WaterSMART Grant: Small Scale Water Efficiency Program Category A

Bard Water District Seminole Pipeline Phase 1 of 2 (0.5/1550') Project

A Collaborative Project between the

BUREAU OF RECLAMATION

and the

BARD WATER DISTRICT

NOFO: R24AS00059

TITLE PAGE

Technical Proposal and Evaluation Criteria

1.1 Executive Summary

This **Category A** Application is being submitted on 01/10/25 by:
Bard Water District, 1473 Ross Road
Winterhaven, Imperial County, California 92283

Two Year Project
If NTP by 3/31/25
06/01/25-8/31/27

The Bard Water District (BWD) in Winterhaven, California, is located along the lower Colorado River and borders Arizona (Yuma) and Mexico (Algodones). BWD along with the Quechan Indian Tribe request funding under the WaterSMART Grant: Small-Scale Water Efficiency Program Category A to complete the **Seminole Pipeline Project Phase 1 of 2 (0.5/1550') to improve the existing water conveyance and delivery infrastructure to increase water savings, improve efficiency, and reduce maintenance and operation expenses.** This project complies with our approved 2020 Five-Year Water Conservation Plan as well as our 10-year Capital Improvement Plan.

BWD will accomplish the goals established for the WaterSMART program [redacted] by leveraging funds to conserve and better manage water resources and increase efficiency by converting the currently dilapidated, open channel Seminole Canal to the Seminole Pipeline and replacing or rebuilding required appurtenances, thus, **conserving water. This Project** will **control water loss, reduce seepage and transpiration, provide faster and more consistent, reliable, and efficient flow/delivery, and reduce maintenance and operation expenses due to its location near a busy roadway (S-24 CA).** Pipelines eliminate water losses associated with seepage and can increase conveyance efficiency by up to 95 to 100%. The conversion of the Seminole Canal to the Seminole Pipeline would conserve approximately 103.96 acre-feet/year. In addition, the amount of water required/delivered would be reduced by being able to safely increase flow rate.

BWD plans to complete this phase 1 project in a **24-month** between **June 1, 2025 and August 31, 2027** depending upon the NTP. Since the primary use of the water is agricultural, we will select the optimal interval during reduced demand to minimize impact to producers/growers. We would schedule work to accommodate them and utilize dry-down times if required.

This **project is located on a Federal facility** that **is a BOR asset** operated and managed by the Bard Water District. It includes both the Fort Yuma Indian Reservation Indian Unit (7,600 Acre Irrigation System) and the non-Indian Bard Unit (7,100 Acre Irrigation System). We share Colorado River water resources with Yuma County Water Users (Cocopah Indian Reservation), Wellton-Mohawk, Palo Verde, and the Imperial Irrigation District.

1.2 Project Location

Bard Water District (BWD) operates and maintains the Reservation Division of the U.S. Bureau of Reclamation's Yuma Project, located in the Bard Valley of southeastern most Imperial Valley, California. The Yuma Project is one of USBR's oldest projects, being constructed in the first decade of the 20th Century. The 13,676 acres of irrigated farmland in Bard Valley includes 7,556 acres of land on the Quechan Indian Reservation and 7,120 acres of private land.

Figure 1 Seminole Pipeline

The Seminole Pipeline Project to convert an open irrigation channel to a concrete reinforced pipeline is the most feasible, sustainable, and practical solution to address current irrigation system inefficiencies. The current open channel is directly adjacent to the heavily traveled S-24 CA roadway and is often filled with trash and debris requiring frequent maintenance. Installing 1,550' of concrete reinforced pipeline where the existing eroding Seminole open channel canal lies will not only conserve water by reducing water loss by seepage but protect water users and reduce maintenance costs. The Project is located directly north of Yuma in Imperial County, California and is within 10 miles of the Mexican border.

Project beneficiaries are Bard Water District members (lands within the Reservation Division of the U.S. Bureau of Reclamation (USBR) Yuma Project) and the Fort Yuma Quechan Indian Tribe.

