

Del Puerto Water District

WaterSMART Grants: Small-Scale Water Efficiency Projects

Funding Opportunity No: R22AS00195
CFDA No. 15.507

Del Puerto Water District Groundwater Well Remote Telemetry Program

Submitted By:

Del Puerto Water District

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Technical Proposal

Executive Summary

Name: Del Puerto Water District Date: April 26, 2022

City: Patterson County: Stanislaus State: California

Del Puerto Water District (District) is a CVP contractor that delivers water to 43,815 acres of highly productive agricultural ground and services 137 customers. The District has relied on its CVP allocation of 3.2 AF/AC for all of its surface water deliveries prior to the completion of the North Valley Regional Recycled Water Program (NVRWP) which delivers up 20,000 AFY of tertiary treated recycled water from the cities of Modesto and Turlock. Growers in DPWD have needed to rely heavily on groundwater to supplement their irrigation needs throughout the recent droughts. In 2020 the District implemented the 1st phase a real-time monitoring program that allows water users in the District to access their flowmeter readings in real-time to better make decisions regarding efficient water use. In 2014 the state of California passed the Sustainable Groundwater Management Act (SGMA) requiring all groundwater basins in the state to develop a plan to reach sustainability with regard to groundwater use by 2040. The District intends to expand the its existing SCADA network to include groundwater use in the District to maximize the grower's ability to track use of surface water and groundwater most efficiently through ongoing and future droughts. This will require the purchase of flowmeter and radio equipment to connect to the District's existing SCADA network. DPWD estimates that based on surface deliveries and crop ETs, the average historical groundwater pumping in the District is around 48,000 AF/Y. The Del Puerto Water District groundwater Well Remote Telemetry Program (project) would allow the District to collect more complete data regarding water use through drought periods and better manage District supplies to maximize conjunctive use within the District and limit the potential impacts relating to relying heavily on groundwater use during these periods. District customers would be also be able to better track their various supply types and make informed decisions regarding when to use which type to minimize drought related impacts. The District would be able to utilize this data in its efforts to comply with SGMA and implement the Northern & Central Delta-Mendota GSP.

The project will begin the necessary environmental documentation as soon as the grant award is announced. It is anticipated that due to the limited environmental impact of installing meters on existing wells that this process should take no longer than 9 months. During this time meters and networking equipment will be purchased by the District so construction can begin as soon as environmental clearance is determined. The construction process should take roughly 12 months from the anticipated start date of November 2022 to install the 45 high-priority meters the

District plans to meter and track through this project. As all of the wells are privately owned, thus none of the project will be on a Federal facility.

Project Location

The Project will be located within DPWD's boundaries at each identified Agricultural well in the District. The map of the District's boundaries and identified wells is shown below.

