visit

What was found

- The system is really big and complicated
    - The small scale is fairly simple - Mostly a single field
- Water quality
    - Sediment plume
    - Sediment catchment

    - Can see pipes on Google Earth, which is helpful to figure out use and flow direction
        - Found places of obvious oil and grease run off
        - By using street view, you can see exactly what is happening on the ground
        - Can use older imagery to see the history
    - Use laterals and imagery to map flow direction
    - The return is most important
    - Reuse of water is limited and only really in the large scale

Uses

- Address how the water is being used
    - For water quality, how to treat the quality issue
- "drain sheds" help people to be interested in how the water quality affects them and their neighbors
- Work with the irrigators to help keep the water clean in the river
- Restructure the existing water flowlines to keep the natural creeks clean
- New named water lines are available for download

Treasure Valley NHD Discussion (Wilma Robertson)

How do people want to use hydrography in the Treasure Valley? Is the 1:24,000 sufficient?

- City of Boise (Eric Wing)
    - Little information is readily available
    - Users want to know every trickle, smaller scale is always good
    - Mostly, people just want to know where the water is
    - Want to know about piped water
    - Need a better way to get edits/changes into the NHD as the tools can be complicated and difficult to use
- Blaine County (Sam Young)
    - Use it mostly for cartographic purposes
    - More names on features would be nice
- Idaho Rural Water Association (Tui Anderson)
    - A smaller scale would be nice
    - Proximity to public drinking water
    - Only used for cartographic purposes
    - Stream orders would be helpful for generalization
        - Was noted that the new NHDPlus high res would cover this problem
- City of Boise (Eric Wing)
    - The city is starting to map storm water. This might be helpful to add to the NHD
        - IDWR (Danielle Favreau) added that they are still working on how to integrate storm water into the NHD
- Idaho Rural Water Association (Tui Anderson)
    - Storm water would be helpful for their uses and is often forgotten about
- Idaho DEQ (Hawk Stone)
    - Irrigation companies are not using Arc or Google Earth
        - They are just starting to map things with GPS
            - Pumps, wells, and thing
- Boise Project (Genna Ashley)
    - Boise project is updating line work and facilities
        - Headgates and things
    - New York and Nampa Meridian just started with GIS

- IDWR (Danielle Favreau)
    - 1:24,000 is not good enough resolution when looking at individual fields and drains

What events or associated layers are needed?

- Idaho DEQ (Hawk Stone)
    - Lift stations, pumps, pressurization stations. The things that move water around
- Idaho Rural Water Association (Tui Anderson)
- Ideas of where irrigation water is being used in subdivisions or near public drinking water
    - These areas need backflow preventers to keep irrigation water and drinking water separate
    - Most are on Suez/United Water, but there are a lot of little systems out there

Elizabeth Stevens-Klein – WBD Select Topics

WBD and NHDPlus V2 Catchments

- WBD (Slide 4)
    - Used as a cataloging unit for the NHD
- NHDPlus V2 Catchments (Slide 5)
    - Shows flowline catchmensts
    - Used for modeling
    - Incremental watersheds
- WBD and NHDPlus V2 Catchments, Interrelated (Slides 6-11)
    - Without "burning" in the flowlines, the catchments end up strangely shaped
    - NHD takes precedence over WBD
        - NHD based on catchment flowlines
        - WBD based on "walling"
- Which to Use? (Slide 12)
    - WBD used for smaller areas and help define study areas
    - Catchments are elevation derived and are used more for modeling

Editing WBD (Slides 14-18)

- Stewards will likely be asked to verify any changes

WBD Future Plans (Slides 20-24)

- Canadian/US Harmonization
- Name Review across US
- NHD/WBD 4-digit boundary review

Danielle Favreau – News from IDWR

Updating the NHD in the Lemhi Sub-Basin (Slides 1-3)

- Photo revision complete

Updating the NHD in the Big Lost Sub-Basin (Slides 4-6)

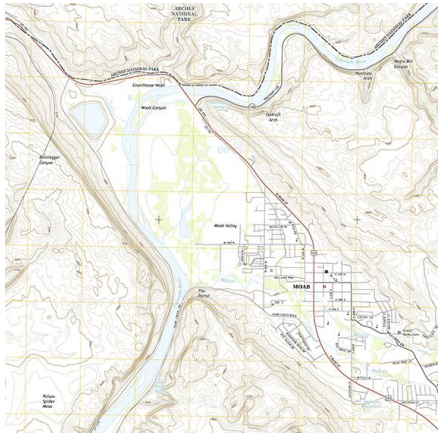
- Photo revision 50% complete

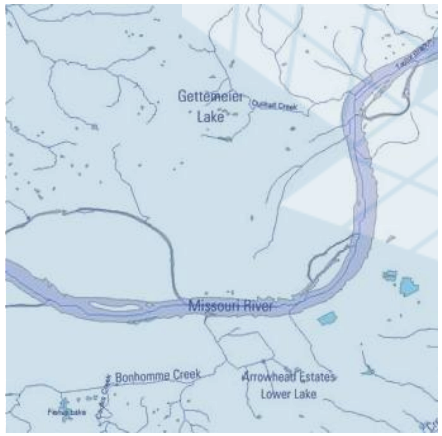
USGS Provisional Names Tool (Slide 7)

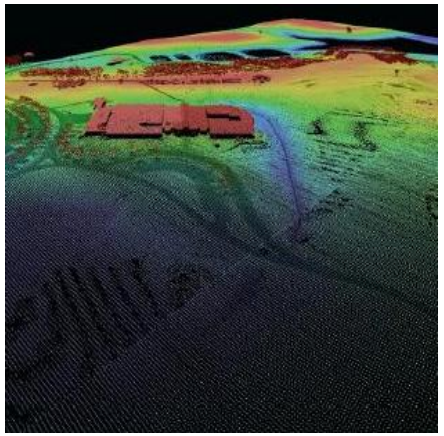
- Will be an easy way to submit names to BGN/GNIS
    - Hopefully, this will speed things up
- Tool still in testing

Next Hydro TWG is September 8, 2016!

NHDPlus High-Resolution Update







Al Rea

National Geospatial Program

3/10/2015

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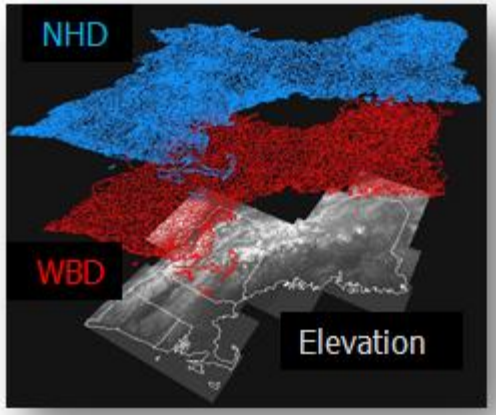
NHD*Plus* High Resolution

Integrating the Landscape with the Stream Network at 24K or better

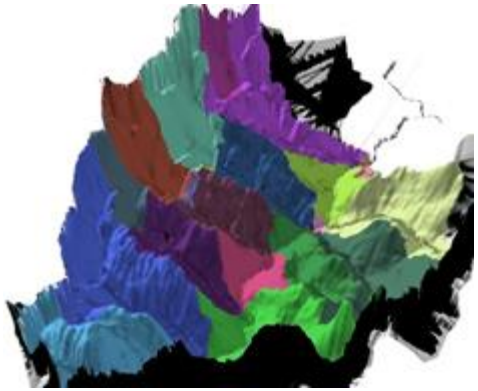


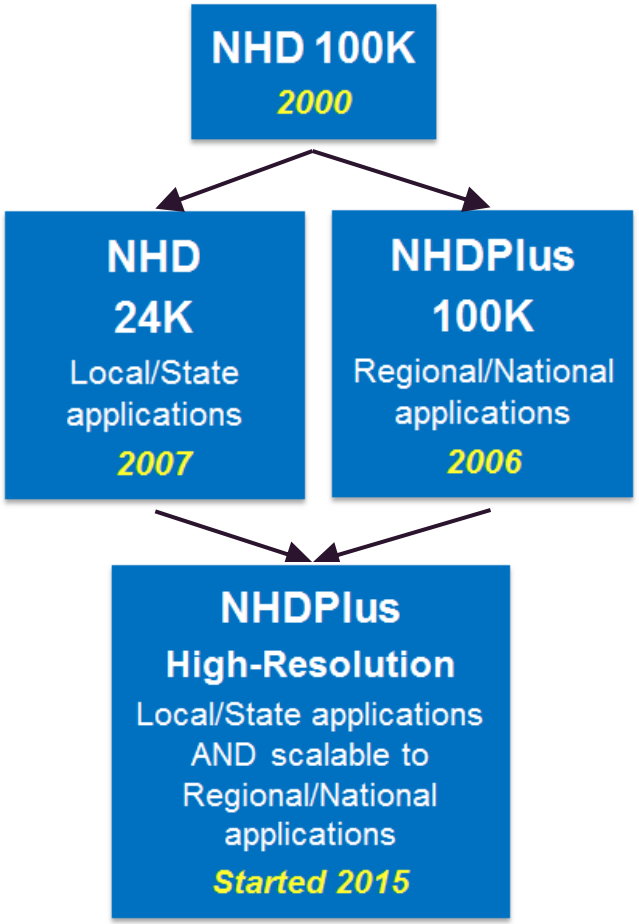
Addresses the need for a single hydrographic frame of reference by

- Building on NHDPlus 100K integration of NHD, WBD and elevation data
- Building on higher resolution framework of 24K NHD
- Providing ability to generalize to many different scales so that all users can link their data to the same core network

Initial Steps

- Tools and procedures in FY15
- Production will proceed by sub-region





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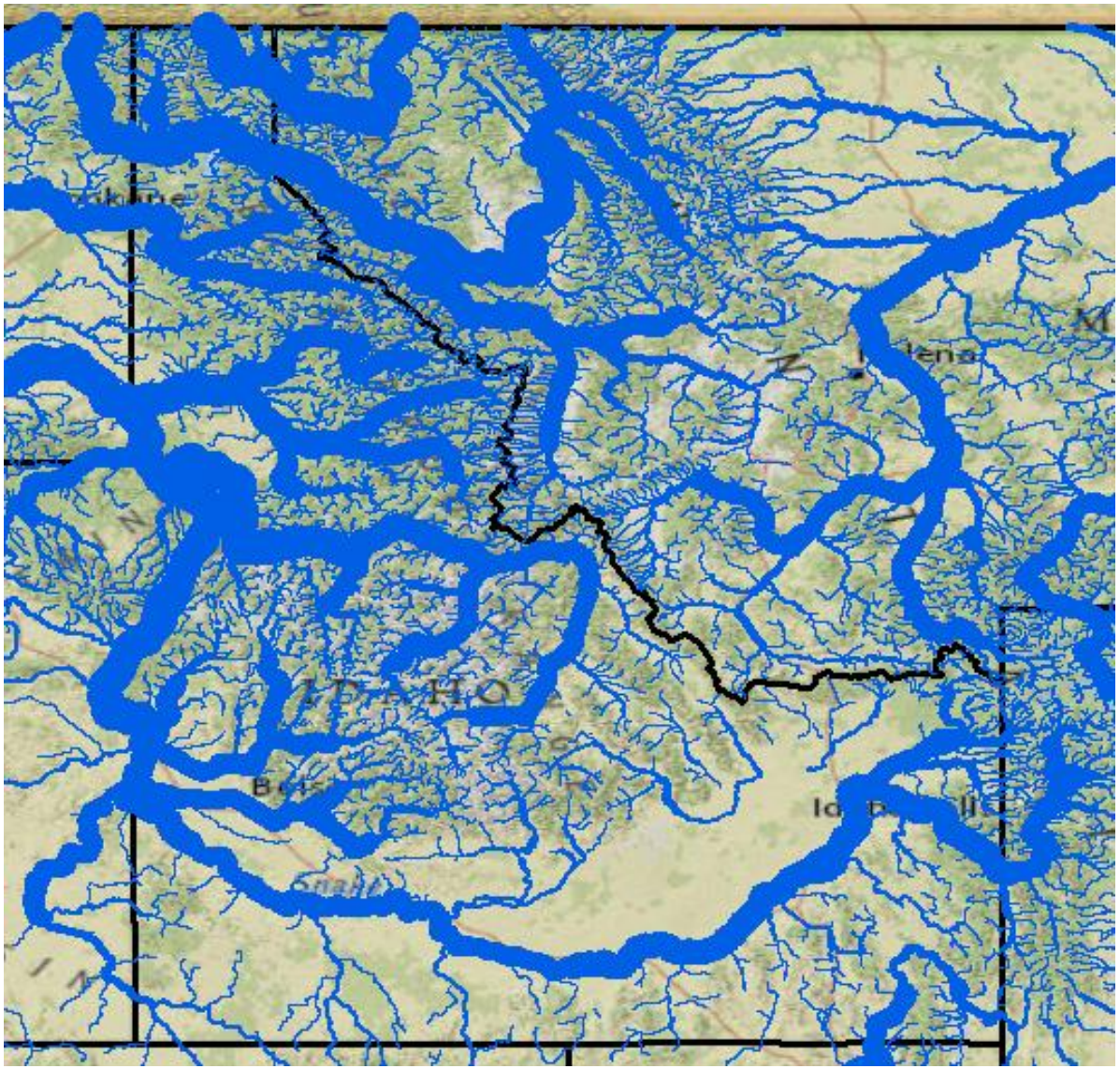
What will NHDPlusHR look like?

- Snapshots of ingredient data
  - High Resolution NHD
  - Watershed Boundaries Dataset (WBD)
  - 10-meter DEMs (3DEP)
- Value-added attributes (VAAs)
- Catchments
- Flow direction and accumulation grids
- Mean annual flow estimates

Comparison with NHDPlus V2

	NHDPlus - Med Res (V2)	NHDPlus - High Res
Elevation Snapshot	National 1 Arc-Second Seamless DEM (30 meters)	National 1/3 Arc-Second Seamless DEM (10 meters)
NHD Snapshot	Medium Resolution NHD 100K	High Resolution NHD Local, 24K, & 63K (AK)
WBD Snapshot	Composite 2010-2012	Updated WBD
File format	Shape file & Grids	File GeoDatabase & TIFF
Tile size	HUC-2 (with exceptions)	HUC-4
Flow estimates	Mean annual, mean monthly	Mean annual
Tools (Build/Refresh)	Version 2	New High Res Process & Tools

Streams symbolized by mean annual flow



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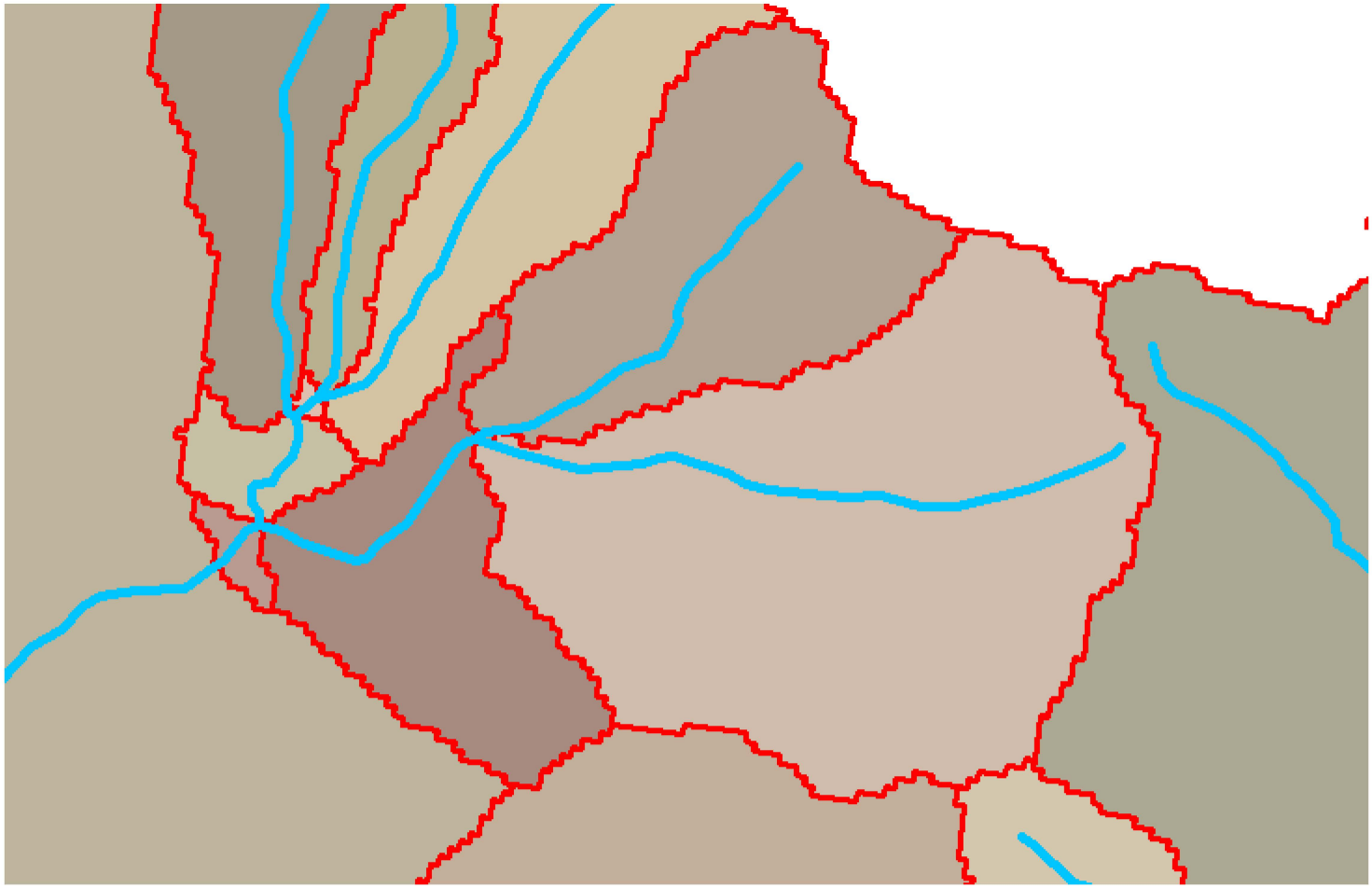
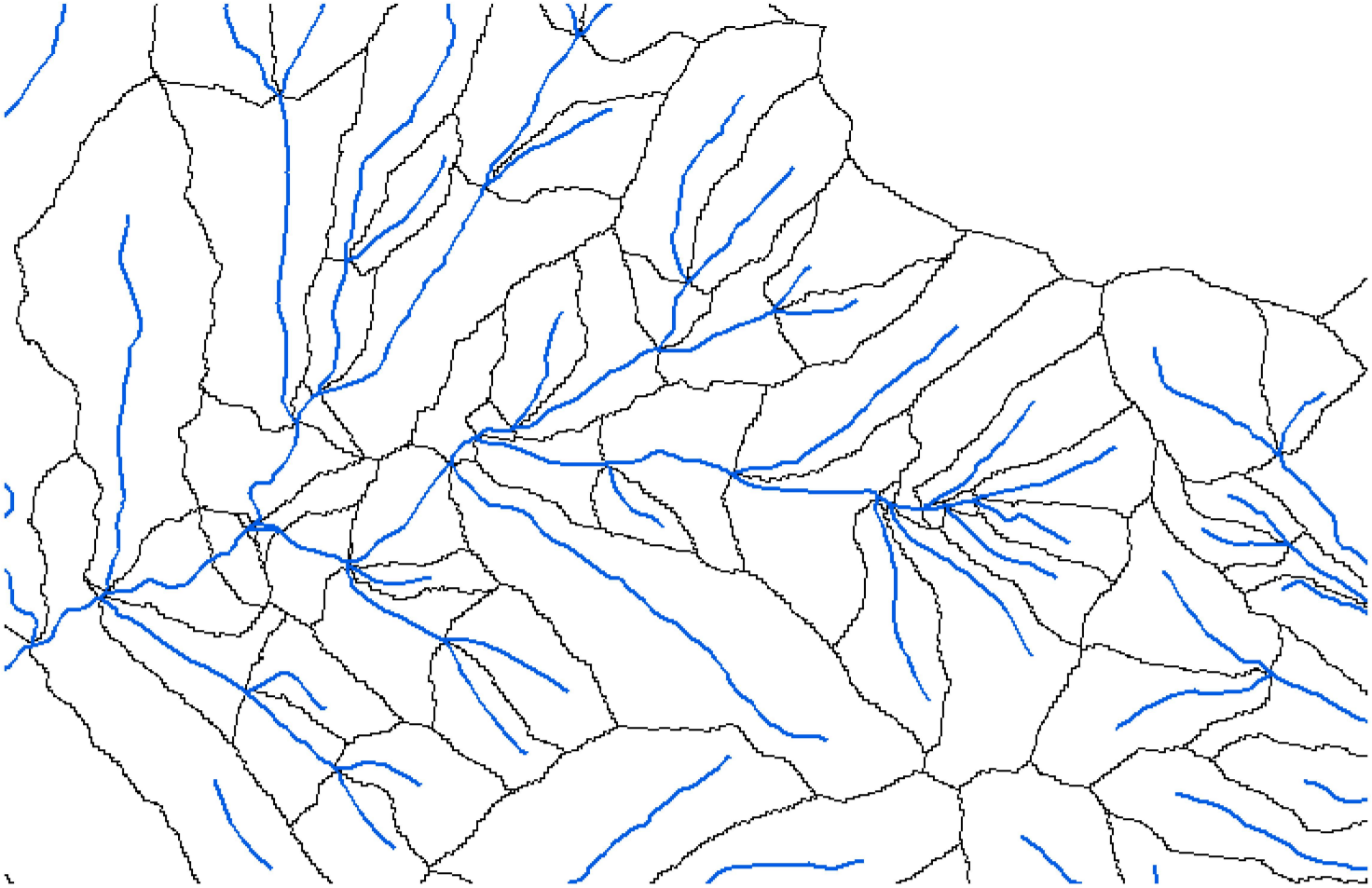
NHDPlus V2.1