1.3 Technical Project Description

This project complies with our approved Five-Year Water Conservation Plan and has been a priority to BWD and the Quechan Indian Tribe for the last several years. The Seminole Canal provides water to agricultural fields in the Bard Water District (Bard and Indian Units).

The Seminole Pipeline Project Phase 1 of 2 consists of installing approximately 0.5 of 1550' reinforced concrete pipeline to replace a synthetic lined canal as well as replace deteriorated structures. The canal was originally a concrete lined canal; however, when cracks appeared many years ago a synthetic lining was applied to control seepage. Unfortunately, with the extreme heat the synthetic lining is now bubbling and requires removal. Due to the current condition and location of the canal, BWD seeks to convert this open channel canal to a reinforced concrete pipeline. Converting the Seminole Canal to pipeline will significantly conserve water by reducing water loss by seepage, reduce the potential for water contamination, and reduce BWD maintenance and operation costs due to trash and debris removal.

This project will be performed on a **BOR asset** (Bard Irrigation District) that is operated and managed by the Bard Water District under contract number **19-XX-30-N0965**. It includes both the Fort Yuma Indian Reservation Indian Unit and Bard Water District (7,600 and 7,100 Acres, respectively). BWD maintains a continuous working relationship with the Bureau of Reclamation's office in Yuma as well as USBR's Technical Service Center and receives Reclamation project water via the All-American Canal. The BWD manages Colorado River water and the irrigation systems for the **BOR asset** (Bard Irrigation Unit and Indian Irrigation Unit). See Appendix for BWD Description, Background, and History.

1.4 Evaluation Criteria

A. Project Benefits

The Seminole Pipeline Project will result in a more efficient management of water supply by:

1) Reduced water volume requests due to more reliable water levels (elevation) and faster flow rates.
2) Reduced water volume requests due to improved check/turnout gates (leakage).
3) Reduced water volume requests if drip lines or sprinklers are used instead of flood irrigation.
4) Reduced water volume requests due to reinforced concrete pipe (reduce seepage and transpiration).
5) Reduced water volume requests due to system assessment and subsequent improvements.
6) Prevent maintenance and monetary loss and wasted water from crops destroyed because of trash and debris, uncontrolled flooding, or bacterial contamination.

Converting the Seminole Canal to the Seminole Pipeline will create an annual system savings of 103.96 acre-feet annually. George Cairo Engineering, Inc., a Civil and Agricultural Engineering Firm and Water Resource Specialist, assisted with the earthen seepage loss estimate for the Seminole Canal noted below.

SEMINOLE CANAL PL
EARTHEN SEEPAGE LOSS ESTIMATE

3. Seminole Canal (pipeline)
14' wide at the top of the canal
6' wide at the bottom of the canal
5' deep from the high-water line

		Area
base	a	6
Base	b	14
Height	h	5
	Solution =	50

1	ft:ft	Side slope
6	ft	bottom width
5	ft	HWL
20.14	ft	wetted perimeter
1528	ft	Length Canal
30777.18	ft^2 area	Wetted Perimeter FULL
0.29	Ac-ft/day	Seepage Rate
358	day	Days Wet
103.96	Ac-ft	Seepage Total – Water Lost

Physical and Chemical Properties of Soils

12 (85%)	Holtville	Soil name and Map symbol
0.06-0.2	In/hr	Permeability
0.051	In/hr	% average
13 (10%)	Indio	Soil name and Map symbol
0.6-2.0	In/hr	Permeability
0.06	In/hr	% average
18 (5%)	Lagunita	Soil name and Map symbol
6.0-20.0	In/hr	Permeability
0.3	In/hr	% average
0.411	In/hr	Average

0.2055	in/hr	Permeability
0.017125	ft/hr	Permeability
0.411	ft/day	Seepage

*assuming water is flowing at normal depth

The water we save will remain in the system under the stewardship of BOR because it will not be diverted. They will be able to determine its best use. This project will also enable us to conserve water going through the delivery system, allowing us to be proactive in addressing drought, shortfalls, and other critical water issues.

