Regional Public Agency Turf Replacement Incentive Program

WaterSMART: Water and Energy Efficiency Grants for FY 2022
U.S. Department of the Interior
Bureau of Reclamation
Notice of Funding Opportunity No. R22AS00023

The Metropolitan Water District of Southern California
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Los Angeles, CA 90012

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EXECUTIVE SUMMARY

The executive summary should include:

- The date, applicant name, city, county, and state
- Please indicate whether you are a Category A applicant or a Category B applicant. If you are a Category B applicant, please briefly explain how you are acting in partnership with a Category A partner. Note: If you are a Category B applicant, you must include a letter from the Category A partner confirming that they are partnering with you and agree to the submittal and content of the proposal.
- A one-paragraph project summary that provides the location of the project, a brief description of the work that will be carried out, any partners involved, expected benefits, and how those benefits relate to the water management issues you plan to address. Please note: this information will be used to create a summary of your project for our website if the project is selected for funding. For example, note the following description of a project selected for funding in FY 2020:
- State the length of time and estimated completion date for the proposed project. Note: proposed projects should not have an estimated construction start date that is prior to July 2022.
- Whether or not the proposed project is located on a Federal facility.

Date: November 2, 2021
Applicant Name: Metropolitan Water District of Southern California
Location: 700 North Alameda Street Los Angeles, CA 90012-2944
County: Los Angeles County
State: California

As a special district of the State of California that provides and delivers water, the Metropolitan Water District of Southern California qualifies as a **Category A applicant**.

Project Summary:

This proposal seeks $2,000,000 from the Bureau of Reclamation's (Reclamation) WaterSMART: Water and Energy Efficiency Grants (WEEG) program to support landscape transformations through the Metropolitan Water District of Southern California (Metropolitan) Regional Turf Replacement program. The Turf Replacement program is a collaborative effort among Metropolitan and its 26 member agencies comprised of 14 cities, 11 municipal water districts, and one county water authority, that collectively provide water service to 19 million Southern Californians. Funding will supplement a portion of Metropolitan's Regional Turf Replacement Program for fiscal periods 2022/2023, 2023/2024, and 2024/2025. More specifically, Metropolitan intends to utilize the WaterSmart WEEG program funds to target Public Agency landscapes and prioritize the transformation of non-functional turf in public areas. Metropolitan will provide a minimum matching contribution of $2 million dollars up to $34.5 million for the Turf Replacement Program over three years for a total project cost of $36.5 million. This project will result in an estimated quantifiable water savings of 2,572-acre feet per year by contributing to the conversion of 19.05 million square-feet of non-functional turf to water-efficient landscaping. Over the lifetime of the transformed landscape, the cumulative savings of this project is estimated to result in a lifetime savings of 77,153 AF effectively reducing commercial, industrial and institutional demand necessary for future water reliability. The funding will also assist Metropolitan's member agencies to increase water resiliency in the face of future supply challenges and foster further collaboration between Metropolitan and member agencies.

Project Timeline:

The project will commence at the beginning of Fiscal Year 2022-23, July 1, 2022. All work shall be completed prior to the end of Fiscal Year 2024-25, June 30, 2025.

Federal Facilities:

A primary focus of this project is to eliminate non-functional turf in commercial and public agency landscape areas. As such, turf replacement projects may take place on the grounds of Federal facilities. However, if there is a conflict on interest in Reclamation grant funding providing a supplemental incentive to federal landscapes, federal landscapes will only receive Metropolitan's base incentive and will not be provided an incentive supplemented by grant funds.

PROJECT LOCATION

- Provide detailed information on the proposed project location or project area including a map showing the specific geographic location. For example, {project name}is located in {state and county} approximately {distance} miles {direction, e.g., northeast} of {nearest town}. The project latitude is {##°##'N} and longitude is {###°##'W}.

Metropolitan's Regional Turf Replacement program is available to Residential and CII water users across the district's 5,200 square mile service area which includes portions of six Southern California counties: Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura and includes approximately 300 cities. These areas are serviced by 26 member agencies that include 14 cities, 11 municipal water districts, and one county water authority. Metropolitan is governed by a Board of Directors made up from its member agencies. A map and list of communities served in project area is shown below in Figures 1 and 2.

Figure 1: A map of Metropolitan's Service Area broken down by member agency service area boundaries.

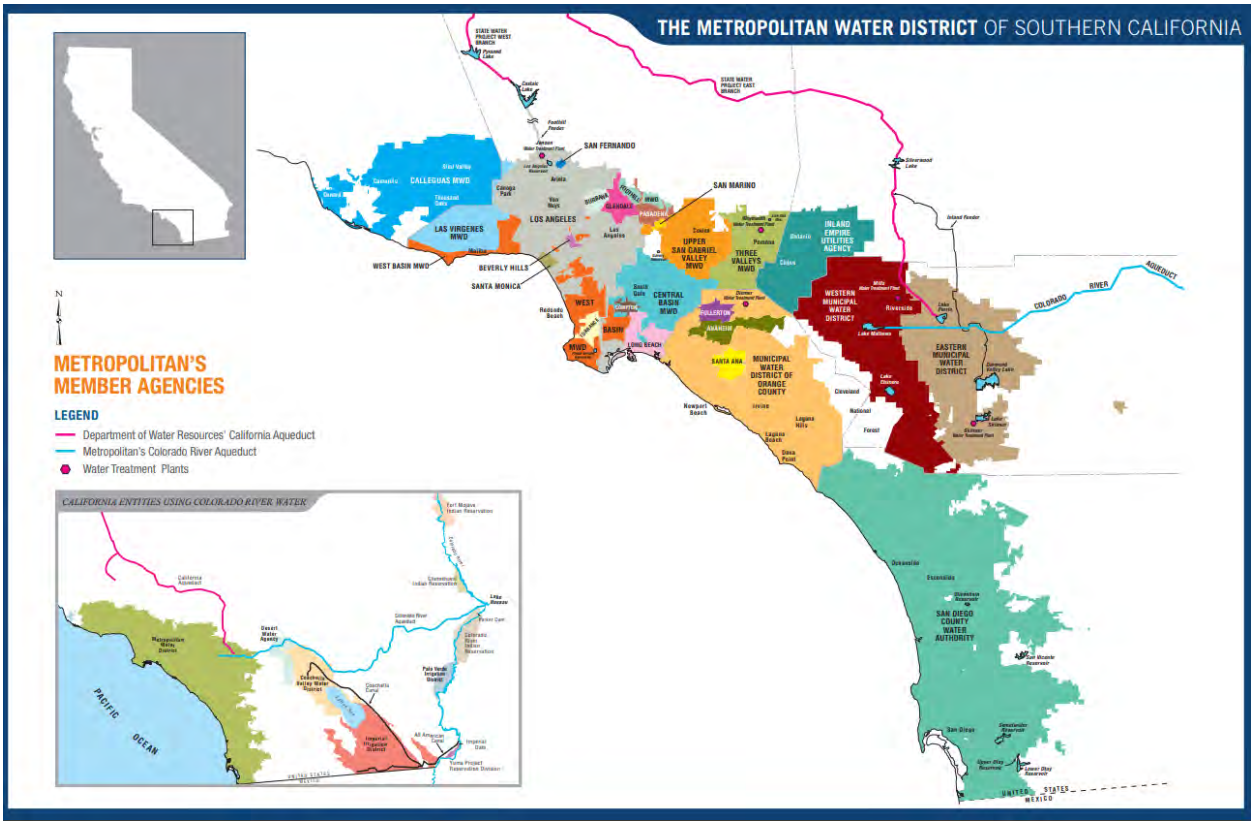

Figure 2: A list of Metropolitan's member agencies and the communities that they serve.

TECHNICAL PROJECT DESCRIPTION:

- Provide a more comprehensive description of the technical aspects of your project, including the work to be accomplished and the approach to complete the work. This description should provide detailed information about the project including materials and equipment and the work to be conducted to complete the project. This section provides an opportunity for the applicant to provide a clear description of the technical nature of the project and to address any aspect of the project that reviewers may need additional information to understand.
- Please do not include your project schedule and milestones here; that information is requested in response to the Readiness to Proceed criterion described in Section E.1.5.2. In addition, please avoid discussion of the benefits of the project, which are also requested in response to evaluation criteria described in Section E.1. This section is solely intended to provide an understanding of the technical aspects of the project.
- Please note, if the work you are requesting funding for is a phase of a larger project, please only describe the work that is reflected in the phase.

Project Background:

The Regional Public Agency Turf Replacement Program (Project) will enhance the implementation of regional and local turfgrass replacement programs within Metropolitan's service area that will provide significant water savings and reduce per capita demand necessary for future water supply reliability. This proposal will provide supplemental funding and program assistance to increase the availability of turf replacement programs within Metropolitan's service area over the next three years. A total of/Up to $34.5 million in incentives will be offered through programs implemented by Metropolitan and participating member and retail agencies. Program funding currently provides a base incentive of $2.00 per square foot for residential and commercial sites but may be higher depending on the local water agency's co-funding contribution. By converting an estimated 19.05 million square-feet of non-functional turf to water-efficient landscaping over the next 3 years, Metropolitan's Turf Replacement program will result in an estimated quantifiable water savings of 2,571-acre feet per year and an estimated savings range of 6,400,000 – 7,680,000 kilowatt hours of energy per year. Reduced consumptive demand will provide additional benefits for water supply sustainability.

