

# TECHNICAL MEMORANDUM

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RE: Regional Drought Resiliency Project

This technical memorandum (TM) presents the Regional Drought Resiliency Workgroup’s (Workgroup) recommendation for the San Diego Integrated Regional Water Management (SDIRWM) Region Regional Drought Resiliency Project. The contents of the TM are organized into the following sections:

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## 1. INTRODUCTION

The SDIRWM Region includes the 11 western-draining watersheds in San Diego County, from the border with Mexico in the south to the borders with Orange County and Riverside County in the north. The SDIRWM region is home to approximately 3 million people who rely on a mix of local and mostly imported water sources to meet their water needs. The region experiences cyclical droughts due to its semiarid climate, and averages approximately 10 inches of rain per year, though local rainfall levels vary from year to year. Watersheds are prone to flash floods, and local aquifers are generally not well suited to serve as major water supplies, though there are some locally-important groundwater basins in the region. Local surface water reservoirs also store imported water and capture local runoff from the watershed.

Droughts are anticipated to become more frequent and extreme because of climate change, which could impact the SDIRWM Region's water supply. SDIRWM Region's largest water supply source is imported, with the majority originating from the Colorado River and a smaller portion originating from the State Water Project. For the past three decades, the region has made significant investments in diversifying its water portfolio with desalinated seawater, groundwater, surface water, and recycled water (potable and non-potable). This diverse portfolio helped protect the San Diego region from supply limitations in recent droughts. Still, it is important to be vigilant in protecting water reliability and consider potential threats from changing hydrologic conditions. Higher temperatures and less rainfall could increase water demand. Additionally, long-term drought in the Colorado River Basin and ongoing negotiations for Colorado River water rights could impact San Diego's largest water supply. Continued pressure on the State Water Project could result in rationing and require the use of San Diego's emergency water supplies. Local supply options like surface water are susceptible to variation due to weather, while the Region's already limited groundwater resources may become stressed because of frequent or persistent drought.

Desalinated and recycled water do not depend on climate patterns and are reliable even during drought periods. The development of additional potable reuse projects is expected to provide another significant increase in resiliency in the San Diego Region. Three of these projects, Pure Water San Diego, Pure Water Oceanside, and East County Advanced Water Purification Program, are under construction and have been partly funded by IRWM grants.

Opportunities for state and federal grant funding have been made available to support drought resilience projects in recent years. Drought has also been identified as a priority concern for SDIRWM stakeholders, and the SDIRWM Program has funded several projects since 2010 that address drought by creating new reliable supplies and managing demands. However, the SDIRWM Program has not yet sought funding for projects outside of designated IRWM sources. Given these factors, the SDIRWM Program is exploring the potential for an SDIRWM-endorsed drought project that could benefit from potential drought funding from other sources in the future.

This TM has been developed as a pilot effort for creating a regional drought resiliency project that provides regional benefits and is both responsive to and competitive for funding. The project described in this TM can be adapted to meet specific priorities of future funding programs, and can be sponsored whole or in part by a variety of potential project sponsors, including the SDIRWM Program's Regional Water Management Group (RWMG), composed of the City of San Diego (City), County of San Diego (County), and San Diego County Water Authority (SDCWA).

## **1.1 Drought Resiliency Workgroup**

A Drought Resiliency Workgroup (Workgroup) was formed to guide the development of the regional drought resiliency project. The Workgroup was composed of volunteers from the Regional Advisory Committee (RAC), a group of stakeholders that advise on SDIRWM Program activities, and the RWMG, representing a diverse group of public agencies and nongovernmental organizations (NGOs). Volunteers from the RAC and RWMG collaborated through an iterative process to develop the objectives of the prospective drought project and ensure the project is supported and meets the needs of the SDIRWM region.

## 2. DEVELOPMENT OF DROUGHT RESILIENCE PROJECT

The project was selected to be eligible and competitive for grant funding, as well as meet the needs of the SDIRWM Region. The following sections describe the process for developing priority project concepts that aligned with previous drought funding opportunities as well as met the prioritization criteria developed for the drought project that were reviewed and supported by SDIRWM Region stakeholders.

### 2.1 Drought Projects Previously Eligible for Funding

In 2021 and 2022, during the most recent drought period in California, the Department of Water Resources (DWR) offered two drought relief grant programs, the 2021 Urban and Multibenefit Drought Relief Grant Program, and the 2022 Urban Community Drought Relief Grant Program. These programs were assessed to better understand potential eligible projects for drought relief funding, based on what project types have been eligible in the recent past. **Table 1** lists eligible project types for both drought relief grant programs.