All BWD customers receive their **FULL WATER RIGHT.** There are currently no customer water restrictions. Our diverse water conservation efforts are **all voluntary.** We carefully balance our **voluntary seasonal fallowing** program (rotate fields/grower, number of acres and time interval – early spring) to reduce water use and prevent adverse economic impact to our workers and the District.

The Bard Water District is located at the end of the Lower Colorado River Basin along the Mexican Border. Thus, we are one of the smallest and last districts to receive water before the required quantity and quality (salinity) of water enters Mexico. This project will allow BWD to save water through better management and protect against state or federal mandated water quantity reduction because of drought or climate change.

Broader Benefits:

This project demonstrates collaboration between our water district and other districts, BOR, the Quechan Indian Tribe, and our agricultural users. It can be used as an example to other water managers reflecting how assessment, planning, usage, and need can be used to benefit a district, especially districts relying on multiple sources of water under various conditions (distance from source, seasonal fluctuations in supply, drought, and climate change).

By leverage funding from the WaterSMART program to complete this project, we can meet BWD's goals in our **Water Conservation, Drought and Capital Improvement Plans** and recommendations from BOR's TSC System Evaluation as well as the new Executive Orders for historically underserved and disadvantaged communities.

[redacted]

B. Planning Efforts Supporting the Project, Plan Development

This Small-Scale Water Efficiency project has been a priority to BWD; however, most BWD funding has been for used O & M and for critical repairs/rebuilds or larger, more expensive concrete lining or pipeline projects. We have completed six large concrete lining projects and also have eight new gate replacement projects completed. We have also recently completed one pipeline project.

By leverage funding from the WaterSMART program to complete this project, we can meet BWD's goals in our **Water Conservation, Drought and Capital Improvement Plans** and

recommendations from BOR's TSC System Evaluation as well as the new Executive Orders for historically underserved and disadvantaged communities.

Our **Water Conservation Plan** mandates that we periodically access our water delivery system and identify needs as we continue to mature and adapt to address changing conditions. Each year, we identify and prioritize our system issues and projects utilizing the following criteria: 1. The project is listed as a priority on our Capital Improvement, Water Conservation, Drought Contingency Plan, and/or USBR TSC recommendations; 2. The problem or need can be remedied with a **BOR Match** and existing resources and funds; 3. Benefits will occur from the corrective action taken (water/monetary savings, efficiency, sustainability, annual maintenance, acre foot savings); 4. No additional resources and funds are available if the existing funds are expended; and 5. Recommendations from the new SOR.

Support for Project

This Small-Scale Water Efficiency project has been approved by the Board and discussed with the Yuma BOR Field Office. In recent years, we have developed a strategy to divide large costly project into 2-4 phases, allowing us to provide the required matching funds. Each year, our water users (farmers) pledge $25/acre for O & M and provide a percentage of their fallowing money for capital improvements. Letters of support are included in appendix C from farmers who would be impacted by the Seminole Pipeline Project. They are very supportive.

C. Project Implementation and Results

Once the Categorical Exclusion is completed and we receive the NTP, we will begin initial planning. The Project Timeline and Milestones Schedule listed below will be finalized and implemented.