NHDPlus High Res



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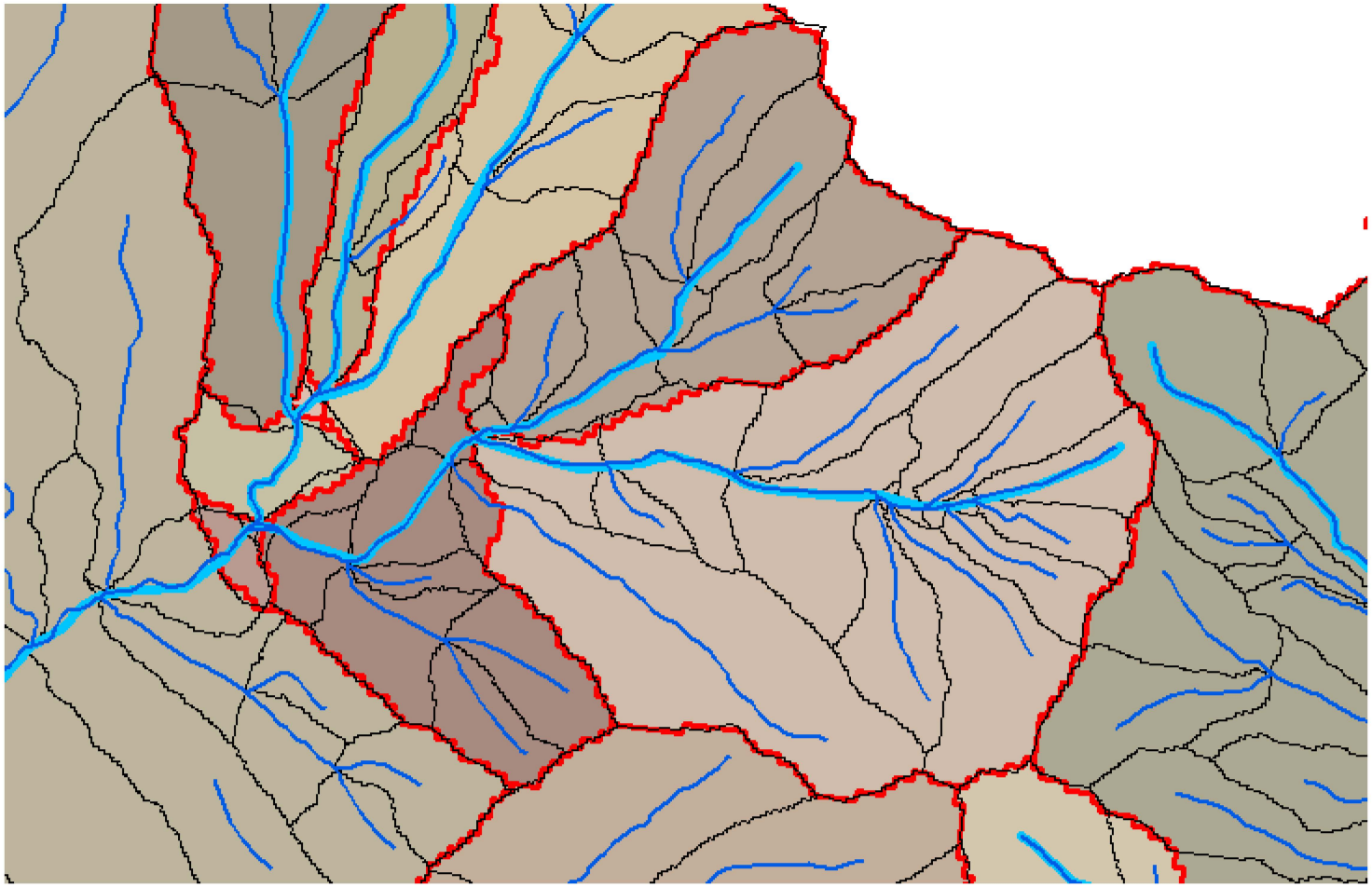
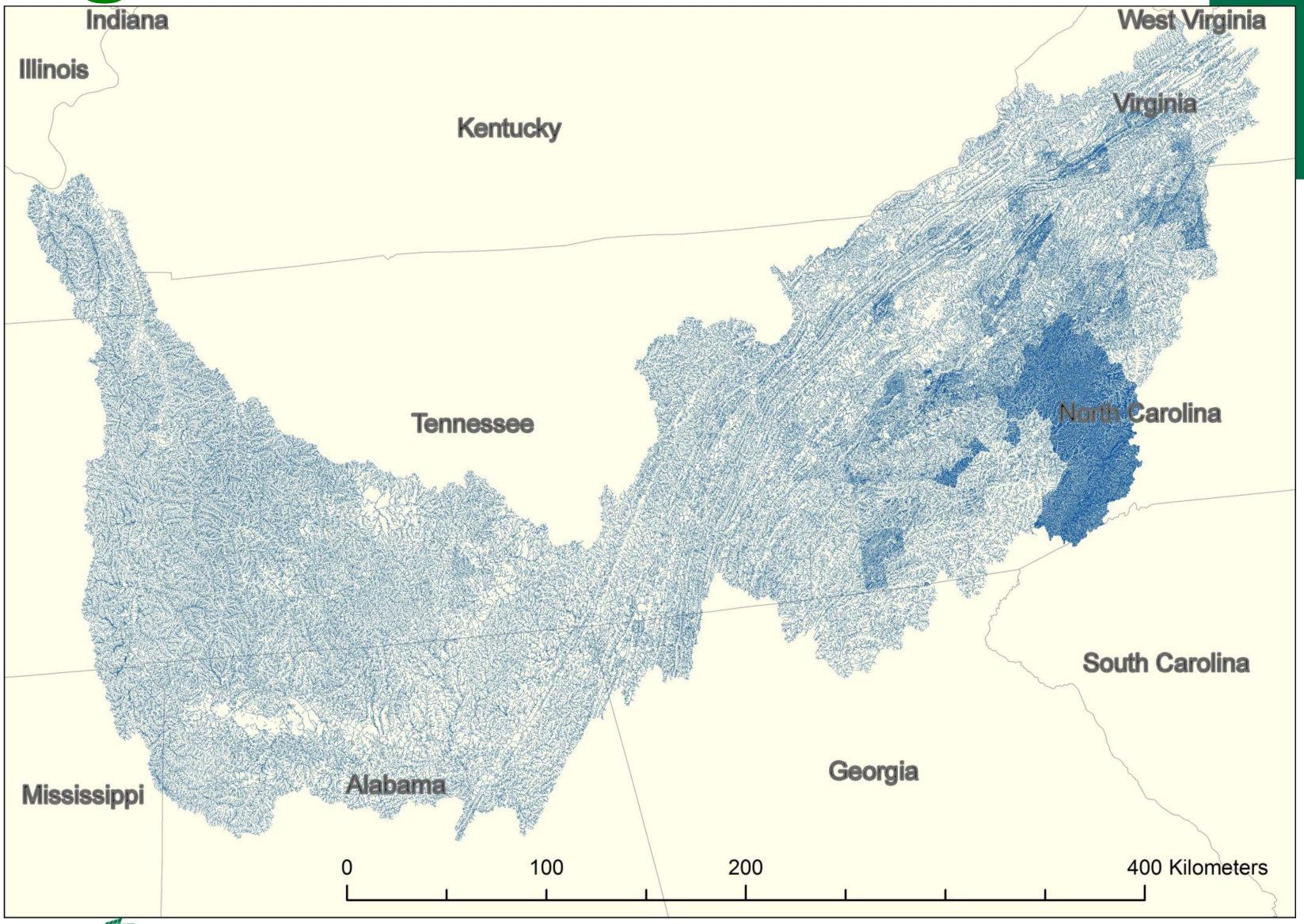
NHDPlus - Combo



How will NHDPlusHR be built?

- Adapting NHDPlus V2 tools
- Emphasize automation
- Iterative process
  - Initial production
  - QC Review—using V2.1 as a check
  - Refresh
- Generalization to multiple scales

Region 06 – ALL Flowlines



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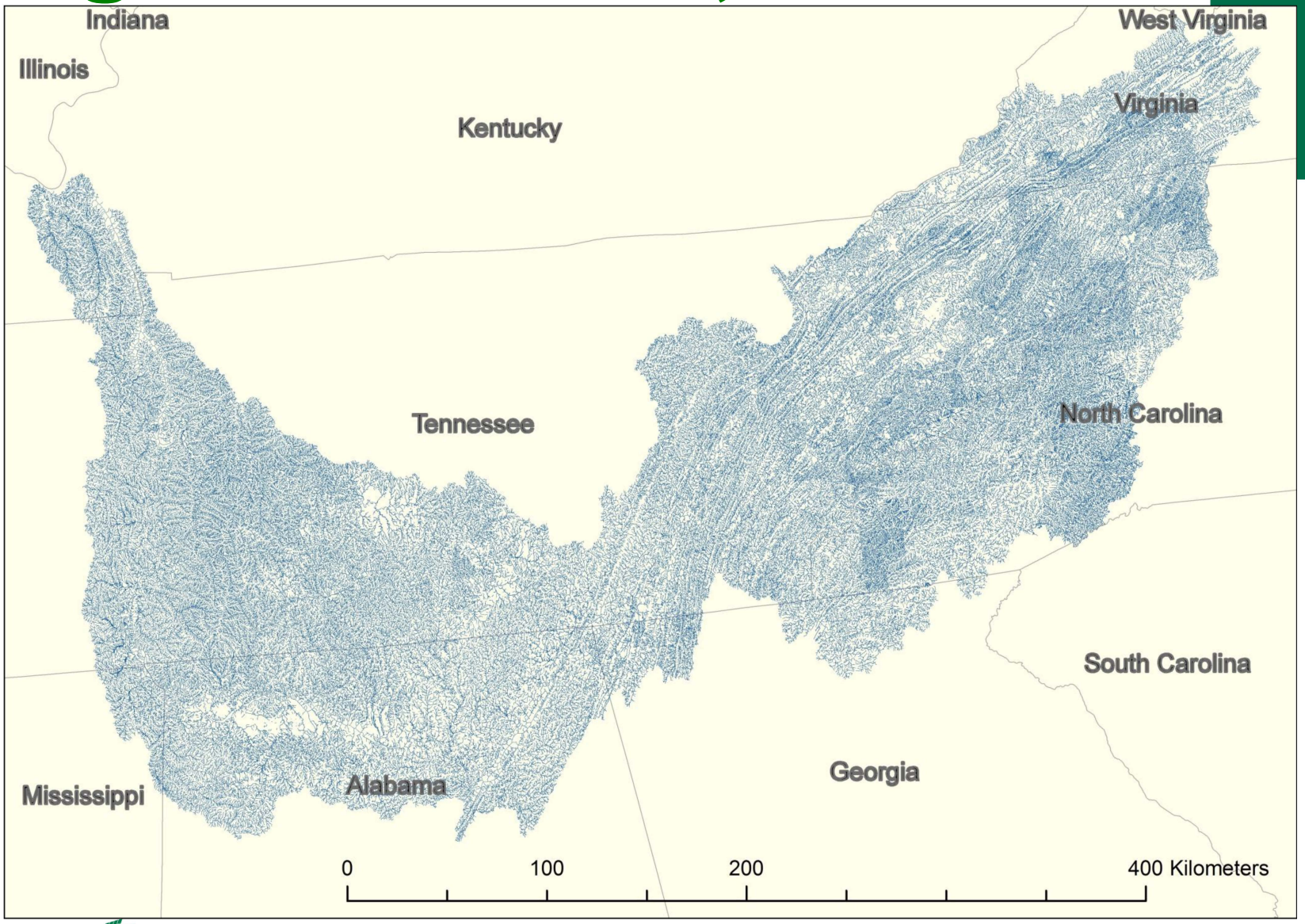
Region 06 – 1:24,000



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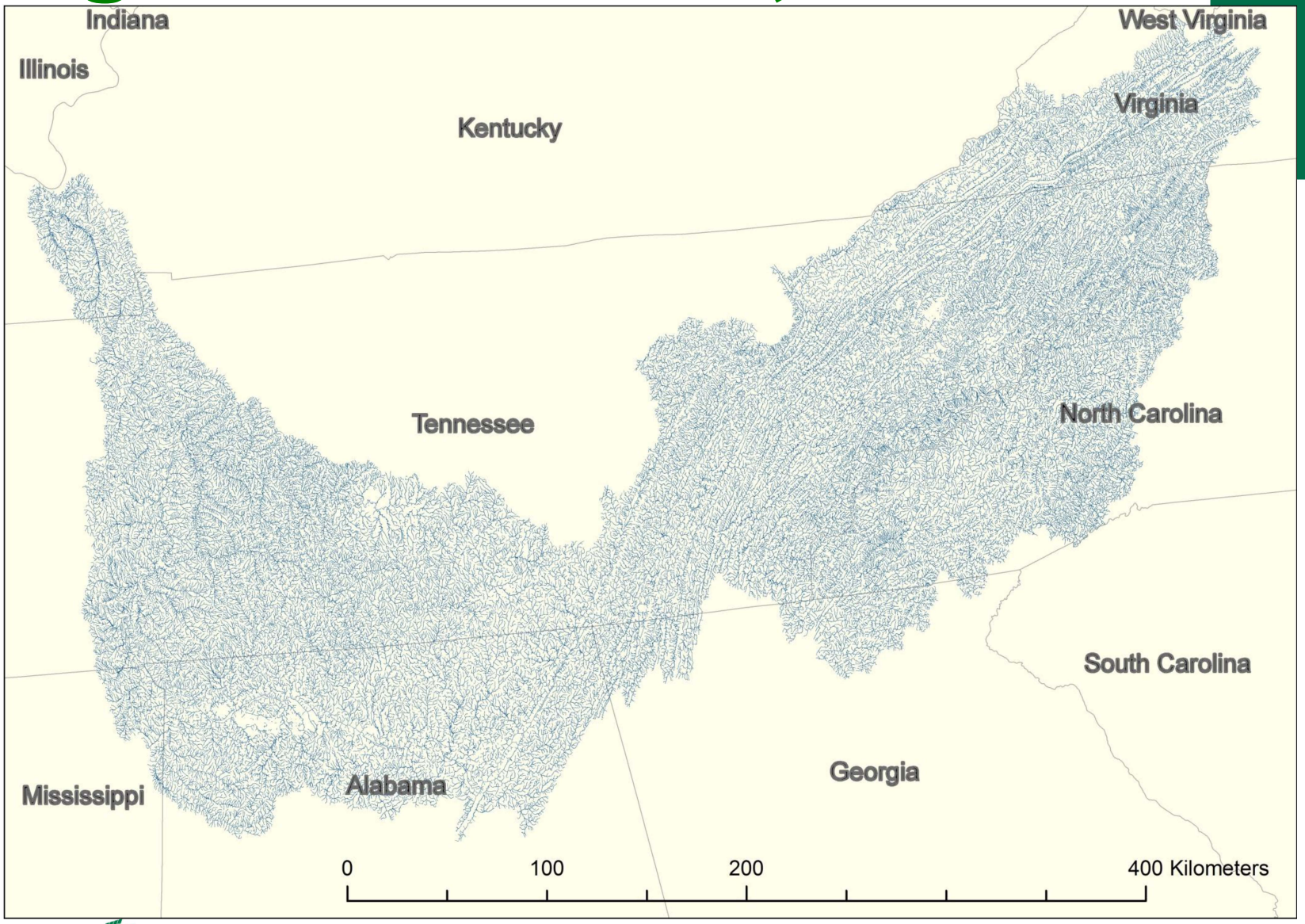
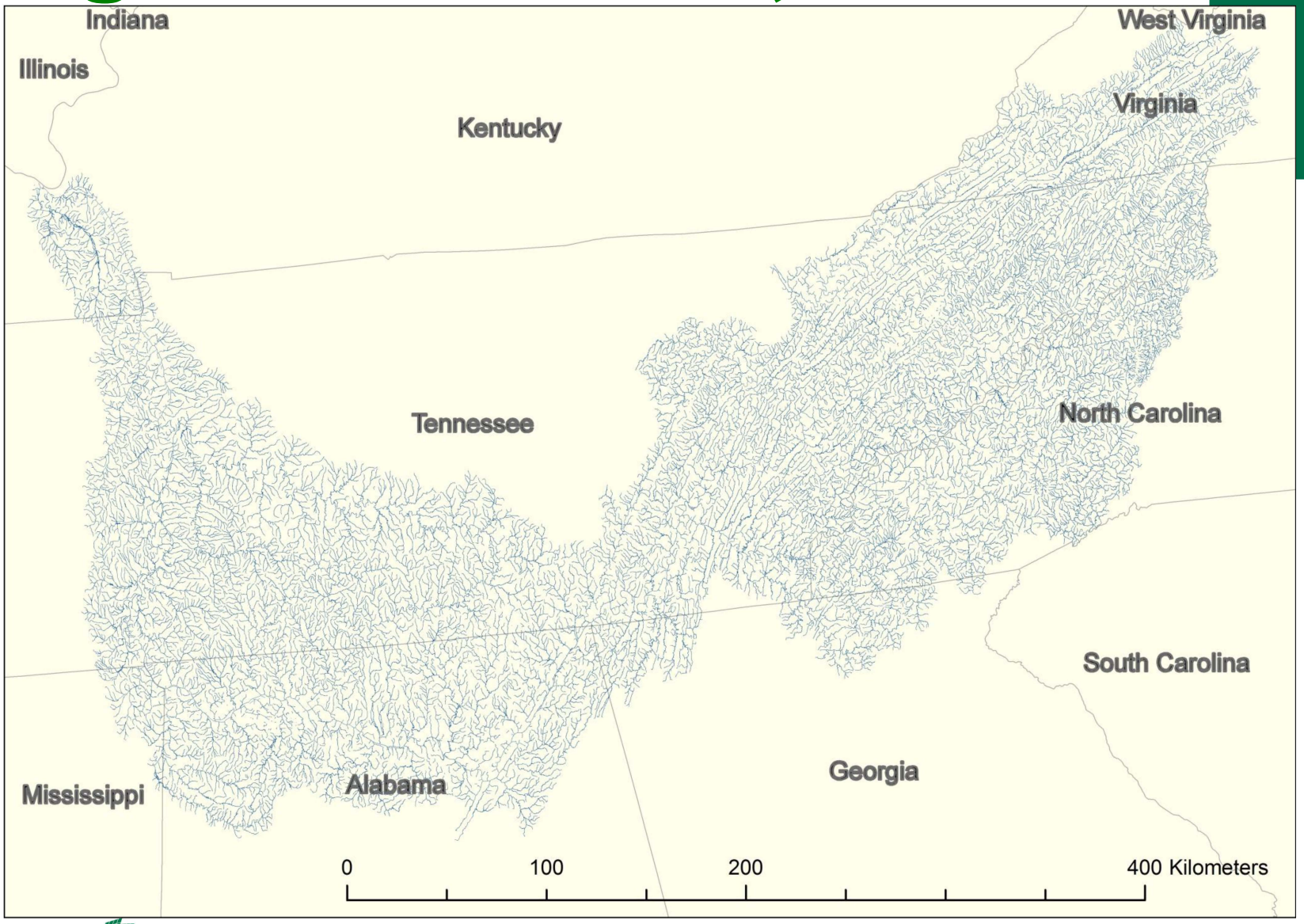
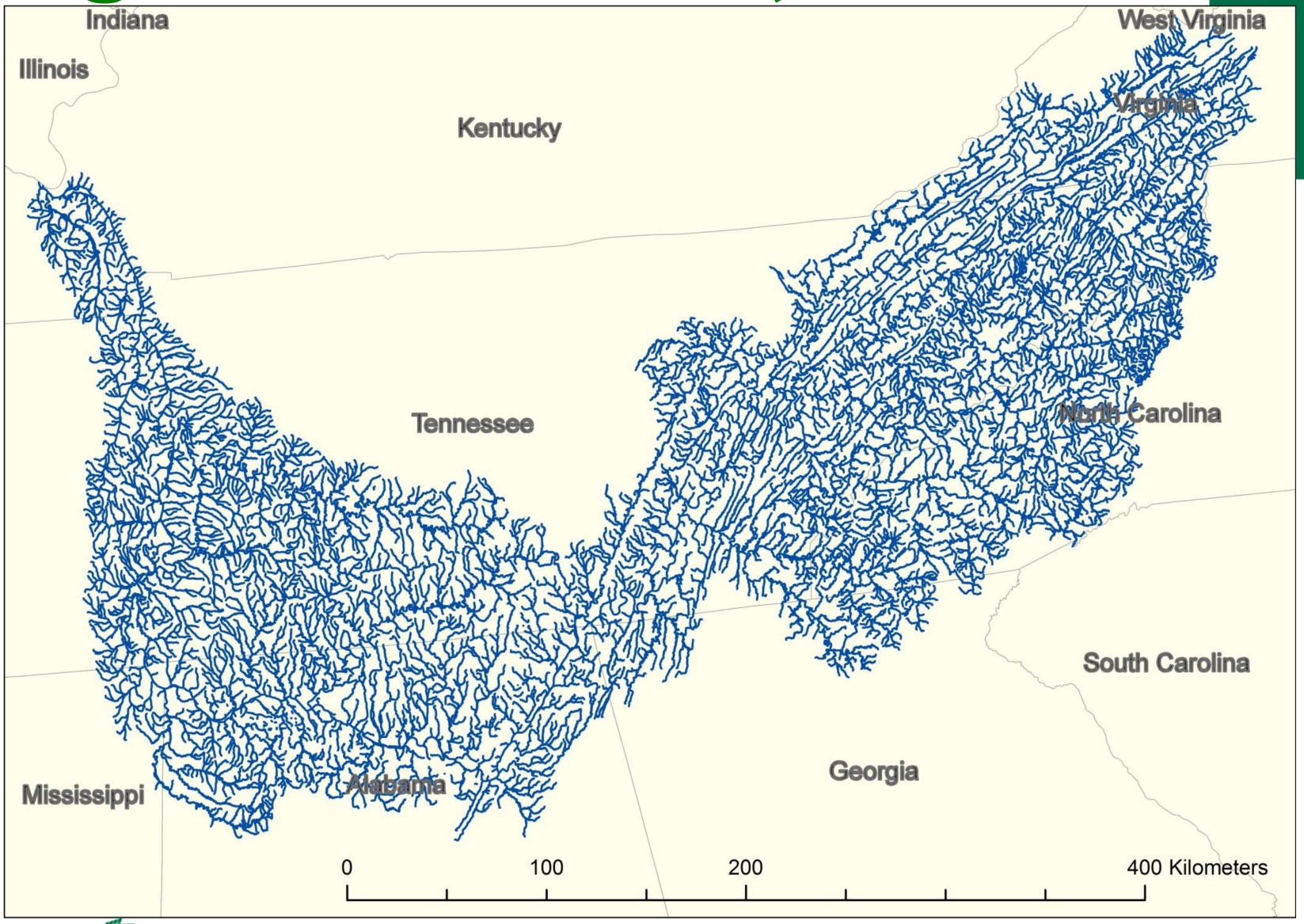
Region 06 – 1:100,000



