



# Washington Hydrography Program



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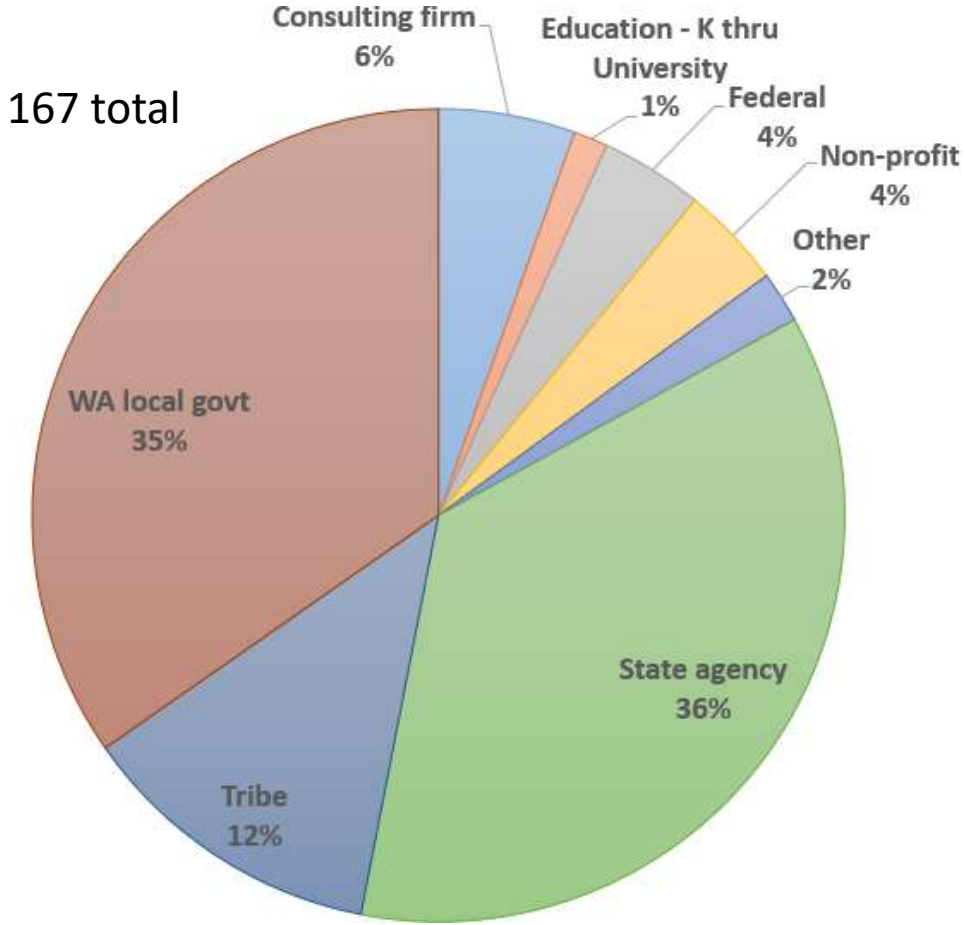
WA Hydrography Steward