Project Timeline and Milestones with Tentative Schedule

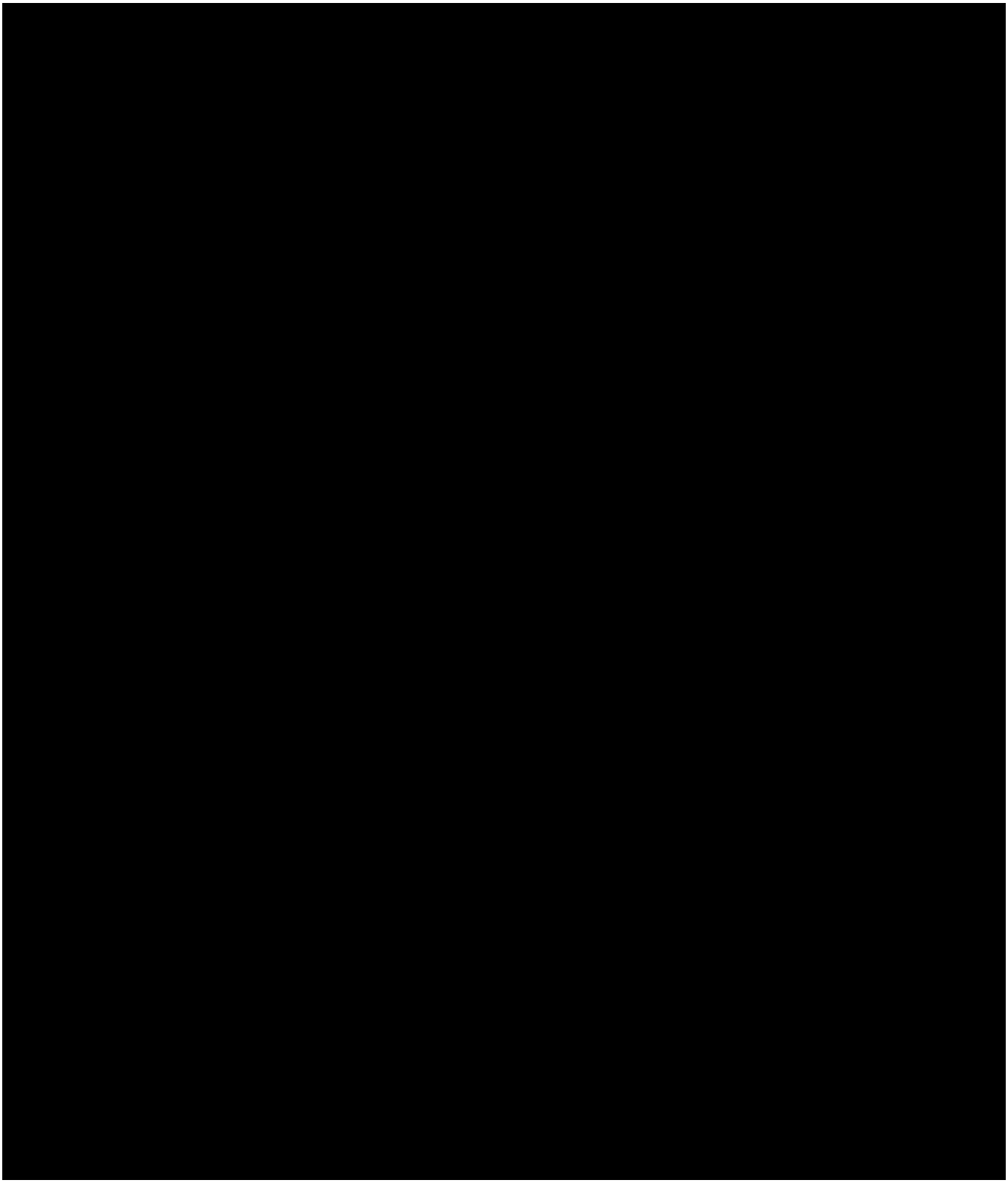
Phase	Milestones/Tasks	Duration Weeks	Interval
Pre-Work	**Activities**		
1	USBR – USBR Review and Award NTP	12	3/31/25 – 6/30/25
	BWD Contractors' Bid Packages/Award/Selection	4	7/1/25 – 8/1/25
Work	**Activities**		
2	USBR Environmental Compliance – Coordination with BOR YAO Environmental Planning and Compliance Office	24	4/1/25 – 10/1/25
3	Engineering/Design for Seminole Pipeline Project	24	8/1/25 – 2/1/26
4	Final Design/Engineering BOR Approved 100%	12	3/1/26 – 6/30/26