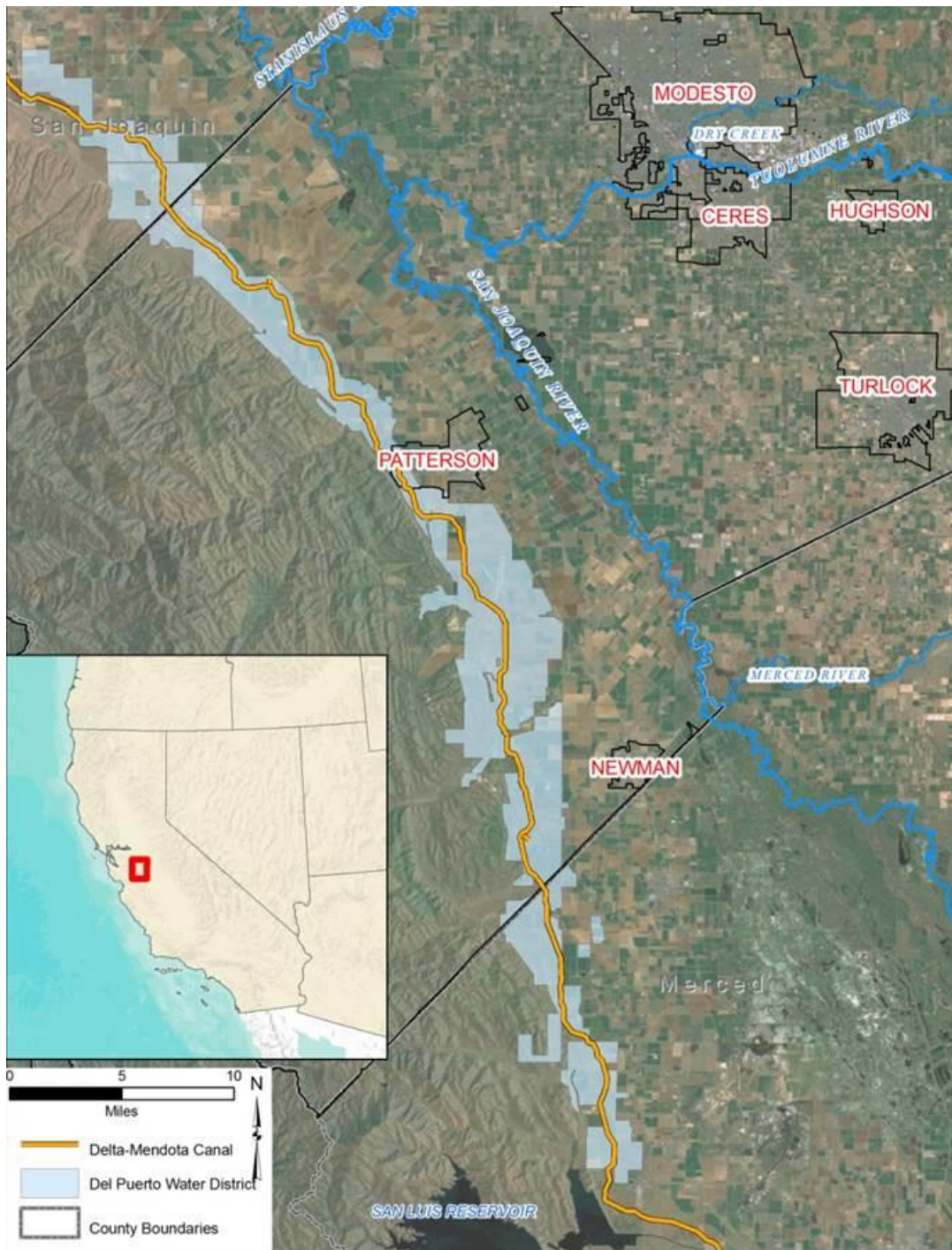


Figure 1: Del Puerto Water District Boundary

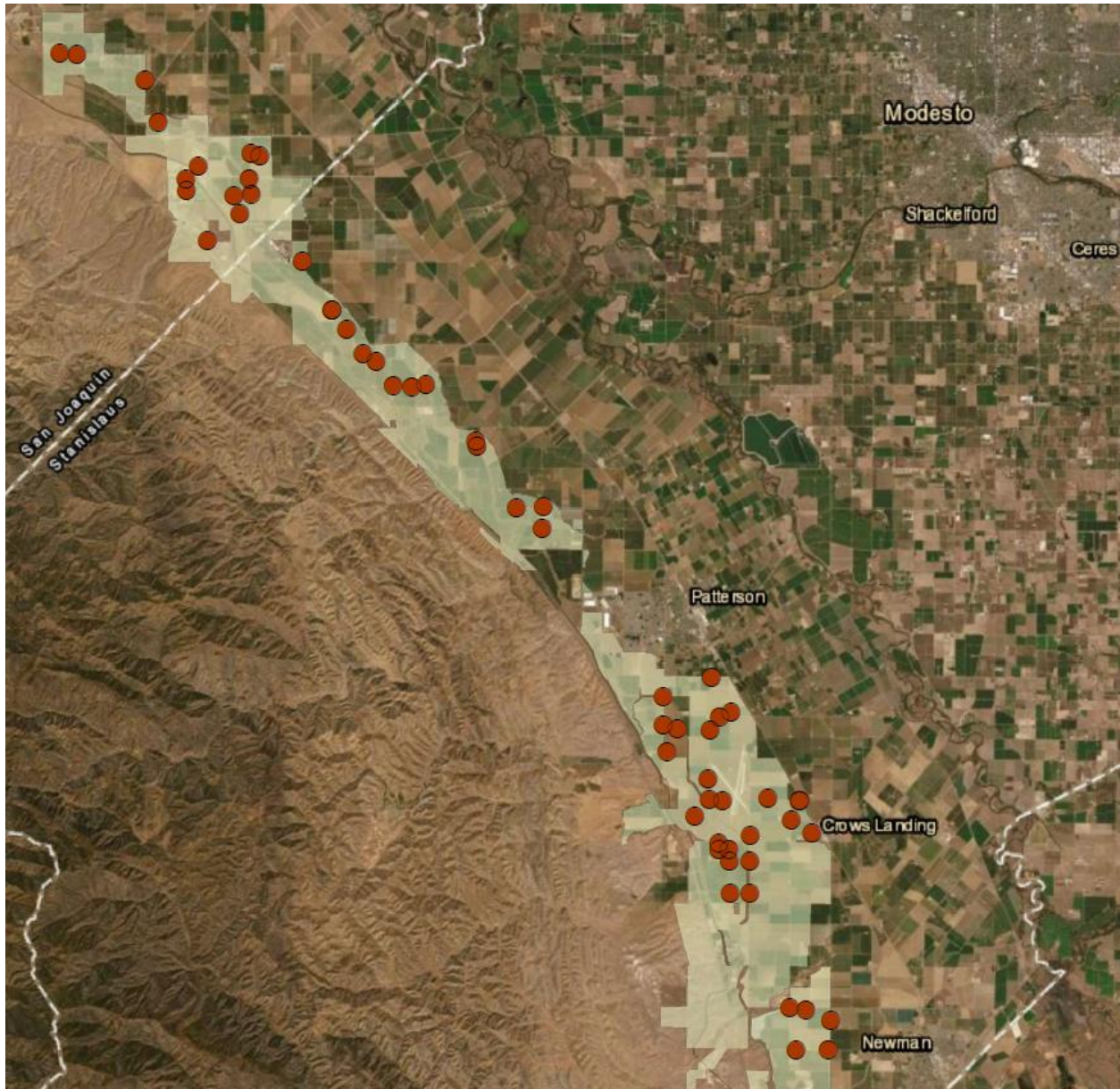


Figure 2: Location of Lower Aquifer Wells North

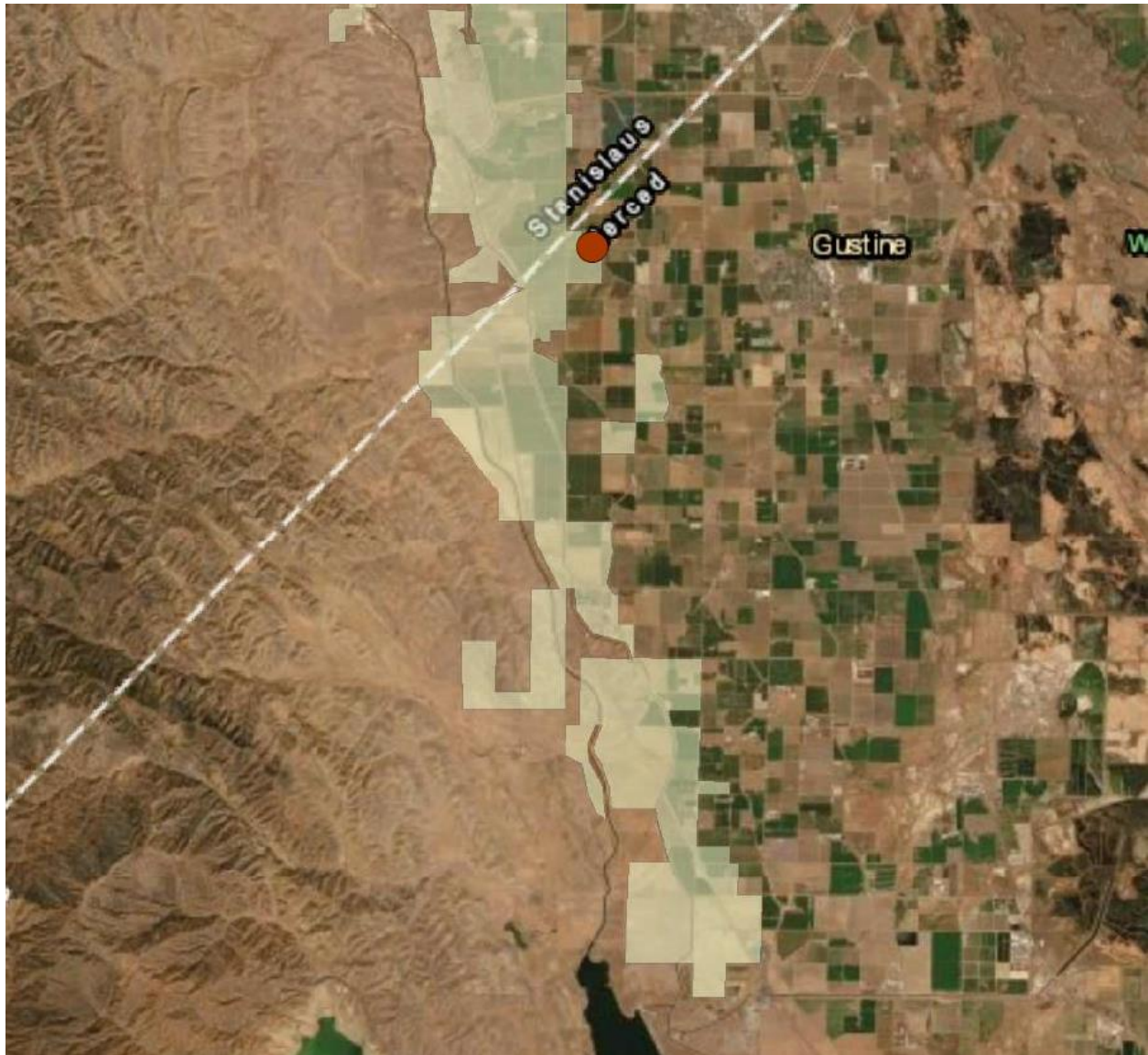


Figure 3: Location of Lower Aquifer Wells South

Technical Project Description

The proposed project expands upon projects already completed by DPWD. The District has identified a majority of the private agricultural wells with the District service area. Also, the District has previously developed a pilot SCADA network to remotely monitor surface water deliveries with the District. This program established a web portal that allows water users within the District to access their water use in real-time to aid them in their decision-making regarding irrigation timing to maximize efficient surface water use. The proposed project intends to make the same data available to groundwater users in the District.

The project will require the installation of flowmeters with pulse output capabilities, an RTU to receive that data, and improvements to the network to collect and display the data. The

flowmeters will either be propeller or insertable magnetic meters, depending on the space available to install the meters, to match what is already in use throughout the District. District staff will perform the meter installations. A hole will be cut into the discharge pipes of the wells and either a saddle meter or tap for the insertable meter will be installed.

For the RTUs, a pole will be installed of sufficient height to receive a cell signal. The poles will be affixed to existing structures at the well site. Typically, these will be concrete structures, fencing, or on the discharge pipes themselves. District staff will perform the RTU installation and wire the meters to the units, see **Figure 4** and **Figure 5** below.



Figure 4: Typical Flowmeter Installation



Figure 5: Typical RTU Installation

Sierra Controls set up the current District SCADA system. They will perform the programming of the RTUs and connect the units to the existing SCADA network.

The District will collect this data via Verizon Wireless data networks and the data will be stored in the District's CloudSCADA database. Each well will be given an identifying number. Water users associated with that well will be given login credentials to access the web portal and view only the groundwater/surface water data associated with their account, see **Figure 6** below.