**Table 1: Eligible Project Types**

Project Types	2021	2022
<b>Watershed improvements to enhance local supply and climate resilience</b>		X
<b>Drought resilience planning</b>		X
<b>Water conservation activities</b>		X
<b>Turf replacement</b>		X
<b>Hauled Water</b>	X	X
<b>Community water tanks</b>	X	X
<b>Bottled Water</b>	X	X
<b>Water vending machines</b>	X	X
<b>Emergency interties</b>	X	X
<b>New wells or well rehabilitation</b>	X	X
<b>Permanent connection to adjacent water systems</b>	X	X
<b>Recycled water projects</b>	X	X
<b>Fish and wildlife rescue, protection, and relocation</b>	X	X
<b>Other projects supporting immediate drought response</b>	X	X

### 2.2 Prioritization Criteria

A multi-criteria evaluation method was developed to identify the priorities of the SDIRWM Region for a drought resilience project. These prioritization criteria were applied to the project concepts to assist the Workgroup in understanding how projects achieved the criteria and identify opportunities to improve project concepts. These criteria informed the selection and further development of the drought resilience project.

### 2.2.1 Development of Prioritization Criteria

Eight prioritization criteria were initially identified based on criteria in prior drought and non-drought funding programs. The Workgroup refined the prioritization criteria and participated in a ranking exercise to identify which criteria are most essential in evaluating potential project concepts. Prioritization criteria were shared with the RAC at the April meeting and feedback was incorporated.

Recognizing that not all criteria are equally important for the SDIRWM Region, a weighting was assigned to each of the final criteria. The four highest-priority criteria for a regional drought program were assigned a weighting of 15%, and the rest were assigned a weighting of 8%. The prioritization criteria are SDIRWM's internal criteria to evaluate project priority concepts that align with the priorities of the SDIRWM Region for a drought resilience project, and inform selection of the concept that was further developed into a project. The prioritization criteria and weighting are shown in **Table 2**.

**Table 2: Final Prioritization Criteria**

Criteria	Metric	Weighting
<b>Drought Reliability</b>	Ability to reduce the gap between supply and demand during single-year and multiple-year droughts	15%
<b>Performance monitoring</b>	Time required to implement project and time for benefits to be realized (i.e., long-term benefits versus short-term benefits)	15%
<b>Cost Efficiency</b>	Present value unit cost, including capital, O&M, and water purchase cost	8%
<b>Water Quality</b>	Impact on water quality and watershed health (e.g., recharge of imported water, recycled water)	8%
<b>Institutional Independence</b>	Use of local water supply	8%
<b>Underrepresented Community (URC) Consideration</b>	Benefits to URCs	8%
<b>Ability to Implement</b>	Stakeholder support, environmental and permitting compliance and operational considerations that contribute to the ability to implement the project successfully	15%
<b>Adaptability</b>	Ability to adapt to potential changes within and outside of the region – scalability	8%
<b>Multiple Benefits</b>	Project produces two or more benefits (e.g., decreased wildfire risk, ecosystem health)	15%

### 2.3 Development of Priority Project Concepts

After reviewing previous funding opportunities and priority criteria, the Workgroup collaborated to develop several project concepts that address drought impacts in the SDIRWM Region. Existing drought-related projects in the SDIRWM region's project database, projects identified by stakeholders in the SDIRWM Region, and new projects not yet implemented in the region were compiled to assist in identifying and refining a potential project. The projects were then grouped into five broad project types: conservation, water loss control, water recycling/reuse, stormwater capture, and water storage.

The development of project concepts within each of these five project types was an iterative process. The Workgroup refined the project concepts to reflect feedback from both the RWMG and the RAC. This resulted in six priority project concepts, described in the following sections. Only the selected project concepts were explored with additional details.

### **2.3.1 Incentive Programs**

This project would expand existing rebate programs, such as rebates for turf replacements, appliances, and rain barrels, and implement an incentive-based approach that provides discounts upfront rather than a rebate approach that reimburses participants after they have paid full-price. This project would also develop incentives for devices and activities that help to address gaps in existing rebate programs. For example, this could entail the development and implementation of standard landscape plans that utilize waterwise approaches and drought-resistant plants that could be used “off the shelf” by property owners. As an incentive program, the project would cover upfront costs and eliminate potential financial barriers for URCs compared to a rebate approach where customers pay for the improvement upfront and are later reimbursed. This project would also include opportunities for direct installation to ensure that the installations follow industry standards and to further reduce barriers to participation. Many existing rebate programs are more easily accessed by property owners and residents who can afford to participate in a rebate program compared to renters or residents who cannot afford up-front costs. This program would emphasize incentives that target water-wise improvements in URCs, including incentives for renters and multi-family units. To better support the project sponsor and potential program participants, this project would encourage partnership with an NGO(s) who works in the targeted communities to help manage the incentives and assist participants with navigating the necessary paperwork.

