ATTACHMENT 8. DISADVANTAGED COMMUNITY ASSISTANCE

Documentation of the Presence and Needs of a DAC

Determination of DACs in the Project Area

Appendix B of the 2014 IRWM Drought Guidelines defines a disadvantaged community (DAC) as a community with an annual median household income (MHI) that is less than 80% of the Statewide annual MHI (PRC §75005 (g)). Using the U.S. Census Bureau's American Community Survey (ACS) MHI data compiled for the 5-year period from 2006 to 2010, a community with an MHI of $48,706 or less is considered a DAC.

Using the GIS data from the DWR IRWM website, a DAC analysis was performed for the East Stanislaus IRWM Region. As shown in Figure 1, based on the census tracts and census block groups within the East Stanislaus Region, the communities of Keyes, Bret Harte, Bystrom, Empire, Grayson, Shackelford, West Modesto, Riverdale Park, Cowan, Parklawn, Rouse, and portions of Modesto, Turlock, Denair, Hughson, Oakdale, Waterford, and Ceres are DACs. Table 1 lists the Census Designated Places that are DACs in the East Stanislaus Region and their associated MHIs.

The inter-regional project, the **North Valley Regional Recycled Water Program (NVRRWP)**, lies in both the East Stanislaus and Westside-San Joaquin IRWM Regions. Figure 1 also shows the DACs in the Westside-San Joaquin Region. Based on the census tracts and census block groups, almost all of the Del Puerto Water District (DPWD or the District) service area is categorized as a DAC (see Figure 4).

Table 1: DAC Census Designated Places in the East Stanislaus IRWM Region

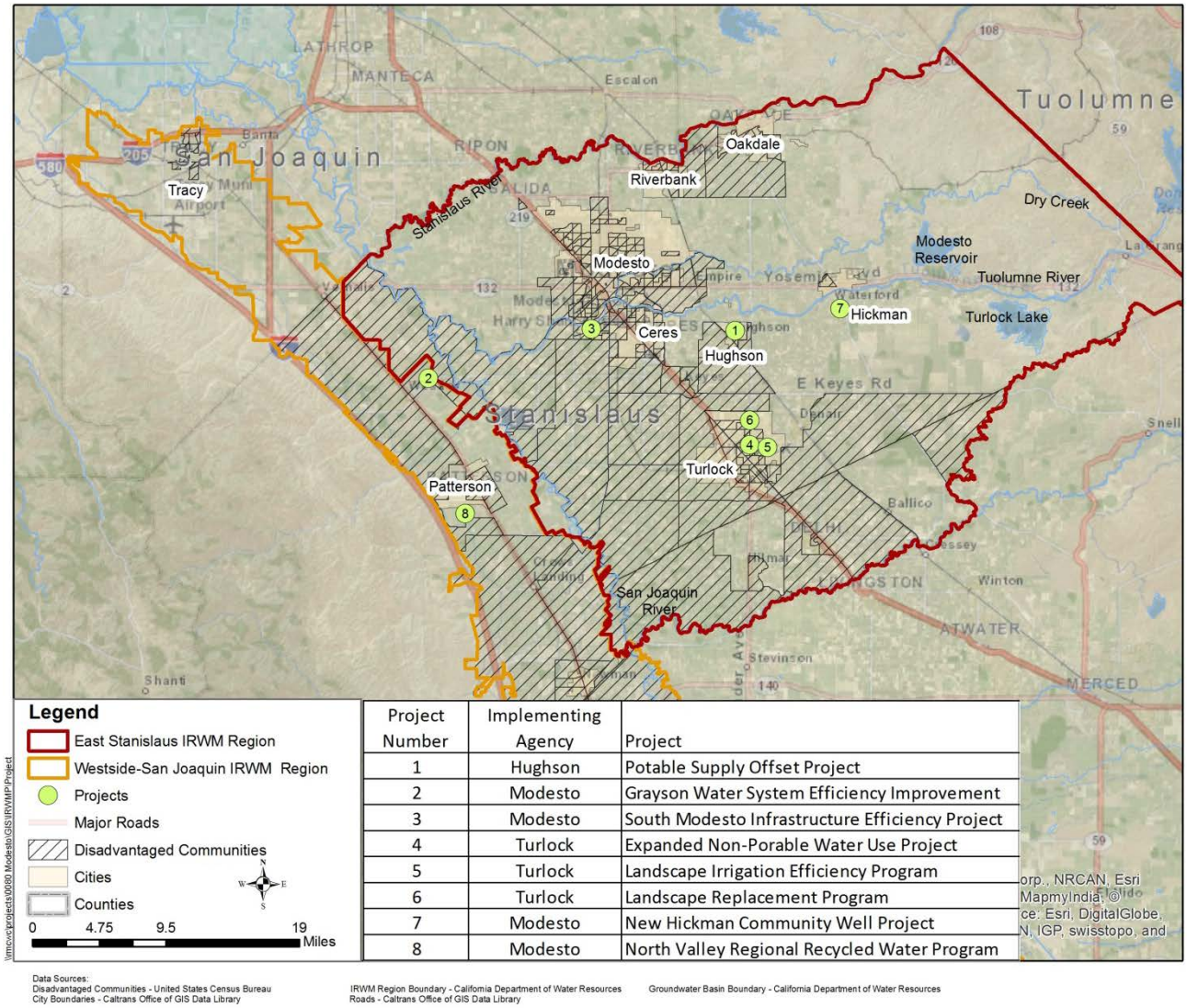
Community[1]	MHI
Bret Harte	$38,087
Bystrom	$34,464
Cowan	$31,063
Empire	$32,198
Grayson	$39,567
Keyes	$35,130
Parklawn	$32,902
Riverdale Park	$37,656
Rouse	$30,504
Shackelford	$19,302
West Modesto	$30,767

