Stanfield Groundwater Supply and Treatment Project

R24AS00007

WaterSMART Drought Response Program:
Drought Resiliency Projects for FY2024
TASK D: Domestic Water Supply Projects for Disadvantaged Communities

Prepared For:
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1. Technical Proposal

1.1. Executive Summary

Applicant Name: Arizona Water Company	Project Length of Time: 24 months
City: Stanfield	Estimated Start Date: November 2024
County: Pinal	Estimated Completion Date: November 2026
State: Arizona	Located on a Federal Facility: No

Arizona Water Company (AWC) is a private water provider in the state of Arizona applying under Task D for a municipal drinking water system which serves the disadvantaged communities in and around the city of Stanfield, AZ. The entirety of AWC's Stanfield service area (100%) falls within the Climate and Environmental Justice Screening Tool (CEJST) Tract 04021941400, which is qualified as disadvantaged based on income, climate change, health, legacy pollution, and transportation percentiles.[1] This system service area includes connections to residential, commercial, rural, and industrial customers.

The Stanfield Groundwater Supply and Treatment Project (Project), located at 36781 West Apache Drive in Stanfield, Pinal County, Arizona, incorporates nitrate and arsenic treatment systems and infrastructure upgrades to provide a reliable supply of safe drinking water to this disadvantaged community. This water system currently provides 140 Acre-Feet per Year (AFY) from two wells (Well 1 and Well 3) within the Maricopa-Stanfield Subbasin of the Pinal Active Management Area (PAMA). Stanfield is completely reliant on Wells 1 and 3 as a sole source of drinking water, with no connections to any other water systems that could provide water in an emergency. Currently, production from this site is restricted due to elevated nitrate and arsenic concentrations. Additionally, over the last five years, instances of "exceptional" drought conditions in Pinal County have increased, demonstrating the need for reliable treatment of groundwater supplies.[2] More information on water and drought planning in the area can be found in the PAMA Fifth Management Plan (2020-2025).[3]

This Project will include state-of-the-art nitrate and arsenic treatment systems that can treat up to 470 gpm of nitrate and arsenic contaminated groundwater to levels below the Maximum Contaminant Level (MCL). The treatment systems will include full redundancy and ancillary equipment, including but not limited to chemical dosing systems, online instrumentation, and Supervisory Control and Data Acquisition (SCADA) systems. By improving groundwater treatment processes and associated infrastructure at Wells 1 and 3, **the Project will increase the system's capacity, capable of providing up to 755 AFY of safe drinking water for residents of drought-impacted Central Arizona.** The Project stands to benefit drought resiliency of Stanfield's rural community water system for 30 years and achieve regional strategic goals by providing ample quantities of safe drinking water for disadvantaged communities. The Project is anticipated to take 24 months for implementation, with an anticipated start date in November 2024 and anticipated completion in November 2026.

1.2. Project Location

The Stanfield Groundwater Supply and Treatment Project (Project) is located in Pinal County, Arizona. The site is located at 36781 W Apache Dr. Stanfield, AZ 85172 (32°88032286274756", -111°96262214803217"), east of Navajo Way, West of Yaqui Way, and South of Apache Drive. A map of the project location and service area of Arizona Water Company's Stanfield community water system (CWS) can be seen in Figure 1.

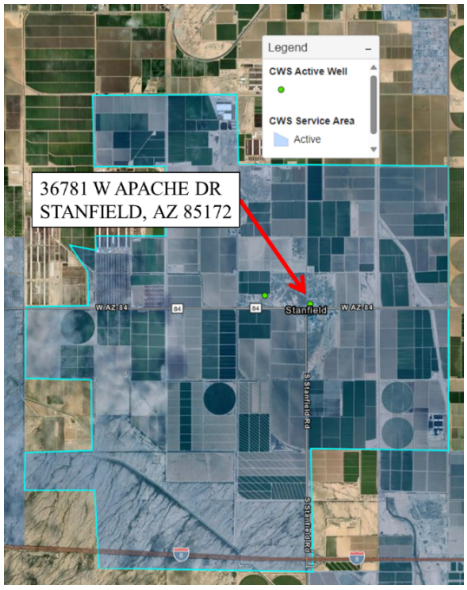

Figure 1. Location of Project and parcels serviced by Arizona Water Company-Stanfield CWS overlayed with the satellite image of Stanfield, AZ [4]

1.3. Project Description

The proposed Project aims to provide clean and reliable drinking water to approximately 642 residents in the CEJST disadvantaged designated community of Stanfield, AZ. This community water system (CWS) draws water from the Maricopa-Stanfield Subbasin of the Pinal Active Management Area (PAMA). **The area has been experiencing prolonged drought conditions and this system is entirely reliant on impaired groundwater supplies.** The Stanfield Community Water System (CWS No. 91-000522.0000) currently depends on Wells 1 and 3 for its water supply, but these wells respectively have nitrate and arsenic concentrations that exceed the Maximum Contaminant Levels (MCLs). Without treatment, neither of these wells can be relied upon as sources of safe drinking water.

The existing ion exchange system, which was constructed in 2008 and is nearing the end of its operational life, can only treat a limited volume based on the current treatment configuration. This limitation arises from the high nitrate and arsenic concentrations in the source water, preventing the system from operating at its design capacity.

To address these challenges, the proposed project involves replacing the aging ion exchange system with a Microvi biological nitrate treatment removal system and a coagulation filtration system for arsenic removal. This will treat a portion of the combined flow from Well 1 and Well 3 to reduce nitrate below the MCL, followed by treating the full combined flow to reduce arsenic below the MCL. **The proposed system offers more flexibility as it is able to utilize both wells simultaneously**, whereas the current system can only treat either arsenic or nitrate.

These treatment facilities will be constructed on the existing Arizona Water Company property and will not expand beyond the current parcel footprints. The project will encompass various site work activities, including site grading and preparation, electrical work, installation of concrete pads, and necessary upgrades and replacements to piping and valves for the nitrate treatment system and the filtration system. The nitrate treatment system and arsenic filtration system components will include the construction, installation, and commissioning of various system elements.

- ONE Biological nitrate treatment system with:
  - FOUR 84-inch diameter by 130-inch high, 22,000-gallon, baffled 304SS tank with quiescent zone baffle and cascading aerator
  - 0-120 rpm bioreactor mixer with dual 3-blade turbine impeller
  - Microvi MNE Denitrovi biocatalyst
- ONE Process skid with:
  - Online instrumentation including two nitrate analyzers, one pH, one DO, and one chlorine analyzer
  - Four chemical feed assemblies with full redundancy
  - One control system with PLC/HMI and Remote access
- ONE Coagulation Filtration Arsenic Treatment System with
  - SIX 48-inch diameter pressure vessels
  - Feed, backwash, and recycle pumps with variable frequency drive (VFD) control with pressure gauges, pressure, temperature, and flow transmitters
  - Online instrumentation including two turbidity analyzers and chlorine analyzer
  - Two chemical feed assemblies with full redundancy
  - Actuated valves and control system to allow for automated backwashing and remote access monitoring

1.4. Performance Measures

1.4.1. Current Water Quality at Site

Table 1 gives the recent water quality information of groundwater taken from AWC's two Stanfield wells at the proposed project site in Pinal County, AZ, based on recent direct sampling of the wells. ADEQ is responsible for taking quarterly monitoring samples and has provided documentation around the general trends in water quality in the area.[5] The water quality is most significantly impacted by the presence of nitrate and arsenic. Due to porous soil profile and historical land use, the areas around Stanfield, AZ have **nearly 100% probability** of exceedance in nitrate MCL, which will require treatment.[6] At this site, Well 1 is currently in exceedance of the nitrate MCL of 10 mg-N/L and Well 3 is in exceedance of the arsenic MCL of 10 ppb. which is not uncommon of groundwater in the State.[7,8]

Table 1. Raw water quality for Wells 1 and 3 (Stanfield, AZ).

