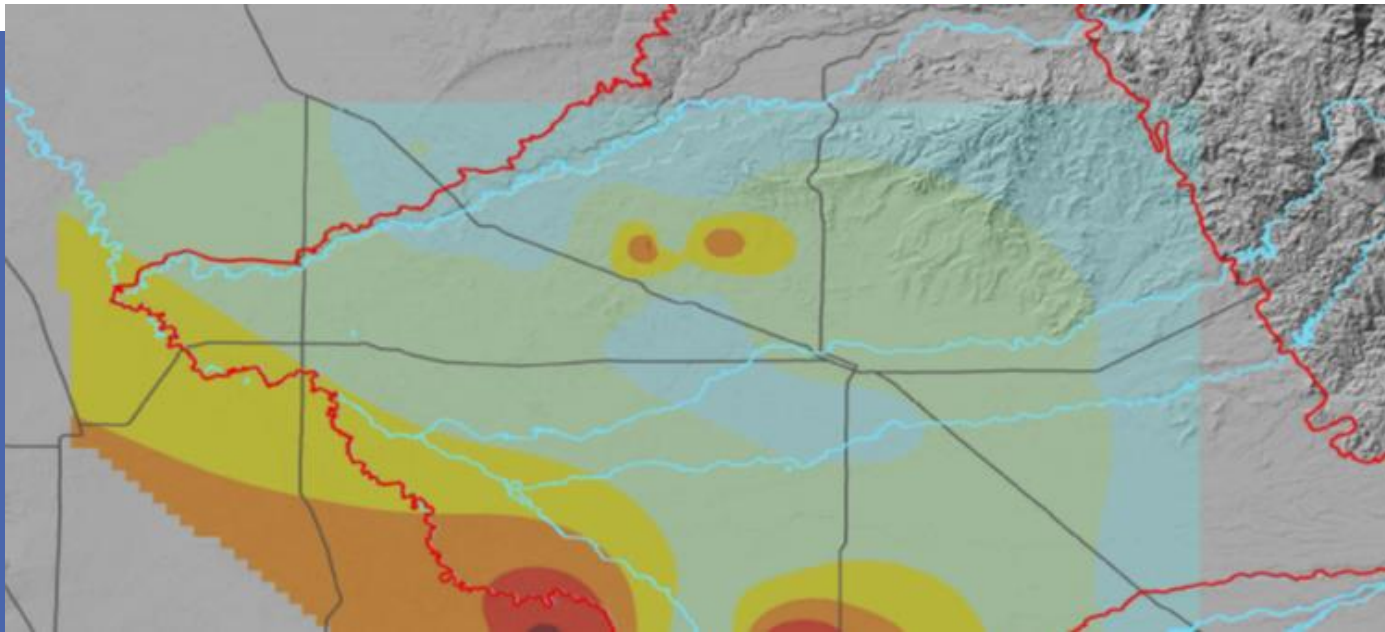




MERCED AREA GROUNDWATER POOL INTERESTS

PROPOSITION I GROUNDWATER GRANT FUNDING



MERCED PROP I GROUNDWATER GRANT FASST PRE-APPLICATION

On July 29, 2016, Amec Foster Wheeler, on behalf of MAGPI and MID, submitted a Pre-Application for a Proposition I Groundwater Grant funding request to the State Water Resources Control Board, using the Financial Assistance Application Submittal Tool (FASST)

Funding Available:

- \$744 Million (\$160 Million set aside for Disadvantaged Communities)
- Minimum Matching Funding is 50%, but as low as 5% for DACs

Project Type	Minimum Grant Amount	Maximum Grant Amount
Planning	\$100,000	\$1,000,000
Implementation	\$500,000	N/A
Implementation - Drinking Water Treatment Only Benefiting DAC/EDA	N/A	\$5,000,000

- The Pre-Application puts MAGPI in the queue for assistance in completing the Grant Application
- Final Application is due October 14, 2016
- Grants awarded December 2016

