

IRWM & SGMA Webinar Series: Coordinated Recharge



Daniel Mountjoy



Sustainable Conservation

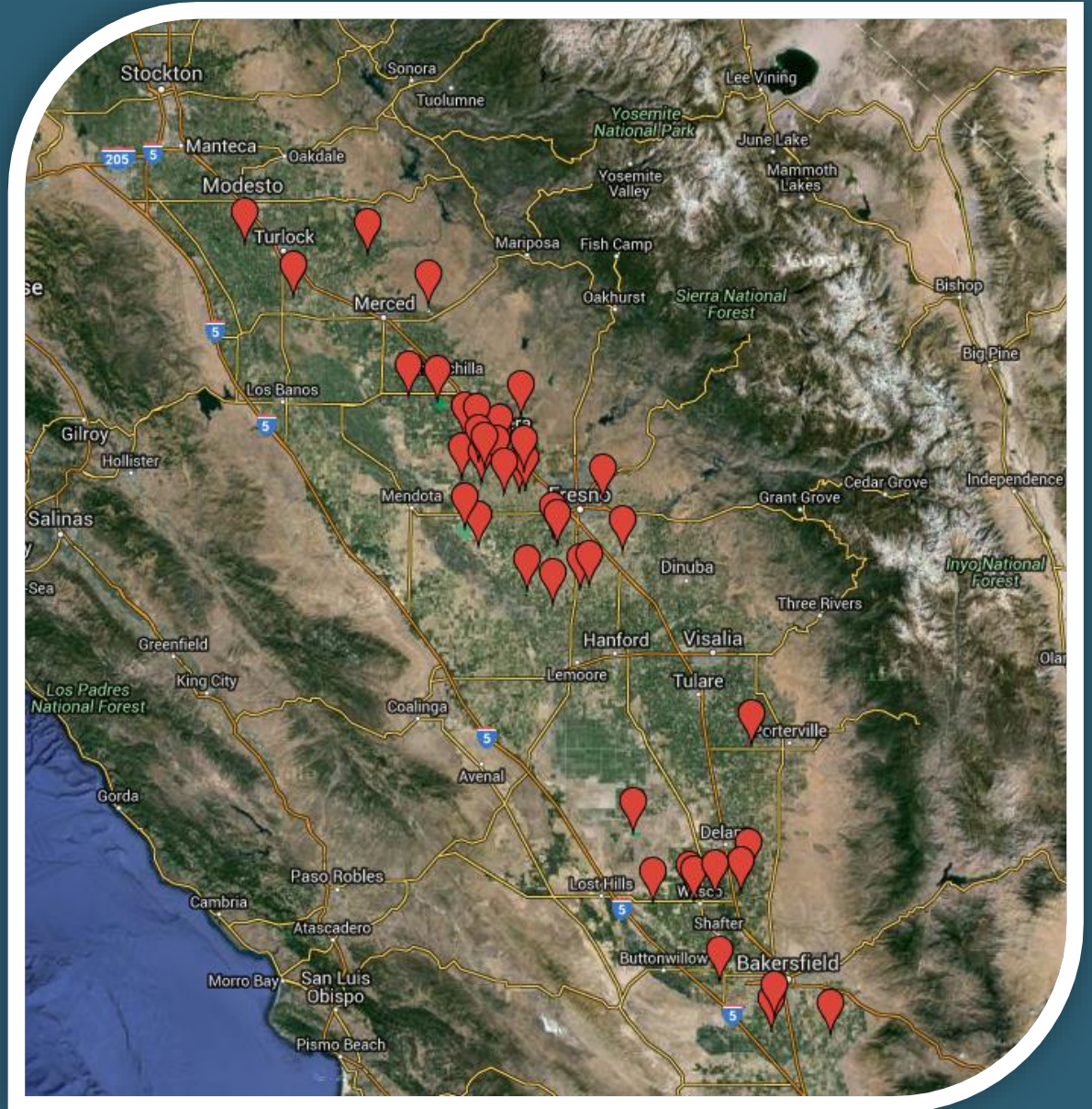