Parameter	Well 1	Well 3	Combined Well 1 & Well 3
Raw Water Nitrate (as N) Max	19.2 mg/L	2.0 mg/L	11.8 mg/L
Raw Water Arsenic Max	6 ppb	9.9 ppb	10.4 ppb

1.4.2. Proposed Performance Measures

The proposed project will enable Arizona Water Company to improve the quality of its local water supply and ensure that it is a usable water source in the future. Table 2 outlines the key project benefits and performance measures.

Table 2. Project Benefits and Performance Measures.

Benefit	Description	Method of Performance Measurement
Water Supply Increased	Treatment systems can increase additional water supply by 615 AFY, resulting in 755 AFY of total supply at the site	State-of-the-art metering improving the monitoring of water withdrawn (pumped), treated and delivered
Water Quality Improved	Improve effluent water quality by reducing nitrate to less than < 7 mg-N/L and arsenic to < 1 µg/L	Well effluent water quality samples will be collected and tested per regulations. The treated effluent will undergo routine testing (by both online instrumentation and lab samples to verify that nitrate and arsenic levels remain within or below the specified target range).
Supply Resiliency Ensured	Treatment up to755 AFY of local groundwater will ensure the ability to use this water supply for 30 years.	The measurement of groundwater production from wells is conducted through metering at the production sites. This data is systematically recorded and subjected to long-term performance analysis.

1.5. Evaluation Criteria

1.5.1. Evaluation Criterion A – Project Benefits

1.5.1.1. Adds to Available Water Supplies

Provide a detailed description of the community that the project will serve. Using the CEJST's methodology and data information, describe the community's environmental, climate, socioeconomic, or other burdens.

The proposed project includes implementing contaminant treatment for two groundwater wells at the existing Stanfield CWS site within Pinal County, Arizona (pop. 420,625, Area 5375 mi^2). Pinal County contains 8 hazardous waste facilities, 472 water dischargers, and 30 brownfields. The County ranks in the 89th percentile for Wastewater Discharge (toxicity-weighted concentration/m distance) in the State and is noted to have impaired waters. The County's population is 55% white and 31% Hispanic with other racial groups comprising 4% or less of the population. Approximately 31% of the population is considered low income with a $29,284 per

capita income.[9] In the last Census of Agriculture, there were 232,224 acres of irrigated farmland in the County.[10] The project's service area includes communities facing environmental and socioeconomic challenges as detailed below.

The service area of the Stanfield CWS well site is shown in Figure 2 and covers the town of Stanfield (pop. 642 as well as area farmers who can purchase water at Wells 1 and 3). This service area is entirely within a disadvantaged area (Tract 04021941400 in the CEJST) and ranks in the 86th percentile for low income. It also ranks in qualifying percentiles for burdens specified in the CEJST methodology related to climate change, health, legacy pollution, and transportation, including expected agriculture loss rate, asthma, formerly used defense sites, and barriers to transportation (Appendix B).[1] This AWC service area (CWS No. 91-000522.0000, ADEQ No. AZ0411012) is considered a small CWS which relies on only groundwater.[11]

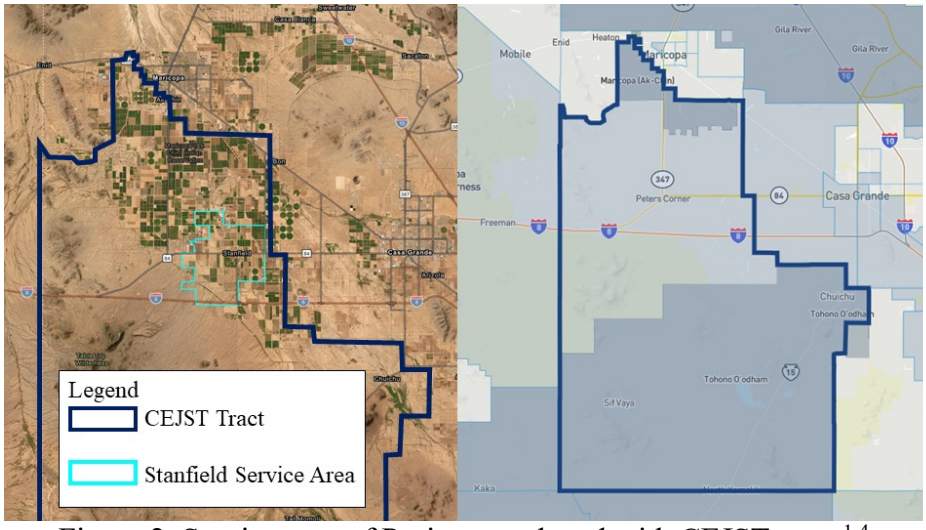

Figure 2. Service area of Project overlayed with CEJST tract [1,4]

Describe the need for the domestic water supply project including any prominent public health and safety concerns, interruptions in supply or other reasons that the community does not currently have reliable access to domestic water supplies.

The sole source of Stanfield CWS's supply is impaired by high levels of nitrate and arsenic contaminants above the maximum contaminant limit, which represent dire threats to public health especially for vulnerable populations. The current ion exchange system can treat only a limited capacity per day, which limits its operational utility. Furthermore, the system is 15 years old and nearing the end of its useful life, which threatens the continuity of treatment necessary to meet the community needs for safe drinking water. **The continued reliance on impaired source water and the discontinuation of the existing treatment infrastructure significantly jeopardize access to domestic water supplies for the Stanfield CWS.** Historical baseline water quality testing by ADEQ across PAMA's five subbasins indicated that mean nitrate levels were already 8.1±1.6 mg-N/L, with 23 sites out of 85 exceeding the MCL of 10 mg-N/L as of 2006.[12]

Another long-term study of groundwater in Arizona basins by ADEQ concluded that for "agricultural areas, shallow domestic wells have a high probability for elevated nitrate concentrations" and that across basins, Pinal AMA had the highest number of sample sites (> 25%) with MCL exceedance for nitrates.[5] Figure 3 shows the overview of nitrate exceedances in groundwater basins throughout the State.

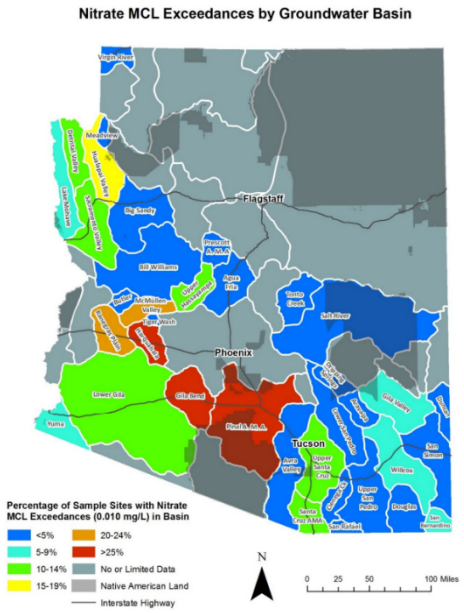

Figure 3. Twenty-year survey (1995-2015) by ADEQ on ambient groundwater quality that collected samples and compiled data across basins within Arizona. Results indicate that Pinal AMA, Harquahala, and Gila Bend had the highest number of sites with Nitrate MCL exceedances[5]

"Due to the co-existence of the Maricopa-Stanfield supply subbasin with land use including surrounding agriculture, dairy lots, and cattle feed lots, it is likely that there will be high nitrogen (nitrate) input to surrounding soils and groundwater supplies. It is therefore imperative that the treatment system be installed as nitrate concentrations are predicted to continually increase. This trend of exceedances in drinking water standards (Primary and Secondary) is highlighted by ADEQ's sampling of 86 sites within PAMA, which shows 27% of sites in exceedance of nitrate MCL (range of exceedances 10-31 mg-N/L) and 38% in exceedance of arsenic MCL (range of exceedances 0.010-0.046 mg/L).[12]

With safe drinking water, the benefit to public health will be significant. **Nitrate** poses a substantial public health risk, especially for the subpopulations of pregnant or nursing women and infants under one year old. **Arsenic**, being a toxic heavy metal, is considered harmful upon contact for any member of the population. Installing nitrate and arsenic treatment systems will prevent future public health issues associated with regulatory noncompliance while reducing costs associated with delayed capital improvements.