1. Based on the ACS data for Census Designated Places.
2. Source: DWR ACS data from 2006 to 2010, available here: http://www.water.ca.gov/irwm /grants/resourceslinks.cfm.

DAC Needs and Targeted Project Benefits

The ongoing drought, reduced surface water supplies, and the associated increase in groundwater use have created a water crisis in the East Stanislaus IRWM Region. The **Grayson Water System Efficiency Project** and the **South Modesto Infrastructure Efficiency Project** will be implemented to help reduce these impacts to DACs in the IRWM Region and will therefore directly benefit these DACs.

Figure 1: DACs in the East Stanislaus IRWM Region



Project Number	Implementing Agency	Project
1	Hughson	Potable Supply Offset Project
2	Modesto	Grayson Water System Efficiency Improvement
3	Modesto	South Modesto Infrastructure Efficiency Project
4	Turlock	Expanded Non-Porable Water Use Project
5	Turlock	Landscape Irrigation Efficiency Program
6	Turlock	Landscape Replacement Program
7	Modesto	New Hickman Community Well Project
8	Modesto	North Valley Regional Recycled Water Program

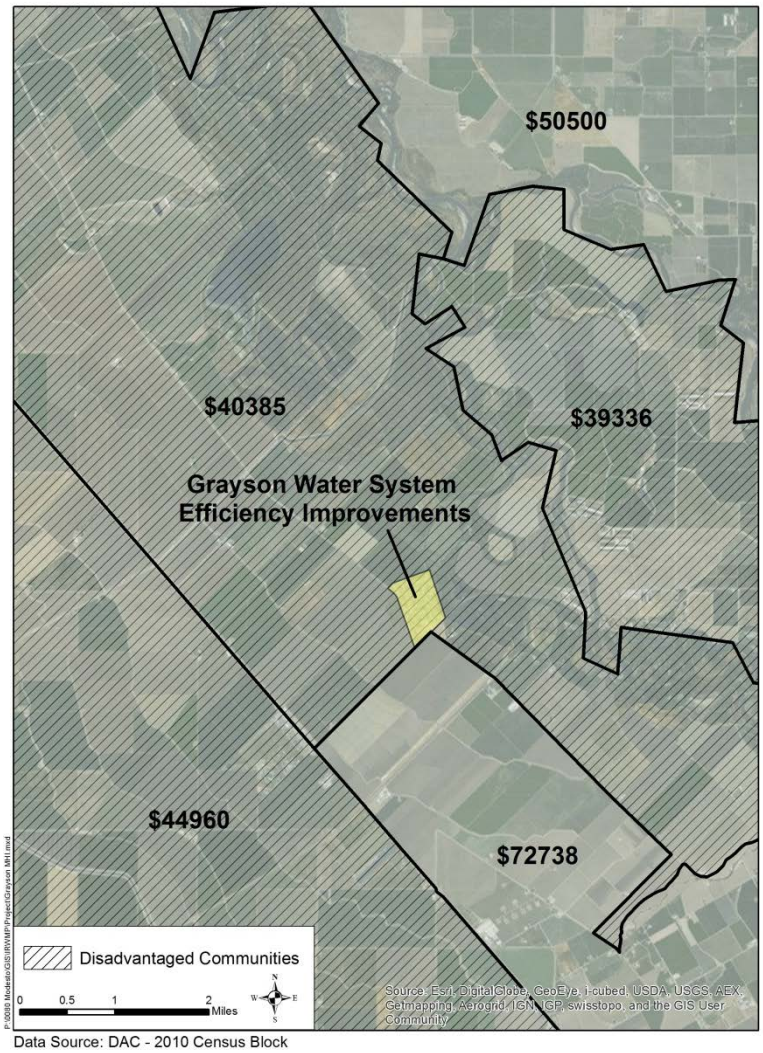
Data Sources:
Disadvantaged Communities - United States Census Bureau
City Boundaries - Caltrans Office of GIS Data Library
IRWM Region Boundary - California Department of Water Resources
Roads - Caltrans Office of GIS Data Library
Groundwater Basin Boundary - California Department of Water Resources