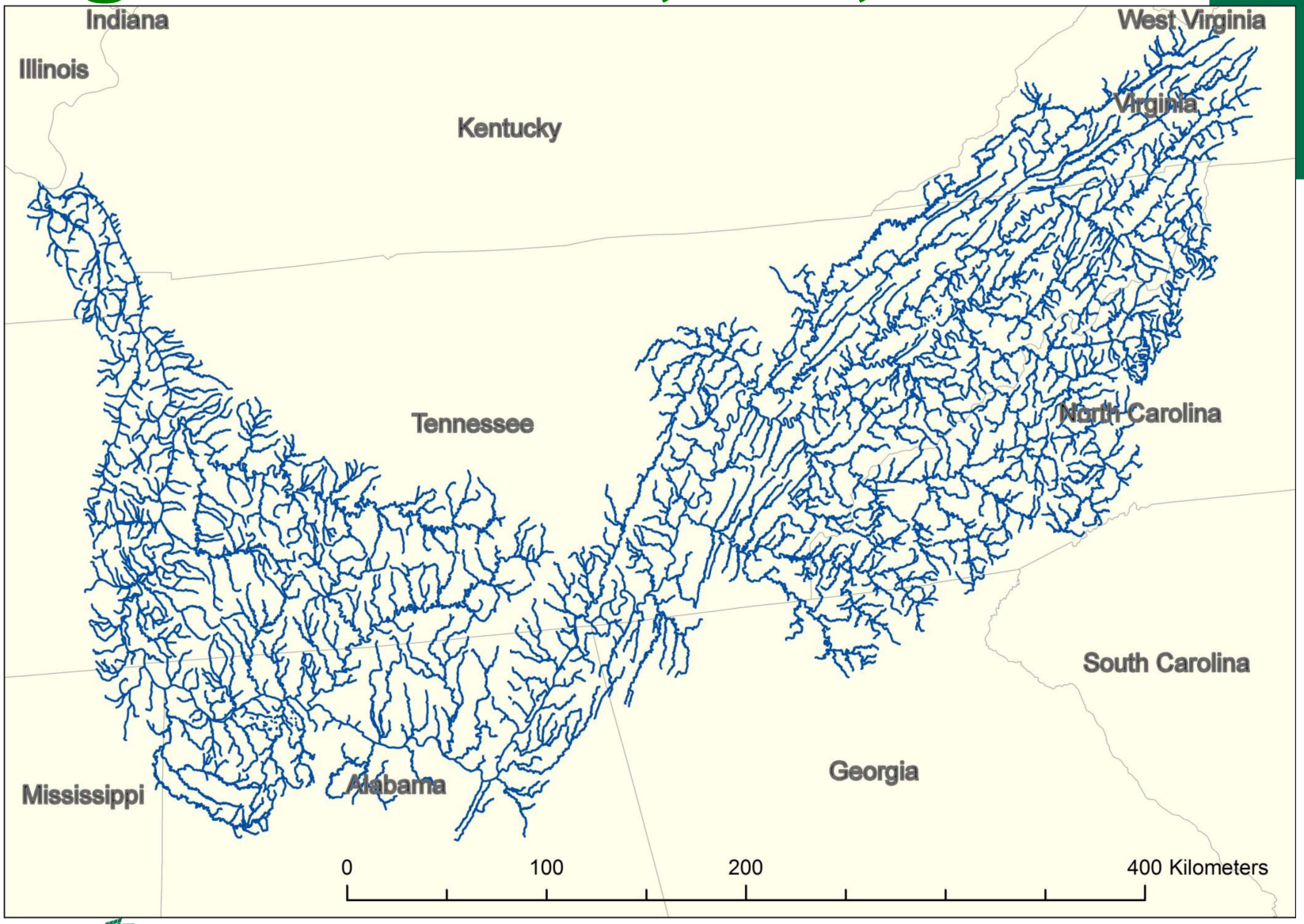
Region 06 – 1:250,000



Region 06 – 1:500,000



+ Region 06 – 1:1,000,000



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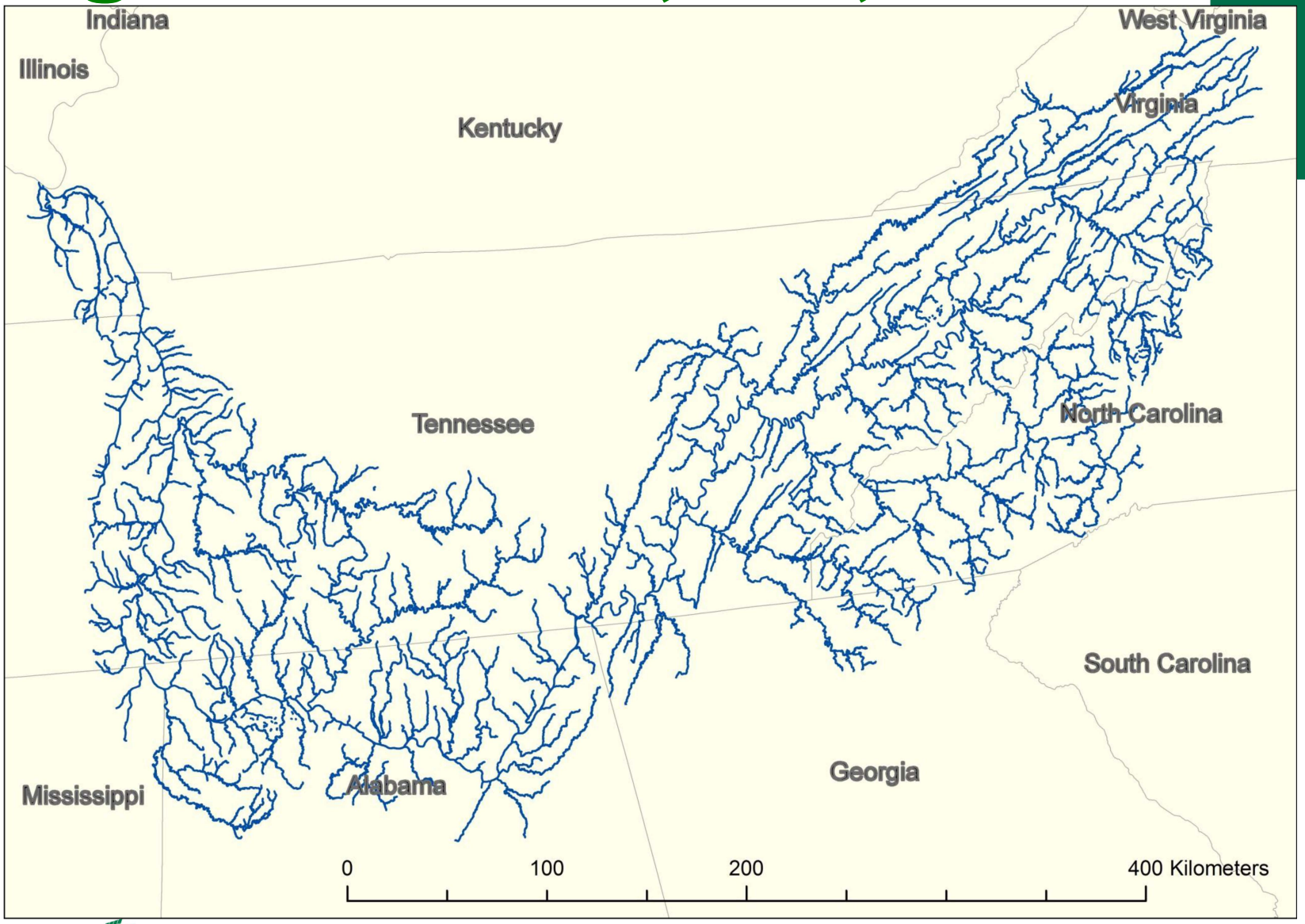
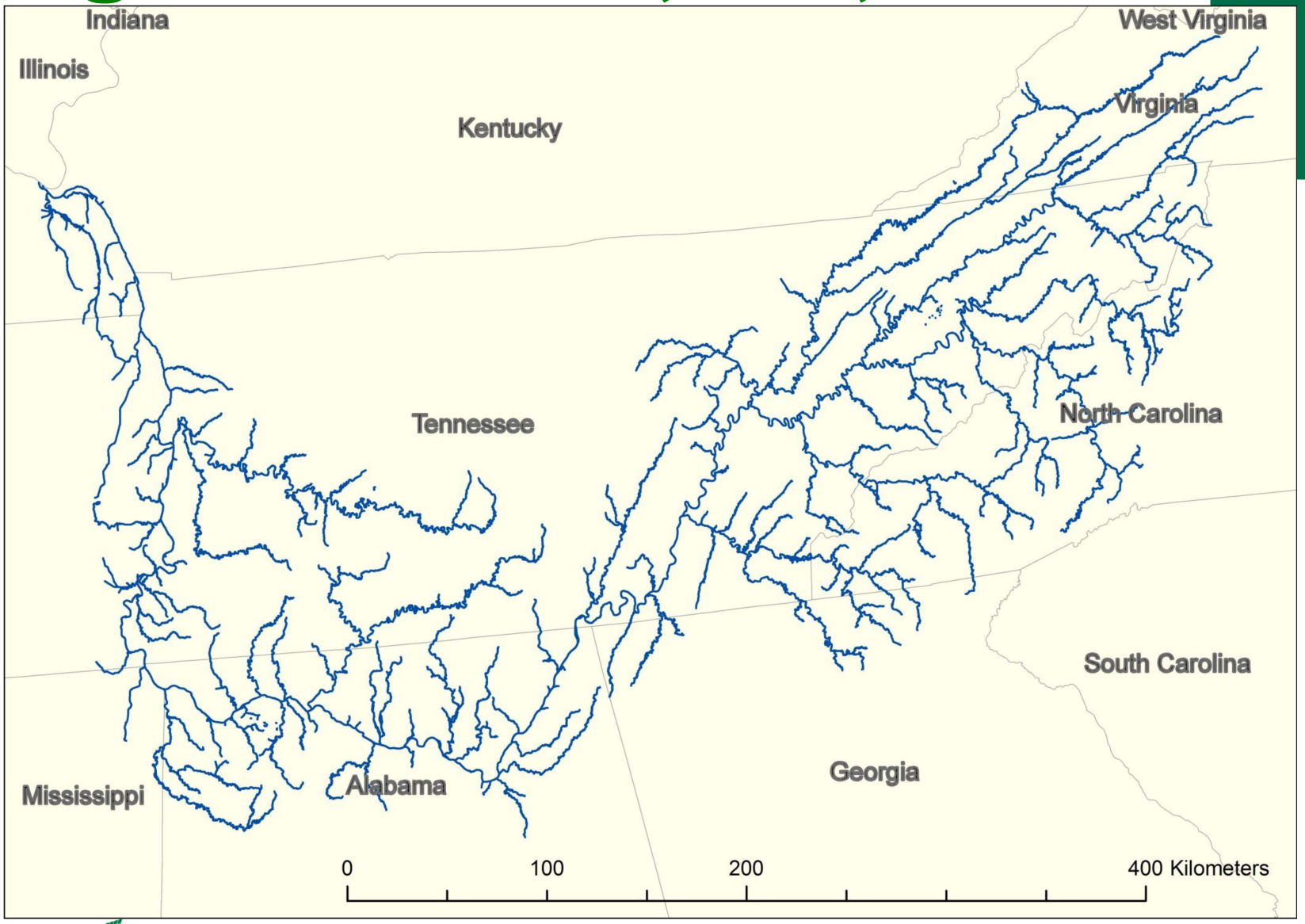
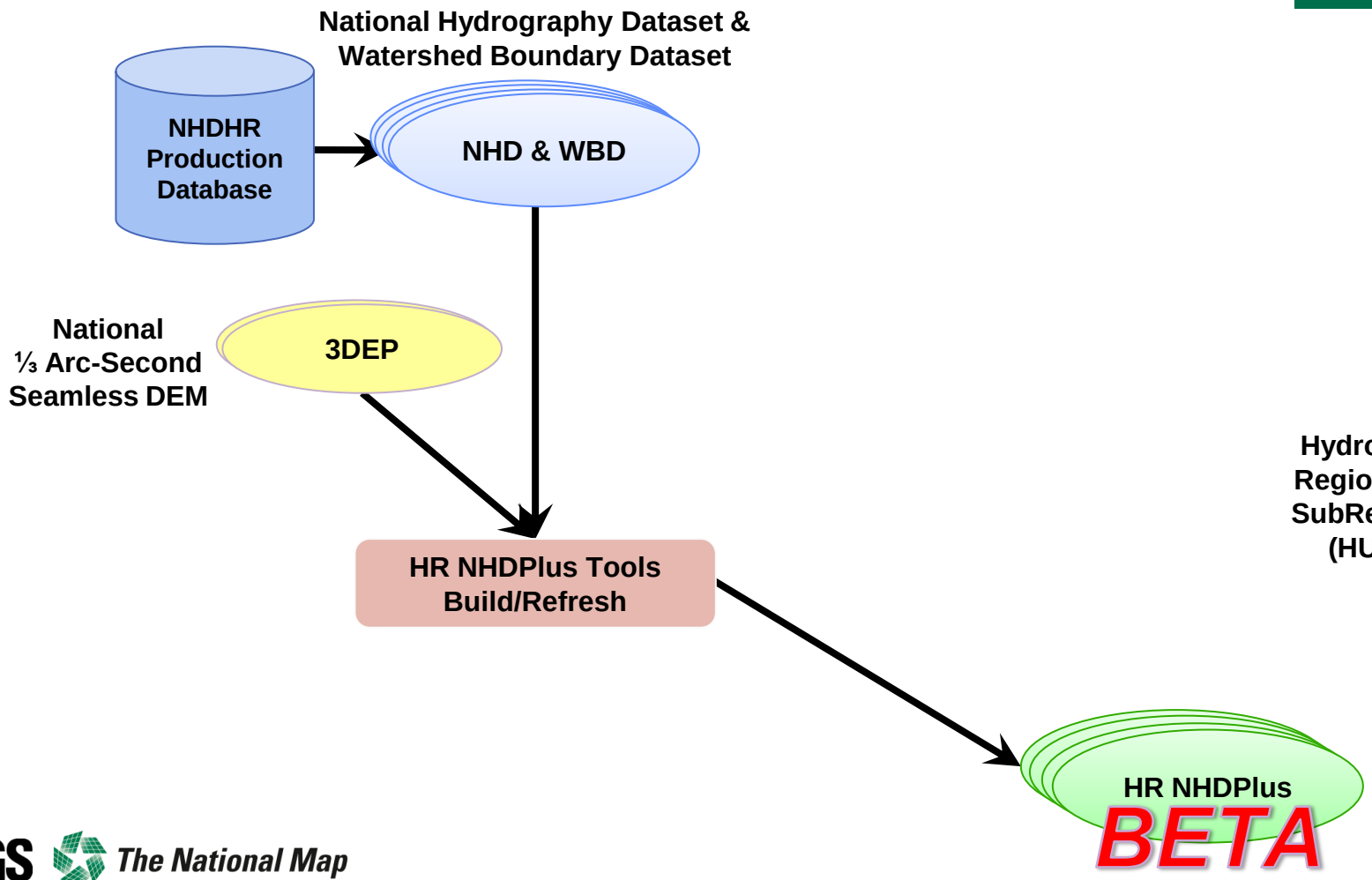
Region 06 – 1:2,000,000



Region 06 – 1:5,000,000

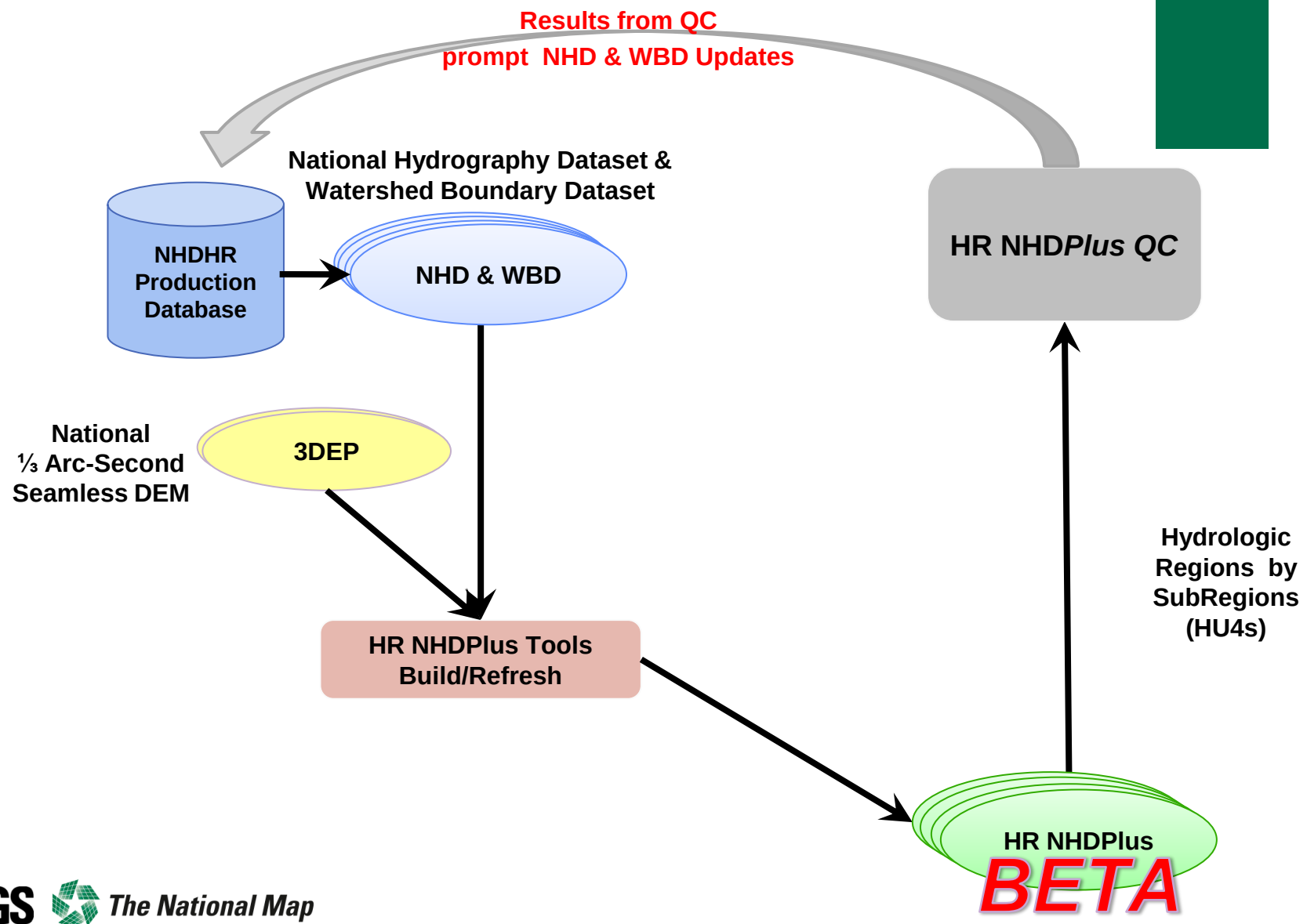


HR NHD*Plus* Workflow - Build Beta



Hydrologic Regions by SubRegions (HU4s)

HR NHD*Plus* Workflow - QC



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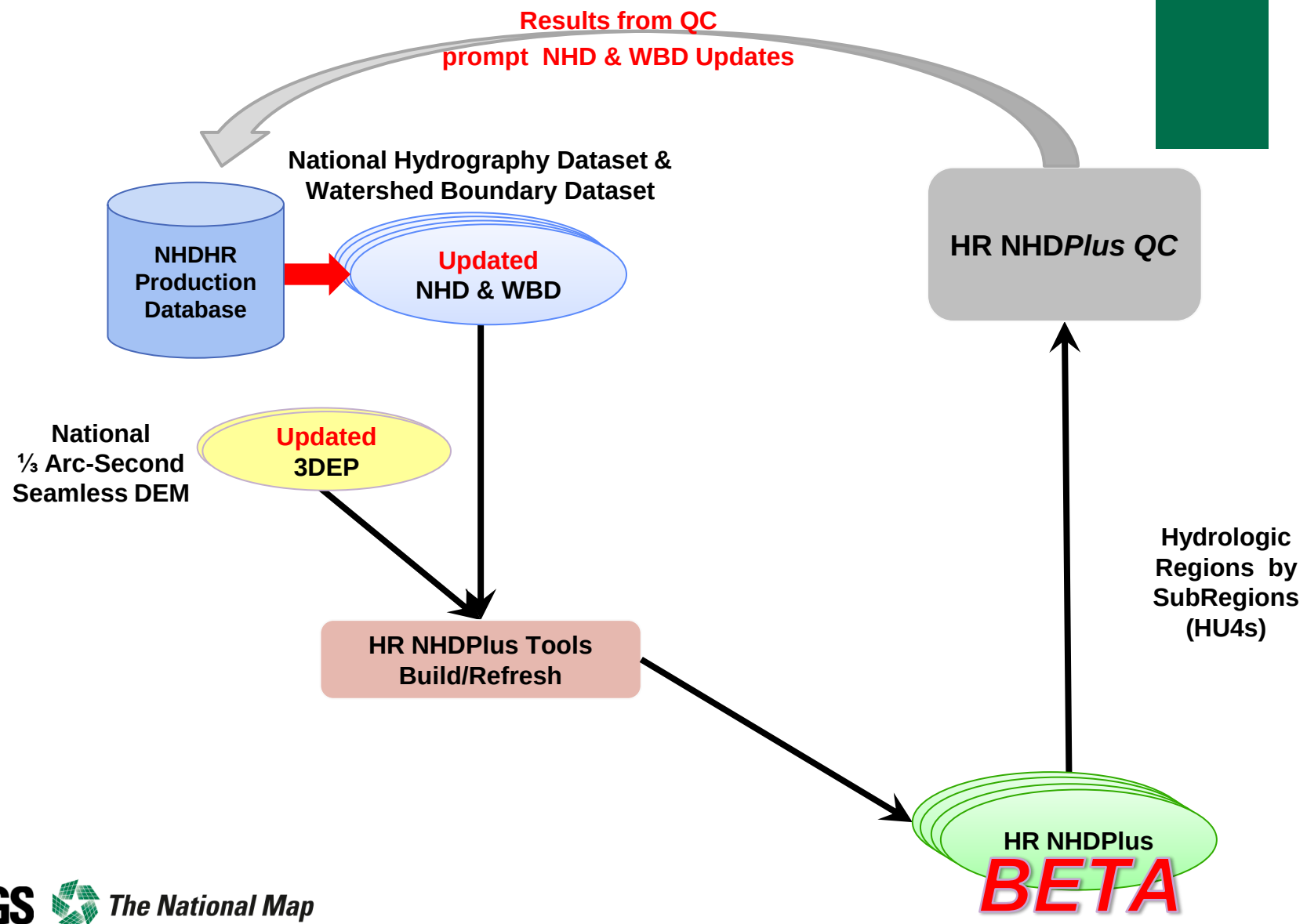
HR NHD*Plus* Workflow - Updates