Metropolitan's Regional Turf Replacement Program requirements foster the transformation of landscape norms within this region from turf dominant, high-water use landscapes to lower, more water-efficient landscapes through the use of climate appropriate plants, efficient irrigation, permeable surfaces that allow rainwater infiltration and mulch to retain soil moisture. The Turf Replacement Program has minimum eligibility and conversion requirements to maximize water savings, although member agencies may impose additional requirements for their local programs.

Participants are encouraged to use California native plants; and are required to install high efficiency irrigation system components or remove irrigation; use only natural mulches and groundcovers, incorporate at least one stormwater/runoff retention measure within their landscape and avoid the use of invasive species.

Minimum requirements for participation include:

- Area to be converted must have irrigated turfgrass;
- A minimum of 3 plants per 100 square feet of area transformed
- A stormwater retention feature
- No hardscape within the transformed area, except permeable hardscape
- Replacement or modification of overhead spray sprinklers
- Exposed soil must be covered with mulch; and
- The participant must agree to the following: (1) allow a pre and post inspection; (2) sustain the conversion for a minimum of five years unless the property is sold; (3) comply with all applicable laws, policies, codes, covenants, conditions and restrictions; and (4) allow water use data to be used to evaluate the program.

Project Administration:

Implementation of the Project will take place through Metropolitan's regional Turf Replacement Program and through local member agency administered programs, which offer several advantages. First, it maximizes the opportunity for customer participation, either through local programs or a regional program for local agencies that have limited staff resources for program administration. Second, it increases the potential for individual customer success through direct interaction with their water agencies. It provides opportunities to educate customers about local landscape standards, irrigation technologies, and climate appropriate plants for local conditions. Most importantly, it leverages federal, regional, and local funding (through supplemental incentives) to build momentum and public acceptance within communities.

As a project administrator, Metropolitan will perform the following tasks:

- Coordinate with participating member agencies to track agency funding requests, expenditures, and status of inspections
- Administer regional turf removal program as requested by member agencies
- Conduct periodic status meetings with participating agencies to address implementation issues, share best practices, and ensure adherence to the project schedule
- Participate in a representative sample of pre and post inspections with participating agencies
- Receive and analyze sample data from retail water agencies, including pre and post conversion water use
- Prepare financial and program performance reports, including final program evaluation

Implementing agencies will perform the following tasks:

- Develop local program terms, conditions, guidelines, resources
- Provide marketing, outreach, and customer assistance for the local program
- Administer the local program through in-house resources or use of Metropolitan's regional rebate program administrator (www.socalwatersmart.com)
- Review applications to ensure eligibility; conduct pre and/or post inspections to ensure compliance with program terms and conditions
- Provide representative digital project photos of pre and post conditions
- Collect site-specific data from participants to assist in the program evaluation

- Report sample data to Metropolitan for use in program evaluation
- Review data analysis and assist in program evaluation

Use of USBR Water and Energy Efficiency Grant Program Funds:

USBR WEEG funds awarded to the Metropolitan Water District of Southern California will be used to supplement the district's current regional turf replacement incentive for public agency landscapes. The current Metropolitan baseline incentive for public agency landscapes provides customers two dollars per square foot paid out at a maximum of fifty-thousand square feet. The majority of the funding (approximately 90% or $1.8 million, out of the $2 million total) will be used to provide an additional dollar per square foot to the approved incentive amount, which under the current incentive structure would bring the total to three dollars per square foot. It is possible that within the awarding period the incentive for regional turf replacement may increase as the call for conservation and water use efficiency magnifies due to impending drought conditions. Should the incentive change, the use of WEEG funds will retain the same purpose of adding an extra dollar to the baseline Metropolitan incentive.

Several public agencies have staffing or budgeting constraints that have historically hindered their ability to participate in water conservation programming. Metropolitan is optimistic that by increasing its turf replacement incentive for public agency landscapes along with creating a program assistance resource for applicants, that more public agency lands surrounding parks, schools, street medians, city halls, court houses, community centers and the like will be more inclined to participate in water conservation programming measures.

A smaller portion of the funds (approximately 10% or $200,000, out of the $2 million total) will be used to develop and offer project assistance services to public agencies wishing to apply for Metropolitan's regional turf replacement incentive. The project assistance services will provide public agencies assistance with understanding program terms and conditions, landscape design requirements, connecting agencies with landscape professionals for the design and implementation of California-Friendly landscapes and assisting with the program application. Metropolitan currently offers a similar service to its member agencies for the development of water use efficiency programming in underserved communities through a third-party vendor that is fully capable of providing similar services for the public agency turf replacement program.

EVALUATION CRITERIA:

- The evaluation criteria portion of your application should thoroughly address each criterion and sub criterion in the order presented to assist in the complete and accurate evaluation of your proposal. (See Section E.1. Technical Proposal: Evaluation Criteria for additional details, including a detailed description of each criterion and sub criterion and points associated with each.) **It is suggested that applicants copy and paste the evaluation criteria and sub criteria in Section E.1. Technical Proposal: Evaluation Criteria into their applications to ensure that all necessary information is adequately addressed.**

PERFORMANCE MEASURES

- Provide a brief summary describing the performance measure that will be used to quantify actual benefits upon completion of the project (e.g., water saved or better managed, energy generated or saved). For more information calculating performance measure, see Appendix A: *Benefit Quantification and Performance Measure Guidance.*
- All Water and Energy Efficiency Grants applicants are **required** to propose a "performance measure" (a method of quantifying the actual benefits of their project once it is completed). A provision will be included in all assistance agreements with Water and Energy Efficiency Grants recipients describing the performance measure and requiring the recipient to quantify the actual project benefits in their final report to Reclamation upon completion of the project. If information regarding project benefits is not available immediately upon completion of the project, the financial assistance agreement may be modified to remain open until such information is available and until a Final Report is submitted. Quantifying project benefits is an important means to determine the relative effectiveness of various water management efforts, as well as the overall effectiveness of Water and Energy Efficiency Grants.
- *Note: program funding may be used to install necessary equipment to monitor progress. However, program funding may not be used to measure performance after project construction is complete (these costs are considered normal operation and maintenance costs and are the responsibility of the applicant).*

Section E. Application Review Information

Technical Proposal: Evaluation Criteria

The following evaluation criteria prioritize projects that are intended to meet the objectives stated in Section 9504(a) of the Secure Water Act (P.L. 111-11) and that align with priorities of the Biden administration, including E.O. 14008: *Tackling the Climate Crisis at Home and Abroad* and E.O. 13985: Advancing Racial Equity and Support for Underserved Communities Through the Federal Government. Applications should thoroughly address each criterion and any sub criterion in the order presented below. It is suggested that applicants copy and paste the below criteria and sub criteria into their applications to ensure that all necessary information is adequately addressed.
Applications will be evaluated against the evaluation criteria listed below. If the work described in your application is a phase of a larger project, only discuss the benefits that will result directly from the work discussed in the technical project description and that is reflected in the budget, not the larger project. *The evaluation criteria portion should be addressed in the technical proposal section of the application.*

Evaluation Criteria: Scoring Summary Points:

A. Quantifiable Water Savings 28
B. Renewable Energy 20
C. Sustainability Benefits 20
D. Complementing On-Farm Irrigation Improvements 10
E. Planning and Implementation 8
F. Collaboration 6
G: Additional Non-Federal Funding 4
H: Nexus to Reclamation 4
Total 100

Evaluation Criterion A—Quantifiable Water Savings (28 points)
Up to **28 points** may be awarded for this criterion. This criterion prioritizes projects that will conserve water and improve water use efficiency, supporting the goals of E.O. 14008. Points will be allocated based on the quantifiable water savings expected as a result of the project. Points will be allocated to give greater consideration to projects that are expected to result in more significant water savings.

All applicants should be sure to address the following:
Describe the amount of estimated water savings. For projects that conserve water, please state the estimated amount of water expected to be conserved (in acre-feet per year) as a direct result of this project. Please include a specific quantifiable water savings estimate; do not include a range of potential water savings.

Quantifiable Water Savings for Project:

Metropolitan's average annual water savings estimate of 43.989 gallons per square foot of turf replaced is based on a range of measured and estimated savings from programs implemented within region. This metric is used as the standard water savings number for turf replacement by Metropolitan for the current and past regional turf replacement programs. Each project is estimated to have a 30-year life based on an extended projection of the landscape to remain drought tolerant indefinitely. It is assumed that residents will replace plants with other plants at the end of their life cycles as opposed to reverting to turf. This results in an estimated 2,572-acre feet of water saved per year.