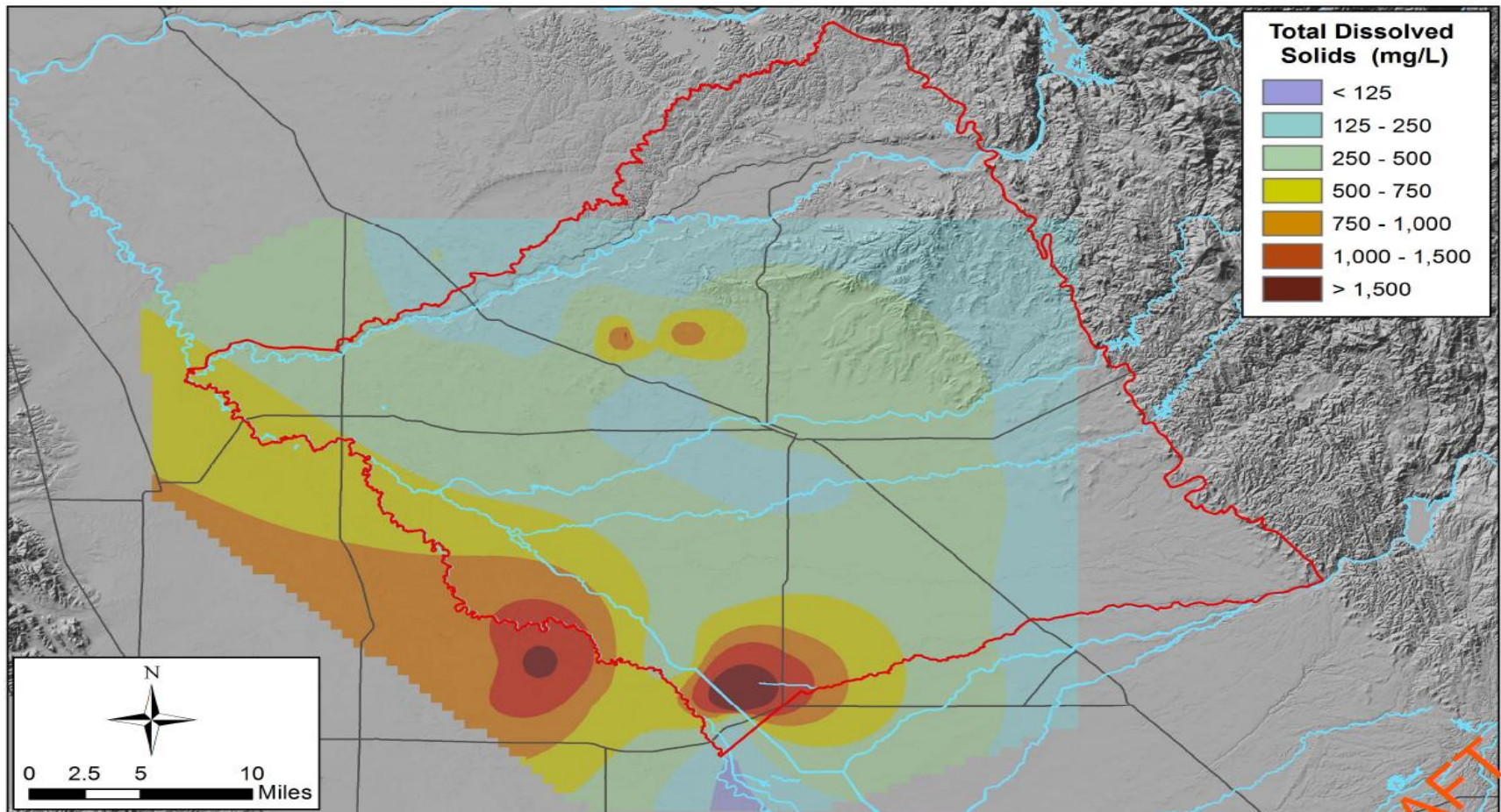
MERCED PROP I GROUNDWATER GRANT FASST PRE-APPLICATION

The request is for an Implementation Grant to **Install Monitoring Well Clusters to Evaluate Degrading Groundwater Quality in Merced Subbasin**

The Funding is intended to establish BMPs and potential SGMA parameters under the basin GSP to:

- Address chronic groundwater quality deterioration in upper aquifer groundwater along the San Joaquin River. Over the years groundwater quality has deteriorated, TDS values exceed 1000 PPM in some areas. The study will evaluate migration of salts up-gradient, groundwater quality trends in the disadvantaged communities of Stevinson, Livingston, and others, and potential remedies.
- Address emerging water quality deterioration due to declining groundwater levels exasperated by the drought.
- Complete a study assessing better Surface and/or Ground water sources for the City of Livingston. Field work includes installing transects of monitoring wells in various areas of MAGPI. Wells would be located and designed by hydrogeologists and equipped to monitor various sub-aquifers above and below the Corcoran Clay.

MERCED PROP I GROUNDWATER GRANT FASST PRE-APPLICATION



- Notes:
- 1) Refer to Section 2, Evaluation Methodology, for details of spatial and temporal averaging
 - 2) Average of data collected between 2007 and 2012
 - 3) Sources: Merced County Division of Environmental Health
USGS GAMA Program
State Water Board GeoTracker
 - 4) SMCL: Recommended = 500 mg/L, Upper = 1,000 mg/L, Short Term = 1,500 mg/L