### **2.3.2 Native Vegetation Partnerships with Nurseries**

This project would entail collaborating with nurseries across the region to promote the use of drought-resistant, native vegetation in the SDIRWM Region. This would involve contacting local and franchised nurseries to identify potential partners and gauge interest. The project would subsidize the cost of landscaping with native, drought-resistant plants by covering a portion of the total costs when customers buy eligible plants and services from the nurseries. To encourage the use of native plants, while recognizing that there are non-native plants that also provide water conservation and other benefits, this project would provide larger incentives for native plants, and smaller incentives for non-native, drought-resistant vegetation. As recommended by the RAC, no incentives would be provided for flammable plants that may contribute to wildfire risk. The Project would also provide greater discounts for URC residents. To help encourage participation, the project sponsor would also work with the nurseries to develop educational materials, such as a vegetation list adapted from existing local guidance, and marketing materials to promote the program.

### **2.3.3 Water Use Efficiency Programs Targeting Inefficient Water Users**

This project would improve water use efficiency in the SDIRWM Region through a variety of programs that target inefficient users. Inefficient users would be identified by water agencies based on local water use patterns and knowledge of the customer-base. Examples of programs offered by this project to inefficient water users would include water audits, educational materials and resources to reduce water use, and rebates for common items that could improve water use efficiency. However, the Workgroup noted that

defining the threshold for “inefficient” water use, as well as identifying potential water users, would be a significant challenge for project implementation, and increase the burden on local agencies.

### **2.3.4 Leak Detection and Testing**

This project would identify and expand existing leak detection and testing programs in the SDIRWM Region to minimize indoor and outdoor water loss. Outreach to local certified plumbing professionals to explore partnership opportunities would occur, and those eligible service providers who would like to participate in the program would be compiled into a database for customers to access. To reduce potential financial barriers to participation, the service provider would bill either partial or full costs of leak detection and testing services to the grant program via the project sponsor, and only bill the customer for the portion of the work not funded by the grant. To better support URC residents, this program would provide greater subsidies to URCs than non-URC participants. The project would also include the development and distribution of marketing materials detailing how customers can participate in this program.

### **2.3.5 Leak Repair Database for Direct Installers and Certified Plumbers**

This project is similar to the Leak Detection and Testing project (Section 2.3.4) but would focus on leak repair. Outreach to local certified professionals would occur to explore partnership opportunities and identify interested service providers. A database with eligible certified plumbers in the SDIRWM Region who can repair indoor and outdoor leaks as well as install water use efficiency devices would be developed that program participants can hire to access the grant-funded leak repair services. To minimize potential financial barriers, this project would cover either partial or full costs of leak repair upfront, rather than function as a rebate program. As with other project concepts, it is recommended that greater subsidies are provided for URC residents. The project would also entail the development and distribution of marketing materials detailing how customers can participate in this program.

### **2.3.6 Rainwater Storage Programs**

This project would identify and expand existing rainwater storage programs in the SDIRWM Region to collect and reuse rainwater for lawns and gardens and minimize potable water demands, while also reducing stormwater runoff (and associated water quality issues). Examples include rainwater storage in cisterns and rain gardens. To minimize potential financial barriers, this project would cover either partial or full costs of program participation upfront (e.g., purchase and installation of a cistern). It is recommended that greater subsidies be provided for URC residents. As with other project concepts, this project would also include the development of educational materials on best practices for using rainwater.

## **2.4 Project Prioritization and Results**

The prioritization criteria were applied to the projects to identify a project that will provide strong benefits and align with the priorities of the SDIRWM Region and the grant program. The Incentive Programs scored the highest, followed by the Leak Detection and Testing and the Leak Repair Database for Direct Installers and Certified Plumbers projects when evaluated with the prioritization criteria. The project selected by the Workgroup described in Section 3, contains elements of these three projects, due to their high prioritization scores, the anticipated benefits to the Region and ability to address a currently unmet need.

### **3. WATER USE EFFICIENCY INCENTIVE PROJECT**

The Workgroup is recommending the Water Use Efficiency Incentive Project (Project) for consideration by the RWMG or another potential regional project sponsor. This Project incorporates various elements of the Incentive Programs and Leak Detection and Testing projects presented in Section 2. Elements from the Leak Repair Database for Direct Installers and Certified Plumbers were not incorporated into the Project due to the complexity of maintaining a database and potential liability issues for the Project sponsor. However, if a potential project sponsor is able to manage the database and accommodate the associated potential liabilities, this database component is encouraged to be included. The Workgroup further refined the Project to better support the needs of the SDIRWM Region as identified through discussions with the RAC and RWMG. While other projects presented in Section 2 are not the focus of this TM, they would still provide drought resilience benefits for the SDIRWM Region and can be further explored should funding opportunities arise. Appendix A provides a summary of the project concepts and some considerations to keep in mind should an organization choose to implement one of them.