Describe current losses:

- Please explain where the water that will be conserved is currently going and how it is being used. Consider the following:
- Explain where current losses are going (e.g., back to the stream, spilled at the end of the ditch, seeping into the ground)?
- If known, please explain how current losses are being used. For example, are current losses returning to the system for use by others?
- Are current losses entering an impaired groundwater table becoming unsuitable for future use? Are there any known benefits associated with where the current losses are going? For example, is seepage water providing additional habitat for fish or animal species?

Current Losses:

Water that is currently used to irrigate turf lawns may end up in a variety of settings. Some does seep into the ground but a significant amount, particularly due to faulty irrigation systems and overwatering, ends up as evaporative loss and polluted, dry weather urban runoff. Program criteria that require applicants to upgrade their irrigation systems with more efficient components, incorporate stormwater/runoff retention features and use climate appropriate plants will help prevent additional losses.

Describe the support/documentation of estimated water savings:

- Please provide sufficient detail supporting how the estimate was determined, including all supporting calculations. Note: projects that do not provide sufficient supporting detail/calculations may not receive credit under this section. Please be sure to consider the questions associated with your project type (listed below) when determining the estimated water savings, along with the necessary support needed for a full review of your proposal. In addition, please note that the use of visual observations alone to calculate water savings, without additional documentation/data, are **not** sufficient to receive credit under this section. Further, the water savings must be the result of reducing or eliminating a current, ongoing loss, not the result of an expected future loss.
- Please address the following questions according to the type of infrastructure improvement you are proposing for funding. See Appendix A: Benefit Quantification and Performance Measure Guidance for additional guidance on quantifying water savings.

Turf Removal: Applicants proposing turf removal projects should address the following: How have average annual water savings estimates been determined? Please provide all relevant calculations, assumptions, and supporting data.

Documentation of Estimated Water Savings:

Metropolitan's average annual water savings estimate of 43.989 gallons per square foot of turf replaced is based on a range of measured and estimated savings from programs implemented within region. This metric is used as the standard water savings number for turf replacement by Metropolitan for the current and past regional turf replacement programs. Each project is estimated to have a 30-year life based on an extended projection of the landscape to remain drought tolerant indefinitely. It is assumed that residents will replace plants with other plants at the end of their life cycles as opposed to reverting to turf.

Table 1: Estimated Water Savings

USBR WEEG Grant Funds	**MWD Matching Funds**	**Total Program Funds**
$2,000,000.00	$34,500,000.00	$36,500,000.00
Funds to be Used for Turf Replacement		
$1,800,000.00*	$34,500,000.00	$36,300,000.00
Incentive Amount		
$1 per square foot	$2 per square foot*	
Square Feet Replaced (Budget/Incentive)		
1,800,000 square feet	17,250,000 square feet	19,050,000 square feet
Gallons Saved/SF/YR (Based on Current and Historical Participation)		
43.989 gallons/sf/yr	43.989 gallons/sf/yr	43.989 gallons/sf/yr
Gallons Saved/YR (Square Feet Replaced * Gallons Saved/SF/YR)		
79,181,793.00 gallons	758,825,516.25 gallons	838,007,309.25 gallons
AF Saved/YR (Gallons Saved/YR / (325,651 GAL/AF)		
243.00 AF	2,328.75 AF	2,571.75 AF
Estimated Lifetime of Turf Replacement		
30 years	30 years	30 years
Lifetime Savings AF		
7,290.00 AF	69,862.50 AF	77,152.50 AF
Notes		
$1.8 million of grants funds will be used towards supplementing Metropolitan's Turf Replacement Incentive for public agency landscapes. The remaining $200,000 will be used for consultant services to provide concierge assistance for applicants. The Metropolitan Water District of Southern California will provide an estimated $34.5 million in turf replacement incentives for fiscal periods FY22-23, 23-24 and 24-25. The Turf Replacement Incentive for commercial landscapes is $2.00/SF at the time this proposal is to be submitted. There is a possibility that this may change over the award period as Metropolitan's conservation activity and budget is adjusted to mitigate periods of drought.		

What is the total surface area of turf to be removed and what is the estimated average annual turf consumptive use rate per unit area?

Metropolitan estimates that a total of 19.05 million square feet of turf will be replaced through the Regional Turf Replacement Program over the course of the 3-year completion time frame for funded projects.

The estimated annual consumptive turf use rate of 62.25 gallons per square foot per year was calculated based on the Estimated Total Water Use for turfgrass:

$$\text{ETWU} = \frac{\text{ETo} * 0.62 * \text{PF} * \text{PA}}{\text{IE}}$$

$$62.25 \frac{\text{gal}}{\text{square ft}} /\text{yr} = \frac{50.2 * 0.62 * .8 * 1}{.4}$$

Where:
ETo (reference evapotranspiration) = 50.2
Conversion Factor = 0.62
Plant Factor (PF) = 0.8
Project Area (PA) = 1 square foot
Irrigation Efficiency= 0.4

The following assumptions were made to determine turf consumptive use rate per area:

- Reference ETo for Metropolitan's service area = 50.2 inches per year
    - Metropolitan has eight reference evapotranspiration zones within its service area ranging from 32.9 to 62.5 inches per year
    - The area of each zone within Metropolitan's service area was calculated using GIS
    - The reference evapotranspiration for Metropolitan's service area was calculated based on the weighted average of the zone areas
- Plant Factor: Pre-conversion - Irrigation requirements for cool season turf = 80% Eto (reference evapotranspiration)
- Irrigation Efficiency defined as "the measurement of the amount of water beneficially used divided by the amount of water applied"
    - Pre-conversion = 0.4; assume 0.5 for inefficient system design and condition plus further inefficiency of 0.1 due to improper controller settings that result in overwatering (typical observation within Metropolitan's service area)

Was historical water consumption data evaluated to estimate average annual turf consumptive use per unit area? If so, did the evaluation include a weather adjustment component?

The average annual turf consumptive use per unit area was not based on historical water consumption data. The methodology for determining average annual consumptive use per square foot was determined theoretically by calculating the Estimated Total Water Use (ETWU) of cool season turfgrass as detailed in the above calculation.

Will site audits be performed before applicants are accepted into the program?

All prospective project requests are reviewed prior to applicants being accepted into the program. Participating agencies ensure eligibility and compliance with program terms and conditions by reviewing program applications and site photos and conducting pre-inspections. More specifically, the pre-inspection site audit will determine the square footage of the project site area, the current method of irrigation, and will verify that there is existing turf grass in the areas to be replaced with program funds. Each applicant will also be required to submit a full landscape design illustrating the changes to be incorporated into the landscape. Applicants receive notice to proceed once the application review is complete and the site is deemed eligible. The incorporation of the new public agency project assistance program will be available to any applicant that requires additional support understanding program eligibility and meeting compliance guidelines for project approval.

Once projects are completed, a post-inspection site audit will also be conducted to verify that the new landscape complies with all of Metropolitan's Turf Replacement Program requirements. The post inspection will verify the conversion area measurements and the final incentive amount, the installation of an efficient irrigation system, and the implementation of a stormwater capture feature.

How will actual water savings be verified upon completion of the project?

Verification of Water Savings (Post Completion):

Metropolitan will work with its member agencies to obtain water-use information in order to conduct a comparison of a pre-conversion versus post-replacement water use for program applicants. Data will be collected for a sample of sites to determine general characteristics of participants in the program. Pre and post conversion water use history and site data for the sample sites will be used to estimate program water savings.

Landscape irrigation occurs year-round within Metropolitan's service area. Pre-project baseline data will be estimated using dedicated meter data and theoretical irrigation requirements:

Dedicated meter data: Historical water use data (up to 10 years) for a representative sample of project sites served by dedicated irrigation meters will be used to determine baseline water use for turf irrigation. Typically, these are large landscape sites, such as homeowner associations, parks, golf courses, schools, and other institutional facilities. The metered water use will be divided by the square footage of irrigated area and the number of years in the data set, providing average annual water demand per square foot of turf.

Theoretical irrigation requirement: For projects that do not have dedicated irrigation meters, pre-project water use will be determined by using reference evapotranspiration (ETo) values from the California Irrigation Management Information System (CIMIS) weather stations within Metropolitan's service area. The following formula will be used:

$$\text{ETWU} = \frac{\text{ETo} * 0.62 * \text{PF} * \text{PA}}{\text{IE}}$$

Where:

ETWU = Estimated Total Water Use per year (gallons)
ETo = Reference Evapotranspiration (inches)
PF = Plant Factor

- Pre-conversion - Irrigation requirements for cool season turf = 80% ETo
- Post-conversion - Plant factor for moderate water use plants = 0.4 – 0.6; assume lower end due to focus on low water use California native plants, local program requirements, and participants' interest in saving water

PA = Project Area, square feet of irrigated turf to be removed
0.62 = Conversion Factor
IE = Irrigation Efficiency: defined as "the measurement of the amount of water beneficially used divided by the amount of water applied"

- Pre-conversion = 0.4; assume 0.5 for inefficient system design and condition plus further inefficiency of 0.1 due to improper controller settings that result in overwatering (typical observation within Metropolitan's service area)
- Post-conversion = 0.8; average based on range of requirements for local programs (including capping existing systems, elimination of overhead spray, and installation of drip systems); and participants' interest in saving water

Post-project methods for quantifying benefits of turf removal projects will include verifying the amount of turf removed at project sites. This will be accomplished through a combination of project inspections, site photos, and geographic information systems technology with aerial photos. The preliminary estimated water savings will be calculated based on area of turf removed and any known irrigation changes compared to the estimated pre-project turf irrigation application rate from dedicated meter data or the theoretical irrigation requirement. The total savings for this project will be calculated as the summation of water savings for all participating sites, determined through dedicated meter data and the theoretical irrigation requirement for the sample sites.

