City of
SANTA BARBARA

Charles E. Meyer Desalination Plant
Product Water Pump Station Upgrades Project

WaterSMART Drought Response Program:
Drought Resiliency Projects for FY2021

BOR-DO-20-F002
Funding Group II
August 5, 2020

Submitted to:
Bureau of Reclamation
Financial Assistance Support
Attn: Mr. Matthew Reichert
P.O. Box 25007, MS 84-27815
Denver, CO 80225
Email: mreichert@usbr.gov
Tel.: (303) 445-3865

Applicant info:
City of Santa Barbra
Public Works Department
Water Resources Division
625 Laguna Street
Santa Barbara, CA 93101
Tel.: (805) 564-5413
(805) 564-5561 (Fax)

City Project Manager:
Matt Ward
Water Resources
Water System Manager
630 Garden Street
Santa Barbara, CA 93101
Tel.: (805) 564-5379
mward@santabarbaraca.gov

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SECTION 1: TECHNICAL PROPOSAL AND EVALUATION CRITERIA

Executive Summary

Date: August 5, 2020
Applicant: City of Santa Barbara – Public Works Water Resources Division
City/County/State: Santa Barbara/Santa Barbara/California
Project: Charles E. Meyer Desalination Plant Product Water Pump Station Upgrades Project (Project)
Reclamation Funding Request: $1.5 million (Funding Group II)

The City of Santa Barbara (City) is requesting $1.5 million in grant funding to upgrade the existing product water pumps, instrumentation, and piping at the Charles E. Meyer Desalination Plant (Desalination Plant) to enable the City to deliver water from the Desalination Plant to the City's regional William B. Cater WTP(Cater WTP), thereby making it possible for the City to convey desalinated water to any part of its service area and to all water agencies located on the South Coast of Santa Barbara County. The upgraded pump station will build local and regional resiliency to drought by increasing the reliability of water supply and improving water management flexibility. The City has been severely impacted by multiple droughts throughout its history, including the recent historic seven-year drought in Central and Southern California. In response to the recent drought, the City invested approximately $72 million (M) between 2014 and 2018 to reactivate the City's Desalination Plant. The proposed project supports drought resiliency planning, as outlined in both the City's Long Term Water Supply Plan and Urban Water Management Plan (Attachments 1 and 2).

The City estimates that construction will begin in July 2021 and take approximately ten months to complete. The project site is located at 525 E. Yanonali Street, Santa Barbara, CA 93101; this site is owned by the City, and is not on federal land.

Project Location

The proposed project area is located in the City of Santa Barbara, County of Santa Barbara, State of California, approximately 100 miles west and north of Downtown Los Angeles. The project address is 525 E. Yanonali Street, Santa Barbara, CA 93101. See Figure 1. Project Location Map below showing the project location within the City limits.

Figure 1. Project Location Map

Technical Project Description and Milestone

The proposed project, Charles E. Meyer Desalination Plant Product Water Pump Station Upgrades Project (Project), involves upgrading the existing product water pumps at the Desalination Plant to facilitate pumping water to the City's regional William B. Cater Water Treatment Plant (Cater Plant), which is located approximately four miles away and 400-ft higher in elevation. The City owns and operates the Cater WTP, which treats raw surface water received from Gibraltar Reservoir and Cachuma Lake to drinking water standards. The Cater WTP provides the City of Santa Barbara with the majority of its drinking water during normal rain years, while also supplying treated drinking water to Montecito, Carpinteria Valley, Goleta, and La Cumbre Mutual water districts. A Joint Powers Agreement governs the operating and capital cost allocations between the participating agencies.

The existing Desalination Plant product water pumps are physically incapable of pumping water to the regional Cater WTP and must be replace or modified to accomplish this. A 5,000-gallon surge tank also needs to be added at the Desalination Plant to help mitigate potential surges in pressure that would likely damage pipelines.

The Desalination Plant currently discharges finished water to the City of Santa Barbara's water distribution system directly outside of the Desalination Plant at Yanonali St. This area represents the "Low Zone." Currently, the Desalination Plant has the capacity to deliver 3,125 Acre Feet per Year (AFY) to the City's Low Zone. As demands increase in the City's Low Zone, the delivery of desalinated water is more concentrated around the Desalination Plant. As demands decrease, desalinated water reaches further into the Low Zone. However, in no circumstance is the system capable of conveying desalinated water to the City's higher-pressure zones.

Grant Project Technical Requirements

1. **Task 1 – Final Design Development.** The Project Design Engineer will be developing final plans and specifications that will be used during the construction/implementation phase to construct the project. Their scope of work includes design project management, design review meetings, QA/QC, hydraulic analysis, 30% drawings (preliminary design detailing), preparation of contract documents, 90% design submittal, 99% design submittal, and 100% design submittal. The 100% design submittal will be the basis of the bid.

2. **Task 2 – Bid and Award.** The City will put the 100% design submittal out for open bidding using an online bidding service. The design engineer will be attending pre-bid meetings and will be responsible for responses to bidder technical questions. The City will evaluate bids received for correctness. Once a responsive low bidder is declared, the City will move forward with awarding a construction contract to the low bidder.

3. **Task 3 – Construction/Implementation.** The Project will upgrade the existing Desalination Plant Product Water (finished water) Pumping System including electrical to allow the system to pump water to the regional Cater WTP. Currently, there are two existing pumps that discharge all 3,125 AFY of finished water into the City's Distribution System at a location directly adjacent to the Desalination Plant. The upgraded pump system will need to pump water approximately four miles away and discharge at a location approximately 400-ft higher in elevation than the Desalination Plant. Systems needing to be upgraded include the two existing 300 horse power (hp) pumps (1 duty, 1 standby), 300hp variable frequency drives (VFDs) powering the pump motors, electrical wiring feeding pump motors, the discharge header (the existing header is not rated to support water pressures necessary to pump water to the regional Cater WTP), the effluent flow meter (the existing meter design is not rated to support water pressures necessary to pump water to the regional Cater WTP), and the addition of a new 5,000 gallon surge tank (dampens pressure and water inertia surges in the system, thereby, helping to prevent large scale "water hammer" effects and damage to the conveyance main and other transmission piping).

Ancillary components to these system parts will also need to be modified:

- Existing pump foundations will need to be demolished and reconstructed to support new higher horsepower pumps, and to meet new critical facility building code requirements for mechanical vibrating equipment.
- The existing discharge header support system may need to be modified to support the upgraded header. High pressure valves will need to be installed on the discharge header.
- The 5,000-gallon surge tank will require a reinforced concrete foundation and a new dedicated high-capacity air compressor system capable of keeping a large ratio of the air volume within the surge tank pressurized to absorb and rebound water surges. Surge tank piping will need to be connected to existing product water discharge piping.
- If the new VFDs do not fit within the existing electrical structure, they may need to be installed outside and constructed to outdoor marine standards.
- Supervisor Control And Data Acquisition (SCADA) computer systems will need to be reprogramed and adapted to the new larger pumps.
- Contaminated soils will need to be handled by hazardous waste certified personnel and disposed of at special hazardous material landfills. A hazardous waste monitoring specialist will need to be present when this type of soil is being handled.

Note that the project design engineer is exploring options to modify the existing pumps by installing larger motors and different impellors. The City may opt to implement these modifications as the pump upgrades in lieu of installing new pumps.

Performance Measures

The City proposes the following two performance measures to quantify project success:

1. Improving water management and increasing drought resiliency and water supply reliability for city water customers: The City proposes to track and report on annually the total water deliveries in acre-feet from the Desalination Plant to the Cater WTP using the Project facilities. There is an existing flow meter at the Desalination Plant that directly measures all plant effluent flow. This plant flow is continuously monitored and recorded by the plant's SCADA system. This data can be retrieved and sent to the Bureau to substantiate this project performance claim.

2. Increasing regional drought resiliency and water supply reliability: The City proposes annually tracking and reporting the total acre feet of desalinated water delivered to neighboring agencies that the Project made possible. The delivery points between the Cater WTP and the South Coast Conduit (a regional water supply pipeline) are monitored by a SCADA system. This data can be retrieved and provided to the Bureau to substantiate this project performance claim.

