

**San Diego Integrated Regional Water Management
2014 IRWM Drought Solicitation Implementation Grant Proposal
Disadvantaged Community Assistance**

Attachment 7 consists of the following items:

- ✓ **Documentation of Presence and Needs of DACs.** Local DACs are defined and mapped using American Community Survey data from the U.S. Census. Critical water supply and water quality needs identified by local DAC representatives are summarized.
- ✓ **Description of Proposed Projects and Benefits to DACs.** The benefits to local DACs from the proposed projects are described.

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Funding Match Waiver

The cumulative funding match for the proposal is 47%. Two of the DAC projects provide funding match below the 25% requirement – 6: *Conservation Home Makeover in the Chollas Creek Watershed* and 9: *Ms. Smarty-Plants Grows Water-Wise Schools*. However, the remaining projects in this 2015 IRWM Implementation Grant Proposal have sufficient funding match to result in an overall 47% cost share, and no funding match waiver is requested.

Presence of DACs

Defining DACs

A DAC is defined by DWR in the *2015 Integrated Regional Water Management Grant Program Guidelines (2015 Guidelines)* as a community earning less than 80% of the statewide median household income (MHI). The American Community Survey (ACS) of the U.S. Census comprises social and demographic data, including information regarding MHI estimates for the State of California and individual communities within the state. According to the *2015 Guidelines*, the most recent ACS data available show that 80% of statewide MHI is \$48,875, meaning that any community with an MHI of \$48,875 or less would qualify as a DAC. The MHI reported in the *2015 Guidelines* uses ACS data from 2009-2013. This 2009-2013 ACS data were mapped for the San Diego IRWM Region at both the block-group and census tract levels, with those block-groups and tracts qualifying as DAC shown in **Figure 7-1**. A combination of block-groups and tracts were used because this best captured the DACs in the Region, and was consistent with the way DACs were mapped in the *2013 San Diego IRWM Plan*. **Figure 7-1**, below, shows the location of projects included in this Proposal in relation to DACs in the Region, as defined in the *2015 Guidelines*. DACs are also shown on individual project maps included in *Attachment 2 Project Justification*.

Calculating DAC Presence Thresholds

The *2015 Integrated Regional Water Management Proposal Solicitation Package (2015 PSP)* states that DAC projects are those that “demonstrate that at least 25% of the project service area (by population or geography) will benefit a water-related need of a DAC”. Project areas were mapped with the 2009-2013 ACS data for MHI and population, and an analysis was completed for each of the projects to determine the percent of the geographic area or population that qualified as a DAC. The results of this analysis is presented in **Table 7-1**, below.

A geographic analysis was conducted for each of the projects to determine how much of each project area overlays a designated DAC. The DAC percentage was calculated as the total area that qualifies as DAC within a project area, divided by the total project area. The following projects were determined to be DAC projects based on this geographic analysis: 1: *Regional Drought Resiliency Program*, 2: *Conservation Home Makeover in the Chollas Creek Watershed*, 11: *San Diego River Healthy Headwaters Restoration*, and 12: *Sweetwater Reservoir Wetlands Habitat Recovery*.

The findings of the geographic analysis found a few projects that failed to capture the nature of the population within the project area. For these projects, an additional population analysis was conducted to determine how much of the population served by the project resided in DACs. In most cases, this additional analysis was deemed necessary because of population density and distribution. The City of San Diego, for example, is geographically disbursed, but population density varies dramatically from the dense urban center to areas of large estates and large lots in the inland and northern reaches of the city. Most of the DACs are located in higher density areas. The population analysis was completed at the Census block-group level because it is a finer scale than the tract-level, reducing the degree of uncertainty that results from Census data boundaries being misaligned with project areas. For the population analysis, any Census block-group that fell at least partially within the project area was included in the analysis. The following projects were determined to be DAC projects based on this population analysis: 3: *San Diego Water Conservation Program*, 4: *Ms. Smarty-Plants Grows Water-Wise Schools*, 7: *UCSD Water Conservation and Watershed Protection*, 8: *Escondido Advanced Water Treatment for Agriculture*, and 13: *Hodges Reservoir Natural Treatment System*.

For three of the above projects, the DAC analysis area was slightly different from the direct project benefit area shown on **Figure 7-1**. The *Sweetwater Reservoir Wetlands Habitat Recovery* and *Hodges Reservoir Natural Treatment System* project areas cannot reasonably be classified as DACs because both of these projects will be implemented in and immediately adjacent to reservoirs. The *Sweetwater Reservoir Wetlands Habitat Recovery* project will benefit all customers within the Sweetwater Authority (SWA) service area (who owns and operates

Sweetwater Reservoir), providing benefits to DACs located within this area. The *Hodges Reservoir Natural Treatment System* project will provide benefits not only to the City of San Diego service area (who owns and operates Hodges Reservoir), but also to the larger SDCWA service area because of Hodges Reservoir's role in the regional water supply system. A geographic and/or population-based DAC analysis was therefore completed as described above for both of these projects using SWA and SDCWA service areas in lieu of the project area. Note that while the results of this analysis are included in **Table 7-1**, the larger benefit area for both projects (SWA and SDCWA services areas) are not included on **Figure 7-1**. The service area of SDCWA is shown in **Figure 7-1** because it is also the project area for the *Regional Drought Resiliency Program*. Additionally, Padre Dam MWD's *Padre Dam Advanced Water Treatment – Phase IA Expansion* lays the groundwork for future potable reuse, and expands water reuse in their service area. Because this project is a critical step to planned future potable reuse, which will benefit Padre Dam MWD's entire service area, the DAC analysis was completed for the entire Padre Dam MWD service area.

Two additional exceptions were made to the standard geographic and/or population analysis described above: 5: *Rural Disadvantaged Community Partnership Project – Phase III* and 10: *Safari Park Drought Response and Outreach*. The *Rural Disadvantaged Community Partnership Project – Phase III* used an alternate analysis to determine DAC project status. DAC mapping using 2009-2013 ACS data showed inconsistencies between local understanding of DACs and DACs shown in ACS data. Local experience has found that Census data are unreliable for tribal land (where many of the project's components will be implemented) due to response bias to U.S. Census forms. Rural DACs can be particularly difficult to capture using Census data, because these communities are small but located in larger Census tracts and block-groups that may also include non-disadvantaged communities. In conjunction with an advisory committee, RCAC uses local knowledge to vet which communities qualify as DACs for participation in the program. Under Phase II of this project, which received a Prop 84-Round 2 IRWM grant, Rural Communities Assistance Corporation (RCAC) developed a project evaluation process to determine which projects could be eligible for IRWM funding. RCAC has been working with IRWM stakeholders for several years to develop a team of experts that are collectively organized as the Rural DAC Stakeholder Committee, and include representatives from RCAC, Indian Health Services (IHS), San Diego County Water Authority (SDCWA), City of San Diego, County of San Diego Department of Environmental Health (DEH), and State Water Resources Control Board (SWRCB). The Committee used the following primary criteria to select DAC projects in 2015: location in an economically disadvantaged community; construction projects or planning projects that will lead to construction projects; positive impact to public health or the environment; critical need with respect to water quantity, water quality, water reliability, or the environment; high likelihood of project success; and ability to be completed within the allowable grant project period. All of the components included in the *Rural Disadvantaged Community Partnership Project – Phase III* are located in areas recognized as DACs by the agencies that make up the Rural DAC Stakeholder Committee.

The *Safari Park Drought Response and Outreach* project is located entirely within the boundaries of the San Diego Zoo Safari Park, which does not contain any households. Although the project will benefit Safari Park visitors, including those from DACs, and will conduct targeted outreach to schools, including Title I low-income schools that serve DACs, it also serves tourists and other residents of the Region. There is no reasonable proxy for determining how many visitors to the Safari Park are from DACs, and how many are not. This project was therefore excluded from all DAC analyses.

Table 7-1: Presence of DACs within Project Areas

Proposed Projects		Project Area (ac)	DAC Area (ac)	% DAC by Area	Project Area Population ¹	DAC Area Population ¹	% DAC by Population ¹
DAC Projects							
1	Regional Drought Resiliency Program	936,529	246,858	26%	3,100,501	930,066	30%
2	Conservation Home Makeover in the Chollas Creek Watershed	3,830	2,456	64%	-	-	-
3	San Diego Water Conservation Program	216,217	32,618	15%	1,503,916	426,221	28%
4	Ms. Smarty-Plants Grows Water-Wise Schools	220,171	4,003	2%	246,927	62,180	25%
5	Rural Disadvantaged Community Partnership Project – Phase III	MHI data presumed to be biased due to location on rural and Tribal lands. Alternative analysis used to determine DAC status. 100% of the project sites are DACs.					
7	UCSD Water Conservation and Watershed Protection	13,319	2,866	22%	81,672	31,652	39%
8	Escondido Advanced Water Treatment for Agriculture	8,327	1,550	19%	68,795	33,544	49%
11	San Diego River Healthy Headwaters Restoration	121,329	67,460	56%	-	-	-
12	Sweetwater Reservoir Wetlands Habitat Recovery ²	23,351	12,602	54%	-	-	-
13	Hodges Reservoir Natural Treatment System ³	936,529	246,858	26%	3,100,501	930,066	30%
Non-DAC Projects							
6	Integrated Water Resource Solutions for the Carlsbad Watershed	7,191	128	2%	64,763	2,252	3%
9	Padre Dam Advanced Water Treatment – Phase IA Expansion ⁴	56,834	3,410	6%	154,679	16,954	11%
10	Safari Park Drought Response and Outreach	DAC analysis not completed. Project does not include residential areas and no reasonable proxy for visitor MHI is available.					