Data will be normalized for weather if conditions are significantly different for pre- and post-data evaluation periods. For analysis, it is best to have at least 12 months of post installation data, to allow time for establishment of the landscape. If enough time has not passed, post-conversion water savings data may not reflect accurate savings

Evaluation Criterion B—Renewable Energy (20 points)
Up to **20 points** may be awarded based on the extent to which the project increases the use of renewable energy or otherwise results in increased energy efficiency and reduced greenhouse gas emissions.

For projects that include constructing or installing renewable energy components, please respond to Sub criterion No. B.1: *Implementing Renewable Energy Projects Related to Water Management and Delivery*. If the project does not implement a renewable energy project but will increase energy efficiency, please respond to Sub criterion No. B.2. *Increasing Energy Efficiency in Water Management*. If the project has separate components that will result in both implementing a renewable energy project and increasing energy efficiency, an applicant may respond to both.

Note: an applicant may receive points under both Sub criteria No.B.1 and B.2 if the project consists of an energy efficiency component separate from the renewable energy component of the project. However, an applicant may receive no more than 20 points total under both Sub criteria No. B.1 and B.2.

Sub criterion No. B.1: Implementing Renewable Energy Projects Related to Water Management and Delivery
Up to **20 points** may be awarded for projects that include construction or installation of renewable energy components (e.g., hydroelectric units, solar- electric facilities, wind energy systems, or facilities that otherwise enable the use of renewable energy). Projects such as small-scale solar resulting in minimal energy savings or production will be considered under Sub criterion No. B.2.

AND/OR

Subcriterion No. B.2: Increasing Energy Efficiency in Water Management Up to **10 points** may be awarded for projects that address energy demands and reduce greenhouse gas emissions by retrofitting equipment to increase energy efficiency and/or through water conservation improvements that result in reduced pumping or diversions.

Describe any energy efficiencies that are expected to result from implementation of the water conservation or water efficiency project (e.g., reduced pumping).

- If quantifiable energy savings is expected to result from the project, please provide sufficient details and supporting calculations. If quantifying energy savings, please state the estimated amount in kilowatt hours per year.
- How will the energy efficiency improvement combat/offset the impacts of climate change, including an expected reduction in greenhouse gas emissions.
- If the project will result in reduced pumping, please describe the current pumping requirements and the types of pumps (e.g., size) currently being used. How would the proposed project impact the current pumping requirements and energy usage?
- Please indicate whether your energy savings estimate originates from the point of diversion, or whether the estimate is based upon an alternate site of origin.
- Does the calculation include any energy required to treat the water, if applicable?
- Will the project result in reduced vehicle miles driven, in turn reducing greenhouse gas emissions? Please provide supporting details and calculations.
- Describe any renewable energy components that will result in minimal energy savings/production (e.g., installing small-scale solar as part of a SCADA system).

Estimated Energy Savings

This proposal is estimated to reduce demand up to 2,572 AF per year of local supplies and imported water, which is pumped from the Colorado River through the Colorado River Aqueduct and from the Bay-Delta through the State Water Project. According to a 2010 study prepared for the California Public Utilities Commission, the average energy intensity of water delivered by Metropolitan to its member agencies is 2,473 kilowatt hours per acre-foot. In addition, the range of energy intensity to distribute treated water to end use customers is 45 to 1,574 kWh per million gallons, or 15 to 513 kWh per acre foot. Based on the energy intensity data in the Commission's studies, the program will result in the following energy savings due to reduced reliance on water imported from the Colorado River and State Water Project:

Table 2: Estimated Energy Savings

Estimated Water Savings	**Energy Intensity Range kWh/AF** (from point of origin to end use customer)	**Estimated Energy Savings Range**
2,572 AF/year	2,488 – 2,986	6,400,000 –7,680,000 kWh/year

The benefit of this energy savings is further enhanced by timing. Irrigation demands within Metropolitan's service area are highest during the warmer months. Historic reference evapotranspiration during July is nearly three times higher than the low in January. The project's estimated water and energy savings will primarily occur during the warmer months when demands are high, resources are constrained, and reservoirs are lower.

Evaluation Criterion C—Sustainability Benefits (20 points)
Up to **20 points** may be awarded under this criterion. This criterion prioritizes projects that address a specific water and/or energy sustainability concern(s), including enhancing drought resilience, addressing the current and future impacts of climate change, and resolving water related conflicts in the region. In addition, this criterion is focused on the benefits associated with the project, including benefits to tribes, ecosystem benefits, and other benefits to water and/or energy supply sustainability.

Enhancing drought resiliency. In addition to the separate WaterSMART Environmental Water Resources Projects NOFO, this NOFO places a priority on projects that enhance drought resiliency, through this section and other sections above, consistent with the SECURE Water Act. Please provide information regarding how the project will enhance drought resilience by benefitting the water supply and ecosystem, including the following:

- Does the project seek to improve ecological resiliency to climate change?
- Will water remain in the system for longer periods of time? If so, provide details on current/future durations and any expected resulting benefits (e.g., maintaining water temperatures or water levels).
- Will the project benefit species (e.g., federally threatened or endangered, a federally recognized candidate species, a state listed species, or a species of particular recreational, or economic importance)? Please describe the relationship of the species to the water supply, and whether the species is adversely affected by a Reclamation project or is subject to a recovery plan or conservation plan under the Endangered Species Act (ESA).
- Please describe any other ecosystem benefits as a direct result of the project.
- Will the project directly result in more efficient management of the water supply? For example, will the project provide greater flexibility to water managers, resulting in a
- more efficient use of water supplies?

Sustainability Benefits:

This proposal seeks to install drought-tolerant plants in replacement of turfgrass. To support the goals of the Project, Metropolitan Water District has invested in the development of resources to include and encourage the use of California native plants within the program. With increased marketing and resources available to applicants, it is likely that many will incorporate native plants species which may in turn provide micro-habitats for local species. The Project will also reduce irrigation demand which can help critical habitat improvement for federally listed, threatened and endangered species in the Lower Colorado River such as at-risk fish species including the Bonytail, Razorback Sucker, Humpback Chub, and Colorado Pikeminnow. Threatened and endangered bird species: the Yuma Clapper Rail and the Southern Willow Flycatcher, which utilize the marsh habitat and cottonwood willow thickets along the river, are also negatively impacted by water withdrawals. Improved water management and reduced demand during warmer months will help to mitigate negative impacts on these species.

The Project will also provide water managers with an additional resource for reducing the demand within their service areas and with implementation, will ultimately result in a more-efficient use of water supplies.

Addressing a specific water and/or energy sustainability concern(s). Will the project address a specific sustainability concern? Please address the following:

- Explain and provide detail of the specific issue(s) in the area that is impacting water sustainability, such as shortages due to drought and/or climate change, increased demand, or reduced deliveries.
- Explain and provide detail of the specific issue(s) in the area that is impacting energy sustainability, such as reliance on fossil fuels, pollution, or interruptions in service.
- Please describe how the project will directly address the concern(s) stated above. For example, if experiencing shortages due to drought or climate change, how will the project directly address and confront the shortages?
- Please address where any conserved water as a result of the project will go and how it will be used, including whether the conserved water will be used to offset groundwater pumping, used to reduce diversions, used to address shortages that impact diversions or reduce deliveries, made available for transfer, left in the river system, or used to meet another intended use.

Addressing Water/Sustainability Concerns

This proposal is in direct response to multiple supply related issues that the western United States and the state of California are currently facing. On August 16th, 2021, the Department of the Interior declared the first ever shortage on the Colorado River system. On October 19th, 2021 Governor Gavin Newsom issued an Executive Order that expanded California's drought declaration to include Metropolitan's service area. Given the increasing severity of conditions the Metropolitan Water District is working to enhance conservation throughout its service area to ensure water reliability for its region, the State of California, and all other parties that depend on the Colorado River System for a safe and reliable supply.

The replacement of turfgrass and outdated irrigation systems with low water use plants and efficient irrigation measures will save approximately 2,572-acre feet of water per year. The installation of drought tolerant gardens specifically for public agency landscapes will also help Metropolitan and local water managers promote turf replacement among all customer types by allowing their converted public landscapes to be seen as examples of responsible and efficient water use. Water efficient landscapes in California should be adopted not only in response to drought, but also in times of normalcy and surplus to mitigate for the more frequent dry periods. Water that is conserved by this Project can be kept in storage reservoirs or used to reestablish water levels in reservoirs, address shortages and meet future dry year demands.