- Elevation Derived Hydrography Pilot
- Supporting Change
- Measuring success



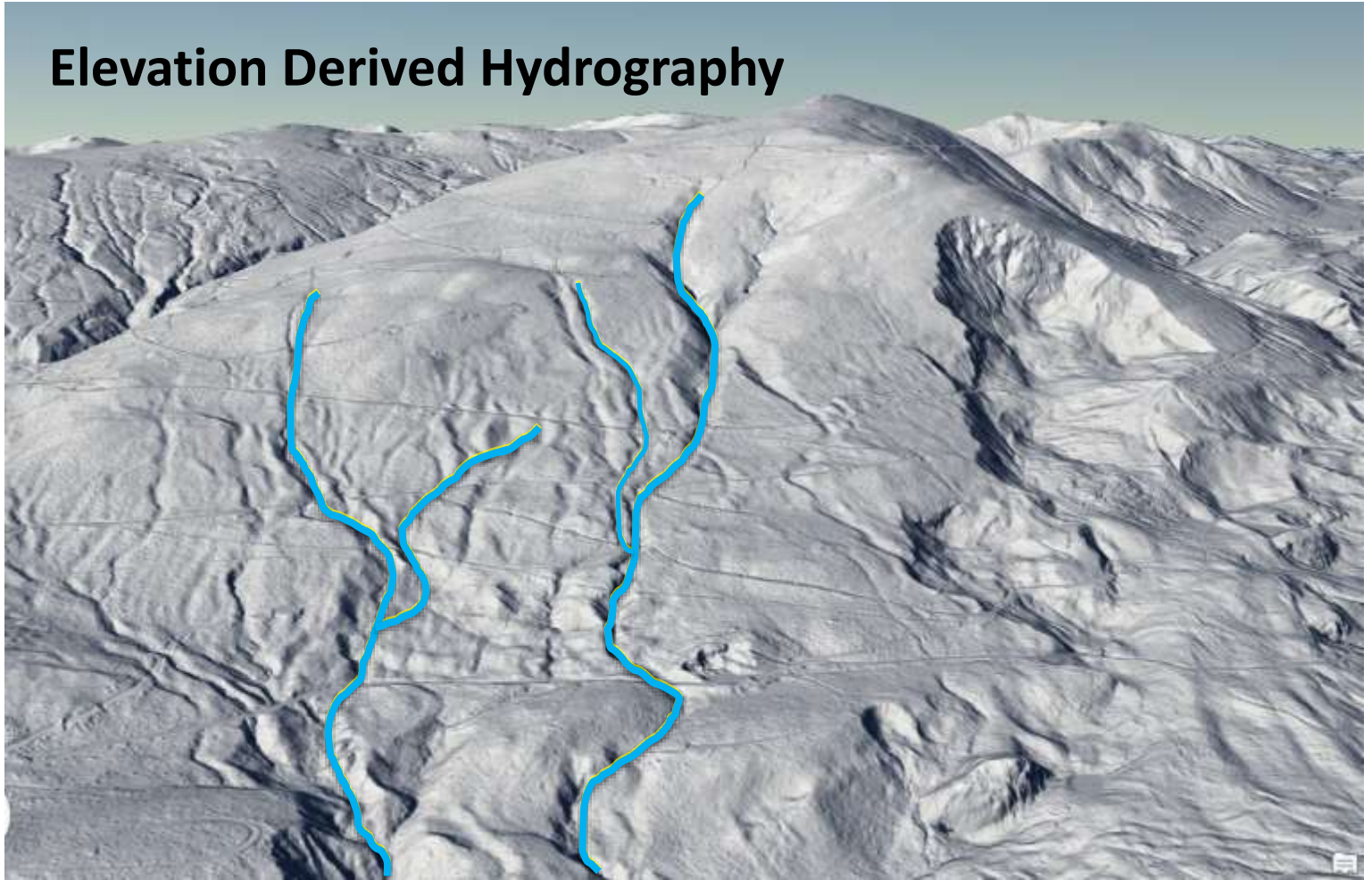
# Stakeholders



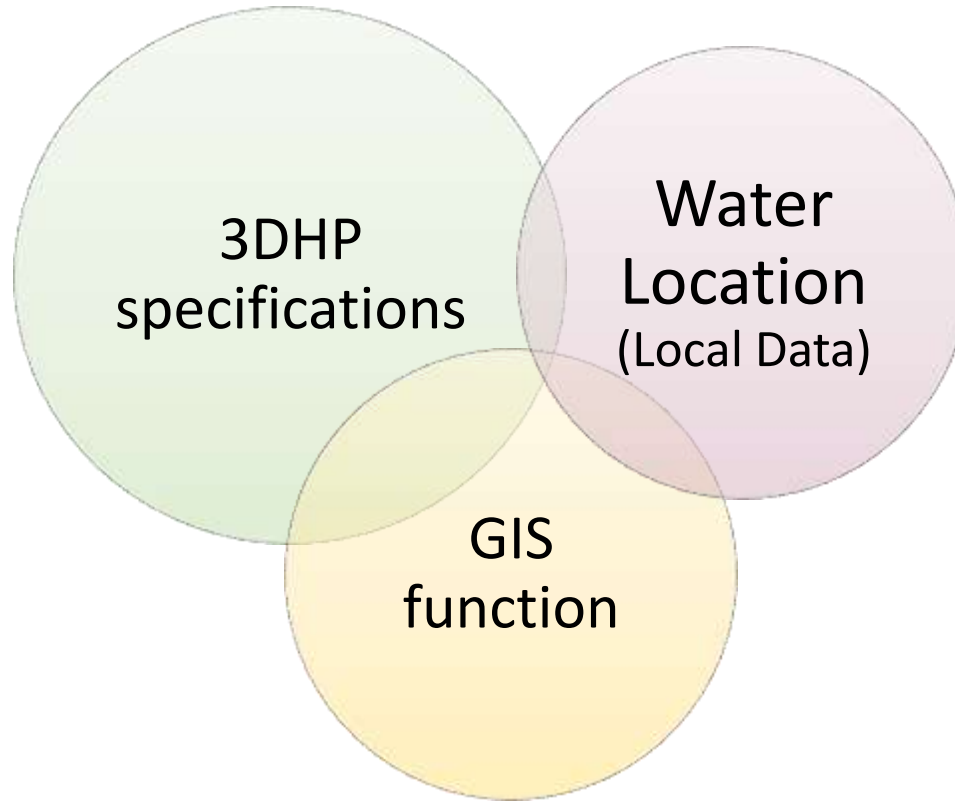
- **Accuracy**
- Connected Attributes
- Accessibility
- Communication