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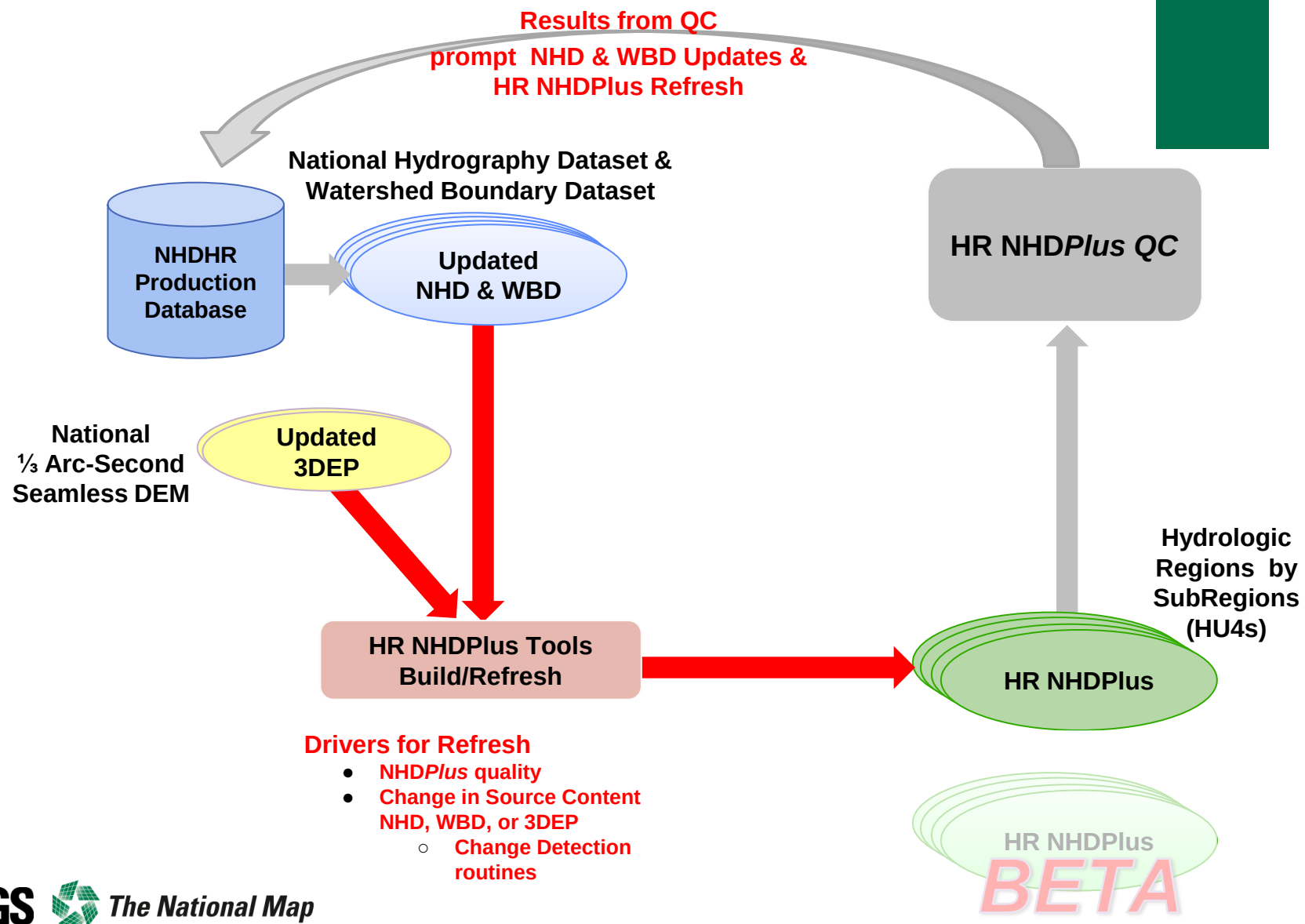
HR NHD*Plus* Workflow - Refresh



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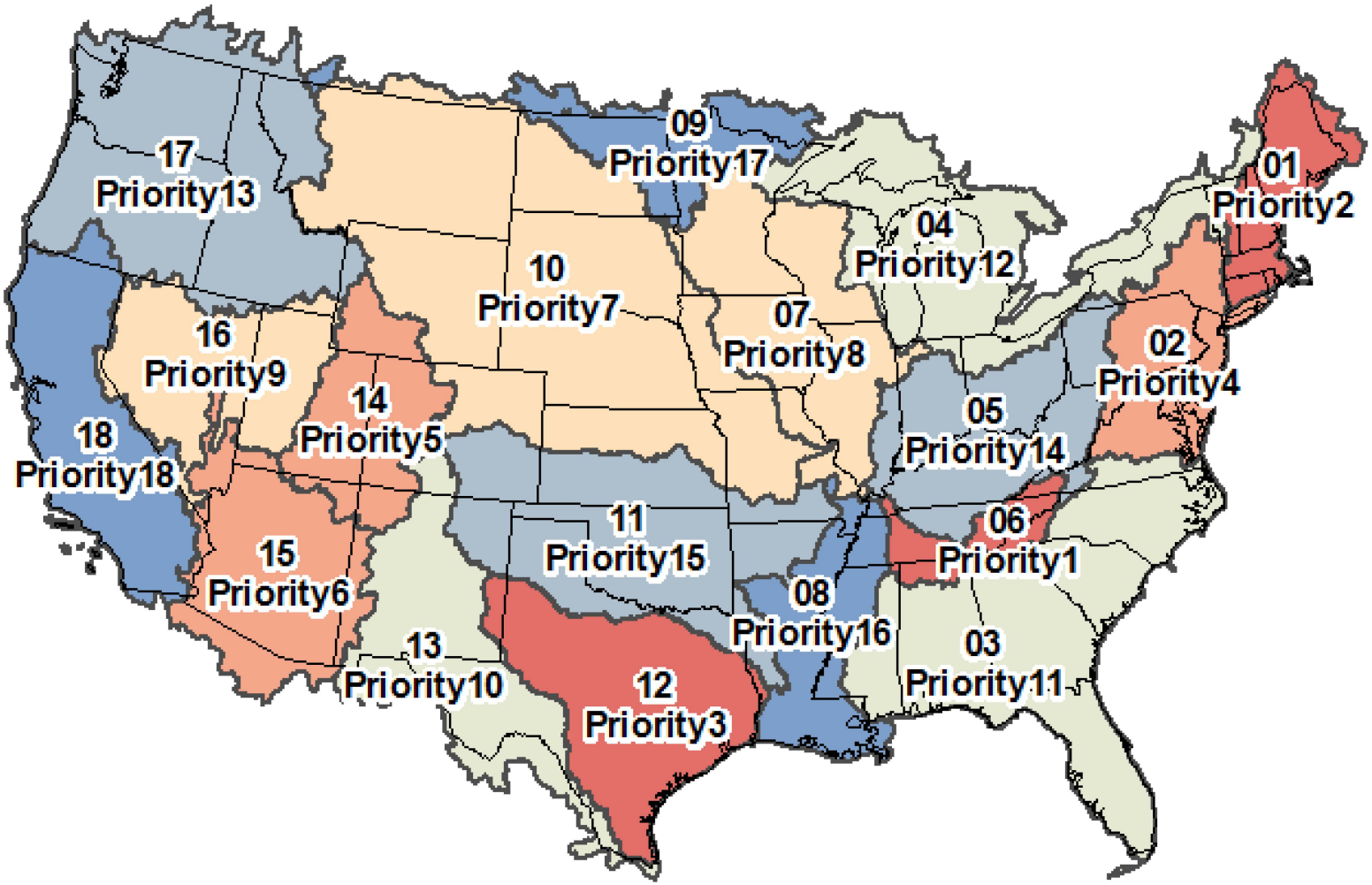
NHDPlus Initial QC Review Review Team:

- National oversight team
  - NHDPlus development team
  - Hydrology experts
  - Biology expert
- Local hydrology experts (by region/state)
  - Stewards
  - StreamStats project staff
  - Water Science Centers staff
- NHD and WBD editors
- Vector Web Edit Development Team
  - Participate in / observe review process
  - Determine markup/edit tool requirements
  - Iterate toward optimal QC tools and workflow

NHDPlusHR Priorities



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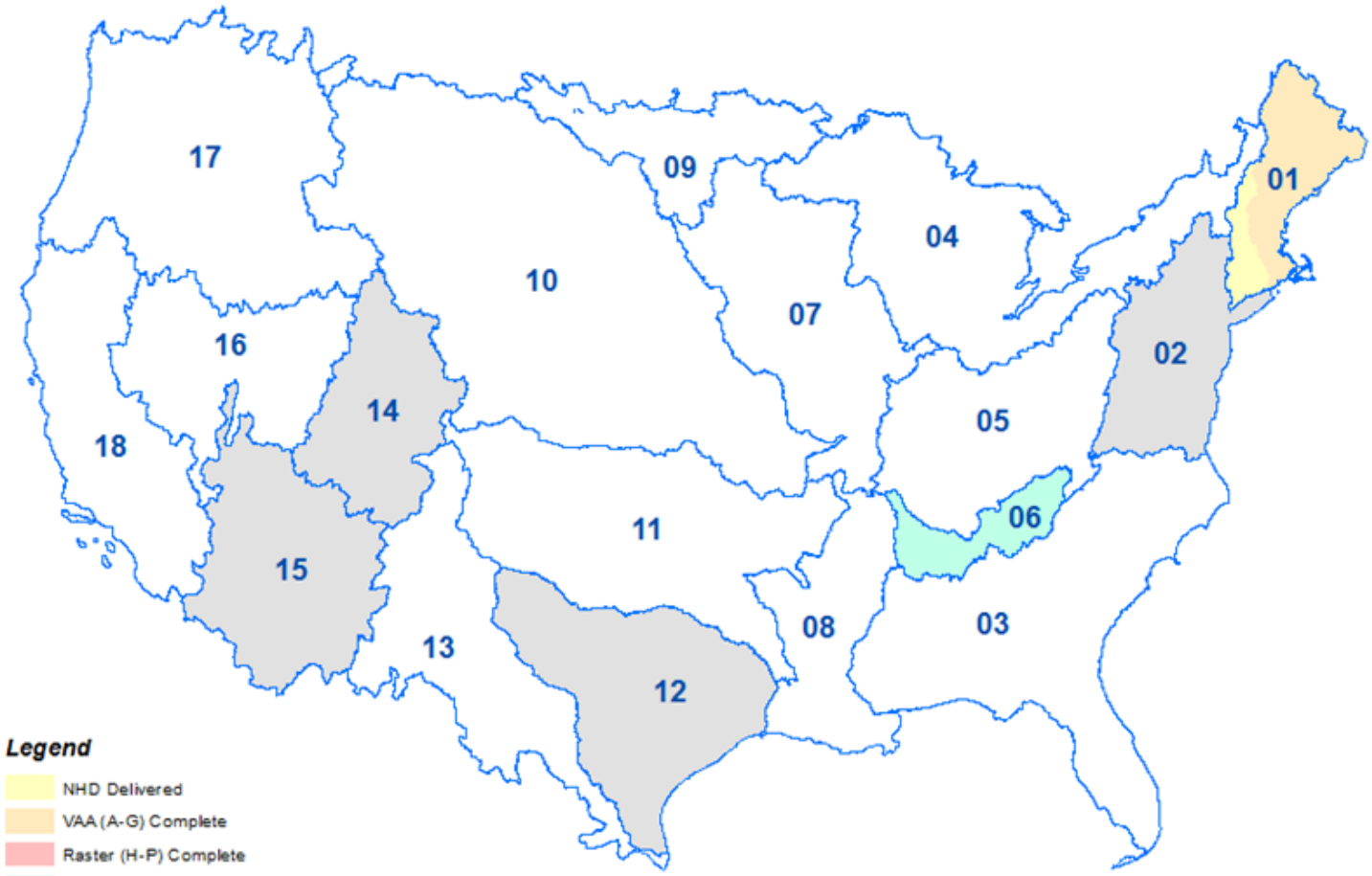
FY16 Goal: (1/3 of CONUS)

- Complete NHDPlus for 6 of 18 Hydrologic Regions and begin refresh
- Graphic - 2 Regions in work & 4 remaining regions shown in grey

NHDPlus - Status 2/17/16



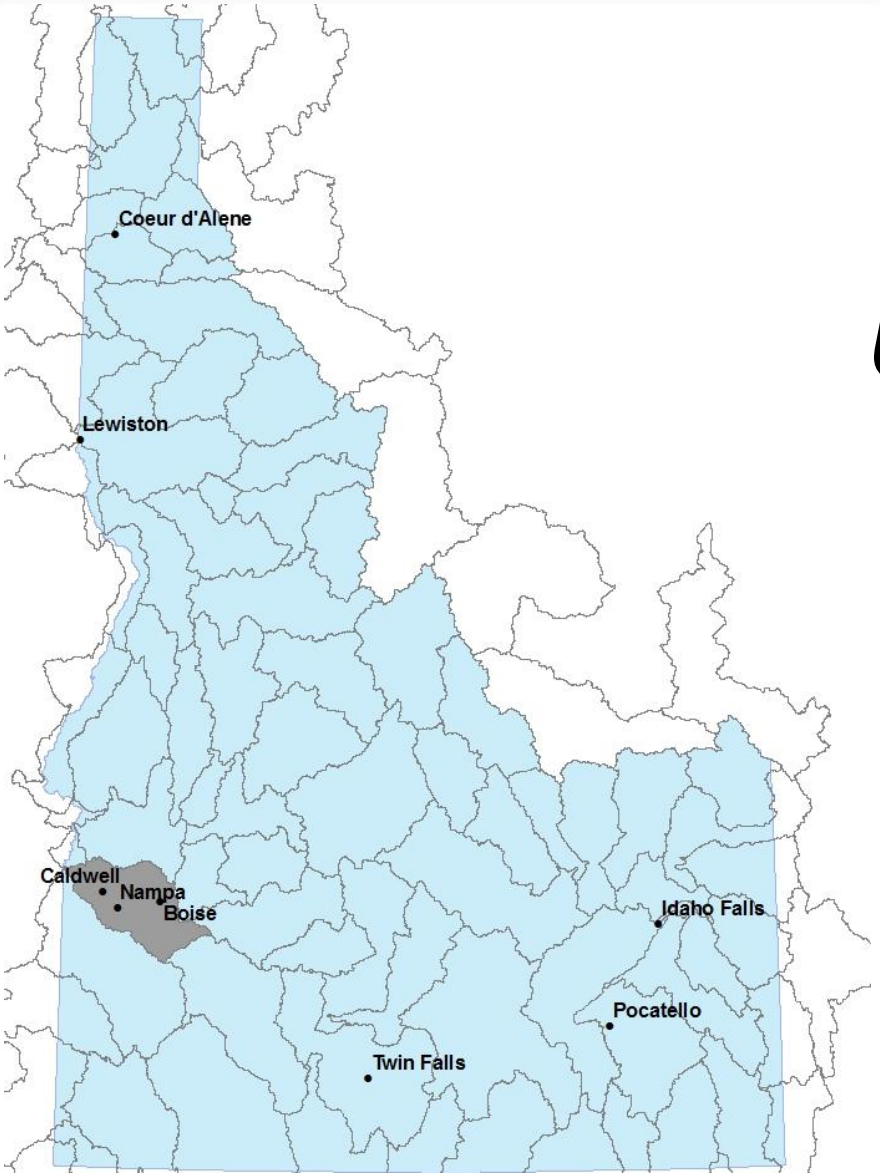
K. Adkins

NHD+HR

Questions….

Alan Rea, P.E., Hydrologist
National Hydrography Dataset
U.S. Geological Survey
230 Collins Road, Boise ID 83702
(208)387-1323 ahrea@usgs.gov

Ellen Finelli, Cartographer
Senior Hydrography Project Lead
National Geospatial Technical Operations Center
U.S. Geological Survey
303-202-4288 elfinelli@usgs.gov



Treasure Valley NHD Photorevision Update -- 17050114

IDWR/USGS Contracts

2012-2013

- Accurate hydrography important for:
  - Planning and design of water projects
  - Modeling of water use
  - Determining upstream and downstream effects
  - Documenting water issues

Updates to the Treasure Valley – Why?

Area of Major Changes

- *Nearly 35% of the State's population*
- *Digital hydrography does not match existing system*

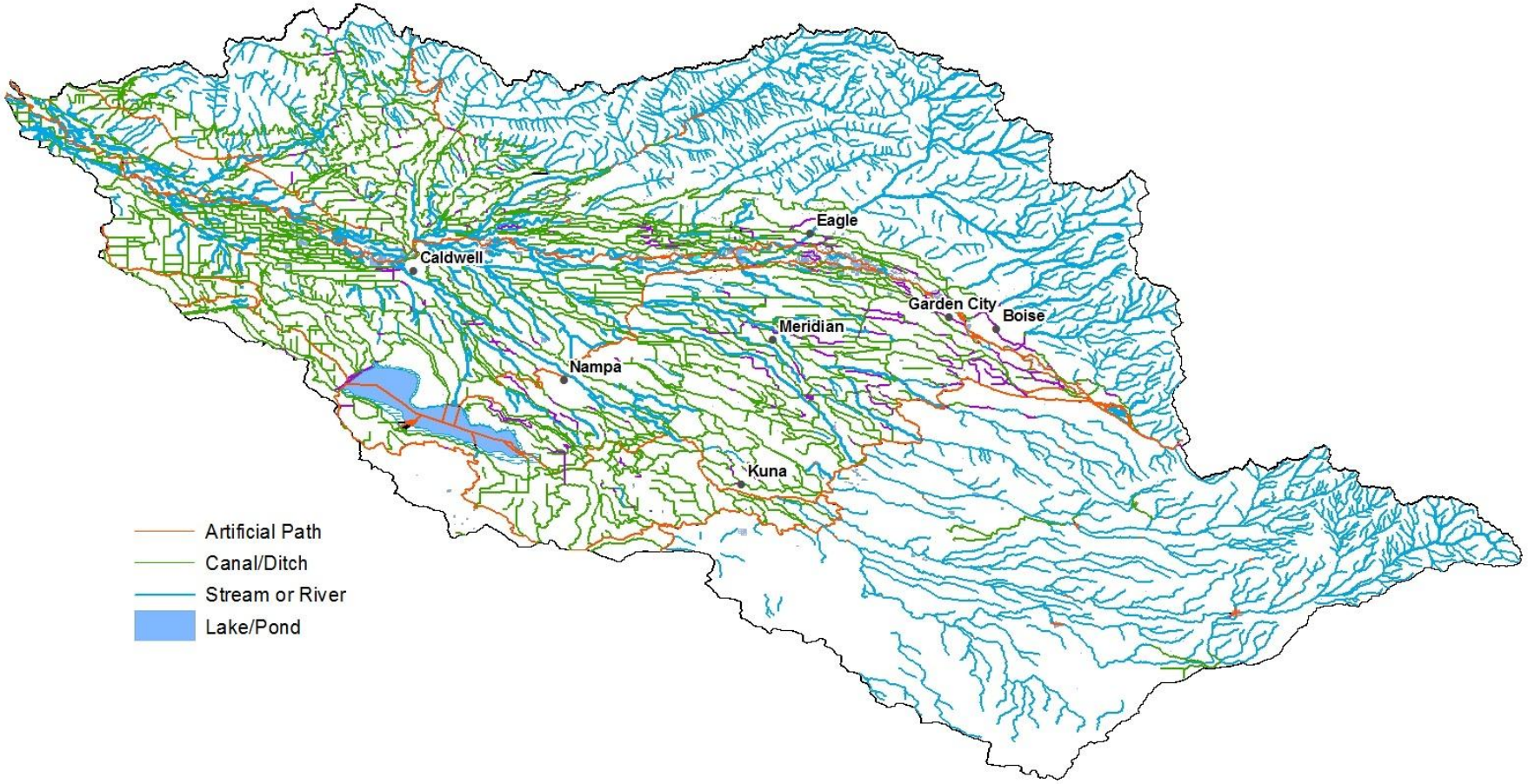
Complicated System

- *49 irrigation entities*
- *13 incorporated areas*
- *Over 1500 miles of canals/ditches*

Multiple Uses and Needs

- *Recreation*
- *Irrigation*
- *Aesthetic*
- *Flooding*
- *Water quality*
- *Analysis*

Treasure Valley NHD Updates



Updates to the NHD in the Treasure Valley

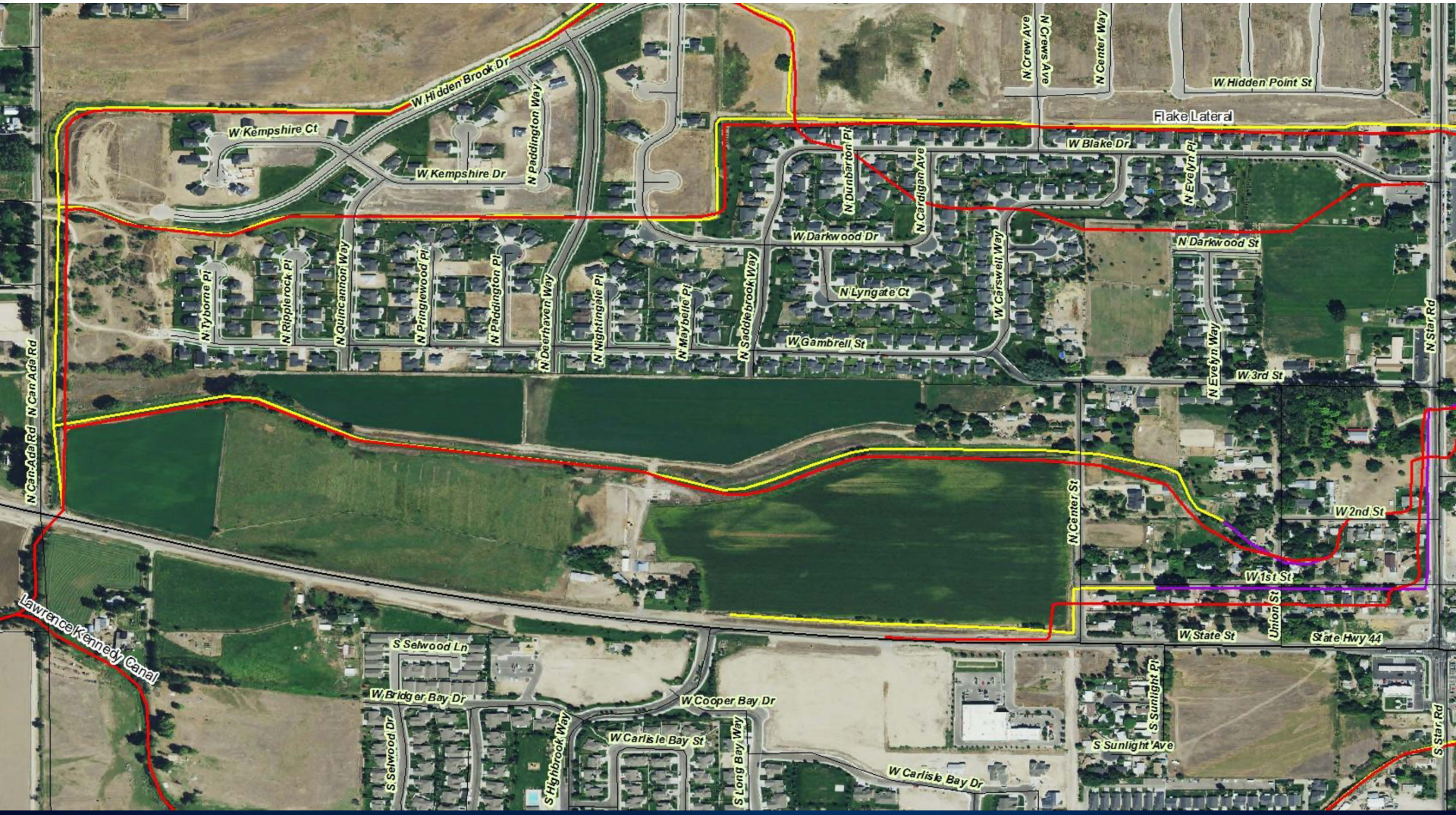
Update Feature Classes:

