

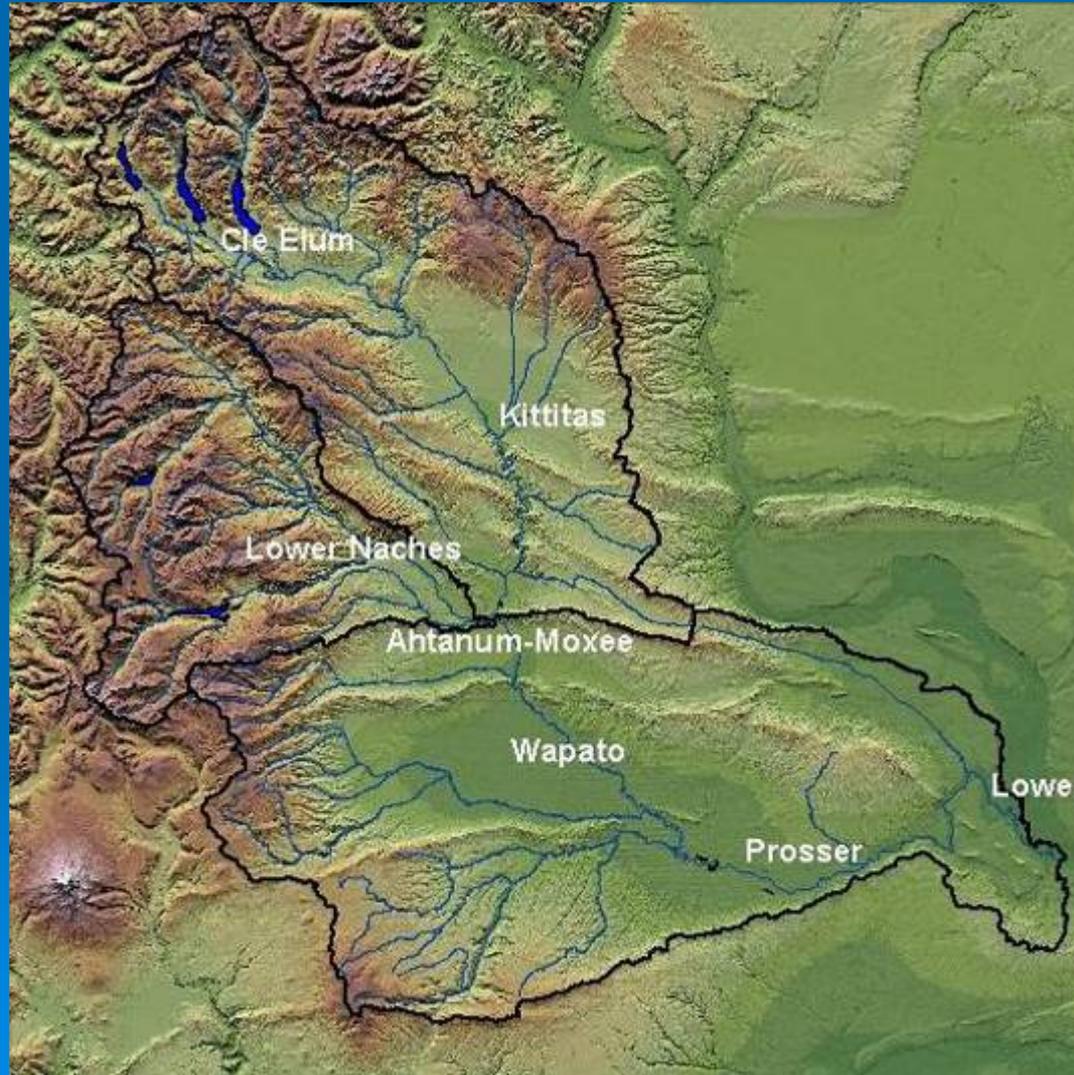
Floodplain Restoration for Fisheries Habitat in the Yakima Basin