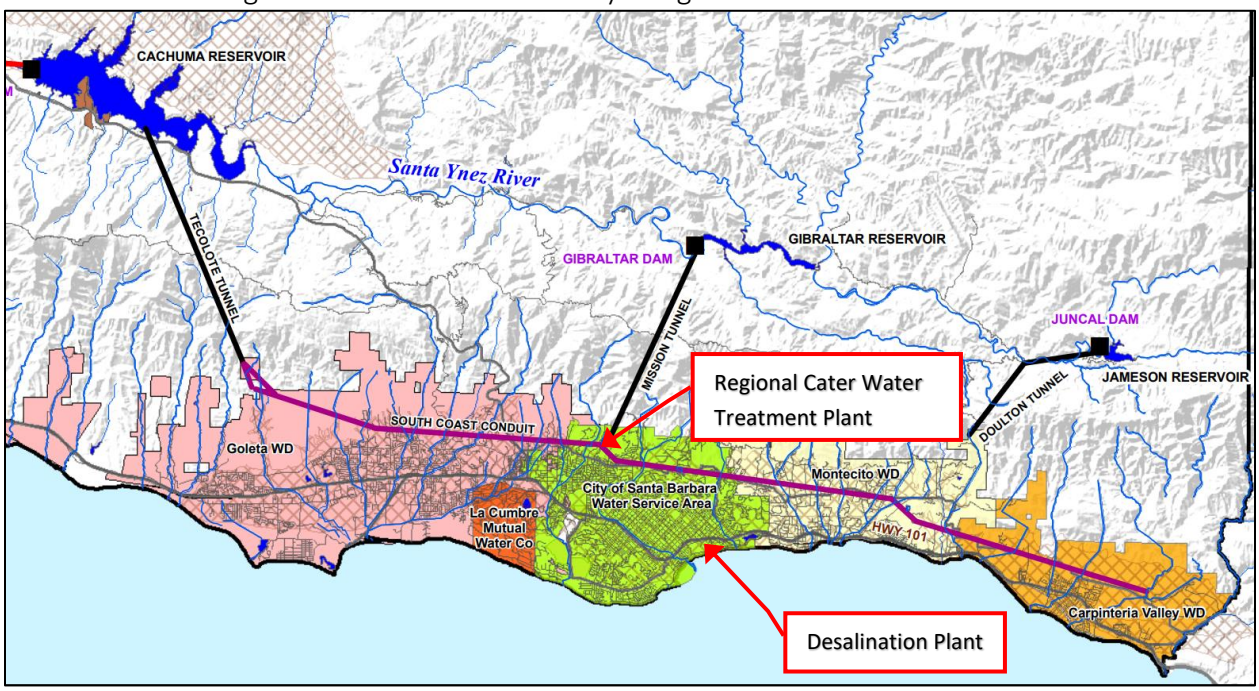
Evaluation Criteria

E.1.1. Evaluation Criterion A—Project Benefits

How will the project build long-term resilience to drought? How many years will the project continue to provide benefits?

The Desalination Plant provides a source of water that is independent of rainfall, groundwater levels, and other sources of water that are affected directly and indirectly by drought. As described in other parts of the application, this project will facilitate pumping desalinated water to the Cater WTP where the water can be distributed to any part of the City's water service area and to other agencies connected to the South Coast Conduit, a regional water conveyance pipeline connecting the Cater WTP and all of the South Coast water agencies. As can be seen in Figure 2. Santa Barbara County – Regional Distribution Facilities, the South Coast Conduit is the backbone of the regional water distribution system that connects surface water supplies coming from the north side of the Santa Ynez Mountains to the City of Santa Barbara, La Cumbre Mutual Water Company, and Goleta, Montecito, and Carpinteria Valley water districts. Together, these agencies serve potable water to a population of approximately 144,000. This connection between the Desalination Plant and the City's full water service area and to neighboring agencies provides long-term drought resiliency to the Santa Barbara south-coast area.

Figure 2. Santa Barbara County - Regional Distribution Facilities



The Project is a necessary component of a landmark Water Supply Agreement (WSA) between the City and Montecito Water District (District), a neighboring agency, which was approved on July 21, 2020. The WSA is a 50-year agreement that is backed by the Desalination Plant and provides the District 1,430 acre feet of water annually. Increasing the pumping pressure and capacity of the desalination pump station is necessary for the City to deliver desalination-exchange water to the

Cater WTP and ultimately the District. The execution of the WSA and completion of the Project will greatly benefit the District's water supply reliability in periods of drought. As with the WSA, the Project creates new opportunities to use the Desalination Plant as the basis for water supply agreements and exchanges among agencies on the South Coast. Additionally, water agencies receiving State Water and water from the Santa Ynez River, which are conveyed through Lake Cachuma, will have increased opportunities for water exchanges with the City.

The Project would build resiliency in the City's water supply portfolio by increasing the supply of potable water originating on the south side of the Santa Ynez Mountains, through which both of the City's surface water sources and State Water are conveyed. In the event of a disaster or damage to Tecolote and/or Mission conveyance tunnels (see Figure 2. Above), the entire City, and all South Coast water agencies, would be able to receive desalinated water as a result of the Project.

Lastly, the City's surface water quality tends to degrade as water levels drop in the surface water reservoirs - Cachuma and Gibraltar (see Figure 2. Above). Total organic carbon (TOC) tends to increase and concentrate as the supply shrinks. With lower than average rainfall during periods of drought, TOC concentration tends to compound year-after-year until there is sufficient rain to create large enough inflows to dilute (or ideally flush and exchange) the high levels of TOC down to treatable levels. Desalinated water is very low in TOC and has the benefit of diluting the finished water TOC from any of the City's surface water supplies. This gives the City more options to maintain compliance and maximize surface water supply sources while staying in compliance with federal disinfection byproduct water quality standards.

The Project is a long-term investment by the City in the Desalination Plant. The Desalination Plant was designed with a minimum service life of 20 years. However, the City considers the Desalination Plant and the Project part of its permanent infrastructure, and plans to operate the plant for at least 20 years and into the foreseeable future. The Project will continue to benefit the City and surrounding community for throughout the lifespan of the Desalination Plant.

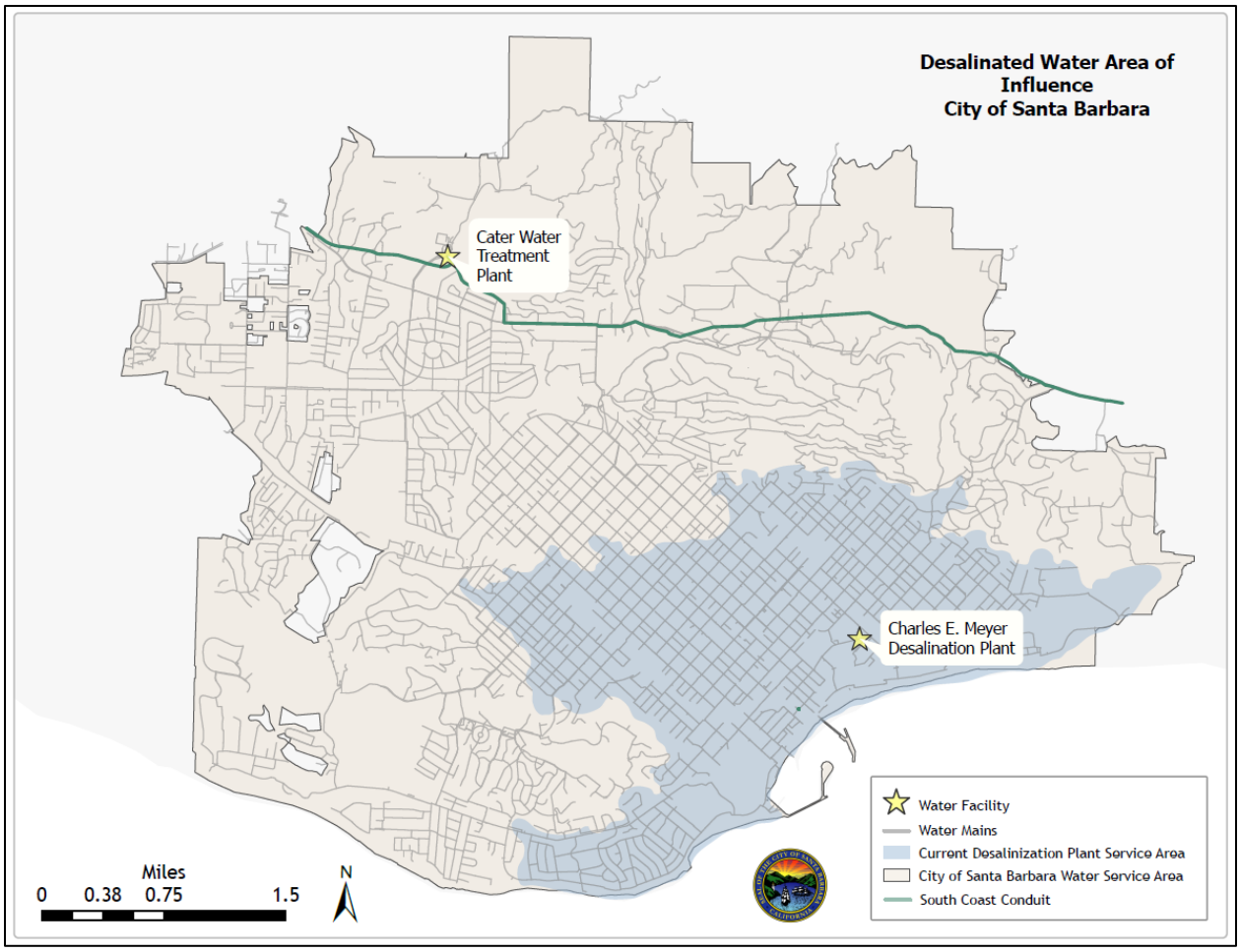
Will the project make additional water supplies available?