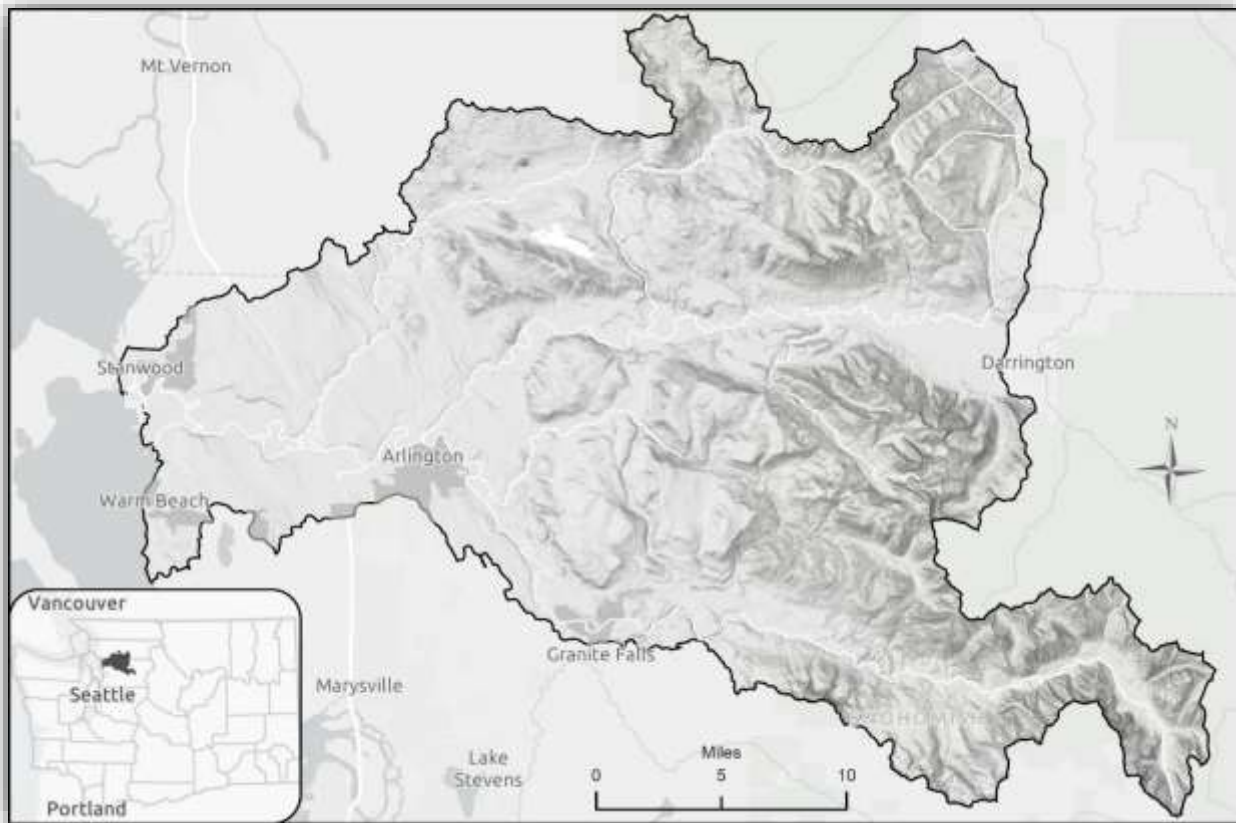


# Elevation Derived Hydrography



# Review Data Errors





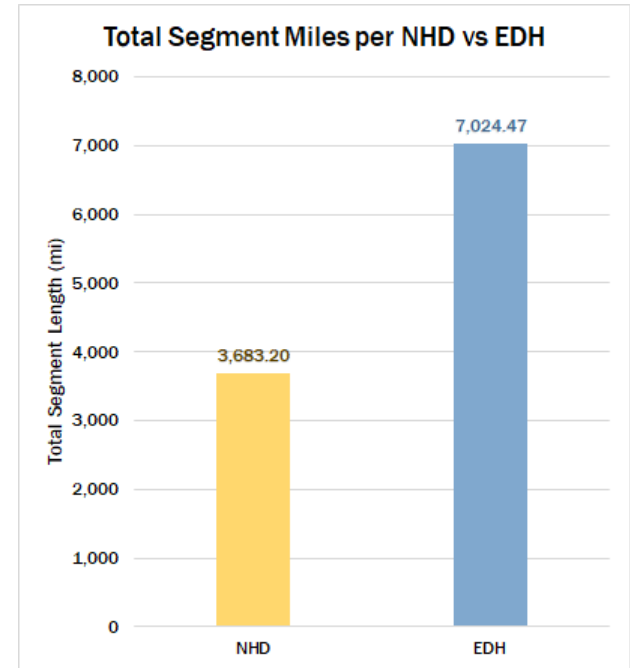
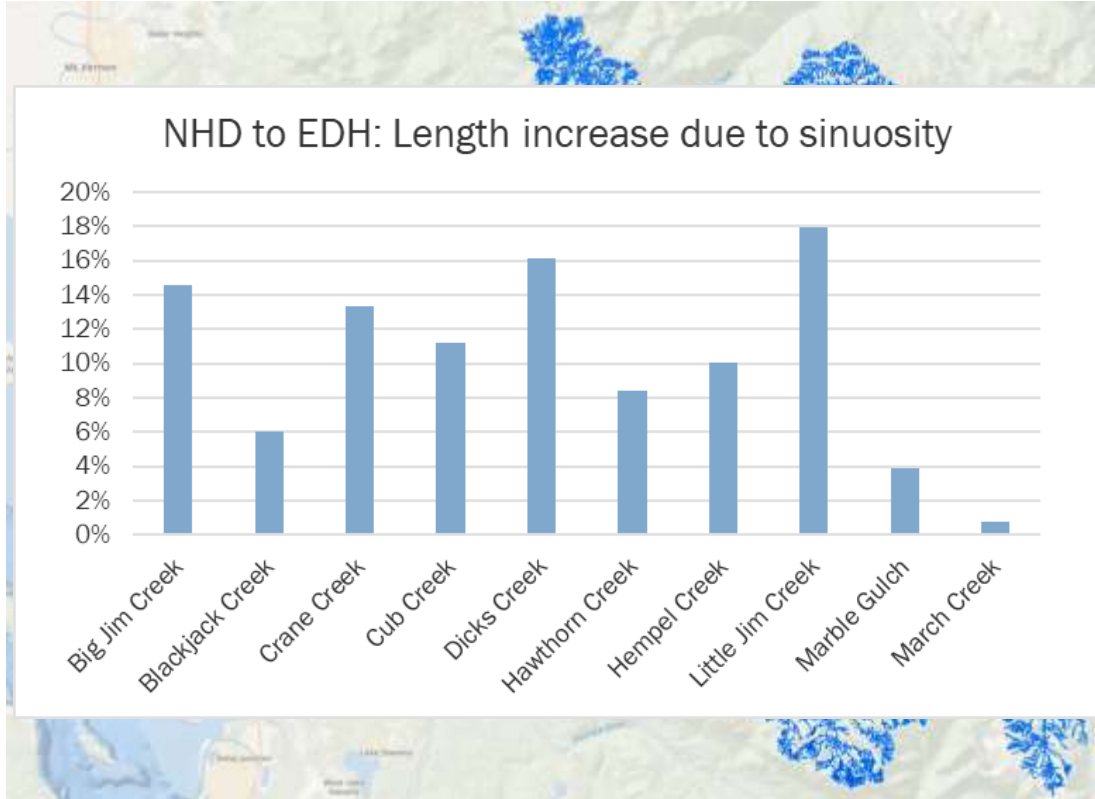
## Goals

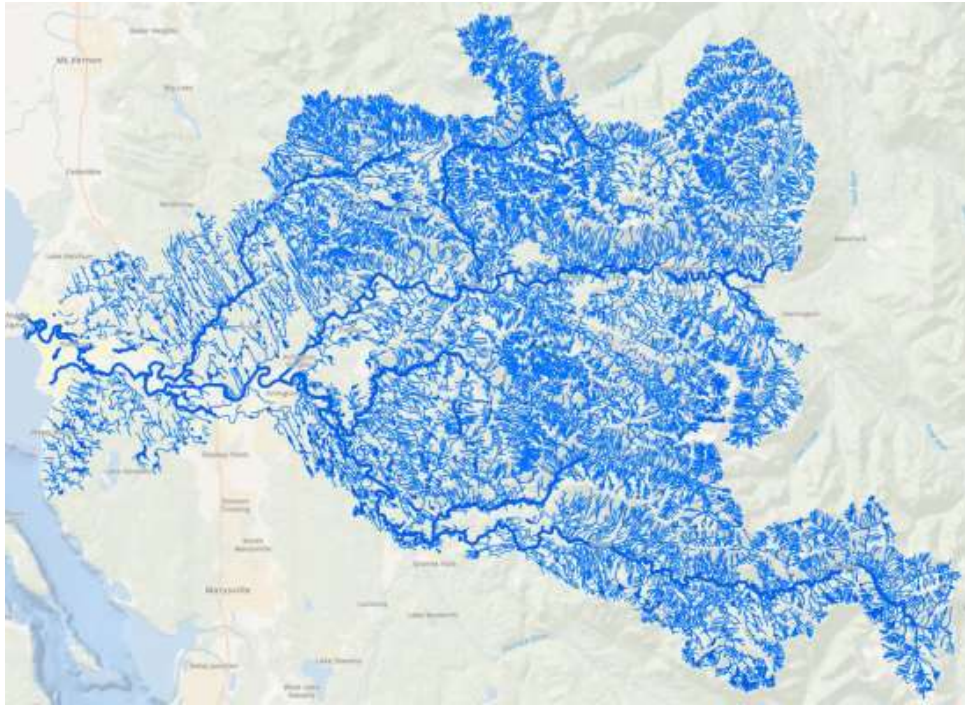
- Evaluate EDH
- Local Data
- 3DHP evaluation