YRBWEP III Workgroup

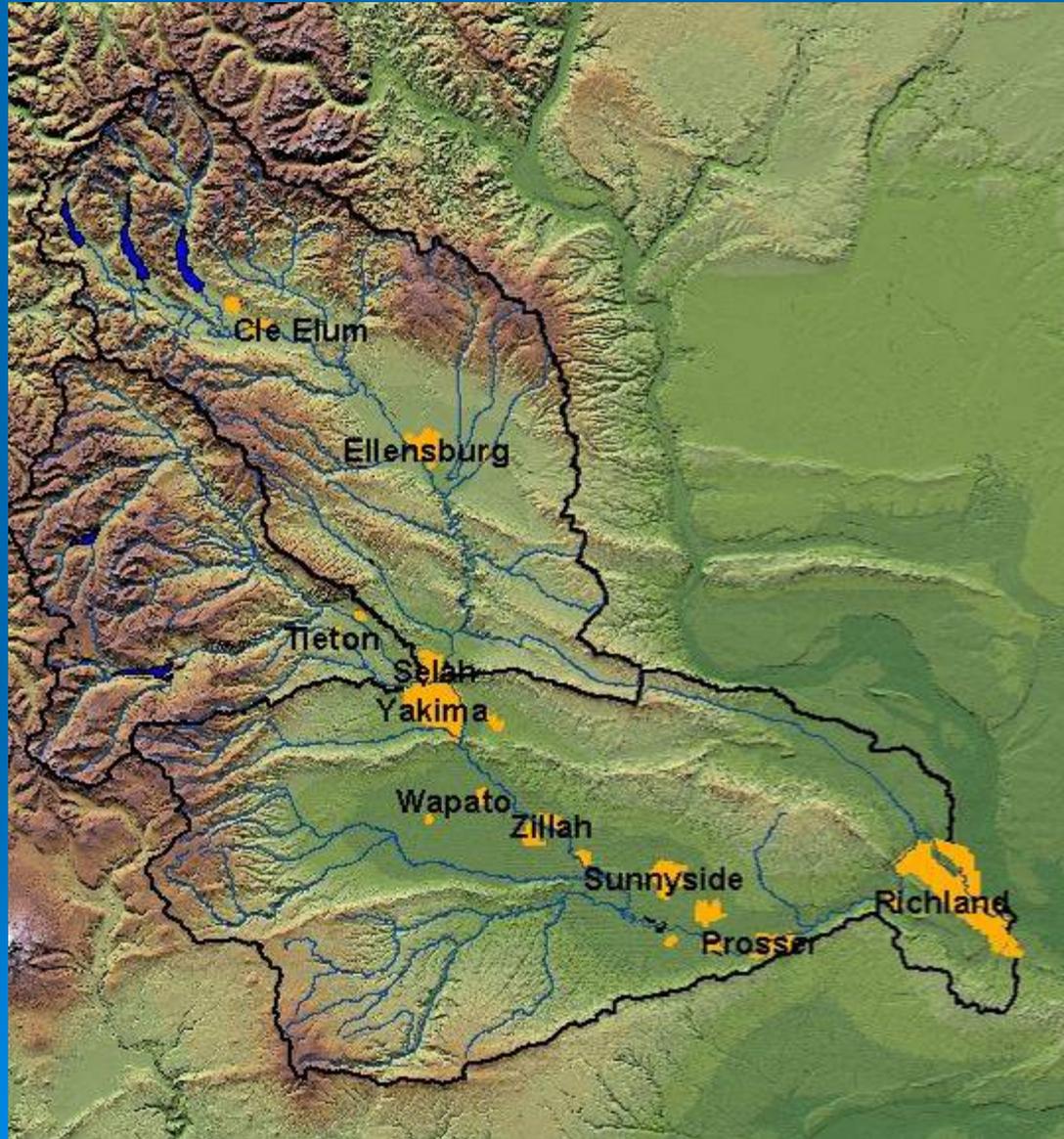
July 29, 2009



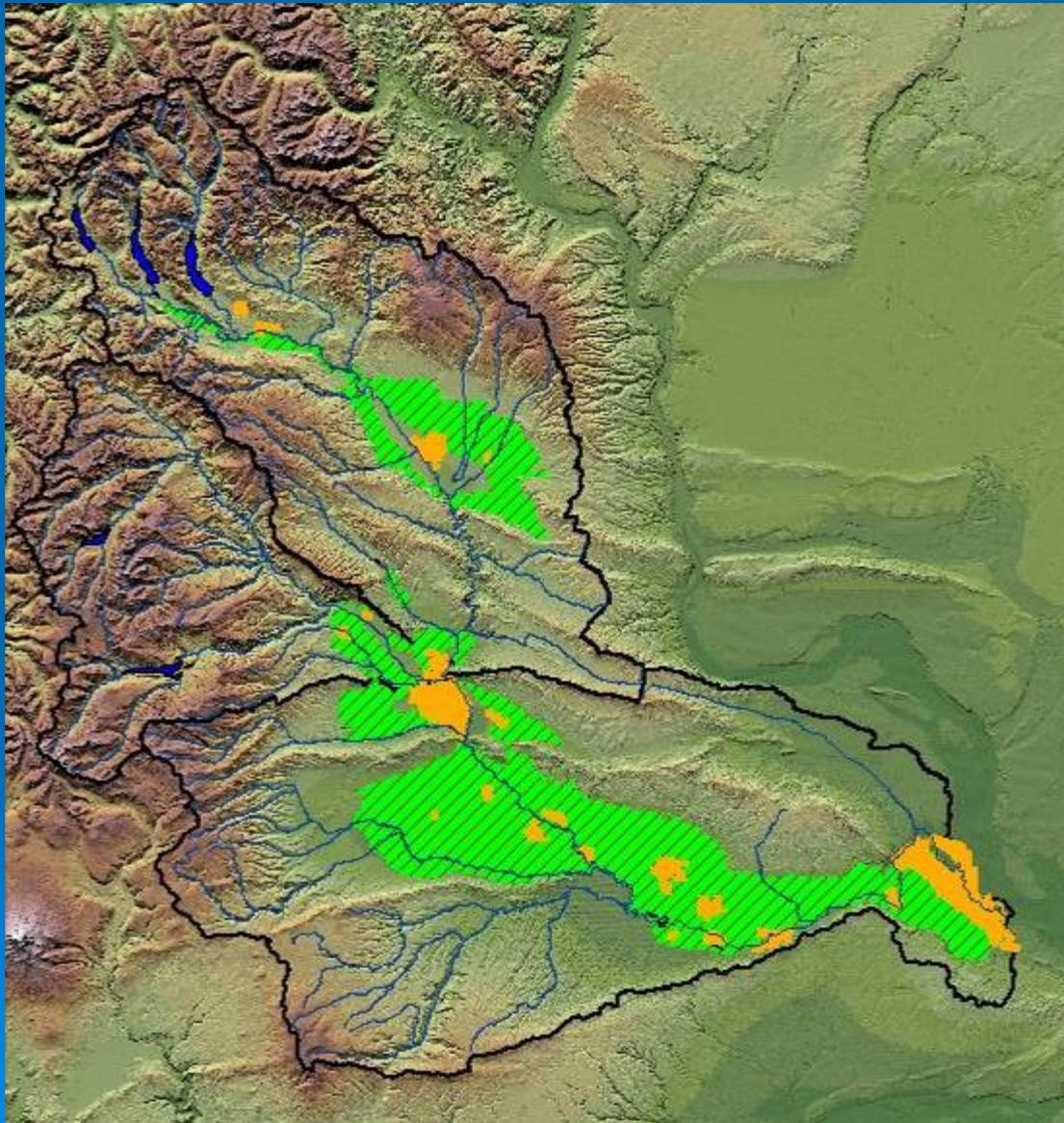
Major Structural Basins of the Yakima River Watershed