Yes, the Project will make additional water supplies available to a subset of the City's water customers. Desalination Plant water is currently not available to all City water customers or neighboring districts. Desalinated water is delivered to approximately 10,352 of the City's 26,992 connections, which is 38% of its customer base. In looking at Figure 3. Desalinated Water Distribution Map below, the blue shade on the map represents the portion of the City's service area currently receiving desalinated water. Upon completion of the Project, desalinated water will be pumped to the Cater WTP and then be made available to all remaining customers in the service area.

As stated above, this Project is necessary to facilitate the delivery of water under the WSA with Montecito Water District. Under the WSA, the District will receive 1,430 AFY from the City, which greatly increases the District's ability to sustain reliable delivery of drinking water during periods

of drought. From the perspective of the District, this Project makes 1,430 AFY of additional water supply available.

Figure 3. Desalinated Water Distribution Map



- *If so, what is the estimated quantity of additional supply the project will provide and how was this estimate calculated? Provide this quantity in acre-feet per year as the average annual benefit over ten years (e.g., if the project captures flood flows in wet years, provide the average benefit over ten years including dry years)?*
  The Desalination Plant is currently constructed to produce 3,125 AFY, all of which would be managed flexibly and delivered to any part of the service area through the construction of the Project. Over a ten year period, the additional quantity of water that will support resiliency across the City and regionally would be 31,250 AF.

- *What percentage of the total water supply does the additional water supply represent? How was this estimate calculated?*
  There is 6,602 AFY of annual supply available to meet water demands in parts of the City other than the Low Zone (served by desalinated water). With the Completion of this

Project, an additional 3,125 AFY would be made available, thereby increasing water supply by approximately 50% for a subset of the City's customers.

Additionally, the 1,430 AF that will be delivered to Montecito Water District under the WSA described above, and made available by the completion of this project, represents approximately 40% of their annual potable water demands.

- *Provide a brief qualitative description of the degree/significance of the benefits associated with the additional water supplies?*

  The City has been severely affected by multiple droughts throughout its history, including the recent historic seven-year drought in Central and Southern California. The following are the major recorded Santa Barbara area drought events: 1947 to 1951; 1987 to 1991; and, 2012 to 2019. In response to the current drought, the City invested approximately $72 million (M) between 2014 and 2018 on a fast-track design-build-operate project to reactivate the Desalination Plant. The Desalination Plant was originally constructed in 1991, in response to the City's previous drought, and later placed into long-term standby after the drought subsided.

  The City of Santa Barbara Water Resources Division has a variety of water sources including surface water from Gibraltar and Cachuma Reservoirs, conveyance tunnel intrusion, State Water Project water, groundwater, and Desalination. Currently, of those, only groundwater wells and the Desalination Plant serve the low pressure zone of the City as exhibited in Figure 3. (Low Zone) and do not require treatment at the regional Cater WTP. However, groundwater wells and the Desalination Plant discharge into the distribution system in specific areas that do not make that water available to the entire service area. By making Desalination Plant water available at the clearwell of the regional Cater WTP, the water will be distributed to the entire water service area, thereby adding redundancy to City's distribution of potable water, and improved homogenous water quality. The improvement to the pumps will enable greater flexibility in the management of water supplies across the City of Santa Barbara, thereby improving resiliency and supply reliability for all customers.

  The Desalination Plant cannot produce water to meet the average water demand for the entire service area. However, in the event of an emergency that would put the regional Cater WTP out of service for an extended period of time, the Project would enable Desal water to be conveyed throughout the City to meet basic health and safety water needs.

  Under non-emergency conditions, the Project would reduce the City's reliance on surface water supplies and allow groundwater aquifers to recharge. By reducing the City's demand on surface water supplies, those supplies could be banked for future use. Reduced demand on groundwater supplies would allow the groundwater basins to recharge without drawing the typical amounts of water and allow them to function as a larger reserve for future use.

For the Montecito Water District, this Project facilitates a Water Supply Agreement backed by the Desalination Plant that would supply 40% of its potable water demands. This greatly diversifies the Montecito water portfolio and builds significant resilience to drought for that agency.

Will the project improve the management of water supplies? For example, will the project increase efficiency, increase operational flexibility, or facilitate water marketing (e.g., improve the ability to deliver water during drought or access other sources of supply)?

The Project will improve the management of existing water supplies by augmenting the reach of an existing supply source that is independent of rainfall.

- *If so, how will the project increase efficiency or operational flexibility?*
  The project would generally not change efficiency of the water supplies. However, it would improve operational flexibility. Since the Desalination Plant came online in 2017, the plant has been able to facilitate short-term maintenance outages at the Cater WTP, such as performing maintenance on various pieces of equipment that can only be accessed during full plant shutdowns or other equipment that creates reduced output of the plant. For example, last year the Cachuma Operations and Maintenance Board (COMB), an entity of the Bureau of Reclamation, performed major maintenance on the pipeline connecting one of the surface water sources (Cachuma Reservoir) and the Cater WTP's raw water reservoir (Lauro Reservoir). The Desalination Plant was able to backfill the supply that normally comes from the Cater WTP and facilitate the outage. After the construction of the Project, the City's water operations team will have greater confidence in the ability to deliver water reliably to all of its customers, not just those in the Low Zone.

- *What is the estimated quantity of water that will be better managed as a result of this project? How was this estimate calculated?*
  The Desalination Plant is currently constructed to produce 3,125 AFY. The full rated capacity of the plant would be available as the additional quantity of water supply to be managed flexibly and delivered to any part of the service area as needed through the existing distribution system. Over a ten year period, the additional quantity of water that will support resiliency across the City and regionally would be 31,250 AF.

- *How will the project increase efficiency or operational flexibility?*
  Please see the response to the same question above.

- What percentage of the total water supply does the water better managed represent? How was this estimate calculated?
  The Project affects approximately 31% of the City's annual water supply. Table 1. 2019 Water Supply Sources summarizes the City's current supply sources and water production in acre-feet for the period January 1, 2019 to December 31, 2019:

Table 1. 2019 Water Supply Sources

Water Source	Water Production (in Acre Feet)
Cachuma Lake	1,175
Gibraltar Reservoir	3,485
Devils Canyon	193
Mission Tunnel	1,188
Groundwater	340
Desalination Plant	2,905
State Water	440
Net Other Production*	(219)
Total Potable Production	***9,507***
Recycled Water	727
Total System Production	**10,234**

- *Provide a brief qualitative description of the degree/significance of anticipated water management benefits?*
  Through implementation of the Project and thereby conveying water to the Regional Cater WTP, desalinated water would be available not only to the entire service area, but it would also be available to neighboring districts. In evidence of this, the City approved a 50-year Water Supply with the Montecito Water District. The City will supply 1,430 AFY to Montecito, which makes up about 40% of its demands. The completion of this Project is a condition precedent to begin delivering water and effectuating the WSA.

  Reduced reliance on State Water and surface water supplies would also be possible through the implementation of this project. The supply risks with surface water sources will be reduced though the addition of local, drought-proof supply – the Desalination Plant. Water managers for the City will be able to adjust management strategy to adapt to this change in risk and facilitate maintenance at the Regional Cater WTP.