Other project benefits. Please provide a detailed explanation of the project benefits and their significance. These benefits may include, but are not limited to, the following:
Combating the Climate Crisis: E.O. 14008: *Tackling the Climate Crisis at Home and Abroad*, focuses on increasing resilience to climate change and supporting climate resilient development. For additional information on the impacts of climate change throughout the western United States, see: https://www.usbr.gov/climate/secure/docs/2021secure/2021SECUREReport.pdf. Please describe how the project will address climate change, including the following:

- Please provide specific details and examples on how the project will address the impacts of climate change and help combat the climate crisis.
- Does this proposed project strengthen water supply sustainability to increase resilience to climate change?
- Will the proposed project establish and utilize a renewable energy source?
- Will the project result in lower greenhouse gas emissions?

Combating Climate Change:

The replacement of turfgrass and outdated irrigation systems with low water use plants and efficient irrigation measures will save approximately 2,572-acre feet of water and between 6,400,000 –7,680,000 kWh of electricity per year. This will help to reduce imported water demands and the energy required to transport said water, providing relief to supply issues on the Colorado River System, the State Water Project and associated energy grids that have been exacerbated by the effects of climate change.

Disadvantaged or Underserved Communities: E.O. 14008 and E.O. 13985 support environmental and economic justice by investing in underserved and disadvantaged communities and addressing the climate-related impacts to these communities, including impacts to public health, safety, and economic opportunities. Please describe how the project supports these Executive Orders, including:

- Does the proposed project directly serve and/or benefit a disadvantaged or historically underserved community? Benefits can include, but are not limited to, public health and safety through water quality improvements, new water supplies, new renewable energy sources, or economic growth opportunities.
- If the proposed project is providing benefits to a disadvantaged community, provide sufficient information to demonstrate that the community meets the disadvantaged community definition in Section 1015 of the Cooperative Watershed Act, which is defined as a community with an annual median household income that is less than 100 percent of the statewide annual median household income for the State, or the applicable state criteria for determining disadvantaged status.
- If the proposed project is providing benefits to an underserved community, provide sufficient information to demonstrate that the community meets the underserved definition in E.O. 13985, which includes populations sharing a particular characteristic, as well as geographic communities, that have been systematically denied a full opportunity to participate in aspects of economic, social, and civic life.

Benefits to Disadvantaged and Underserved Communities

The increased incentive amount makes turf replacement and irrigation upgrades more accessible to public agency landscapes in underserved communities that historically may not have funds or personnel available within their operating budgets to participate in water conservation programming. The program may also provide indirect benefits to low income and minority populations through improved water supply reliability

Tribal Benefits: The Department of the Interior is committed to strengthening tribal sovereignty and the fulfillment of Federal Tribal trust responsibilities. The President's memorandum "Tribal Consultation and Strengthening Nation-to-Nation Relationships" asserts the importance of honoring the Federal government's commitments to Tribal Nations. Please address the following, if applicable:

- Does the proposed project directly serve and/or benefit a Tribe? Will the project increase water supply sustainability for an Indian Tribe? Will the project provide renewable energy for an Indian Tribe?
- Does the proposed project directly support tribal resilience to climate change and drought impacts or provide other tribal benefits such as improved public health and safety through water?

Benefits to Tribal Nations:

The Project will reduce demand for imported supplies and thereby support the amount of water available through water markets and transfers in the Colorado River, State Water Project, and Central Valley Project systems. These supplies may be available to Indian tribes through water markets.

Other Benefits: Will the project address water and/or energy sustainability in other ways not described above? For example:

- Will the project assist States and water users in complying with interstate compacts?
- Will the project benefit multiple sectors and/or users (e.g., agriculture, municipal and industrial, environmental, recreation, or others)?
- Will the project benefit a larger initiative to address sustainability?
- Will the project help to prevent a water-related crisis or conflict? Is there frequently tension or litigation over water in the basin?

Other Project Benefits:

This region faces several ongoing challenges that significantly impact water supply:

- Population and economic growth are key demand uncertainties.
- A robust economy could cause increased demands in the future.
- Climate change and changes in weather patterns could significantly affect water supply reliability.
- The current drought on the Colorado River is more severe than any drought measured in the 20th century.

All water saved by the Project will be used to offset Metropolitan's overall demand. Thus, it will benefit all of Metropolitan's multiple sectors and users including residential, municipal, industrial, commercial, and recreational sites. This reduction will also help alleviate current stress on the Colorado River basin and will help the region achieve the water savings necessary to avoid future water supply shortages.

The project also encourages widespread transformation of contemporary landscapes norms which has become an increasing initiative throughout the State of California. As one of the largest and influential agencies in the western United States, other water agencies throughout the region look to Metropolitan as a resource, an example, and as an encouraging leader in outdoor water use efficiency.

Evaluation Criterion E—Planning and Implementation (8 points)
Up to **8 points** may be awarded for these subcriteria.

Project Planning
Points may be awarded for proposals with planning efforts that provide support for the proposed project.

Does the applicant have a Water Conservation Plan and/or System Optimization Review (SOR) in place? Does the project address an adaptation strategy identified in a completed WaterSMART Basin Study? Please self-certify or provide copies of these plans where appropriate to verify that such a plan is in place. Including a specific excerpt or a link to the planning document may also be considered where appropriate. Provide the following information regarding project planning:

- Identify any district-wide, or system-wide, planning that provides support for the proposed project. This could include a Water Conservation Plan, SOR, Drought Contingency Plan or other planning efforts done to determine the priority of this project in relation to other potential projects.
- Describe how the project conforms to and meets the goals of any applicable planning efforts and identify any aspect of the project that implements a feature of an existing water plan(s).
- If applicable, provide a detailed description of how a project is addressing an adaptation strategy specifically identified in a completed WaterSMART Basin Study or Water Management Options Pilot (e.g., a strategy to mitigate the impacts of water shortages resulting from climate change, drought, increased demands, or other causes)
- For more information on Basin Studies, including a list of completed basin studies and reports, please visit: www.usbr.gov/WaterSMART/bsp.

Planning and Implementation

Metropolitan has prepared and adopted several regional resource management plans that address drought contingencies and the need for conservation to ensure water supply reliability:

Regional Urban Water Management Plan, adopted June 2021
Integrated Water Resources Plan 2015 Update (Report No. 1518)
Water Supply Allocation Plan, adopted February 2008
Long-Term Conservation Plan, adopted August 2011

Metropolitan's Integrated Water Resources Plan 2015 Update identifies the need for an additional 723,000 AF of increased conservation savings and supply production by 2040 to ensure reliable water supplies for the region. Achieving this level of savings will require transforming markets as well as social and landscape norms. Metropolitan's Long-Term Conservation Plan provides a framework and strategies to help achieve the water conservation portion of this target. Landscape water use is identified as a primary opportunity for savings with turf replacement a key strategy for the region.

Metropolitan's service area is included in the "Colorado River Basin Water Supply and Demand Study" (December 2012) (Basin Study), prepared under Reclamation's Basin Study Program as part of the Department of the Interior WaterSMART program. The Basin Study projects a long-term imbalance in future supply and demand of about 3.2 million acre-feet by 2060 due to projected growth and impacts of climate change. The study identifies four portfolios of various representative options to address water supply and demand. Each of the portfolios represents a different potential adaptation strategy. Increased municipal and industrial water conservation is

included in each of the strategies, with potential yield of 600,000 acre-feet per year by 2035 and 1 million acre-feet by 2060.

The Turf Replacement Program implements municipal and industrial water conservation as described in the Basin Study's four adaptation strategies. The Basin Study notes that residential indoor and outdoor landscaping water conservation measures areas offer the greatest potential for savings. Conservation measures within these two categories represent almost 80 percent of the total estimated municipal and industrial water conservation potential. It also identifies landscape water efficiency as one of the most cost-intensive measures. The reduction in demand due to outdoor conservation was based on the implementation of best management practices including conversion of turf to landscaping with lower water needs.

Readiness to Proceed
Points may be awarded based upon the extent to which the proposed project is capable of proceeding upon entering into a financial assistance agreement. Please note, if your project is selected, responses provided in this section will be used to develop the scope of work that will be included in the financial assistance agreement.

Applications that include a detailed project implementation plan (e.g., estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates) will receive the most points under this criterion.

- Identify and provide a summary description of the major tasks necessary to complete the project. Note: please do not repeat the more detailed technical project description provided in Section D.2.2.4.; this section should focus on a summary of the major tasks to be accomplished as part of the project.
- Describe any permits that will be required, along with the process for obtaining such permits. Identify and describe any engineering or design work performed specifically in support of the proposed project.
- Describe any new policies or administrative actions required to implement the project.
- Please also include an estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates. Milestones may include, but are not limited to, the following: complete environmental and cultural compliance; mobilization; begin construction/installation; construction/installation (50% complete); and construction/installation (100% complete)

Readiness to Proceed

Rapid deployment of grant funds is possible because momentum is already established, and contracts and program administrative elements are already in place.