Explain how the proposed project will increase reliable access to domestic water supplies. How many people is it estimated to serve? How were these estimates calculated (average benefit and population)?

With the new treatment system, Stanfield CWS will be able to increase the water supply by 615 AFY. This would represent a total system supply of 755 AFY, **an increase of 440%.** This estimate was calculated based on the average sustained pumping rate of 220 gpm of the current infrastructure and the proposed treatment system capacity (470 gpm). The Stanfield CWS is estimated to serve around 642 individuals. Given this is the only source of domestic water supply, this leaves the Stanfield CWS extremely vulnerable.

How many years will the project continue to provide benefits?

The proposed treatment system is designed for a useful life of 30 years assuming that all equipment is operated according to manufacturer specifications and maintenance procedures. The expanded groundwater treatment facility at Stanfield will alleviate long-term drought conditions in Pinal County and is anticipated to deliver benefits over 30 years.

What is the estimated capacity of the new well(s), and how was the estimate calculated?

There are no new wells. Wells 1 and 3 will operate at a capacity of 230 gpm and 240 gpm, respectively.

How much water do you plan to extract through the well(s), and how does this fit within and comply with state or local laws, ordinances, or other groundwater governance structures applicable to the area?

Wells 1 and 3 will be able to produce a combined 755 AFY, in agreement with AWC's AWDR permit for groundwater withdrawals which are 565 AFY and 686 AFY, respectively. Groundwater pumping and deliveries within Pinal Active Management Area (PAMA) are monitored and regulated through ADWR.

Will the well be used as a primary supply or supplemental supply when there is a lack of surface supplies?

Yes, the wells are the primary supply for the Stanfield CWS, which is solely (**100%**) reliant on groundwater resources for water supply. The primary source for wells in this area is the Maricopa-Stanfield sub-basin within PAMA.

Does the applicant participate in an active recharge program contributing to groundwater sustainability?

Yes, Arizona Water Company has surface water recharge permits and a Central Arizona Project (CAP) allocation that is stored and recovered through groundwater saving facilities (GSFs) and underground storage facilities (USFs) near Coolidge and Casa Grande. These facilities contribute to groundwater sustainability by allocating CAP surface water supplies to the local irrigation districts including Maricopa-Stanfield Irrigation and Drainage District (MSIDD), Central Arizona Irrigation and Drainage District (CAIDD), and Hohokam Irrigation and Drainage District (HIDD). The supplies from GSFs and USFs are then used for irrigation purposes while avoiding pumping groundwater supplies from the Eloy and Maricopa-Stanfield subbasin aquifers.

Provide information documenting that proposed well(s) will not adversely impact the aquifer it/they are pumping from (overdraft or land subsidence).

The proposed project will not install new wells. Stanfield's Well 1 was installed in 1963 and Well 3 was installed in 1990. Well 1 (55-616684) and Well 3 (55-526586) had depths to water of 541 and 546 feet as of 2022, respectively.[13] The nominal pump capacity for Well 1 is 230 gpm and Well 3 is 240 gpm. Stanfield is in an area of subsidence; however, it is located directly south and west of artificial recharge facilities (Figure 4). AWC's permit allows for 565 AFY from Well 1 and 686 AFY for Well 3 in Stanfield, with actual production data captured and reported to ADWR annually. AWC only distributes based on real demand at Stanfield CWS, and currently all pumping is in compliance with the existing permits from ADWR.

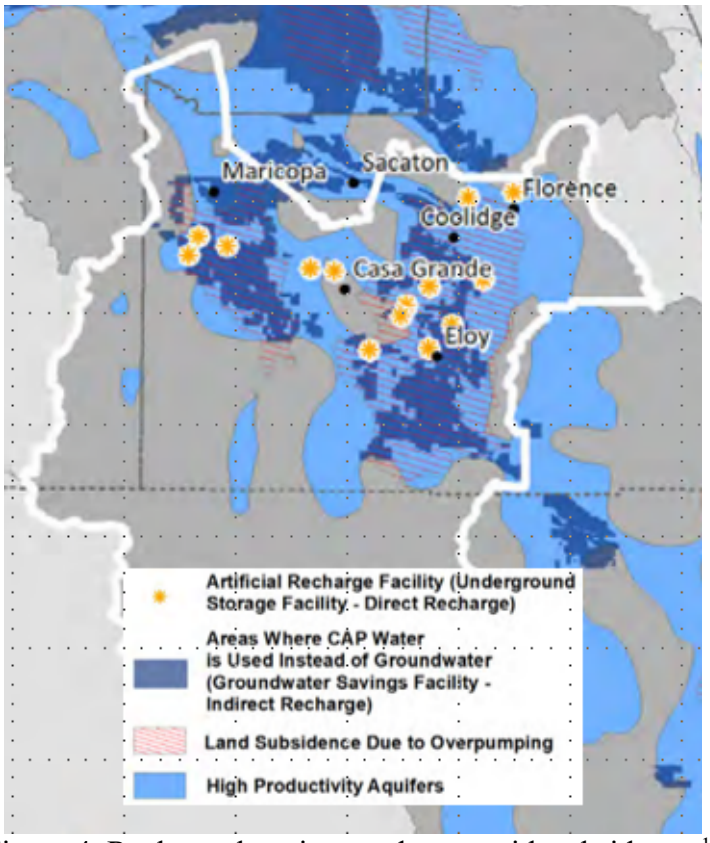

Figure 4. Recharge locations and areas with subsidence [14]

Describe the groundwater monitoring plan that will be undertaken and the associated monitoring triggers for mitigation actions. Describe how the mitigation actions will respond to or help avoid any significant adverse impacts to third parties that occur due to groundwater pumping.

For reporting groundwater pumping and supplies, AWC provides updates to ADWR via the SWP for Stanfield CWS (see Appendix E) by submitting the report every five years. The SWP for Stanfield has also reported conservation measures already in place, including well metering, service connection metering, water rate structuring, leak detection, meter inspection, storage tank evaporation controls, eliminating illegal connections, conservation handout materials, conservation tips online and on water bills, along with adult education workshops and classes. These efforts represent integrated, best management practices to assure ADWR that measures are in place to minimize unwarranted overproduction or system losses, thus avoiding adverse impacts from excessive groundwater pumping. Adverse impacts to groundwater supplies are prevented through use of water-efficient practices and use of best management frameworks.

1.5.1.2. Climate Change

In addition to drought resiliency measures, does the proposed project include other natural hazard risk reductions for hazards such as wildfires or floods?