Note: **Bold text** indicates how project was determined as DAC project (either area or population).

¹ Only completed for projects that failed to meet the 25% DAC threshold by geographic area

² Project completed on reservoir lands, but benefits all customers within SWA's service area. DAC status was determined using SWA service area.

³ Project completed on reservoir lands, but benefits customers within the City of San Diego and SDCWA service areas. DAC status was determined using SDCWA service area.

⁴ Project completed within residential area, but benefits all customers within Padre Dam MWD's service area. DAC status was determined using Padre Dam MWD service area.

Needs of DACs

The San Diego IRWM Region distinguishes between urban DACs and rural DACs, because the nature of water-related issues for these DAC populations is markedly different. Urban DACs are those DACs that are located within municipal service areas and therefore receive public water and wastewater services; urban DACs represent the majority of DACs (by population) in the Region shown in **Figure 7-1**. Rural DACs are those DACs that are generally located outside of the service area of SDCWA and are therefore not typically served by a local water or wastewater agency. *Chapter 3 Region Description* of the 2013 IRWM Plan discussed the issues, needs, and challenges facing both urban and rural DACs in the Region (excerpt included here as **Appendix 7-1**). This information has been summarized below.

Urban DAC Needs

Because urban DACs are located within water agency service areas, they receive safe drinking water and wastewater services through local agencies and municipalities. As such, their water resources needs are generally related to community development and surface water quality issues, rather than drinking water quality, drinking water supply, or wastewater disposal and treatment issues. **Table 7-2**, below, lists the Urban DAC needs as identified in *Section 3.3 Disadvantaged Communities* of the 2013 IRWM Plan (see **Appendix 7-1**).

Urban DACs have reported experiencing flooding due to creek constrictions, which can result from inadequately-sized drains and culverts, vegetation overgrowth (particularly invasive species such as *Arundo donax*), creek realignment, pollution, or illegal dumping. Urban DACs are also prone to flooding due to high runoff from impervious surfaces associated with urbanization and a lack of open space or other non-paved recreation areas. The high volume of stormwater runoff also contributes to the poor surface water quality in urban DACs, as it is often polluted and drains directly into creeks. Homelessness also contributes to water quality issues, especially in homeless encampments located alongside the Region's water bodies that are prone to becoming a place where trash and other illegally-dumped items accumulates.

Many urban DACs in the Region are located adjacent to San Diego Bay and near industrial areas associated with the Region's shipping industry. These urban DACs are substantially impacted by pollution of San Diego Bay waters. Bay pollution from industry, runoff, and other activities has negatively impacted subsistence anglers, many of whom are residents of urban DACs. Low-lying urban DACs near the Bay may also experience the effects of sea level rise as a result of climate change.

Section 3.3 Disadvantaged Communities of the 2013 IRWM Plan includes a description of project components that are a priority to urban DACs in the Region. Projects in this proposal that are located in urban areas implement many of these priority components, including education targeting DACs, creek restoration, stormwater management and pollution prevention, public safety (through removal of invasive species that attract homeless encampments and contribute to flooding, and trash removal), and passive recreation.

Rural DAC Needs

Unlike urban DACs, rural DACs generally do not receive municipal water and wastewater services, and therefore may not be consistently supplied with a safe, reliable source of drinking water or wastewater disposal. **Table 7-3**, below, lists the rural DAC needs as identified in *Section 3.3 Disadvantaged Communities* of the 2013 San Diego IRWM Plan (see **Appendix 7-1**).

Due to infrastructure limitations, source water quality, and other issues, the primary water-related concern of rural DACs is lack of a safe, reliable source of drinking water. Rural DACs often lack access to adequate infrastructure and financing, as well as the resources to adequately maintain existing system facilities. As a result, drinking water systems in rural DACs may face significant challenges in complying with both longstanding and new drinking water rules. Three key issues impede the sustainability of small community water systems:

- 1) Contamination of drinking water sources from wastewater intrusion, agricultural influences, and contaminant spills from industrial activities.
- 2) Seasonal weather changes resulting in floods or droughts that may require design options to bypass treatment during rain and storm events and identification of alternative water supplies (including water reuse) to increase capacity during droughts.

- 3) Deteriorating collection and distribution systems that may compromise source water quality and increase the cost of water treatment.

Water supply and water quality issues in rural DACs may be exacerbated by climate change, poor economies, and lack of community expertise. Inadequate water supply to support existing communities is a public health risk, especially considering that the rural portions of the Region are also those that are particularly susceptible to wildfires. The majority of drinking water maximum containment level (MCL) violations in the Region occur with small public water systems, and inadequate wastewater treatment can result in unplanned discharge events.

Rural DACs also face cost-related water quality issues because small DAC systems have fewer ratepayers to share the costs, and providing supplemental treatment processes to improve the quality of contaminated drinking water sources is costly. Further, rural DACs may lack the technical expertise and financial stability to access funding programs that could be implemented to address cost-related issues. This lack of technical capacity also contributes to the high cost of DAC projects through an inability to adequately perform operation and maintenance activities during the life of a system, further exacerbating issues and potentially resulting in system failures.

Another issue facing rural DACs is groundwater contamination, potentially from leaking septic tanks, illegal dumping, or wildfires. Leaking or improperly sited septic tanks pose a public health hazard, but rural DACs often struggle to find financial assistance to fund the conversion from septic to sewer, which is expensive given the distance between some rural systems and existing sewer infrastructure. Illegal dumping, especially of chemicals or hazardous wastes in creeks and watersheds, is a common problem reported in rural DACs. Drinking water supplies for some rural DACs have also been contaminated with ash from recent wildfires. The Region anticipates that the projected increase in wildfire frequency and intensity resulting from climate change will disproportionately affect rural DACs, which are more likely to be located near fire-prone areas and less likely to have the ability to defend against fires. Some rural DACs lack sufficient water supplies for fire protection, further increasing the danger.

Projects that Provide Water-Related Benefits to DACs

The San Diego IRWM Region considers projects that address the relevant urban or rural DAC needs described above as providing water-related benefits to a DAC. As defined in the *2015 PSP*, a project that provides a direct water-related benefit to a DAC, and whose project area (by geography or population) is at least 25% DAC, is considered a DAC project. **Table 7-2** and **Table 7-3** show which DAC needs are met by each of the projects included in this proposal, and identify which projects qualify as DAC projects when considering the 25% threshold calculated in **Table 7-1**, above. A more detailed description of how projects address DAC needs is provided in *Attachment 2 Project Justification*.

The following projects provide direct water-related benefits to DACs within the San Diego IRWM Region, and meet the 25% threshold to qualify as a DAC project:

- 1: *Regional Drought Resiliency Program*
- 2: *Conservation Home Makeover in the Chollas Creek Watershed*
- 3: *San Diego Water Conservation Program*
- 4: *Ms. Smarty-Plants Grows Water-Wise Schools*
- 5: *Rural Disadvantaged Community Partnership Project – Phase III*
- 7: *UCSD Water Conservation and Watershed Protection*
- 8: *Escondido Advanced Water Treatment for Agriculture*
- 11: *San Diego River Healthy Headwaters Restoration*
- 12: *Sweetwater Reservoir Wetlands Habitat Recovery*
- 13: *Hodges Reservoir Natural Treatment System*

The following projects provide indirect water-related benefits to DACs, or provide direct water-related benefits to DACs but fail to meet the 25% threshold to qualify as a DAC project:

- 6: *Integrated Water Resource Solutions for the Carlsbad Watershed*
- 9: *Padre Dam Advanced Water Treatment – Phase IA Expansion*
- 10: *Safari Park Drought Response and Outreach*

Table 7-2: Projects Addressing Water-Related Urban DAC Needs

Proposed Projects		Urban DAC Needs											
		Community Development	Surface Water Quality	Funding	Water Rates	Flooding/Creek Constriction	Flooding/Impervious Surfaces	San Diego Bay Pollution	Sea Level Rise & Low-Lying DACs	Food Security/Irrigation Costs	Technical Capacity	DAC Outreach	DAC Project?
Conservation Program													
1	Regional Drought Resiliency Program		○	●	○				○			●	Y
2	Conservation Home Makeover in the Chollas Creek Watershed	●	○	●	○		●	●		●	●	●	Y
3	San Diego Water Conservation Program		○	●	○			○	○			○	Y
4	Ms. Smarty-Plants Grows Water-Wise Schools			●	○		●					●	Y
Water Reuse Program													
6	Integrated Water Resource Solutions for the Carlsbad Watershed		●	○	○		○					●	N*
7	UCSD Water Conservation and Watershed Protection		●	○	○	●	○	●			○	○	Y
8	Escondido Advanced Water Treatment for Agriculture			○	●					●		○	Y
9	Padre Dam Advanced Water Treatment – Phase IA Expansion			○	○							○	N*
10	Safari Park Drought Response and Outreach			○	○							○	N*
Water Quality and Habitat Program													
11	San Diego River Healthy Headwaters Restoration		●	○	○	●						○	Y
12	Sweetwater Reservoir Wetlands Habitat Recovery		●	○	○							○	Y
13	Hodges Reservoir Natural Treatment System		●	○	○							○	Y

○ indirectly addresses; ● directly addresses
*Does not meet the 25% threshold to qualify as a DAC

Table 7-3: Projects Addressing Water-Related Rural DAC Needs

Proposed Projects		Rural DAC Needs												
		Drinking Water	Infrastructure	Financial Capacity	Technical Capacity	Small Community Water System Sustainability	Climate Change	Public Health	Adequate Water Supplies	Water Quality/MCL	Wastewater Treatment	Regulatory Burden	Wildfire	Illegal Dumping
Rural Water Infrastructure Program														
	Rural Disadvantaged Community Partnership Project – Phase III	●	●	●	●	●		●	●	●		●		Y

○ indirectly addresses; ● directly addresses

DAC Projects in this Proposal

The projects described below provide direct water-related benefits to DACs, as defined by the San Diego IRWM Region and described above, and meet the 25% threshold (by either area or population). These projects thereby meet the definition of a DAC Project provided in the *2015 PSP*. All of these projects provide funding benefits through their inclusion in this Proposal. Receipt of grant funds will offset costs to implement projects and help to overcome financial barriers to implementation. For those projects that meet the criteria for a DAC Project, a summary of the DAC benefits are provided below, while more in-depth discussion is provided in *Attachment 2 Project Justification*.

