



National Assessment Needs - Reservoir Information Gaps

Presented to:

Reservoir Partnership Workshop

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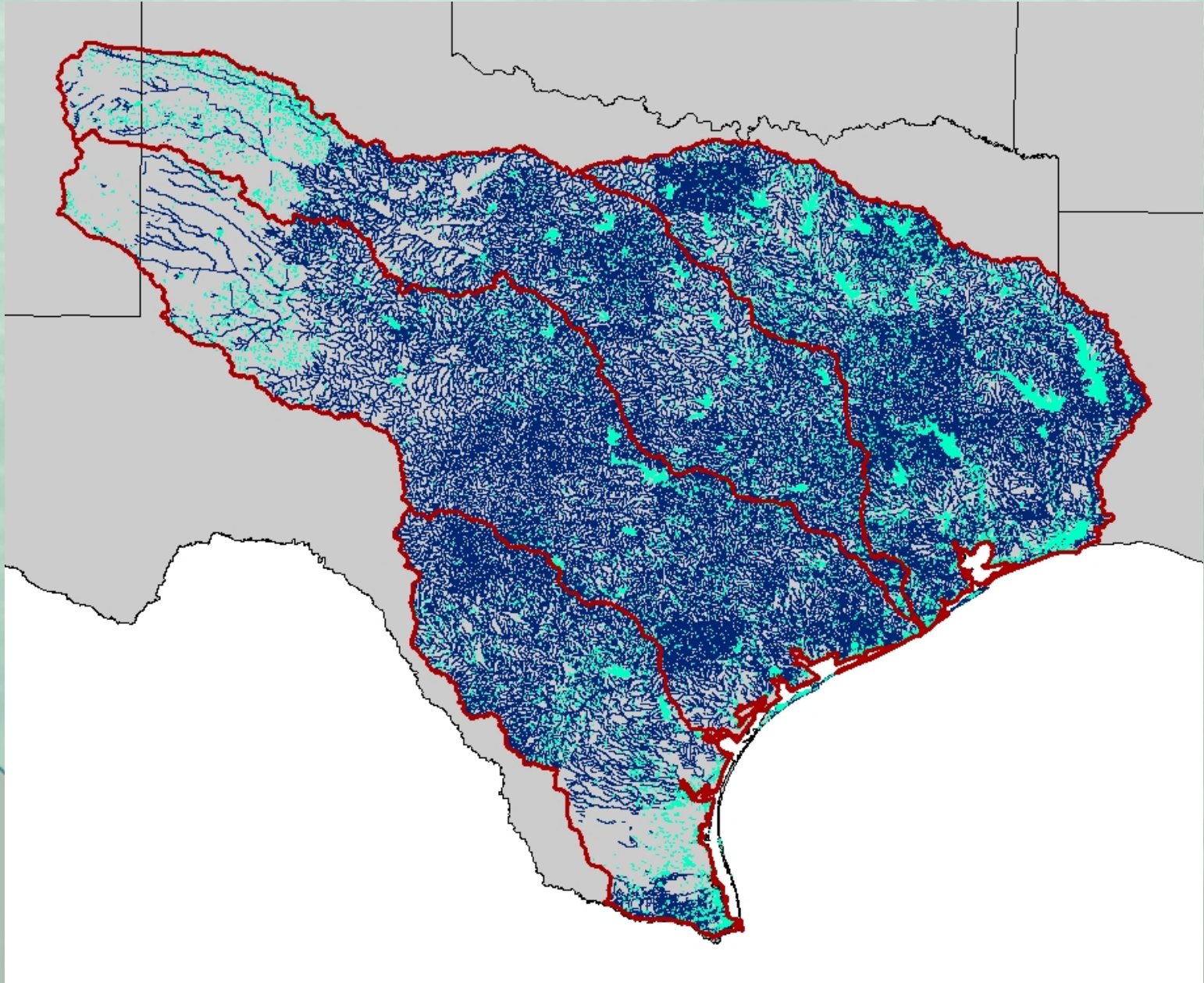
Key Gaps

- Reservoirs not labeled in NHD+
- Local catchment attribution
- Split waterbodies
- Missing waterbodies