- ***NHD Flowline***
- ***NHD Area***
- ***NHD Waterbody***

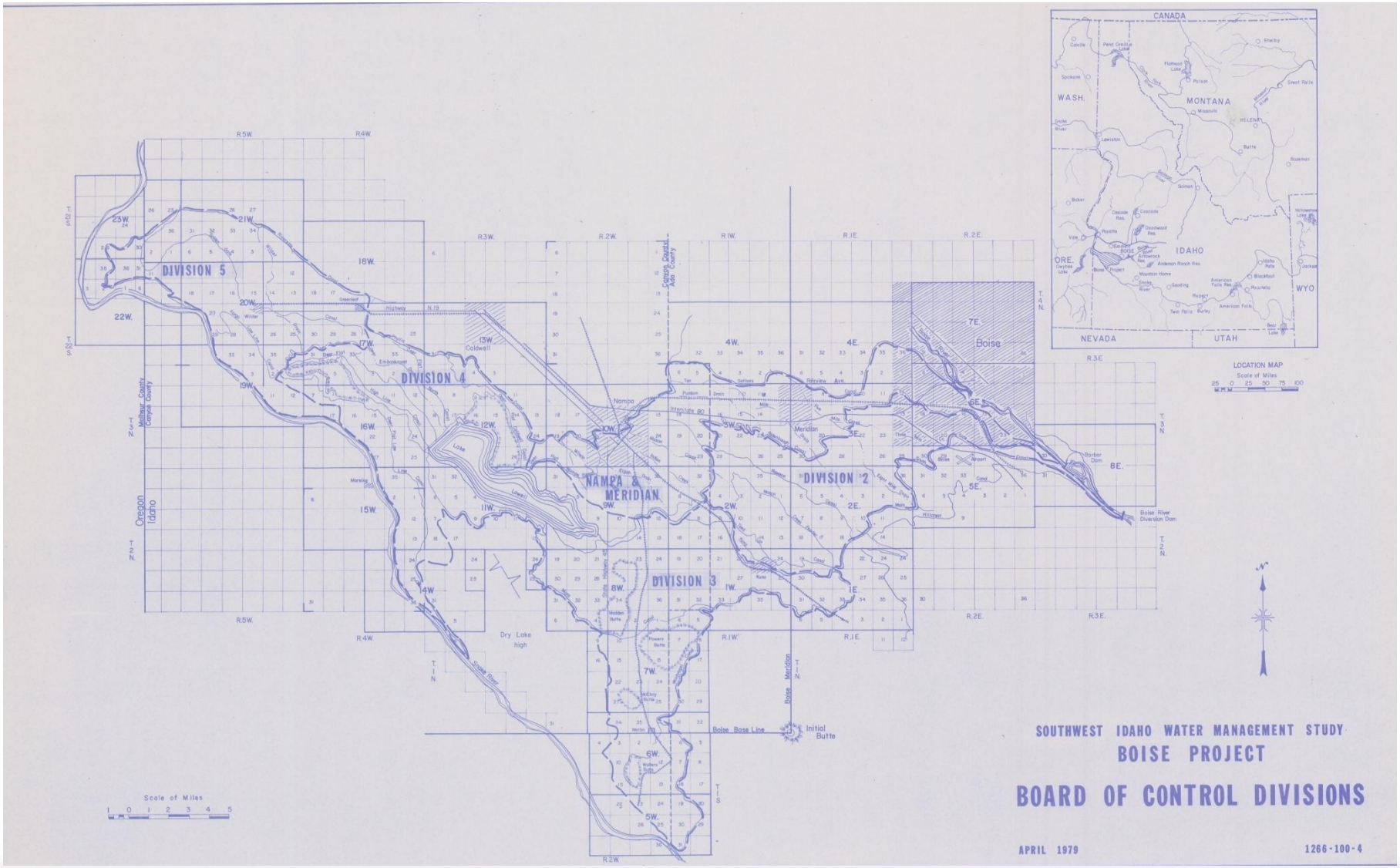
All updates were digitized at the scale of 1:5,000.

NAIP 2013 imagery

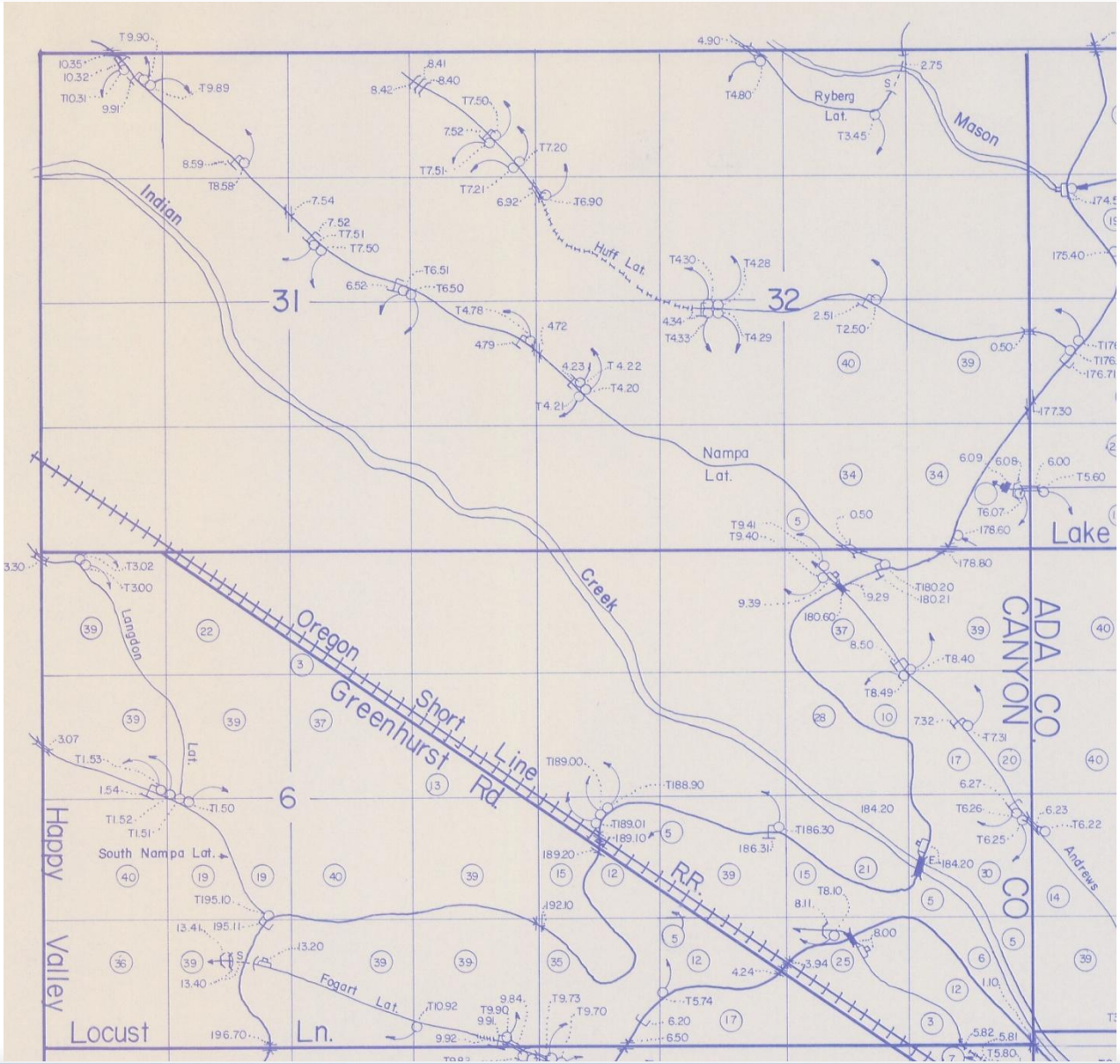
NAIP 2013 imagery



Scanned 1979 Southwest Idaho Water Management Study, Boise Project.



Updates to the Treasure Valley



Updates to the Treasure Valley

Flowline Feature Class Updates

- *782 Deleted*
- *1,111 Inserted*
- *4,150 Edited*
- ***8512 Flowline Features***

Area Feature Class Updates

- *7 Deleted*
- *52 Inserted*
- *45 Edited*
- ***108 Area Features***

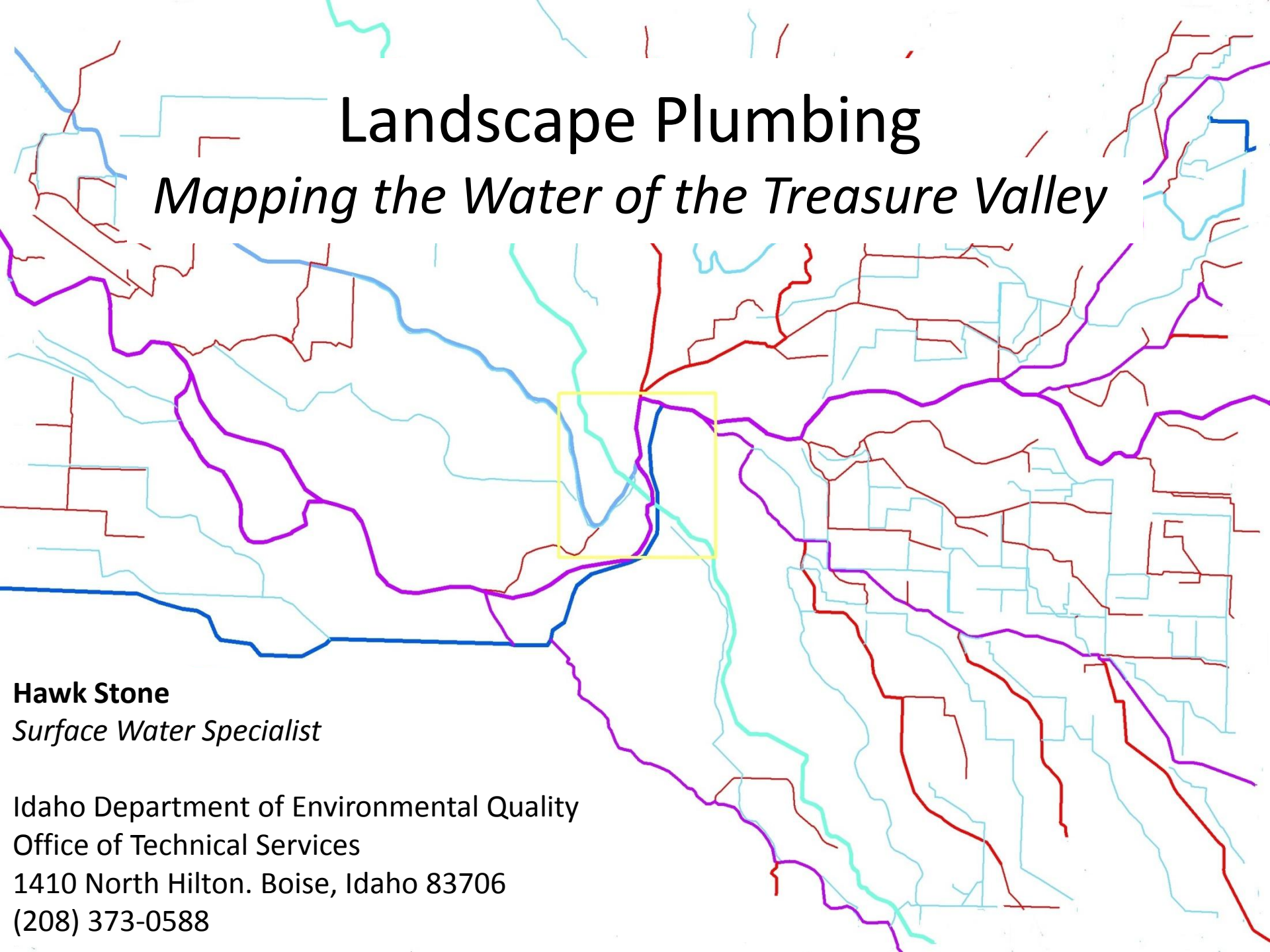
Waterbody Feature Class Updates

- *237 Deleted*
- *418 Inserted*
- *170 Edited*
- ***1275 Waterbody Features***

Questions?

Landscape Plumbing

Mapping the Water of the Treasure Valley



Hawk Stone
Surface Water Specialist

Idaho Department of Environmental Quality
Office of Technical Services
1410 North Hilton. Boise, Idaho 83706
(208) 373-0588

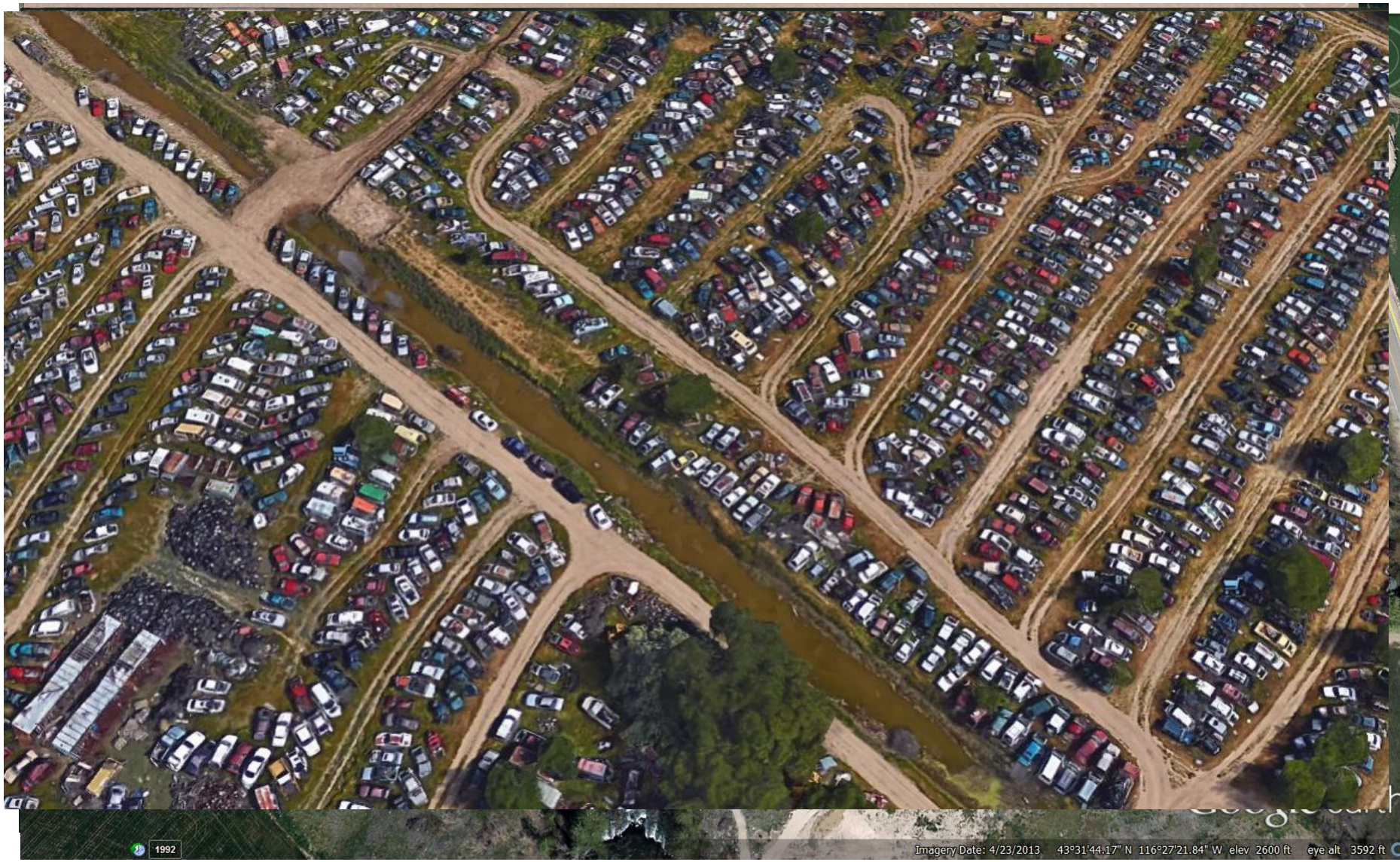
Why Map the Valley?

- Need to understand where pollution is coming from
- Need to know when water is being reused
- Identify obvious sediment sources
- Basic fascination with plumbing and maps

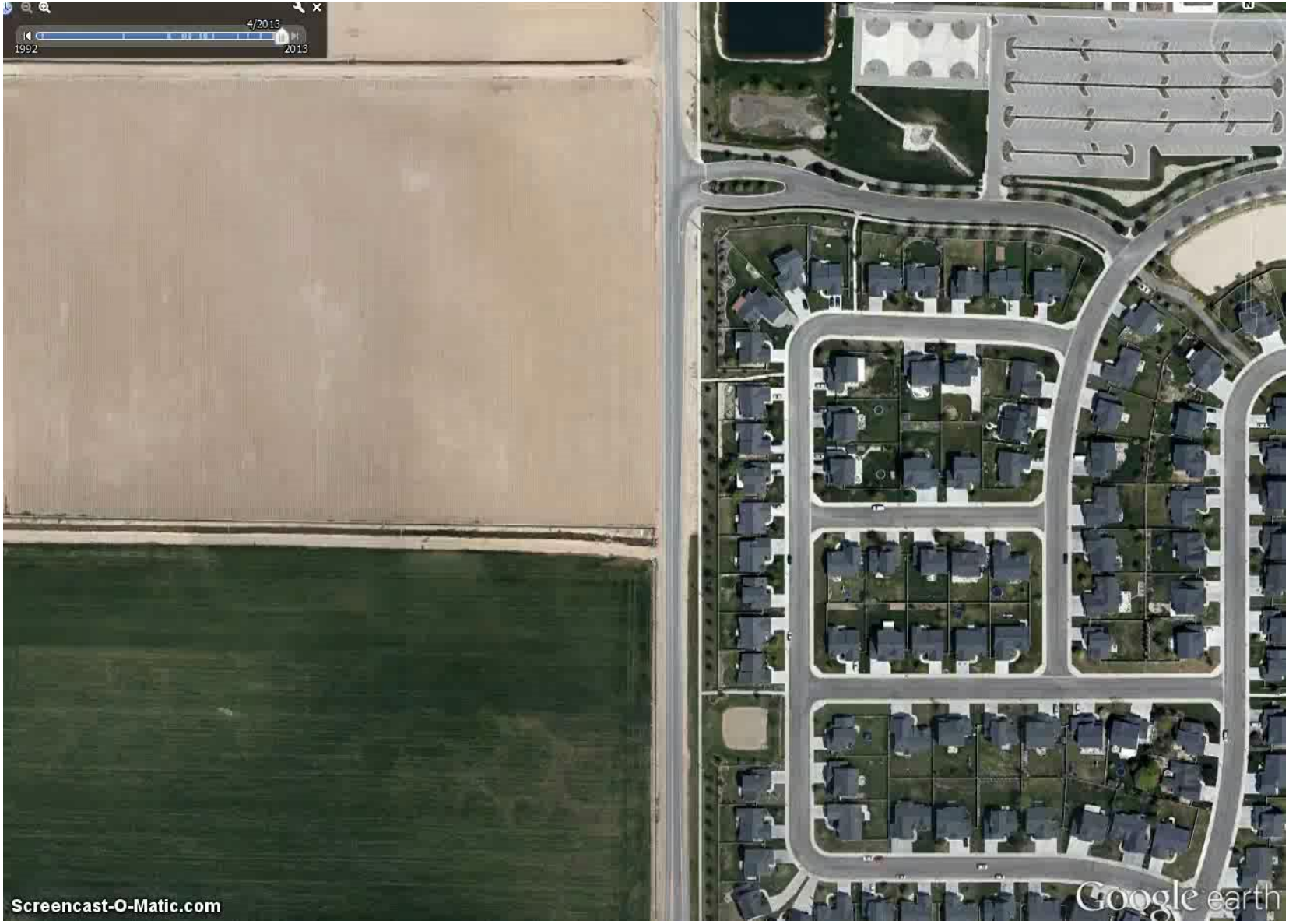
Data Sources

- Google Earth
- Canal Companies
- City of Boise
- Ada County Highway District
- Existing GIS coverages
- Field visits

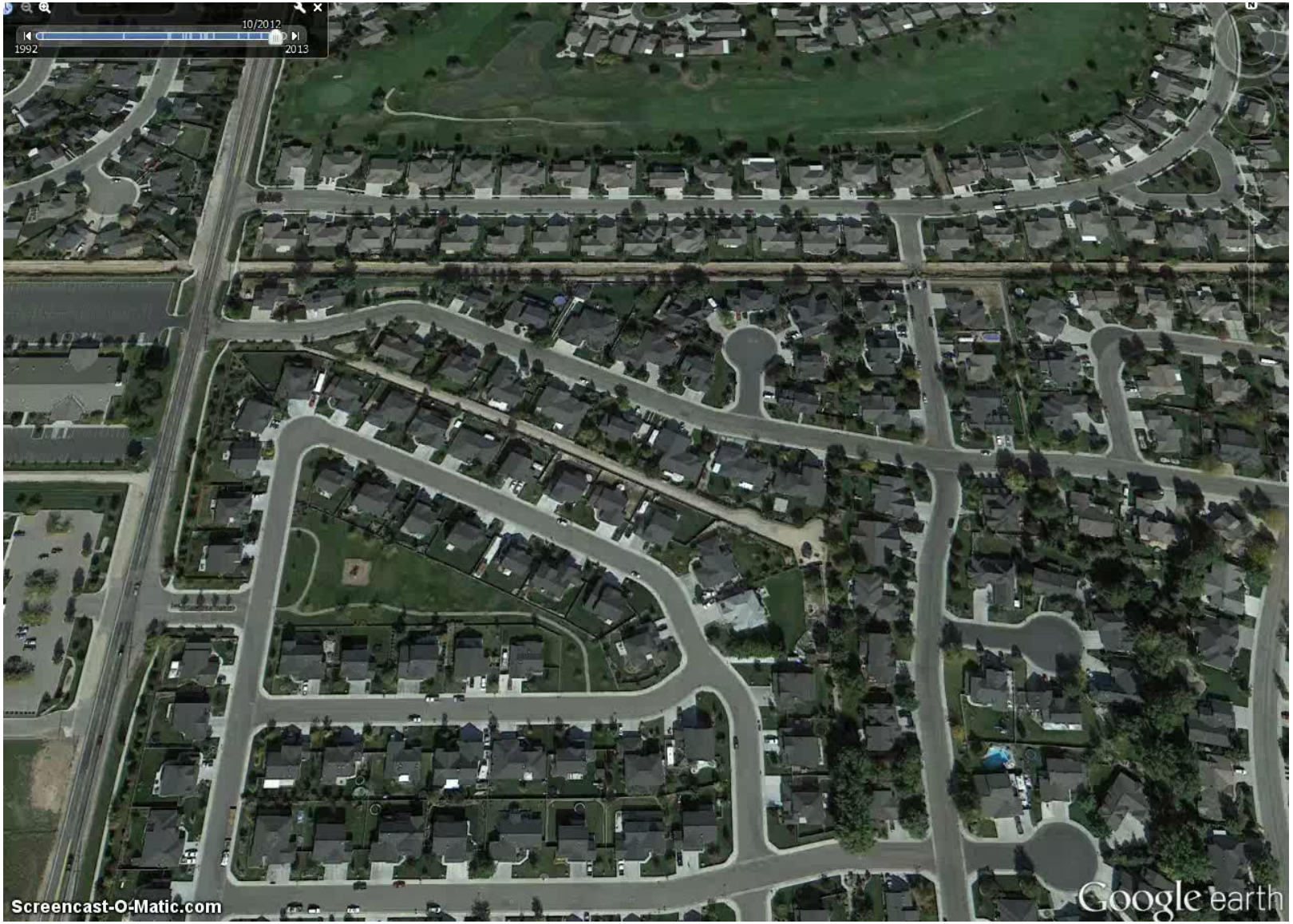
What did I find?