#### **3.1 Project Description**

The Workgroup is recommending that the Project be an incentive program rather than solely a rebate program. An incentive provides partial or full costs upfront (often in the form of a discount or coupon). In contrast, a rebate provides a partial or full refund or reimbursement after a purchase has been made or service has been paid. Incentives reduce financial barriers to access and can reduce the effort required for individual participants. Incentives are particularly beneficial for customers who may not have the resources necessary to pay for services upfront, go through the process of applying for reimbursement, or wait for the reimbursement to be processed. The ability to structure the project as an incentive program could be limited by the constraints of the funding program pursued. The majority of grants are administered as reimbursement programs, where grant money is only distributed after the costs have been incurred. For an incentive program, this means that the project sponsor would need to pay for the incentive upfront, then wait to be reimbursed by the grant. Advance funding may be available for certain projects based on benefit recipients and project size. This is most common for smaller projects benefiting URCs. Potential project sponsors are encouraged to advocate for advanced payment opportunities to support incentive programs given the need to help overcome barriers to participation.

While regional entities, such as the City, the County, and/or the SDCWA, are best suited to sponsor the Project, smaller agencies may adapt this Project for their service area as well, or form partnerships to provide benefits to a larger region. The target audience for the Project are residential and commercial property owners, renters and multi-family homes. Additionally, while the Project described here has several components, it can be modified or scaled to address the requirements of future funding opportunities or local priorities. Regardless of the modifications made to the Project, it is recommended that the project continue to include implementation activities that provide physical benefits (water conservation) to remain eligible and competitive for grant funding.

The Project will leverage City, County, and SDCWA resources and build upon existing initiatives to align with regional water conservation efforts and complement existing regional water conservation programs. The Project will consist of a leak detection and repair program, an indoor and outdoor incentives program, and a community development program. All programs will be advertised consistent with the local Project

sponsor's other programs (e.g., website, email lists, etc.). Each of the Project's programs is described in greater detail below.

### 3.1.1 Leak Detection and Repair Program

The Leak Detection and Repair Program will be offered to customers throughout the Project benefit area to identify and address water leaks both indoors and outdoors. To minimize financial barriers, the Project will partially or fully subsidize the cost of on-site leak detection and repairs upfront, rather than retroactively reimbursing the customer. The amount of the subsidy would vary depending on whether a customer is located within a URC or not, which URC residents eligible for a larger subsidy or potentially services free of charge. Additionally, the subsidy could vary by type of customer, such as providing a large subsidy for residential customers compared to commercial customers. Service providers will directly bill the grant through the Project sponsor. This program will also include funds for program coordination, advertising, and community outreach.

### 3.1.2 Indoor and Outdoor Incentives Program

The Indoor and Outdoor Incentives Program couples leak detection and repair services with a range of incentives for both indoor and outdoor water use to reduce water consumption. Specifically, service providers who are called to provide leak detection and repair services indoors and/or outdoors may also offer the customer a suite of other incentives, such as direct installation of efficient toilets, showerheads, washers, drip irrigation systems, high-efficiency sprinkler nozzles, and garden house shut-off nozzles. Direct installation is a key feature of this program not only to simplify the process for customers but also to ensure that trained professionals or technicians with expertise in the products being installed confirm that the installations are done correctly and follow industry standards.

The following is a list of potential incentive options for single-family (SF), multi-family (MF), and commercial, industrial, and institutional (CII) properties, and represents a wide range of potential incentives that have been provided in the past either within the San Diego IRWM Region or in other parts of the state. This list should be revised to reflect what the grant program will allow, priorities at the time of grant application, and what fits within the anticipated grant budget, and should be considered examples of the types of incentives that could be provided under this program:

#### Indoor Water Use Efficiency

- SF and/or MF Residential Surveys
- SF and/or MF Residential Toilet
- SF and/or MF Residential Showerhead
- SF and/or MF Residential Washer
- Residential Kitchen Aerator
- CII ½ Gallon Urinal
- CII Toilet (Tank or Valve)
- CII Laundromat
- CII Spray Rinse Valve
- CII Food Steamer
- CII Cooling Tower

#### Outdoor Water Use Efficiency

- SF Residential Efficient Irrigation Nozzles
- Residential Rotating Nozzle
- Landscape Irrigation Controller
- Turf Replacement
- Large Landscape Surveys
- Large Landscape Water Budgets

This program is designed to be flexible, and each Project sponsor can customize the types and number of incentives offered based on the grant's requirements, funding available, and service area's specific needs. Existing programs should be used as guidance when preparing an incentive package. For example, the Metropolitan Water District of Southern California's (MWD) SoCal WaterSmart program offers up to \$2 per square foot of turf replaced and \$40 per toilet replacement. These programs, however, do not account for direct installation, so those costs will need to be accounted for as well when budgeting for the grant. Should the cost to directly install these items be too high to allow for a reasonable number of incentives, the direct install option could be offered to URC customers only, with non-URC customers able to access the incentives for the equipment itself but paying the service provider for installation costs (or installing themselves if appropriate). This program will also include funds for program management, administration, coordination, advertising, and community outreach.