In addition to drought, climate change has resulted in many natural hazards such as wildfires across the western US. Multiple studies have concluded that climate change has already led to an increase in wildfire season length, fire frequency and the size of burned areas. The wildfire season is longer in many areas due to factors such as warmer spring seasons, longer summer dry seasons,

and drier soils and vegetation. Wildfires require a substantial amount of water, and this Project can provide up to 755 AFY of water from a local and reliable source if needed.

Will the proposed project establish and use a renewable energy source?

The project will use existing renewable energy sources, since grid energy in Arizona is comprised of a substantial fraction (40%) of renewable energy (solar, hydroelectric, nuclear). The proposed project will not establish and use a renewable energy source.

Will the proposed project reduce greenhouse gas emissions by sequestering carbon in soils, grasses, trees, and other vegetation?

Carbon sequestering is not part of the proposed Project. The proposed project will reduce greenhouse gas emissions through the water-energy nexus and the energy savings expected from increasing local supplies.

Does the proposed project include green or sustainable infrastructure to improve community climate resilience?

Yes, the choice to use a biological treatment system over physical treatment technologies such as ion exchange or reverse osmosis for nitrate has an immediate benefit for maximizing water efficiency and minimizing waste at the site. Establishing drinking water treatment systems using this biological nitrate removal technology allows for **maximum efficient use of water resources without production of hazardous waste products such as sludge or brines**, requiring no disposal of waste to treatment facilities, thus saving energy while benefiting the environment. It is anticipated that the process delivers high quality treated water with minimal water loss through the process (<2% loss). This is a sustainable nitrate treatment technology choice because it will conserve water during the treatment process by minimizing water losses and protect water sources by reducing generated waste as compared to other conventional treatment options.

Does the proposed project seek to reduce or mitigate climate pollutions such as air or water pollution?

Yes, the proposed treatment systems directly mitigate water pollution in the form of nitrate and arsenic contamination. The region's groundwater already has an excess of nitrate contamination such that the Upper wells are reaching a baseline of 8.1±1.6 mg-N/L or in many cases exceeding the 10 mg-N/L MCL. Continued agricultural operations in the region will sustain the amount of nitrate in runoff and thus further increase nitrate concentration in basin groundwater; this is a basin-wide pollution problem identified by ADEQ. Climate change could exacerbate the problem by delivering more nitrate and dissolved solids from fertilized acreage to aquifers during extreme monsoon events. The proposed treatment system biologically destroys nitrate by enzymatic conversion to nitrogen gas and bicarbonates. Unlike the current ion exchange system, this results in zero generation of waste brine, high in total dissolved solids (TDS), which requires disposal in sewer lines or removal via hauling. This produced brine can disrupt downfield treatment processes or pollute water supplies. Therefore, degradation of nitrates without brine generation will improve water quality while protecting public health and water resources.

Does the proposed project have a conservation or management component that will promote healthy lands and soils or serve to protect water supplies and its associated uses?

Yes, the proposed nitrate and arsenic treatment systems will protect local groundwater supplies by removing the need to blend the supply wells and allowing for optimal utilization of water resources. Direct nitrate treatment therefore reduces the total volume of water supplies required to achieve the nitrate treatment objectives and decreases the demand on local water resources.

Does the proposed project contribute to climate change resiliency in other ways not described above?

Yes, the proposed treatment system will contribute to Stanfield's resiliency to climate change. Utilizing local water resources through robust treatment is a climate-resilient approach to water sustainability. It is highly inadvisable from the PAMA and ADWR perspective to transport water across basins, given the costs and difficulty in managing region-wide water use. Furthermore, it is extraordinarily costly to build pipelines, channels, or aqueducts and then pump water across the Southwest. The biological nitrate treatment system will help cover the local water production gaps using local resources.

Additionally, the choice to replace the ion exchange system with a biological nitrate treatment system eliminates hazardous waste streams (brines). The absence of brine generation and handling means decreased energy usage and emissions associated with transportation and disposal and mitigates the risk of brine affecting future potable or non-potable water uses. The proposed system is also resilient to large temperature fluctuations which are likely to occur due to climate change and has a smaller footprint meaning lower energy inputs and CO_2 emissions during site construction. Lastly, the treatment system can be automated with remote operation which allows for fewer site visits (drives) over time, saving energy and transportation-related CO_2 emissions.

1.5.1.3. Environmental Benefits

Does the project seek to improve ecological climate change resiliency of a wetland, river, or stream to benefit wildlife, fisheries, or habitats? Do these benefits support an endangered or threatened species?

Yes, the project will help ensure the continued use of groundwater, rather than imported surface water, in the Stanfield area. This will help prevent potential changes in the surface water levels in the Lower Colorado Basin and in the Maricopa-Stanfield Irrigation and Drainage District (MSIDD) by making use of local groundwater supplies. This keeps water upstream available for fisheries, endangered species and other priority habitats which are a part of the greater Lower Colorado River Basin ecosystem.

What are the types and quantities of environmental benefits provided, such as the types of species and the numbers benefited, acreage of habitat improved, restored, or protected, or the amount of additional stream flow added? How were these benefits calculated?

The utilization of local water supplies for the CWS prevents reliance on imported water from the Colorado River watersheds and CAP. In turn, this keeps more supply available upstream to benefit riparian ecosystems. These benefits are indirect and therefore cannot be quantified.

Will the proposed project reduce the likelihood of a species listing or otherwise improve the species status?

According to US Fish and Wildlife Service (USFWS), the Western Yellow-billed Cuckoo (C*occyzus americanus*) and the Mexican Spotted Owl (*Strix occidentalis lucida*) are classified as a threatened species in this region. Keeping Arizona's river watersheds properly managed and

having foraging areas associated with farmland (active or abandoned) can ease pressure on these threatened bird species.[15]

1.5.1.4. Other Benefits

Will the project assist States and water users in complying with interstate compacts?

Yes, the project helps ensure that Stanfield demands will not need to be met by CAP and Colorado River supplies in the future, thus aiding Arizona with compliance of interstate compacts and adjudicated water rights.

Will the project benefit multiple sectors and/or users (e.g., agriculture, municipal and industrial, environmental, recreation, or others)? Describe the associated sector benefits.

Yes, the project benefits multiple sectors. By contributing clean drinking water to area residents, the treatment system will help ensure the public health of the Stanfield residents as well as area children attending Stanfield Elementary School and patrons of local restaurants and other businesses such as metal fabrication shops. First responders working at the seven different fire departments and stations and Pinal County Sheriff Office will also benefit from a reliable water source in case of emergencies. As a continued benefit, area residents from rural households not connected to the CWS can also purchase water at Stanfield's water salesman facility to support their potable water needs.

The Project will contribute to a healthier population, which in turn promotes a healthy workforce. The region around the proposed project relies heavily on both agricultural and industrial economies, including cultivation of cotton, alfalfa, corn, wheat, and vegetables. There is a large dairy industry in the region, with an estimated 300,000 cattle and dairy cows in Pinal County. These industries provide a substantial fraction of County revenues, and their long-term sustainability will require a robust workforce and infrastructure reliant on ample supplies of potable water.

Water managers in Arizona will benefit from the new information derived from installing and operating a dual nitrate-arsenic treatment system in the State. This reduces the risk for future water managers and water companies seeking a similar treatment system. By having an existing facility, the process overview can be seen in-person, with sites potentially made available for tours and visits along with data and information exchanges. Additional resources generated from assessment of treatment performance data and related outcomes can be shared at industry conferences and workshops, further benefiting water managers in Arizona and beyond.

Will the project benefit a larger initiative to address sustainability?