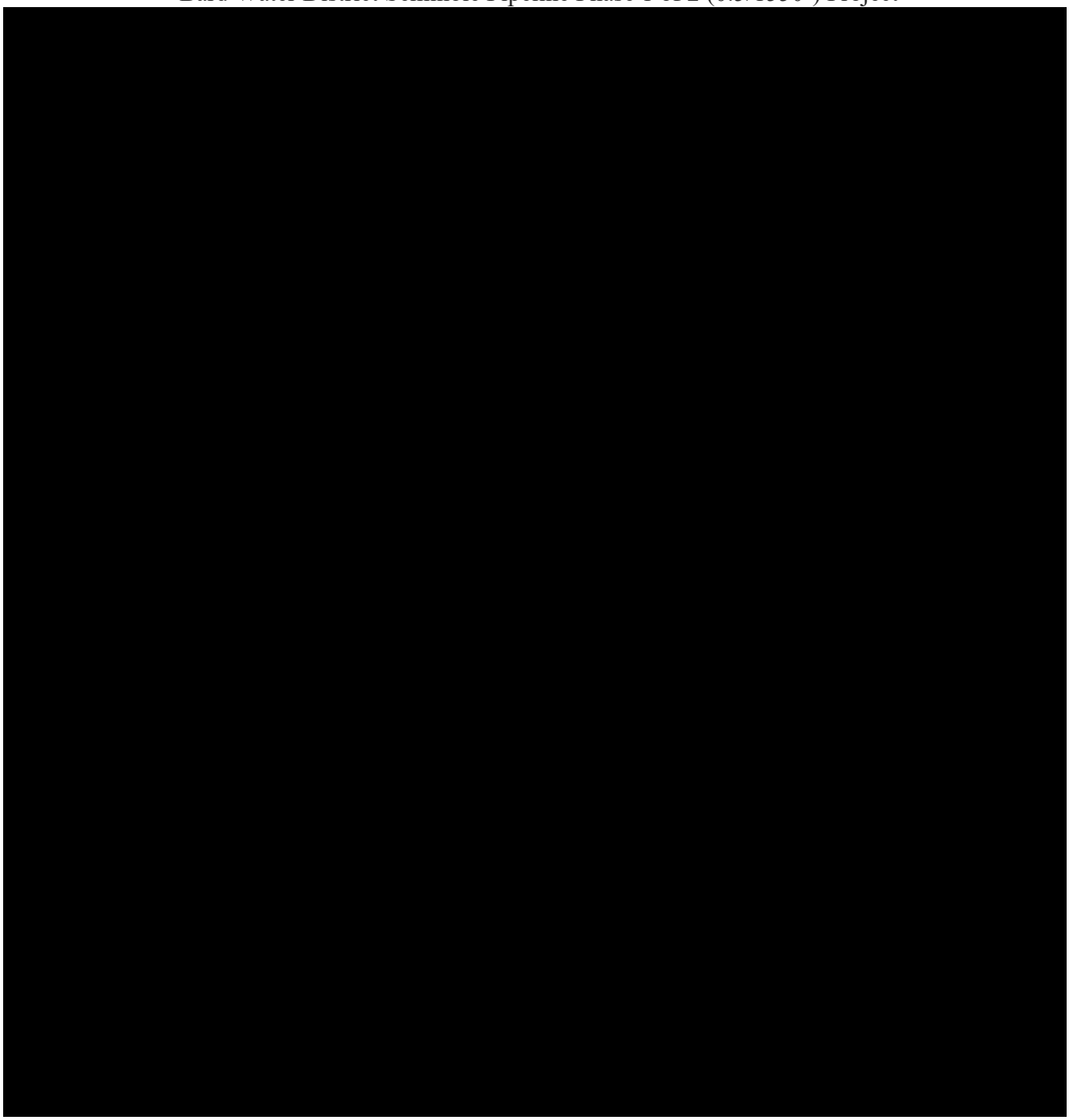
5	Bid Packages/Award/Selection	12	7/1/26 – 10/31/26
6	Construction – Seminole Pipeline Installation	16	4/1/27 – 7/31/27
7	Appurtenances, Gates, Structures – During Install and Periodically During Dry-Downs	12	4/1/27 – 7/31/27

The timeline for completion was discussed with the local Reclamation Office. All work will comply with Federal environmental and cultural resource laws and other required regulations. However, since all work will take place within the canal itself which was constructed above grade on **elevated "borrow" material**, we anticipate that only a Categorical Exclusion will be required at no costs.