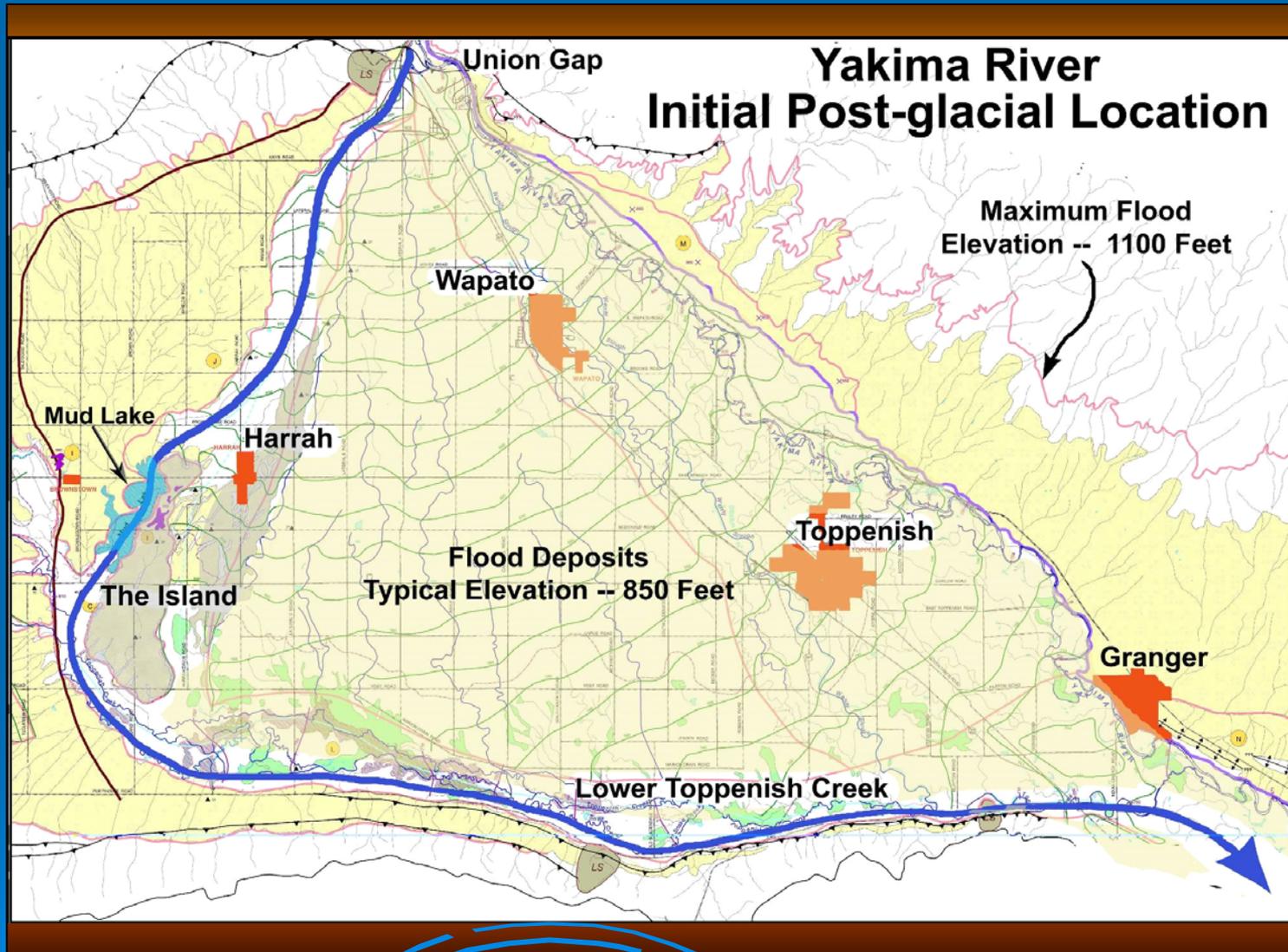


Population Centers of the Yakima Watershed

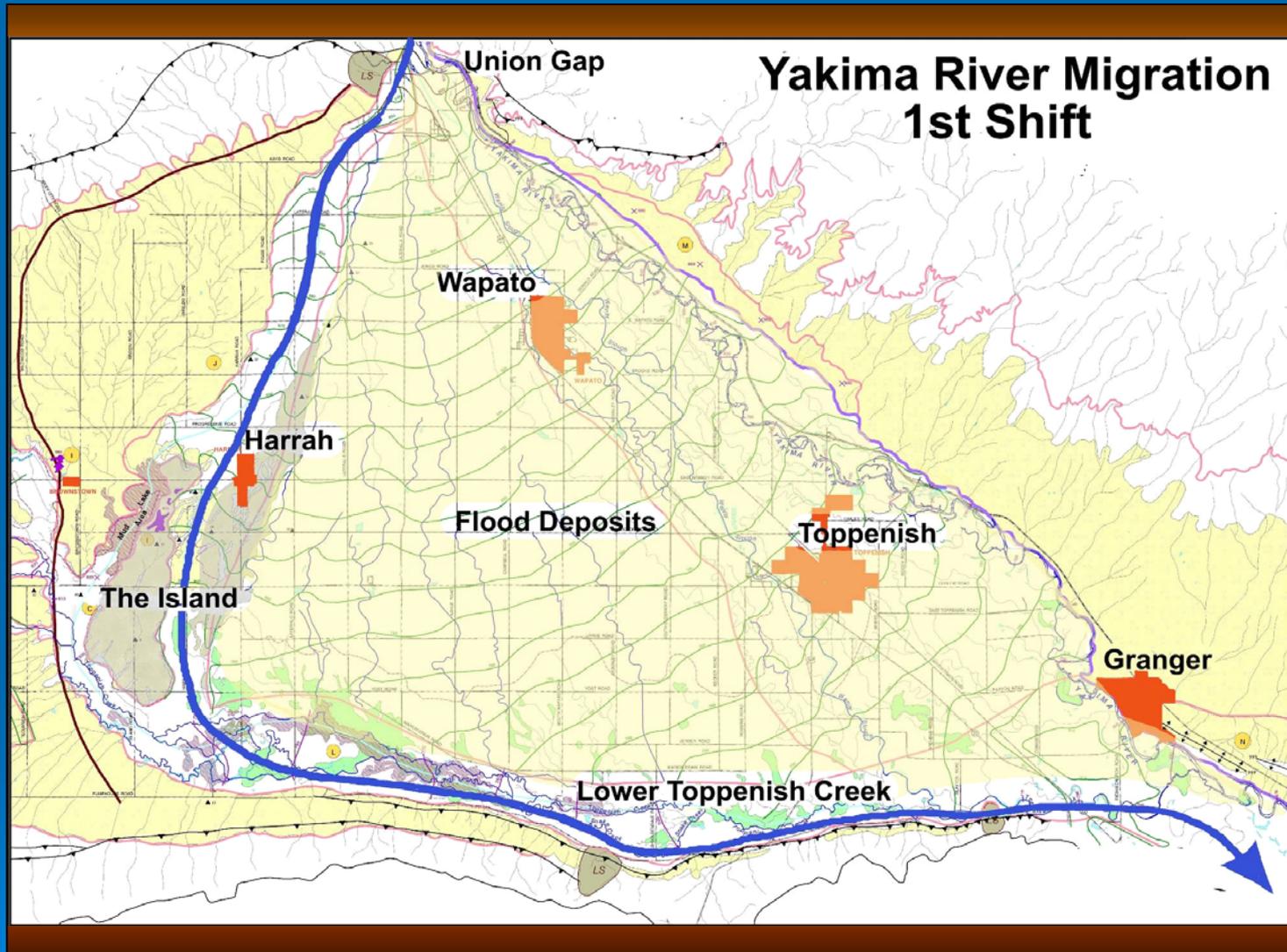


Major Irrigation Districts in the Yakima Watershed

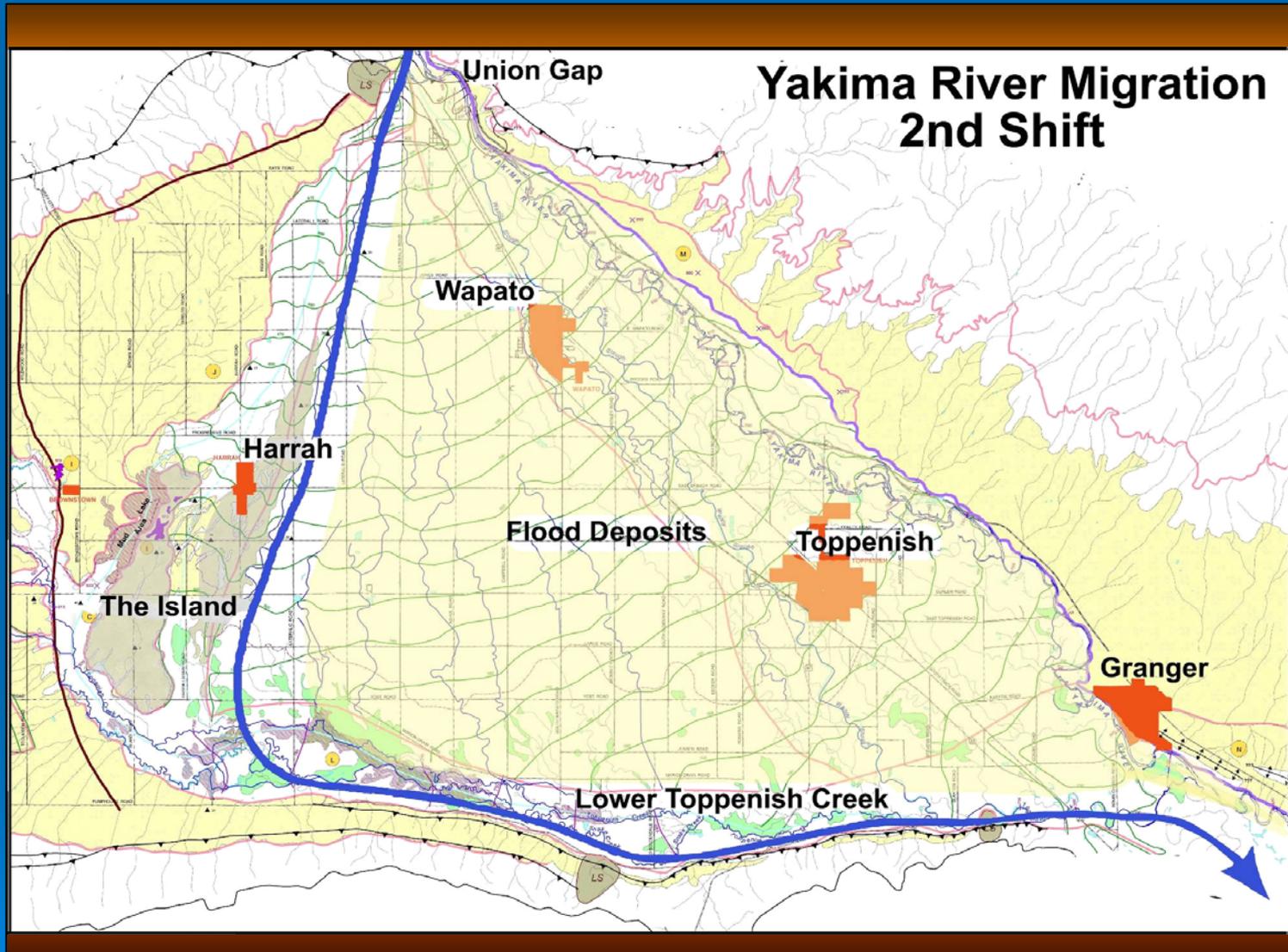




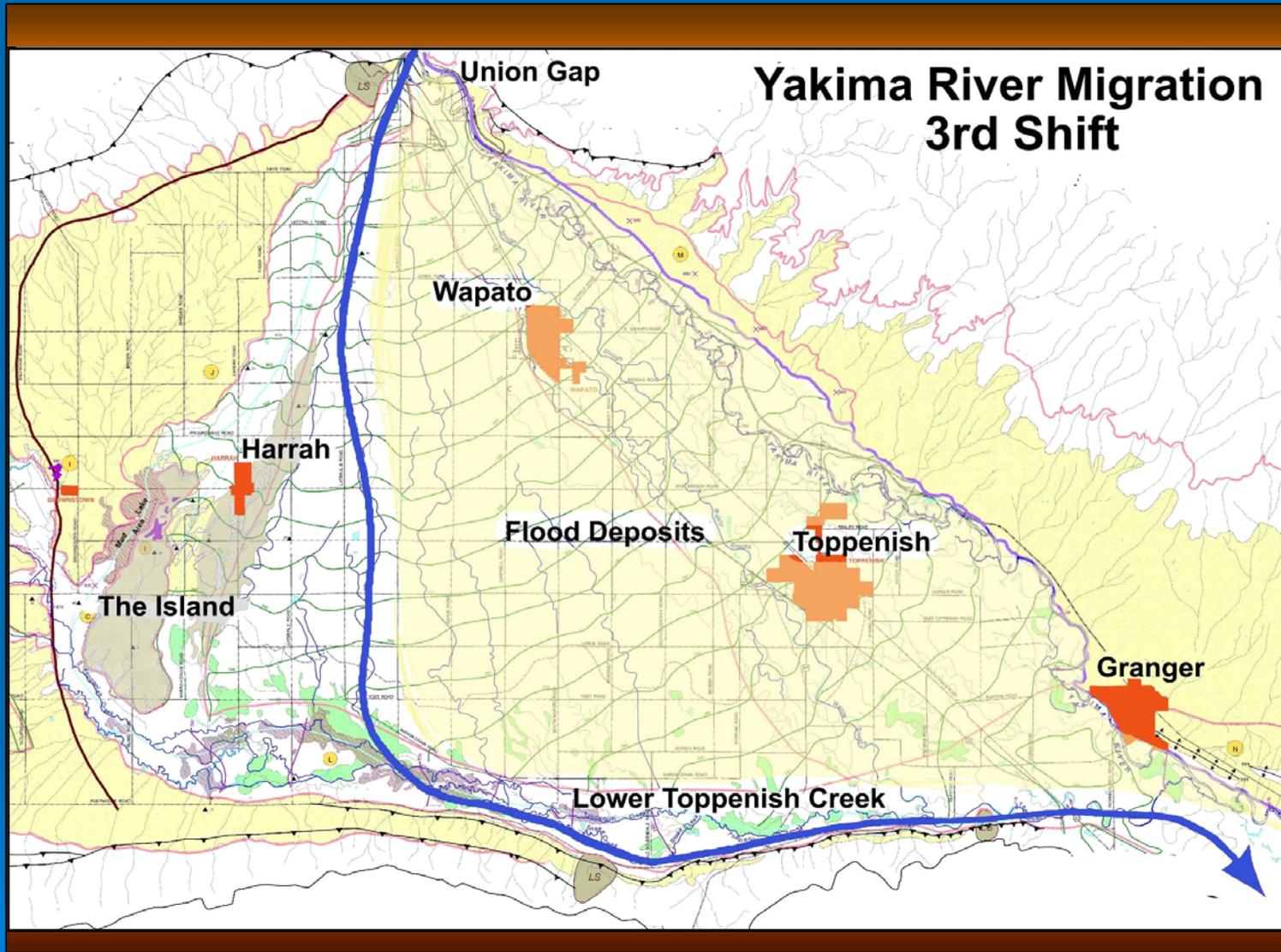
From: Toppenish Basin
Geomorphology, GeoMax, 2007