**5-Year Average Distribution of
Total Dissolved Solids in Groundwater**

2013

Figure 9

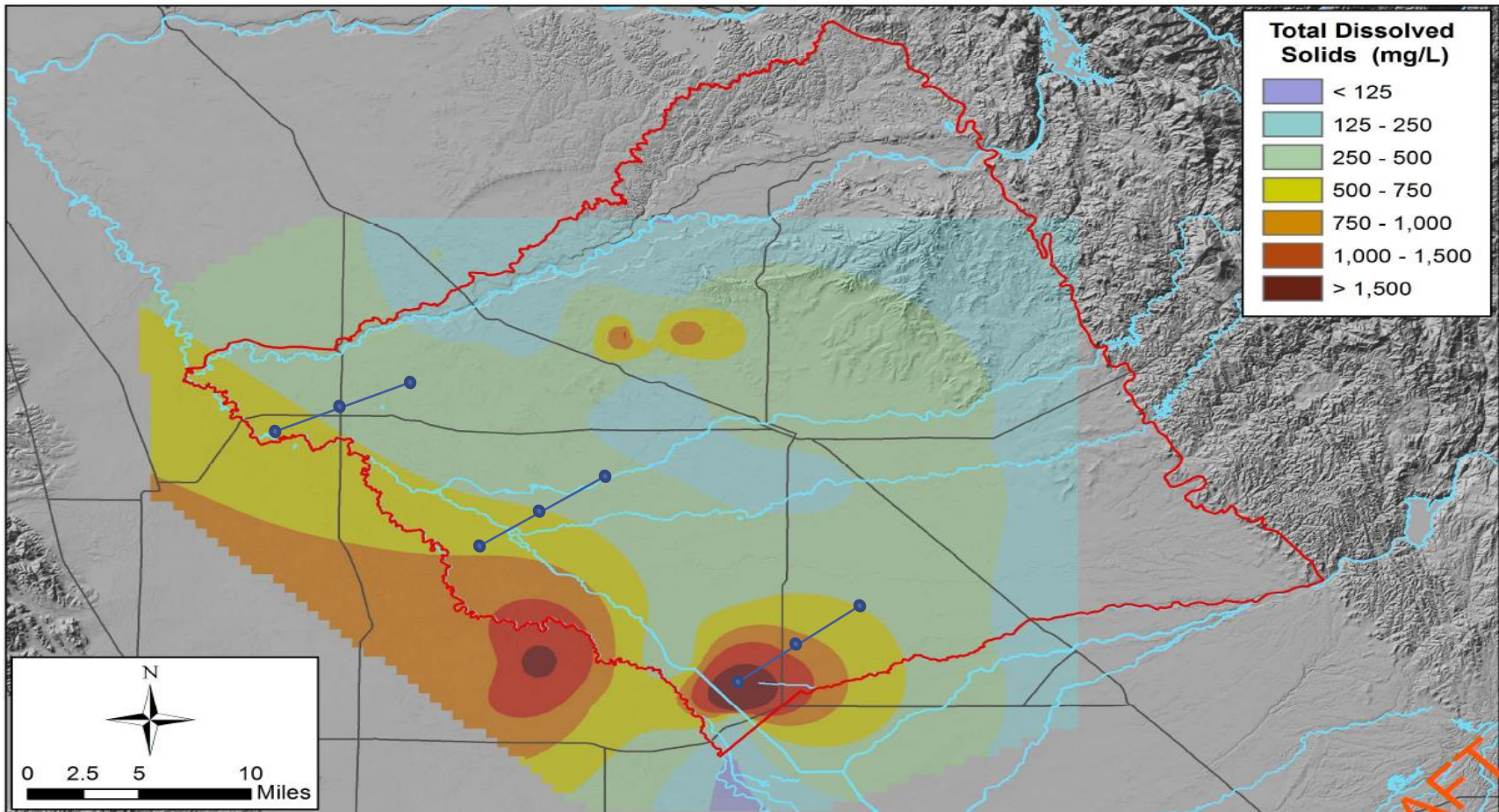
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MERCED PROP I GROUNDWATER GRANT FASST PRE-APPLICATION

The Proposed Project Includes:

- Installation of three 2 or 3-well clusters (or nested monitoring wells) at 2 or 3 depth intervals along 3 east-west trending 6-10 mile transects from San Joaquin River eastward (total 18 or 27 wells).
- Locations and depth intervals with one or two well(s) above and one below the Corcoran Clay (to be determined based on available data).
- The wells will be monitored continuously for groundwater levels using data loggers and telemetry. The well will also be sampled annually for General Minerals, nitrate (as N), boron, and VOCs for a minimum of 5-years.
- Data will be uploaded to CASGEM and Merced DHS databases.
- Data will be used to monitor water level elevation changes, establish baseline water quality, and evaluate water quality trends over time near the San Joaquin River and eastward (in the up-gradient direction).
- Total Estimated cost: \$1.5 MM to \$2 MM (to be refined for Final Application)

MERCED PROP I GROUNDWATER GRANT FASST PRE-APPLICATION



Notes:
 1) Refer to Section 2, Evaluation Methodology, for details of spatial and temporal averaging
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**5-Year Average Distribution of
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