Methods - Street View



Methods – Time Travel

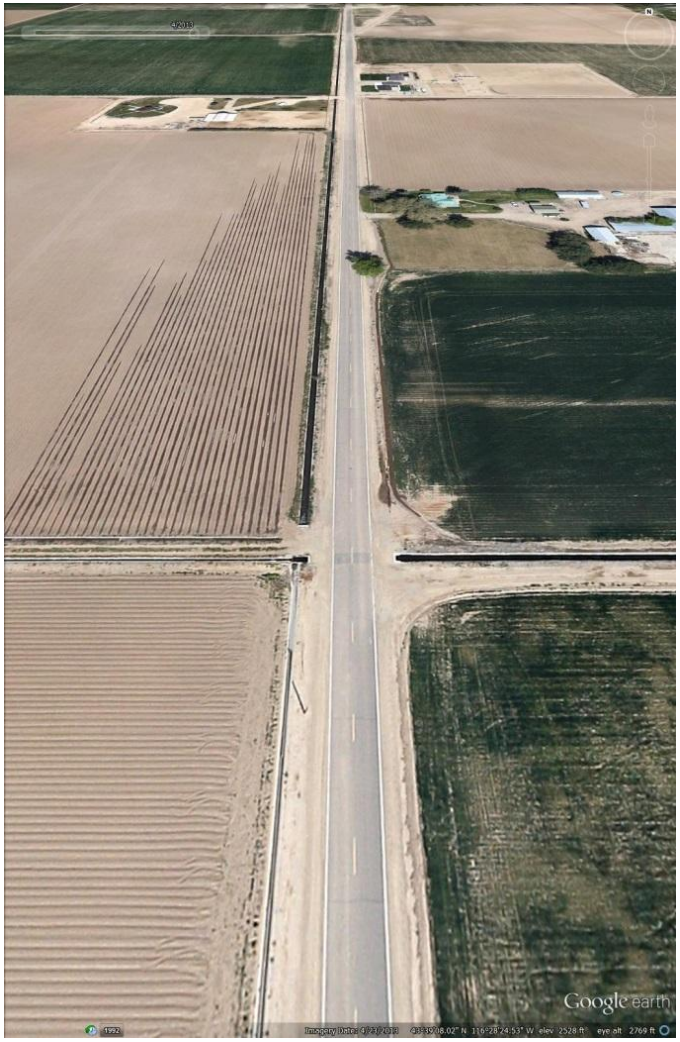


Flow Direction

- Hardest part – 2D view of fairly flat land.

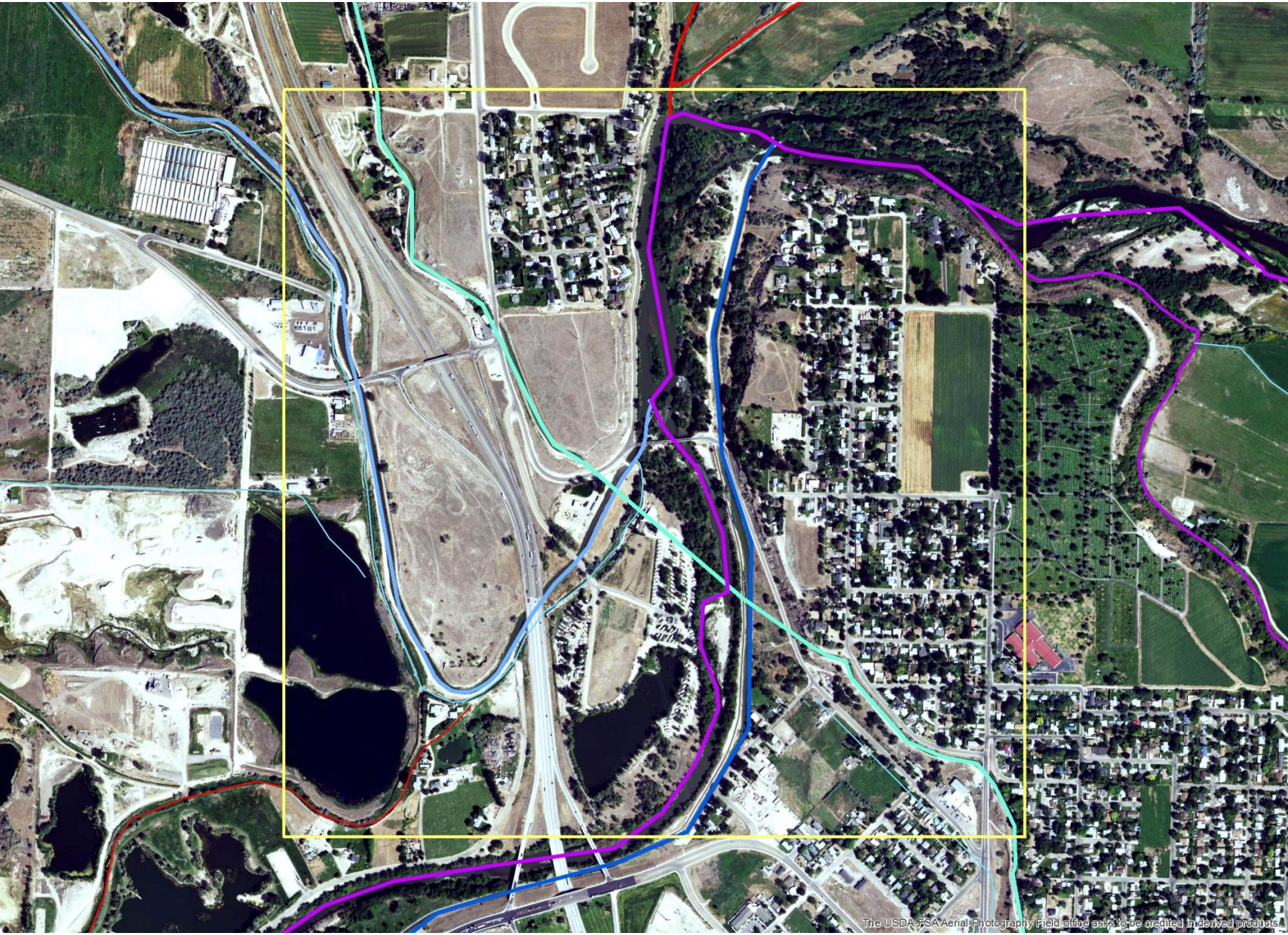
Flow Direction

Flow Direction



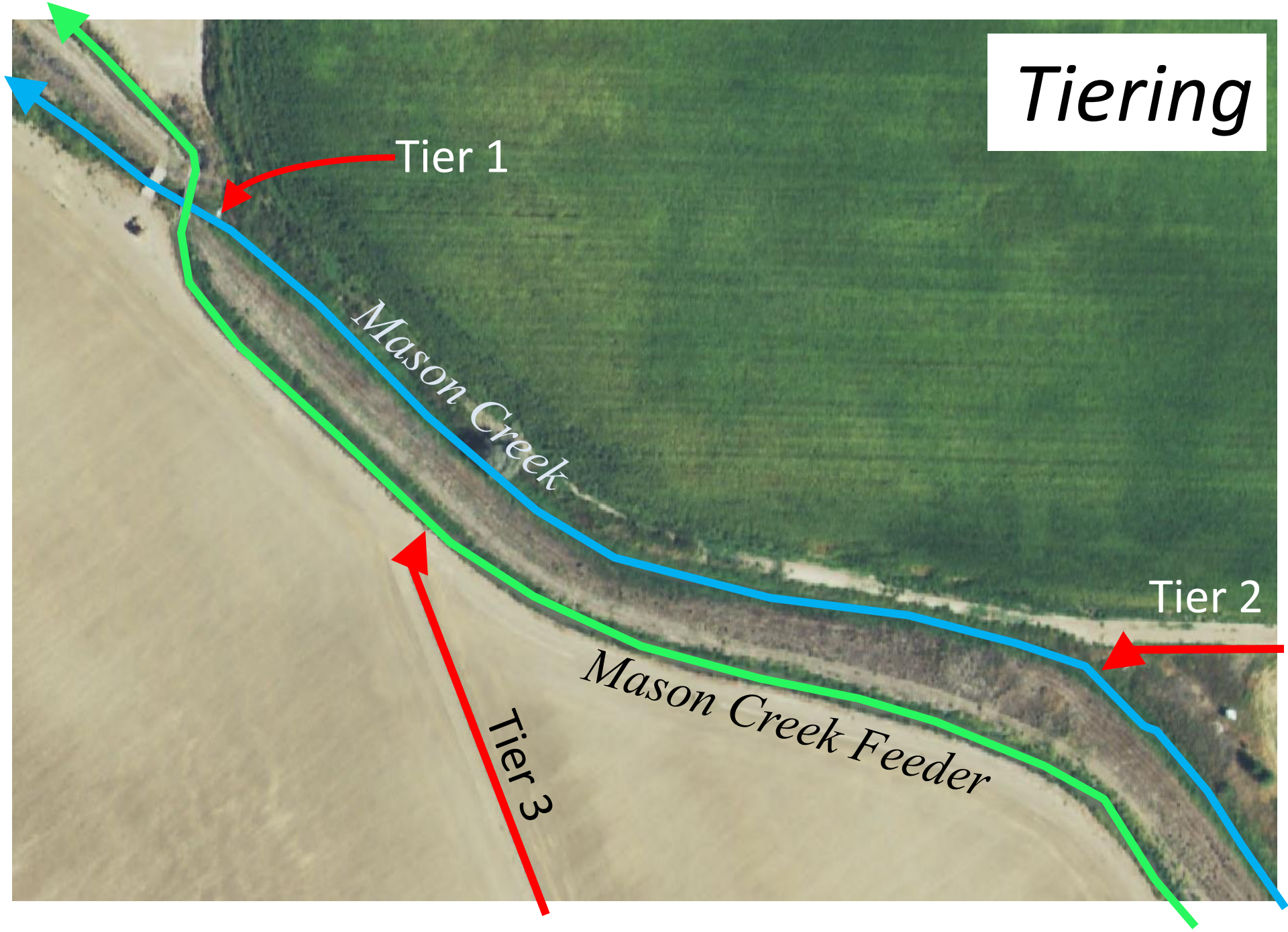
Flow Direction


4/2013
1991
2013
00:00
Screencast-O-Matic.com
Google earth


The USDA-FSA Aerial Photography Field office asks to be credited in derived products.

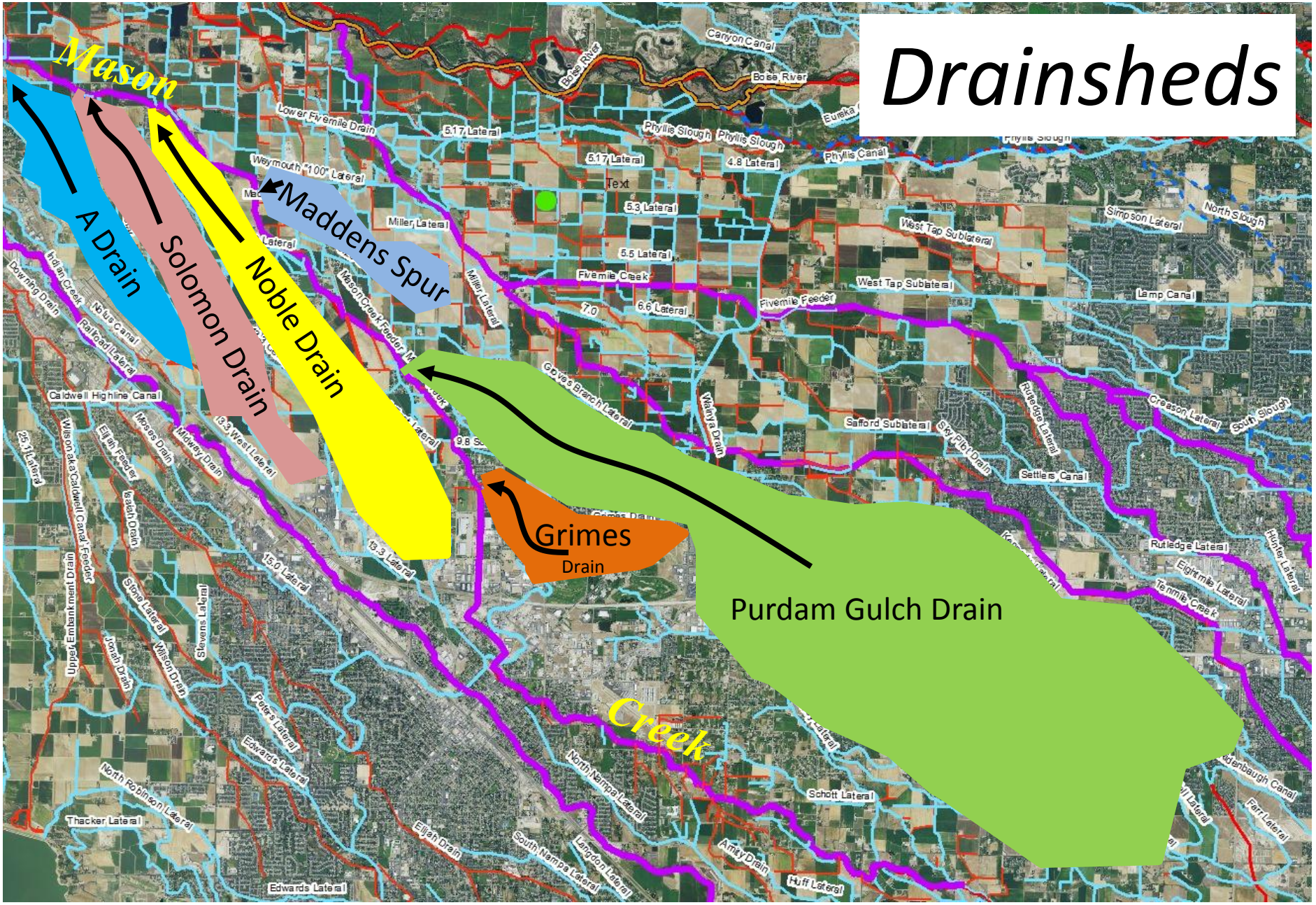
Uses

- Update land tiers in implementation plan
    1. Direct runoff to creek: *Field-level treatment*
    2. Via drain to creek: *Drain treatment (sed basin)*
    3. Via drain with re-use: *Plumbing treatment (pump-up or feeder)*


Tiering
Tier 1
Mason Creek
Tier 2
Mason Creek Feeder
Tier 3

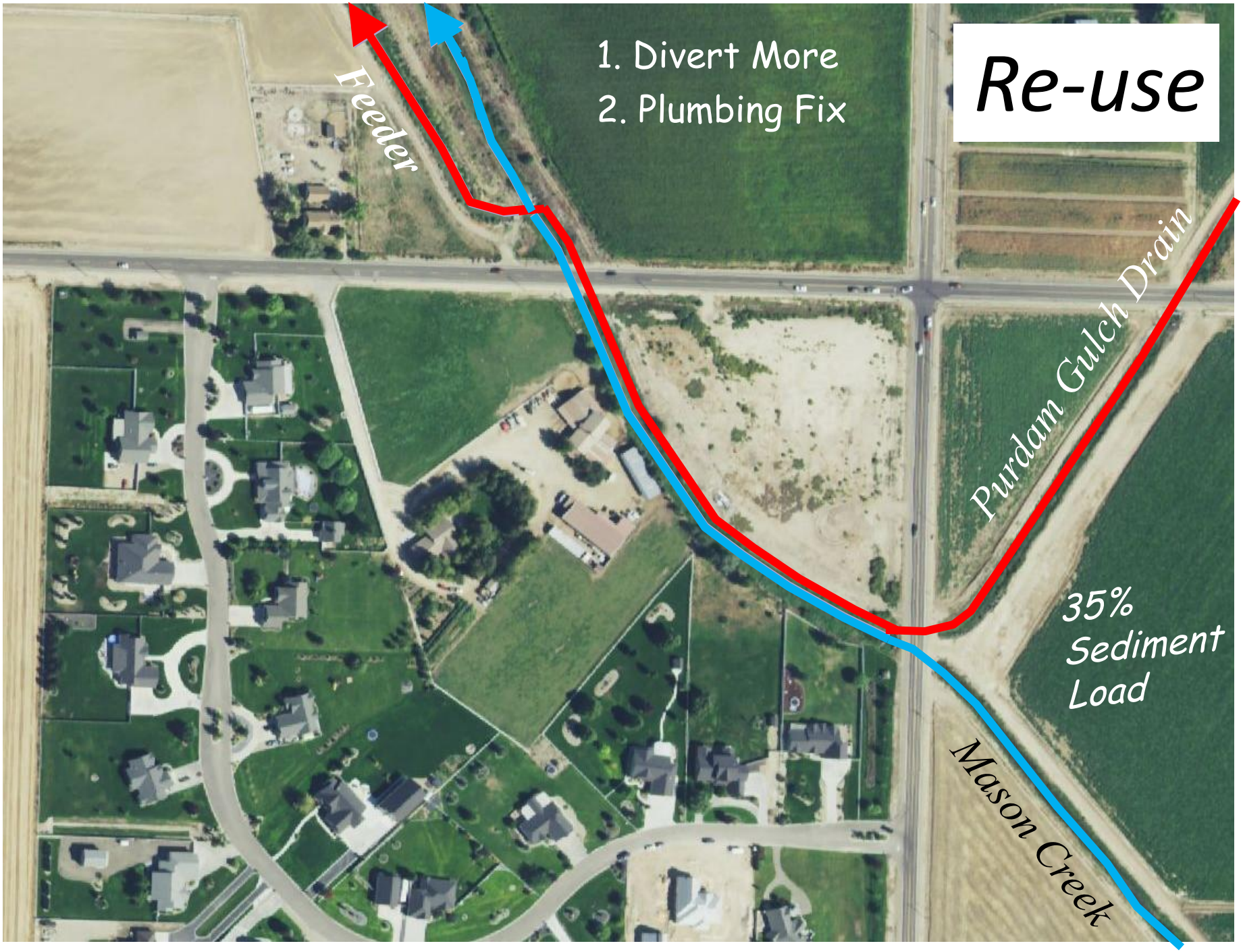
Uses

- Update land tiers in implementation plan
    1. Direct runoff to creek: Field-level treatment
    2. Via drain to creek: Drain treatment (sed. basin)
    3. Via drain with re-use: Plumbing treatment (pump-up or feeder)
- Delineate ‘Drainsheds’


Drainsheds
Mason
A Drain
Solomon Drain
Noble Drain
Maddens Spur
Grimes
Drain
Purdam Gulch Drain
Creek
Boise River
Canyon Canal
Lower Fivemile Drain
Weymouth "100" Lateral
Miller Lateral
Fivemile Creek
Fivemile Feeder
Phyllis Slough
Phyllis Canal
West Tap Sublateral
Lamp Canal
Caldwell Highline Canal
Grove's Branch Lateral
Safford Sublateral
Settlers Canal
Rutledge Lateral
Eightmile Lateral
Tenmile Creek
Schott Lateral
North Nampa Lateral
South Nampa Lateral
Langdon Lateral
Thacker Lateral
North Robinson Lateral
Edwards Lateral
Peters Lateral
Stevens Lateral
Stone Lateral
Wilson Drain
Jonah Drain
Elijah Drain
Amity Drain
Huff Lateral
Farr Lateral
Ustenbaugh Canal
Simpson Lateral
North Slough
South Slough
Creason Lateral
Hunter Lateral
Sky Pilot Drain
Wainya Drain
Mason Creek Feeder
Railroad Lateral
Nibus Canal
Downing Drain
Moser's Drain
Midway Drain
Isaiah Drain
Upper Embankment Drain
Wilson aka Caldwell Canal Feeder
5.17 Lateral
4.8 Lateral
5.3 Lateral
5.5 Lateral
6.6 Lateral
7.0
13.3 West Lateral
13.3 Lateral
15.0 Lateral
25.1 Lateral
Text

Uses

- Update land tiers in implementation plan
    1. Direct runoff to creek: Field-level treatment
    2. Via drain to creek: Drain treatment (sed. basin)
    3. Via drain with re-use: Plumbing treatment (pump-up or feeder)
- Delineate ‘Drainsheds’
- See opportunities for reusing water:
    - Keep clean water in the river
    - Extend irrigation season by conserving storage


1. Divert More
2. Plumbing Fix
Re-use
Feeder
Purdam Gulch Drain
35% Sediment Load
Mason Creek

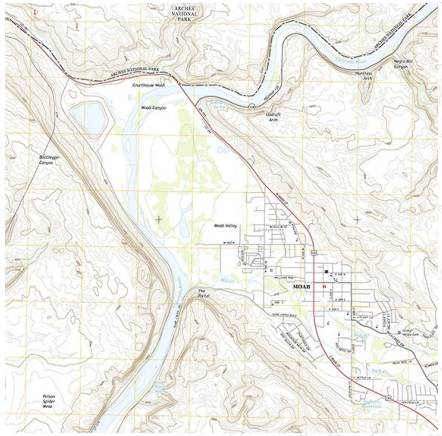
Next Steps

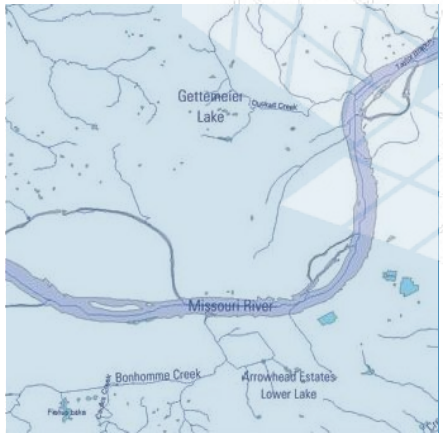
- Clean up and improve coverage
- Extend to Payette, Weiser, Snake basins
- Make map available to stakeholders
- Incorporate into implementation planning
- Talk to irrigation districts about potential projects

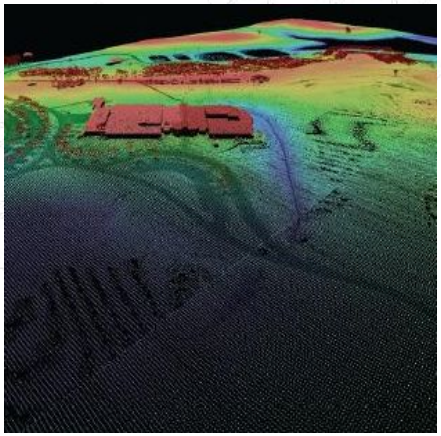
Download map at:
www.deq.idaho.gov/
2016-monitoring-workshop/


ROCKS
Questions ?