- *Will the project make new information available to water managers? If so, what is that information and how will it improve water management?*
  The new information that will be made available to water management is the volume and flow rate of water being conveyed from the Desalination Plant to the Regional Cater WTP. Over time, the trends of water production between the Regional Cater WTP and the Desalination Plant will be tracked, and managers will be able to manage the entire service area's water demands as opposed to two distinct zones – upper and lower zones.

  The desalinated water will be delivered to the clearwell immediately downstream of Regional Cater WTP and blended with treated drinking water. The outcome of this blending will be an improvement to the entire City's drinking water quality, and the City will be able to adjust the amounts of chemicals used in surface water treatment and adapt water management strategies for the Distribution System to help address issues such as water age, disinfection by-products, chlorine residuals, and other factors.

Will the project have benefits to fish, wildlife, or the environment? If so, please describe those benefits.

By increasing the total local supply available to all customers, the Project is anticipated to generally reduce the City's dependency on water from the State Water Project that is sourced from the Sacramento-San Joaquin Delta. The Sacramento-San Joaquin Delta provides habitat for more than 500 species of fish and wildlife. The 2013 Bay Delta Conservation Plan identified over 30 non-listed species potentially impacted by withdrawals from that system through the State Water Project (SWP). Impacts from withdrawals occur due to the change of river flow by pumping, capture within pumping equipment, and increased saltwater intrusion due to pumping. A decrease in water imported through the SWP could help to alleviate these pressures on the Sacramento-San Joaquin Delta ecosystem and could help restore habitat for non-listed species.

***If the proposed project includes any of the following components, please provide the applicable additional information: Salt Water Barriers, Wells, New Water Marketing Tool or Program, Metering/ Water Measurement Projects, Environmental/Wildlife Projects?**

The Project does not include those components.

E.1.2. Evaluation Criterion B—Drought Planning and Preparedness

Attach a copy of the applicable drought plan, or sections of the plan, as an appendix to your application. These pages will not be included in the total page count for the application.

See Attachment 1, City of Santa Barbara 2011 Long Term Water Supply Plan (LTWSP) and Attachment 2, City of Santa Barbara 2015 Urban Water Management Plan Update (2015 UWMP). The LTWSP is the City's primary water supply planning and policy document. The LTWSP identifies the Desalination Plant as part of the City water supply to be activated from long term storage during extended drought. In 2015, City Council voted to reactivate the plant in response to extended, unprecedented drought conditions. The plant went online in 2017, and the City intends to keep the plant operational while some of the City's other water supplies recover post-drought. The City's groundwater basins need to recharge after heavy pumping during the drought, and the City has 2,000 acre-feet of water debt it must pay back after purchasing supplemental water in drought years. Recovery from the drought is expected to take 5-10 years. The 2015 UWMP further analyzes the City's ability to meet water supply needs during a drought and contains the City's Water Shortage Contingency Plan, which outlines potential drought response actions depending on the severity of the drought. The City is currently updating both its LTWSP and its UWMP with enhanced drought planning to include more severe drought conditions. A new Enhanced Urban Water Management Plan is anticipated to be completed in June 2021, replacing the 2011 LTWSP and the 2015 UWMP. To help maximize the benefit of the desalination plant, the City is proposing to implement the Project to make Desalination Plant water fully accessible to the entire City's service area and to neighboring water districts.

Explain how the applicable plan addresses drought. Proposals that reference plans clearly intended to prepare for and address drought will receive more points under this criterion.
The 2011 LTWSP is a water supply planning document that analyzes the City's ability to meet water demands through the year 2030. The planning effort specifically includes a "design drought" that defines the critical drought period by extending the historical drought of record from five years to six. The LTWSP was developed to meet 85% of demands during the critical drought period, meaning 15% customer conservation would also be required. The City's Water Shortage Contingency Plan found in the 2015 UWMP outlines specific actions the City can take to secure water supplies and reduce water demand during times of drought and other water supply emergencies.

- *Explain whether the drought plan was developed with input from multiple stakeholders. Was the drought plan developed through a collaborative process.*
  Both the 2011 LTWSP and the 2015 UWMP were developed with extensive input from the public. Both documents were presented at the City's Water Commission and City Council meetings with opportunities for the public to review and comment. The 2011 LTWSP was developed in support of the Environmental Impact Report (EIR) for the Plan Santa Barbara process to update the City's General Plan, which was also a public process.

- *Does the drought plan include consideration of climate change impacts to water resources or drought?*
  The 2011 LTWSP considers the effects of climate change on the City's State Water Project supplies. In addition, the historic drought of record was extended to six years in acknowledgement of the fact that climate change is likely to result in more frequent and more prolonged droughts. The 2015 UWMP also addresses the potential effects of climate change on the City's future water supplies. An update to both documents is currently underway. The update will include an even more robust analysis on the effects of climate change on the City's water supplies.

Describe how your proposed drought resiliency project is supported by an existing drought plan.
Desalination is defined specifically as a drought supply in the City's 2011 LTWSP. In 2015, City Council decided to reactivate the Desalination Plant in response to extended, unprecedented drought conditions. While the City is no longer experiencing drought conditions, the Desalination Plant continues to operate and provide reliable, important supply while some of the City's other water supply sources that were depleted during the drought recover. The proposed project will allow the City to provide desalinated water to its entire service area and continue to recover from recent drought, as well as distribute it to regional partners on the south coast.

- *Does the drought plan identify the proposed project as a potential mitigation or response action?*
  The proposed project is not specifically cited in the 2011 LTWSP or 2015 UWMP. However, page 20 of the LTWSP identifies desalination as "a vital resource as a back-up for potential

prolonged drought and unforeseen interruptions of the water supply that would help mitigate the economic impact of such situations." This Project supports that objective.

- *Does the proposed project implement a goal or need identified in the drought plan?*
  The proposed project will allow the City to distribute desalinated water to its entire service area. Currently, it is just supplied to the low zone, near the desalination facility. It will also allow the City to provide desalinated water to neighboring water agencies in the south coast via the South Coast Conduit. The proposed project therefore makes desalinated water a more robust and regional water supply in times of drought.

- *Describe how the proposed project is prioritized in the referenced drought plan.*

The proposed project is not specifically cited in the 2011 LTWSP or 2015 UWMP. However, the 2011 LTWSP defines desalination as an emergency supply that can be used to meet water demands in times of prolonged drought. The Santa Barbara City Council voted to reactivate the Desalination Plant in response to the most recent unprecedented drought. Desalination was an important tool in meeting the City's water needs during the drought and remains important as the City works to recover some of its other supplies, including groundwater and State Water Project water.

E.1.3. Evaluation Criterion C—Severity of Actual or Potential Drought Impacts to be addressed by the Project

What are the ongoing or potential drought impacts to specific sectors in the project area if no action is taken (e.g., impacts to agriculture, environment, hydropower, recreation and tourism, forestry), and how severe are those impacts? Impacts should be quantified and documented to the extent possible.

The largest impact to the City of Santa Barbara as a result of drought are impacts on the availability of drinking water supplies for the City's water customers. At the height of the most recent drought, City customers were required to reduce their water use by 40 percent of pre-drought usage. Restrictions were enacted around landscape irrigation, waste of water, and the use of decorative water fountains. Many customers let their landscapes die or converted their landscapes to water-wise, climate-appropriate designs. Customers successfully met each of the City's water conservation goals as supply conditions worsened by making significant changes to their lifestyles and water use.

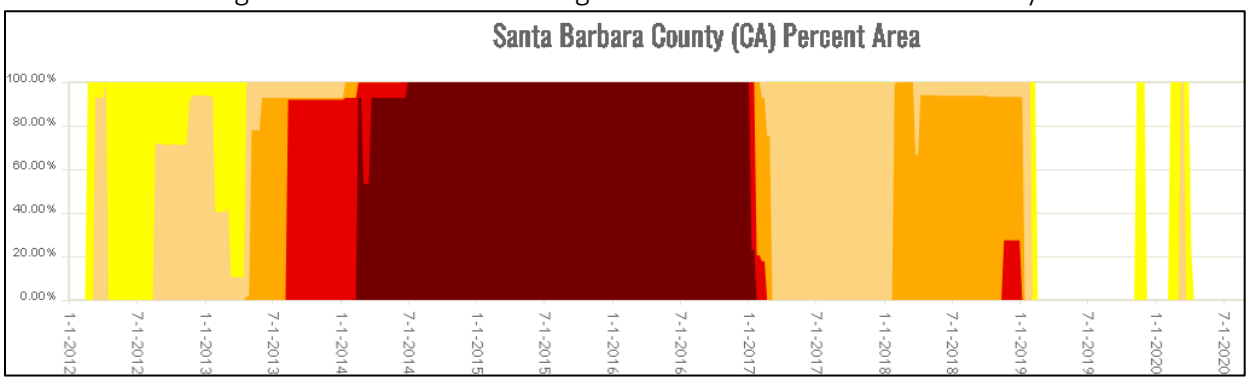
In addition to the conservation requirements described above, the City's water rates increased significantly, especially for its higher Tier 2 and Tier 3 water users. The majority of the City's costs to serve water are fixed, so when customers use significantly less water as required during a drought, the unit cost of water must go up to cover those fixed costs. In addition, drought supplies such as supplemental water purchases and desalination are more expensive than the City's non-drought supplies, including surface water from the Santa Ynez River, so City water rates were raised several times during the most recent drought.