D. Nexus to Reclamation

This project will be performed on a **BOR asset** (Bard Irrigation District - Cocopah Canal) that is operated and managed by the Bard Water District under contract number **19-XX-30-N0965**. It includes both the Fort Yuma Indian Reservation Indian Unit and Bard Water District (7,600 and 7,100 Acres, respectively). BWD maintains a continuous working relationship with the Bureau of Reclamation's office in Yuma as well as USBR's Technical Service Center and receives Reclamation project water via the All-American Canal. The BWD manages Colorado River water and the irrigation systems for the **BOR asset** (Bard Irrigation Unit and Indian Irrigation Unit). See Appendix A for BWD Description, Background, and History. The water conserved through this project will go to lower priority users who are affected more by water shortages. USBR can use this water to aid other growers, municipalities, or other nearby entities. This will be especially important during times of shortages and drought.





2. Project Budget

1.1 Funding Plan and Funding Letters of Commitment

The requested **Federal share** is **50%** and the **Non-Federal** share is **50%**.

BWD In-kind Contributions: Salaries and Wages, Fringe, and Equipment

We will utilize our staff and equipment for all project activities. This will include project management, on-site excavation, demolition, and installation. Total project costs will be reduced by 37% using existing BWD staff and equipment.

Bard Cash Contribution: Remaining construction costs.

Costs incurred before start date: $0.00

2.2 Budget Proposal

SOURCE	AMOUNT
Costs to be reimbursed with the requested Federal funding	$125,000.00
Costs to be paid by the Applicant	$123,599.00
Value of third-party contributions	$0.00
TOTAL PROJECT COSTS	**$248,599.00**

Project Costs Breakdown:
Federal Funding

BUDGET ITEM DESCRIPTION	AMOUNT
Materials and Supplies	$125,000.00
Equipment	$0.00
Construction	$0.00
Other: Environmental Compliance/Engineering & Design	$0.00
In Direct Costs – De Minimis	$0.00
TOTAL FEDERAL FUNDING	**$125,000.00**

Non-Federal Funding – In Kind and Cash

BUDGET ITEM DESCRIPTION	AMOUNT
Salaries and Wages*: In Kind*	$28,477.00
Fringe: *In Kind*	$14,497.00
Travel:	$0.00
Equipment:	$48,900.00
Materials and Supplies:	$13,725.00
Contractual/Construction:	$6,000.00
Other: Environmental Compliance & Engineering	$12,000.00
TOTAL NON-FEDERAL FUNDING	**$123,599.00**

BUDGET ITEM DESCRIPTION	COMPUTATION		Quantity TYPE	TOTAL COST
	$/Unit	Quantity		
SALARIES/WAGES				
Project Manager	$45.43	120	HR	$5,452.00
Water Master	$29.56	120	HR	$3,547.00