Yes, replacing the current ion exchange (IX) treatment system with biological nitrate treatment is a more sustainable method by eliminating the need for additional handling to address secondary brine wastes. Currently, the IX brine is collected via tanker truck, hauled off site and disposed at a landfill which accepts the brine waste, at considerable cost to AWC. The nitrate treatment system harnesses natural organisms to convert nitrate into a harmless byproduct, nitrogen gas. Past projects utilizing this type of biological treatment have benefitted disadvantaged areas of Barstow, San Gabriel, Modesto, San Juan Bautista, and Marysville, CA and Avondale and Goodyear, AZ.

Will the project help to prevent a water-related crisis or conflict? Is there frequently tension or litigation over water in the basin?

Yes, this project will aid in keeping water resources local, eliminating the need for water transfer projects between Active Management Areas and/or regional aquifer sub-basins as outlined

in PAMA5MP. The use of local water supplies will avoid conflict during times of water shortages and droughts. Due to elimination of their Colorado River surface water supplies, the nearby City of Scottsdale had to implement emergency full-scale arsenic treatment systems at several well sites on an "aggressive" timeline. This Project aims to avoid such a crisis by proactively implementing the dual-contaminant treatment process at Stanfield. Furthermore, the project will help the Company avoid missing any treatment targets for nitrate and arsenic contaminants, therefore ensuring public safety, and mitigating legal or regulatory actions for non-compliance.

1.5.2. Evaluation Criterion B – Planning and Preparedness

Describe any prior planning efforts related to the proposed project. Was the plan developed through a collaborative process? If the referenced plan was not developed collaboratively, please explain why. Does the plan include elements of drought planning? If so, please describe.

There are a number of drought-related planning efforts in the project region (Appendices C, D, E). These include:

1.5.2.1. Pinal Active Management Area's Fifth Management Plan for 2020-2025 (PAMA5MP)[3]

The PAMA5MP was developed as part of a process put in place by the Arizona Groundwater Management Act in 1980, which established five Active Management Areas (AMA) for groundwater management around the state. This report discusses the PAMA's hydrology, water sources, recharge plans, present and future water demands for municipal, industrial, and agricultural sectors, and on-going strategies for water management. This regional plan is developed by ADWR through a long-term collaborative process which engages stakeholders within the AMAs. Development of PAMA5MP started with the formation of the Management Plans Working Group (MPWG) by ADWR. The MPWG was a forum for engaging stakeholders in the Management Areas and met 38 times while working with various stakeholders, including the Groundwater Users Advisory Committee and Agricultural Water Conservation Best Management Practices Advisory Committee, to draft the plan which was then again shared with stakeholders via public hearings. Even once a management plan is adopted, it can be revised through a similar public hearing process. Because the main objective of the PAMA5MP to conserve groundwater and prevent overdraft is threatened by dwindling surface water supplies, the plan does outline drought planning, including further developing conservation incentives, groundwater recovery, and recharge capabilities.

1.5.2.2. Arizona Drought Preparedness Plan (ADPP, updated each year in an Annual Report)[16]

The ADPP was first implemented between 2004 and 2007. The report is prepared every year by the Arizona Department of Water Resources (ADWR) and includes updates on the state's drought conditions and expected conditions in the water year ahead. As part of the ADPP, regulations for CWSs were put into place to report on their water use and drought planning in System Water Plans every five years. The annual reports for the ADPP are developed based on information from groups like Local Drought Impact Groups, the Drought Monitoring Technical Committee, and the Governor's Drought Interagency Coordinating Group. Contributors to the 2022 report included professionals at state and federal agencies, including AWDR, Arizona Department of Health Services, Arizona Department of Forestry and Fire Management, US Geological Survey, US Department of Agriculture, and the National Weather Service. There were

also contributors affiliated with Arizona State University and Salt River Project, a local utility provider. This report focuses solely on the drought that the State of Arizona faces. It covers trends in precipitation and temperature, current drought status of regions around the state, and highlights implementation of drought planning efforts over the past water year. For drought status and drought emergency planning information from ADWR's 2022 ADPP, see Appendix D. AWC does submit CWS-based system water plans every five years as directed in the ADPP. These system water plans, which cover water supplies and drought preparedness, are described below.

1.5.2.3. CWS System Water Plans (SWP) for the Arizona Water Company-run CWS of Stanfield[13]

The SWP covers the CWS's water use over the previous five years (volume produced and sources), expected changes to the CWS demand, planned changes to the CWS to meet demand, drought stage responses, and emergency supplies. These plans are prepared by the water provider responsible for the given CWS, as the information needed is specific to each CWS. Each plan contains a drought plan of action, which describes the stages of drought (0-4) and then details what actions will be taken at each given stage of drought to help make sure water demands can be met. Lastly, the SWP details each CWS's plans for conservation activities and emergency water supplies. Appendix E gives the overview of Drought Preparedness Plan from Stanfield CWS's SWP for the years 2017-2021.

1.5.3. Evaluation Criterion C – Severity of Actual or Potential Drought or Water Scarcity Impacts Addressed by Project

Describe recent, existing, or potential drought or water scarcity conditions in the project area.

Arizona's climate is considered semi-arid and arid and has been suffering from a drought since 1994 with a Drought Emergency Declaration in effect since 1999. Average precipitation has declined by 0.02 inches per decade over this time period.[16] Additionally, winter temperatures have been steadily climbing over the last 40 years, which directly impacts water availability by limiting snowpack and therefore runoff and recharge in the warmer months.[16] For example, over the winter of 2021-2022, there was average to below average snowpack so Colorado River flow was down leading to losses in important reservoirs around the state (Lake Mead down by 22.26 ft, Lake Powell down by 16.03 ft from WY 2021, Salt and Verde System down by 141,366 acre-ft, and the total Colorado River system storage down by 3.38 million acre-ft from Water Year 2021).[16]

Pinal County, where the project is located, has been a USDA-designated Drought Disaster area for eight out of the last eleven years with either a Primary or Contiguous Disaster Designation.[16–26] Drought Monitor shows Pinal County has been experiencing drought conditions ranging from abnormally dry to extreme since 2000. Drought conditions are becoming more common as exceptional drought conditions (D4) have occurred more often in the last five years (Figure 5).[2]

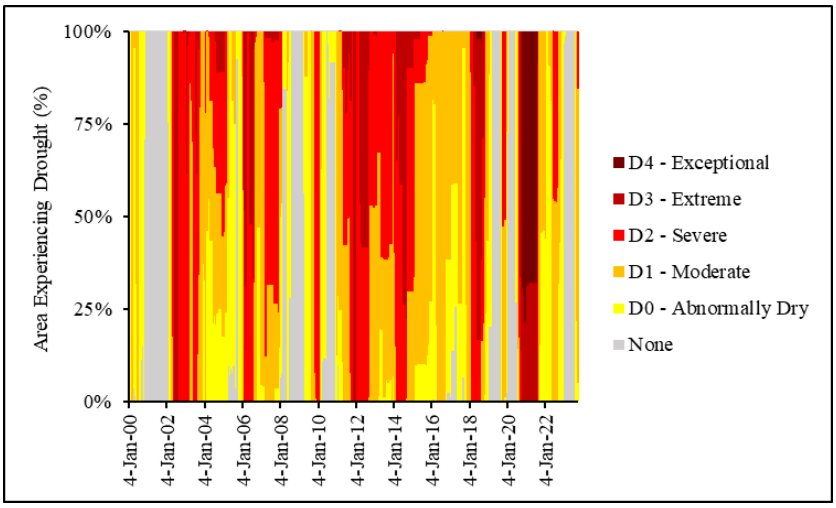

Figure 5. Pinal County drought data since 2000[2]