Describe existing or potential drought conditions in the project area:

- *Is the project in an area that is currently suffering from drought or which has recently suffered from drought? Please describe existing or recent drought conditions, including when and the period of time that the area has experienced drought conditions (please provide supporting documentation, [e.g., Drought Monitor, droughtmonitor.unl.edu]).*

The City is currently recovering from a prolonged, unprecedented drought that began in 2012 and ended with winter rains in January 2019. Please see Figure 4. United States Drought Monitor – Santa Barbara County indicating the duration and severity of the drought in Santa Barbara. In the graph, the darker red colors indicate more severe drought while the lighter yellow colors represent a less severe drought.

Figure 4. United States Drought Monitor – Santa Barbara County



While the City's 2011 Long Term Water Supply Plan anticipated mandatory conservation of up to 15%, the City enacted conservation requirements of up to 40% during the last drought due to its unprecedented duration and severity. The City had to rely on all of its drought supplies, including groundwater, supplemental water purchases, and desalination to meet demands during the last drought, despite a phenomenal response from the community to reduce their water use and conserve valuable water resources. Currently, the City is recovering from the drought. While it has enough water supplies to meet demands for the next three years, its groundwater basins are depleted and showing signs of seawater intrusion and will take years to recover. The City also has 2,000 acre-feet of water debt to pay back that resulted from water purchases during the height of the drought.

- *Describe any projected increases to the severity or duration of drought in the project area resulting from changes to water supply availability. Provide support for your response (e.g., reference a recent climate informed analysis, if available).*

The City is currently updating its Long Term Water Supply Plan with a planning horizon of 30 years, through the year 2050. Preliminary results of this work effort indicate that drought response is the City's number one water supply challenge. The updated plan will include a region-specific climate change analysis and a more severe design drought than the previous LTWSP. In addition to the effects of climate change on the City's water supplies, the City's surface water supplies from the

Santa Ynez River (a primary supply during non-drought years) could potentially be reduced due to regulatory action around the operation of Lake Cachuma. In addition, State Water Project supplies are expected to be less reliable in the future, and it may be harder to purchase supplemental water when needed during times of drought. For this reason, the City is planning for more frequent and longer future drought conditions than it has experienced previously. The City's Enhanced Urban Water Management Plan, which will present the results of this planning effort, is expected to be available by June 2021.

E.1.4. Evaluation Criterion D—Project Implementation

Describe the implementation plan of the proposed project. Please include an estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates.

Figure 5. Project Schedule lists the major project components and estimated completion schedules. Major milestones include completion of the final design (March 2021), bid phase and award completion (June 2021), start of construction (July 2021), and completion of construction (April 2022). Construction is expected to be completed within a 10 month period.

Figure 5. Project Schedule

	2020						2021												2022											
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Project Component																														
Design																														
Award of Final Design Contract																														
Final Design																														
Bid Phase/Award of Construction Contract																														
Construction																														
Construction - Submittals																														
Construction - Equipment Procurement																														
Construction - Equipment Installation																														

Describe any permits that will be required, along with the process for obtaining such permits.

The will construct the project under permits acquired for the reactivation of the Desalination Plant in 2015, namely the California Coastal Commission Coastal Development Permit (a complete list of permits related to the Desalination Plant is found in Section 4, Table 9. Charles E. Meyer Desalination Plant Permit Summary). Preliminary research indicates that the County of Santa Barbara will allow the existing Soils Management Plan to be used as a basis for handling contaminated soils at the plant, and the City of Santa Barbara Community Development Department is expected to allow the project to move forward under the existing 1995 Desalination Environmental Impact Report.

Identify and describe any engineering or design work performed specifically in support of the proposed project.

Carollo Engineers has provided a basis of design for pump selection criteria. This criteria provides design information about hydraulic conditions, including flow and head characteristics, the

Project, as well as considerations for how these pumps must be selected to coordinate their use in future plant capacity expansion projects.

The City is awarding the final design contract to Kennedy Jenks Consultants. They were selected as the final designer through a competitive Request for Proposals and interview process. The scope of the final design includes development of 100% bid plans and specifications for implementation of the construction project that will upgrade the pumps. The final design effort is expected to take approximately seven months.

Describe any new policies or administrative actions required to implement the project.
The Project is not anticipated to require any new policies or administrative actions.

E.1.5. Evaluation Criterion E—Nexus to Reclamation

How is the proposed project connected to a Reclamation project or activity?
The City of Santa Barbara is a member agency of the Cachuma Operation and Maintenance Board (COMB). COMB is a California Joint Powers Agency (JPA) formed in 1956 pursuant to an agreement with the Bureau of Reclamation. COMB's main regional water storage facility is Cachuma Reservoir, formed by Bradbury Dam, which is owned and operated by the U.S. Bureau of Reclamation. Similarly, Cachuma Reservoir and Lauro Dam, located adjacent to the regional Cater WTP, are also owned by the Bureau of Reclamation, and operated by COMB. The Cater WTP treats water conveyed through Lauro Reservoir and originating from Lake Cachuma. Both of these are Reclamation facilities. The Project is expected to offset some of the raw water conveyance through Lauro Reservoir and potentially some of the raw water originating from Lake Cachuma.

Will the project benefit any tribe(s)?
The project is not anticipated to benefit the Chumash Tribe of the Santa Barbara region.

Does the applicant receive Reclamation project water?
A major component of the City's water supply portfolio comes from Reclamation facilities, as described in the bullet above. Water in Lake Cachuma travels through Tecolote Tunnel to Lauro Reservoir, where it is stored until the City treats the water at the Cater WTP and delivers this water to City customers, and downstream agencies.

Is the project on Reclamation project lands or involving Reclamation facilities?
The Project is not located on Reclamation project lands. Desalination Plant water will not be conveyed through Reclamation project lands nor will its conveyance directly involve Reclamation Facilities. However, the project is expected to have some impact on Lake Cachuma and Lauro Reservoir. The project is expected to have some impact on raw water volumes originating at Lake Cachuma and being conveyed through Lauro Reservoir.

Is the project in the same basin as a Reclamation project or activity?
Although the City is not located within the Santa Ynez River Basin, one of the City's most important water supply sources, Lake Cachuma, is located on the Santa Ynez River. Lake Cachuma is a

Reclamation project. The City's surface water supplies, which include water from the Cachuma Project, is directed into Lauro Reservoir, another Reclamation project, before being treated at the Cater WTP.

Will the proposed work contribute water to a basin where a Reclamation project is located?
It is not anticipated that the Project will contribute water to a basin where a Reclamation project is located.

E.1.6. Evaluation Criterion F—Department of the Interior and Bureau of Reclamation Priorities

1. Creating a conservation stewardship legacy second only to Teddy Roosevelt

The City is a long-term leader in water conservation. The City's Water Conservation Program began as a response to drought in the late 1970s. The program experienced increased participation due to the 1987- 1991 drought and the subsequent 1994 Long Term Water Supply Plan (LTWSP) identified a goal of 1,500 AFY of additional water conservation, a target that was met and exceeded. In 1991, the City signed the Memorandum of Understanding Regarding Urban Water Conservation in California (MOU). Since that time, the City has been actively implementing the best management practices (BMPs) for water conservation as well as additional water conservation measures. In accordance with the City's LTWSP, the City's current Water Conservation Program is operated to minimize the use of potable water supplies, meet the requirements of the BMPs, and achieve compliance with California Senate Bill X7-7 per capita water use reduction requirements. Water conservation measures are evaluated for cost effectiveness based on the avoided cost of additional water supplies.