NHDPlus Region 12 Hydrography

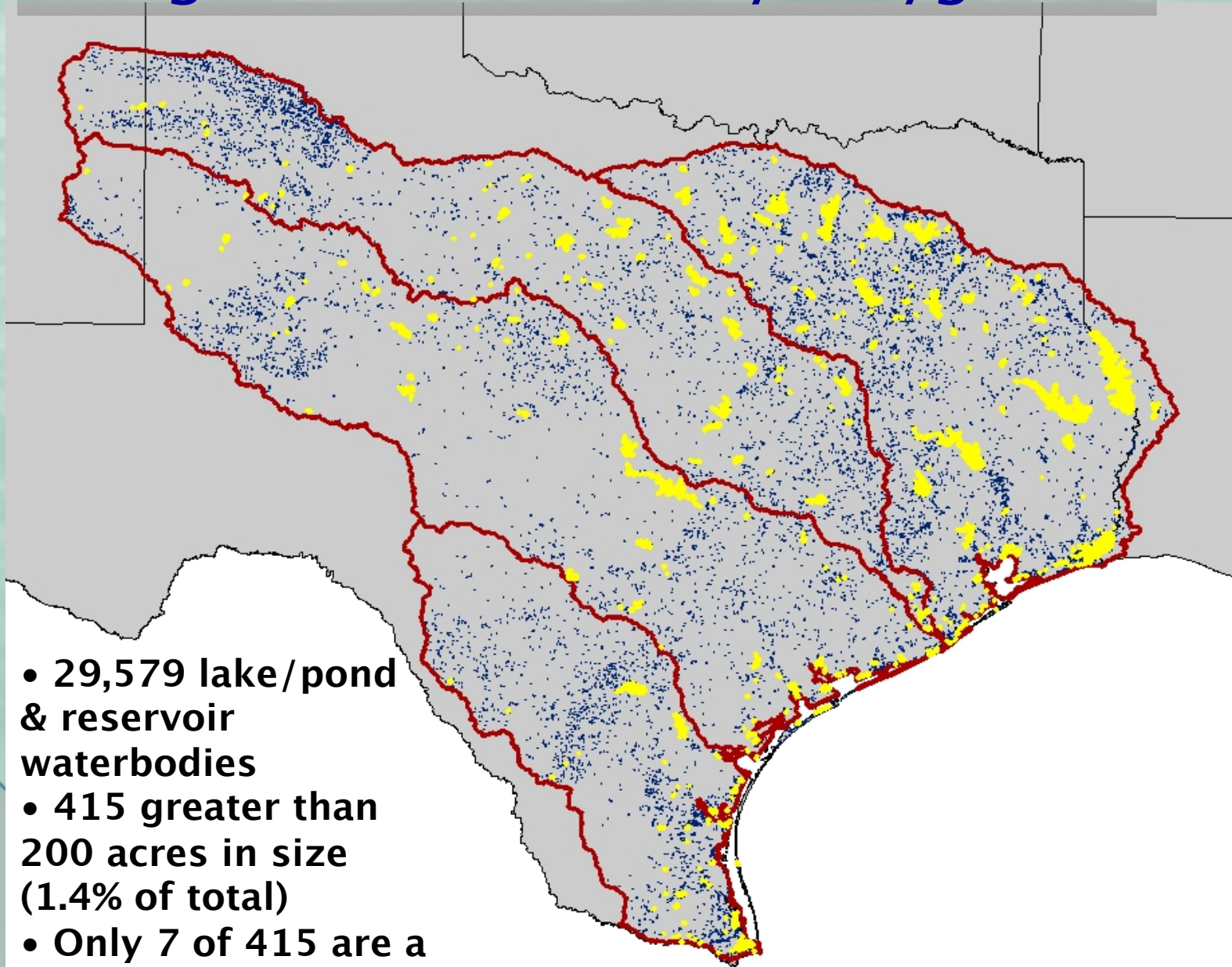
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Region 12 Waterbody Polygons