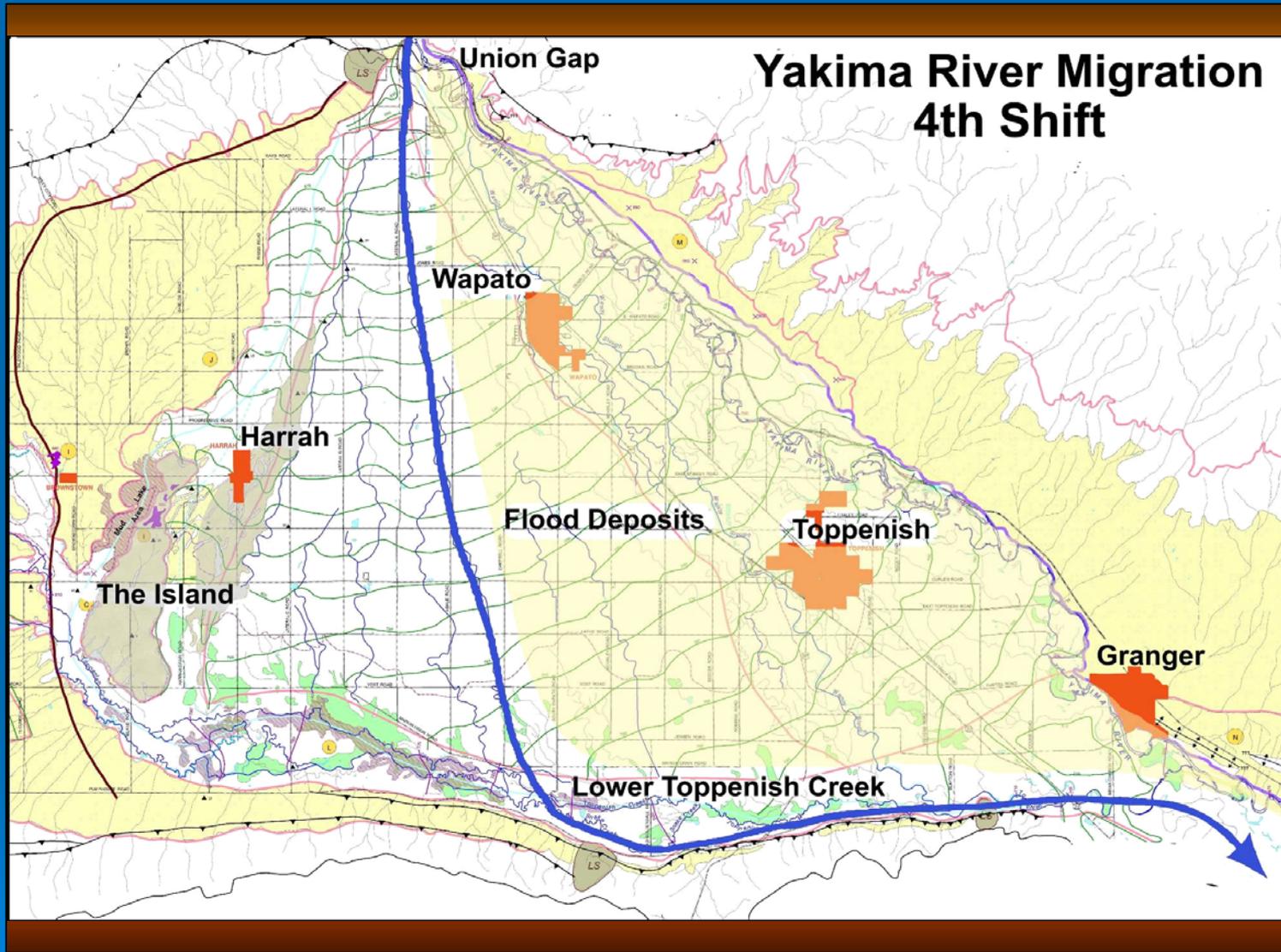
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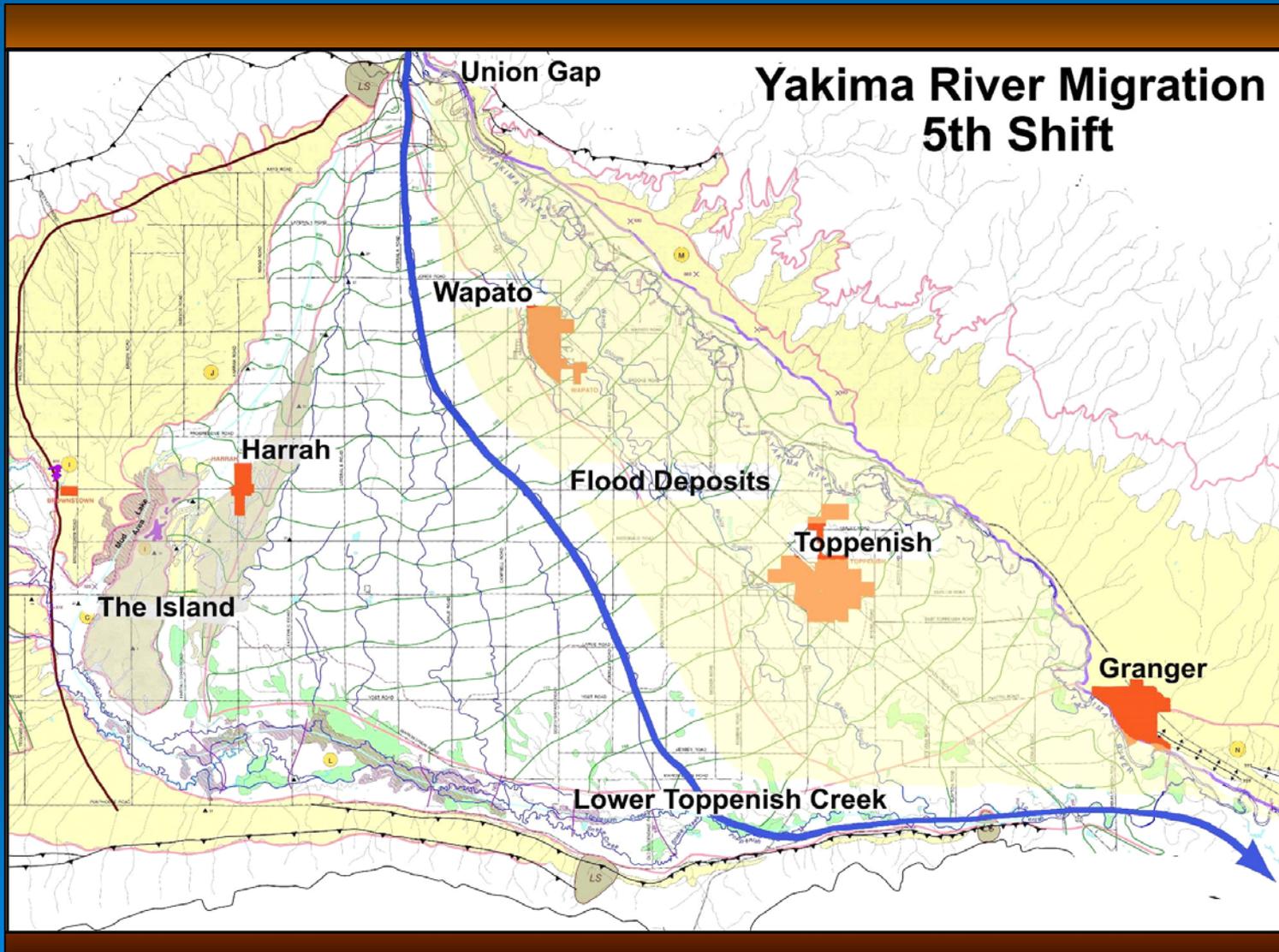
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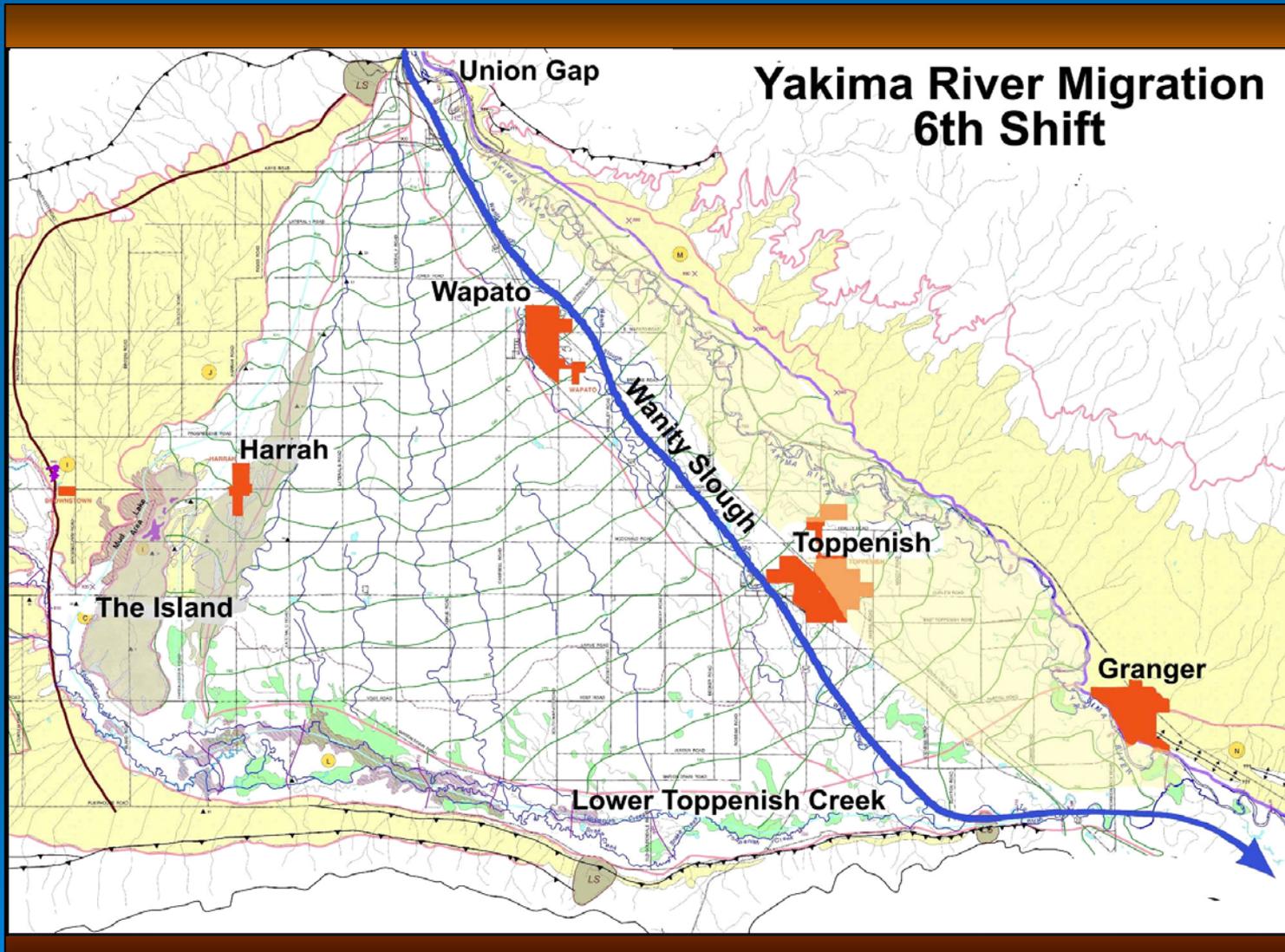
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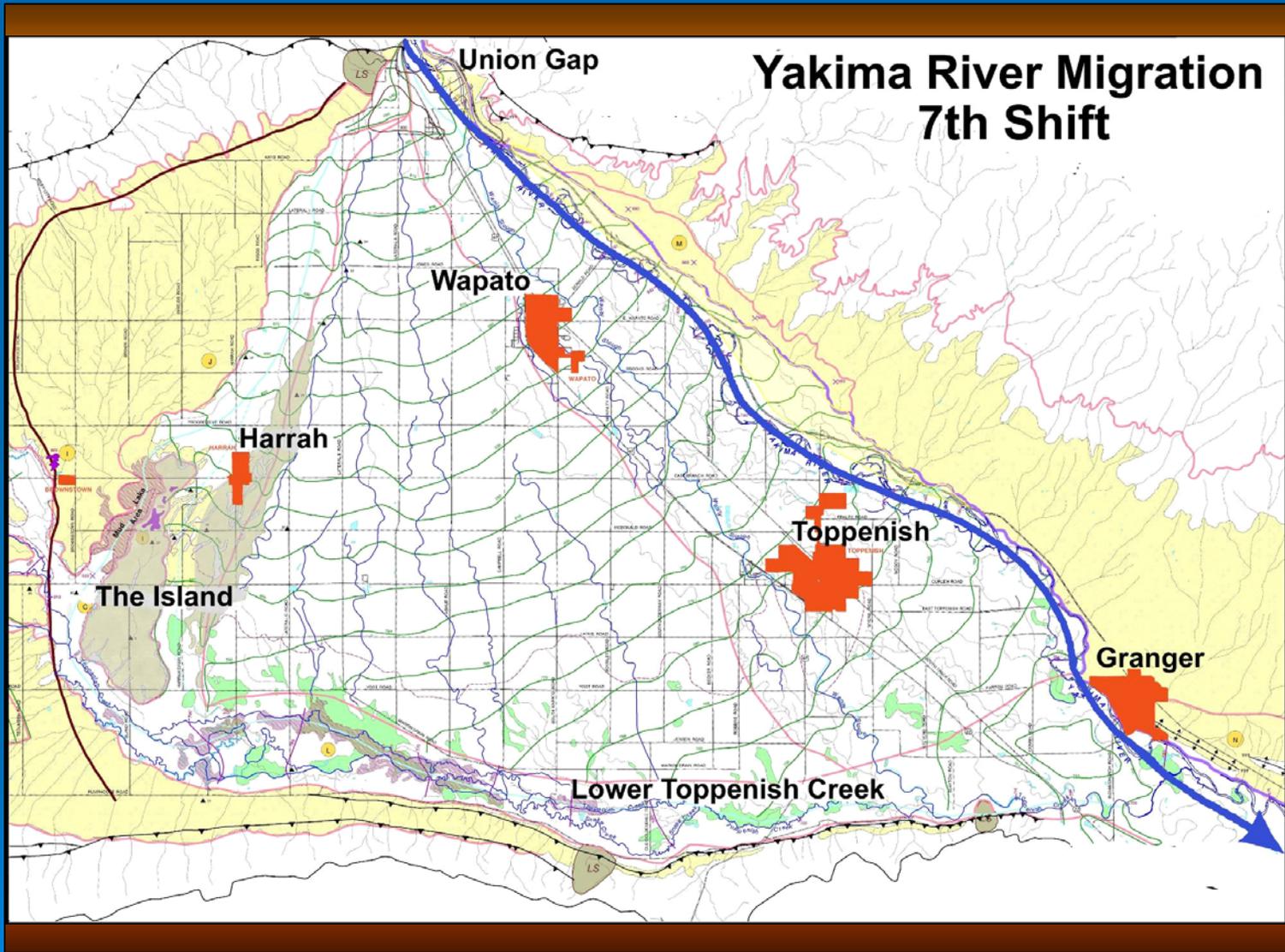