Grayson Water System Efficiency Project - The community of Grayson is approximately 14 miles west of the City of Modesto. The Grayson water system is owned and operated by the City of Modesto, and relies entirely on groundwater supply from two water wells. Groundwater from both wells is pumped through an ion exchange nitrate treatment system at great expense and then stored in a tank before distribution to the system. This economically disadvantaged community (see Table 1) does not have access to any other sources of water, and groundwater quality is not reliable with regionally declining groundwater levels. If the drought continues, groundwater levels in the Delta-Mendota Groundwater Subbasin will drop, impacting both the quantity and quality of

the water supply. Increased contaminants will drive up the costs of treatment, which impacts rate payers. Drilling deeper wells is also costly and does not appear to improve water quality. With a new water supply not feasible, reducing the amount of groundwater that must be pumped and treated to meet demands is the immediate solution to preserving what supply is available for potable uses.

The Grayson Water System Efficiency Improvements Project will reduce the community's water losses, which are quite high due to old and undersized steel water mains. Previous leak detection/repairs and water metering in this community have resulted in a large reduction in required water production; however, system-wide pipe leakage still contributes to a significant loss of potable water for this small community. A more efficient water distribution system would help offset the short-term drought impacts in regard to a reduced water supply and the resulting potential increase in contaminants and provide the DAC with a more reliable water supply.