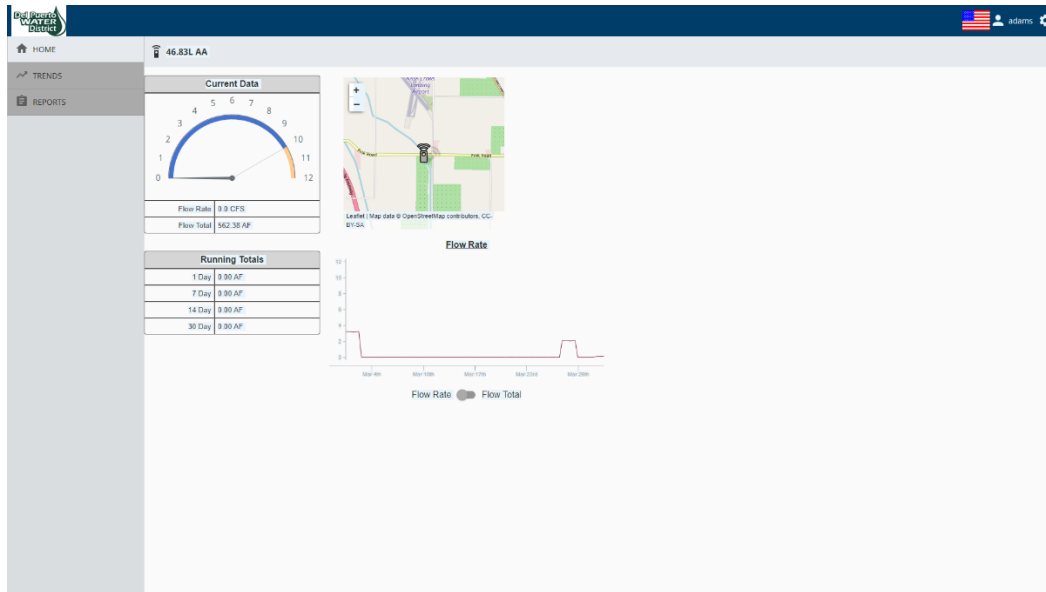


Figure 6: Typical Water User Web Portal

Evaluation Criteria

Criterion A: Project Benefits

Benefits to the Category A Applicant's Water Delivery System

The District relies on two primary water sources, its CVP allocation of 140,210 AF (subject to shortages) and deliveries from the NVRWP of approximately 20,000 AFY. During droughts the CVP allocation can be 0-10% with NVRWP flows remaining fairly constant. This leaves 20,000-34,000 AF of water for the more than 43,000 acres of irrigable agricultural land within DPWD. The District purchases supplemental water supplies each year and makes it available to growers to augment their surface supply. During droughts these supplies become either impossible to procure or cost prohibitive so growers rely on groundwater. If DPWD was able to track that groundwater use more closely, the District would be able to plan for future droughts more accurately by establishing more long-term transfer agreements to acquire enough water to meet the needs of the growers and reduce reliance on the groundwater. Over reliance on groundwater, especially lower aquifer groundwater where extractions are more likely to cause subsidence, throughout the sub-basin will become more challenging as SGMA continues to be implemented. Negative impacts associated with overuse of groundwater through drought periods may result in the loss of ability of these growers to utilize this tool if it is not properly monitored. Currently, subsidence within the Delta-Mendota Subbasin is a major concern. Extractions of groundwater from the lower aquifer can be a factor in inelastic land subsidence and exacerbate existing issues, such as the loss of capacity in critical water delivery infrastructure. This project will focus on the metering and management of high priority lower aquifer wells within Del Puerto Water District.

The proposed project will allow for accurate and instantaneous monitoring of lower aquifer groundwater usage by both the District and growers in areas that are difficult to monitor

regularly. Many users have land throughout the District, and some of this land can be separated by many miles. It can often be difficult to perform all of the other duties associated with operating a farm while trying to monitor water use in a district that is so spread out.

None of the proposed sites for meter installation have flow meters currently installed. Many of the growers in the area use current conditions and changes in evapotranspiration rates to determine the quantity of water and application rate they apply to the fields. In situations like this it is easy to over-irrigate due to a lack of ability to gather the required information to make informed decisions about how long and what total volume they should be irrigating. The District intends to install either propeller or insertable magnetic flow meters depending on space available at the individual sites. These meters have a documented accuracy of 2-5% if installed correctly. Having a system that allows them to view instantaneous, accurate flow rates and total volumes provides them the data to make more informed decisions.

Broader Benefits

The project will allow the District to utilize this data in reporting extraction information to the Northern and Central Delta-Mendota GSP. The GSA's that make up the GSP will have access to that data and can use that data, in conjunction with their own extraction data to make decisions regarding projects and management actions for the region.

The project is located in an area that is subject to frequent drought periods and is currently experiencing an exceptional drought, as indicated in **Figure 7** below. The three counties that the District spans, San Joaquin, Stanislaus, and Merced are all within the exceptional drought borders. The Northern and Central Delta-Mendota GSP has forecasts of water balances for the region taking into consideration climate change, and the results show that drought effects will occur more frequently and more severely as the projections approach 2040.

U.S. Drought Monitor
California

September 28, 2021
(Released Thursday, Sep. 30, 2021)
Valid 8 a.m. EDT

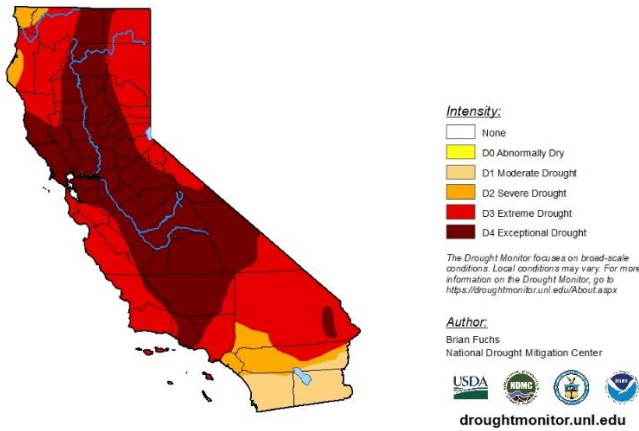


Figure 7: Drought Monitor Map

The ongoing and potential drought impacts to agriculture are the economic losses from the lack of surface water or groundwater supplies. If the drought becomes severe enough and no water is available for ag users, there could be as much as \$210M in lost crop value alone, based on the District 2019 crop reports and value estimates. This does not include the economic impacts relating to lost jobs as business are forced to downsize or close. If the drought continues and water users are forced to rely on the groundwater even more causing increased subsidence, the result could be damage to the DMC severe enough that major repairs/replacement would be necessary.

In another rehabilitation effort, the DMC designers incorporated as much as 2.75 m (10 ft) of extra freeboard into the DMC, adding \$4.573 million (\$30.67 million 2013 dollars) to construction costs. Additional subsidence required raising of canal linings, bridges, and other canal structures and rehabilitation of roads at costs of \$1.575 million, \$4.731 million, and \$4.5 million, respectively, during 1982, 1983, and 1984 (Prokopovich and Marriot, 1983). Adjusting for inflation, these costs amount to \$55.7 million in 2013 dollars. The total cost to the U.S. government to account for or repair subsidence damage from groundwater extraction to major canals and drains built by the federal government on the west side of the San Joaquin Valley was \$88.19 million (2013 dollars). These are contract construction costs and do not include costs for design, inspection, or studies.

Industrial users would face similar impacts. If the drought became severe enough, business may have to be downsized or closed altogether. In DPWD's service area, the major industrial water users are quarries. During development of the Northern and Central Delta-Mendota GSP, some of the quarries reached out with concerns regarding groundwater use and its management. In their outreach they reference the States recognition of mineral resources being vital, finite, and

an important natural resource and that the responsible protection and development of these natural resources is vital to a sustainable California. This same outreach included notes that 67% of California Construction aggregate production in 2012 was produced from alluvial deposits in historic floodplains that do not have access to public water systems and therefore rely on groundwater as their only source of water. If the drought continues and these industries were to lose the ability to pump groundwater, a major support industry within the State could potentially be lost.

Municipalities could be particularly susceptible to continued drought. Many small DACs and cities rely solely on groundwater as their drinking water supply. It would become a major public health crisis if groundwater levels were to decline or degrade due to continued reliance on the groundwater supply as the drought continues. Solutions to the loss of drinking water supply from groundwater decline would include the trucking of bottled water or other temporary potable supply shipments. Such requirements would inevitably create tensions over responsible parties to facilitate these kinds of programs.