WBD Select Topics







Subtitle: WBD and NHDPlusV2 Catchments, Editing WBD, and WBD Future Plans

Date: March 10th, 2016

Name: Elizabeth Stevens-Klein, estevens-klein@usgs.gov

USGS science for a changing world

The National Map
Your Source for Topographic Information

WBD Select Topics

Agenda

- WBD and NHDPlusV2 Catchments
- Editing WBD
- WBD Future Plans

WBD Select Topics

Agenda

- WBD and NHDPlusV2 Catchments
- Editing WBD
- WBD Future Plans

WBD and NHDPlusV2 Catchments

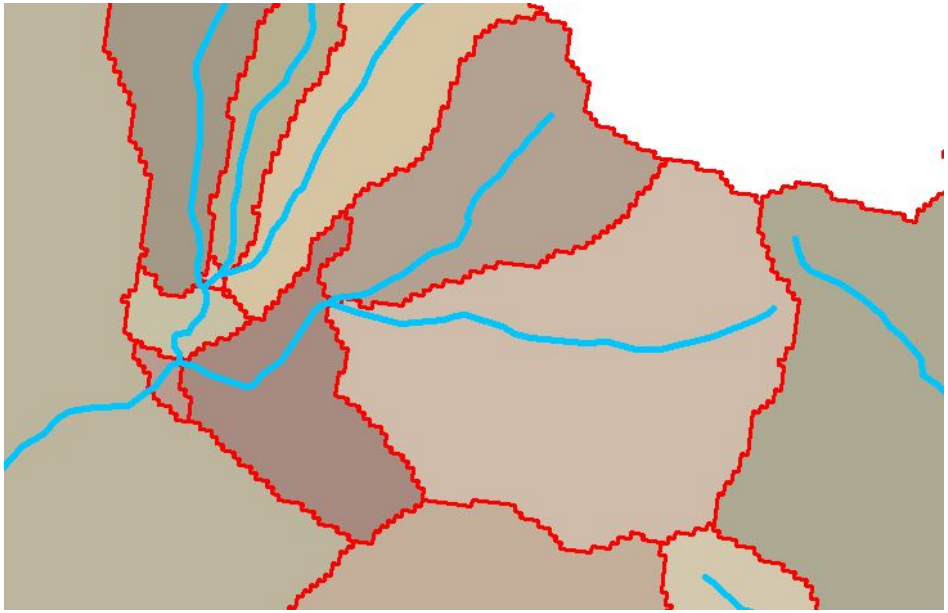
Overview

- WBD
  - Largely created from heads-up digitizing of - at a minimum - 1: 24k DRGs
  - Smaller scale coverage (2, 4, 6, 8, 10, 12-digits)
  - Hierarchical (nested) drainage areas that represent hydrological and topographic conditions throughout the US at different geographic scales
  - Used as hydro cataloging units/study areas for the NHD and water resource communities

WBD and NHDPlusV2 Catchments

Overview

- NHDPlusV2 Catchments
  - Elevation-derived
  - Larger scale coverage (sub 12-digit)
  - Used to associate precipitation, temperature, and runoff data to a stream to estimate NHDPlus stream flow velocity
  - Also used for other modelling such as SPARROW
  - Also called incremental watersheds since they represent areas draining into single flowlines



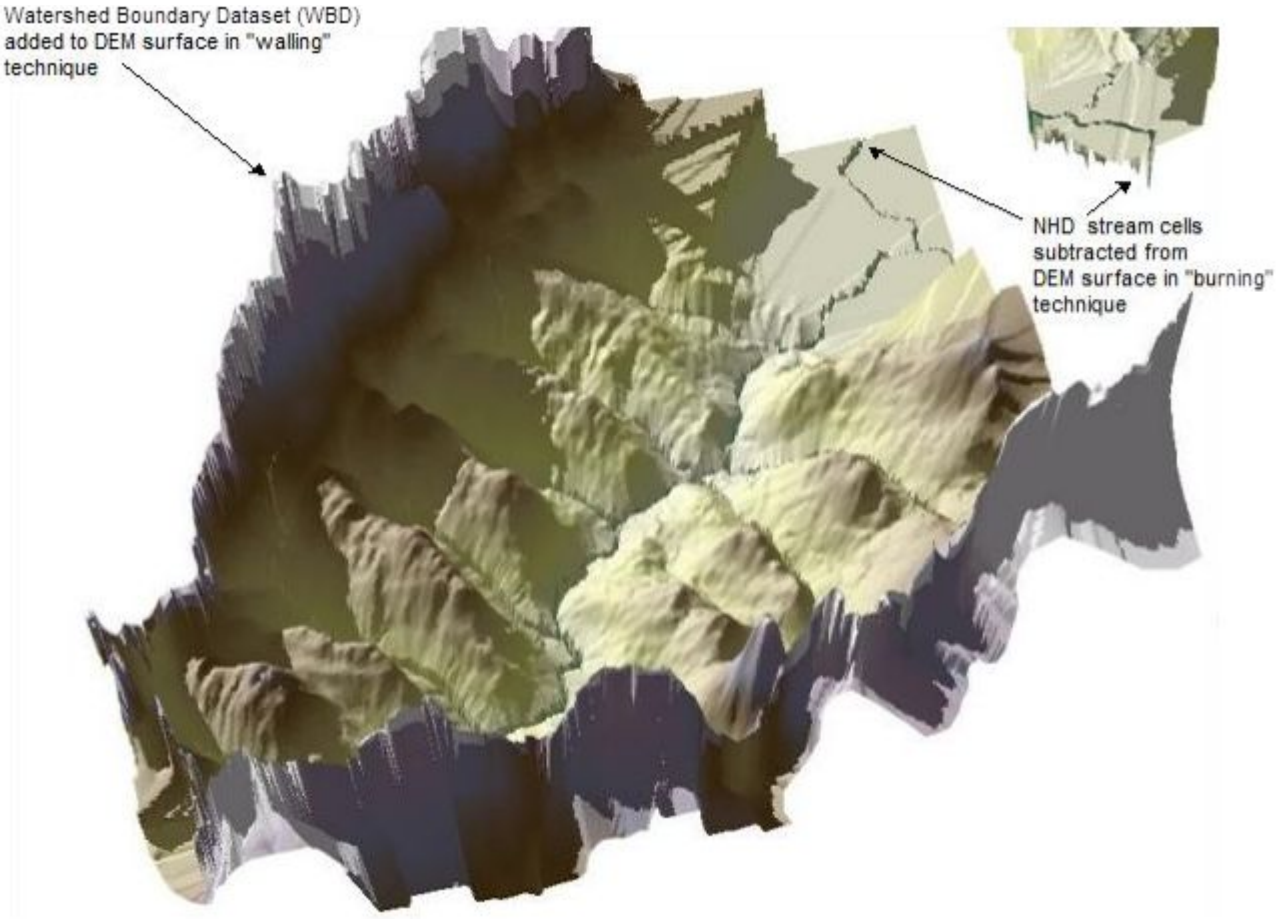
WBD and NHDPlusV2 Catchments

Interrelated

- 3 Datasets Used to Create NHDPlusV2 Catchments
  - 3DEP 10-meter DEMs
  - NHDPlus flowlines
  - WBDHU12s
- Preprocessing of the DEMs - Overview
  - 12-digit HUs used to “wall” DEMs to force nested catchment boundaries to closely match WBD
  - NHDPlus flowlines are used to “burn” the DEMs to force water to flow correctly

WBD and NHDPlusV2 Catchments

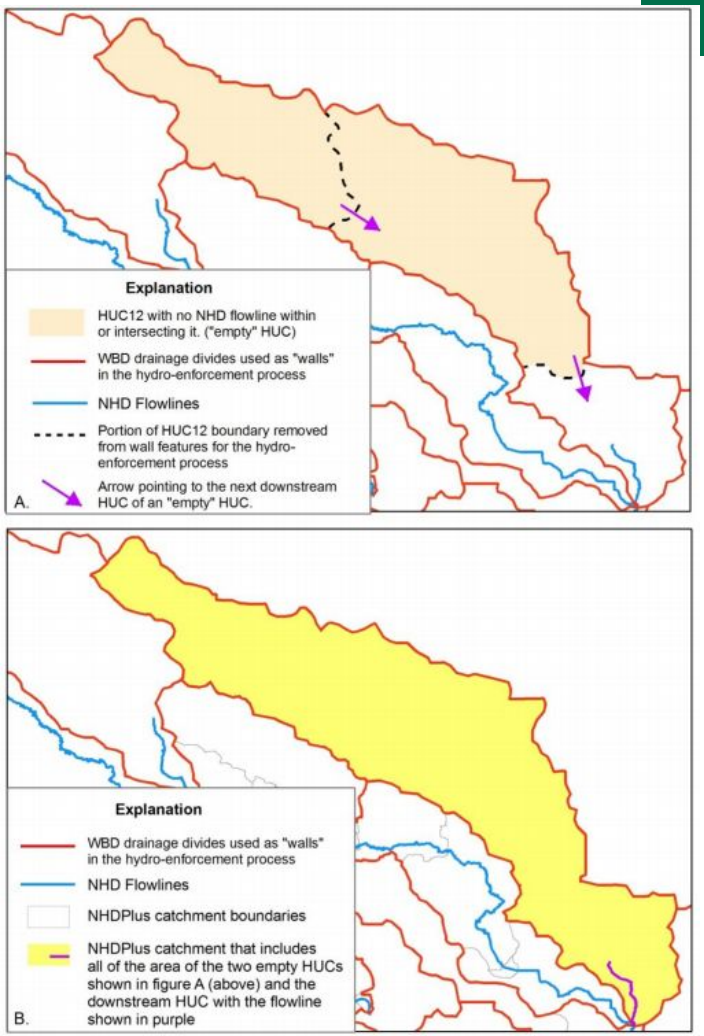
Preprocessing of the DEMs



WBD and NHDPlusV2 Catchments

WBDHU12 Selection for Preprocessing

- In some cases,WBDHU12s walls are removed
  - Where lake shores define WBD boundaries
  - Where an HU contains no NHD flowlines, or NHD flowlines end at sinks (arid areas)
- Noncontributing WBDHU12 “walls” remain intact



WBD and NHDPlusV2 Catchments

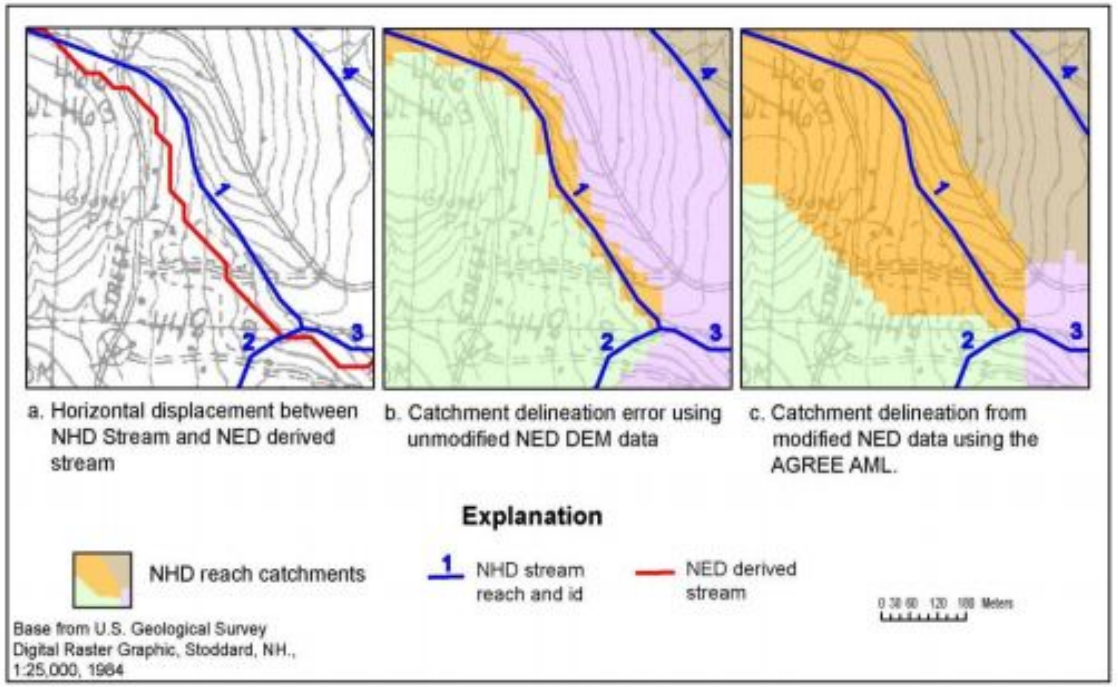
NHD Flowline Selection for Preprocessing

- Only appropriate networked ("WithDigitized") NHD flowlines are used as "burn" features
  - Not included:
    - Pipelines
    - Elevated canals
    - Extremely short flowlines
- Headwater flowlines were clipped back to ensure no intersection with WBD 12-digit boundaries (unless appropriate)

WBD and NHDPlusV2 Catchments

NHD Flowline Selection for Preprocessing

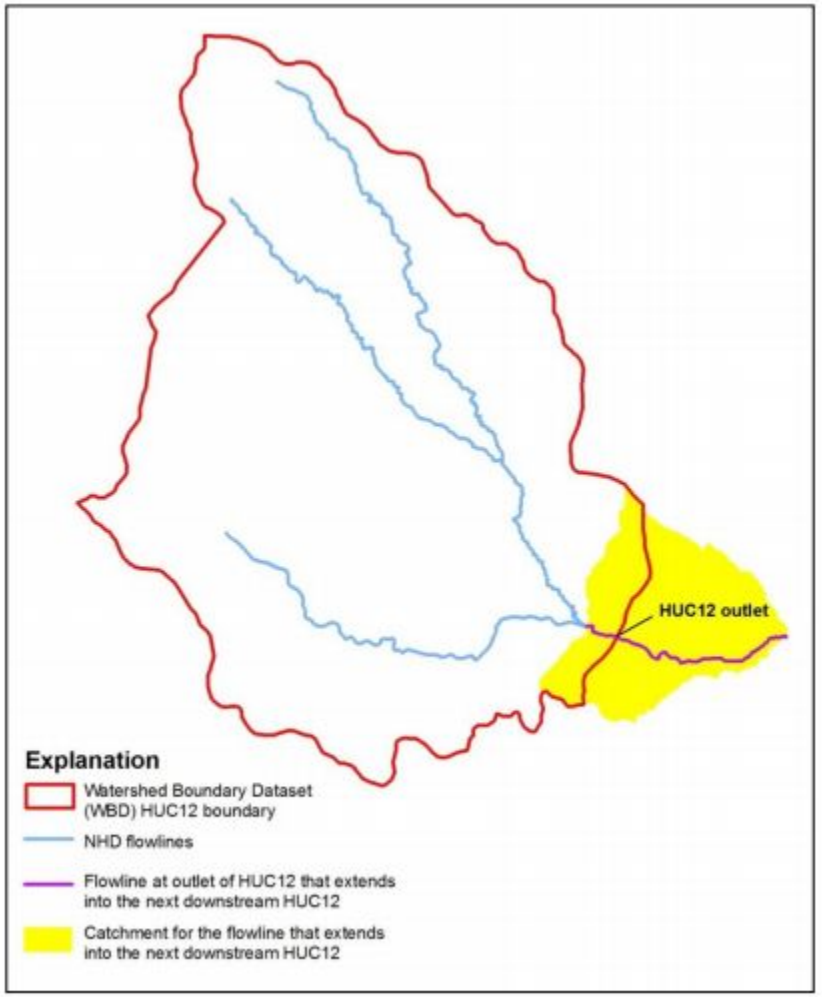
- Once appropriate flowlines to receive catchments were selected, they were "burned" into DEMs
- Burning fixes DEM flow path displacement (DEMs and NHD don't always agree)



WBD and NHDPlusV2 Catchments

Comparison

- WBD and NHDPlusV2 Catchments correspond well at ridges, but differences are common near pour points
  - Reflect differences in WBD standards, decisions, and base data as compared to flowlines, 3DEP, and derivation process
- Flowlines appropriately intersecting WBDHU12 boundaries result in catchment areas that fall outside WBDHU12 boundary



WBD and NHDPlusV2 Catchments

Which one to use?

- Depends on your needs
  - WBD
    - Smaller scale, used for smaller scale studies, often to define study area
    - Multi-source dataset
      - Doesn't always line up with 3DEP perfectly depending on date that WBD was updated/created and which base data was used
    - Represents local knowledge
      - Largely steward-driven
  - NHDPlusV2 Catchments
    - Larger scale – used for larger scale studies, particularly to associate soil/runoff, temperature, and precipitation data to calculate stream flow velocity as well as modelling such as SPARROW
    - Elevation-derived from 1 consistent dataset

WBD Select Topics

Agenda

- WBD and NHDPlusV2 Catchments
- Editing WBD
- WBD Future Plans

Editing the WBD

Open for Editing

- 10, 12, 14, 16-digit polygons and WBDLines – geometry and attributes
  - Fields that stewards edit:
    - LineSource
    - HUMod
    - Name
    - AreaAcres – will be done on backend by end of FY16
    - AreaSqKm – will be done on backend by end of FY16
    - States – will be done on backend by end of FY16
    - Etc. – already done on backend

Editing the WBD

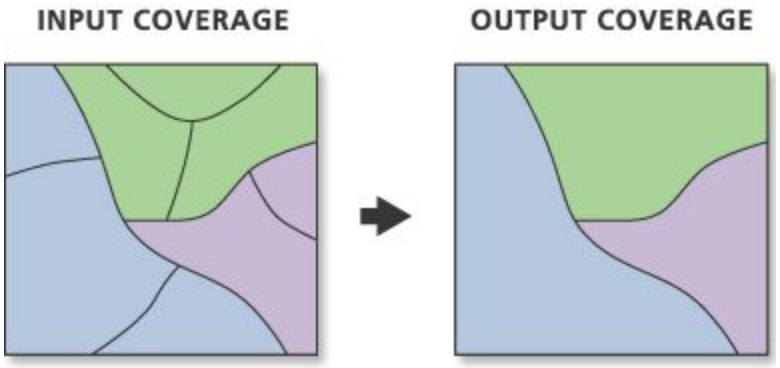
Locked for Editing

- 2, 4, 6, and 8-digit polygons are locked because of the extensive use of these footprints in historical studies and decisions
  - WBD community decision to lock these
- Attribute changes
  - NTC team will review
  - If change is agreed upon, NGTOC data management team has to make change

Editing the WBD

Exception

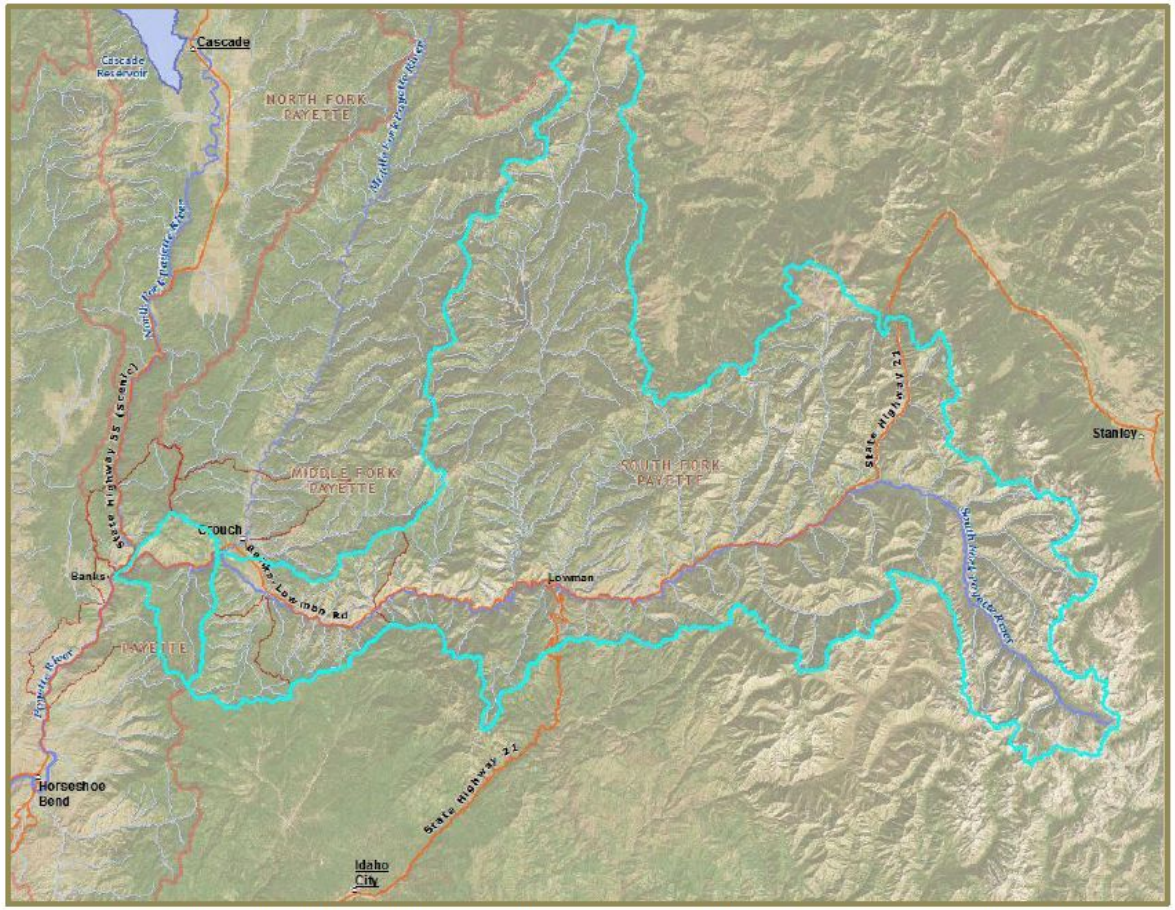
- Upon job check-in:
  - All "dirty" polygons are rebuilt from 12-digits and up through a series of dissolve functions
    - Editing a 12-digit that shares a boundary with a 2, 4, 6, 8, and 10 results in an edited 2, 4, 6, 8, or 10-digit boundary, but this is subject to review by NTC team
      - Minor edits are generally fine



Editing the WBD

Examples

- Proposed Change to 8-digit HU boundary and Name



South Fork Payette River 4th-code HUC 17050120 boundary with proposed addition of Deer Creek-Payette River 6th-code HUC 170501220101 (small polygon at left) selected. This delineation corresponds to local usage that includes river rafting companies and whitewater enthusiasts that have known it as South Fork Payette River for many decades. (Examples follow.)