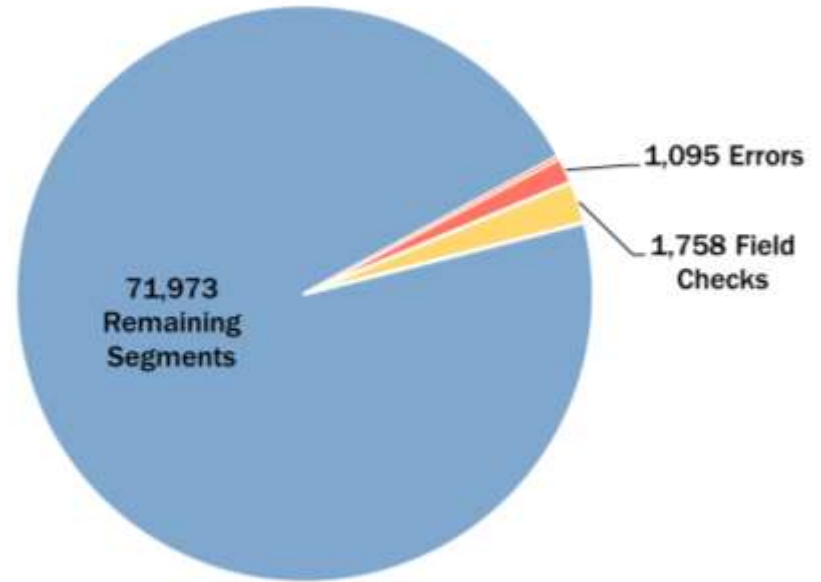
Final Report: [Ecology.wa.gov/WASHD](https://ecology.wa.gov/WASHD)