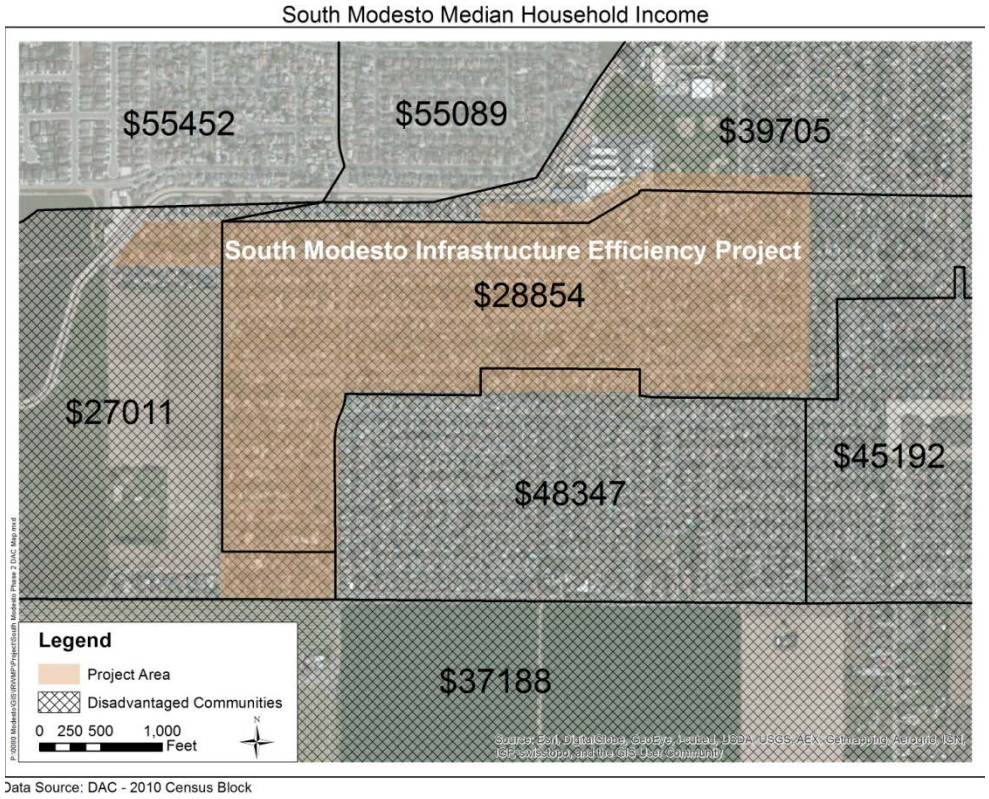
Figure 2: Grayson MHI



South Modesto Infrastructure Efficiency Project - South Modesto (south of the Tuolumne River) is largely a disadvantaged community which relies on water conveyed from North Modesto (north of the Tuolumne River) to sustain its water needs. South Modesto does not have adequate groundwater pumping facilities to meet those demands. Recently, several South Modesto wells in the Bret Harte area had to be shut down and abandoned due to uranium, gross alpha, and nitrates contamination. Four of the remaining active wells rely on blending with surface and groundwater supplies from North Modesto to maintain potable standards. The drought has forced the Modesto Irrigation District (MID), whose boundaries reside north of the Tuolumne River and which supplies 30 million gallons per day (mgd) of surface water to the City of Modesto, to reduce surface water deliveries by about 43% starting in May 2014. With this severe reduction in surface water deliveries to Modesto's customers north of the river, Modesto has had to increase pumping north of the river and rush every available well that has been down for maintenance back into service to meet the peak and maximum-day demands of the entire City through the summer. Modesto has very little reserve pumping capacity south of the river as bringing South Modesto offline wells back into production will require a blending source due to existing contaminant issues. Without water supplies conveyed from North Modesto, including that needed to blend with water from existing South Modesto wells to meet potable standards, South Modesto can't meet its demand needs, including those for fire flow. This situation will worsen if the drought continues into 2015.

The South Modesto Infrastructure Efficiency Project will reduce system-wide demands south of the Tuolumne River by replacing over two miles of old steel water mains in the South Modesto disadvantaged community of Bret Harte to eliminate system losses. As with the Grayson Water System Efficiency Improvements Project, a more efficient water distribution system would offset the short-term drought impacts in regard to a reduced water supply and the resulting potential increase in contaminants and provide the DAC with a more reliable water supply.

Figure 3: South Modesto Infrastructure Efficiency Project Area MHIs



North Valley Regional Recycled Water Program (NVRRWP) - The ongoing drought and reduced Central Valley Project (CVP) allocations have created a water crisis in the area to be served by the North Valley Regional Recycled Water Program. The Del Puerto Water District (DPWD) serves water to agricultural growers within its service area with CVP supplies through a contract with the U.S. Bureau of Reclamation; this contractual entitlement is the District's sole source of supply. Irrigation water is provided to approximately 45,000 acres of highly productive farmland in Stanislaus, San Joaquin, and Merced Counties. The U.S. Bureau of Reclamation provides DPWD up to 140,210 acre-feet per year (AFY), but as a south of the Sacramento-San Joaquin Delta user, DPWD has experienced significant shortages and decreased reliability in the quantity of water it has received in recent years under the terms of its federal service contract. Contractual limitations have the following impacts to the District and its customers:

- Increased land fallowing and shifts in cropping patterns
- Increased groundwater pumping, which is unreliable in many areas and lacks the quality requirements for cropping
- Higher per unit delivery costs
- Economic hardship for users and local communities
- Crop loss and permanent crop damage

DPWD received 0% of its full contract amount for 2014 which will be devastating to the DACs in the Project area. The NVRRWP will address the critical water supply need of the DACs in the DPWD service area by delivering recycled water from the Cities of Modesto and Turlock to the DPWD service area. The Project would improve water supply reliability and augment the shortfalls of the District's CVP supplies and offset further economic impacts to the local DACs.