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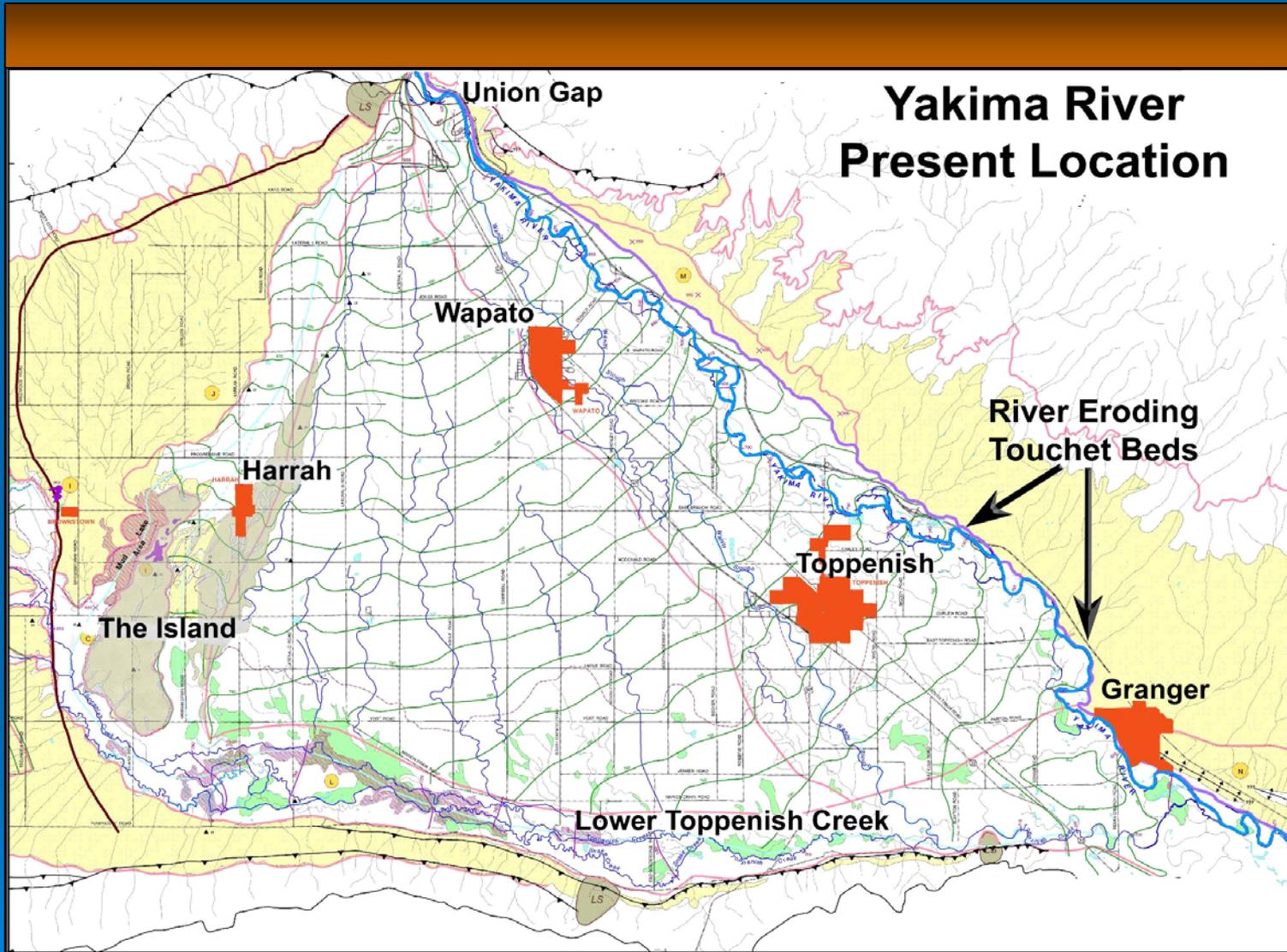
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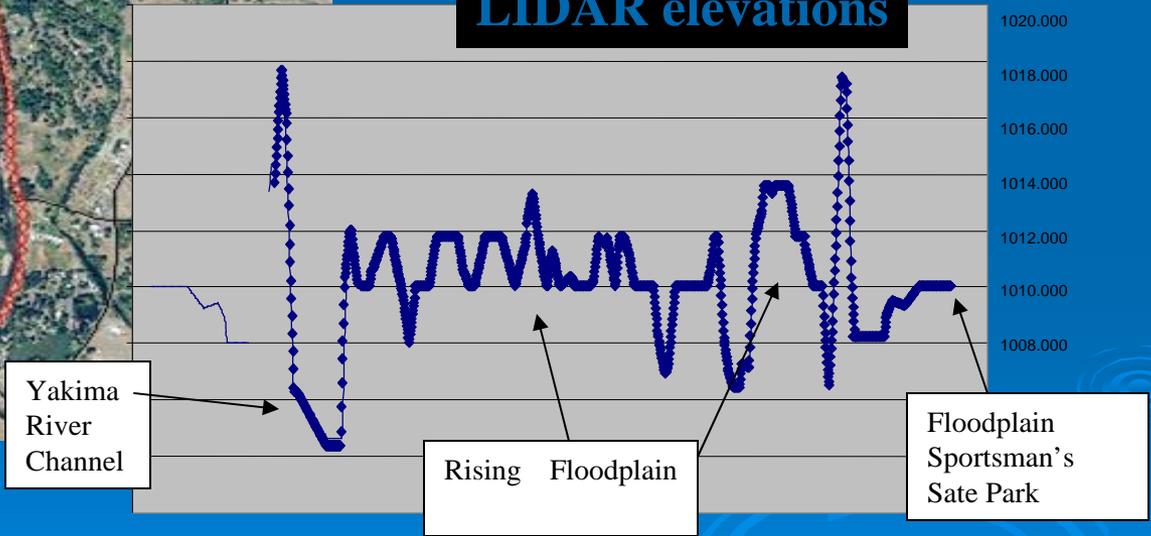
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Yakima River Cross Section at Sportsman's Park