The report titled "Eloy-Maricopa Stanfield Basin Study: Development of Future Climate and Recharge Scenarios," which was written by the Bureau of Reclamation as part of the grant awarded to the Pinal Partnership, examined future temperature trends, future precipitation patterns, and future recharge scenarios. Across all the projected future climate scenarios, there was a consistent trend of rising temperatures. All the modeled scenarios pointed to the likelihood of longer periods between substantial recharge events during which groundwater reservoirs would receive replenishments.[27]

According to the Bureau of Reclamation, Lake Powell is in a Lower Elevation Balancing Tier for water year 2023, while Lake Mead is in a Tier 2a Shortage Condition in calendar year 2023. The observation of water levels at Lake Mead caused restrictions to the Lower Colorado Basin, specifically causing Arizona's Colorado River supply to be cut by nearly 592,000 AF, or 21%, of the State's past allotment. For 2024-2026, the latest forward-looking projections for Lake Mead indicate that it will not restore Normal Conditions, and it will remain under Tier 1 Shortage Conditions in the near future (100% chance for 2024, 90% chance for 2025, and 53% chance for 2026). This outlook indicates that Arizona will have to rely more heavily than before on three major sources of water: 1) groundwater, 2) (non-Colorado River) surface water, and 3) treated effluent.[28] According to the PAMA5MP (see Appendix C), current mitigation strategies for this loss of Colorado River water are due to expire in the next few years. Arizona statutes allow for the transportation of groundwater from the McMullen, Butler Valley, or Harquahala groundwater basins to PAMA. Due to the severity of cuts from Colorado River allocations, this last option, importing of groundwater from basins outside the PAMA region, is considered a plausible scenario under PAMA's management plan.[3]

The anticipated number of dry days (days without any precipitation events) in the Central Arizona region is 285 days on average (1961-1990). According to projections from The Climate Explorer website, the number of dry days in Pinal County, AZ could likely increase by an additional 10-11 days annually (295-296 dry days per year) by the 2040s. It is also predicted that the scarcity of rain events could be offset by highly variable and unpredictably extreme monsoon-type events.[29] For Southwestern Arizona, such storms were documented to have increasing intensity of rainfall,[30] the severity and short duration of which could lead to more extreme flooding events within Arizona, causing significant damage to crops and infrastructure. While the monsoon

events can lead to temporary relief from wildfire threats or dust storms, the water itself may not be relied on by agriculture, nor provide much benefit for groundwater recharge.[27]

What are the ongoing or potential drought or water scarcity impacts to specific sectors in the project area if no action is taken (e.g., impacts to agriculture, environment, hydropower, recreation, tourism, forestry, etc.), and how severe are those impacts?

Current water quality issues in the PAMA and districts serviced by AWC have the potential to culminate in an acute public health crisis if the treatment systems are not installed soon. These two contaminated wells are the community's only source of drinking water. Decreased utilization of these wells due to the contamination restricts operational adaptability and puts the community is a very vulnerable position. Stanfield emergency water would have to be supplied by hauling water from the Pinal Valley System, with bottled water to be used as a temporary response if necessary (Appendix E).[13] However, this would burden the CWS with substantial cost to import water and be counterproductive to the drought plans and water management programs set by ADWR should either of the wells need to be taken offline due to contaminant exceedances or if the current treatment system fails.

1.5.4. Evaluation Criterion D – Presidential and DOI Priorities

Describe, in detail, how the proposed project supports the priority(ies) below.

1.5.4.1. Disadvantaged or Underserved Communities

Please use the White House Council on Environmental Quality's interactive Climate and Economic Justice Screening Tool, available online at Explore the map – Climate & Economic Justice Screening Tool (https://screeningtool.geoplatform.gov) to identify the disadvantaged communities that will benefit from your project.

As described in Section 1.5.1.1 above, this project will serve a disadvantaged area that experiences environmental, health, and social burdens, such as increased wildfire risk due to climate change, health conditions such as asthma, and inequitable access to transportation. See Appendix B for complete documentation of the designated tracts within the project service area.

If applicable, describe how the proposed project will serve or benefit a disadvantaged or underserved community, identified using the tool described above. For example, will the project improve public health and safety by addressing water quality, add new water supplies, provide economic growth opportunities, or provide other benefits in a disadvantages or underserved community?

The main benefit of the proposed dual-contaminant treatment train is that it offers a safeguard for the public health of residents through reliable drinking water treatment, instead of relying on an aging system or needing to blend water sources to comply with nitrate standards. These strategies would be challenging and unreliable solutions to the community when facing unexpected spikes in nitrate levels. This treatment will specifically target water quality problems (i.e., elevated nitrate) associated with proximity to agriculture,[6] which is an important industry in the county and many in the area may rely on for income. Additionally, this supports the goal of the PAMA's Fifth Management Plan to "allow the development of non-irrigation water uses and to preserve existing agricultural economies in the Pinal AMA for as long as feasible, consistent with the necessity to preserve future water supplies for non-irrigation uses (A.R.S. § 45-562(B))"[3] by helping supply safe water to residents and the existing industries in the area as water supplies from the Colorado River are cut.

1.5.4.2. Tribal Benefits

Does the proposed project directly serve and/or benefit a Tribe?
No.

Does the proposed project support Reclamation's Tribal trust responsibilities or a Reclamation activity with a Tribe?
No.

1.5.5. Evaluation Criterion E – Readiness to Proceed and Project Implementation

Describe the implementation plan of the proposed project.

The project will consist of five stages described below and is capable of proceeding immediately after execution of the agreement with BOR. Table 3 shows the Project schedule with a start date of November 2024, construction beginning June 2025, and Project completion by November 2026. The tasks below describe how the Project will be implemented:

Task 1: Project Management and Reporting – AWC will prepare documentation relating to Project funding, contracts, and reporting mechanisms to ensure requirements of the proposal and agreement are met.

Task 2: Design and Engineering – The final design drawings will be completed by February 2025. The final design drawings will be submitted to obtain all required permits and as a part of the bid package for the Project to contractors. This will include design of the nitrate and arsenic treatment systems (see Appendix F for Microvi Letter Proposal for nitrate and arsenic treatment system).

Task 3: Permitting – Arizona Water will submit design drawings Arizona Department of Environmental Quality (ADEQ) for permit approval.

Task 4: Bidding and Procurement of Construction Contract – Bid documents will be developed, advertised, and submitted for contractor bidding. This will also include bid evaluation, contactor selection and award, and notice to proceed.

Task 5: Construction and Implementation – Construction activities include acquisition of necessary bonds and insurance, submittals, procurement of materials, supplies, and equipment, site preparation and infrastructure upgrades required to receive and install treatment systems. It will also include the installation of the treatment systems which include electrical, mechanical, and programming. Once the treatment systems have been installed, media for the biological nitrate system will be installed and start-up will be initiated by going through an acclimation phase until steady state conditions are achieved. In parallel arsenic media will also be installed and wet commissioned. After both treatment systems achieve steady state operation, the previous ion exchange system will be fully decommissioned and removed from the site.

Table 3. Project schedule and milestones

No.	Task/Milestone	Start Date	Completion Date
	Anticipated Funding Award Date		*October 31, 2024*
1	Project Management and Reporting	November 2024	December 2024
2	Design and Engineering	January 2025	March 2025
3	Permitting	April 2025	May 2025

4	Bidding and Procurement of Construction Contract	June 2025	August 2025
5	Construction	September 2025	November 2026

Describe any permits or approvals that will be required.