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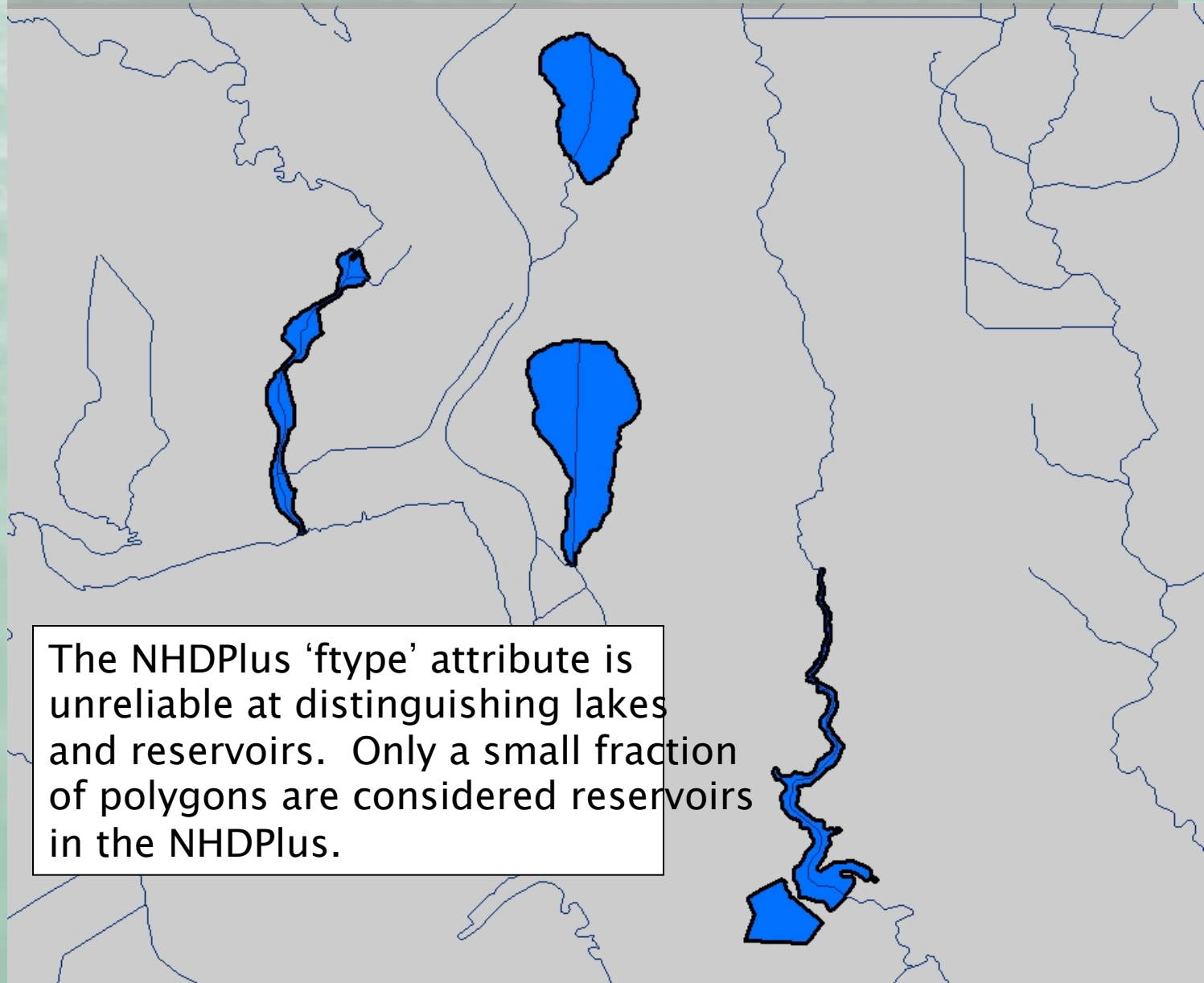
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- 29,579 lake/pond & reservoir waterbodies
- 415 greater than 200 acres in size (1.4% of total)
- Only 7 of 415 are a 'reservoir' feature type in NHDPlus



Challenge 1 - Identifying Lakes vs. Reservoirs



The NHDPlus 'ftype' attribute is unreliable at distinguishing lakes and reservoirs. Only a small fraction of polygons are considered reservoirs in the NHDPlus.