**7,000 total miles**





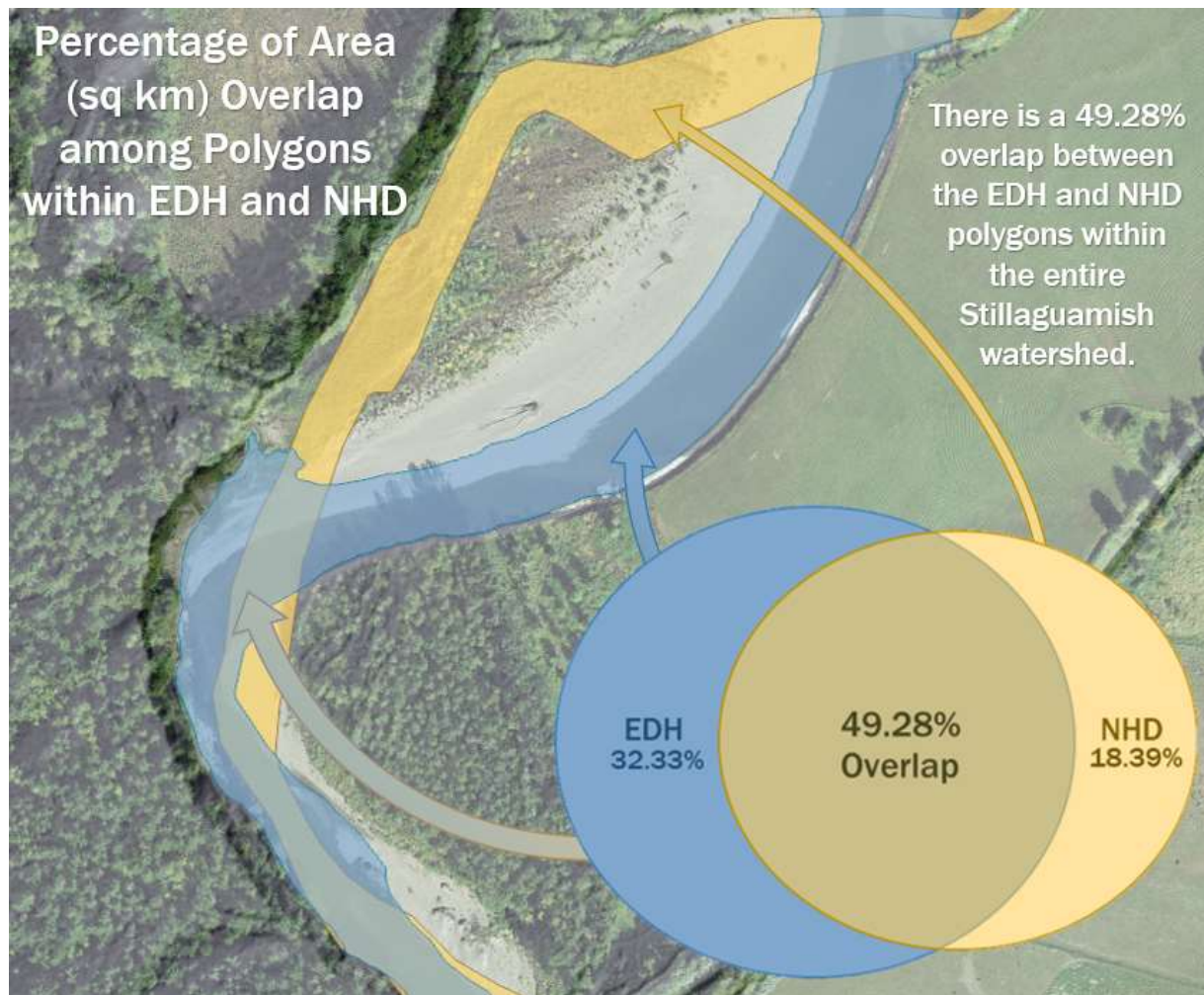
**1.6% error rate of segments**



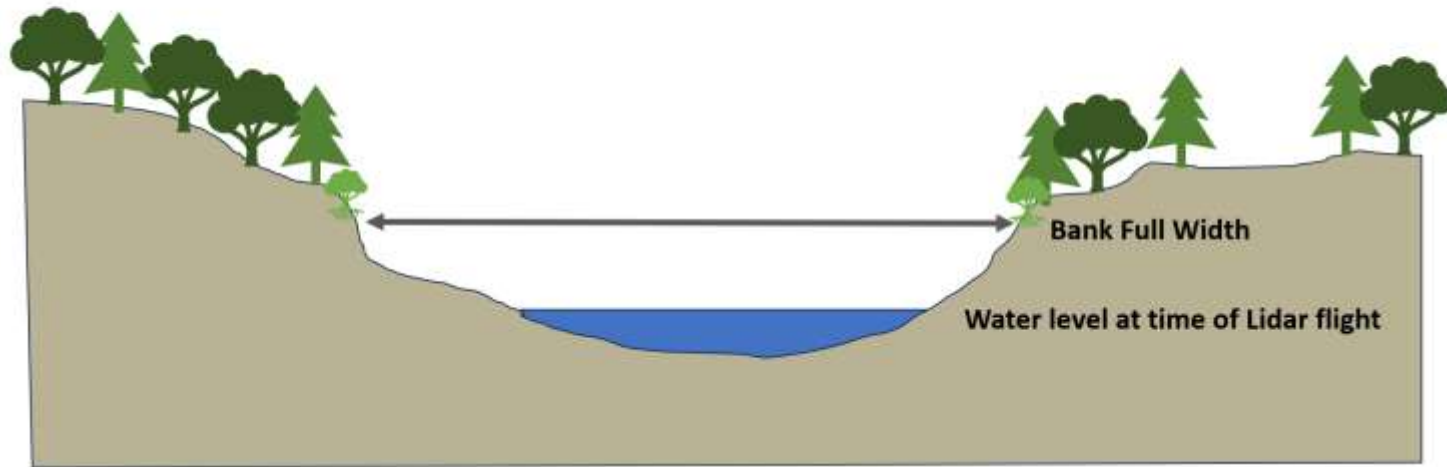


Percentage of Area  
(sq km) Overlap  
among Polygons  
within EDH and NHD

There is a 49.28%  
overlap between  
the EDH and NHD  
polygons within  
the entire  
Stillaguamish  
watershed.