One potential impact to wildlife of the continued drought would be the loss of ability to supply water to the Refuge Wildlife Supply Program (RWSP). The RWSP relies on CVP allocations and the delivery of water from the DMC. If continued groundwater pumping caused subsidence severe enough to limit DMC capacity or continued reduced allocations, the RWSP may be unable to receive water.

The project's primary goal will be to ensure that the District and groundwater users within the District have the information necessary to preserve that resource. Limiting and reducing the use of groundwater supplies when adequate surface supplies are available will ensure that more water is available in the aquifer for use by all groundwater users during drought periods where surface supplies are scarce. Having this data would allow the District and water users to make programmatic decisions regarding the development and use of surface supplies when they are available. It would also provide the District with the data necessary to place limitations on groundwater use when negative impacts from groundwater overdraft are affecting water users within the subbasin.

Criterion B: Planning Efforts Supporting the Project Plan Development

A copy of the District's 2019 Local Hazard Mitigation Plan (LHMP) has been included in Attachment A. The District's LHMP discusses several hazards and potential mitigations associated with future droughts. The plan explains that drought is a likely hazard occurring intermittently, but frequently enough that it has lasting impacts. The impacts of drought are classified as critical because of the negative effects on groundwater levels and affects both human and environmental health. It also addresses groundwater overdraft. Drought has a compounding effect on overdraft. Decreases in precipitation increase groundwater use, which is unable to be replenished due to less than average precipitation and runoff. The LHMP also address how climate change may alter the

normal precipitation, plant evapotranspiration, and temperature regimens causing higher snow line elevations, less snow pack retention due to higher temperatures in the spring, and greater fluctuations in reservoir storage and groundwater levels which all exacerbate the issues relating to drought.

DPWD held workshops where the public, neighboring County, Water District, and City representatives were invited to comment on the Districts LHMP. Though no comments were received, the District worked to make the development of the LHMP as collaborative as possible.

The proposed project is not specifically referenced in the LHMP as a mitigation project, however, the goals of the project are included in mitigation strategies for drought/climate change and overdraft/subsidence. In the drought/climate change mitigation strategies section, the plan references the need for projects that monitor groundwater and evaluate trends and increase efficient water use practices during both wet and dry years. This project would accomplish both of these goals by allowing the District to monitor and evaluate trends in groundwater use and allowing water users to view data that allows them to use water as efficiently as possible.

The overdraft/subsidence mitigation strategies section refers to projects that monitor groundwater and evaluate trends, actively manage groundwater, and support statewide water management policies which support efficient and responsible water use. The project would accomplish the goals of monitoring groundwater use and actively managing the water supply as previously mentioned. Additionally, the project would support statewide water management polices such as SGMA. The goal of SGMA is to reach a point where all sub-basins in the state are using and conserving groundwater in a way that is sustainable by 2040. The proposed project would give the District the tools necessary to track and monitor groundwater use to ensure that this goal is being met.

This project's main goal directly addresses one of the management actions detailed in the Sacramento and San Joaquin River Basin Study of improving agricultural water use efficiency. Having access to real-time information will allow agricultural water users make decisions regarding water use utilizing information that was previously unavailable to them. The expected improved irrigation efficiency will have extensive benefits to all water users in the watershed, including but not limited to, leaving more water stored in the aquifer for future use during drought conditions related to climate change.

Criterion C: Implementation and Results

This project is being proposed as a two-year effort. The project is ready to proceed with equipment procurement and integration to begin upon notice of award. Installation and implementation are schedule to begin immediately following CEQA/NEPA clearance. Environmental review and documentation should be fairly straight forward as similar District projects have only required a notice of exemption and categorical exclusion. The District does not foresee this project needing any permits beyond CEQA/NEPA compliance. The District also

does not anticipate the need for any new policies or administrative actions to implement the project.

Assuming an award date of March 2023 the timeline for major project tasks will include:

- Environmental Compliance: The required notice of exemption and categorical exclusions is presumed to take 9 months. (March 2023 – December 2023)
- Flowmeter Determination and Procurement: As soon as the award of the project is made. The District will inventory the quantity of each meter will be needed based on space available at the sites and will order the appropriate meters. For 45 meters, the District assumes a 6-month lag time with 1 month to perform the analysis of which meters will be required. (April 2023 – January 2024)
- Ranger RTU Procurement and Integration: The District assumes a similar lag time for the Ranger RTU units of 6 months. The integration of the units will be phased as not all meters and RTUs will be installed at once. The District assumes it will take 3 months to complete the integration of all of the units. (April 2023 – March 2024)
- Flowmeter and RTU installation: The District will begin installation of flowmeter and RTUs as soon as environmental compliance is complete. The District assumes it will take roughly 2 months for District staff to complete the installation of the 45 flowmeters and RTUs. (March 2024 – May 2024)
- Water User Training: The District will be creating web portal logins for the groundwater users in the District and training them on how to use the web portal to retrieve their data. The District plans to roll this out as meters are installed and implemented. (March 2024 – July 2024)
- Reporting: The District plans to submit quarterly budget and progress performance reports, as well as, a final report. (March 2023 – September 2024)

Criterion D: Nexus to Reclamation

DPWD was organized on March 24, 1947 to contract for and administer delivery of water supplies to landowners within its geographical boundaries as part of the Bureau of Reclamation's development of the Central Valley Project. On March 1, 1995, the District was reorganized through a formal consolidation with ten other local, similarly contracted water Districts. Prior to 2018, the District's contractual entitlement is its sole source of supply, providing up to 140,210 AF/Y when hydrology and operational considerations make allowances possible. The use of this contractual supply is governed by Reclamation Law, water code requirements and place-of-use restrictions associated with the Bureau of Reclamation's State-issued water rights permits, Reclamation Law as amended by the Reclamation Reform Act of 1982, the Central Valley Project Improvement Act, the Clean Water Act, and the Endangered Species Act. The latter of these laws (CVPIA/CWA/ESA), and particularly the 2019 Biological Opinion for the Reinitiation of Consultation on the Coordinated Operations of the CVP and SWMP issued under ESA, have rendered the District's CVP Water Service contract highly unreliable as a source of supply. As such, the District has been compelled to seek alternate sources to meet the needs of its

Landowners and water users. Completed in 2018, the Modesto portion of the North Valley Regional Recycled Water Program (NVRWP) provides the District with a reliable supply of approximately 20,000 AF/Y. On September 28, 2020, DPWD completed the process to convert the District's long-term CVP Water Service Contract to a Permanent Repayment Contract (14-06-200-922-LTR1-P) pursuant to section 4011 of the WIIN Act. Paying off the remaining debt owed to the Bureau for construction of the CVP facilities and DPWD ensures the 140,210 AF/Y of CVP water will be available to customers when hydrology and pumping restrictions make allocations possible.