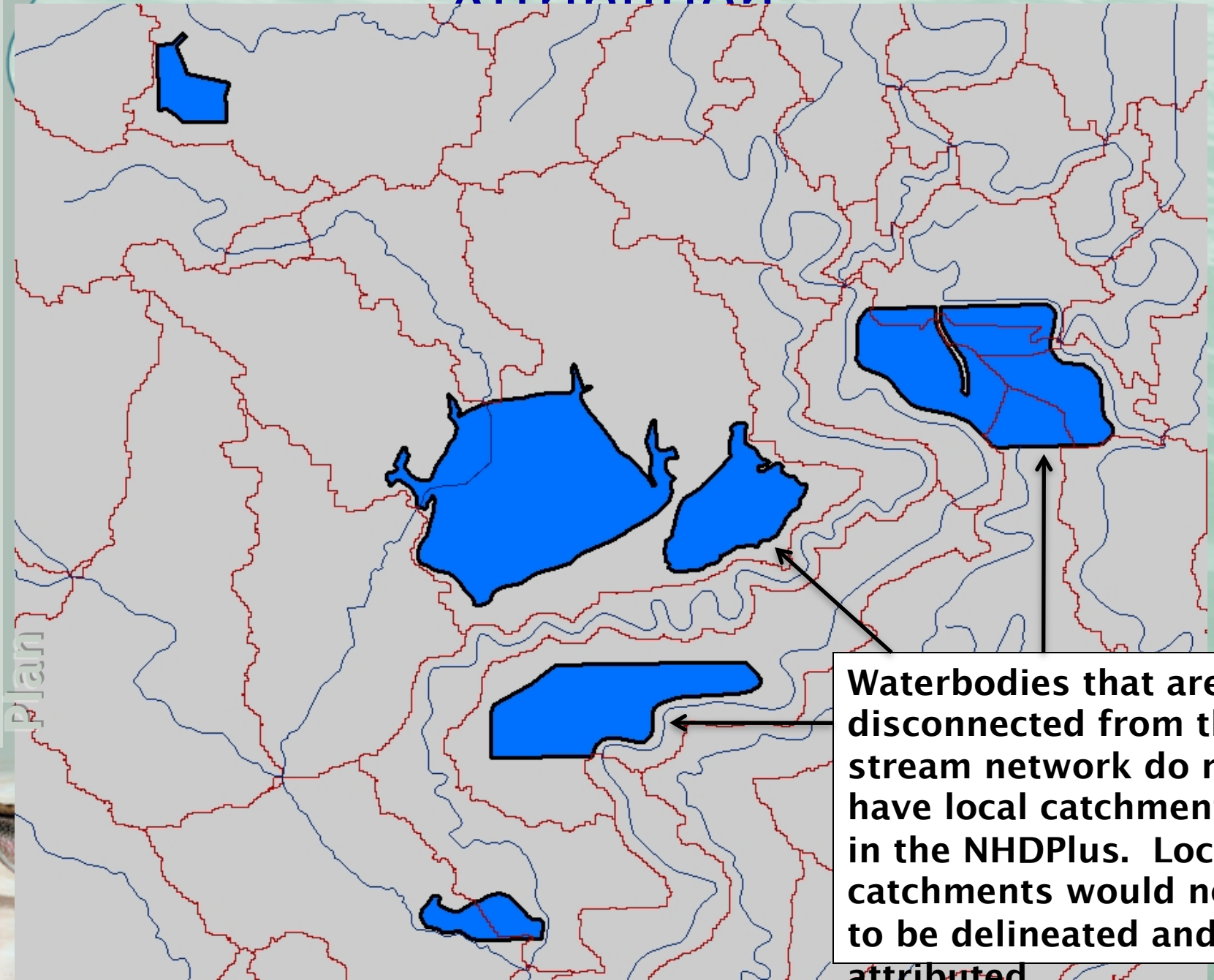


Challenge 2 - Local Catchment Attribution

Attribution

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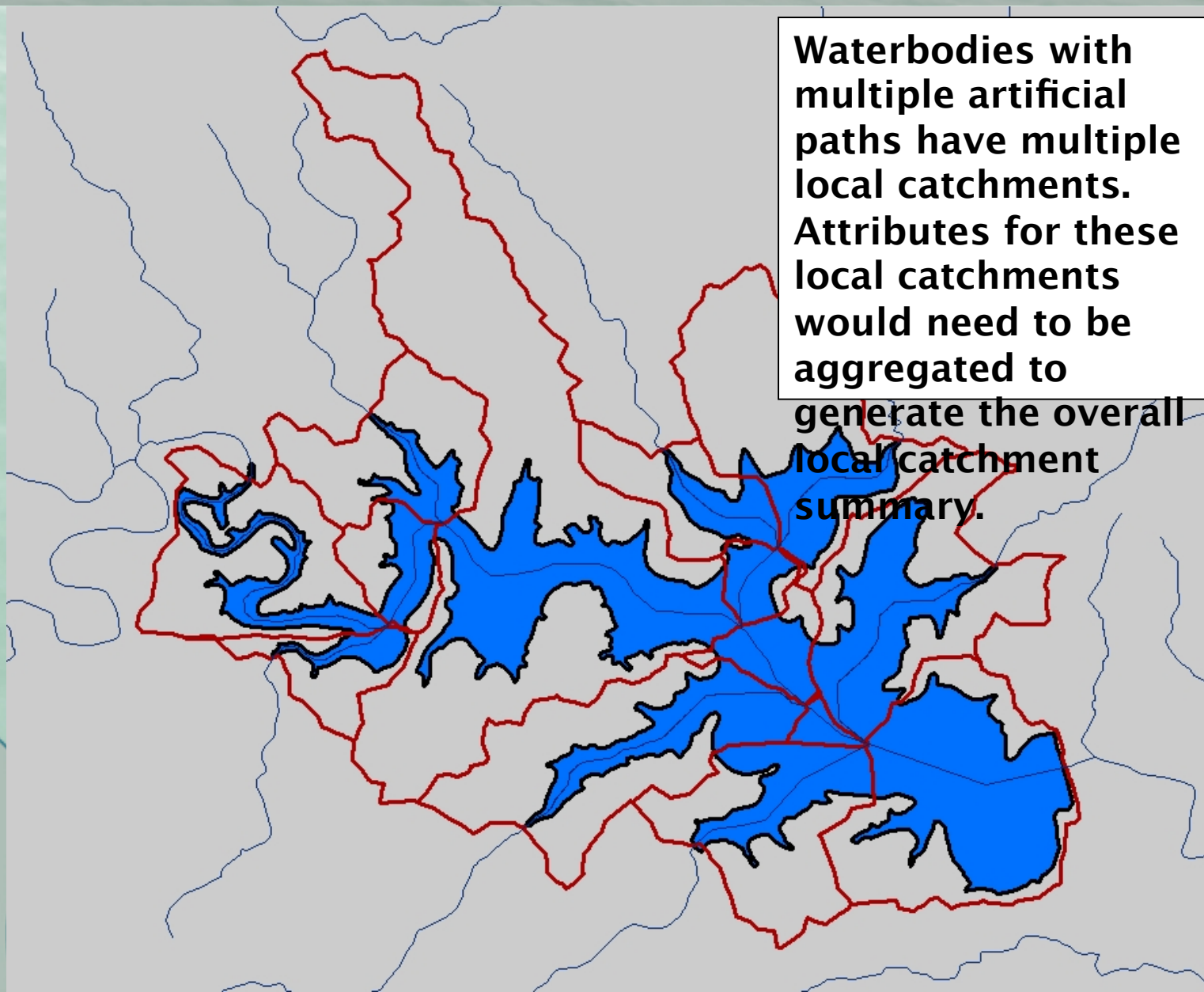
Waterbodies that are disconnected from the stream network do not have local catchments in the NHDPlus. Local catchments would need to be delineated and attributed