Agencies are already implementing the Turf Replacement Incentive Program, and the transition to include more options for public agency landscapes will be seamless. Several agencies have developed web pages for their own turf replacement programs, including tools and resources to assist participants (i.e., Long Beach Water Department's Lawn to Garden Program: www.lblawntogarden.com, the Municipal Water District of Orange County's Turf Replacement Program: www.mwdoc.com/turf-removal). Other agencies are using Metropolitan's regional SoCalWaterSmart website (SoCalWatersmart.com) that includes turf replacement program pages for residential and commercial customers. The Metropolitan Water District also offers various gardening tips and resources at BeWaterWise.com.

Minor modifications to agreements already in place with local agencies would require an addendum to incorporate program modifications and grant requirements. Modifications to the scope of work for Metropolitan's conservation program consultants already on retainer would also be required to include the tasks for the public agency landscape program assistance.

No delays are expected to result from environmental compliance nor will any permits be required for program implementation. Some local jurisdictions may require permits for individual projects depending on local codes and the extent of landscape renovation. Participants will be responsible for obtaining necessary permits prior to initiating landscape projects.

Table 4: Program Timeline

Task		Month Due	Deliverables
1	Issue addendum to member agency agreements to incorporate grant requirements	1	Executed addendum
2	Modify contracts with program consultants currently on retainer to include scope of work consistent with public agency landscape program assistance	1	Revised work plan for consultants
3	Provide outreach to member agencies to encourage participation, explain program requirements and administration	1	Summary of outreach efforts
4	Administer program, monitor performance, collect sample data	Ongoing	Program tracking database
5	Prepare semiannual financial and program performance reports	6, 12, 18, 24, 30	SF 425 and interim performance report
6	Work with participating agencies on program assessment and evaluation	12, 24, 36	Data collection and analysis
7	Prepare final financial and program evaluation report	36	SF 425 and final program performance report

Evaluation Criterion F—Collaboration (6 points)
Up to **6 points** may be awarded for projects that promote and encourage collaboration among parties in a way that helps increase the sustainability of the water supply.
Please describe how the project promotes and encourages collaboration. Consider the following:

- Is there widespread support for the project? Please provide specific details regarding any support and/or partners involved in the project. What is the extent of their involvement in the process?
- What is the significance of the collaboration/support?
- Will this project increase the possibility/likelihood of future water conservation improvements by other water users?
- Please attach any relevant supporting documents (e.g., letters of support or memorandum of understanding).

Collaboration:

Metropolitan's member agencies support the provision of funding for member agency administered programs. A close and working relationship between Metropolitan's conservation staff and those of its member agencies is essential for meeting ongoing and drought related conservation goals. Strengthening partnerships by collaboratively implementing new and enhanced programs will increase reliability of water supply by ensuring a cohesive drought response. All agencies currently participate in the MWD regional turf replacement program or manage their own. If awarded, all Metropolitan member agencies will have a chance to participate and provide additional benefits to the consumers they serve.

Landscape water use is identified as a primary opportunity for savings with turf replacement a key strategy for the region. The collaboration among agencies on landscape transformation is essential to long-term, sustained reductions in outdoor water use. Transforming landscape norms requires a region-wide effort with common messaging and broad availability of programs. Regional collaboration with water agencies and Reclamation will provide the foundation for this effort.

As previously mentioned, Metropolitan's Integrated Water Resources Plan 2015 Update identifies the need for an additional 723,000 AF of increased conservation savings and supply production by 2040 to ensure reliable water supplies for the region. Achieving this level of savings will require transforming markets as well as social and landscape norms. Shifts in behavioral changes alone would not achieve the goals of the Integrated Resources Plan. Long term static changes such as landscape transformation would be required to achieve this level of savings.

More specifically, the Project will encourage collaboration to evaluate program benefits that move beyond water saving measures to holistic approaches that seek to change norms. The Project will increase the number of examples of water efficient landscapes within communities throughout Metropolitan's service area specifically in highly visible public agency landscapes. Participation in the program by local agencies and regional jurisdictions will provide excellent examples of water efficient landscapes and will help to encourage and display the assumption of responsibilities of outdoor water use-efficiency by local governments in addition to the widespread efforts and strides made by residential water users. If successful, this Project would provide public agencies the opportunity to lead by example in our region's efforts to mitigate

drought and water supply issues which may result in more positive relationships with the communities, their ratepayers and constituents.

Additionally, the Project would encourage collaboration with watershed, water quality, and stormwater organizations as turf replacement provides additional benefits that support their interests.

Evaluation Criterion G— Additional Non-Federal Funding (4 points)
Up to **4 points** may be awarded to proposals that provide non-Federal funding in excess of 50 percent of the project costs. State the percentage of non-Federal funding provided using the following calculation:

$$\frac{Non\ Federal\ Funding}{Total\ Project\ Costs}$$

Non-Federal Funding:

$$\frac{\$2{,}000{,}000 - \$34{,}500{,}000 \text{ Non Federal Funding}}{\$4{,}000{,}000 - \$36{,}500{,}000 \text{ Total Project Costs}}$$

At the time of this proposal, it is estimated that the Metropolitan Water District of Southern California will provide up to $34.5 million dollars in turf replacement incentives over the next 3 years. This pool of funds is available to residential, commercial and public agency customers of Metropolitan's twenty-six member agencies that are located within Metropolitan service area boundaries. For this program, Metropolitan will provide at least $2 million dollars in matching funds up to $34.5 million, depending on the demand that is driven by public agency landscape projects.

Evaluation Criterion H— Nexus to Reclamation (4 Points)
Up to **4 points** may be awarded if the proposed project is connected to a Reclamation project or Reclamation activity. No points will be awarded for proposals without connection to a Reclamation project or Reclamation activity.
Describe the nexus between the proposed project and a Reclamation project or Reclamation activity. Please consider the following:

- Does the applicant have a water service, repayment, or O&M contract with Reclamation?
- If the applicant is not a Reclamation contractor, does the applicant receive Reclamation water through a Reclamation contractor or by any other contractual means?
- Will the proposed work benefit a Reclamation project area or activity?
- Is the applicant a Tribe?

Nexus to Reclamation

Metropolitan holds Priority 4 water rights from the Colorado River. This project will reduce demand for imported supplies and will support Reclamation's projects and activities managing the water resources of the Colorado River Basin. The project will also support Reclamation's water use efficiency efforts within the Lower Colorado Region.

PROJECT BUDGET

The project budget includes:

(1) Funding plan and letters of commitment
(2) Budget proposal
(3) Budget narrative

- If the proposed project is selected, the awarding Reclamation Grants Officer will review the proposed pre-award costs to determine if they are consistent with program objectives and are allowable in accordance with the authorizing legislation. Proposed pre-award costs must also be compliant with all applicable administrative and cost principles criteria established in 2 CFR Part 200, available at www.ecfr.gov, and all other requirements of this NOFO. Costs incurred prior to July 1, 2021 are no t eligible project costs under this NOFO and should not be included in the proposed budget estimate.
- Please note that the costs for preparing and submitting an application in response to this NOFO, including the development of data necessary to support the proposal, are not eligible project costs under this NOFO and must not be included in the project budget. In addition, Budget Proposals must not include costs for the purchase of water or land, or to secure an easement other than a construction easement. These costs are not eligible project costs under this NOFO.

Funding Plan and Letters of Commitment

Describe how the non-Federal share of project costs will be obtained. Reclamation will use this information in making a determination of financial capability. Project funding provided by a source other than the applicant shall be supported with letters of commitment from these additional sources. Letters of commitment shall identify the following elements:

- The amount of funding commitment
- The date the funds will be available to the applicant
- Any time constraints on the availability of funds
- Any other contingencies associated with the funding commitment

Commitment letters from third party funding sources should be submitted with your application.
If commitment letters are not available at the time of the application submission, please provide a timeline for submission of all commitment letters. Cost-share funding from sources outside the applicant's organization (e.g., loans or State grants), should be secured and available to the applicant prior to award.

Reclamation will not make funds available for an award under this NOFO until the recipient has secured the non-Federal cost-share. Reclamation will execute a financial assistance agreement once non-Federal funding has been secured or Reclamation determines that there is sufficient evidence and likelihood that non-Federal funds will be available to the applicant subsequent to executing the agreement. Please identify the sources of the non-Federal cost-share contribution for the project, including:

- Any monetary contributions by the applicant towards the cost-share requirement and source of funds (e.g., reserve account, tax revenue, and/or assessments)
- Any costs that will be contributed by the applicant
- Any third-party in-kind costs (i.e., goods and services provided by a third party)
- Any cash requested or received from other non-Federal entities
- Any pending funding requests (i.e., grants or loans) that have not yet been approved and explain how the project will be affected if such funding is denied

In addition, please identify whether the budget proposal includes any project costs that have been or may be incurred prior to award. For each cost, describe:

- The project expenditure and amount
- The date of cost incurrence
- How the expenditure benefits the project

Funding Plan

The non-federal share of project costs of $2.0 million dollars is available without constraints as matching funds for this award in Metropolitan's Conservation Budget for FY 22/23 through FY 23/24 and would be available for FY 24/25 as well. No project funding will be provided by any sources other than the Metropolitan Water District and no project costs will have been expended prior to the award.