The project site is located within Pinal County, and with such will require an Approval to Construct (ATC) and an Approval of Construction (AOC) permit from the Arizona Department of Environmental Quality (ADEQ). The permit application will require at a minimum the following items:

- Design Report
- As-built Drawings
- Application
- Fee (included in the budget narrative)

The ATC permit must be procured prior to the start of construction. The AOC permit is procured once construction is completed. The overall review time for the ATC and AOC applications for approval is 53 business days each for a total of 106 business days.

Table 4. Anticipated Project permits and approval/issuance processes

Anticipated Permits	Process for Approval or Issuance
ADEQ Approval to Construct (ATC)	Preapplication meeting, followed by preparation of the application and permit package consisting of the design drawings, design report, and technical specifications. After submittal and review by ADEQ, any comments or coordination will be amended, and once approved, ADEQ will issue the Approval to Construct, and construction can begin.
ADEQ Approval of Construction (AOC)	After the completion of substantial construction, the record documents, including the as-built drawings, materials testing results,

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

The engineer will provide the following deliverables in support of the proposed project: Design drawings; design report; and specifications.

Each of the above-listed deliverables will be completed in a phased approach allowing for data analysis, reviews, and progress meetings. The engineer will work with the subconsultants to complete the design per the applicable standards and regulations. The engineer will provide permitting support to obtain all necessary permits.

Preliminary design for the nitrate treatment system and arsenic treatment system were informed by and completed based on site water quality data and specific site treatment requirements. The nitrate treatment system is proposed to fit upstream of the arsenic removal process such that post-biological filtration can integrate easily with an arsenic media filtration system. Microvi will design the system parameters and produce initial process flow diagrams (PFDs) and will work collaboratively with the third-party fabricator to finalize the design and produce final process flow diagrams (PFDs) and piping and instrumentation diagrams (P&IDs). Work prior to the start of the Project and outside of this request for funds included piloting a small-scale BNTS system.

Describe any land purchases that must occur before the project can be implemented.

No land purchases are required for the project.

Describe any new policies or administrative actions required to implement the project.

No new problems or administrative actions are required to implement the project.

1.5.6. Evaluation Criterion F – Nexus to Reclamation

Does the applicant have a water service, repayment, or O&M contract with Reclamation?

No.

If the applicant is not a Reclamation contractor, does the applicant receive Reclamation water through a Reclamation contractor or by any other contractual means?

AWC receives Bureau of Reclamation water through a CAP allocation.

Will the proposed work benefit a Reclamation project area or activity?

It is unknown if the proposed project will benefit a Reclamation project area or activity.

Is the applicant a Tribe?

No.

1.5.7. Evaluation Criterion G – Stakeholder Support for Proposed Project

Describe the level of stakeholder support for the proposed project. Are letters of support from stakeholders provided? Are any stakeholders providing support for the project through cost-share contributions or through other types of contributions to the project?

There are eight letters of support provided (Table 5 and Appendix A). These letters represent support from regional government offices (Arizona Governor's Office of Resiliency, Maren Mahoney; Arizona State legislature – District 16, Teresa Martinez; and Pinal County Supervisor, Stephen Miller), water experts (Pinal Active Management Area Groundwater Users Advisory Council, Bill Collings and Water Resources Research Center at the University of Arizona, Sharon Megdal), regional advocacy and planning groups (Pinal Partnership, Tony Smith and Pinal County Water Augmentation Authority, Bill Collings), and fellow water providers (Maricopa-Stanfield Irrigation & Drainage District, Bryan Hartman). These stakeholders are not contributing to the project budget.

Table 5. Letters of Support provided for the Project

Organization	Representative
Governor Katie Hobbs' Office of Resiliency	Maren Mahoney, Director for the Governor's Office of Resiliency

Arizona Legislature	Teresa Martinez, Arizona Legislature, District 16
PINAL COUNTY	Stephen Miller, Pinal County Board of Supervisors, District 3
Pinal Active Management Area Groundwater Users Advisory Council	William Collings, Chairman for the PAMA Groundwater Users Advisory Council
WATER RESOURCES RESEARCH CENTER	Sharon Megdal, Director at the University of Arizona Water Resources Research Center and Professor of Environmental Science
PINAL PARTNERSHIP Uniting the Vision for Pinal County	Tony Smith, President and CEO for Pinal Partnership
PCWAA Pinal County Water Augmentation Authority	William Collings, Chairman for the Pinal County Water Augmentation Authority
MARICOPA-STANFIELD IRRIGATION & DRAINAGE DISTRICT	Bryan Hartman, President of Maricopa-Stanfield Irrigation & Drainage District

Explain whether the project is supported by a diverse set of stakeholders, as appropriate, given the types of interested stakeholders within the project area and the scale, type, and complexity of the proposed project. For example, is the project supported by entities representing agricultural, municipal, Tribal, environmental, or recreation uses?

Those who have provided letters of support cover the range of stakeholders who may benefit from this project. The Governor's Office of Resiliency, Arizona legislature, and Pinal County Supervisor represent the residents in the service area who would be served by the new treatment

system. Water experts from the University of Arizona and from advocacy groups in the region have a vested interest in making sure local water suppliers are more resilient to drought conditions that the area may experience to ensure water stability throughout the region. Both Pinal Active Management Area Groundwater Users Advisory Council and Pinal Partnership represent multiple disciplines within their ranks including agriculture, residents, engineers, and real estate. Maricopa-Stanfield Irrigation & Drainage District represents agricultural suppliers in the area.

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2. Project Budget

2.1. Funding Plan and Letters of Commitment

Describe how the non-Federal share of projects costs will be obtained. Reclamation will use this information in making a determination of financial capability.

Arizona Water Company (AWC) has allocated the matching funds necessary to complete the project. The source of the non-federal cost share is from AWC's Capital Projects Fund.

If a project is selected for award under this funding opportunity and cost share funding is anticipated to be provided by a source other than the applicant, the third-party cost share must be supported with letters of commitment prior to award.

AWC will be providing the matching funds from its own budget. No letters of commitment are included as there are no third-party funders for this project. Table 1 shows the funding distribution for the proposed project. AWC will provide $500,000 of non-federal cost-share (5.2%) for the project. The budget proposal does not include design or other project costs that will be incurred prior to the Project being awarded.

2.2 Budget Proposal

Table 1. Total Project Cost Summary

Source	Amount
Costs to be reimbursed with the requested Federal funding	$9,094,200
Costs to be paid by the applicant	$500,000
Total Project Cost	$9,594,200

Table 2. Non-Federal and Federal Funding Sources Summary

Funding Sources	Amount	%
Non-Federal Entities		
Arizona Water Company	$500,000	5.2%
Non-Federal Subtotal	$500,000	
Requested Reclamation Funding	$9,094,200	94.8%

Table 3. Budget Proposal

Budget Item Description	Computation		Quantity Type	Total Cost
	$/Unit	Quantity		
Salaries and Wages				
Not Applicable				
Fringe Benefits				
Not Applicable				
Travel				
Not Applicable				
Equipment				
Not Applicable				
Supplies and Materials				
Not Applicable				
Contractual/Construction				

Professional Services				
Administrative and Legal Expenses	$18,580	1	LS	**$18,580**
Engineering Fees	$780,500	1	LS	**$780,500**
Project Inspection Fees	$47,400	1	LS	**$47,400**
	Subtotal Professional Services Costs			**$846,480**
Construction				
Site Work	$138,590	1	LS	**$138,590**
Demolition and Removal	$83,530	1	LS	**$83,530**
Construction	$1,697,100	1	LS	**$1,697,100**
Equipment	$5,379,000	1	LS	**$5,379,000**
Miscellaneous	$612,700	1	LS	**$612,700**
Contingencies	$836,800	1	LS	**$836,800**
	Subtotal Construction Costs			**$8,747,720**
Other				
Not Applicable				
	Total Direct Costs			$9,594,200
Indirect Costs				
Not Applicable				
	Total Estimated Project Costs			$9,594,200

2.3 Budget Narrative

2.3.1. Personnel

Not applicable. Project implementation will be conducted by the contractor(s) performing the work. AWC will not seek reimbursement for staff time spent on the Project, such as project management activities, as it is considered normal staff activity.