### **3.1.3 Community Development Program**

Recognizing that local skilled job opportunities are important for SDIRWM Region stakeholders, the Project will incorporate an innovative partnership with a community-based organization that can provide specialized job training and development opportunities for community members. Local job training, particularly in URCs, will aim to strengthen the workforce and reduce unemployment, promote economic growth, and foster community development. The training will be developed by experts to best align with the Indoor and Outdoor Incentives Program, with training provided to support installation of water efficient equipment, knowledge on applicable building codes, and other education identified by the Project sponsor and its partners. Potential educational centers and community-based organizations identified by the Workgroup that could facilitate this training include Cuyamaca College, Los Angeles Trade-Technical College, and Coastal Roots Farm. The Project sponsor should discuss the potential for providing shadowing opportunities, internships, or apprenticeships with service professionals to support the Community Development Program. It is recommended that the Project sponsor meets with the potential training organizations before applying for funding to solicit support and develop specifics of the training program. Specific training details and the scope of the program, including schedule and courses, should be refined before submittal of the funding application.

### **3.1.4 Resource Database Program**

As stated, elements from the Leak Repair Database for Direct Installers and Certified Plumbers were not incorporated into the Project due to the complexity of maintaining a resource database and potential liability issues for a Project sponsor. In the event creation of a resource database does not present any liability issues, the Project sponsor may develop a database that provides customers with a list of resources for leak repairs. This database could include a list of direct installers and certified plumbers that are eligible to bill the Project sponsor through the grant program, rather than the customer, for eligible work. Development and maintenance of the database may be funded by a future grant, though preliminary outreach to professionals is recommended to identify potential partners and gauge interest in participation.

To develop this database, the Project sponsor could conduct outreach to all direct installers and certified plumbers in the SDIRWM Region via the RAC email list and outreach to service providers listed online. It is recommended that outreach consist of a widely distributed email inviting direct installers and certified

plumbers to participate, followed by one or more information sessions where potential participants can ask questions and learn more about the Project.

It is recommended that service providers selected to participate be able to provide the complete range of services summarized in the following sections. Once the list of participants has been compiled, the database will be made available online on the Project sponsor's website and maintained by the Project sponsor throughout the duration of the Project. While the database will not be comprehensive of all service providers in the SDIRWM Region, its goal is to include a wide geographical representation throughout the Project's service area and contain only those providers who are able to comply with the grant requirements.

### 3.2 Project Partners

It is recommended that the Project sponsor partner with local community organizations to facilitate the implementation of the Project. Partners are particularly important for stakeholder engagement. Partners can support the distribution of outreach and educational materials, build trust with community members to best understand their water use efficiency needs, and understand how to overcome barriers to participation. Potential partners include NGOs and community-based organizations in target communities, especially those with experience and relationships with the UCRs, as well as agencies with experience providing incentives. Examples of potential partners include the Environmental Health Coalition, the Environmental Center of San Diego, San Diego Gas & Electric, and United Association of Plumbers & Steamfitters Local Union. It is recommended that the Project sponsor meets with potential partners before applying for a grant to assess whether potential partners are a good fit for the project's goals, needs and priorities prior to requesting support. Early and active partner engagement are important aspects of a multi-partnership project.

### 3.3 Project Benefits

Grants generally require applicants to quantify project benefits, which can be challenging for incentive programs. While the overall benefits will vary depending on how many incentives are provided and of which type, example water savings, in gallons per year (gpy), for each Project component is summarized in **Table 3**.

In addition to water savings, the Project could provide quantified energy savings, which can be estimated based on the embedded energy of water. This supports both direct energy benefits and discussions on climate change benefits. Turf replacement incentives may be able to claim habitat benefits, especially if using native vegetation, and have claimed fertilizer savings in past grants, which can sometimes be tied to potential stormwater and water quality benefits. Generally, excess fertilizer can be carried via runoff into creeks and the ocean during storm events or through overirrigation which can impact water quality. Runoff can also carry chemicals used to control weeds or pests, which may be less necessary in a waterwise or native landscape. Many waterwise landscapes are also incorporating swales or other retention features not commonly found in turf landscaping. If the incentives address runoff issues, stormwater and water quality benefits may be claimed, if they can be quantified.

