

Yakima Basin Water Quality Inventory

AARON PELLY — BENTON CONSERVATION DISTRICT AND WSU TRI-CITIES
FUNDED BY THE YAKIMA BASIN FISH AND WILDLIFE RECOVERY BOARD

Project scope

Develop a comprehensive database for the Yakima River basin

Streamline finding data from multiple storehouses

- Help ID data gaps

Parameters critical for fish habitat

- Flow
- Temperature
- Dissolved oxygen

Symbolize in GIS

Inventory process

Work group meeting held Feb 3

- Agencies that collect/store/use water quality data

Key databases

- Environmental Information Management Database (Ecology)
- National Water Information System (USGS)
- Hydromet (USBR)
- NorWeST (USFS) — Model-focused for temperature

Queried partners

- Yakama Nation, WDFW, USFWS, Ecology, Mid-Columbia Fisheries, KCWP, irrigation districts

Additional databases identified

- Yakima Basin Water Temperature (USFWS)
- Freshwater DataStream (Ecology)

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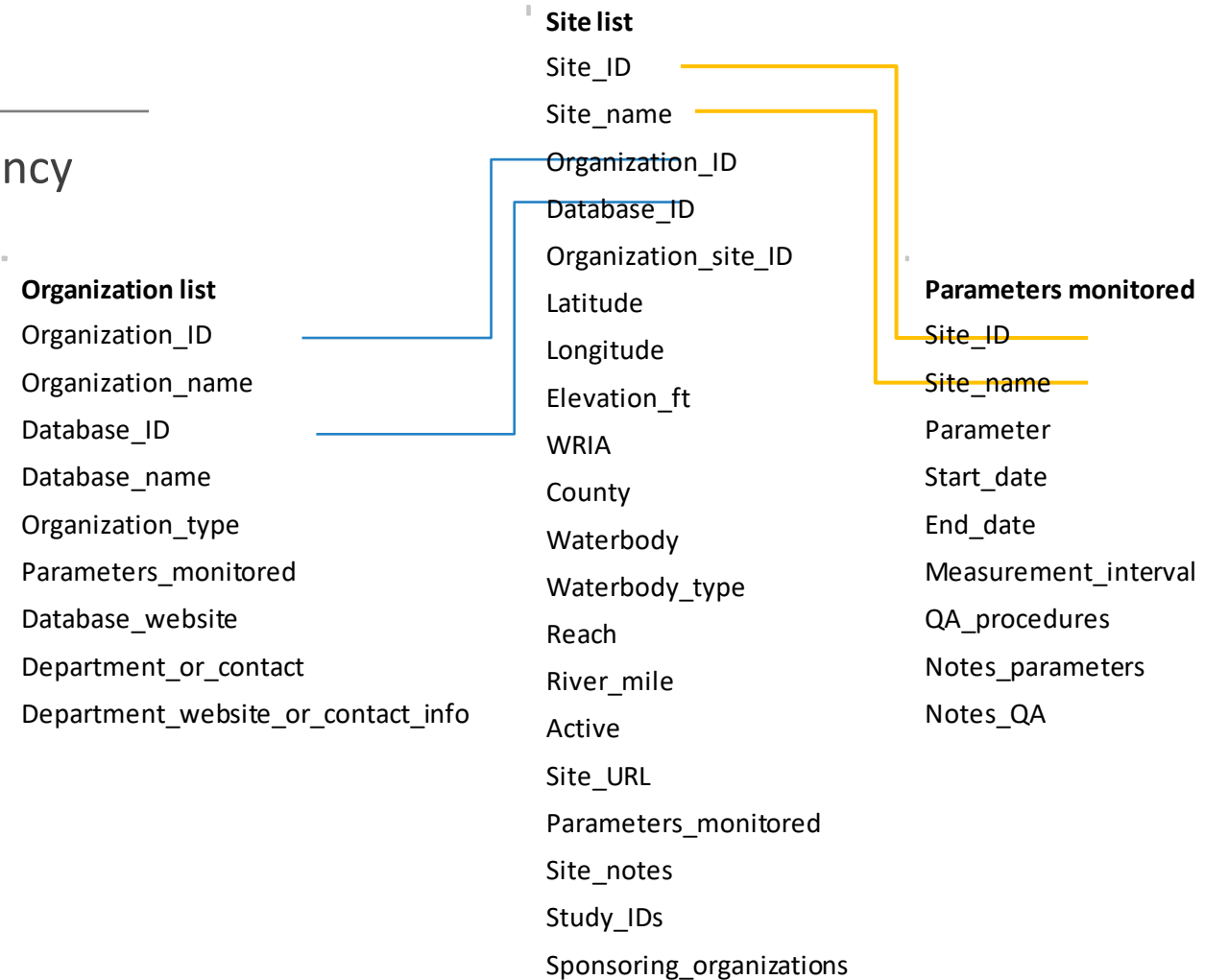
Database structure