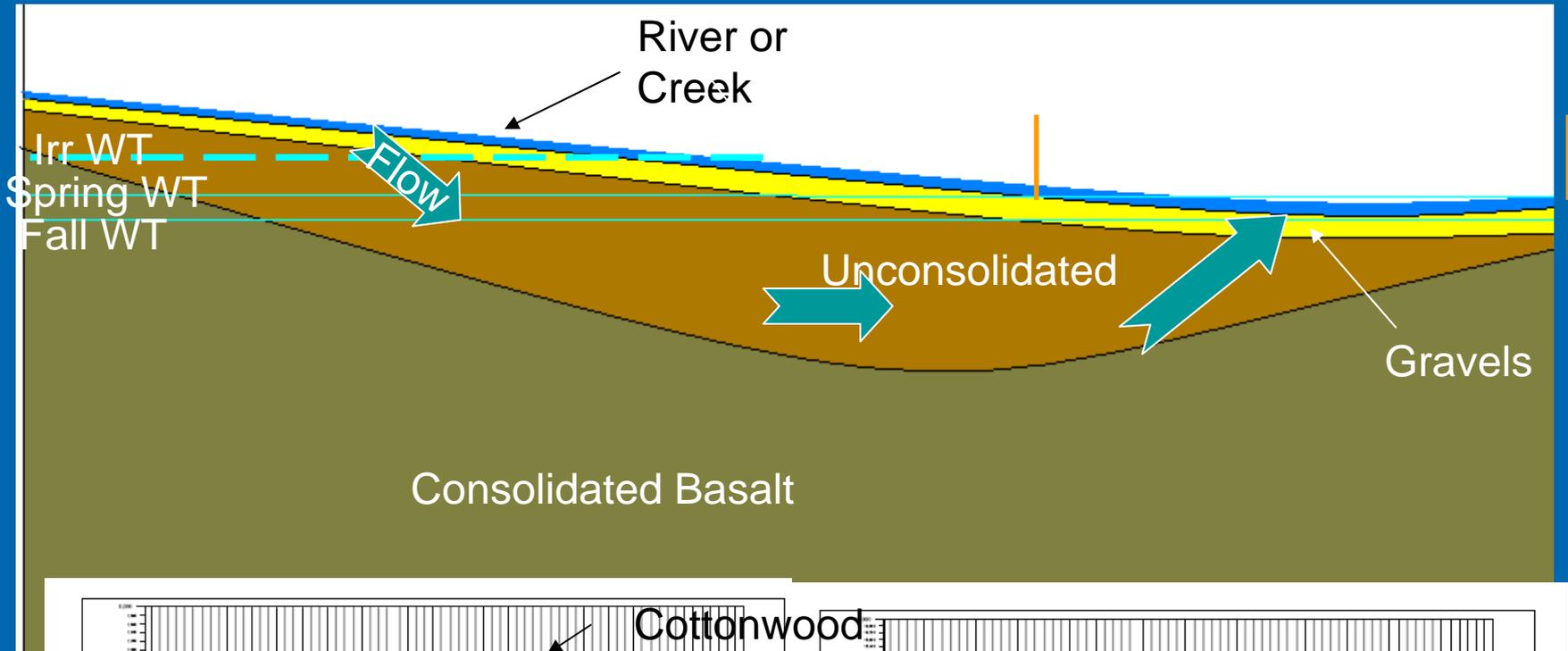


Cross Section
Location

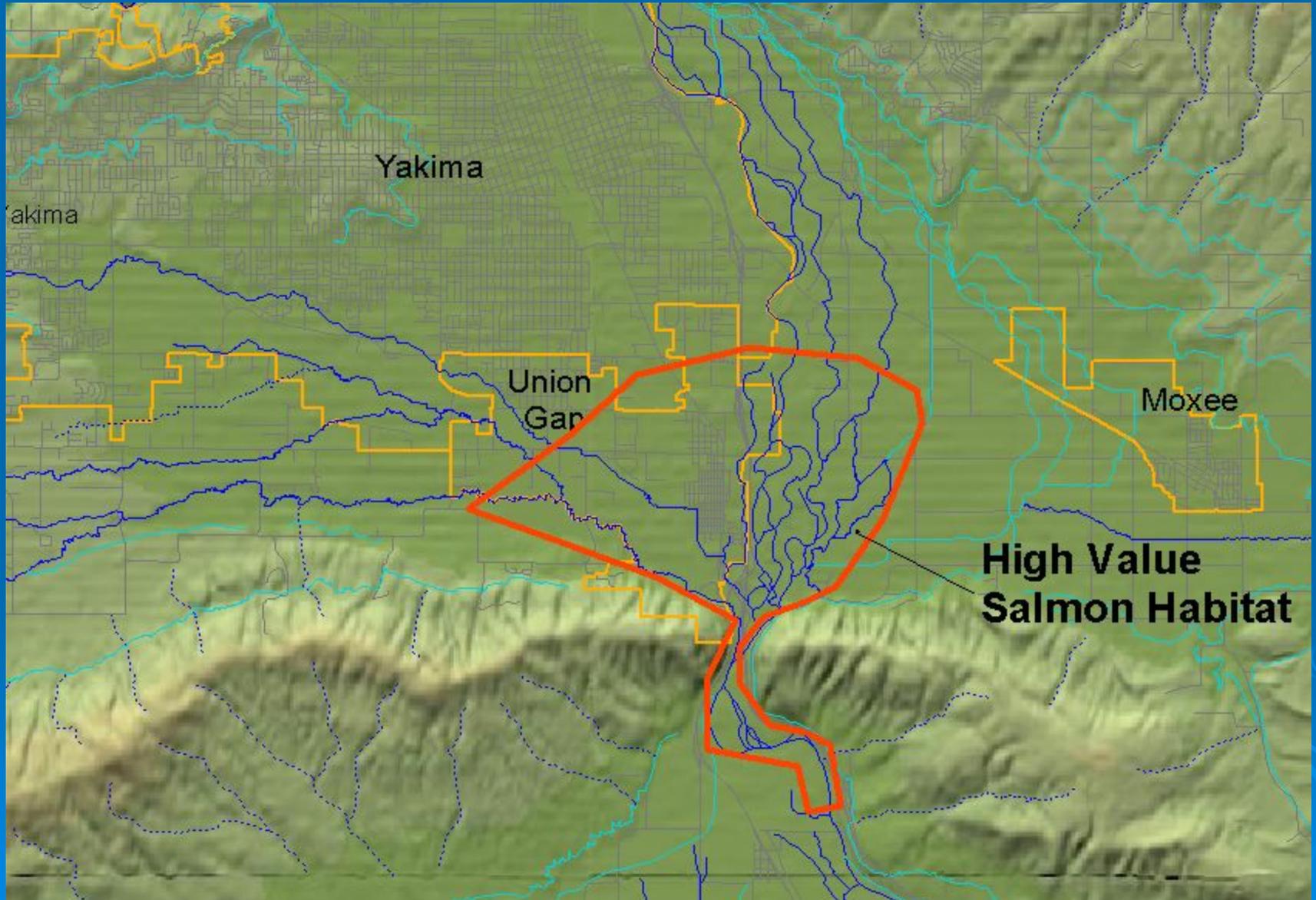
LIDAR elevations



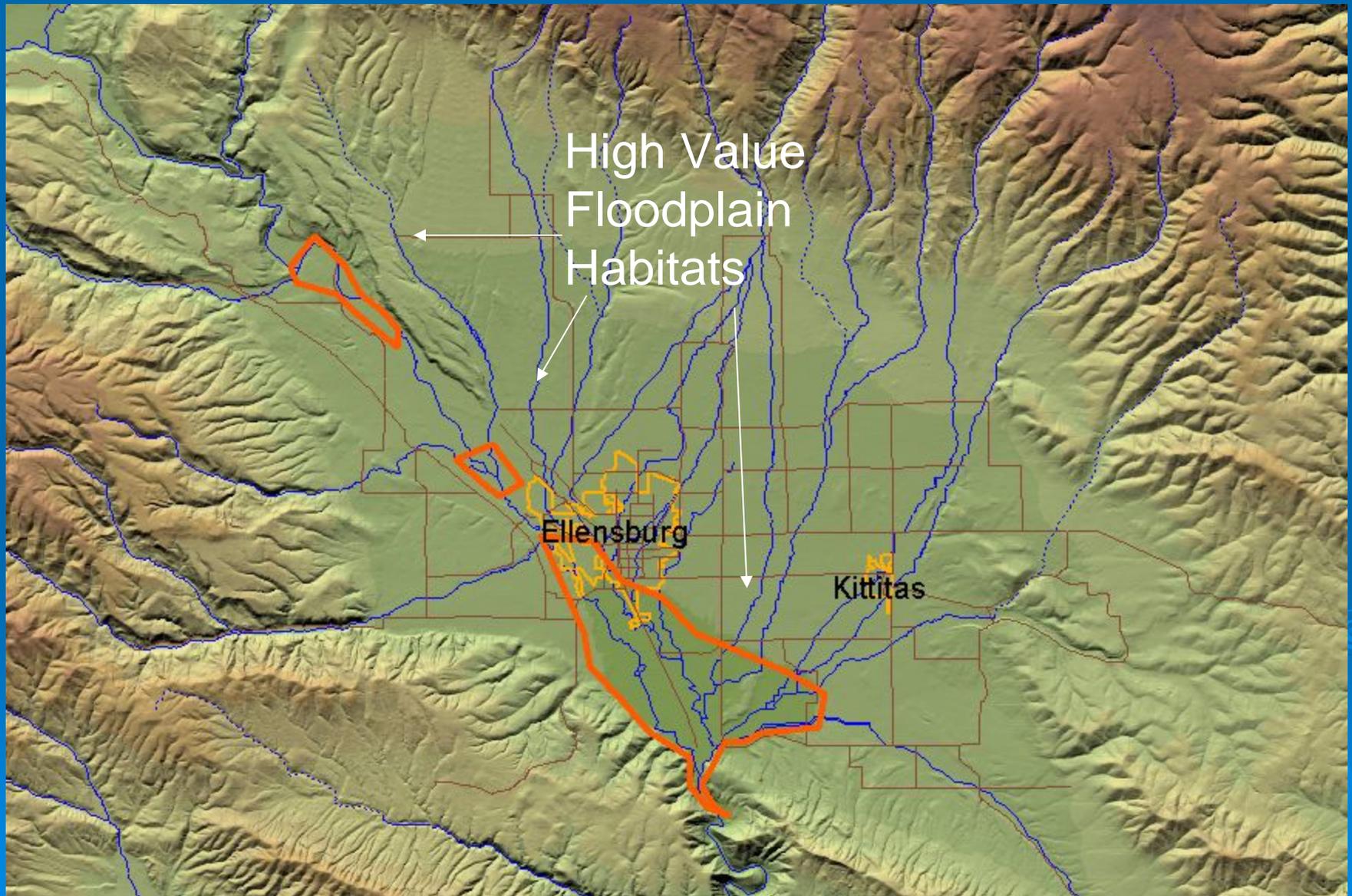
Geologic Profile of a Yakima River Floodplain Basin



Ahtanum Moxee Basin

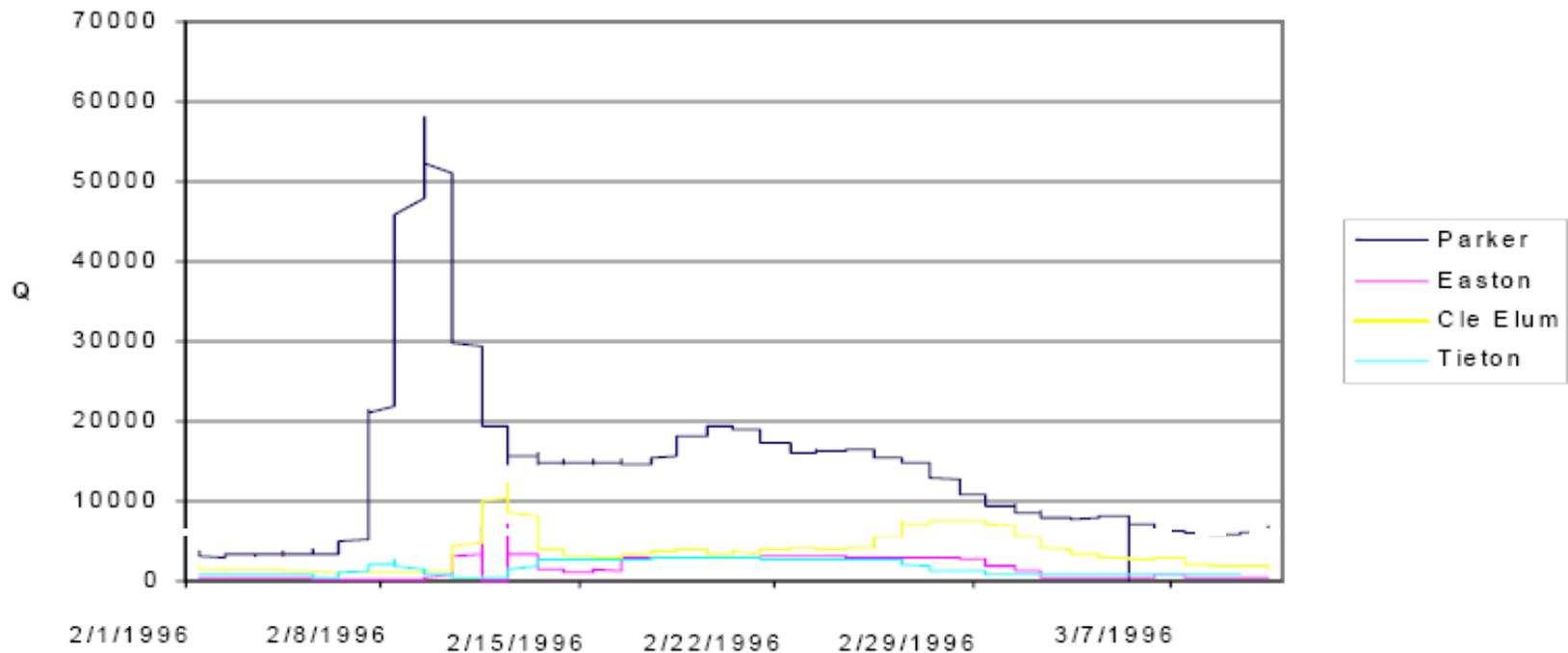


Kittitas Basin



Pick Your Poison – High Peaks or Long Duration

Discharge at Easton, Cle Elum, Tieton R., and Parker: Feb 1996



Threshold

Floodplain Restoration

- Restoring Lateral and Vertical Connectivity
 - remove or modify infrastructure, restore or maintain flood flows.