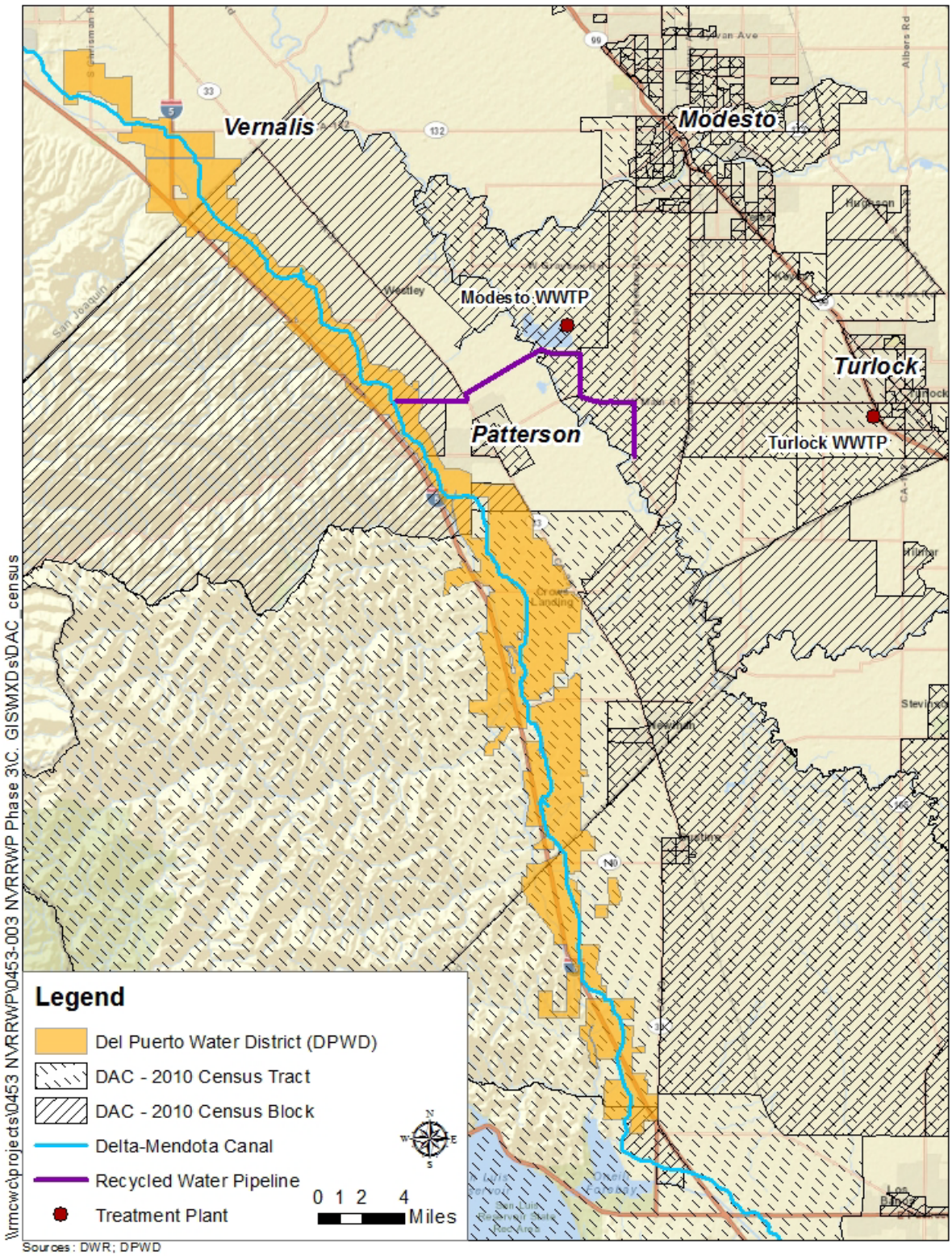



Figure 4: Disadvantaged Communities in the NVRRWP Area