One database of what's available from each agency

Comprehensive metadata storehouse

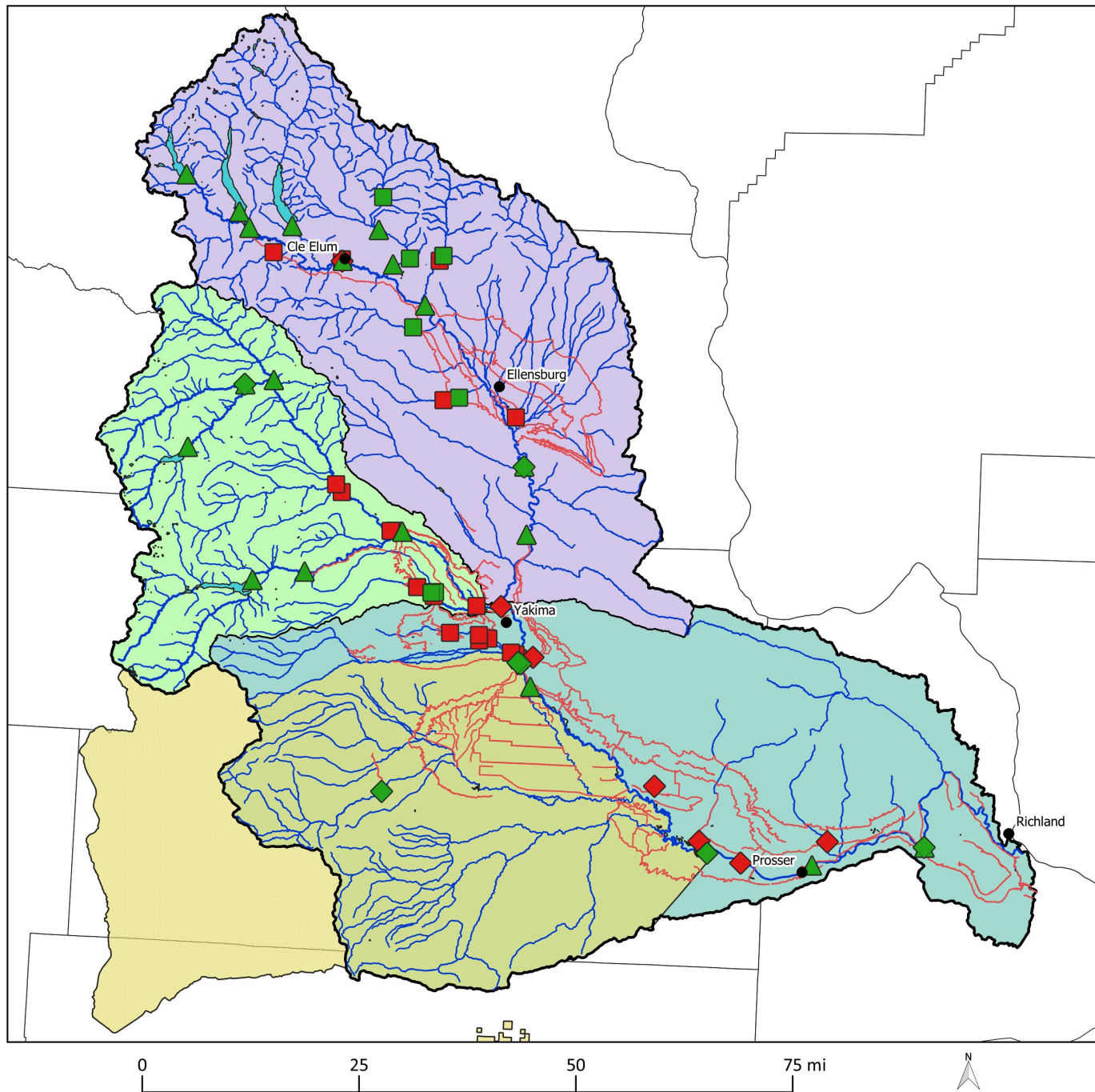
- Site location (lat, long, elevation, waterbody)
- Data source (organization & URL)
- Parameters (continuous and synoptic)
- Dates data collected
- QA info