In addition to these contractual agreements, the District has been a partner with Reclamation in multiple venues and processes, and its staff has worked cooperatively through many issues, including but not limited to Long-Term Contract Renewals, Municipal & Industrial Shortage Policy development, CVP Financial matters, Multi-Year Warren Act Contracting process development, BOR WORKS updates, the USBR Stakeholder Technical Team, and most recently has actively participated in drought-related Stakeholder efforts between Reclamation and its CVP customers.

The District and proposed project are located in the Sacramento-San Joaquin Rivers basin as well as the CalFed Solution Area. The proposed project will conserve surface water through increasing irrigation efficiency making that supply available to other areas, therefore reducing the need for pumping groundwater in those areas, both of which are priorities for Reclamation.

Criterion E: Presidential and Department of the Interior Priorities

1. Climate Change

The project could reduce the energy needs to manage water. Monitoring of groundwater use could indicate when groundwater use should be reduced to limit energy consumption during peak periods. Also, maximizing efficient groundwater use would result in less water needing to be lifted from the aquifer, reducing power needs to irrigate the same acreage.

The project has potential to reduce greenhouse gas emissions by sequestering carbon in trees and other vegetation. The efficient use of water supplies and blending of groundwater and surface water sources to limit the use of potentially degraded groundwater quality maximizing crop growth and yields, sequestering more carbon in crop production.

The project will have a management component that will serve to protect water supplies and its associated uses. Monitoring groundwater use during a drought will enable to District to prevent negative impacts of groundwater overuse to water users in the District service area. This would ensure the conservation of the groundwater supply for all agricultural, municipal, and industrial groundwater users. Many of these industries rely on groundwater as a sole source of water supply. Real-time monitoring of in-District groundwater use would enable to District to protect the reliability of this supply for all users.

2. Disadvantaged or Underserved Communities

Many of the disadvantaged communities in the District service area rely on groundwater as their sole source of drinking water supply. As mentioned earlier, the monitoring of groundwater use

in the District will enable to the District to protect the reliable of this supply for these water users. Maps of the DAC areas and the District boundary are included in Error! Reference source not found. and Error! Reference source not found. below.

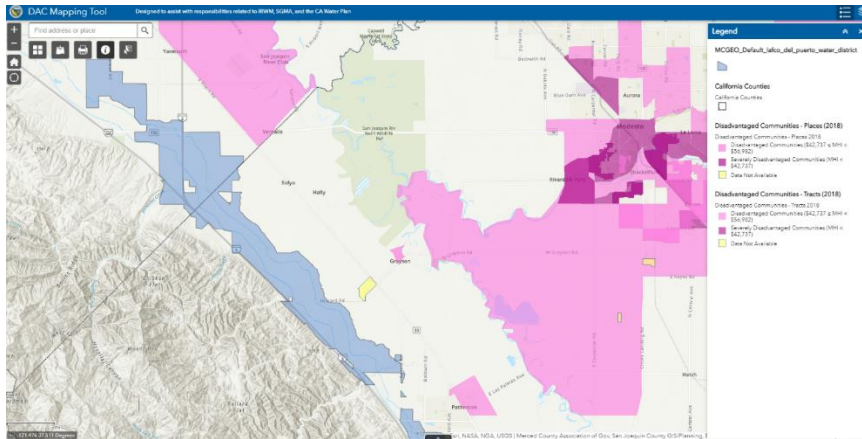


Figure 8: DAC Map of Upper DPWD

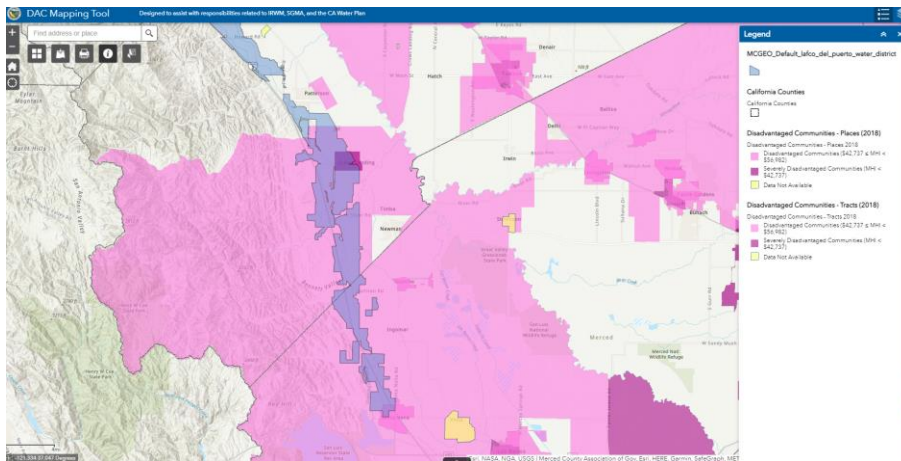


Figure 9: DAC Map of Lower DPWD

3. Tribal Benefits

The project will have no direct tribal benefits.

Overlap or Duplication of Effort Statement

There is no overlap between this project and any other anticipated District projects. This project represents a smaller portion of a project that was submitted to the Bureau of Reclamation’s WaterSMART Water and Energy Efficiency Grant for FY 2022 in November of 2021. The funding decisions are expected to be announced in Spring of 2022.