Project 1: Regional Drought Resiliency Program

The *Regional Drought Resiliency Program* benefits DACs because benefits will be distributed across SDCWA's service area, which is 26% DAC by area, and 30% DAC by population. This project would directly benefit urban DACs by providing funding support in the form of rebates for individual water conservation efforts. Component 6 would provide direct outreach benefits to urban DACs by increasing the target audience of drought and conservation messaging to include populations with limited English skills. Many of these targeted English-limited populations reside in DACs. It would also provide indirect benefits to urban DACs, including surface water quality benefits achieved through turf conversion, and reducing the impacts of climate change (through improved water supply reliability and reduction of local contribution to GHG emissions associated with water production and conveyance) that could disproportionately affect low-lying DACs within SDCWA's service area. In addition, this project, like the other projects in the Conservation Program, will help protect against higher water costs through reducing the need for future purchases of additional, potentially more expensive, water supplies that could lead to water rate increases.

Project 2: Conservation Home Makeover in the Chollas Creek Watershed

The *Conservation Home Makeover in the Chollas Creek Watershed* projects specifically targets residences in the Encanto neighborhood of the City of San Diego. This neighborhood is located between Hwy. 805 to the west, Hwy. 94 to the north, Hwy. 125 to the east, and Division and Plaza streets to the south. As shown in **Figure 2-3** (see *Attachment 2 Project Justification*) and in **Table 7-1**, this area is 64% DAC by area as defined in the *2015 Guidelines*. As shown in **Table 7-2**, above, this project will directly address seven urban DAC issues. The project will cover the costs of purchasing and installing rainbarrels and greywater systems, as well as funding landscape makeovers to convert turf to water-wise landscaping. Installation of greywater systems through this project will help address food security and irrigation costs by diverting greywater from the sewer system for use in irrigation of fruit trees to be planted at each residence. The project will reduce runoff from residences, protecting against flooding and impervious surfaces, as well as reducing pollution reaching San Diego Bay. The project will provide technical training to project participants, which will help build technical capacity for proper system maintenance, support community development and job skills, and provide outreach to DACs. Data collected from the project can be used to support future expansion of the project, and to secure funding for such expansion through other grant programs, which helps to address the funding issue that so often plagues urban DAC projects in the Region. Indirect benefits of this project include improved surface water quality from reduced urban runoff, and protection against water rate increases by improving water supply reliability in the Region, and reducing potable water demands in a DAC.

Project 3: San Diego Water Conservation Program

The City of San Diego is 28% DAC by population, and the *San Diego Water Conservation Program* will be implemented throughout the City's service area. Direct and indirect benefits are therefore anticipated to be distributed across the city, including its DACs. Direct benefits to DACs include funding support through rebates available to program participants. These rebates will help to overcome financial barriers to participation in water conservation efforts. This project also provides indirect benefits to five urban DAC needs, including surface water quality benefits, reduced pollution to San Diego Bay, addressing needs of low-lying DACs, and DAC outreach. Reduced pollution and surface water quality benefits are realized through the reduction in urban runoff that is associated with conversion from turf to water-wise landscaping, and improved irrigation efficiency. Many DACs in the City of San Diego are in low-lying areas along the San Diego Bay and may be disproportionately affected by the impacts of climate change. This project helps improve water supply reliability, and reduces the City's GHG emissions associated with water production and conveyance. Reduced runoff also helps to reduce flood risks in

these low-lying DACs. The outreach component of this project will not specifically target DACs, but will reach DACs within the City's service area. Water rate benefits are realized through the increased regional water supply reliability from the project, which reduces demand, conserving water for other uses, and helping to diminish the need for securing more expensive, water supplies that could result in water rate increases. For DAC renters, water costs are passed along in the form of rent increases, so water conservation efforts that help minimize water cost increases also help to minimize rent hikes.

Project 4: Ms. Smarty-Plants Grows Water-Wise Schools

Ms. Smarty-Plants Grows Water-Wise Schools targets Title I schools in the La Mesa-Spring Valley and Lemon Grove School Districts, portions of which fall within the service areas of Otay Water District and Helix Water District. These school districts are considered the project area, and are 25% DAC by population. **Appendix 7-2** includes a list of all Title I schools located within these school districts, 12 to 15 of which will be selected for the water-wise school upgrades. Title I schools are those schools serving high numbers or high percentages of children from low-income families. The U.S. Department of Education allows schools with at least 40% of their student population from low-income families to apply for Title I funding assistance for the entire school. According to the National Center for Education Statistics, in the 2012-2013 and 2012-2014 school years, there were six Title I schools in the Lemon Grove School District, and thirteen Title I schools in the La-Mesa Spring Valley School District.¹ Because all targeted schools will be Title I schools, all benefits from this project will be realized by DACs. As shown in **Table 7-2**, this project will directly address three urban DAC issues: funding, flooding and impervious surfaces and outreach. The turf conversions will cut expenses for the cash-strapped schools by reducing irrigation requirements. The conversion to turf will promote porous surfaces by reducing the potential for paving over existing turf to reduce water consumption. In addition, the project will target DACs with its water conservation and water-wise landscaping outreach. The project will indirectly provide surface water quality benefits by reducing runoff and water waste at targeted schools, while it provides indirect water rate benefits by improving water supply reliability through reduced demand for potable water, which will help to protect against water rate increases associated with securing additional reliable water supplies.

Project 5: Rural Disadvantaged Community Partnership Project – Phase III

As shown in the project map provided as **Figure 2-7**, the *Rural Disadvantaged Community Partnership Project – Phase III* will implement ten project components in rural DACs. These components will directly address nine rural DAC issues (see **Table 7-3**). The ten components represent the following project types, whose DAC benefits are described here:

- *Recycled water infrastructure improvements*: these projects address infrastructure needs of rural DACs by improving their recycled water infrastructure, and reducing stresses on existing potable water infrastructure by offsetting potable demands
- *Potable water storage*: these projects address drinking water, infrastructure, adequate water supplies, public health, and wildfire needs of rural DACs, primarily by providing adequate storage for safe water supplies necessary to meet community needs
- *Smart meter installation*: these projects improve infrastructure and reduce stress on systems and supplies by helping residents better manage their water use
- *Regionalization/consolidation of neighboring water systems*: regionalization projects address infrastructure issues by building financial and technical capacity through consolidation and qualification for additional funding programs. These types of projects increase supply and treatment reliability, helping to protect public health and provide adequate and safe supplies.
- *Treatment system installation*: these projects address water quality/MCL issues, protecting drinking water quality and public health, improving infrastructure, and supporting small community water system sustainability.

¹ National Center for Education Statistics. CCD Public School Data 2012-2013, 2013-2014 School Years. Online database, accessed 16 June 2015. Search Criteria: District ID 0620250 (La Mesa – Spring Valley School District).

- *Floating trash removal*: trash removal helps to address public health concerns associated with polluted waterways, and improves water quality.
- *Bioswale construction*: bioswales are an effective way to address water quality issues resulting from unfiltered runoff. This helps to protect public health by addressing water quality and MCL issues.

In addition to the project-specific benefits, RCAC will provide training to build technical capacity to support successful project implementation and continued successful operation of the sub-projects. This will also help support infrastructure and small community water system sustainability. This project builds on the existing efforts of RCAC, continuing to build relationships with and meet the needs of rural DACs who are often unable to access funding opportunities.

Project 7: UCSD Water Conservation and Watershed Protection

The *UCSD Water Conservation and Watershed Protection* project will directly address three urban DAC needs, and indirectly address another five. Urban DAC needs that are directly addressed include surface water quality, flooding/creek constriction, and sea-level rise and low-lying DACs. The project improves surface water quality by reducing pollutant loading to San Diego Bay and the La Jolla ASBS, as well as reduces stormwater runoff and pollutant loading through its LID project components. The project includes trash removal in the Tijuana River Watershed, helping to reduce creek constriction and associated flood risks. DAC outreach and technical capacity building will indirectly occur because select project components will utilize volunteers from DACs to assist with project implementation. Indirect water rate benefits will be realized through the project's contribution to regional water supply reliability, reducing the potential for increased water rates to secure additional reliable supplies. As shown in **Table 7-1**, the cumulative *UCSD Water Conservation and Watershed Protection* project area is 39% DAC by population.