June 21, 2021

Interested Farmers - 2016

- 130 sites
- 10 crops
- 14,000 acres

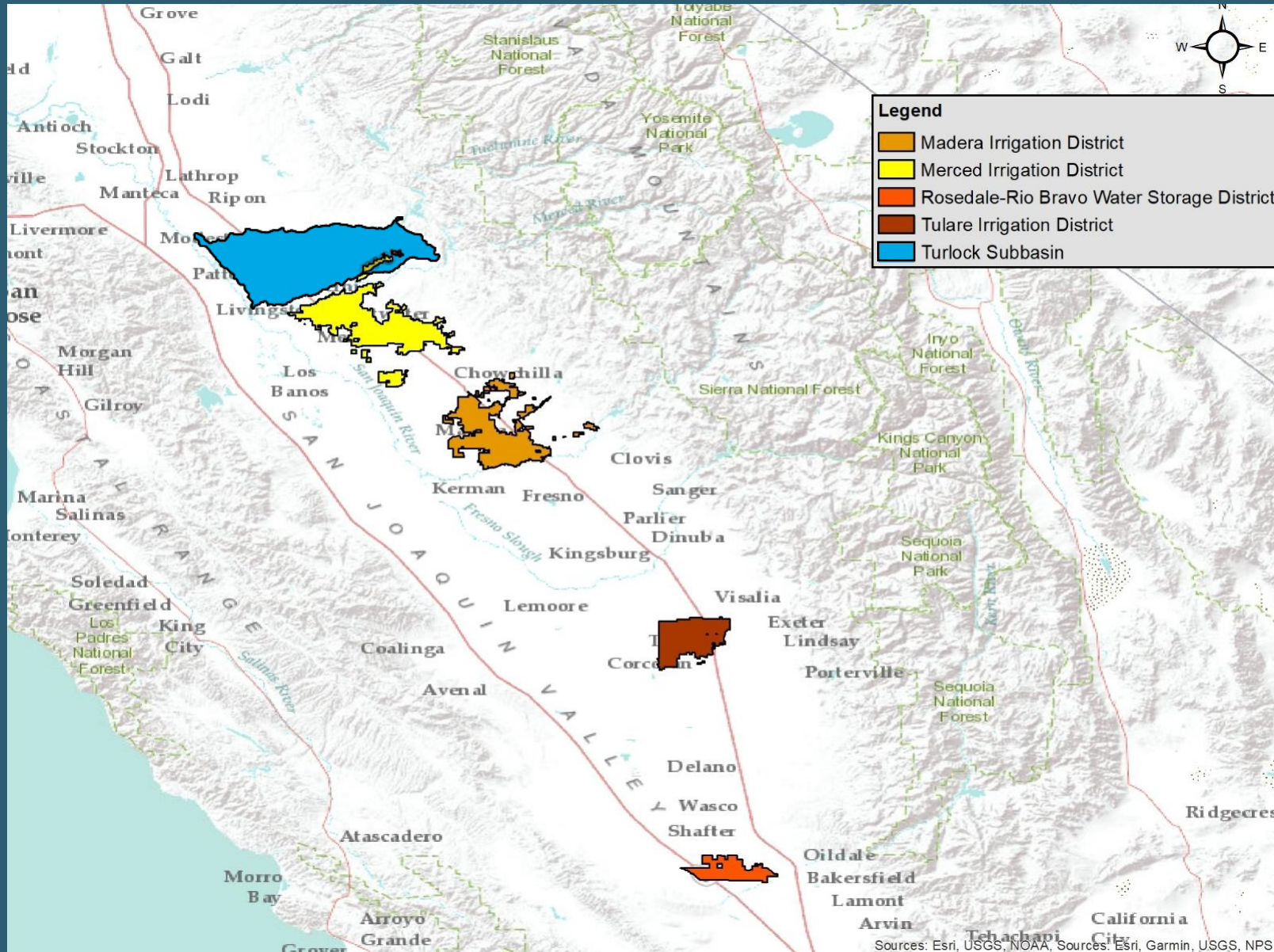
Barriers:

- Coordination with IDs
- Agronomic uncertainty





Partnerships with Irrigation Districts and GSAs





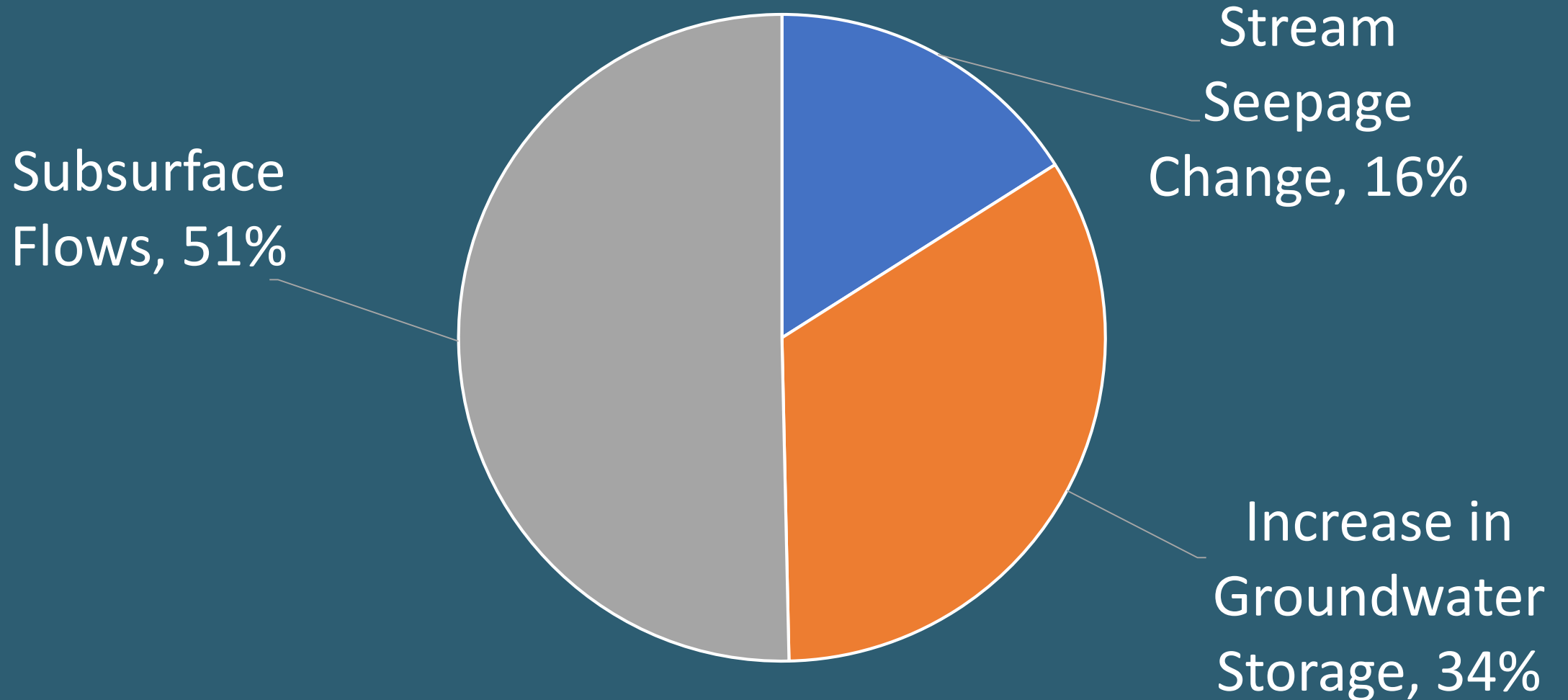
Groundwater Recharge Assessment Tool - GRAT™



What is the cost-effective optimal combination of recharge in dedicated basins and on various types of farmland to maximize capture of available water?