Project Budget

Funding Plan and Letters of Commitment

The total estimated cost of the project is \$210,950. This cost was determined based on estimates from other completed District projects with similar objectives. The applicant is requesting \$99,750 in federal funding assistance and will utilize \$111,200 of District Funds.

The District's contribution to the project will be through direct funding of administration, design, and construction of the project. This funding will be allocated in the District's 2023 reserves and will be available to complete the project.

The District expects to utilize federal funding assistance for a portion of the equipment purchases, engineering services, and environmental compliance costs and utilize District funding for all other costs.

The District has not incurred any costs that would be used to meet its match obligation.

This project represents a smaller portion of a project that was submitted to the Bureau of Reclamation's WaterSMART Water and Energy Efficiency Grant for FY 2022 in November of 2021.

If the funding requested by this application is denied, the proposed project would not be implemented at this time and other funding opportunities will be pursued. Should a lesser amount of funding be provided, the District may implement a sub-phase of the project, depending on the funding provided.

Budget Proposal

Table 1: Non-Federal and Federal Funding Sources Summary

Funding Sources	Amount
Non-Federal Entities	
1. Del Puerto Water District	\$111,200
Non-Federal Subtotal	
Requested Reclamation Funding	\$99,750

Table 2: Total Project Cost Summary

Source	Amount
Costs to be reimbursed with the requested Federal Funding	\$99,750
Costs to be paid by the applicant	\$111,200
Value of third-party contributions	\$0
Total Project Costs	\$210,950

Table 3: Budget Proposal

	Computation	District	Reclamation	Total
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Item	Budget Item Description	Quantity	Unit	Unit Cost	Funding	Funding	Cost
1	Salaries and Wages	0					\$0
2	Fringe Benefits	0					\$0
3	Travel	0					\$0
4	Equipment						
4.1	Flowmeter	45	meters	\$2,500	\$56,250	\$56,250	\$112,500
4.2	RTU	45	units	\$1,200	\$27,000	\$27,000	\$54,000
4.3	Masts	45	units	\$350	\$8,750	\$7,000	\$15,750
5	Supplies/Materials	0					\$0
6	Contractual/Construction						
6.2	Engineering Services	1	each	\$10,000	\$5,000	\$5,000	\$10,000
6.3	Construction						
6.3.7	Install/ Commissioning Support	1	each	\$10,000	\$10,000		\$10,000
6.3.8	Miscellaneous Installation Hardware	1	each	\$3,000	\$3,000	\$0	\$3,000
7	Environmental and Regulatory Compliance						
7.1	Reclamation Costs (assumed)					\$4,500	\$4,500
7.2	Engineering Consultant	8	hours	\$150	\$1,200		\$1,200
8	Other Costs						
8.1	Review and Reporting						\$0
Total Direct Costs:					\$111,200	\$99,750	\$210,950
9	Indirect Costs (not charged to the project)				\$0	\$0	\$0
Total Project Costs:					\$111,200	\$99,750	\$210,950
Percent of Total Cost:					52.7%	47.3%	

Budget Narrative

- a. Salaries and Wages. Although District Staff will spend time administering and constructing the project, the District does not intend to separate that time from other daily duties of the staff. No District staff time will be charged to the project.
- b. Fringe Benefits. The District will not charge fringe benefits associated with District staff to this project.
- c. Travel. No travel is associated with this project.
- d. Equipment.
 - Flowmeters. Flowmeters will be purchased to match what the District already has installed for the purpose of continuity and ease of maintenance. These will either be McCrometer or Water Specialties propeller meters or insertable magnetic meters depending on space available at each site. The assumed cost of \$2,500 per unit is an average cost of the two types of meters based on previous purchases of the meters by the District.
 - RTUs. The RTU price includes the price for the SignalFire Ranger unit, the configuration and integration of the unit to the District's network, and 1 year of support. This is provided by Sierra Controls. Sierra Controls established and integrated the District's current SCADA network using the same Ranger RTUs.
 - Masts. Materials for mounting the Ranger RTUs. The costs for this were average costs based on the District experience mounting these units.
- e. Materials and Supplies.
- f. Contractual. The proposed project will make use of consultants and contractors for its completion.
 - Engineering Services. This price includes the deliver and project management costs for Sierra Controls to configure and integrate the Range Units.
 - Install/commissioning support. This price includes the costs for Sierra Controls to perform any installations or troubleshoot flowmeter to network connection issues that may arise during the installation process.
 - Miscellaneous installation hardware. This price includes some small costs for purchasing fasteners, wire, and similar components that may be needed during installation.
 - Environmental and Regulatory Compliance Costs. The proposed project will require a Notice of Exemption. NEPA will require a Categorical Exclusion. The proposed project budget includes consultant costs to assist with any issues that arise during the permitting process. All documents and backup information developed through that process would be provided to Reclamation for the EA. Reclamation will also determine the level of effect the proposed project will have on historic properties, and if this level of effect will require coordination with the SHPO. Costs incurred by Reclamation to develop the EA and compliance with the National Historic Preservation Act are assumed to be \$4,500. The environmental and regulatory compliance costs are based on previous

District experience on similar projects. The District has sufficient reserves available to cover additional environmental costs should they be required.

- g. Other Costs. Other costs include construction administration, field review, and grant contract administration.
 - Field Review and Construction Administration. A large amount of construction and field work will be required. Field review activities include trips to the sites to ensure project components are completed according to design and with sufficient standards. These tasks are expected to be performed by District staff and not be charged to the project.
 - Review and Reporting. The District plans to perform the reviews and reporting with District Staff as a part of their daily duties and do not anticipate charges to the project.
- h. Indirect Costs. Indirect costs incurred by the District will not be charged to the project.
- i. Total Cost. The District has sufficient reserves available in its budget to fund any overruns or unforeseen costs should they arise.

Environmental and Cultural Resources Compliance

The proposed project will add appurtenances to existing facilities new facilities for the remote monitoring of water deliveries. Under CEQA, this project will require a notice of exemption. All of the activities are in actively farmed and trafficked areas and all of the installations would be on existing, above ground pipes and structures. CEQA documentation will be provided to Reclamation for compliance with any necessary NEPA requirements.