USGS science for a changing world

The National Map
Your Source for Topographic Information

Editing the WBD

Examples

- "Names (and even boundaries) undoubtedly refer, in many cases, to a historic hydrologic situation that no longer applies" – anonymous ID user
  - Stewards and users have more local knowledge, and use their data more than anyone, so data should be as useful as possible to stewards and users, while also considering historical value
  - If there are many high-profile studies completed for a particular HU, might consider leaving it unchanged
  - If a historic name or geometry doesn't serve stewards or users anymore, might consider changing it
  - We want to discuss the justification with you at the 2, 4, 6, and 8-digits to ensure that the WBD historical value is considered for these highly used HUs
  - HU code changes are much more difficult
- Stewards and NTC team will review on a case-by-case basis and we encourage you to bring these to us so that the WBD is continually improved and increasingly useful

WBD Select Topics

Agenda

- WBD and NHDPlusV2 Catchments
- Editing WBD
- WBD Future Plans

WBD Future Plans

WBD Data

- Continuing harmonization between US and Canadian border
- Continuing Name review across US
- Coordinating with stewards to work through inconsistencies between NHD and WBD 4-digit boundaries as individual regions are reviewed as part of NHDPlus HiRes preprocessing

WBD Future Plans

WBD Editor Tools

- Currently
  - Last 10.2 WBD Editor Tools are due to be released early 2016
    - Held off to incorporate Name Add-In and consolidate all Add-Ins
    - During final testing 2 new bugs were identified, back in development
    - We will release as soon as possible
  - New 10.3 version also due to be released early 2016
    - Undergoing enhancements and bug fixes
      - New “List Changes” tool
      - New dialog boxes for clarification
      - When stable build is available, we will release

WBD Future Plans

WBD Editor Tools

- Future
  - Desktop Tools
    - Data Review similar to NHD Update Tools
    - Job workflow status window similar to NHD Update Tools
  - To try and stay ahead of the curve:
    - Discussions around ArcPro and Web-Editing
      - Still in early research stages
      - Will largely depend on the potential of the two to maintain our current processes and the needs of our stewards
      - Web-editing might be the way of the future
        - We will ensure the ability to maintain editing permissions, NTC, and the ability for you to use your own base data
        - Mark-up tool

WBD Future Plans

WBD Model

- Near term
  - Rename HUClass to HUDigit
  - Remove HULevel

WBD Future Plans

WBD Model

- Discussions
  - Keep HUMod only at 12-digit and below? Maybe events in the further future?
  - How do we further integrate NHD and WBD models for easier maintenance, editing, and delivery?
  - Do WBDLines still provide value?
  - If you have input on any of these questions we're beginning to toss around, please contact me

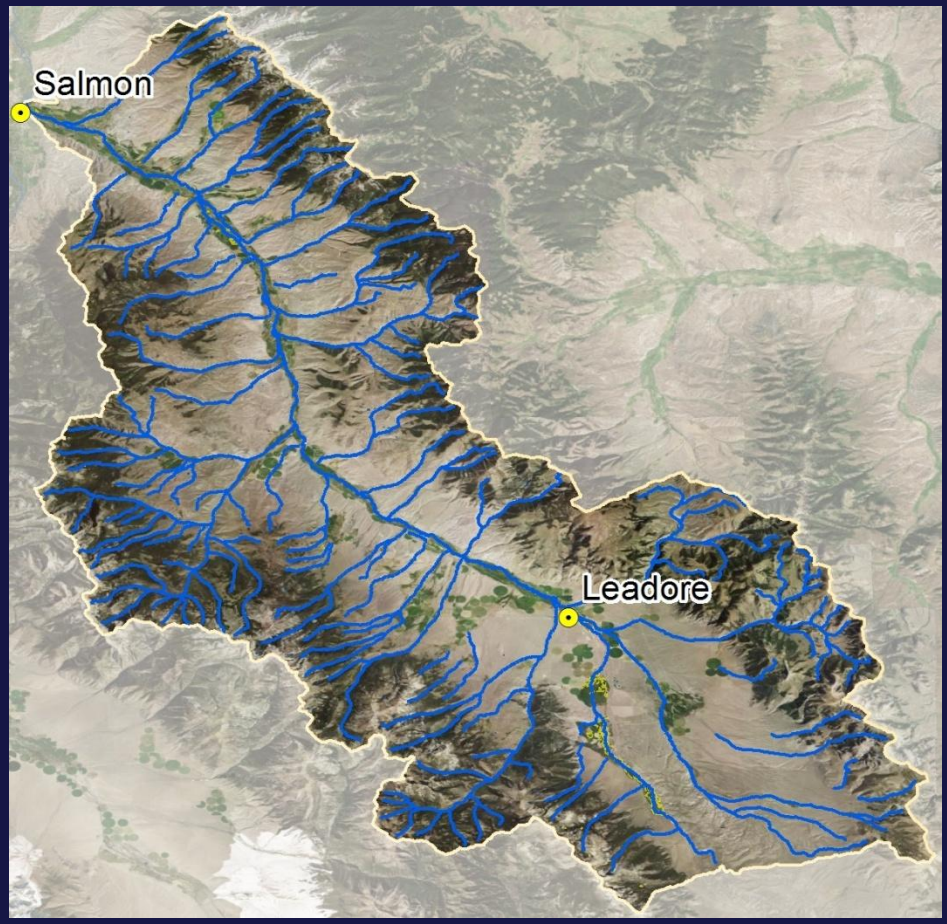
Questions?

- WBD Acting Product and Service Lead
  - Susan Buto – sbuto@usgs.gov
- WBD National Technical Coordinators (NTC):
  - Elizabeth Stevens-Klein - estevens-klein@usgs.gov
  - Kimberly Jones - kjones@usgs.gov
  - Laura Davenport - laura.davenport@ftw.usda.gov

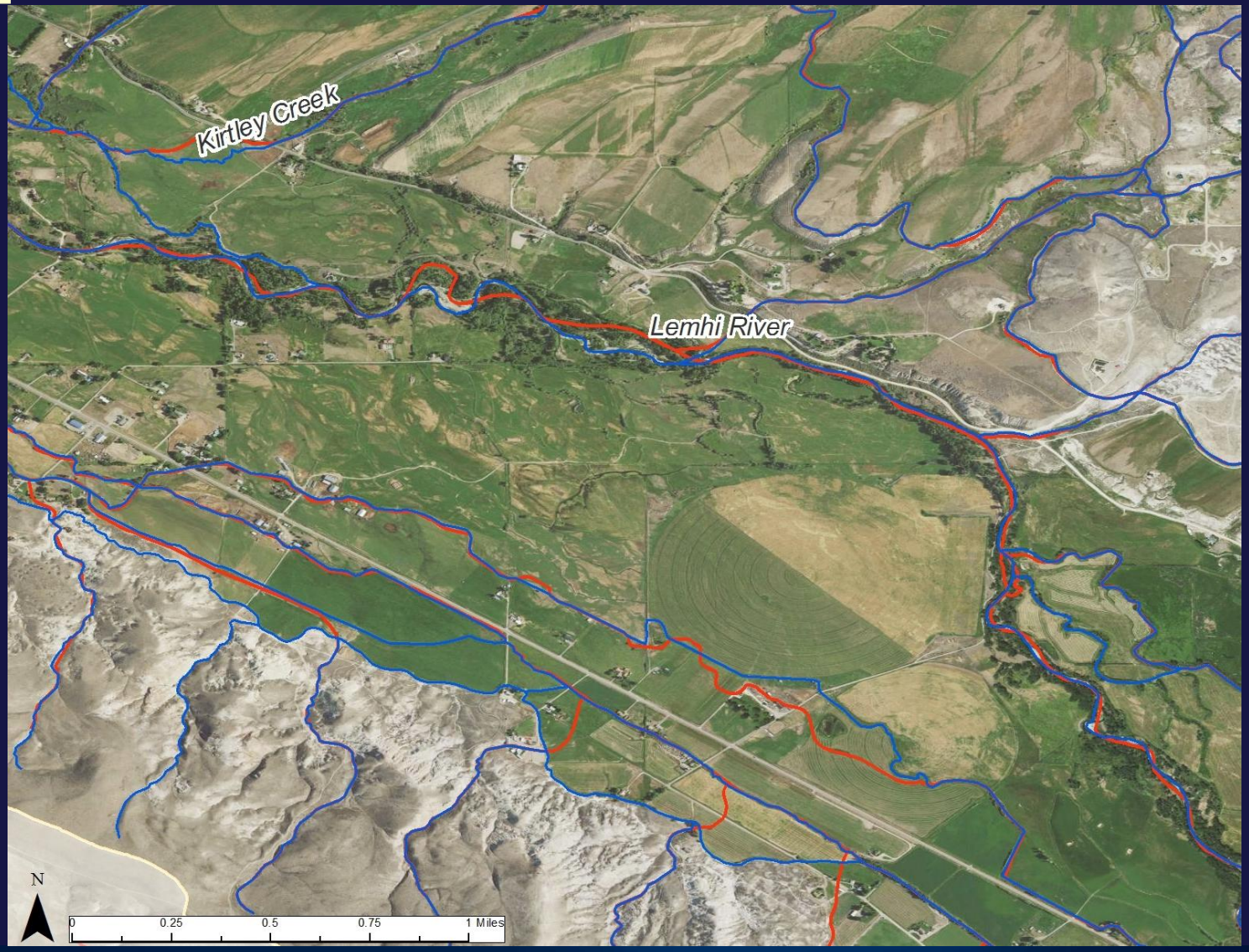
News from IDWR

Updating the NHD in the Lemhi Sub-Basin-

- **Updated:**
  - **NHDFlowline**
  - **NHDArea**
  - **NHDWaterbody**
- **Sources:**
  - NAIP 2013 imagery
  - IDWR Water Rights Database
- **All updates were digitized at 1:5000**



Update the NHD in the Lemhi Sub-Basin



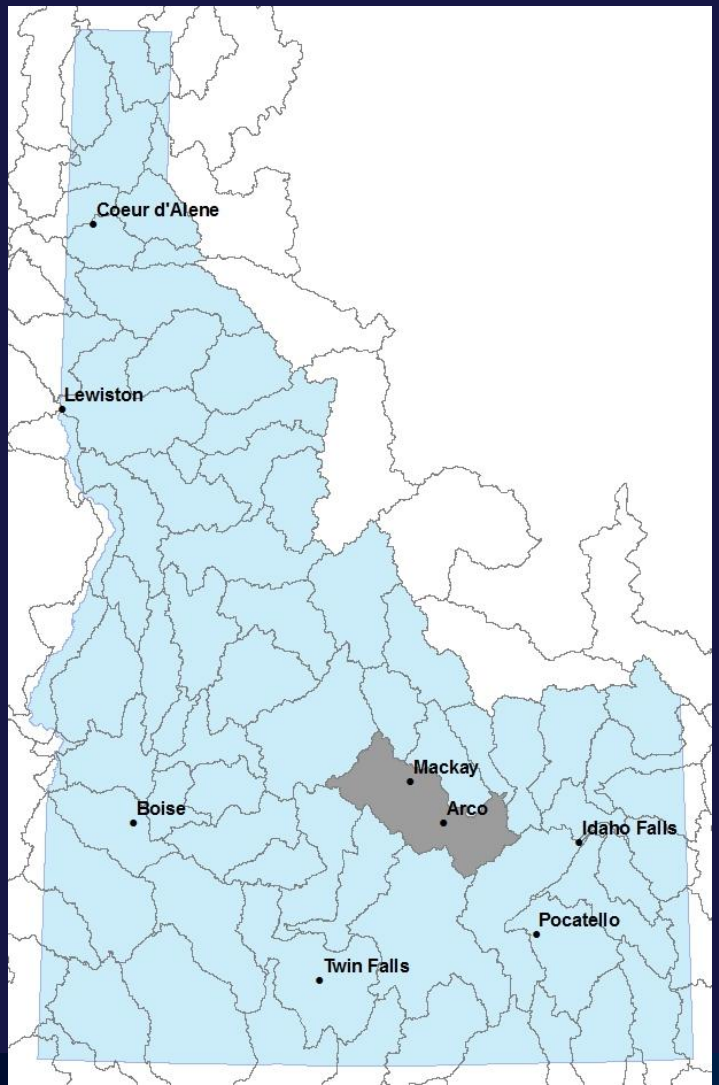
News from IDWR

Updating the NHD in the Lemhi Sub-Basin-

- **Update Flowline Feature Class:**
  - 74 Deleted, 469 Inserted, 1568 Edited (~5373 Flowlines total)
- **Update Area Feature Class :**
  - 0 Deleted, 2 Inserted, 2 Edited (~3 Areas total)
- **Update Waterbody Feature Class:**
  - 24 Deleted, 35 Inserted, 69 Edited (~547 Waterbodies total)
- Next Steps:
  - Meet with a representative from the TAC meeting
    - Local land managers

News from IDWR

Updating the NHD in the Big LostSub-Basin-



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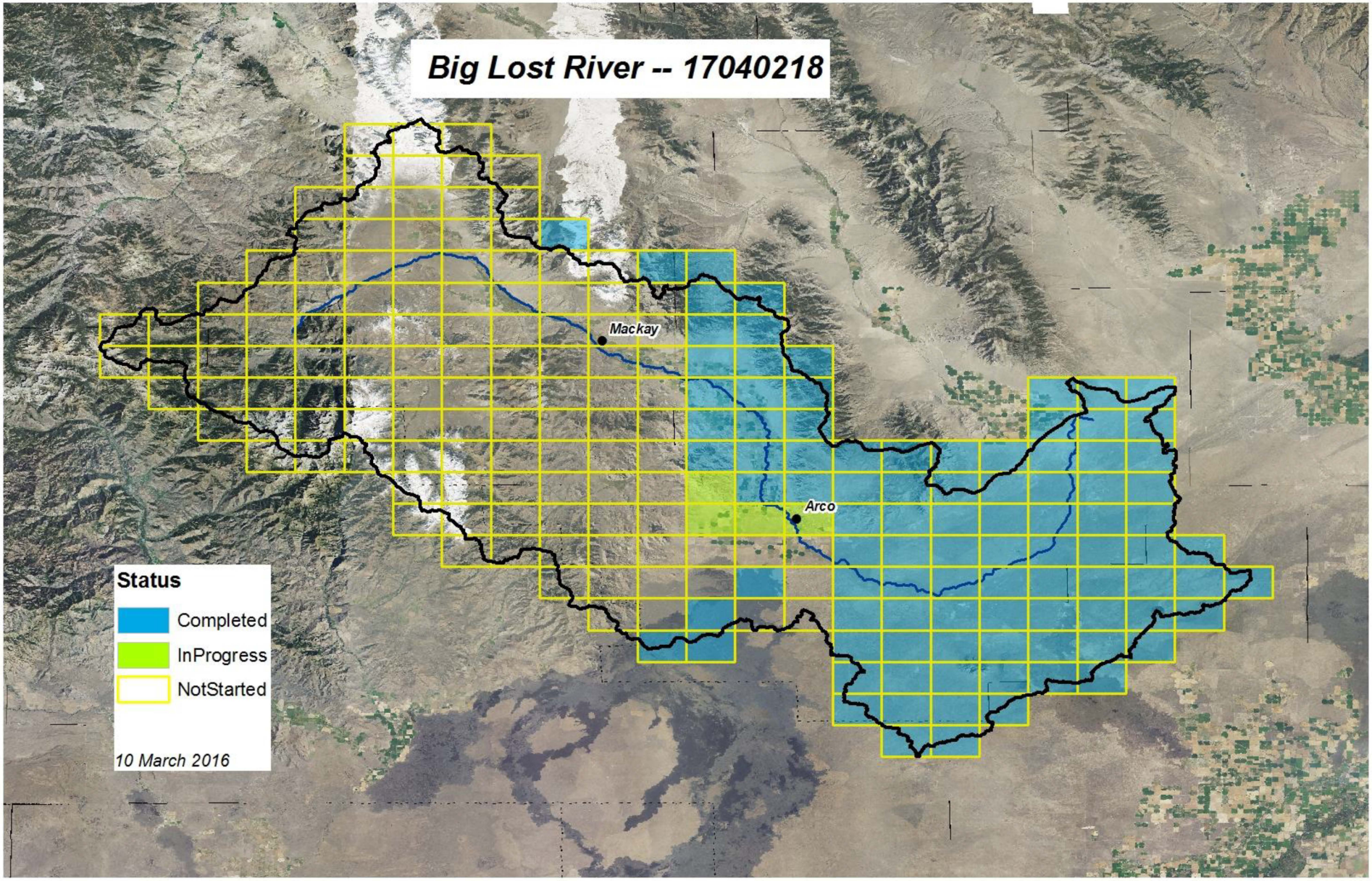
IDAHO Department of Water Resources



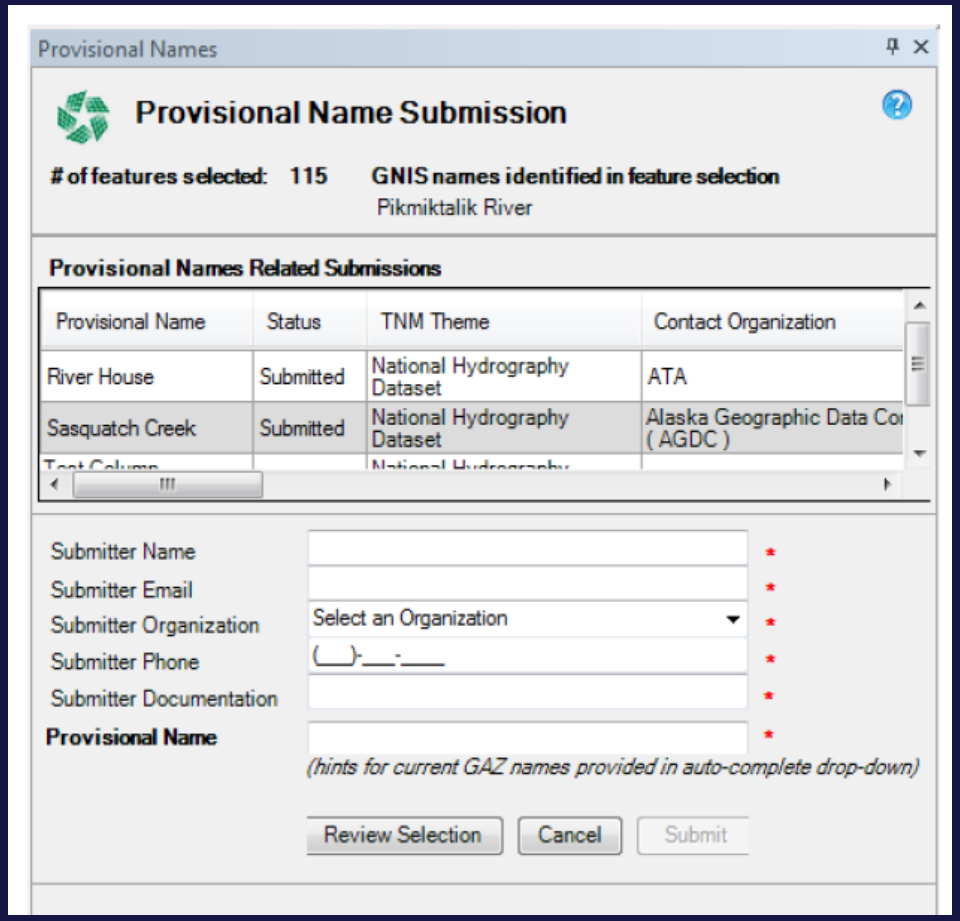
News from IDWR

Updating the NHD in the Big Lost Sub-Basin-

- **Update Flowline Feature Class:**
  - 108 Deleted, 91 Inserted, 973 Edited (~7000 Flowlines total)
- **Update Area Feature Class :**
  - 0 Deleted, 0 Inserted, 1 Edited (~18 Areas total)
- **Update Waterbody Feature Class:**
  - 27 Deleted, 25 Inserted, 23 Edited (~950 Waterbodies total)
- Next Steps:
  - Complete photorevision and ask for input from local land owners/managers.

News from IDWR

USGS Provisional Names Tool



- **In Testing**
- **Works on NHD Production Edit Jobs**
  - **Need to be an NHD Editor to use.**
- **Still working on details with BGN**

Other Business?

Upcoming Events

- **25th Annual IRWA Spring Conference March 16-18 Pocatello, ID**
- **NGWA Groundwater Summit April 24-27 Denver, CO**
- **IWUA Summer Water Law & Resource Issues Seminar June 13-14 Sun Valley, ID**
- **ESRI U.C. June 27 – July 1 San Diego, CA**
- **NWRA Western Water Seminar August 3 -5 Sun Valley, ID**
- **Water Smart Innovations Conference October 7-9 Las Vegas, NV**

IDAHO Department of Water Resources

Next Hydro TWG

September 8, 2016

Contact Information:
Linda Davis, Idaho Principal Data Steward
Danielle Favreau, Idaho WBD & NHD Technical Point of Contact

NHD_WBD@idwr.idaho.gov
Website Information: http://idwr.idaho.gov/GIS/NHD/

QUESTIONS?