- Restore Surface Flow and ideally Groundwater annual patterns to synchronize with plant and animal life histories – improve, remove or modify irrigation and drainage infrastructure.

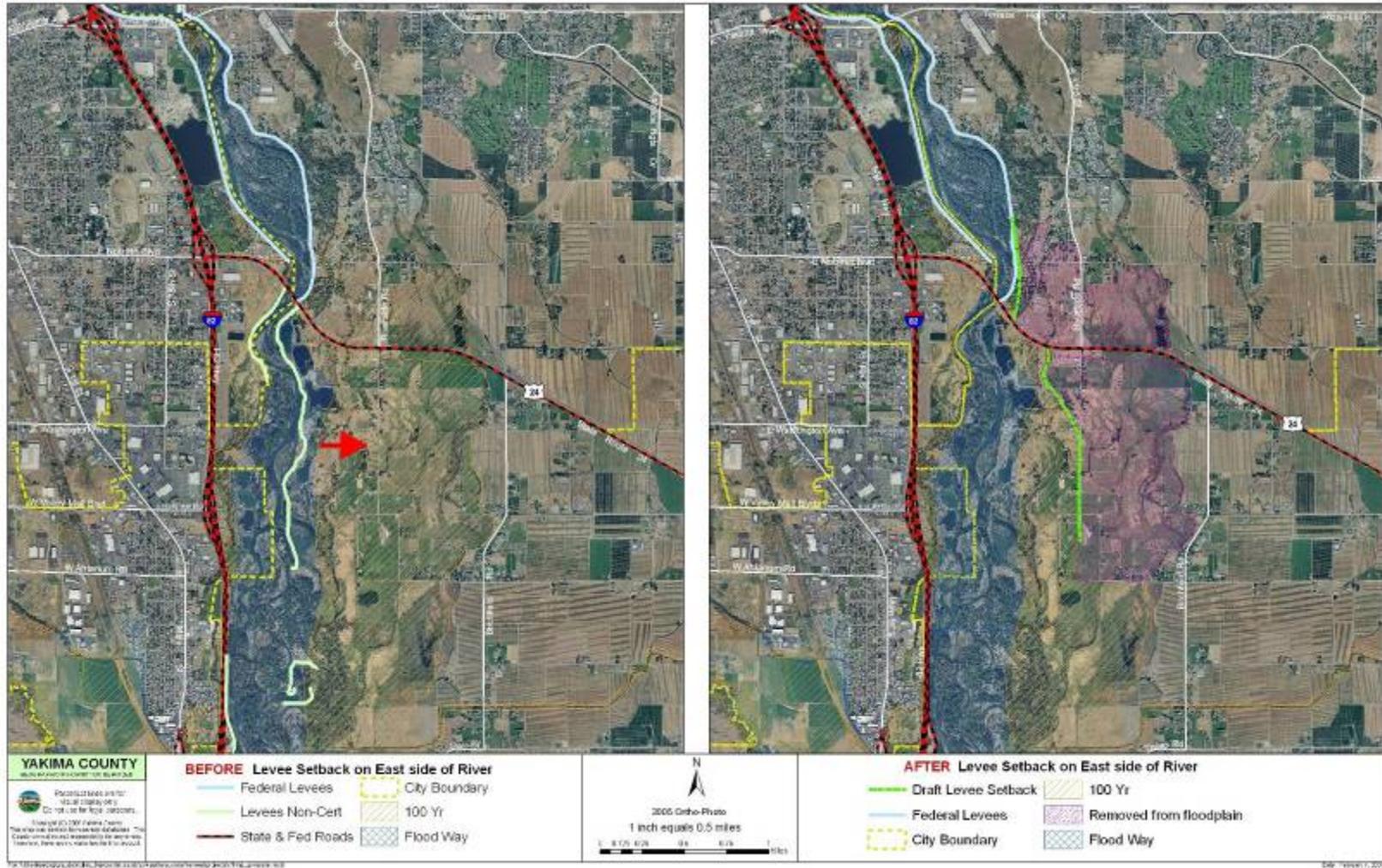
Practical Aspects of Floodplain Restoration

- Easier to do if it reduces flood hazard, especially to critical facilities – strong link to CFHMPs and local (including Tribal) land use
- Need to get fairly large areas under a common or coordinated management scheme – easiest in areas already in conservation status
- Flood and annual flow issues in mainstem need to be managed at a basin scale.