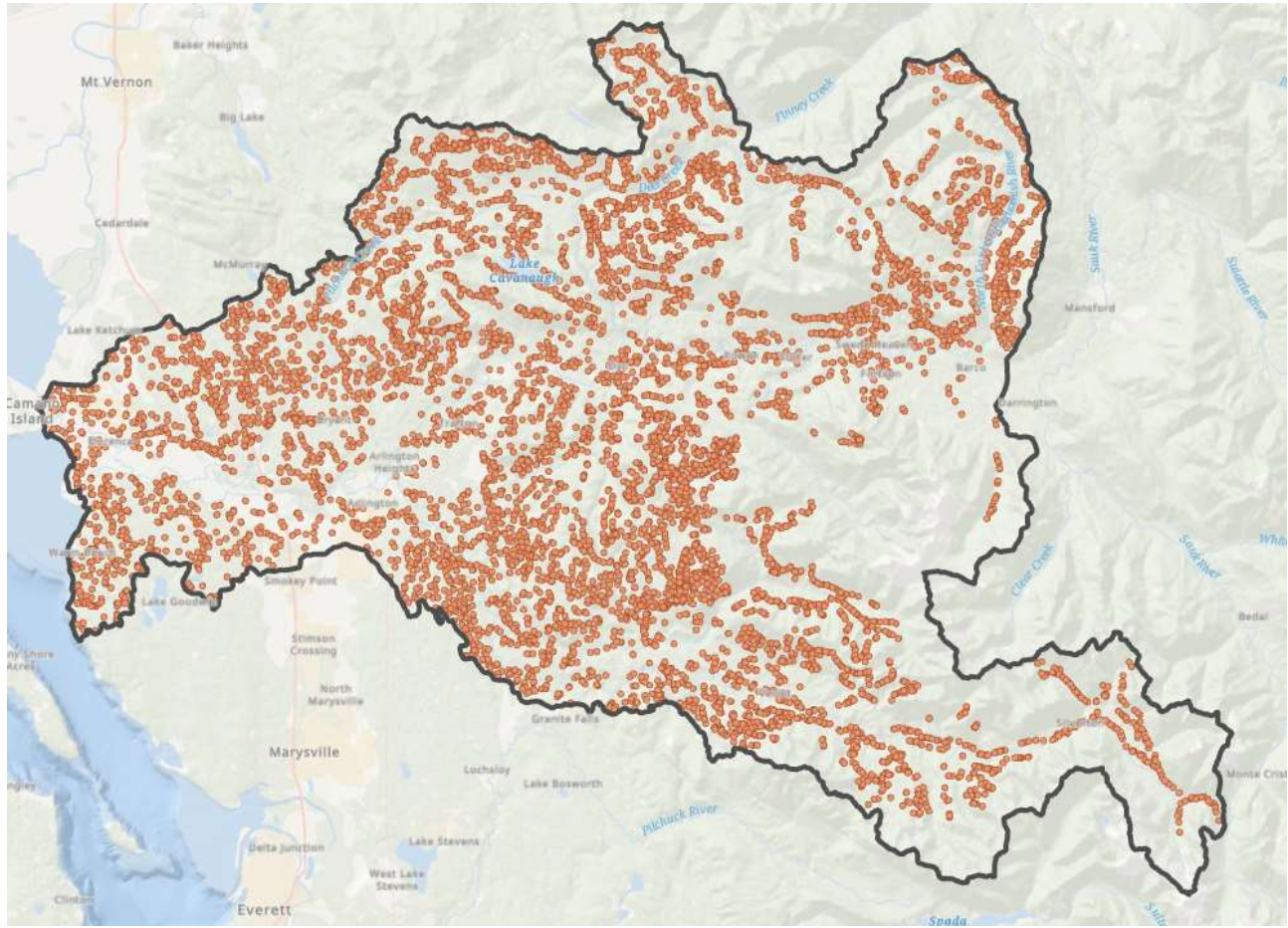


## Pilot evaluation (Bank Full Width)











## NHD

- Reachcodes
- Perennial/Intermittent
- Geometric Network

## 3DHP

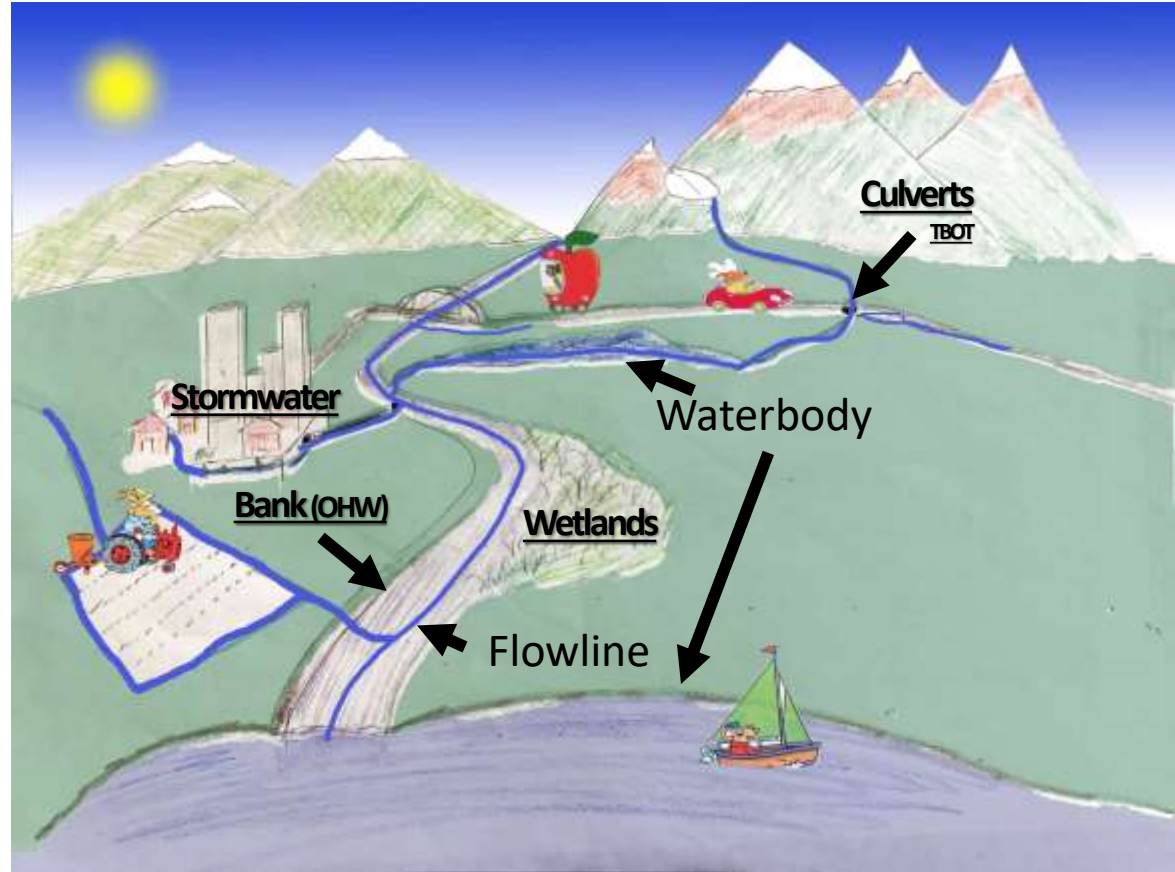
- Mainstem ID
- Stream Order
- Flow Permanence

## WASHD HydroPlus

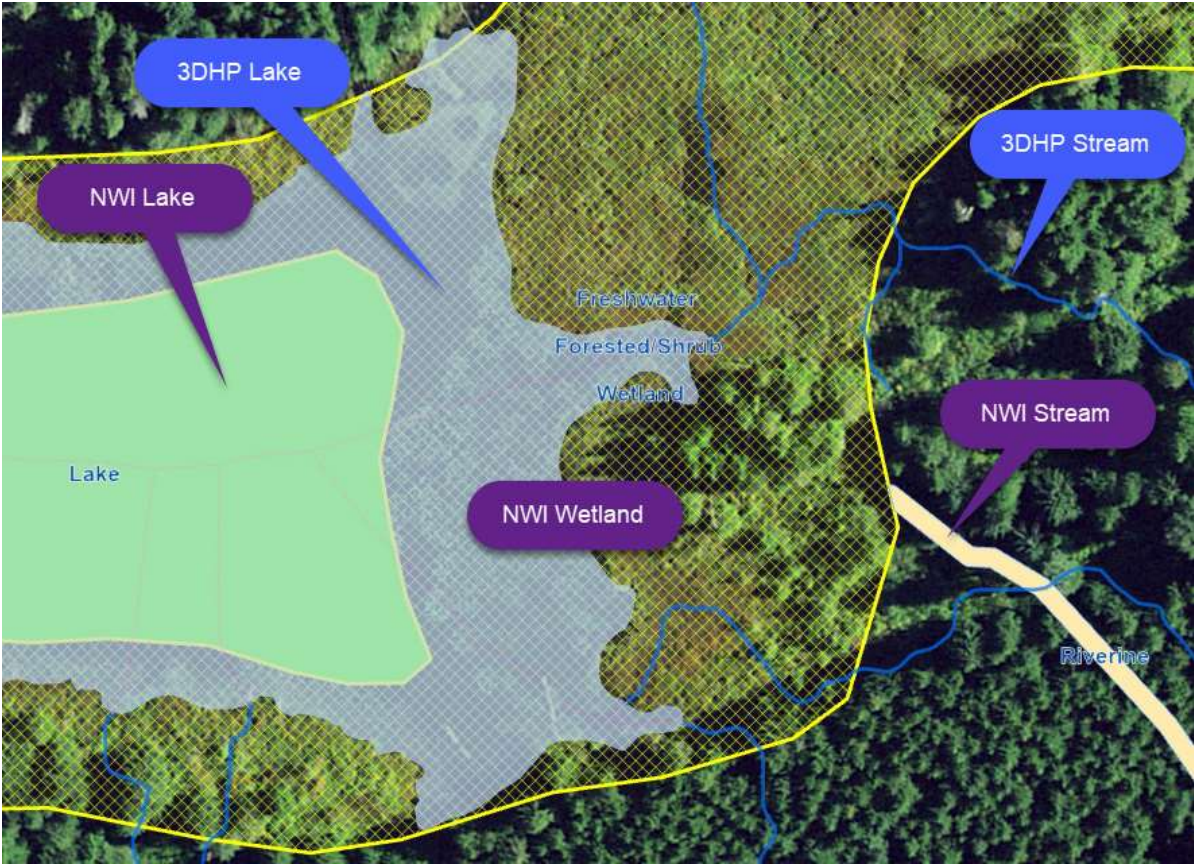
- Stream Initiation
- Trace Network (Arc Pro)
- Bank Full Width (Active channel)
- Stormwater
- Channel Migration Zone
- Wetlands (Swamp/Marsh)