Budget Proposal
The total project cost (Total Project Cost), is the sum of all allowable items of costs, including all required cost sharing and voluntary committed cost sharing, including third-party contributions, that are necessary to complete the project.

- The budget proposal should include detailed information on the categories listed below and must clearly identify ***all*** items of cost, including those that will be contributed as non-Federal cost share by the applicant (required and voluntary), third-party in-kind contributions, and those that will be covered using the funding requested from Reclamation, and any requested pre-award costs. Unit costs must be provided for all budget items including the cost of services or other work to be provided by consultants and contractors. Applicants are strongly encouraged to review the procurement standards for Federal awards found at 2 CFR §200.317 through §200.327 before developing their budget proposal.
- If you have any questions regarding your budget proposal or eligible costs, please contact the grants management specialist identified in *Section G. Agency Contacts.* It is also strongly advised that applicants use the budget proposal format shown in Table 2 or a similar format that provides this information. If selected for award, successful applicants must submit detailed supporting documentation for all budgeted costs. It is not necessary to include separate columns indicating which cost is being contributed as non-Federal cost share or which costs will be reimbursed with Federal funds.
- **Note:** The costs of preparing bids, proposals, or applications on potential Federal and non-Federal awards or projects, including the development of data necessary to support the non-Federal entity's application are not eligible project costs and should not be included in the budget proposal (2 CFR §200.460).

Table 5: Total Project Cost Table

Source	Amount
Costs to be reimbursed with the requested federal funding	$2,000,000.00
Costs to be paid by the applicant	$2,000,000.00
Value of third-party contributions	$0
Total Project Costs	$4,000,000.00

Table 6: Budget Proposal

Budget Item Description	Computation		Quantity Type	Total Cost
	$/Unit	Quantity		
Contractual/Construction				
Supplemental Funding for Turf Replacement Incentive	$1.00	3,600,000	per square foot	$3,600,000.00
Project Assistance Consultant O'Cain Consulting	$150.00	1,000	per hour	$150,000.00
Project Assistance Consultant Maureen Erbeznik & Associates	$125.00	1,000	per hour	$125,000.00
Project Assistance Consultant Kathy Ramos	$125.00	1,000	per hour	$125,000.00
Total Direct Costs				$4,000,000.00
Total Indirect Costs				$0.00
Total Project Costs				$4,000,000.00

Budget Narrative
Submission of a budget narrative is mandatory. An award will not be made to any applicant who fails to fully disclose this information. The budget narrative provides a discussion of, or explanation for, items included in the budget proposal. The types of information to describe in the narrative include, but are not limited to, those listed in the following subsections. Costs, including the valuation of third-party in-kind contributions, must comply with the applicable cost principles contained in 2 CFR Part §200, available at the Electronic Code of Federal Regulations (www.ecfr.gov).

Budget Narrative

The Project will provide funding to expand turf replacement projects for public agency landscapes within Metropolitan's service area. With a cost share of up to $1.00 per square foot from Reclamation and a match of up to $2.00 per square foot from Metropolitan, a total of $36.5 million in incentives will be offered through regional and locally implemented programs. Local agencies will have the option to increase this incentive, leveraging federal, regional, and local funds. The turf replacement incentive for public agency landscapes is $2.00 per square foot at the time this proposal is to be submitted. There is a possibility that this may change over the award period as Metropolitan's conservation activity and budget is adjusted to mitigate periods of drought. Should Metropolitan increase the turf replacement incentive, the purpose of funds will remain the same and be used to supplement projects with an additional $1.00 per square foot of turf replaced. A small portion of Water and Energy Grant Program funds in the amount of $200,000.00 will be used to provide program assistance services through a group of consultants that will assist program applicants throughout the process.

Salaries and Wages
Indicate the Project Manager and other key personnel by name and title. The Project Manager must be an employee or board member of the applicant. Other personnel should be indicated by title alone. For all positions, indicate salaries and wages, estimated hours or percent of time, and rate of compensation. The labor rates must identify the direct labor rate separate from the fringe rate or fringe cost for each category. All labor estimates must be allocated to specific tasks as outlined in the applicant's technical project description. Labor rates and proposed hours shall be displayed for each task.

Project Staff:

The program will be managed by Krista Guerrero, Resource Specialist. She will be assisted by Elise Goldman, Resource Specialist, James Morgutia, Assistant Resource Specialist and Bill McDonnell, Water Efficiency Team Manager. Program administration will be provided through Metropolitan's regular assistance to member agencies. No salary and wage expenses are proposed.

The budget proposal and narrative should include estimated hours for compliance with reporting requirements, including final project and evaluation. Please see Section F.3. *Reporting Requirements and Distribution* for information on types and frequency of reports required. Generally, salaries of administrative and/or clerical personnel will be included as a portion of the stated indirect costs. If these salaries can be adequately documented as direct costs, they should be included in this section; however, a justification should be included in the budget narrative.

Fringe Benefits
Identify the rates/amounts, what costs are included in this category, and the basis of the rate computations. Federally approved rate agreements are acceptable for compliance with this item.

Fringe Benefits

Program administration will be provided through Metropolitan's regular assistance to member agencies. No fringe benefit expenses are proposed.

Travel
Identify the purpose of each anticipated trip, destination, number of persons traveling, length of stay, and all travel costs including airfare (basis for rate used), per diem, lodging, and miscellaneous travel expenses. For local travel, include mileage and rate of compensation.

Travel Costs

Program administration, including travel for program monitoring, will be provided through Metropolitan's regular assistance to member agencies. No travel expenses are proposed.

Equipment
If equipment will be purchased, itemize all equipment valued at or greater than $5,000. For each item, identify why it is needed for the completion of the project and how the equipment was priced. Note: if the value is less than $5,000, the item should be included under materials and supplies. If equipment is being rented, specify the number of hours and the hourly rate. Local rental rates are only accepted for equipment actually being rented or leased. If the applicant intends to use their own equipment for the purposes of the project, the proposed usage rates should fall within the equipment usage rates outlined by the United States Army Corps of Engineers within their Construction Equipment Ownership and Operating Expense Schedule (EP 1110-1-8) at www.publications.usace.army.mil/USACE-Publications/Engineer- Pamphlets/u43545q/313131302D312D38. Note: If the equipment will be furnished and installed under a construction contract, the equipment should be included in the construction contract cost estimate.

Purchase of Equipment:

Grant funds will not be used to purchase equipment for the Project.

Materials and Supplies
Itemize supplies by major category, unit price, quantity, and purpose, such as whether the items are needed for office use, research, or construction. Identify how these costs were estimated (i.e., quotes, engineering estimates, or other methodology). *Note: If the materials/supplies will be furnished and installed under a contract, the equipment should be included in the construction contract cost estimate.*

Purchase of Material and Supplies

Grant funds will not be used to purchase materials or supplies for the Project.

Contractual
Identify all work that will be accomplished by consultants or contractors, including a breakdown of all tasks to be completed, and a detailed budget estimate of time, rates, supplies, and materials that will be required for each task. For each proposed contract, identify the procurement method that will be used to select the consultant or contractor and the basis for selection.

Contractual Costs:

As a part of its member agency administered program, Metropolitan offers consulting services to its member agencies for the development of water-use efficiency programming in low income and underserved communities. Metropolitan currently has three consultants on retainer that specialize in water efficiency programming and would be utilized in the public agency turf replacement program to offer related services to interested program applicants. Metropolitan would modify the current scopes of work and amend contracts for three consultants: O'Cain Consulting, Maureen Erbeznik & Associates, and Kathy Ramos to include:

- Providing assistance to public agency turf applicants with understanding program terms and requirements
- Providing assistance with the program application and pre-qualification documentation process
- Assisting applicants in the procurement of landscape and/or irrigation design/construction services
- Reviewing landscape design plans to ensure that they comply with the terms and conditions of Metropolitan Water Districts Regional Turf Replacement Program
- Coordinating and adjusting project timelines to ensure all program deadlines are met
- Providing assistance with submitting post-project documentation to Metropolitan

Metropolitan's conservation program consultants are compensated on an hourly basis. A breakdown of time and rates for work expected for this program are included in the table below:

Table 7: Estimated Contractual Services Costs

Budget Item Description	Computation		Quantity Type	Total Cost
	$/Unit	Quantity		
Contractual/Construction				
Project Assistance Consultant O'Cain Consulting	$150.00	1,000	per hour	$150,000.00
Project Assistance Consultant Maureen Erbeznik & Associates	$125.00	1,000	per hour	$125,000.00
Project Assistance Consultant Kathy Ramos	$125.00	1,000	per hour	$125,000.00

Third-Party In-Kind Contributions
Identify all work that will be accomplished by third-party contributors, including a breakdown of all tasks to be completed, and a detailed budget estimate of time, rates, supplies, and materials that will be required for each task. Third-party in-kind contributions, including contracts, must comply with all applicable administrative and cost principles criteria, established in 2 CFR Part 200, available at www.ecfr.gov, and all other requirements of this NOFO.