Challenge 2 - Local Catchment Attribution

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Waterbodies with multiple artificial paths have multiple local catchments. Attributes for these local catchments would need to be aggregated to generate the overall local catchment summary.



Catchment Summary

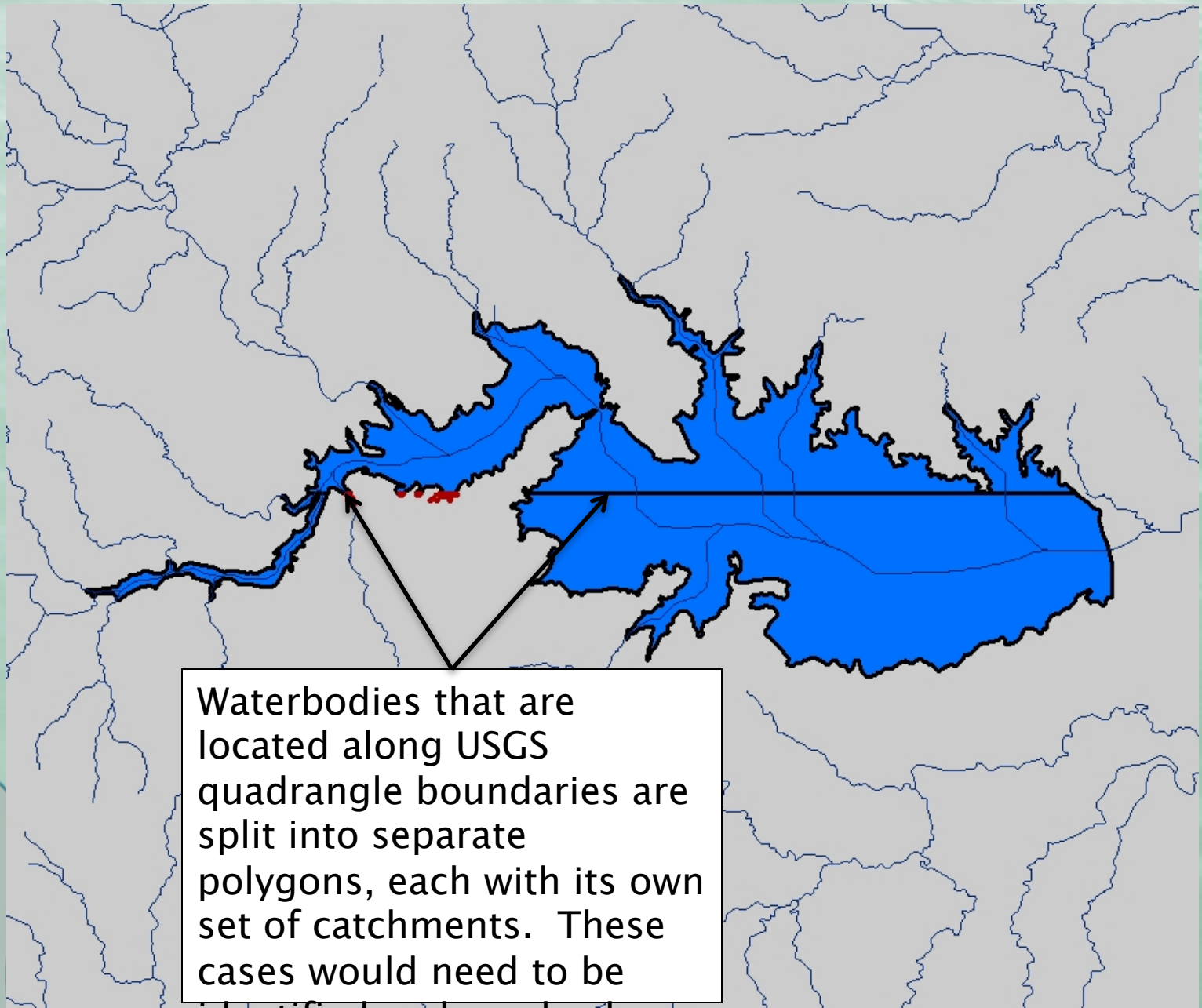
- **Texas Example**
 - 29,579 waterbodies (lakes and reservoirs)
 - 6,209 have catchments (21%)
- **Nationally (Lower 48)**
 - 389,867 waterbodies
 - 122,165 have catchments (31%)