Project 8: Escondido Advanced Water Treatment for Agriculture

As shown in **Table 7-1**, the *Escondido Advanced Water Treatment for Agriculture* project serves an area that is 49% DAC by population. It provides direct benefits to water rates and food security/irrigation costs by producing recycled water suitable for agricultural purposes. Recycled water is a drought-proof local supply, meaning it is highly reliable, even in times of drought. In addition, recycled water is generally cheaper for customers than potable water, and conversion to recycled water can result in cost savings to customers. Because the water produced by the *Escondido Advanced Water Treatment for Agriculture* project would be used to irrigate crops, this project will also address food security and irrigation cost issues that are of concern to urban DACs. Indirect benefits include DAC outreach and funding. Outreach will be conducted to agricultural customers regarding the safe, and appropriate, use of recycled water for agricultural irrigation. Because approximately 43% of the City of Escondido, by area, meets the definition of a DAC, any outreach within the City of Escondido will also indirectly reach those DACs in the City of Escondido that are also agricultural customers or workers. Funding benefits are provided through the use of grant funds to cover a portion of the project costs. The presence of DACs within the project area is shown in **Figure 2-16**.

Project 11: San Diego River Healthy Headwaters Restoration

Per the analysis in **Table 7-1**, the *San Diego River Healthy Headwaters Restoration* project site is 56% DAC by area. This project directly addresses two urban DAC issues (surface water quality and flooding/creek constriction), and indirectly addresses three (funding, water rates, DAC outreach). Urban DAC benefits include a direct surface water quality benefit, achieved through invasive species removal and restoration of unauthorized recreation trails that contribute to water quality issues in the San Diego River watershed and downstream El Capitan Reservoir. Flooding/creek constriction benefits are realized through removal of invasive species which could cause creek constriction. The project also indirectly provides DAC outreach benefits because its outreach will reach DACs, although it is not specifically targeted to DACs. Finally, the project provides indirect water rate benefits to DACs because it helps to increase the amount of surface water available at El Capitan Reservoir. Surface water is a cheap water supply, and increased availability of such supplies helps to reduce the need for purchases of alternative, expensive supplies, thereby protecting against associated water rate increases.

Project 12: Sweetwater Reservoir Wetlands Habitat Recovery

The *Sweetwater Reservoir Wetlands Habitat Recovery* project is located adjacent to Sweetwater Reservoir, and so falls outside residential areas that can be classified as DAC or non-DAC. The project directly benefits customers of SWA, and directly addresses DAC needs, as shown in **Table 7-2**. To address this disconnect between the project area and the benefit area, SWA's service area was used as a proxy for determining DAC status. **Table 7-1** shows that the majority (54%) of SWA's service area comprises DACs in National City and Chula Vista (refer to **Figure 2-28**). The *Sweetwater Reservoir Wetlands Habitat Recovery* project will benefit all customers served by SWA, including those customers that are in DACs. This project will improve water storage capacity at Sweetwater Reservoir, as well as restore wetlands alongside the reservoir. This project will directly address surface water quality and DAC outreach. Surface water quality will be improved through restoration of the area around the Sweetwater Reservoir that was burned during massive fires that struck the Region in 2007. Outreach for this project directed towards SWA customers will reach also indirectly reach DACs within SWA's service area.

Project 13: Hodges Reservoir Natural Treatment System

Although the *Hodges Reservoir Natural Treatment* project will be implemented directly adjacent to the Hodges Reservoir, it will benefit the Region as a whole through improved emergency storage and regional water supply functionality. The direct benefits will be realized regionally, in areas that receive municipal water supply through SDCWA's member agencies. As such, SDCWA's service area has been used here as the appropriate proxy for DAC determination. As noted above, SDCWA is 26% DAC by area and 30% DAC by population. As indicated in **Table 7-2**, this project will directly address surface water quality, and indirectly address sea level rise and low-lying DACs. Surface water quality will be improved at Hodges Reservoir through the biofiltration function of the constructed wetland. Improved water supply reliability provided by this project will also provide some protection against potential increases in water rates by reducing the need to secure expensive water supply alternatives. Outreach for this project directed towards City of San Diego customers will reach also indirectly reach DACs within the City's service area.

Non-DAC Projects Providing DAC Benefits

The projects described here provide some form of water-related benefit to DACs, but fail to meet the criteria of a DAC project because the DAC benefits are indirect, or do not meet the 25% threshold (refer to **Tables 7-1** and **7-2**). A brief description of how these projects benefit DACs, even though they are not DAC projects, is provided here because addressing DAC needs is a priority for the San Diego IRWM Region, which recognizes that even small contributions to DACs are valuable.

Project 6: Integrated Water Resource Solutions for the Carlsbad Watershed

The *Integrated Water Resource Solutions for the Carlsbad Watershed* project benefits DACs, although the project area is only 3% DAC by population. It does, however, provide direct DAC benefits through outreach that will specifically target students at Title I schools. As described above, Title I schools serve students from predominately disadvantaged areas. This outreach will include implementation of state-approved curriculum for students in grades K-12, and conducting field trips for schools in Encinitas and Escondido to the San Elijo Lagoon. The project also includes direct surface water quality benefits through reduced pollutant loading to San Elijo Lagoon, which may be utilized for recreational purposes by local DAC residents. Indirect DAC benefits from this project include improved regional water supply reliability associated with increased recycled water use, which helps to buffer against potential water rate hikes associated with securing additional reliable water supplies. The project also provides indirect impervious surface benefits through the addition of LID components to reduce stormwater runoff and increase infiltration.

Project 9: Padre Dam Advanced Water Treatment – Phase IA Expansion

The *Padre Dam Advanced Water Treatment – Phase IA Expansion* project will indirectly benefit DACs, though the project area is only 11% DAC by population. Indirect benefits to DACs include potential protection from water rate increases and DAC outreach benefits. Water rate benefits will be realized because the project will increase local water supply reliability, which helps to protect against water rate increases associated with the need for expensive water supply alternatives. Outreach efforts for this project will be directed to everyone served by Padre Dam MWD, including DAC residents. However, because this outreach will not be targeted specifically to DACs, the outreach benefit is considered indirect.

Project 10: Safari Park Drought Response and Outreach

The *Safari Park Drought Response and Outreach* project will reach DACs through school programs and visits to the Safari Park and its website by DAC residents. The project will also reach a large number of non-DAC individuals and communities. There is no reasonable method for breaking down the visitor population to DAC and non-DAC populations due to the large volume of non-local visitors. Further, the outreach portion of the project would be indirect because it is not specifically targeted to DACs, and will reach many more non-DACs than DACs. In addition to DAC Outreach, the *Safari Park Drought Response and Outreach* project will indirectly provide protection against water rate increases by improving water supply reliability in the Region, which helps to buffer against water rate hikes associated with securing additional water supplies.

local regulatory oversight within the Region on drinking water wells, monitoring wells, small water systems, recycled water use, and the beach recreational water quality program. The County also regulates on-site wastewater systems through an agreement with the Regional Board.

Eighteen incorporated municipalities exist within the Region, including the Cities of Carlsbad, Chula Vista, Coronado, Del Mar, El Cajon, Encinitas, Escondido, Imperial Beach, La Mesa, Lemon Grove, National City, Oceanside, Poway, San Diego, San Marcos, Santee, Solana Beach, and Vista.

Physical and Hydrologic Characteristics

Each of the Region's east-west-trending watersheds flows from elevated regions in the east toward coastal lagoons, estuaries, or bays in the west. Each of the watersheds features similar habitats at similar elevations, and all watersheds share habitat restoration and protection needs. A significant majority of the volume of surface flow in each of the watersheds is comprised of runoff from seasonal precipitation that predominantly occurs during the winter and spring months. Surface flows during summer and fall months are typically low, and consist of urban runoff, agricultural runoff, and surfacing groundwater. Each of the watersheds has similar water quality characteristics and faces similar water quality problems.

Imported Water Supply

Imported water supplied by the Water Authority is the predominant source of supply within the Region. The Region's imported water supply infrastructure crosses watershed and jurisdictional boundaries and requires coordination among local agencies and entities to address water supply, water quality, and habitat issues. This broader perspective promotes funding for regional projects and increases the economy of scale for the Region's local supply development projects.

Wastewater Service

Wastewater generated in the Region is either locally recycled or exported to one of the regional ocean outfall disposal systems. The Region's urban wastewater agencies have organized – both through the formation of JPAs and through interagency contracts – into five multi-jurisdictional wastewater systems based around the Region's five deep-water ocean outfalls. This shared infrastructure requires a high level of collaboration and coordination between local agencies within the Region. Further, the Region's agencies are collaborating with the International Boundary and Water Commission to address trash and wastewater pollution in the shared Tijuana River watershed.

3.3 Disadvantaged Communities

Disadvantaged communities (DACs) are defined by DWR as communities with a combined Median Household Income (MHI) of less than 80% of the statewide MHI (DWR and SWRCB, 2007). The 2012 IRWM Guidelines define DACs based on data from the 2006-2010 American Community Survey. This defines DACs as Census tracts with an MHI of \$48,706 (DWR, 2012). The San Diego IRWM Region has refined data, with projections of 2013 MHI by Census blocks, produced by Nielsen-Claritas. Per the Nielsen-Claritas projections, 2013 statewide MHI is \$58,724, making the 80% criteria to define DACs as \$46,979 (Nielsen-Claritas, 2013). The decrease in statewide MHI from 2010 to 2013 has caused some of the Region's communities to no longer be considered DACs per the State standards; however, due to the Region's concern with addressing the needs of DACs, both the 2010 and 2013 data has been included in this Plan. The DAC information presented in Figure 3-4A and Figure 3-4B and discussed in the following sections represents the best available data on the location and nature of economically disadvantaged communities in the Region and does not constitute final or complete representation of DACs due to the scale of the data available

Additional income survey and other reliable data sources that demonstrate the location and nature of DACs in the Region may be used to further refine the data set and can be used for purposes of justifying grant eligibility based on DAC service areas.