3DHP

# OneHydro



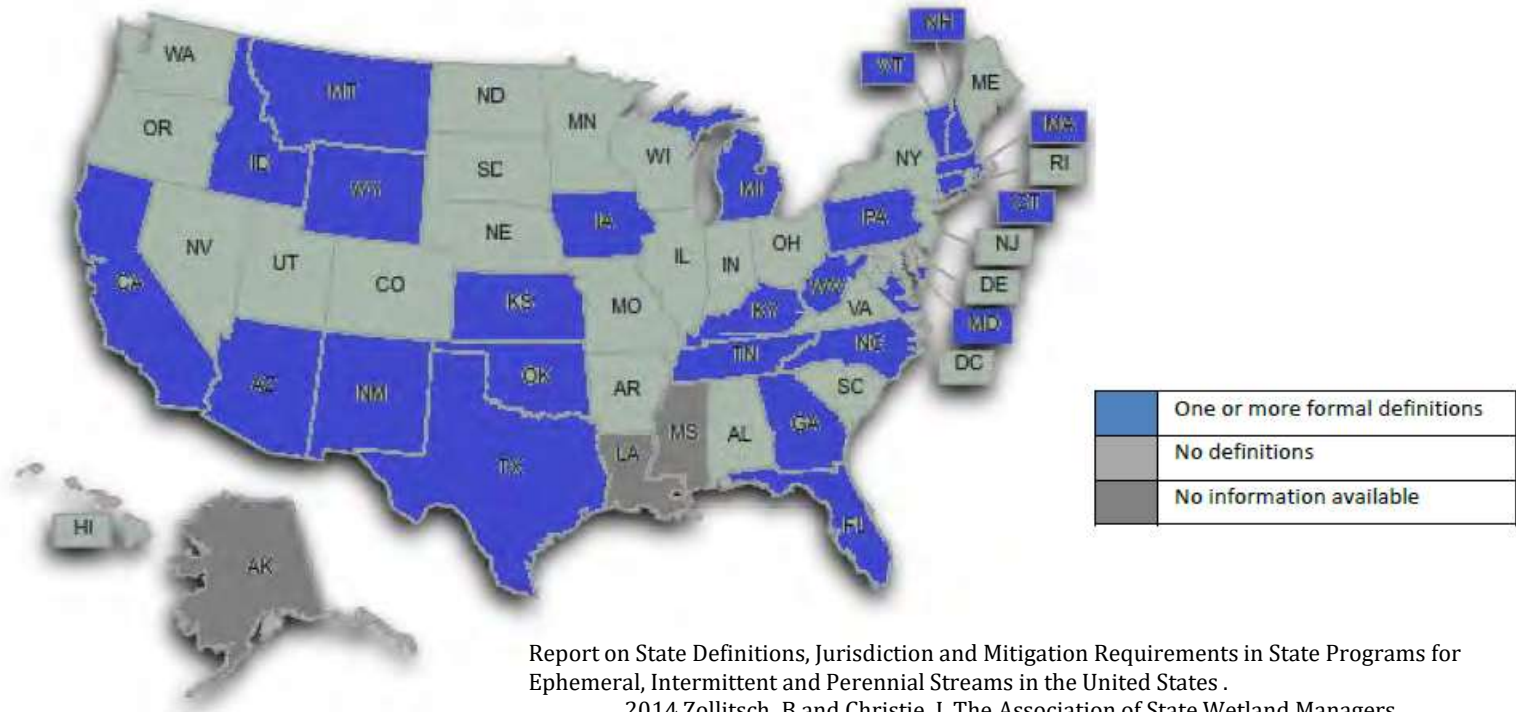
# Pilot evaluation (Wetlands - NWI)



~~Swamp/Marsh~~

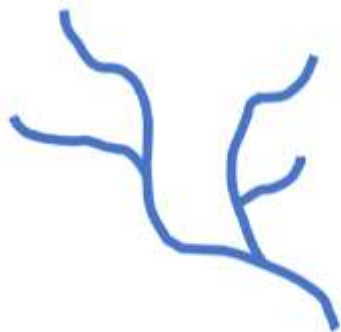
# What is a stream?