Challenge 3 - Split Waterbodies

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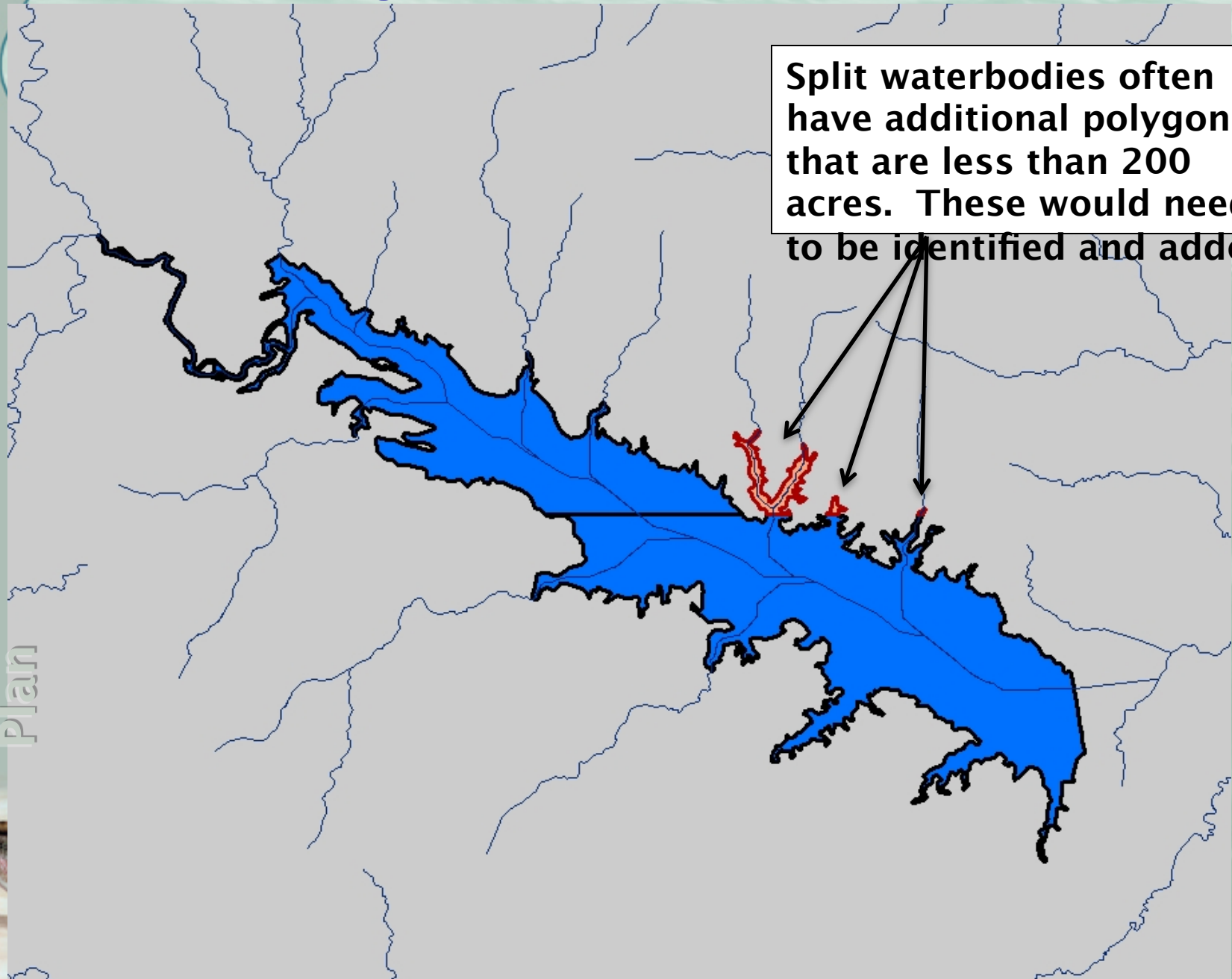