Several communities and rural areas within the Region have an average MHI that is less than 80% of Statewide. The 2013 IRWM Plan uses various geographical designations to analyze DACs, including cities, County of San Diego community planning areas, and City of San Diego community planning areas. However, the use of larger planning areas can at times cause smaller portions of the planning area that are economically disadvantaged to be overlooked. The RWMG recently analyzed MHI values on a Census block basis to identify smaller pockets of DACs for outreach purposes. Figure 3-4A illustrates the community planning areas (CPAs) within the Region that are considered economically disadvantaged according to either the 2010 MHI criteria at tract level and the 2013 projections at block level. Figure 3-4B shows those areas within the City of San Diego that are considered DACs by either the 2010 or the 2013 data. Figure 3-4A also demonstrates the location of DACs with respect to the Water Authority's service area, which is used to distinguish Urban and Rural DACs as described below. Based on the 2010 Census data, eight of the County's 18 incorporated cities are considered DACs or contain DACs; these cities are El Cajon, Imperial Beach, Oceanside, Carlsbad, Escondido, San Marcos, National City, and San Diego. Additionally, based on the same data, 24 of the 58 City of San Diego CPAs and 18 of the 23 County CPAs are considered DACs or contain areas that qualify as DACs (SANDAG, 2013). Analysis of the 2013 data reduces these down to 22 and 13, respectively (Nielsen-Claritas, 2013).

Table 3-9 summarizes communities (by planning area) within the Region that meet DWR and State Board criteria for designation as DACs. The CPAs shown in the table are all CPAs in the Region that contain at least some DAC areas. Some CPAs are entirely or primarily DAC, while others (denoted by an asterisk) only contain small pockets of DACs. The table also shows how the DAC status for these areas has changed since 2000. The DACs are geographically distributed throughout the Region.

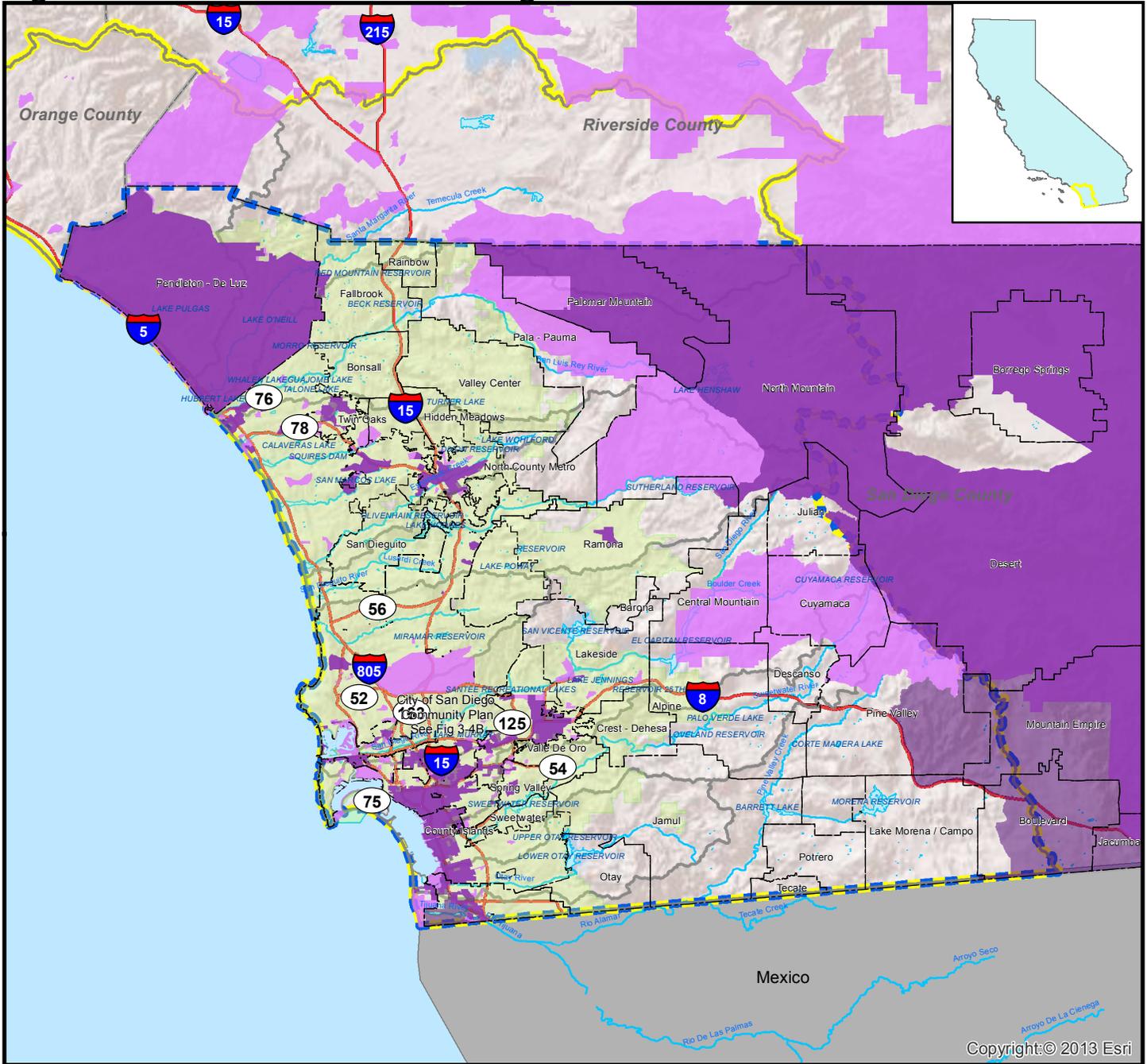
2010 Census data indicated that numerous Census tract neighborhoods in many of the Region's planning areas (both in incorporated and unincorporated areas) have MHIs that are less than 80% of the statewide MHI. Consistent with the recommendations of the *San Diego IRWM Public Outreach and Disadvantaged & Environmental Justice Community Involvement Plan*, actions are underway to outreach and collaborate with DACs throughout the Region.



Chollas Creek is a widely acknowledged disadvantaged community with surface water quality issues.

Photo credit: Leslie Reynolds, Groundwork San Diego-Chollas Creek

Figure 3-4A: Location of Disadvantaged Communities



Legend

- 2013 Disadvantaged Communities
- 2010 Disadvantaged Communities
- San Diego County Water Authority
- Community Planning Area
- Watershed
- San Diego IRWM Region
- Funding Area Boundary
- Ocean
- Waterbody
- County
- Freeway

Community Planning Areas (CPA) Containing Disadvantaged Communities (DAC)

- | | |
|---------------------------------|---------------------------|
| Alpine CPA*** | Mountain Empire CPA** |
| Bostonia County/Lakeside CPA*** | North County Metro CPA* |
| Central Mountain CPA* | City of Escondido |
| City of Carlsbad*** | City of San Marcos |
| City of Oceanside*** | North Mountain County CPA |
| County Islands CPA | Pala-Pauma CPA* |
| Cuyamaca CPA* | Palomar Mountain CPA |
| Descanso CPA*** | Pendleton-DeLuz CPA |
| Desert CPA | Pine Valley CPA |
| Fallbrook CPA*** | Ramona CPA*** |
| Fallbrook CPA*** | Spring Valley CPA |
| Julian CPA | Twin Oaks CPA*** |

*Areas meeting 2010 DAC criteria but not 2013 criteria
 **Areas meeting 2013 DAC criteria but not 2010 criteria
 ***Areas containing small pockets of DAC