Figure 1 - States Reporting One or More Formal Definitions of the Term "Streams" in State Regulations





## Examples of data connected to the hydrography network



### Physical measures:

Stream temperature, gradient, flow



### Biological measures:

Fish distribution, IBI, habitat

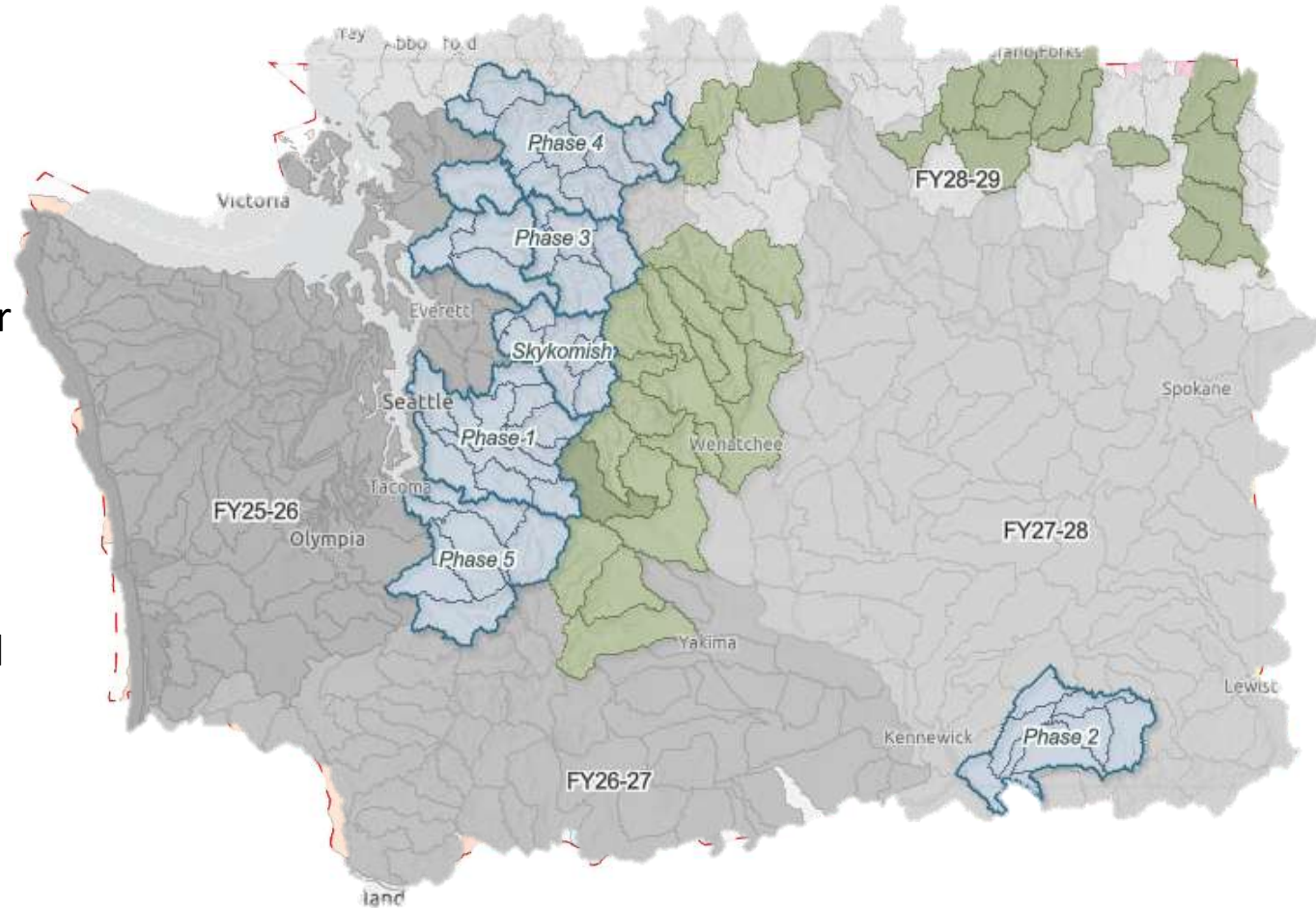


### Structures:

Culverts, blockages, gates, bridges, rip rap

## 5 Year 3DHP Plan

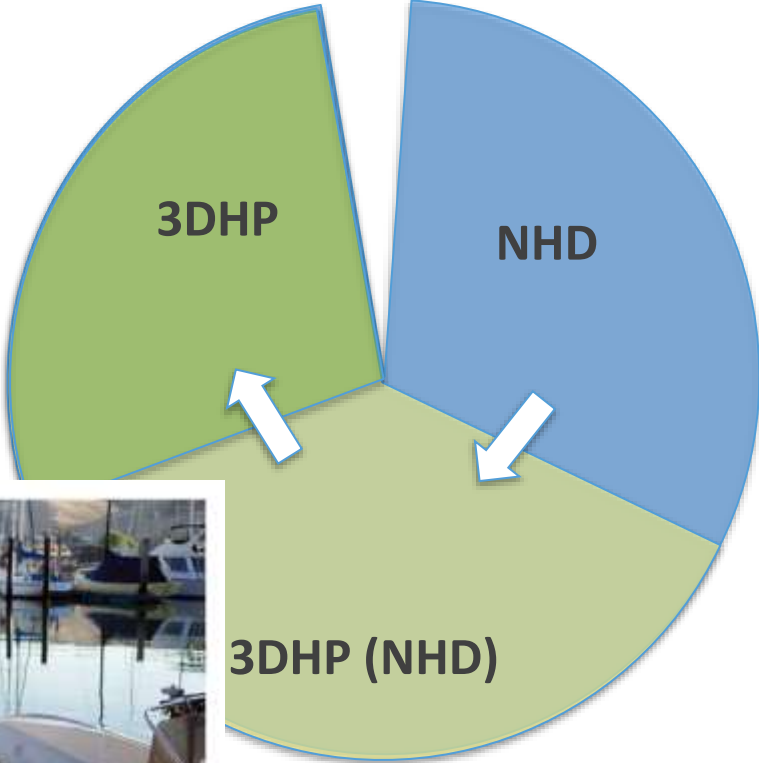
- Work with Contractor
- Stakeholders
- Funding
  - State
  - USGS
  - USFS
  - Local when needed



# Review Data Errors



# Transition to 3DHP



### Phase 3

Only 3DHP data  
*\*Mainstem ID*  
*Significant Spatial Change*

### Phase 1

Update to final NHD  
*\*ReachCode*

### Phase 2

Both NHD and 3DHP data  
*\*ReachCode*  
*\*Mainstem ID*  
*Schema Change*





# Measuring Success?

## Stakeholder Desires

- Accuracy
- Connected Attributes
- Accessibility
- Communication

But...are they

Using the Data

Engaged in program

# Communication

## Web page



## Strategic Plan



## Presentations



## Final Report



## Implementation Plan




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# Stay Connected!

Stakeholders (Local, Tribal, State)

USGS, Federal Partners

NSGIC (GIO, State Stewards)



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**<https://ecology.wa.gov/washd>**