Merced Flood-MAR Groundwater Model Results – Fate of Recharged Water

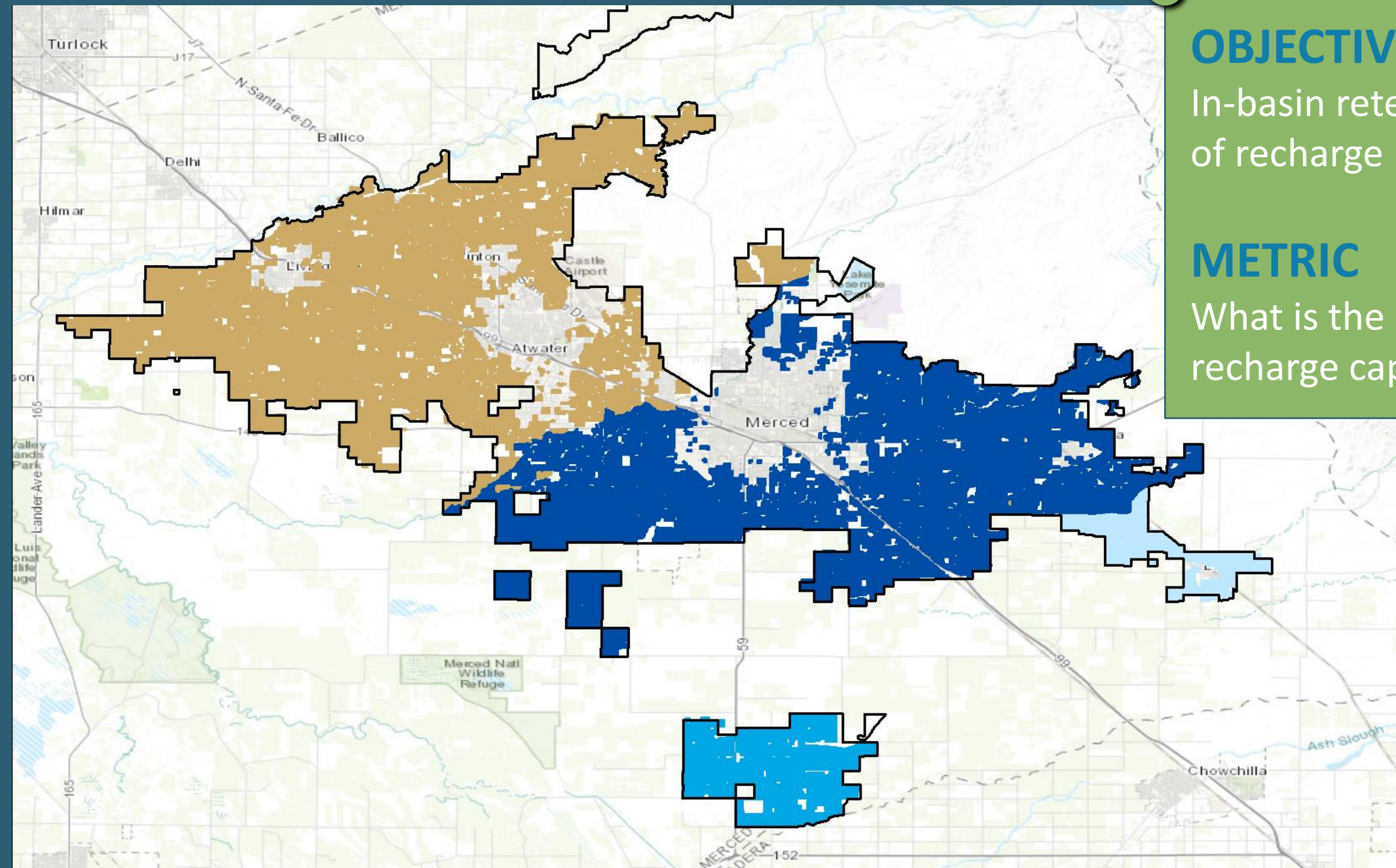


OBJECTIVE #1

In-basin retention
of recharge benefits

METRIC

What is the max monthly
recharge capacity?