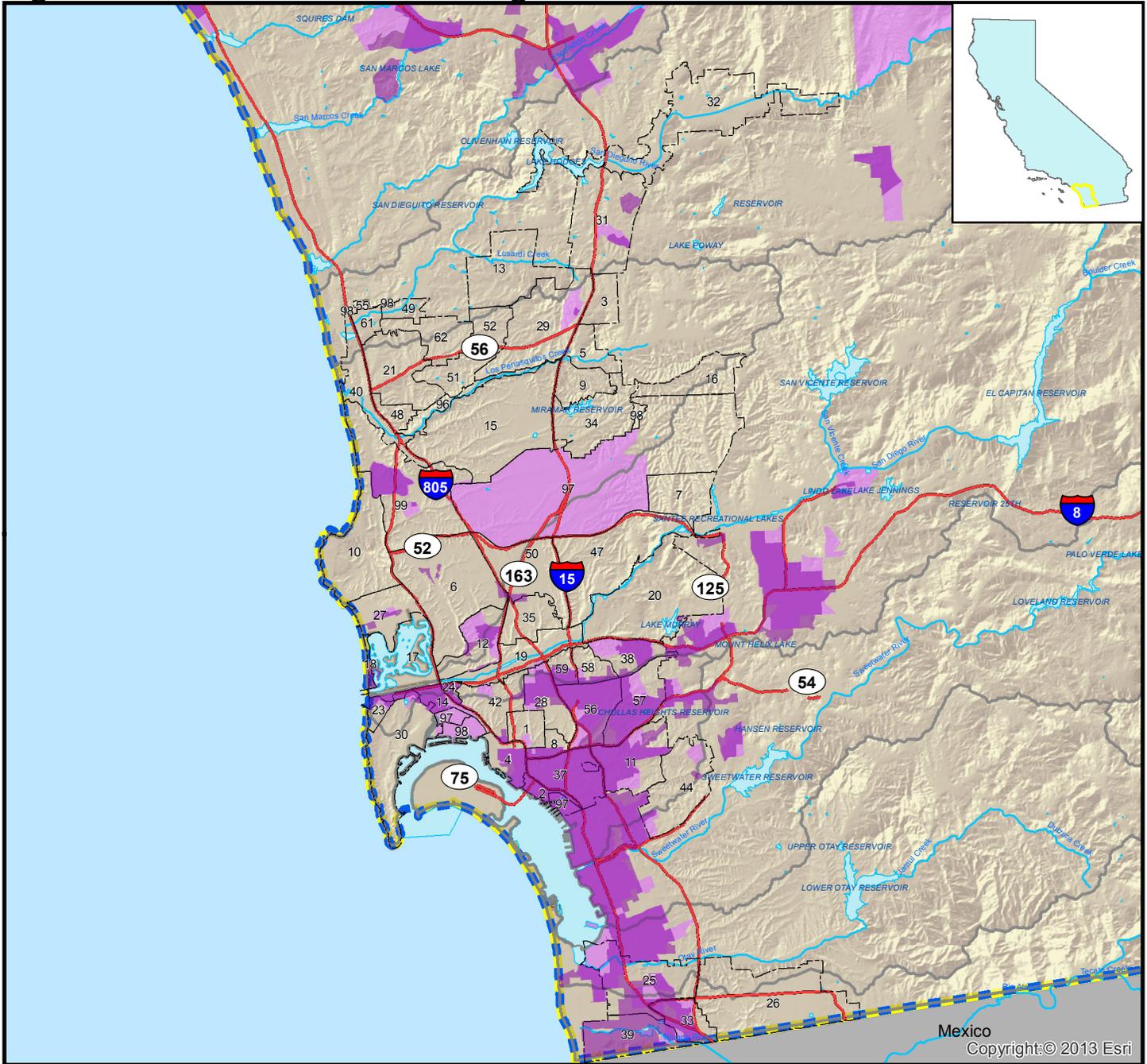
N

0 3 6 12
Miles

Sources: San Diego Association of Governments (SANDAG) - GIS Data Warehouse, 2010 Census Data.
 DAC defined as a block group with a median household income (MHI) of less than \$48,706 (80% of the Statewide MHI).
 \\rvmcsd\RMCS\Projects GIS\10188-003 SDIRWMP Plan Update\AdminDraft\Maps\060713_JD\Fig3-4A_Location of DACs 060713.mxd



Figure 3-4B: Location of Disadvantaged Communities in Central Area



Legend

- 2013 Disadvantaged Communities
- 2010 Disadvantaged Communities
- Community Plan
- Watershed
- San Diego IRWM Region
- Funding Area Boundary
- Ocean
- City Boundaries
- Waterbody
- County
- River
- Freeway

- Community Planning Areas (CPA) Containing Disadvantaged Communities (DAC)**
- | | |
|--------------------------------|------------------------------------|
| 2 - Barrio Logan CPA | 37 - Southeastern San Diego CPA |
| 6 - Clairemont Mesa CPA*** | 38 - College Area CPA |
| 8 - Greater Golden Hill CPA | 42 - Uptown CPA*** |
| 9 - Miramar Air Station CPA* | 44 - Skyline-Paradise Hills CPA*** |
| 10 - La Jolla CPA*** | 56 - City Heights CPA |
| 11 - Encanto CPA | 57 - Eastern Area CPA |
| 14 - Midway CPA | 58 - Kensington-Talmadge CPA*** |
| 17 - Mission Bay Park CPA | 59 - Normal Heights CPA |
| 23 - Pacific Beach CPA*** | 98 - Harbor CPA |
| 24 - Old San Diego CPA | 99 - University CPA*** |
| 25 - Otay Mesa CPA** | |
| 29 - Rancho Penasquitos CPA*** | |
| 31 - Rancho Bernardo CPA*** | |
| 33 - San Ysidro CPA | |

Cities Defined as DACs:
 City of National City
 City of Imperial Beach*
 City of El Cajon

*Areas meeting 2010 DAC criteria but not 2013 criteria
 **Areas meeting 2013 DAC criteria but not 2010 criteria
 ***Areas containing small pockets of DAC

N

0 1.25 2.5 5
Miles

Sources: Sources: San Diego Association of Governments (SANDAG) - GIS Data Warehouse, 2010 Census Data.
 DAC defined as a block group with a median household income (MHI) of less than \$48,706 (80% of the Statewide MHI).
 \\rmcsd\RMCS\Projects GIS\0188-003 SDIRWM Plan Update\AdminDraft\Maps\060713_JD\Fig3-4B_Location of DACs in SD 060713.mxd



Table 3-9: Economically Disadvantaged Communities

HU ¹	Name ²	Disadvantaged City or Community Planning Area (CPA) ³	Jurisdiction	2000 DACs	2010 DACs	2013 DACs
901 902	San Juan Santa Margarita	Pendleton-DeLuz CPA	County	•	•	•
902 903	Santa Margarita San Luis Rey	Palomar Mountain CPA Fallbrook CPA*	County County		• •	• •
903	San Luis Rey	North Mountain County CPA Pala-Pauma CPA	County County	•	• •	• •
903 904	San Luis Rey Carlsbad	City of Oceanside* City of Carlsbad*	City of Oceanside City of Carlsbad		• •	• •
904	Carlsbad	North County Metro CPA Twin Oaks CPA* City of San Marcos City of Escondido	County County City of San Marcos City of Escondido		• • • •	• • • •
906	Peñasquitos	Miramar Air Station CPA Mission Bay Park CPA Rancho Peñasquitos CPA* University CPA* La Jolla CPA* Clairemont Mesa CPA* Pacific Beach CPA*	City of San Diego City of San Diego		• • • • • •	• • • • • •
905 906	San Dieguito San Diego	Ramona CPA*	County		•	•
907	San Diego	Bostonia County/Lakeside CPA* Central Mountain CPA Julian CPA City of El Cajon Rancho Bernardo CPA*	County County County City of El Cajon City of San Diego	•	• • • • •	• • • • •
907 908	San Diego Pueblo	Normal Heights CPA College Area CPA Ocean Beach CPA Midway CPA County Islands CPA Old San Diego CPA Kensington-Talmadge CPA*	City of San Diego City of San Diego City of San Diego City of San Diego County City of San Diego City of San Diego	• • • • • • •	• • • • • • •	• • • • • • •
907 909	San Diego Sweetwater	Alpine CPA* Cuyamaca CPA Descanso CPA*	County County County		• • •	• • •
908	Pueblo	Barrio Logan CPA Centre City CPA Spring Valley CPA City Heights CPA Eastern Area CPA Greater Golden Hill CPA Greater North Park CPA Encanto CPA Lindbergh Field CPA Southeastern San Diego CPA Uptown CPA*	City of San Diego City of San Diego County City of San Diego City of San Diego	• • • • • • • • • • •	• • • • • • • • • • •	• • • • • • • • • • •
908 909	Pueblo Sweetwater	City of National City Skyline-Paradise Hills CPA*	City of National City City of San Diego	•	• •	• •

HU ¹	Name ²	Disadvantaged City or Community Planning Area (CPA) ³	Jurisdiction	2000 DACs	2010 DACs	2013 DACs
910 911	Otay Tijuana	City of Imperial Beach	City of Imperial Beach	•	•	•
		Otay Mesa - Nestor CPA	City of San Diego		•	•
911	Tijuana	San Ysidro CPA	City of San Diego	•	•	•
		Mountain Empire CPA	County	•		•
		Desert CPA	County		•	•
911 909	Tijuana Sweetwater	Pine Valley CPA	County		•	•
<i>80% Statewide Median Household Income</i>				\$37,520	\$48,706	\$46,979

1 Numerical watershed (hydrologic unit) designation per Regional Water Quality Control Board (1994) and California Department of Water Resources *Hydrologic Data* (Bulletin 130).

2 Some planning areas fall within multiple watersheds

3 * denotes a CPA that contains small pocket(s) of DAC

DAC advocates have indicated that additional efforts to validate DACs in the Region are necessary, because U.S. Census data is often unable to capture the true economic conditions of various communities in San Diego County, particularly those communities with a high number of undocumented residents, tribal communities, or other residents that may not participate in providing information to the U.S. Census. For the 2013 IRWM Plan, this effort included using 2013 MHI projections on a Census block level for a refined understanding of DAC areas. Areas that may no longer qualify as DACs per the 2013 data, but are considered DACs with the 2010 data, remain areas of concern and will continue to be included in outreach efforts associated with the IRWM Program.

DAC Assistance

The RWMG has worked directly with many organizations that are involved with addressing water-related issues of DACs and environmental justice (EJ) communities within the Region, including: San Diego Coastkeeper, Environmental Health Coalition, Rural Community Assistance Corporation (RCAC), Jacobs Center for Neighborhood Innovation, Groundwork San Diego-Chollas Creek, WildCoast, and others. Outreach has focused on identifying DAC issues, needs, and concerns, as well as ensuring DAC and EJ representation on the RAC.