**Table 3: Anticipated Water Savings from Project**

Device	Savings Rate	Units
SF/MF Residential Surveys	4,015-7,665	gpy
SF/MF Residential Toilet	15,777	gpy
SF/MF Residential Showerhead	2,008	gpy
SF/MF Residential Washer	11,315	gpy
SF Residential Efficient Irrigation Nozzles	0.2	gpy per sq. ft.
Residential Kitchen Aerator	8,870	gpy
Residential Rotating Nozzle	1,320	gpy
CII 1/2 Gallon Urinal	6,206	gpy
CII Toilet (Tank or Valve)	12,374-13,020	gpy
CII Laundromat	31,435	gpy
CII Spray Rinse Valve	28,285	gpy
CII Food Steamer	81,505	gpy
CII Cooling Tower	209,875	gpy
Large Landscape Surveys	9	gpy per sq. ft.
Large Landscape Water Budgets	9	gpy per sq. ft.
Landscape Irrigation Controller	3	gpy per sq. ft.
Turf Replacement	29	gpy per sq. ft.

### 3.4 Project Budget

The Project scope may be scaled based on available grant funding. The number of leak detection and repair services, and the number and types of incentives for both indoor and outdoor water use, could be modified to match available resources throughout project implementation. Consistent with other grant-funded projects, it is estimated that project management will be approximately 10% of the total Project costs, including grant administration.

If the resource database is part of the Project, the Project sponsor will have to negotiate with the service providers and agree on standard service costs. It is recommended that agencies establish the price first based on common costs in the region, and then providers agree and join the database, as opposed to providers joining the database and then agreeing on a standard price. This would allow the project sponsor to provide additional details in the grant application regarding the number of available direct-install services. Setting the incentive amounts prior to developing the Resource Database Program would require some additional research prior to submitting the application to allow for costs to be appropriate enough for service providers to agree to participate, and it is recommended that they be developed in coordination with potential service providers.

It is recommended that the Project sponsor request full project costs funding, including project management, as a grant, if sufficient grant funding is available and no cost share is required. If no cost share is required, full incentives for non-URCs and URCs are recommended. If there is limited funding or a cost share is required, it is recommended that priority be given to URC customers, such as providing partial incentives for non-URCs and full incentives for URCs. In this case, non-URC costs would be considered first to accommodate cost-share requirements. The Project sponsor or its partners may also need to provide in-

kind services, such as staff time for project management or other activities to meet cost-share requirements. Many funding programs offer varying levels of cost-share waivers for projects with URC benefits. In this case, the Project can be tailored to prioritize URCs if there is no capacity for providing funding match.

It is important to consider the upfront costs associated with developing the Project and the administrative requirements of the grant in pre- and post-implementation periods. The level of effort required for grant administration varies across different funding programs. Therefore, the Project sponsor should evaluate the available funding in relation to the effort and resources necessary to manage the grant. Based on previous grants funded through the IRWM Program, the minimum grant request should be \$300,000. Individual grant programs may establish a required minimum grant or project size, in which case the Project should be scaled appropriately.

### **3.5 Project Schedule**

The duration of the Project is determined by the amount of funding available, the requirements of the grant program, and any reporting requirements. Generally, implementation grants require a project to be completed within four to five years, though some funding programs are shorter, and others allow for longer implementation periods. It is recommended that the Project be available to customers and active until grant funds are exhausted, project goals are achieved, and funding obligations are met. Given the time required to start the project, advertise it to customers, and implement the activities funded by the grant, it is recommended that the project only pursue grants that provide a minimum of two years for implementation, though schedule may be based on grant timeline for implementation, costs, available funding, experience with implementation of similar projects, and overall goals. In addition, post implementation funding requirements, such as the post-performance reports typically required for IRWM grants, need to be considered when planning resources and schedules.

### **3.6 Additional Considerations**

This type of Project structure is aimed to facilitate customer participation by reducing potential financial and logistical barriers. In addition, there are no regulatory or environmental compliance issues anticipated as long as certified professionals perform the services. The Project is also flexible in terms of adaptability and scalability. The selection of Project components can be customized, and the funding request can be adjusted based on the available grants. This makes the Project suitable for both small and large service areas. This type of Project also has no operations and maintenance requirements.

The project is structured as an incentive program, which would require the project sponsor to provide the incentive to customers upfront, then wait for grant reimbursement after the customer's improvements have been completed. It is important to note that reimbursement timing may be a potential challenge for smaller agencies who want to implement this Project. This could lead to cash flow issues for smaller entities, although as noted above, advanced payment options may be available for URCs with certain conditions. Advance payments under IRWM programs are only applicable to projects under \$1 million and fund up to half of the awarded grant amount, contingent upon satisfactory compliance of specified grant program criteria. Additionally, some programs may not allow for direct installation services to be funded by the grant or may limit which customers may access direct install services, and the Project should be tailored to accommodate grant requirements.

### 3.7 Potential Funding Sources

There have been several drought-specific funding programs available in the past, though future grant programs are uncertain until they begin accepting applications. Grant programs generally offer between six and eight weeks to apply, though this may vary depending on the program. Some recent grants suited for a drought resilience project are described here, though their future availability is not guaranteed. Additionally, grant programs may have different priorities or eligibility requirements and should be carefully reviewed prior to preparing the application. There is also the possibility that other new programs suited to funding a drought project may arise in the future that is not listed here.