Waterbodies that are located along USGS quadrangle boundaries are split into separate polygons, each with its own set of catchments. These cases would need to be identified and resolved.

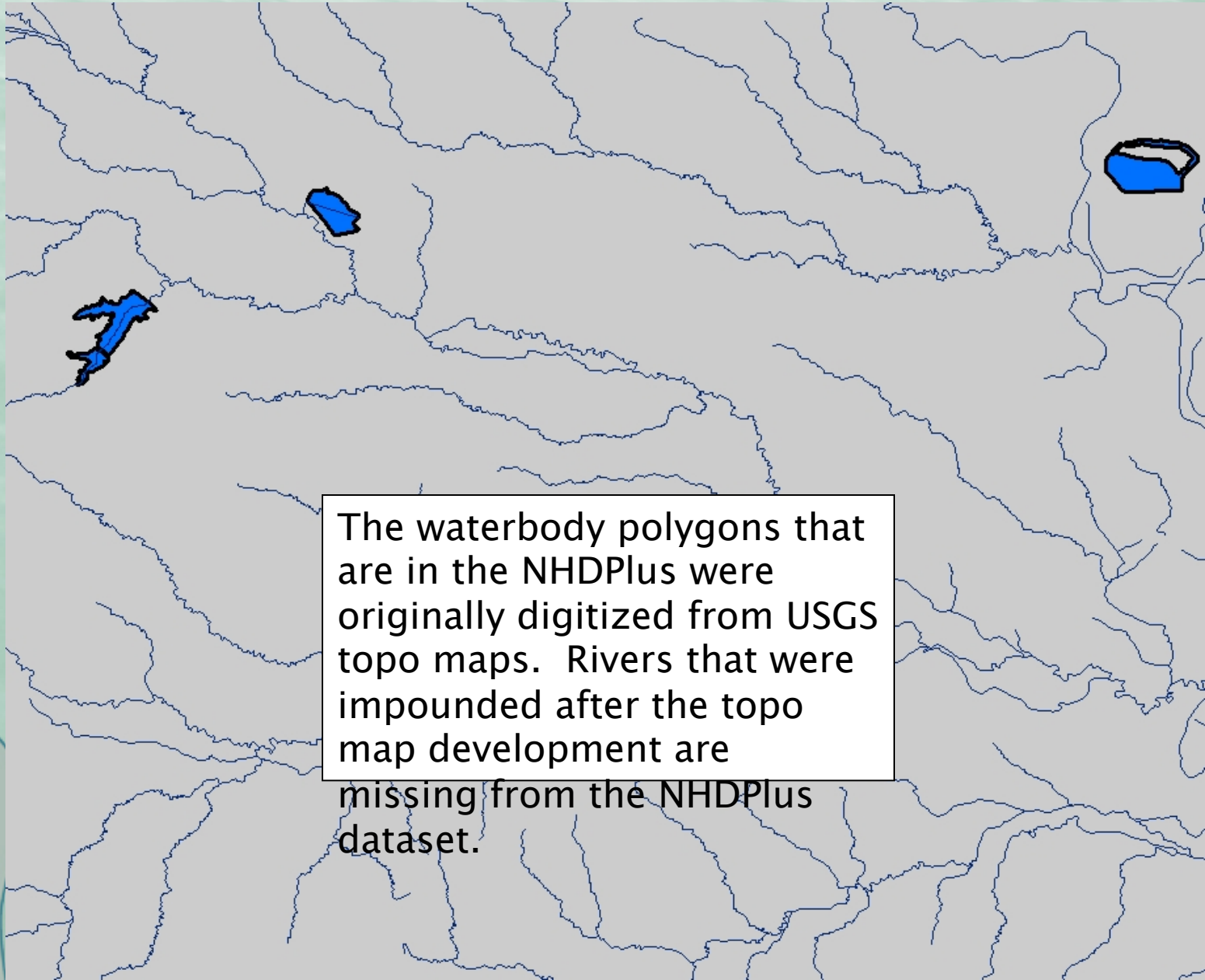


Challenge 3 - Split Waterbodies

Split waterbodies often have additional polygons that are less than 200 acres. These would need to be identified and added.