1. Will the project impact that surrounding environment?

No ground disturbing activities should be necessary with this project. All of the installations of equipment should be on above ground pipes and structures actively utilized for farming activities. Lands surrounding the proposed project are heavily trafficked or actively farmed. The proposed project will not result in the loss of any farm land.
2. What endangered or threatened species are in the project area?

There are several special status species have been identified to exist within the district's boundaries. These include the San Joaquin Kit fox, Giant Garter snake, and others. However, the proposed project area is actively traveled and maintained, so it is unlikely that any special status species will be in the project area during construction.
3. Are there wetlands inside the project boundary?

There are no wetlands in the project boundary. The project will be constructed within existing District footprint or maintained dirt access areas. The State of California purchased 450 acres of District land to protect and preserve a native California Sycamore

grove that comprises approximately 50 acres. However, the project will not have any effect on this property.

4. When was the water delivery system constructed?

Private ag well discharges have evolved over the years. None are anticipated to be more than 30 years old, as the above ground pipes would have corroded and needed replacement in that time.

5. Will the project result in any modifications of or effects to, individual features of an irrigation system (e.g. headgates, canals, or flumes)?

A small hole will be cut into above ground well discharges to install flowmeters on the pipelines.

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

As part of the environmental and regulatory compliance, the District will supply all necessary information to Reclamation so they can coordinate with the appropriate State Historic Preservation Officer (SHPO). Much of the work for the proposed project is near existing, actively farmed facilities, so the District does not anticipate any issues with adverse effects.

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

There are no known archeological sites in the proposed project area.

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

The proposed project will have no impact on low income or minority populations.

9. Will the project limit access or use of Indian sacred sites or impact tribal lands?

There are no tribal lands within the project or its service area. The proposed project will have no impact on tribal lands or sacred sites.

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

The project will have no impact on noxious weeds or non-native species.

Required Permits or Approvals

The project will need to comply with the applicable provisions of CEQA and NEPA as discussed under **Environmental and Cultural Resources Compliance**.

Letters of Support and Letters of Partnership

Letters of support from the local DM-II GSA and from DPWD growers are included in **Appendices B and D**.

Official Resolution

An official Resolution is included in **Appendix C** of the application.

DM-II GSA

A Multi-Agency GSA

Del Puerto Water District

Oak Flat Water District

PO Box 1596
Patterson, CA 95363

Adam Scheuber, Deputy General Manager – Water Resources
Del Puerto Water District
P.O. Box 1596
Patterson, CA 95363

RE: Support for the Del Puerto Water District Groundwater Remote Telemetry Program

Dear Mr. Scheuber,

The DM-II GSA understands and supports the DPWD Groundwater Remote Telemetry Program.

The challenge of achieving groundwater sustainability in the Delta-Mendota Subbasin is going to require many innovative approaches to reach sustainability. The project will install flowmeters at 230 of the District's private agricultural well sites as well as remote monitoring equipment to send that data to the District's SCADA network, allowing the individual water users and the District to track the groundwater use in real-time.

The project will provide the GSA and sub-basin with much needed data to ensure compliance with the Northern and Central Delta-Mendota GSP. The GSA and District will be able to monitor groundwater extractions and trends to make the appropriate decisions regarding the implementation of projects and management actions to prevent negative impacts resulting from groundwater overdraft. Providing the water users with this information, as well, will aid the GSA in informing the water users about the impacts and need to manage this resource sustainably. The GSA would find it difficult to meet the requirements established by SGMA if it wasn't for projects such as this one.

This project is the beginning of a solution to filling data gaps in the area and is considered a long-term solution. The DM-II GSA wholeheartedly supports this regional and sustainable multi-benefit project.

Sincerely,



Anthea G. Hansen
General Manager
Del Puerto Water District &
Oak Flat Water District

Bays Ranch, Inc.
P.O. Box 85
Westley, CA 95387

September 30, 2021

Mr. Adam Scheuber, Deputy General Manger – Water Resources
Del Puerto Water District
PO Box 1596
Patterson, CA 95363

SUBJECT: Del Puerto Water District Groundwater Well Remote Telemetry Program

Dear Adam,

Thank you for informing me about the District's plans to monitor groundwater use remotely and the potential benefits it will have for water use management on my property in Del Puerto Water District.

Bays Ranch operates a number of wells throughout the District and having the ability to view all of our groundwater use remotely will be very beneficial as many of our wells are spread across a large acreage. Bays Ranch currently farms over 1,600 acres in Del Puerto Water District. Crops grown in the District service area include almonds, apricots, walnuts, processing tomatoes, and beans. Based on the information you have provided, I believe that this project will complement and improve our ability to irrigate efficiently and conserve groundwater. Having access to real-time flow data will allow our operation to more accurately monitor our various water supply use to minimize groundwater overdraft.

We understand the importance of conserving groundwater, not just in these drought years but at all times, and have been evaluating tools that would assist us in reducing our groundwater usage. The project would provide us with very useful information and we would be excited to participate project.

Sincerely,



Daniel Bays

Perez Farms
P.O. Box 97
Crows Landing, CA 95313

September 30, 2021

Mr. Adam Scheuber, Deputy General Manger – Water Resources
Del Puerto Water District
PO Box 1596
Patterson, CA 95363

SUBJECT: Del Puerto Water District Groundwater Well Remote Telemetry Program

Dear Adam,

Thank you for informing me about the District's plans to monitor groundwater use remotely and the potential benefits it will have for water use management on my property in Del Puerto Water District.

Perez Farms operates a number of wells throughout the District and having the ability to view all of our groundwater use remotely will be very beneficial as many of our wells are spread across a large acreage. Perez Farms currently farms over 4,000 acres in Del Puerto Water District. Crops grown in the District service area include almonds, walnuts, processing tomatoes, cantaloupes, and beans. Based on the information you have provided, I believe that this project will complement and improve our ability to irrigate efficiently and conserve groundwater. Having access to real-time flow data will allow our operation to more accurately monitor our various water supply use to minimize groundwater overdraft.

We understand the importance of conserving groundwater, not just in these drought years but at all times, and have been evaluating tools that would assist us in reducing our groundwater usage. The project would provide us with very useful information and we would be excited to participate project.

Sincerely,



Kyle Perez