Can be symbolized in GIS



Yakima Basin Water Quality Inventory

Continuous flow monitoring



Water quality monitoring sites

- FDS (Ecology)
- △ Hydromet (USBR)
- ◇ NWIS (USGS)
- Current monitoring sites
- Historical monitoring sites

Hydrography

- Rivers and streams
- Canals and other artificial waterways
- Lakes and reservoirs

Yakima River subbasins

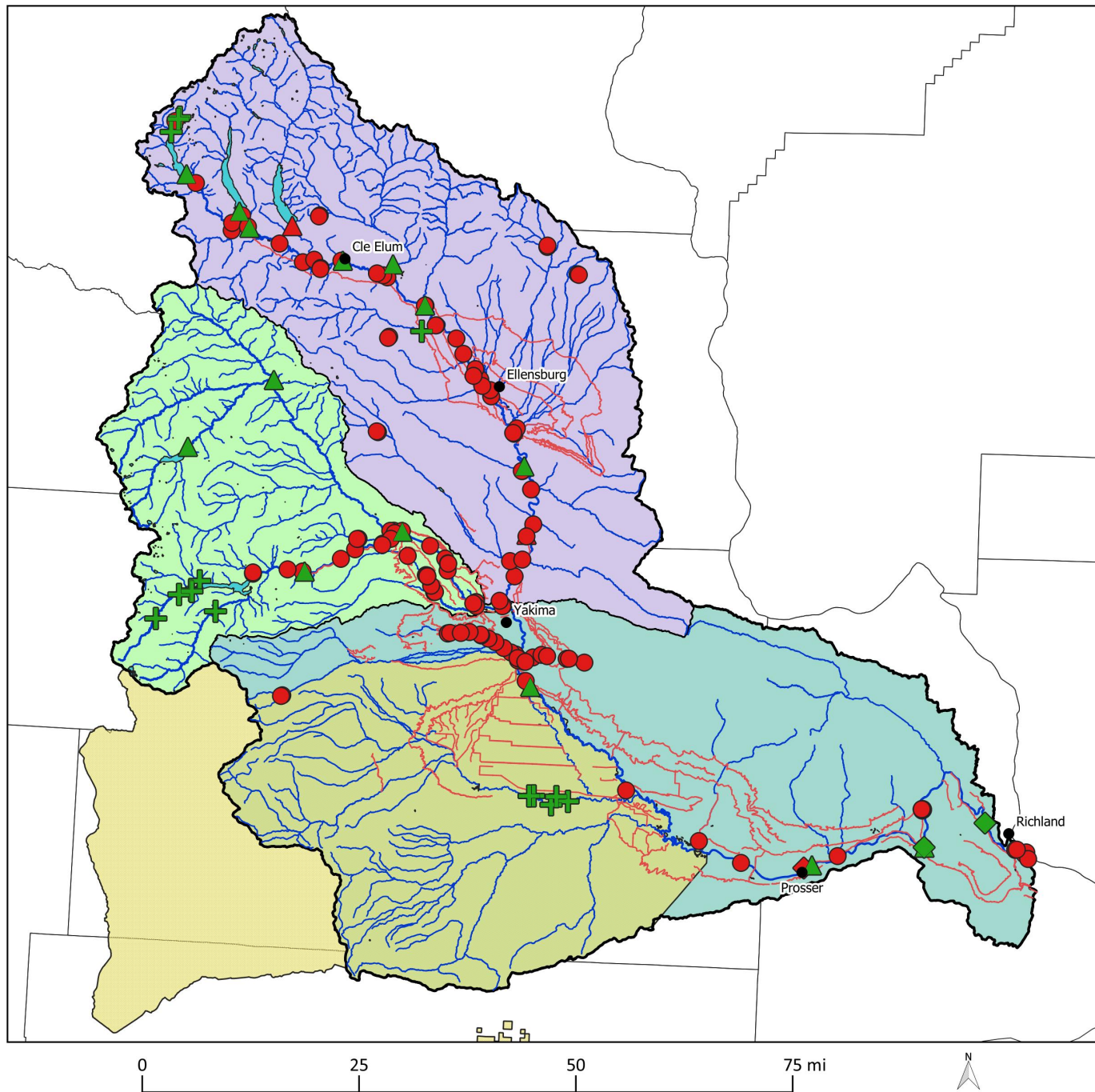
- Upper Yakima
- Naches
- Lower Yakima

Boundaries

- Confederated Tribes And Bands Of The Yakama Nation
- County boundaries

Yakima Basin Water Quality Inventory

Continuous temperature monitoring



Water quality monitoring sites

- EIM (Ecology)
- △ Hydromet (USBR)
- ◇ NWIS (USGS)
- ⊕ YBWT (USFWS)
- Current monitoring sites
- Historical monitoring sites