Equipment Operators (2)	$25.02	240	HR	$6,005.00
Concrete Fabricator	$22.69	120	HR	$2,723.00
Gate Fabricator	$22.69	120	HR	$2,723.00
Laborers (2)	$15.52	240	HR	$3,725.00
Administrative Assistant	$26.54	40	HR	$1,062.00
Contract and Grants Specialist	$27.00	120	HR	$3,240.00
			Subtotal	$28,477.00
FRINGE BENEFITS				
Project Manager	$5,452.00	.4534	%	$2,472.00
Water Master	$3,547.00	.4383	%	$1,555.00
Equipment Operators (2)	$6,005.00	.5891	%	$3,538.00
Concrete Fabricator	$2,723.00	.5605	%	$1,526.00
Gate Fabricator	$2,723.00	.4997	%	$1,361.00
Laborers (2)	$3,725.00	.5533	%	$2.061.00
Administrative Assistant	$1,062.00	.4694	%	$499.00
Contracts and Grants Specialist	$3,240.00	.4583	%	$1,485.00
			Subtotal	$14,497.00
EQUIPMENT (Bard Water District)				
Front End Loader CAT 938G	$100.00	40	HR	$4,000.00
Rubber Tired Excavator CAT M318F	$100.00	40	HR	$4,000.00
Excavator 330 C	$100.00	40	HR	$4,000.00
Dump Truck GMC	$100.00	40	HR	$4,000.00
Dump Truck Kenworth	$135.00	40	HR	$5,400.00
Water Truck – GMC	$50.00	40	HR	$2,000.00
12M3 Motor Grader	$150.00	40	HR	$6,000.00
Mac/Cozad Lowboy	$150.00	40	HR	$6,000.00
Flatbed/Tilt Truck	$75.00	40	HR	$3,000.00
Service Truck 1 Ton 2000 Ford	$50.00	120	HR	$7,500.00
Project Manager and Water Master Trucks (2)	$25.00	120	HR	$3,000.00
			Subtotal	$48,900.00
SUPPLIES AND MATERIALS				
Fill Dirt	$12.00	1550	CU YD	$18,600.00
Reinforced Concrete Pipe	$155.00	775'		$120,125.00
			Subtotal	$138,725.00
CONTRACTUAL/CONSTRUCTION				
Construction Management Included On-Site Engineering/Survey	$6,000.00	1		$6,000.00
			Subtotal	$6,000.00
OTHER				
Engineering and Design	$12,000.00	1		$12,000.00
			Subtotal	$12,000.00

TOTAL DIRECT COSTS	**$248,599.00**			
INDIRECT COSTS				
De minimis	0%		base	$0.00
TOTAL ESTIMATED PROJECT COSTS	**$248,599.00**			

2.3 Budget Narrative
Salaries and Wages:

Project Manager – Nick Bahr, General Manager, 120 Hours
Manage Overall Project: Bid Procurement Process (Vendors and Contractual – Pipeline and Engineering); Scheduling of Staff and Equipment.

Water Master – Shawn Weddle, 120 Hours
Assist Project Manager – Help supervise BWD employees and Alert/Coordinate with Water Users

EQ Operators – 2 x 120 Hours
Initial site preparation – some excavation and demolition activity, provide support for all construction activities including logistics

Laborers – 2 x 120 Hours
Assist with all construction activities

Concrete Fabricator – 1 x 120 Hours
Assist with pipe installation and fitting gaskets/connections

Gate Fabricator – 1 x 120 Hours
On-site installation and modifications

Contracts & Grant Specialist – Lydia Mendoza, 120 Hours
Contract Administration, Tracking, Quarterly and Final Reports

Administrative Assistant – Maria Alonso, 40 Hours
Purchasing, Payroll. Tracking, Equipment/Staff Hours for Tracking

Fringe: Fixed
The Bard Water District certifies that the labor and fringe rates included in the budget proposal represent the actual labor rates of the identified personnel.

Travel: No Travel Required

Equipment:
(All Bard owned): Will use USACOE Region 7 rates for equipment listed on USA COE Table 2-1.

Motor Grader 12M3
CAT 420F Backhoe
Rubber Tired Excavator 318F
International Water Truck
Flatbed/Tiltbed
Ford F150 – Crew Cab Truck
Lighting (Night)
ARC Welder
Tamper
CAT 938G
Tracked Excavator 330C
Dump Truck
Mac/Cozad Lowboy
Ford F150 PU Trucks (2)
Ford XLT Super Crew
TIG Welder
Stihl Concrete Saw
Roller

Materials and Supplies:
Reinforced Concrete Pipe
Clean Fill Dirt
Fuel and Lubricants
Appurtenances and Gates, as needed

Other:
Steel plates, Steel Pipe, Fill Dirt, Gravel, Paint, Padlocks, Fencing

Safety: Barriers/Temporary Fencing, Level D Personal Vests, glasses, hard hats, gloves; Drinking Water; Shade Provided by BWD at **no** cost.

Contractual:
Construction management, on-site engineering; engineering and design

Environmental Regulatory Compliance Costs:
All work will comply with Federal environmental and cultural resource laws and other required regulations. However, since no earth disturbing activities will occur outside the existing lateral, all work will take place within the lateral itself which was constructed above grade on **elevated "borrow" material**. We anticipate that only a Categorical Exclusion will be required at no cost. See responses to Environmental Compliance Questions in Section 3 below for additional information.