- **DWR Drought Grants:** 2021 Urban and Multibenefit Drought Relief Grant Program and 2022 Urban Community Drought Relief Grant Program were available through DWR as a result of budget surpluses identified by the Governor of California in their respective years. The 2021 program provided opportunities for drought projects as individual projects or through a set-aside that IRWM programs could access for URC projects. Both programs focused on drought relief projects and prioritized projects addressing critical needs in regions suffering from extreme drought. In 2022, this -grant program required a minimum project size of \$2,000,000, which was challenging for some smaller organizations to reach. Eligible project types are described in **Table 1**, above.
- **USBR WaterSMART Drought Response Program:** USBR's Drought Resiliency Projects, a subset of its WaterSMART Drought Response Program, funds projects that increase water reliability and improve water management. This program provides up to \$500,000 for projects completed within two years, and up to \$2 million for projects completed within three years. It requires a 50% funding match, and generally accepts applications approximately once per year, though the timing varies.
- **IRWM Program Grants:** IRWM grants have historically been funded via State Water Bonds. Currently, there is no remaining IRWM funding in the existing water bonds, and this grant program is not expected to provide any more funding. However, there is potential for IRWM funding to be included in a future water bond. Recent IRWM grants have required a 50% funding match, and the SDIRWM Program requires a minimum grant request of \$300,000 for each project. The Project would need to be successful during the local project selection process, but water use efficiency projects have been funded in several previous rounds of IRWM grants.
- **Regional Resilience Planning Grant Program:** Available through the Integrated Climate Adaptation and Resiliency Program and the Governor's Office of Planning and Research, this program includes funding for planning and implementation projects. Projects must have a regional focus, consider vulnerable communities, align with at least one of the program's goals, and are encouraged to be consistent with at least one climate-related state plan. This program also funds capacity building including workforce development related to climate resiliency or implementation projects that include an educational component. Water efficiency and conservation was listed as an example of an eligible implementation project. For the 2023 solicitation, no match funding was required, and implementation grants could range between \$800,000 and \$3,000,000.

## **APPENDIX A: SDIRWM PRIORITY PROJECT CONCEPTS**

## SDIRWM Priority Project Concepts

The following list reflects feedback received from the SDIRWM Drought Resilience Workgroup meetings held on March 2, March 29 and April 26, RAC meeting held on April 5, and RWMG input received on April 24, 2023. Additional project concepts were identified during the public review period of this TM, and were added to this list for future consideration.

Project/Program	Preliminary Concepts	Considerations	Target Audience
Conservation			
Incentives programs	<ul style="list-style-type: none"> <li>• Compile existing rebate programs (e.g., turf replacement, appliances, rain barrels, agriculture) and expand/fill gaps</li> <li>• Prepare standard landscape plans that utilize waterwise approaches and plants, and that can be easily adapted to individual sites</li> <li>• Develop an incentive program that covers upfront costs and/or direct install</li> <li>• URC Support:               <ul style="list-style-type: none"> <li>○ Target water wise improvements at community resources in URCs to provide community benefits</li> <li>○ Indoor installs for URCs</li> </ul> </li> <li>• Identify dedicated partner to support process (e.g., vendor list who can do it, NGO or agency staff who can support through the process)</li> </ul>	<ul style="list-style-type: none"> <li>• Grant programs may impose certain requirements to rebate programs to be eligible or competitive, which may not align as well with our regional needs</li> <li>• Need to keep equity considerations top of mind to incorporate elements that support equity goals</li> </ul>	<ul style="list-style-type: none"> <li>• Customers, some elements may target URCs</li> </ul>
Native vegetation partnerships with nurseries	<ul style="list-style-type: none"> <li>• Adapt list of preferred vegetation from existing local waterwise landscaping guidance</li> <li>• Outreach to local and franchised nurseries when a funding opportunity is identified</li> <li>• Provide upfront costs for landscaping and/or partner with nurseries for direct install</li> </ul>	<ul style="list-style-type: none"> <li>• May need nursery commitments before submitting grant application to be competitive, in which case costs for time spent securing commitments may not be eligible for grant reimbursement</li> </ul>	<ul style="list-style-type: none"> <li>• Customers, some elements may target URCs</li> <li>• Nurseries</li> </ul>