OBJECTIVE #2

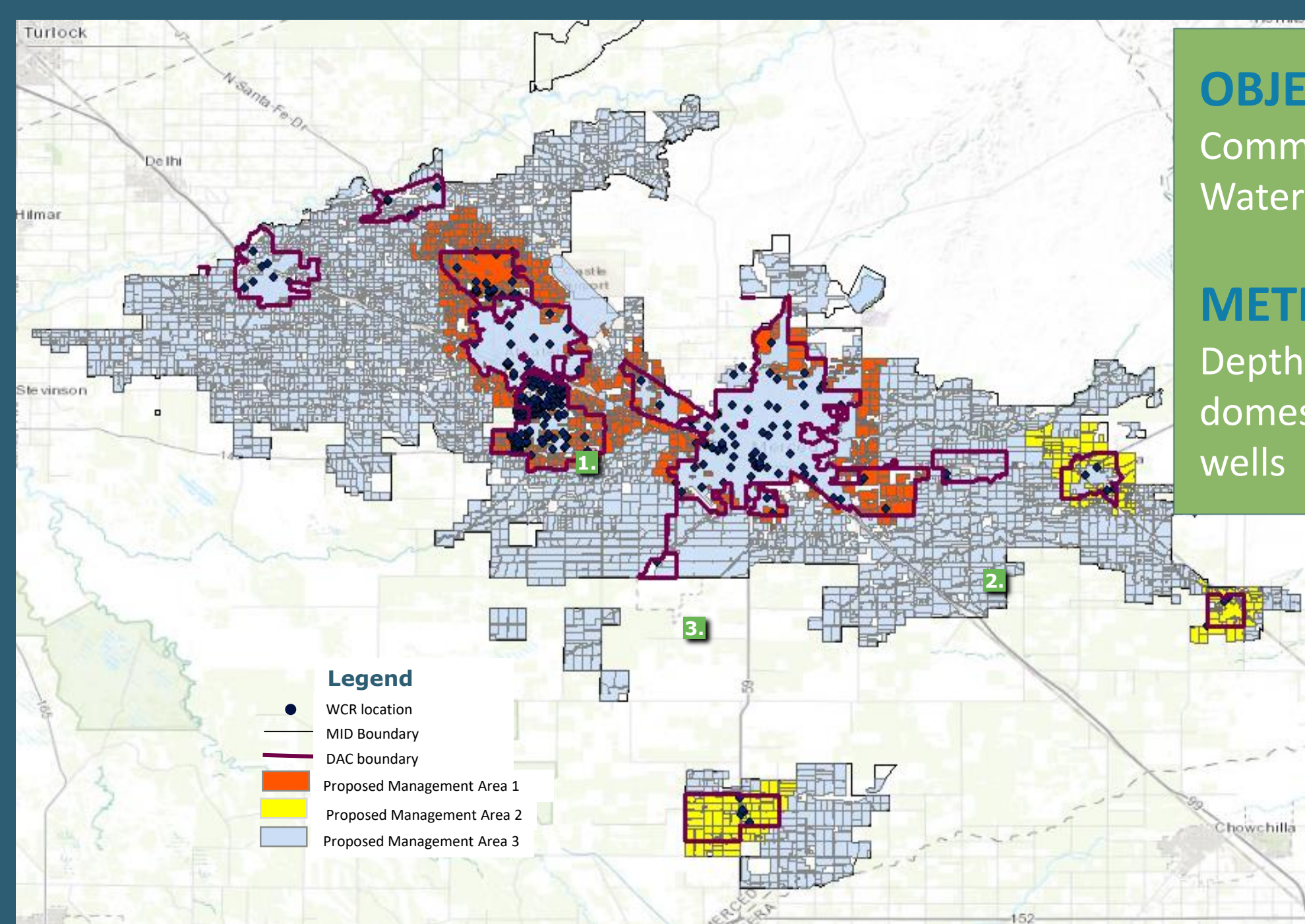
Community Drinking
Water Reliability

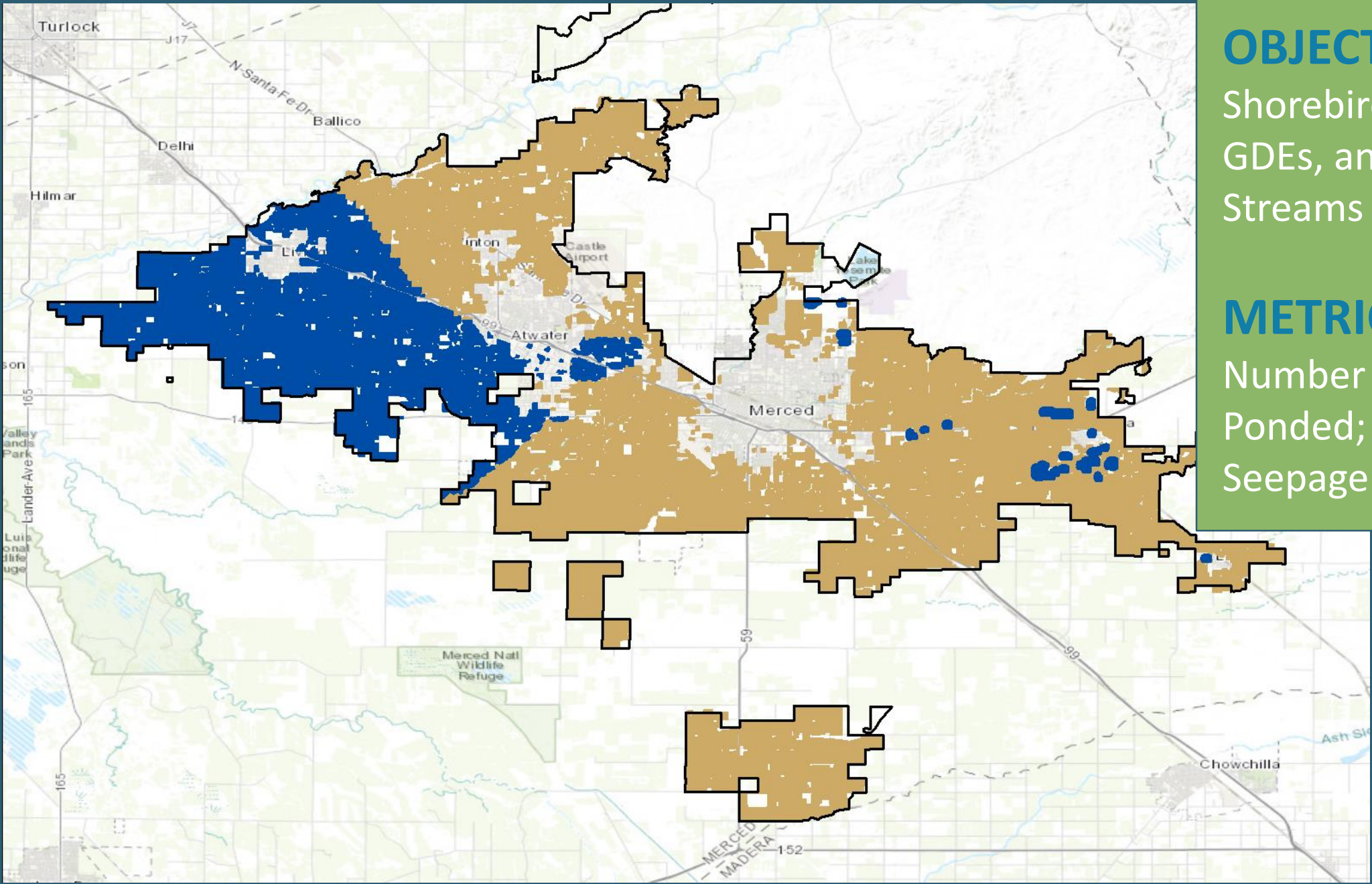
METRIC

Depth to Groundwater at
domestic and municipal
wells

Legend

- WCR location
- MID Boundary
- DAC boundary
- Proposed Management Area 1
- Proposed Management Area 2
- Proposed Management Area 3





OBJECTIVE #3

Shorebird Habitat, GDEs, and Return to Streams

METRIC

Number of Days Ponded; Volume of Seepage into Rivers



Groundwater Recharge Assessment Tool - GRAT™



SGMA Decision Support:

- What are realistic expectations for recharge?
- Whose projects or management actions will most cost effectively achieve basin sustainability?





Groundwater Recharge Assessment Tool - GRAT™



How can we target recharge to achieve social and environmental management objectives?



