

**Attachment 10**  
**Disadvantaged Community**  
**Match Requirement Calculations**  
**Property Acquisition, Middle Creek Flood Damage Reduction**  
**and Ecosystem Restoration Project**

The Lake County Watershed Protection District is requesting a reduction on the match requirement for the Middle Creek flood damage Reduction and Ecosystem Restoration Project from 25 percent to six percent, as the Project primarily benefits disadvantaged communities. Following are the calculations supporting this request.

The reduced match requirement for Disadvantaged Communities (DAC) was determined in accordance with Appendix E of the Proposal Solicitation Package, Integrated Regional Water Management, Proposition 84, Round 2, November 2012. Spatial and population data sources include the 2010 Census data from the County GIS Server.

Calculations were performed with populations obtained from the Census “Blocks” which receive their drinking water supply from Clear Lake. The procedures are as follows:

1. The 2010 Census “BlockPopulationDensity” was added to the map.
2. The Census Block Groups data containing the DAC was obtained from the California Department of Water Resources website <http://www.water.ca.gov/irwm/grants/resourceslinks.cfm> and only Lake County Block Groups selected and saved as Lake\_Co\_Block\_Groups. File Properties were utilized to display non-DAC and DAC Block Groups utilizing different symbology.
3. Using ArcGIS, the “BlockPopulationDensity” that intersect the major water supply boundary shapes were selected. The selected records data table (1,164 records) was exported to *Census Blocks Served by Surface Water.shp*. The total population served is 33,252 (Field: Total\_)
4. The Census Block in the above shape file were selected for only those areas that overly the DAC areas. The selected records data table (1,164 records) was exported to *Census Blocks DAC Served by Surface Water.shp*. The total population served is 28,781 (Field: Total\_)
5. From the above figures, it is estimated that 86.55% ( $28,781/33,252 \times 100\%$ ) of the population benefitting is classified as a DAC.

For the flood damage reduction benefit, 100% of the population removed from the 100-year floodplain by the Project are classified as DAC.

Estimating the DAC benefit for habitat improvement and for general water quality/recreational opportunity improvement is much more problematic, as the extent of these benefits is very hard to quantify, and even reaches beyond the County and IRWM Region boundaries due to the number of second homes and tourism industry associated with Clear Lake. For an approximation, the percentage DAC was calculated using only the Clear Lake watershed. The procedures are as follows:

1. Using ArcGIS, the Clear Lake Watershed shapefile (Clear Lake WS) was added to a “map.”
2. The 2010 Census “BlockPopulationDensity” was added to the map.

3. The data table for the "BlockPopulationDensity" shapefile was modified by calculating a field from the GEOID10 field to correspond to the "Block Group" shapefile. The GEOID10 field was stripped of the last three digits in Field BG\_Link.
4. BlockPopulationDensity was joined to Lake\_Co\_Block\_Groups.
5. Blocks from BlockPopulationDensity selected based on their intersection with Clear Lake WS. Blocks were exported to the file. Extraneous fields from Lake\_Co\_Block\_Groups were deleted. Total population is 54,526.
6. Blocks were selected from Blocks\_ClearLake\_WS\_DAC that were designated as DACs. Total population is 41,672.
7. From the above figures, it is estimated that 76.43% ( $41,672/54,526 \times 100\%$ ) of the population benefitting is classified as a DAC.

If the calculation is based on the entire County, the estimate is calculated as follows:

1. Using ArcGIS, the Clear Lake Watershed shapefile (Clear Lake WS) was added to a "map."
2. The 2010 Census "BlockPopulationDensity" was added to the map.
3. The data table for the "BlockPopulationDensity" shapefile was modified by calculating a field from the GEOID10 field to correspond to the "Block Group" shapefile. The GEOID10 field was stripped of the last three digits in Field BG\_Link.
4. BlockPopulationDensity was joined to Lake\_Co\_Block\_Groups. Total population is 64,665.
5. Blocks indicated as a DAC were selected. Total population is 44,818.
6. From the above figures, it is estimated that 69.31% ( $44,818/64,665 \times 100\%$ ) of the population benefitting is classified as a DAC.

Using a population weighting to determine the minimum cost share, the minimum cost share for each benefit is estimated as:

- Drinking Water:  $25\% \times (1 - 86.55\%) = 3.36\%$
- Flood Benefit:  $25\% \times (1 - 100\%) = 0\%$
- Habitat/water quality/recreation:  $25\% \times (1 - 76.43\%) = 5.89\%$  or  $25\% - (1 - 69.31\%) = 7.67\%$ , an average of 6.78%.
- An average of the three separate benefits is 3.38 %.

## **ATTACHMENT 10**

### **Disadvantaged Community Assistance**

The Lake Berryessa Resort Improvement District (District) is an unincorporated community remotely located along Putah Creek in northeast Napa County. The District's services are limited to public water and sewer for the Berryessa Estates subdivision. Currently, there are approximately 180 single-family residences that receive services from the District.

In September 2012 the District in conjunction with the Rural Community Assistance Corporation (RCAC) conducted an income survey of the Berryessa Estates subdivision. Prior to this income survey provided by RCAC, a Berryessa Estates focused median household income survey had not been conducted. RCAC concluded that the Median Household Income for Berryessa Estates to be \$45,000 based on a response rate of 72.3 percent. The RCAC MHI survey was designed and conducted per State and Federal guidelines established for the United States Department of Agriculture, Rural Development. A copy of the RCAC Final Report dated 12/14/12 is included herein.

The proposed project addresses the following critical water quality needs:

- Construction of additional wastewater storage and disposal improvement necessary to prevent surface or groundwater contamination.
- The completion of the project will ensure compliance with Regional Water Quality Control Board mandated requirements and thus the District's Wastewater Discharge Standards.
- The project has been designed to meet long term wastewater treatment, storage, and disposal needs of the community.

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The proposed project addresses the following critical water supply needs:

- Infrastructure renovations to a public water supply system necessary to assure continued reliability of the minimum quality and quantity of water. The following is summary of the issues surrounding the water tanks:
  - Water Tank #1 was concrete lined in 1991 to minimize water leakage. However, in April 2012 the District and GHD Engineering conducted a visual inspection and there are appeared to be cracks in the tank where water was seeping out. If not replaced the minor cracks may turn into significant holes and reduces the structural integrity of the structure.
  - The foundation of Water Tank #2 was constructed on unstable soil (i.e. non-engineered material), which has resulted in differential settlement causing the Tank Structure to lean. Replacement of the structure and foundation is immediately necessary at Water Tank #2 because it is a seismic hazard and structural liability for the District.
  - District staff determined in 2009 that Tank #3 was not seismically stable at full volume. Accordingly the District has been operating the tank at half capacity (50,000 gallons) to prevent structural failure. Additionally the roof of the tank was damage in 2010 and is currently in need of repair.
  - The existing two pump stations are not adequately sized to handle current and build-out flow demands. This recommendation is based on the December 2011, Technical Memorandum prepared by Winzler and Kelly. The proposed project will replace the existing equipment at both pump stations to increase efficient and ensure the delivery of reliable water supply to the District.