The City's long-term commitment to water conservation is evident in reductions in water demand achieved over the past thirty years. Total system demand has dropped from approximately 16,300 AFY in the late 1980s to approximately 13,000 AFY in 2013 before the current drought and is currently averaging 10,000 AFY.

a.) *Utilize science to identify best practices to manage land and water resources and adapt to changes in the environment;*
The Desalination Plant uses state of the art reverse osmosis membrane technology, energy recovery systems, variable frequency drives and other modern systems to create drinking water from ocean water and meet changing water supply demands. The Project takes advantage of that water source by conveying the water to where it can benefit a larger population. Conveying the water to the Cater WTP can help allow water managers to make decisions to shift demand away from existing exhaustible water supplies.

b.) *Examine land use planning processes and land use designations that govern public use and access.*
This Department of Interior priority is not applicable to the Project.

c.) Revise and streamline the environmental and regulatory review process while maintaining environmental standards.
This Department of Interior priority is not applicable to the Project.

d.) Review Department water storage, transportation, and distribution systems to identify opportunities to resolve conflicts and expand capacity.
This Department of Interior priority is not directly applicable to the Project. However, the Project does affect the City's water storage and water distributions systems and does provide opportunities to help mitigate water supply and water storage issues. The Project conveys Desalination Plant water to the City's central source of drinking water where it can be most easily distributed to the entire service area. The blended water from the Desalination Plant and Cater WTP reduces concentrations of regulated compounds in the water, including trihalomethanes and PFOS. This becomes a direct benefit to the distribution system.

e.) Foster relationships with conservation organizations advocating for balanced stewardship and use of public lands.
This Department of Interior priority is not applicable to the Project.

f.) Identify and implement initiatives to expand access to Department lands for hunting and fishing.
This Department of Interior priority is not applicable to the Project.

g.) Shift the balance towards providing greater public access to public lands over restrictions to access.
The City's potential reduction in dependence State Water Project (SWP) may increase the available water supply in the Sacramento-San Juaquin Delta, the SWP source. This would have a positive effect on public recreation in the area in activities such as fishing, hunting, boating, camping, picnics, and bird watching.

2. Utilizing our natural resources
The Desalination Plant and the Project use one of the most abundant natural resources on the planet, the ocean, as a source of raw water. Surface water and groundwater are not used in the production of desalinated water.

a.) Ensure American Energy is available to meet our security and economic needs.
This Department of Interior priority is not applicable to the Project.

b.) Ensure access to mineral resources, especially the critical and rare earth minerals needed for scientific, technological, or military applications.
This Department of Interior priority is not applicable to the Project.

c.) Refocus timber programs to embrace the entire 'healthy forests' lifecycle.

This Department of Interior priority is not applicable to the Project.

d.) Manage competition for grazing resources.

This Department of Interior priority is not applicable to the Project.

3. Restoring trust with local communities

The City enjoys a collaborative and constructive relationship with the local community. As such, restoration of trust with the local community is not necessarily a distinguished goal. Nevertheless, the Project will strengthen the trust and working collaborative relationship that already exists between the City, its water customers, and other local communities. The City of Santa Barbara Public Works Department vision statement is "a unified department that coordinates and collaborates effectively and earns the trust and high regard of our community." The Desalination Plant is a significant and long term City investment. The Project will make the benefits of the high quality water generated by that investment available to all parts of the water service area, the community, and neighboring water districts.

a.) Be a better neighbor with those closest to our resources by improving dialogue and relationships with persons and entities bordering our lands.

This Department of Interior priority is not applicable as the Project does not border Reclamation resources or Reclamation Lands. However, and as noted herein above, the City of Santa Barbara enjoys collaborative and constructive relationships with its neighboring municipalities, including City of Goleta, County of Santa Barbara, and Caltrans. Additionally, we have close working relationships with the other water districts in our county, especially the bordering water districts such as the Goleta Water District and Montecito Water District. As mentioned in the application, the proposed project will facilitate a regional water supply agreement that will greatly benefit Montecito's water supply reliability and drought resiliency. During all aspects of the Project, the City will adhere to the Bureau's "be-a-better-neighbor" policy.

b.) Expand the lines of communication with Governors, state natural resource offices, Fish and Wildlife offices, water authorities, county commissioners, Tribes, and local communities.

This Department of Interior priority is not applicable to the Project.

4. Striking a regulatory balance

This Department of Interior priority is not applicable to the Project.

a.) Reduce the administrative and regulatory burden imposed on U.S. industry and the public.

The expanded water portfolio and potential reduced reliance on State Water Project and Lake Cachuma water may lead to reduced impacts from environmental regulatory agencies restrictions on the use of this water. This may include the impacts from mandates to release water to habitats and restrictions on surface water storage maintenance.

b.) Ensure that Endangered Species Act decisions are based on strong science and thorough analysis.

This Department of Interior priority is not applicable to the Project.

5. Modernizing our infrastructure

The Desalination Plant existing product water pumps were manufactured in 1991 as part of the original plant construction. The Project proposes to install new modern pumps with greater capacity.

a.) Support the White House Public/Private Partnership Initiative to modernize U.S. infrastructure.

The existing pumps are almost 30 years old. While they were maintained since the deactivation of the Desalination Plant in the early 1990s and were refurbished as part of the 2015 reactivation project, they are almost 30 years old. The Project proposes to install new replacement pumps, instrumentation, and piping.

b.) Remove impediments to infrastructure development and facilitate private sector efforts to construct infrastructure projects serving American needs.

The Desalination Project was designed, constructed, and is being operated by a private company. The Project will upgrade the product water pumps and will be designed and constructed by private companies.

c.) Prioritize Department infrastructure needs to highlight: (1) Construction of infrastructure; (2) Cyclical maintenance; (3) Deferred maintenance.

The Project will address two of the Departments items noted above. Regarding construction of infrastructure, the Project will be constructing a new product water pump station at the Desalination Plant. Regarding cyclical maintenance, the Desalination Plant uses a Computerized Maintenance Management System (CMMS) to track and schedule plant maintenance activates. All aspects of maintenance will be tracked using the CMMS software including maintenance activities, requirements, costs, and maintenance scheduling.

SECTION 2: PROJECT BUDGET

Funding Plan

It is the intent of the City to fund the proposed project from two sources: (1) the City's Water Utility (Utility); and, (2) the WaterSMART Drought Response Grant Program. The Utility generates the majority of its revenue from volumetric water rates and monthly fixed meter charges. The Utility also collects revenue on special fees and system development charges. These revenue streams fund annual budget appropriations and all financial obligations, without assistance from the City's General Fund. The Utility has, by way of City Council action, adopted a budget for Fiscal Year 2021 (July 1, 2020 to June 30, 2021) that commits funding to cover the non-Federal share of the Project costs. There are no outside funding sources to be used to pay for project costs. As such, there are no Letters of Funding Commitment contained herein. None of the City's noted

funds will be used on construction costs during the application review and award period. The City is planning on executing construction contracts after the anticipated grant award.

No environmental, cultural compliance, engineering, nor design costs are anticipated to be incurred directly by the City. No costs for preparation of this Grant application will be included in the budget costs. No purchases of water, land, nor easements are expected. There are no third-party nor other funding partners for this project.

The City will be incurring Project costs prior to grant award. The City will be moving forward with the Design Engineer's contract to develop 100% construction drawings and specifications, and will be having the Design Engineer assist with technical responses to bidder questions. The City expects that the full contact amount of $268,500 will be paid out during the period from September 1, 2020 (start of design) to June 30, 2021 (end of bidding/award). The Project benefit of incurring these costs prior to grant award is that the project begins design earlier in the process and this in turn allows all subsequent steps, including construction, to be started earlier and ultimately achieve Performance Measures sooner.

The City will also be incurring costs related to project management by City employees during the Design and Bid/Award phases including awarding the contract to the final designer, oversite of the final design process, and oversite of the bidding/award phase. This item provides oversite of the Design Engineer and must coincide with that activity. As with the Design Engineer, an earlier start to this item ultimately allows the Project construction to be completed sooner and allows for Performance Measures to be met earlier.