Third-Party In-Kind Contributions

No work will be performed in-kind by third-party contributors.

Environmental and Regulatory Compliance Costs
Prior to awarding financial assistance, Reclamation must first ensure compliance with Federal environmental and cultural resources laws and other regulations ("environmental compliance"). Every project funded under this program will have environmental compliance activities undertaken by Reclamation and the recipient.

Depending on the potential impacts of the project, Reclamation may be able to complete its compliance activities without additional cost to the recipient. Where environmental or cultural resources compliance requires significant participation by Reclamation, costs incurred by Reclamation will be added as a line item to the budget during development of the financial assistance agreement and cost shared accordingly (i.e., withheld from the Federal award amount). Any costs to the recipient associated with compliance will be identified during the process of developing a final project budget for inclusion in the financial assistance agreement.

Environmental Compliance Costs

No environmental compliance costs are anticipated. The Public Agency Regional Turf Replacement Program will provide funding to broaden the availability of turf replacement programs for existing landscapes. Implementation will occur on land already developed with localized impacts to the site only.

Other Expenses
Any other expenses not included in the above categories shall be listed in this category, along with a description of the item and why it is necessary. No profit or fee will be allowed.

Other Expenses

No additional expenses not listed in the above categories are included in this proposal.

Indirect Costs
Indirect costs are costs incurred by the applicant for a common or joint purpose that benefit more than one activity of the organization and are not readily assignable to the activities specifically benefitted without undue effort. Costs that are normally treated as indirect costs include, but are not limited to, administrative salaries and fringe benefits associated with overall financial and organizational administration, operation and maintenance costs for facilities and equipment, and payroll and procurement services. If indirect costs will be incurred, identify the proposed rate, cost base, and proposed amount for allowable indirect costs based on the applicable cost principles for the applicant's organization. It is not acceptable to simply incorporate indirect rates within other direct cost line items.

Any non-Federal entity that does not have a current negotiated (including provisional) rate, except for those non-Federal entities described in appendix VII to 2 CFR §200, paragraph D.1., may elect to charge a *de minimis* rate of 10% of modified total direct costs (MTDC) which may be used indefinitely. For further information on MTDC, refer to 2 CFR §200.68 available at www.ecfr.gov.

If the applicant does not have a federally approved indirect cost rate agreement and is proposing a rate greater than the *de minimis* 10 percent rate, include the computational basis for the indirect expense pool and corresponding allocation base for each rate. Information on "Preparing and Submitting Indirect Cost Proposals" is available from the Department's Interior Business Center, Office of Indirect Cost Services, at www.doi.gov/ibc/services/finance/indirect-cost-services.

Indirect Project Costs

No indirect costs are included in this proposal.

REQUIRED PERMITS OR APPROVALS

Applicants must state in the application whether any permits or approvals are required and explain the plan for obtaining such permits or approvals.

Note that improvements to Federal facilities that are implemented through any project awarded funding through this NOFO must comply with additional requirements. The Federal government will continue to hold title to the Federal facility and any improvement that is integral to the existing operations of that facility. Please see P.L. 111-11, Section 9504(a)(3)(D).

Reclamation may also require additional reviews and approvals prior to award to ensure that any necessary easements, land use authorizations, or special permits can be approved consistent with the requirements of 43 CFR §429, and that the development will not impact or impair project operations or efficiency.

Required Permits or Approvals

No permits are required for program implementation. Some local jurisdictions may require permits for individual projects depending on local codes and the extent of landscape renovation. Participants will be responsible for obtaining necessary permits prior to initiating landscape projects.

LETTERS OF SUPPORT AND LETTERS OF PARTNERSHIP

Please include letters from interested stakeholders supporting the proposed project. To ensure your proposal is accurately reviewed, please attach all letters of support/partnership letters as an appendix. Letters of support received after the application deadline for this NOFO will not be considered in the evaluation of the proposed project.

Category B applicants must include a letter from the Category A partner, stating that they are acting in partnership with the applicant and agree to the submittal and content of the proposal (see Section C.1. Eligible Applicants). Letters of Partnership must be received by the application deadline for this NOFO otherwise the applicant will be considered ineligible, and the proposed project will not be evaluated.

Letters of Support

Please see the letters of support included as attachments at the end of this application.

OFFICIAL RESOLUTION

Official Resolution

Include an official resolution adopted by the applicant's board of directors or governing body, or, for State government entities, an official authorized to commit the applicant to the financial and legal obligations associated with receipt of a financial assistance award under this NOFO, verifying:

- The identity of the official with legal authority to enter into an agreement
- The board of directors, governing body, or appropriate official who has reviewed and supports the application submitted
- The capability of the applicant to provide the amount of funding and/or in- kind contributions specified in the funding plan
- That the applicant will work with Reclamation to meet established deadlines for entering
- into a grant or cooperative agreement

An official resolution meeting the requirements set forth above is mandatory. If the applicant is unable to submit the official resolution by the application deadline because of the timing of board meetings or other justifiable reasons, the official resolution may be submitted to bor-sha-fafoa@usbr.gov up to 30 days after the application deadline.

Anticipation of Official Resolution

An official resolution of support for this proposal from the Metropolitan Water District of Southern California's Board of Directors is expected on November 8, 2021 and will be submitted within 30 days of the application deadline.

Long Beach Water
Exceptional Water · Exceptional Service

Christopher J. Garner
General Manager

1800 E. Wardlow Road, Long Beach, CA 90807-4931
562.570.2300 | lbwater.org

October 28, 2021

U.S Department of the Interior
Bureau of Reclamation
Financial Assistance Operations
Attn: Josh German
P.O. Box 25007, MS 84-27133
Denver, CO 80225

Subject: Support of Metropolitan Water District's WaterSMART Water and Energy Efficiency Grant Application for FY 2022

Dear Mr. German:

Long Beach Water Department (LBWD) supports Metropolitan Water District's (Metropolitan) $2,000,000 grant application to provide supplemental funding for public agency landscapes in Metropolitan's Regional Turf Replacement Program.

In 2010, LBWD launched its Lawn to Garden (L2G) program by leveraging funding available through Metropolitan. More recently, LBWD launched a second turf replacement program, Direct Install Gardens (DIG), which combines Metropolitan's funding with additional investments from LBWD to directly install drought tolerant gardens at no cost to homeowners in underserved communities. Together, L2G and DIG have replaced over 3.8 million square feet of turf in Long Beach resulting in a water savings of over 500 acre-feet per year.

To secure a reliable supply of water for our region and to mitigate the impacts of reoccurring drought that impact the Colorado River Basin, Metropolitan's service area must continue to transition to more water-efficient landscapes. Approval of Metropolitan's grant proposal will assist its 26 member agencies, including LBWD, in replacing an estimated total of 19 million square feet of irrigated turf over the next three years and save approximately 77,000 AF of water.

Adopting a water-wise lifestyle is crucial for Southern Californians to prepare for the long-term impacts of climate change by reducing water demands across our region. Turf replacement programs like L2G and DIG reduce outdoor water-use while promoting water conservation by providing high visibility examples and awareness of water-efficient landscapes.

Given these reasons, I support Metropolitan's grant application. If you have any questions, please contact Dean Wang, Manager of Water Resources, at (562) 570-2311.

Sincerely,

Christopher Garner
General Manager

17140 S. Avalon Blvd.
Carson, CA 90746

310-217-2411
www.westbasin.org

October 28, 2021

U.S Department of the Interior
Bureau of Reclamation
Financial Assistance Operations
Attn: Josh German
P.O. Box 25007, MS 84-27133
Denver, CO 80225

Support of Metropolitan Water District's WaterSMART Water and Energy Efficiency Grant Application for FY 2022

Dear Mr. German,

On behalf of West Basin Municipal Water District, I want to express our support for Metropolitan Water District's (Metropolitan) $2,000,000 grant application to provide supplemental funding for public agency landscapes in Metropolitan's Regional Turf Replacement Program.

To secure a reliable supply of water for our region and to mitigate the impacts of reoccurring drought that impact the Colorado River Basin, Metropolitan's service area must continue to transition to more water efficient landscapes. Approval of Metropolitan's grant proposal will assist its 26 member agencies in replacing an estimated total of 19 million square feet of irrigated turf over the next three years and save approximately 77,000 acre-feet of water.

This proposal also represents an important next step in our program evolution as these funds will help public agencies take charge in reducing outdoor water-use and promote water conservation by providing high visibility examples and awareness of water efficient landscapes for residents and commercial businesses.

West Basin Municipal Water District encourages your support for this project. If you have any questions, please contact E.J. Caldwell, Interim General Manager, at 213-500-0379.

Sincerely,

Edward J. Caldwell
Interim General Manager