Within the San Diego IRWM Region, DACs are typically classified as either an Urban DAC – those DACs that are located within the Water Authority’s service area (with municipal water and wastewater service), or a Rural DAC – those DACs that exist outside the bounds of a city or are not served by a Water Authority member agency. This distinction aids planners in addressing the true needs of DACs in the Region, as Rural DACs and Urban DACs face different issues and challenges. Some areas are rural in nature due to their distance from the Region’s urban core, although they are served by large public water systems and therefore have characteristics of both Rural and Urban DACs. One such community, which includes Ramona, is provided water services by Ramona MWD, a Water Authority member agency.

In 2010, 2012, and 2013, targeted outreach to DACs was undertaken by the RWMG. The purpose of this outreach effort was to develop an understanding of the water needs in DACs within the Region, and increase awareness of IRWM funding opportunities.

Urban DACs Issues and Needs

As described above, Urban DACs fall within the service area of a water or wastewater agency. Of the communities in the Region that have been identified as DACs using both 2010 and 2013 data, the majority are Urban DACs. These include:

- Miramar Air Station CPA*
- Mission Bay Park CPA
- City of El Cajon
- Normal Heights CPA
- Old San Diego CPA
- Barrio Logan CPA
- Eastern Area CPA
- College Area CPA
- Midway CPA
- Twin Oaks CPA†
- North County Metro CPA*
 - City of Escondido
 - City of San Marcos
- Bostonia County/Lakeside CPA†
- City of Oceanside†
- City of Carlsbad†
- Pacific Beach CPA†
- Rancho Bernardo CPA†
- Uptown CPA†
- City Heights CPA
- Encanto CPA
- Lindbergh Field CPA*
- Southeastern San Diego CPA
- City of National City
- City of Imperial Beach
- San Ysidro CPA
- Otay Mesa-Nestor CPA**
- Greater Golden Hill CPA
- Ramona CPA†
- Spring Valley CPA
- County Islands CPA
- Fallbrook CPA†
- Rancho Peñasquitos CPA†
- University CPA†
- La Jolla CPA†
- Clairemont Mesa CPA†
- Kensington-Talmadge CPA†
- Skyline-Paradise Hills CPA†

* Area meeting 2010 DAC criteria but not 2013 criteria

**Area meeting 2013 DAC criteria but not 2010 criteria

†CPA containing only a small pocket(s) of DAC

Because Urban DACs are located within water agency service areas, their water resources needs are generally centered around community development and surface water quality issues, rather than drinking water quality or drinking water supply issues, as they receive safe drinking water through their water agency. DWR's definition of a critical water supply or water quality need of a DAC often fails to encompass what the Urban DACs (and their relevant planning agencies) consider a critical water supply or water quality need. Therefore it can be challenging to obtain funding for Urban DAC water projects, as they often do not qualify for the funding match waivers frequently provided for DAC projects. While Urban DACs in the Region receive safe drinking water from local water agencies, increases in water rates (refer to Section 3.10 for more information) can have a disproportionate impact on DAC residents, because they tend to spend a larger percentage of their income on water compared to those in higher-income communities. .

During rain events, Urban DACs often suffer from flooding due to creek constrictions, which can result from inadequately-sized drains and culverts, vegetation overgrowth (particularly *Arundo donax*), creek realignment, pollution, or illegal dumping. Urban DAC areas are also prone to flooding due to high runoff from impervious surfaces associated with urbanization and the typical lack of parks or other non-paved recreation areas in Urban DACs. In order to improve surface permeability while not restricting economic growth potential in Urban DACs, more assistance is necessary for de-channelization, hydro-modification, and to implement Low Impact Development (LID) projects to reduce stormwater runoff and associated flooding. These projects could also be used as an

Region Description

September 2013



Illegal dumping in creeks and watersheds is a common problem faced by Urban DACs.

Photo credit: Leslie Reynolds, Groundwork San Diego-Chollas Creek



Water quality concerns in urban creeks can result from illegal dumping, invasive species, and stormwater runoff.

Photo credit: Leslie Reynolds, Groundwork San Diego-Chollas Creek

opportunity to provide increased access to recreational areas, which is sorely lacking in most Urban DACs.

The high volume of stormwater runoff also contributes to the poor surface water quality in Urban DACs, as it is often polluted and drains directly into creeks. Although many of the residents of Urban DACs are aware of the pollution problems, and TMDLs have been developed for some streams that traverse Urban DACs, challenges remain. For example, while TMDLs for metals and bacteria in Chollas Creek have been developed, illegal dumping (especially of large trash items such as mattresses) in creeks and watersheds is a common problem that causes water quality issues in Urban DACs. A large-trash collection program would help reduce these incidents and the public health and safety hazards they often represent. Watershed stakeholders have reported that homelessness presents water quality issues throughout the Region, especially in homeless encampments located alongside the Region's water bodies that are prone to becoming a place for trash and other illegally-dumped items to accumulate.

Pollution of San Diego Bay waters also substantially impacts Urban DACs, many of which are located adjacent to the Bay, near industrial areas. Bay pollution from industry, runoff, and other activities has negatively impacted subsistence fishermen, many of whom are residents of Urban DACs.

Additionally, insufficient water quality monitoring has been completed in the San Diego Bay wetlands, again located near or in Urban DACs, to understand and address water quality issues. Low-lying Urban DACs near the Bay will also suffer disproportionately from the effects of sea level rise as a result of climate change. These areas will be more susceptible to floods and inundation from storm surges, which are anticipated to be larger and more frequent.

One of the biggest issues facing Urban DACs is food security. Food security is one of the highest priorities in these areas and must be addressed before full DAC involvement in other issues, including water quality. However, some urban DACs use community gardens to help offset food needs, and irrigation costs may impact their ability to care for such gardens.

Urban DACs, like their rural counterparts, frequently lack the financial and technological resources to design, implement, operate, and maintain water projects. Because of this, they require financial assistance for project implementation, particularly to support ongoing operation and maintenance (O&M) costs. Non-governmental organizations (NGOs) that propose projects in Urban DACs should consider the long-term stewardship of the projects in question, and determine post-project ownership of any acquired land at the outset of the projects, to ensure the resources necessary to achieve the long-term benefits associated with the projects. For creek restoration projects, or those projects that improve recreational or access opportunities, public safety should always be considered. In Urban DACs, there may be a need for additional park rangers or security officers to ensure public safety in recreation areas.

Effective water conservation, watershed, and stormwater management outreach and education is lacking in Urban DACs. In order to be most effective, outreach and education efforts should come from the community or peers, rather than top-down through an agency. Outreach efforts should also aim to raise awareness of the existence of surface waters in Urban DACs, which will assist in improving stewardship of these resources. These efforts should be tailored to the community and be multilingual.

Priority projects in Urban DACs include those with education, creek restoration, passive recreation, hydro-modification, stormwater management/pollution prevention, public safety, and those that address sea level rise adaptation components.

Rural DACs

Rural DACs are located outside of the jurisdictional boundaries of the Region's water and wastewater agencies, and are not provided municipal water supply or wastewater infrastructure. Of the communities in the Region that have been identified as DACs using both the 2010 and 2013 data, the following are Rural DACs:

- North Mountain County CPA
- Pala-Pauma CPA*
- Palomar Mountain CPA
- Pendleton-DeLuz CPA
- Pine Valley CPA
- Mountain Empire CPA**
- Alpine CPA*†
- Central Mountain CPA*
- Cuyamaca CPA*
- Descanso CPA*†
- Julian CPA
- Desert CPA

* Area meeting 2010 DAC criteria but not 2013 criteria

**Area meeting 2013 DAC criteria but not 2010 criteria

†CPA containing only a small pocket(s) of DAC

It should be noted that more rural communities may be designated as DACs following additional efforts that may be taken to characterize DACs in the Region.

Unlike Urban DACs, Rural DACs are not consistently supplied with a safe source of drinking water. Due to infrastructure, source water quality, and other issues, the primary water-related concern of Rural DACs is meeting drinking water needs with a safe, reliable source of drinking water. Rural DACs often lack access to much-needed infrastructure and financing, as well as the resources to adequately maintain existing system facilities. As a result, drinking water systems in Rural DACs often face significant challenges in complying with longstanding and new drinking water rules (EPA 2007).

Three major problems that impede the sustainability of small community water systems include:

- 1) contamination of drinking water source water from wastewater intrusion, agricultural influences, naturally occurring contaminants, and/or contaminant spills from industrial activities;
- 2) seasonal weather changes resulting in floods or droughts may require design options to bypass treatment during rain and storm events and identification of alternative water supplies (including water reuse sources) to increase capacity during droughts; and
- 3) deteriorating collection and distribution systems compromise source water quality and increase the cost of water treatment.

Rural communities within the San Diego IRWM Region's unincorporated areas have water supply and water quality issues that may be exacerbated by climate change, poor economies, and lack of community expertise. Inadequate water supply to support existing communities is a public health risk, especially considering that the rural portions of the Region are also those that are particularly susceptible to wildfires. The majority of drinking water maximum containment level (MCL) violations in the Region occur with small public water systems, and inadequate wastewater treatment can result in unplanned discharge events.