Challenge 4 - Missing Reservoirs



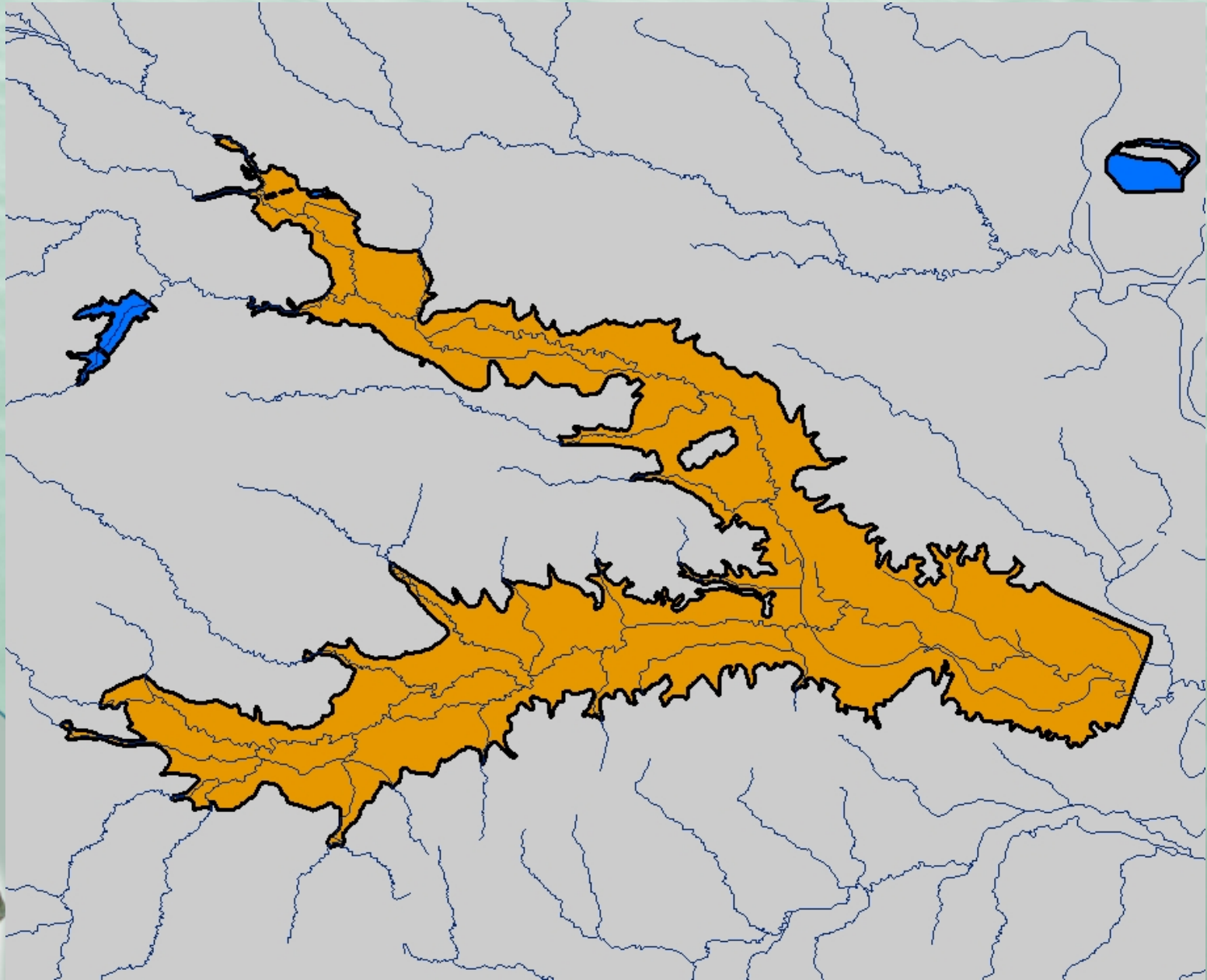
The waterbody polygons that are in the NHDPlus were originally digitized from USGS topo maps. Rivers that were impounded after the topo map development are missing from the NHDPlus dataset.



Challenge 4 - Missing Reservoirs

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Difficulty to Address

- **Reservoirs not labeled in NHD+**
 - Low difficulty
 - Examine database
- **Split waterbodies**
 - Medium difficulty
 - Examine database and join
- **Missing waterbodies**
 - Medium to high difficulty
 - Examine database and linework – ID Easy
 - ArcGIS and NHD+ to insert linework
- **Local catchment attribution**
 - High difficulty
 - ArcGIS and NHD+ experience





Thank You!

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