

Dudek Technical Memorandum Summary

The Tribal Communities and Underrepresented Communities under the Proposition 68 Technical Assistance Program

The purpose of the Technical Assistance Program (Program) is to fulfil the Proposition 68–eligible needs, risk, and vulnerability assessments, and other technical assistance services, to Tribes, Tribal Communities, and Underrepresented Communities (Communities). The Tribal Communities and Underrepresented Communities under the Proposition 68 Technical Assistance Program will identify communities throughout California with water supply problems such as dry groundwater wells, water shortages, or poor water quality. These communities may get help for needs and technical assessment services to improve their water supplies. To identify and reach out to communities for the Program services, DWR has prepared a community identification tool (CIT) with which to find, rank, and map the Communities of greatest need.

Identifying Tribes and Communities in Need

The CIT uses publicly available data sources and information to identify and assess Community needs based on important water-related and economic traits. The most important traits are given the greatest weight in assigning priority. The CIT is flexible and will be updated as new data and information becomes available.

Information Sources

The CIT uses data and information that is available to the public for ranking the communities. The data sources used are from the United States Census Bureau, California Department of Water Resources, California Office of Environmental Health Hazard Assessment, and California Office of Emergency Services (See Resources below).

Information Compiled

Using the data sources listed above, the CIT collects relevant information for each census block within the State of California^[1]. The information that was collected includes, but is not limited to, median household Income (MHI), threats to groundwater, whether or not people have access to drinking water, surface water quality, for example if there are water quality concerns in creeks or rivers , water system identification number and compliance status to see if there have been drinking water contamination violations, Tribal lands and native entities, groundwater basin identification and management information, groundwater basin overdraft status and ranking, groundwater basin sustainability agency identification, and household water shortages. The information is stored in a database that is used to quantify areas of greatest water-related need.

[1] Census blocks are the smallest geographic unit used by the US Census Bureau for data tabulation. They are statistical areas bounded by visible features such as roads, streams, and railroad tracks, and by nonvisible boundaries such as property lines, city, township, school district, county limits and short line-of-sight extensions of roads. (US Census Bureau 2011)



Assessing Need

DWR has ranked several criteria as being the most important for understanding Community need. These criteria are water system compliance, threats to drinking water, threats to groundwater, DWR groundwater basin prioritization, and median household income. The criteria are filtered to remove some categories from consideration. For example, areas within “low priority” groundwater basins are removed from further consideration. In addition, each category is assigned a multiplier based on its relative importance to the other categories as well as a multiplier that establishes the relative importance within each criterion. For example, areas where with median household income less than \$15,000 are assigned a multiplier of 5 whereas those with an MHI of greater than \$60,000 are assigned a multiplier of 1. The resulting filtering and prioritization scheme is summarized in the following table. The first two columns show the Ranking Criteria numbers and names and the Criterion Multiplier in the third column shows how heavily each Criterion is weighted. The Filtered Out column shows categories of each Ranking Criterion that are removed from consideration. Finally, the Multiplier Within Criterion in the 5th column shows the categories within each criterion and how heavily they are weighted.

As an example, a community supplied by a water system that is out of compliance (5), is in the 65th percentile of drinking water threats (2), 82 percent of groundwater threats (4), within a medium priority groundwater basin (1), and has a median household income of \$40,000 dollars (3) would receive a total priority ranking of $(5 \times 5) + (5 \times 2) + (4 \times 4) + (4 \times 1) + (3 \times 3) = 64$.

Filtering and Prioritization Criterion				
Ranking Criteria Number:	Ranking Criteria Name:	Criterion Multiplier:	Filtered Out:	Multiplier Within Criterion:
C1	Water Systems Compliance	5	= Yes (in compliance)	Yes (in compliance) = 0, No (not in compliance) = 5
C2	Drinking Water threats Percentage	5	< 50%	50 - 60 = 1, 60 - 70 = 2, 70 - 80 = 3, 80 - 90 = 4, 90 - 100 = 5
C3	Groundwater Threats Percentage	4	< 50%	50 - 60 = 1, 60 - 70 = 2, 70 - 80 = 3, 80 - 90 = 4, 90 - 100 = 5
C4	Basin Prioritization	4	Low and Very Low	Critical = 3, High = 2, Medium = 1
C5	Median Household Income	3	> \$75 K	0 - \$15K = 5, \$15k - \$30K = 4, \$30 - \$45K = 3, \$45K - \$60K = 2, \$60K - \$75K = 1

Mapping the Results

Maps that illustrate prioritized areas within California have been prepared and are included on the Technical Assistance webpage (<https://water.ca.gov/Work-With-Us/Grants-And-Loans/Sustainable-Groundwater/Underrepresented-Communities-Grants>). These “heat maps” show regions of the state from lowest to highest priority represented by a color scale that ranges from gray to purple. Additional maps that illustrate various information collected for the Program have also been prepared. The maps show the process as applied to California’s hydrologic regions including Northern California, Central California, and California’s Central Coast.

Resources

- [United States Census Bureau](#)
- [California Department of Water Resources Disadvantaged Communities Mapping Tool](#)
- [California Office of Environmental Health Hazard Assessment](#)
- [California Water Resources Control Board Human Right to Water Portal](#)
- [California Governor’s Office of Emergency Services GIS Data Hub](#)
- [California Department of Water Resources SGMA Data Viewer](#)
- [California Department of Water Resources Critically Overdrafted Basins](#)
- [California Department of Water Resources Household Water Supply Shortage Reporting System](#)