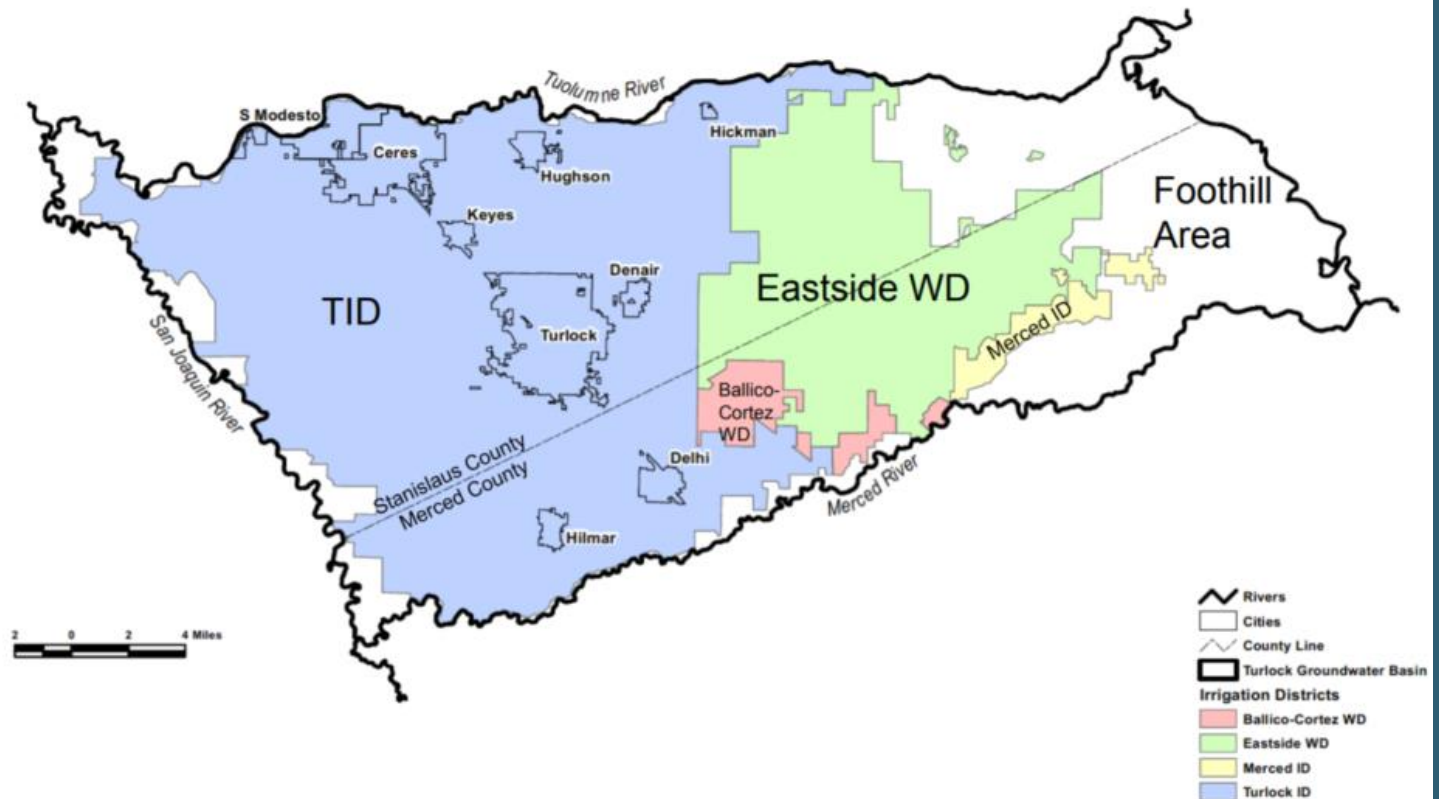
Coordination of recharge strategies in the GSP implementation process

GRAT is being used by partners to:

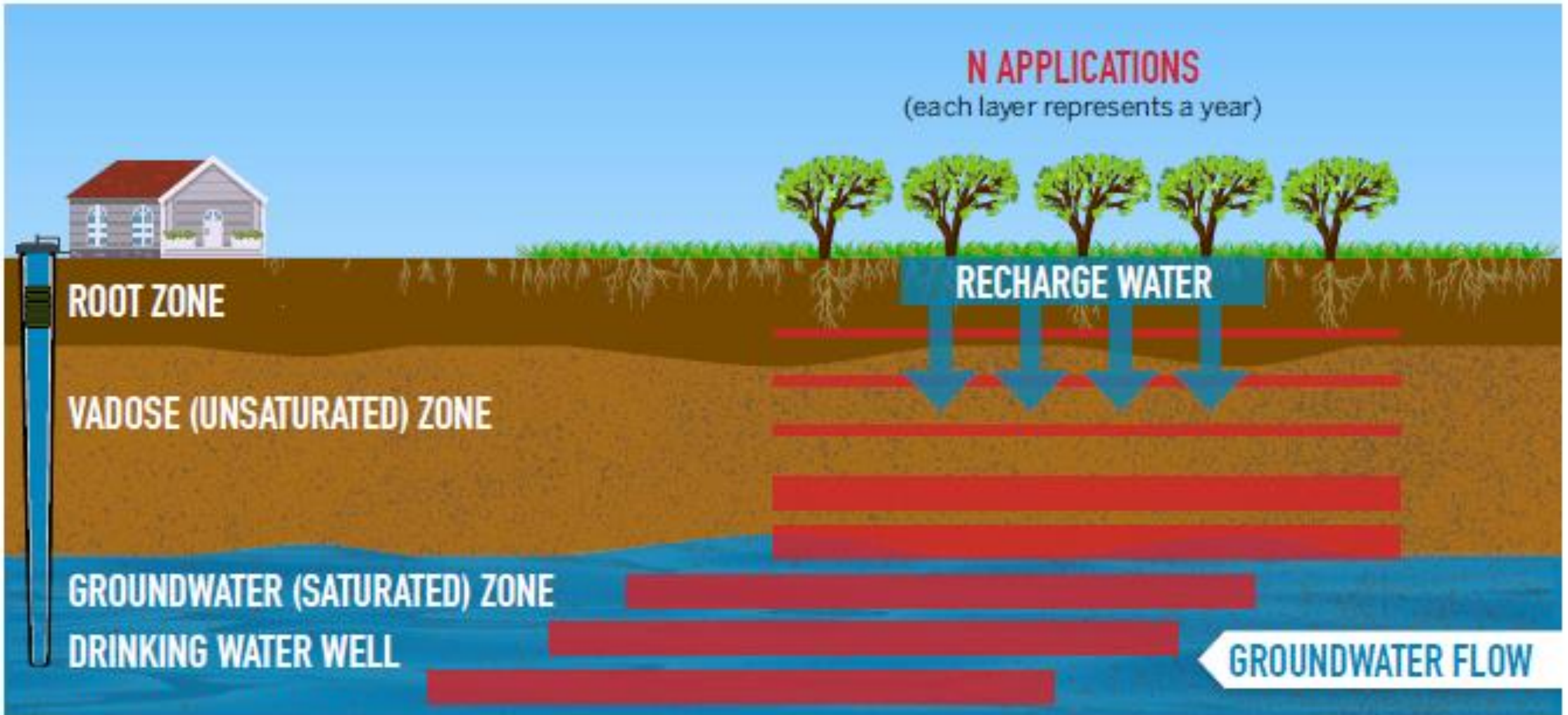
- ✓ compare relative cost effectiveness of capturing limited surface water supply in different locations
- ✓ Estimate intra-district cost allocation for greater basin benefit
- ✓ Create a shared view, using best available data and science, on groundwater opportunities across multiple jurisdictions

Turlock Subbasin Boundaries & Local Agencies

- Bounded by local rivers and the Sierra Nevada Foothills
- Occupies portions of Stanislaus and Merced Counties



Recharge Water Quality Guidance



For further information

suscon.org

Daniel Mountjoy dmountjoy@suscon.org

Groundwater Recharge Assessment Tool (GRAT™)

groundwaterrecharge.org