Table 2. Costs Incurred Prior to Grant Award

Item	Cost	Dates Costs Incurred
Design Engineer- Final Design	$ 268,500	9/1/20 to 6/30/21
City Employee - Salary/Wage/Fringe Benefit	$ 29,820	7/1/20 to 6/30/21
Total Costs	**$ 298,320**	

Budget Proposal

The total project cost including the sum of all allowable items, including required cost sharing, voluntary committed cost sharing, and third-party contributions, is $3,144,660. The City has allocated funds to cover the $1,644,660 of project costs noted below. These are existing funds that are currently available and will represent all the non-Federal share of the Project funding. Reclamation grant funds are anticipated to pay for $1,500,000 of the total project cost. This is in compliance with 50% maximum grant ratio requirement.

Table 3. Total Project Costs

Funding Source	Amount	Percentage
Costs to be reimbursed with the requested Federal funding	$ 1,500,000	48%
Costs to be paid by the applicant	$ 1,644,660	52%
Value of third-party contributions	$ 0	0%
Total Project Costs	**$ 3,144,660**	**100%**

Table 4. Budget Proposal

Budget Item Description	Computation		QTY Type	Total Cost
	$/Unit	QTY		
Salaries and Wages				
Employee 1- Supervising Engineer	63.56	500	hour	$ 31,780
Fringe Benefits				
Employee 1 - Supervising Engineer	45.76	500	hour	$ 22,880
Travel				
Trip 1 - N/A				$ -
Equipment				
Item A - N/A				$ -
Supplies and Materials				
Item A - N/A				$ -
Contractual/Construction				
Design Engineer - Final Design	$ 268,500	1	lump sum	$ 268,500
Construction Cost includes 10% contingency	$ 2,502,500	1	lump sum	$ 2,502,500
Design Engineer - Design Management	$ 154,000	1	lump sum	$ 154,000
Construction Management	$ 165,000	1	lump sum	$ 165,000
Third-Party Contributions				
Contribution A - N/A				$ -
Other				
None		1	lump sum	
TOTAL DIRECT COSTS				$ 3,144,660
Indirect Costs				
Type of rate - N/A				$ -
Total Estimated Project Costs				**$ 3,144,660**

Table 5. Summary of Non-Federal and Federal Funding Sources

Funding Sources	Amount
Non-Federal Entities	
1. City of Santa Barbara - Applicant	$ 1,644,660
Request Reclamation Funding	**$ 1,500,000**

Budget Narrative

The following narrative provides an explanation for each of the line item cost amounts encompassed in Table 4. Budget Proposal.

Salaries and Wages

The City's Project Manager is Matt Ward, Water System Manager. However, as a manager with the City, Mr. Ward will not be charging direct labor and fringe benefits to the project. Salaries and Wages in Table 4. Budget Proposal above include staff time for Carson Wollert, a Supervising Engineer, to manage the design and construction phases of the project. The City pays this level of employee up to $63.56 per hour in wages. Based on other similar public works projects that include third-party construction management, it is estimated that City staff costs will total approximately 2% of the construction costs ($2.5M estimated). A 10% contingency was added to this estimate.

Calculation:
*$2,500,000 (construction cost) * 2% * 110% = $55,000*

The administration estimate of $55,000 was then used to determinate an estimated number of hours using the combined Salaries & Wages and Fringe Benefit hourly costs.

Calculation:
*$109.32 / hr (combined Salaries & Fringe Benefit rate) * 500 hrs = $54,660*

It is estimated that project management costs will be spent equally across the scheduled 22 months of the project. This includes nine months of design, three months of bid phase & award, and ten months of construction.

Calculation:
$54,660 / 22 months = $2,485/mo

Table 6. City Employee Cost Projection shows the City Employee budgeted cost for each of the three project tasks.

Table 6. City Employee Cost Projection

Task	Description	Months	Cost $2485 /mo	Dates Costs Incurred
1	Final Design Development	9	$ 22,361	7/1/20 to 3/31/21
2	Bid and Award Phase	3	$ 7,454	3/1/21 to 6/3/21
3	Construction Phase	10	$ 24,845	7/1/20 to 4/30/21
	Total Costs		**$ 54,660**	

Fringe Benefits

Fringe Benefit costs are included for City employees to perform administration of the design and construction phases of the project. The fringe benefit rate used in this application, 72%, was developed by the City in March 2018 to support reimbursement claims submitted to FEMA for damages incurred during the California Wildfires, Flooding, Mudflows, and Debris Flows Disaster (DR-4353). The rate components are as follows:

Table 7. Fringe Benefit Rate Calculation

Component	Rate
Holidays	3.85%
Vacation	8.46%
Sick Leave	4.63%
Social Security	0.00%
Medicare	1.45%
Unemployment	0.28%
Worker's Comp	9.06%
Retirement	28.93%
Health Benefits	14.85%
Life Insurance Benefits	0.13%
Other	0.50%
Total (rounded)	**72%**

The budgetary cost is based on a Supervising Engineer performing the work. The City of Santa Barbara pays this level of employee $45.76 per hour in fringe benefits (72% multiplied by $63.56 per hour).

Travel

No City of Santa Barbara personnel travel is anticipated.

Equipment

No equipment valued at $5,000 or greater is expected to be purchased directly by the City for this scope of work. No equipment is expected to be rented for this scope of work.

Materials and Supplies

The City of Santa Barbara is not expecting to directly procure any materials nor supplies. Materials are accounted for in the Contract/Contractual section of Table 4. Budget Proposal.

Contract/Construction

It is anticipated that the City of Santa Barbara will execute multiple contracts for the project. See description below of the anticipated contracts and scopes of work.

1) Design Engineer – Final Design.

The City will be contracting with a design engineering professional to develop bid plans and specifications for the project. These include specific details for the upgraded pumps, equipment pads, surge tank, piping and other mechanical components, disposal of contaminated soils, demolition of the old pumps and pads, electrical upgrades, and SCADA integration. The City has negotiated a cost of $244,098 with Kennedy-Jenks Consultants to provide these services. A 10% contingency was added to this cost.

Calculation:
*$244,*098 * 110% = $268,508

2) Construction Cost

Through a competitive low bid process, the City will select and hire a construction contractor to implement the final design plans and specifications. These costs will include mobilizing/de-mobilizing, procurement and installation of the upgraded pumps, piping, demolition of the old pumps, pads, and mechanical, installation of upgrade electrical equipment, installation of the new surge tank, disposal of contaminated soils, and implementation of SCADA integration. The City created a construction estimate for the proposed work that totaled $2,275,000. A 10% contingency was added to this cost.

Calculation:
*$2,275,000 * 110% = $2,502,500*

3) Design Engineer – Design Management during Construction

The City will be contracting with a design engineering professional to provide design management services during construction. These services will include reviewing and responding to submittals and Requests For Information (RFI), and addressing design issues. Kennedy-Jenks Consultants is providing final design services for the project. It is anticipated that the City will contract with them to provide design management services during construction. For design management services, they have provided a cost proposal of $140,025. A 10% contingency was added to this estimate. Final negotiation of this cost is pending completion of the 100% design drawings and specifications.

Calculation:
*$140,000 * 110% = $154,000*

4) Construction Management

The City will be contracting with a construction management firm to provide third party construction management services for the project. Services will include administration of the construction contract, change event management, change order management, special inspection and materials testing, working with the design engineer on addressing project issues, and general oversight of the construction phase portion of the project. On a recent water department project whose construction cost was approximately $2.1M, the third party construction management firm performed their services for $130k. This represents 6% of the construction cost. This same percentage was used to calculate the estimated contract cost for this item. A 10% contingency was added.

Calculation:
*$2,502,500 * 6% * 110% = $165,165*

Third-Party In-Kind Contributions

The Project is not requesting, or anticipating, third party in-kind contributions.

Environmental and Regulatory Compliance Costs

No environmental nor regulatory compliance costs are anticipated. The work is expected to be completed under existing permits.

Other Expenses, Indirect Costs, Etc.

No other expenses nor indirect costs are anticipated for the project.

Indirect Costs

No indirect costs are anticipated for the project.

Total Estimated Project Costs

The proposed project has a total estimated cost of $3,144,660.

Section 3: Environmental and Cultural Resources Compliance

Will the proposed project impact the surrounding environment (e.g., soil [dust], air, water [quality and quantity], animal habitat)? Please briefly describe all earth-disturbing work and any work that will affect the air, water, or animal habitat in the project area. Please also explain the impacts of such work on the surrounding environment and any steps that could be taken to minimize the impacts.

Earth-disturbing activities would be minimal and/or non-existent.