Hydrography

- Rivers and streams
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- Lakes and reservoirs

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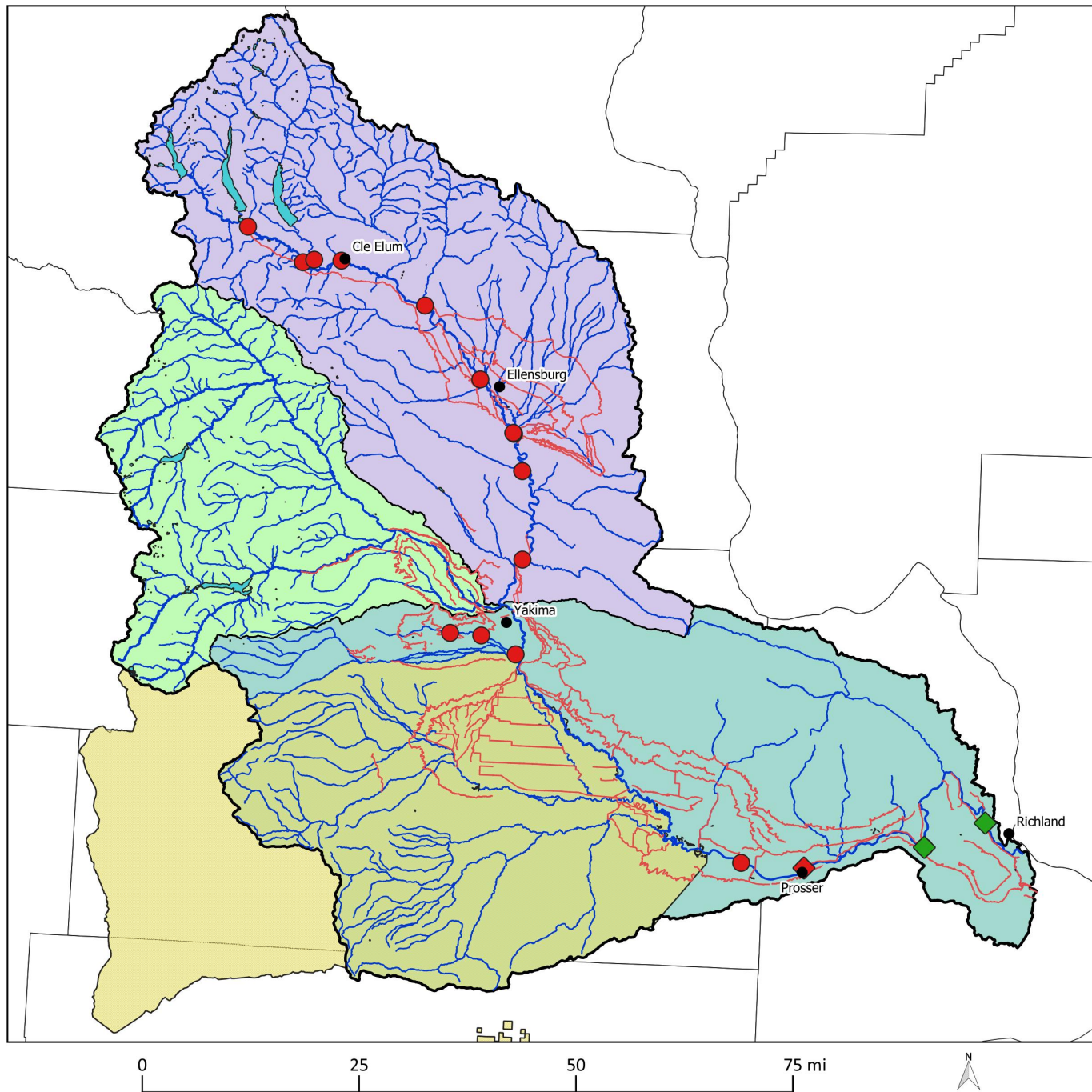
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Next steps

Finalize EIM synoptic sites (100 complete, 172 remaining)

Database and map storage

- Database housing
- Accessible online map

Streamline database maintenance

Future database needs

- Integration with NorWeST
- Integration with WDFW stored data (not yet publicly available)
- Cross-link with bull trout temperature monitoring (MCF)