The infrastructure needs of Rural DACs are so extensive that there is not enough currently available funding to meet the needs of Rural DACs throughout the Region. CDPH has 41 small (less than 10,000 population) systems located in San Diego County on its 2013 State Revolving Fund (SRF) Priority Project List, with many systems listed for multiple improvements (CDPH 2013). The State Board has a similarly lengthy list of communities requesting funding from the Clean Water SRF for wastewater improvements. Additional challenges to obtaining funding for Rural DAC projects includes a regulatory burden that is often too difficult for Rural DACs to meet and difficulties in providing matching funds, both of which cause DAC projects to look unfavorable when compared to non-DAC projects during consideration for funding.



Aging storage tanks can lead to contamination of rural water supplies.

Photo credit: Dave Harvey, Rural Community Assistance Corporation

Rural DACs in the San Diego IRWM Region are faced with critical water supply issues in that some areas have inadequate water supplies to support existing connections. Rural DACs also face water quality issues associated with costs as it is costly to provide supplemental treatment processes to improve the water quality of contaminated drinking water source waters, and it is also difficult for small DAC systems to afford improvements because they have fewer ratepayers to share the costs. Further, Rural DACs may lack the technical expertise and financial stability to access funding programs that could be implemented to address cost-related issues. Because of the lack of internal capacity for small water systems, a supporting agency should provide capacity (such as engineering) to support necessary improvements for Rural DAC systems. The lack of technical

capacity and support from agencies also contributes to the high cost of DAC projects through an inability to adequately perform O&M activities during the life of a system.

Some of the other issues facing Rural DACs include groundwater contamination, potentially from leaking septic tanks. Leaking or improperly sited septic tanks also pose a public health hazard, though the conversion from septic to sewer is expensive, and Rural DACs often struggle to find assistance in funding such projects. The San Dieguito and San Diego groundwater basins have experienced contamination, as has the Otay/San Diego Formation, which is being considered by U.S. Geological Survey (USGS) for groundwater use. As described above, small water systems often lack the ability to treat contaminated water with a supplemental treatment process. Drinking water supplies for some Rural DACs have also been contaminated with ash from recent wildfires. It is anticipated that the projected increase in wildfire frequency and intensity resulting from climate change will inordinately affect Rural DACs, which are more likely to be located near fire-prone areas and less likely to have the ability to defend against fires. Some Rural DACs lack sufficient water supplies for fire protection, further increasing the danger.

Illegal dumping, especially of chemicals or hazardous wastes in creeks and watersheds, is a common problem reported in Rural DACs. Awareness of existing programs such as the County's permanent Household Hazardous Waste Collection Facilities in Ramona and El Cajon and the County's collection events that travel throughout unincorporated areas of the County can help to reduce illegal dumping and associated water quality impacts.

To meet the needs of Rural DACs, the San Diego IRWM Region will need to identify solutions that recognize that the needs of Rural DACs differ from those of Urban DACs. In order to be most effective, the Region may develop and implement targeted, multilingual outreach to Rural DACs that is tailored to the community being addressed. Finally, appropriate support must be provided to enable Rural DACs to develop projects, secure funding for projects, and properly operate and maintain their systems.

Community Support for DACs and Environmental Justice Communities

The U.S. EPA defines Environmental Justice as:

...the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies...It will be achieved when everyone enjoys the same degree of protection from environmental and health hazards and equal access to the decision-making process to have a healthy environment in which to live, learn, and work.

In addition to the efforts of the San Diego IRWM Program, a variety of organizations in the IRWM Region work to address the needs of DACs and EJs:

San Diego Coastkeeper

The San Diego Coastkeeper's mission is to protect and restore fishable, swimmable, and drinkable waters in San Diego County. Coastkeeper enhances public awareness of water quality and other water-related issues through their extensive community outreach and participation program that involves hands-on stewardship activities such as beach cleanups and water quality sampling.

Rural Community Assistance Corporation

The Rural Community Assistance Corporation (RCAC) focuses its San Diego-based efforts in the rural portions of the Region that generally do not receive municipal water or wastewater services.

RCAC completes a variety of work to address the needs of DACs and EJs, including providing technical assistance, training, and funding support.

California Rural Water Association

California Rural Water Association (CRWA) works to provide on-site technical assistance and specialized training for rural water and wastewater systems. Similar to RCAC, CRWA focuses its work on the rural portions of the Region that do not receive municipal water or wastewater.

Environmental Health Coalition

The Environmental Health Coalition (EHC), founded in 1980, is a community-based organization founded in Barrio Logan, an Urban DAC. It works to achieve environmental and social justice through leader development, organizing, and advocacy. EHC focuses on green energy and jobs, healthy kids, border environmental justice, and toxic-free neighborhoods.

Groundwork San Diego

Groundwork San Diego–Chollas Creek works with the communities surrounding Chollas Creek to improve the creek and communities. It strives to create opportunities for people to learn new skills and take action, help businesses grow, and create safer and healthier neighborhoods. It achieves these goals through three overarching programs: 1) Environmental education, 2) Clean creeks and healthy habitats, and 3) Thriving communities.

Jacobs Center for Neighborhood Innovation

The Jacobs Center for Neighborhood Innovation seeks to create community change by teaming up with residents in under-invested communities. It seeks to empower residents to take ownership of the change they wish to see in their communities, and provide financial, technical, and other forms of support. The Jacobs Center works in Chollas View, Emerald Hills, Lincoln Park, Mountain View, Mount Hope, North Encanto, Oak Park, South Encanto, Valencia Park, and Webster.

Civic San Diego

Civic San Diego is a public non-profit founded by the City of San Diego following the dissolution of the Redevelopment Agency of the City of San Diego in 2012. Its main responsibility has been the redevelopment and subsequent revitalization of Downtown San Diego, though it also works in the surrounding neighborhoods, including four Urban DACs: Barrio Logan, City Heights, Southeastern, and San Ysidro.



Jacobs Center for Neighborhood Innovation serves an important role in improving creek conditions in Southeast San Diego.

Photo credit: Charles Davis, Jacobs Center for Neighborhood Innovation

Appendix 7-2: Title I Schools Eligible for Ms. Smarty-Plants Grows Waterwise Schools

The *Ms. Smarty-Plants Grows Waterwise Schools* will target 12 to 15 Title I schools in the Lemon Grove and La Mesa-Spring Valley School Districts for participation in their waterwise landscaping and waterwise operations upgrades program. A list of Title I schools for each of these school districts was pulled from the National Center for Education Statistics, available via the Common Core of Data database. These data are from the 2012-2013 and 2013-2014 school years. The list of targeted Title I schools may therefore change during project implementation to reflect updated data, but are not anticipated to alter substantially.

Title I schools are those schools serving high numbers or high percentages of students from low-income families. The percentage of students participating in lunch assistance programs (either receiving free or reduced lunch) can act as a proxy for the percentage of students from low-income communities. Schools with at least 40% of its population from low-income families is eligible to apply for Title I funding assistance school-wide.

Lemon Grove School District (State District ID 3768205) Title I Schools

State School ID	Grade Range	School Name	Title I School*	Title 1 School Wide*	Students*	Free Lunch*	Reduced Lunch*	% of Students Receiving Lunch Assistance
6038608	Pre-K to 8	Lemon Grove Academy For The Sciences And Humanities	Yes	Yes	1241	712	187	72%
6038624	Pre-K to 6	Monterey Heights Elementary	Yes	Yes	461	263	70	72%
6038632	Pre-K to 6	Mt. Vernon Elementary	Yes	Yes	559	312	99	74%
6038657	Pre-K to 6	San Altos Elementary	Yes	Yes	397	223	65	73%
6038665	Pre-K to 6	San Miguel Elementary	Yes	Yes	558	347	92	79%
6038673	Pre-K to 8	Vista La Mesa Academy	Yes	Yes	685	355	162	75%

Source: National Center for Education Statistics, Common Core Database, available: http://nces.ed.gov/ccd/schoolsearch/school_list.asp?Search=1&DistrictID=0620250

*Data from 2012-2013 school year

La Mesa-Spring Valley School District (State District ID 3768197) Title I Schools

State School ID	Grade Range	School Name	Title I School*	Title 1 School Wide*	Students*	Free Lunch*	Reduced Lunch*	% of Students Receiving Lunch Assistance
6038400	Kindergarten to 6	Avondale Elementary	Yes	Yes	552	355	58	75%
6038418	Kindergarten to 6	Bancroft Elementary	Yes	Yes	640	447	61	79%
6038434	Kindergarten to 6	Casa De Oro Elementary	Yes	Yes	367	228	31	71%
6038459	Kindergarten to 6	Highlands Elementary	Yes	Yes	497	251	56	62%
6038467	Kindergarten to 6	Kempton Street Elementary	Yes	Yes	723	539	60	83%
6038475	Kindergarten to 6	La Mesa Dale Elementary	Yes	Yes	512	259	69	64%
6038509	Kindergarten to 6	La Presa Elementary	Yes	Yes	411	260	58	77%
6067003	7 to 8	La Presa Middle	Yes	Yes	526	371	52	80%
6098446	Kindergarten to 6	Loma Elementary	Yes	Yes	490	228	48	56%
0115543	5 to 8	Quest Academy	Yes	No	22	10	0	45%
6038566	Kindergarten to 6	Rancho Elementary	Yes	Yes	470	236	84	68%
6038590	7 to 8	Spring Valley Middle	Yes	No	598	319	73	66%
6111207	Kindergarten to 6	Sweetwater Springs Elementary	Yes	Yes	578	251	64	54%

Source: National Center for Education Statistics, Common Core Database, available: http://nces.ed.gov/ccd/schoolsearch/school_list.asp?Search=1&DistrictID=0620250

*Data from 2012-2013 school year