2.3.2. Fringe Benefits

Not applicable. Fringe benefits are not included in the overall project budget.

2.3.3. Travel

Not applicable. Travel to the project site is considered a part of normal staff activity and no reimbursement is being sought.

2.3.4. Equipment

Not applicable. The purchase of treatment equipment and any related piping and equipment is included as a part of the construction contract.

2.3.5. Supplies

Not applicable. Similar to the above, materials and supplies for the Project will be part of the construction contract.

2.3.6. Contractual

2.3.6.1. Contract Narrative

Through a competitive bid process which meets applicable county, state and federal requirements, a Contractor will be selected by AWC. Contractual and construction work to be completed includes the installation of treatment systems, disinfection, associated appurtenances, associated piping, site preparation, concrete, and construction management.

2.3.6.2. Subaward Narrative

Not applicable. No subawards are included in the Project.

2.3.7. Construction

All construction items are included within Budget Class Category 6g. This includes labor and materials related to mechanical items, equipment, painting, metals, masonry, and concrete.

2.3.7.1. Equipment Use

Not Applicable.

2.3.7.2. Construction Material

All construction-related costs are included in Budget Class Category 6g and accounted for in the above table.

2.3.7.3. Contractual Services

All estimates were determined using published market values and vendor supplied quotes. A detailed estimate is included within Budget Class Category 6g.

2.3.7.4. Other Construction-related costs

All construction-related costs are included in Budget Class Category 6g and accounted for in the above table.

2.3.8. Other

2.3.8.1. Other Costs (Excluding Third-Party Contributions)

All project costs are captured in Table 3 above. No other expenses are proposed.

2.3.8.2. Third-Party Contributions Narrative

Not applicable.

2.3.9. Indirect Costs

No other expenses are anticipated beyond what is captured in the above categories.

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.

The project is not expected to impact the surrounding environment other than dust and noise during construction. The selected contractors will be required to follow Pinal County Air Quality Control District Regulations for dust. Noise generated from construction activity will be minimal and contractors will work within designated ordinance construction hours.

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?

There are two Endangered Species listed for the project area: the Sonoran pronghorn (*Antilocapra americana sonoriensis*) and the Gila topminnow (*Poeciliopsis occidentalis*). There is no critical habitat designated for either of these species at the moment. There are also two Threatened Species listed for the project area: the Yellow-billed Cuckoo (*Coccyzus americanus*) and the Cactus ferruginous pygmy-owl (*Glaucidium brasilianum cactorum*).

There are no critical habitats for these species within the project area. Work at the site is unlikely to cause any disturbances as it falls within an industrial area, is fenced in, and has minimal vegetation onsite that might attract animals as habitat.

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 wetlands or other surface waters inside the project boundaries.

When was the water delivery system constructed?

Well 1 (55-616684) has a drill date of 1963 and Well 3 (55-526586) has a drill date of 1990. The current ion exchange treatment system has been in place since 2008.

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 Project will not result in modification of individual features of an irrigation system.

Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places?

There are no buildings, structures, or features listed or eligible for listing on the National Register of Historic Places within the Project area.

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

There are no known archeological sites in the Project area.

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

The Project will not have a negative or adverse effect on low income or minority populations. The Project will provide positive benefits to low income and minority populations by increasing water supply and improving water quality to federally designated disadvantaged communities. See Sections 1.5.1.1 and 1.5.4.1.

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

The Project will not limit access to and ceremonial use of Indian sacred sites or result in other impacts on Tribal lands.

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 will not contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species in the area.

4. Overlap or Duplication of Effort Statement

There is no anticipated overlap between the Project and any other active or anticipated proposals or projects in terms of activities, costs, or commitment of key personnel that would adversely impact the Project. In addition, the proposal submitted for consideration under this program is not currently in any way duplicative of any proposal that has been submitted for funding consideration to other potential Federal or non-Federal funding sources.

5. Conflict of Interest Disclosure Statement

There is no actual or potential conflict of interest at the time of submission.

6. Uniform Audit Reporting Statement

AWC was not required to submit a Single Audit Report for Fiscal Year 2022-2023

7. SF-LLL: Disclosure of Lobbying Activity (if Applicable)

Arizona Water Company does not perform any lobbying activities.

8. Official Resolution

The applicant is governed by a Board of Directors who support this application provided for the FY 2024 WaterSMART Drought Resiliency NOFO. The Board has legal authority to enter into an agreement with Bureau of Reclamation upon selection, and prior to award, will adopt an official resolution at the Board meeting.

9. Letters of Funding Commitment

Not applicable. No third-party cost share is included in the Project.

Appendix A: Letters of Support

A1. Maren Mahoney, Director for the Governor's Office of Resiliency

A2. Teresa Martinez, Arizona Legislature, District 16

A3. Stephen Miller, Pinal County Board of Supervisors, District 3

A4. William Collings, Chairman for the PAMA Groundwater Users Advisory Council

A5. Sharon Megdal, Director at the University of Arizona Water Resources Research Center and Professor of Environmental Science

A6. Tony Smith, President and CEO for Pinal Partnership

A7. William Collings, Chairman for the Pinal County Water Augmentation Authority

A8. Bryan Hartman, President of Maricopa-Stanfield Irrigation & Drainage District

KATIE HOBBS
GOVERNOR

STATE OF ARIZONA
OFFICE OF THE GOVERNOR

EXECUTIVE OFFICE

November 1, 2023

Honorable Commissioner Camille Calimlim Touton
Bureau of Reclamation
1849 C Street NW
Washington, D.C. 20240-0001

Dear Commissioner Touton,

On behalf of the Governor's Office of Resiliency, I write to you in support of the 2023 Bureau of Reclamation WaterSMART Grant applications submitted by Arizona Water Company. These projects aim to enhance the Community Water Systems in Pinal County, AZ, by addressing nitrate and arsenic contamination, which is of great importance. By incorporating nitrate treatment systems and arsenic removal systems, these initiatives represent a significant step towards ensuring clean, safe drinking water for disadvantaged communities in the region, while also bolstering the reliability of our groundwater supply.

Moreover, these projects align with key water policy outcomes in the state of Arizona. Governor Hobbs has emphasized the need to secure and modernize Arizona's water supply through better conservation and management of water resources, investing in infrastructure, and fostering inclusive leadership. These grant applications support these priorities by addressing water quality issues and improving water infrastructure.

In light of the significant challenges facing our Pinal County communities, I believe that this grant is vital. These projects not only have the potential to enhance the residents' quality of life by addressing public health concerns but also are in alignment with sustainable water management practices that minimize waste and its related costs, a matter of heightened importance in the face of ongoing drought conditions. Furthermore, this application reflects an inclusive approach, ensuring that all stakeholders have equitable access to essential services. Historically, disadvantaged communities have been underserved, and it is of utmost importance that we allocate resources to address these disparities for the advancement of a more prosperous and sustainable Arizona.

I extend my appreciation for your thoughtful consideration of these applications, which offer essential water resource benefits to Pinal County.

Sincerely,

Maren Mahoney
Director, Governor's Office of Resiliency