Are you aware of any species listed or proposed to be listed as a Federal threatened or endangered species, or designated critical habitat in the project area? If so, would they be affected by any activities associated with the proposed project?

No endangered or threatened species or habitat lie within the project boundaries.

Are there wetlands or other surface waters inside the project boundaries that potentially fall under CWA jurisdiction as "Waters of the United States?" If so, please describe and estimate any impacts the proposed project may have.

There are no designated wetlands and surface waters within the project boundaries.

When was the water delivery system constructed?

Reference Table 8. Water Distribution System Summary below for a description of the City's water delivery system, including piping types, sizes, lengths, and approximate year of installation.

Table 8. Water Distribution System Summary

Diameter	Length (Ft)	Length (miles)	Percent of Modeled System
4-inches and smaller	166,978	31.6	9.9%
6"	488,031	92.4	29.0%
8"	580,892	110.0	34.5%
10"	40,325	7.6	2.4%
12"	248,892	47.1	14.8%
14"	15,582	3.0	0.9%
15"	2,583	0.5	0.2%
16"	35,728	6.8	21.0%
18"	9,291	1.8	0.6%
20"	8,287	1.6	0.5%
22"	8,915	1.7	0.5%
24"	37,688	7.1	2.2%
30"	17,891	3.4	1.1%
36"	23,035	4.4	1.4%
42"	452	0.1	0.0%
Total	1,684,567	319.0	100.0%

Will the proposed project result in any modification of or effects to, individual features of an irrigation system (e.g., headgates, canals, or flumes)? If so, state when those features were constructed and describe the nature and timing of any extensive alterations or modifications to those features completed previously.

The City's Project is not intended to modify or affect individual features of any irrigation system.

Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places? A cultural resources specialist at your local Reclamation office or the State Historic Preservation Office can assist in answering this question.

The Project would not modify or affect any buildings, structures, or features. Therefore, cultural resources and/or historical buildings would not be affected as a result of Project.

Are there any known archeological sites in the proposed project area?

The City of Santa Barbara, originally settled by the Spanish in the 18th century, has many archeological sites and historic points of interest. There are approximately 2,700 buildings, homes, or other structures that are nearly 100 years old, and some that date back to 1780s. The City encompasses known previous Chumash Tribe settlements. There are archeological sites, where evidence and/or artifacts of pre-historic or historic activities are preserved, or thought to exist, throughout the City. However, there are no known archeological sites at the Project site. The Project scope will not encompass any significant ground disturbance activities.

Will the proposed project have a disproportionately high and adverse effect on low- income or minority populations?

The Project benefits would impact all City water customers equally. Because the Project affects the entire water distribution system, and is meant to improve water distribution any potential impact or benefit would be distributed equally throughout the service area. No disproportionately high and adverse effects would occur on low income or minority populations.

Will the proposed project limit access to and ceremonial use of Indian sacred sites or result in other impacts on tribal lands?

The Project is not anticipated to impact any Chumash Tribal lands, natural resources, or limit access to sacred sites.

Will the proposed project contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area?

The Project is not anticipated to contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area.

Section 4: Required Permits or Approvals

For the Project, the City intends to request an exemption from being required to acquire a California Coastal Commission Coastal Development Permit. No other permits nor approvals are anticipated. The City has included below a complete summary of the permits acquired and reports completed in the course of reactivating the Desalination Plant and delivering desalinated water into the water distribution system.

Table 9. Charles E. Meyer Desalination Plant Permit Summary

Permit and Regulatory Authority	Agency	Date Approved	Date Expires	Related Reports and Associated Required Plans
Coastal Development Permit 017-91 (1991)	California Coastal Commission	March 1991	None	• Mitigation monitoring Reports • Landscape Plans • Discharge monitoring programs
State Lands Commission Lease PRC 4942.9	State Lands Commission	June 29, 2015	June 28, 2040	• Plan for debris removal
Water Quality Certification 1st Amendment Clean Water Act Section 401 (34215WQ03)	Regional Water Quality Control Board	June 23, 2017	2020	• Oil Spill Plan • Turbidity Plan • SWPPP
Water Quality Certification Clean Water Act Section 401 (34215WQ03)	Regional Water Quality Control Board	June 19, 2015	2020	• Oil Spill Plan • Turbidity Plan • Stormwater Pollution Prevention Plan
Army Corps Nationwide Permit - Clean Water Act Section 404 (SPL-2015-00079-TS)	United States Army Corps of Engineers	July 1, 2015	March 18, 2018	• Caulerpa Report • Eelgrass Report
Coastal Development Permit - California Coastal Act/Coastal Zone Management Act (Repair and Maintenance for Areas Within CCC Jurisdiction)	California Coastal Commission	August 31, 2015	None	• Nesting Bird Plan • Marine Mammal Plan • Oil Spill Plan • Anchor Plan • Bio Assessment • Cultural Report • Turbidity Plan • SWPPP
National Pollutant Discharge Elimination System Permit (NPDES) - Clean Water Act Section 402	Regional Water Quality Control Board	February 10, 2015	May 13, 2020	• State Coastal Conservancy Grant Agreement • Revised NPDES Permit
City Coastal Development Permit Substantial Conformance - California Coastal Act (Repair and Maintenance within the City Coastal Jurisdiction)	City of Santa Barbara	August 12, 2015	None	• Final Substantial Conformance Determination

Section 5: Letters of Support

The City has received Letters of Support from Congressman Salud O. Carbajal, State Senator Hannah Beth Jackson, Montecito Water District, Carpinteria Water District, and La Cumbre Mutual Water Company, and are provided as Attachment 3.

Section 6: Official Resolution

The City of Santa Barbara resolution approving and authorizing grant participation is provided as Attachment 4.

Appendix A:

City of Santa Barbara
Water Conservation Program

Program Summary

Appendix B:

Executive Summary:
Water Conservation Technical Evaluation

Maddaus Water Management

Appendix C:

Long-Term Water Supply Performance Charts

APPENDIX A:

UWMP CHECKLIST

Appendix F

UWMP Checklist

This checklist is developed directly from the Urban Water Management Planning Act and SB X7-7. It is provided to support water suppliers during preparation of their UWMPs. Two versions of the UWMP Checklist are provided – the first one is organized according to the California Water Code and the second checklist according to subject matter. The two checklists contain duplicate information and the water supplier should use whichever checklist is more convenient. In the event that information or recommendations in these tables are inconsistent with, conflict with, or omit the requirements of the Act or applicable laws, the Act or other laws shall prevail.

Each water supplier submitting an UWMP can also provide DWR with the UWMP location of the required element by completing the last column of eitherchecklist. This will support DWR in its review of these UWMPs. The completed form can be included with the UWMP.

If an item does not pertain to a water supplier, then state the UWMP requirement and note that it does not apply to the agency. For example, if a water supplier does not use groundwater as a water supply source, then there should be a statement in the UWMP that groundwater is not a water supply source.

APPENDIX B:

UWMP STANDARDIZED TABLES

*Note: Water suppliers are required to report their 2015 UWMP data using standardized tables provided by the DWR. The City's completed tables are included in this appendix.

APPENDIX C:

DOCUMENTATION OF PUBLIC NOTICING, COMMUNITY NOTIFICATIONS, INTERAGENGY COORDINATION, AND CITY COUNCIL ACTION

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APPENDIX E:

TECHNICAL MEMORANDUM ON WATER CONSERVATION - MADDAUS WATER MANAGEMENT, 2010

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APPENDIX F:

EXISTING AND PROJECTED HOUSING UNITS IN THE CITY OF SANTA BARBARA

APPENDIX H:

CITY OF SANTA BARBARA LONG TERM WATER SUPPLY PLAN 2011

Appendix A:

City of Santa Barbara
Water Conservation Program

Program Summary

Appendix B:

Executive Summary:
Water Conservation Technical Evaluation

Maddaus Water Management

Appendix C:

Long-Term Water Supply Performance Charts

APPENDIX I:

WATER SUPPLY MIX BY TYPE OF YEAR

APPENDIX J:

2016 WATER SHORTAGE CONTINGENCY PLAN

APPENDIX K:

CITY OF SANTA BARBARA MUNICIPAL CODE

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APPENDIX L:

FY 2016 WATER AND WASTEWATER RATES

APPENDIX M:

WATER SHORTAGE RESOLUTION

(STAGE 3 DROUGHT DECLARATION, MAY 2015)

APPENDIX N:

2013-2014 CUWCC BMP COMPLIANCE REPORTS