Gap to Gap Project

Restoring Horizontal Connectivity



Eschbach Park Levee Removal



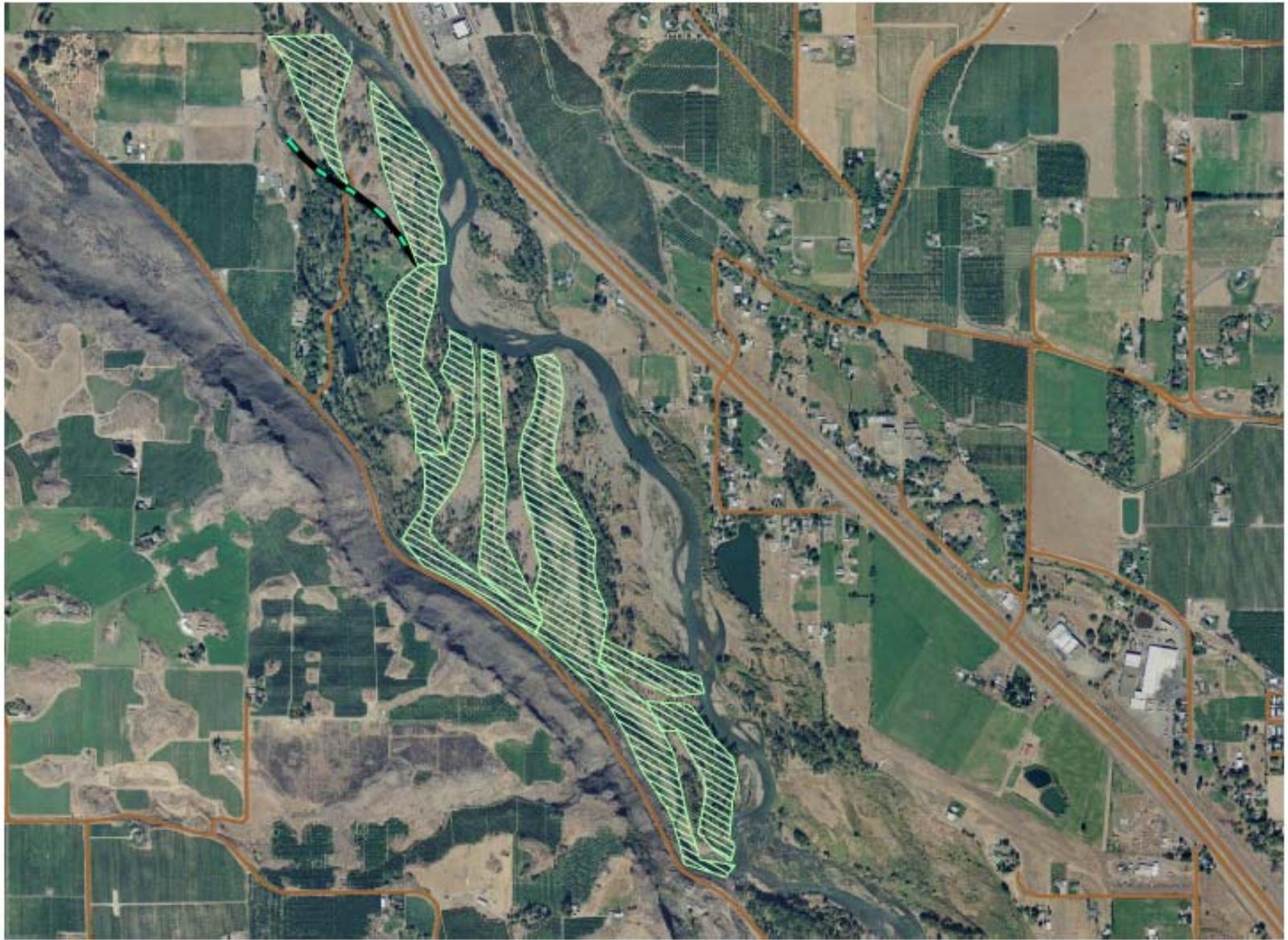
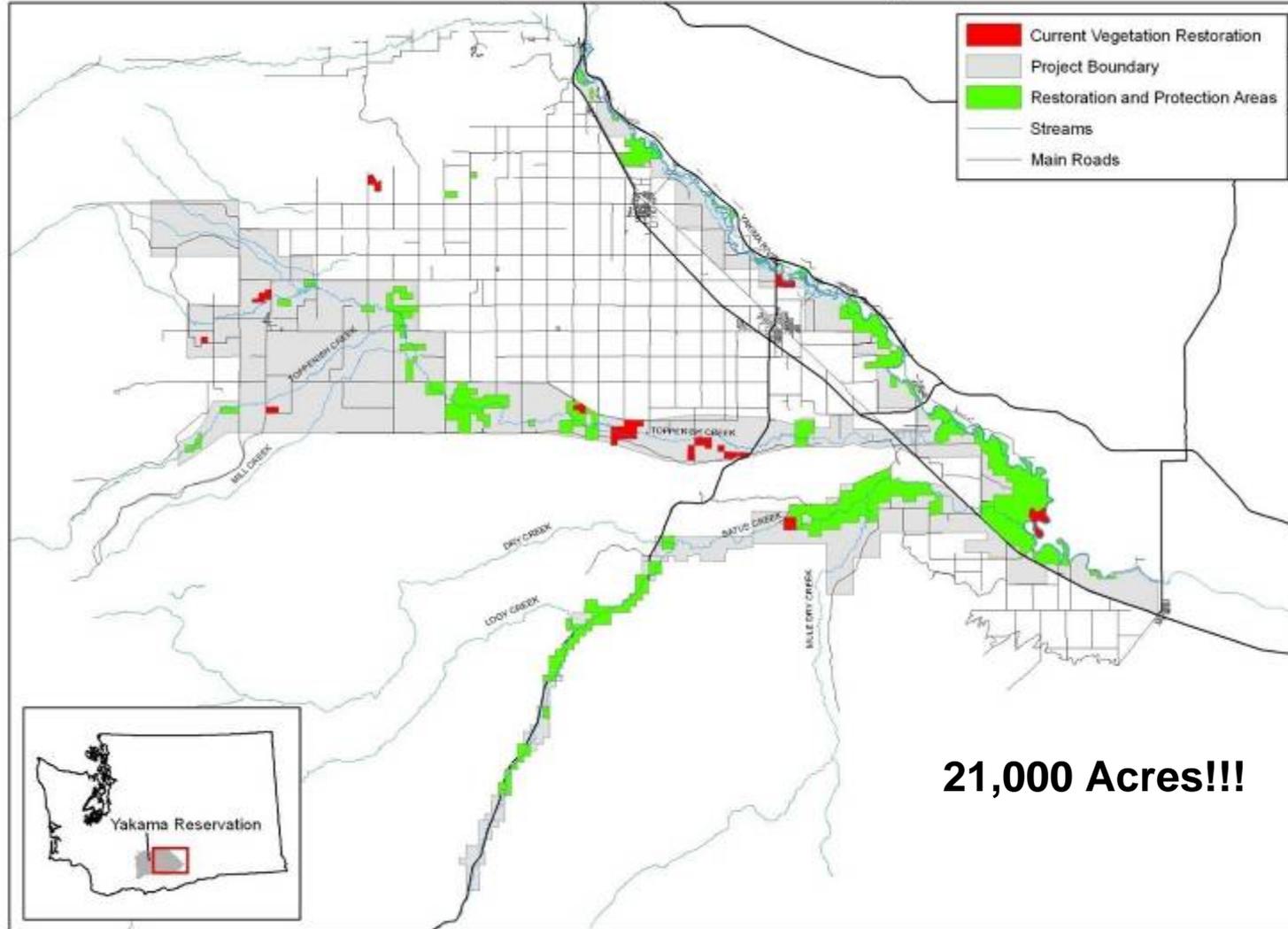


Figure 1. *Historic side channels to be reconnected by the project.*

Yakama Nation Wetlands and Riparian Restoration Project

Wetlands Restoration Project Floodplain Terrace Vegetation Restoration



21,000 Acres!!!



0 5 10 Miles

Future Actions

- Short term – Concentrate on areas already in Conservation Status (Yakima Side Channels, State and Local).
- Medium Term – “Art of the Possible” where can floodplains be reasonably restored (basin-based restoration)
- Medium Term – Link actions to current fish use, Life history goals, reintroduction plans and actions (Wapato Reach Analysis), and also flood hazard reduction, GMA, Transportation and Recreational goals.
- Long Term – Cooperative, adaptive management of floodplains (physical and biological) across ownerships and authorities. (Lower River Sockeye and Summer Chinook Reintroduction)