Project/Program	Preliminary Concepts	Considerations	Target Audience
	<ul style="list-style-type: none"> <li>• Provide discounts for native plants, or higher incentive for native vs non-native drought resistant</li> <li>• Provide greater discounts for URCs</li> <li>• Develop marketing materials and work with nurseries on how to best encourage customers to choose plants from the program</li> </ul>	<ul style="list-style-type: none"> <li>• Incorporate equity and URC considerations</li> <li>• CA Native Plant Society may be helpful resource when developing this concept</li> </ul>	
Water use efficiency programs targeting inefficient water users	<ul style="list-style-type: none"> <li>• Offer set number of audits for inefficient water users</li> <li>• Develop and distribute resources (e.g., tailored guidance by type/sector) to reduce water use</li> <li>• Provide rebates for common items that could improve water use efficiency</li> </ul>	<ul style="list-style-type: none"> <li>• Education alone may not be competitive for funding</li> <li>• Solutions to inefficient water use may be specific to the customer and could make crafting a rebate program challenging</li> <li>• Agencies may not want to participate</li> </ul>	<ul style="list-style-type: none"> <li>• Agencies and customers, some elements may target URCs</li> </ul>
Water Loss Control: A lot of existing programs; consider target audience (e.g., homeowners/HOAs, not agencies)			
Leak detection/testing	<ul style="list-style-type: none"> <li>• Identify existing programs and expand/fill gaps</li> <li>• Provide targeted outreach to inefficient water users</li> <li>• Prepare and distribute resource list for on-site leak detection/testing, especially for URCs</li> <li>• Provide subsidies for repairs               <ul style="list-style-type: none"> <li>○ Provide greater subsidies for URCs</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Resource list may require ongoing maintenance</li> <li>• Education alone may not be competitive for funding</li> <li>• Greater incentives for URCs</li> <li>• Keep broad on what kind of leaks can be addressed</li> </ul>	<ul style="list-style-type: none"> <li>• Customers</li> </ul>
Leak repair resources (e.g., plumbing services, subsidies) • Database for direct installers & certified plumbers	<ul style="list-style-type: none"> <li>• Prepare database with resources of plumbing services and subsidies</li> <li>• Prepare database with direct installers &amp; certified plumbers</li> <li>• Provide subsidies for direct install               <ul style="list-style-type: none"> <li>○ Provide greater subsidies for URCs</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Resource list may require ongoing maintenance</li> <li>• Databases may not be competitive for funding</li> <li>• Databases may require ongoing maintenance</li> </ul>	<ul style="list-style-type: none"> <li>• Customers</li> </ul>

Project/Program	Preliminary Concepts	Considerations	Target Audience
<i>(previously presented as a separate project)</i>			
Infrastructure maintenance/upgrades	<ul style="list-style-type: none"> <li>• <i>Project was removed from consideration</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Agencies already have projects to address infrastructure needs and customer-side improvements are challenging to fund</i></li> </ul>	<ul style="list-style-type: none"> <li>• --</li> </ul>
Water use software	<ul style="list-style-type: none"> <li>• <i>Project was removed from consideration</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Many agencies in the region have already shifted to such software and limited opportunity to create a regional project with this concept</i></li> </ul>	<ul style="list-style-type: none"> <li>• --</li> </ul>
<b>Water Recycling/Reuse</b>			
Rainwater storage programs (e.g., cisterns)	<ul style="list-style-type: none"> <li>• Identify existing rainwater capture/storage programs and expand/fill gaps</li> <li>• Incentivize rain gardens and provide guidance on how to implement</li> <li>• Incentivize green infrastructure</li> <li>• Develop education materials on options for saving rainwater – moving beyond the rain barrel</li> </ul>	<ul style="list-style-type: none"> <li>• Permits may be required, or inspections needed for larger cisterns</li> </ul>	<ul style="list-style-type: none"> <li>• Customers</li> </ul>
Greywater programs	<ul style="list-style-type: none"> <li>• <i>Project was removed from consideration</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Significant regulatory challenges and previous lack of success</i></li> </ul>	<ul style="list-style-type: none"> <li>• --</li> </ul>
Policy reform for rainwater capture/greywater use	<ul style="list-style-type: none"> <li>• <i>Project was removed from consideration</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Logistical challenges, lack of competitiveness for funding. However, this could be a valuable RAC meeting topic or other IRWM effort outside of a drought grant</i></li> </ul>	<ul style="list-style-type: none"> <li>• --</li> </ul>

Project/Program	Preliminary Concepts	Considerations	Target Audience
Recycled water injection to create a seawater barrier to project brackish wells	<ul style="list-style-type: none"> <li>• <i>Project was not considered because it was suggested after the drought resilience project was selected and developed, but has been added for future considerations.</i></li> </ul>	<ul style="list-style-type: none"> <li>• --</li> </ul>	<ul style="list-style-type: none"> <li>• Agencies</li> </ul>
Use of seawater for turf in locations that have ocean water available, such as Mission Bay and San Diego Bay	<ul style="list-style-type: none"> <li>• <i>Project was not considered because it was suggested after the drought resilience project was selected and developed, but has been added for future considerations.</i></li> </ul>	<ul style="list-style-type: none"> <li>• --</li> </ul>	<ul style="list-style-type: none"> <li>• Agencies</li> </ul>