3. Environmental and Cultural Resources Compliance

BWD's Seminole Pipeline Project Phase 1 of 2 will have no significant impact to the surrounding environment. All earth-disturbing work will occur with existing canal and sidewalls. As this area is greatly disturbed and in constant agricultural use, there are no threatened or endangered species or critical habitat at present. There are also no wetlands within the project boundary.

The features in the Bard Water District Listed or Eligible for Listed on the National Register of Historic Places include: The All- American Canal, USBR Dams, Head Gates, and Retention

Areas, Old Southern Pacific Rail Line and Bridges, Fort Yuma, Potholes, and Petroglyphs. None of these will be impacted by this project, and there are no archaeological sites in the project area.

This project will not have disproportionally high or adverse effects on low income or minority populations, and the project will not limit access to and ceremonial use of sacred sites or impact Tribal lands.

4. Required Permits or Approvals

There are no permits or approval required for this project.

5. Official Resolution

Approved by Board, no third-party financial support. Resolution will be provided within 30 days from submission.

APPENDIX

Appendix A

Description, Background and History of the Bard Water District

The Yuma Project, initiated in 1909, is a Federal Reclamation Project and lies within the historical boundaries of the Fort Yuma Indian Reservation in Southeastern California (Imperial County) along the lower Colorado River near Yuma, Arizona. The Bard Water District and Lands located in the Yuma Project includes the Valley Division in Arizona and the Reservation Division in California. The Reservation Division consists of approximately 14,700 irrigable acres of which 7,100 acres are in the Bard Unit (Bard Water District, mostly on the Eastern portion) and 7,600 acres in the Indian Unit (mostly on the Western portion).

On December 1, 1978, the Bard Irrigation District was renamed the Bard Water District. In March 1981, the Bard Water District entered a contract with the U.S. Bureau of Reclamation (USBR) for the operation and maintenance of the Bard Unit, In January 1983, BWD entered an additional contract to operate and maintain the Indian Unit facilities. The Indian Unit Water Users pay the Bureau of Indian Affairs (BIA) their O & M costs, then these funds pass through to the USBR and eventually BWD is compensated. *The overall condition of the delivery and drainage systems is relatively poor due to aging infrastructure , flood damage, maintenance challenges and other causes,* USBR TM 86-68210-2016-07, Evaluation of O & M Costs Allocation, July 2016.

The Fort Yuma Indian Reservation of California was established for the Quechan Indian Tribe by an Executive Order of January 9, 1884. These Indian lands are held in trust by the BIA for the individual Indian allottees in about 10-acre allotments. This acreage is pooled and leased to approximately 10 major farm operators in the area. The Bureau of Indian Affairs administers the leases. The Bard Unit contains patented lands held in private ownership. There are about 190 individual water user accounts in the Bard Water District and 10 in the Indian Unit.

Work began on the distribution system of the Reservation Division in 1909 and the patented land was opened to settlers in 1910. With the construction of the Laguna Dam from 1905-1909, approximately 38,000-acre feet per year were provided to the non-Indian sections. The Bard Irrigation District was organized in 1927 to represent landowners in the Bard District. Water for the project was diverted from the Laguna Dam.

Description, Background and History of the Bard Water District

Later after the construction of the Imperial Diversion Dam (1938), 5 miles upriver and the completion of the All-American Canal (1941), irrigation for the Reservation Division was diverted from 5 turnouts along the All-American Canal. This included the Siphon Drop Power Plant for additional turnouts off the Yuma Main Canal for the Valley Division located in Arizona.

The Bard water users originally contracted (beginning in 1909) with the Bureau of Reclamation under Present Perfected Rights to provide water under this pre-existing agreement. Bard's consumption is based upon these farm units. The Yuma Project Reservation District (YRPD) can divert all the water needed for crops; not to exceed 25,000 acres per year. The Bard Water District is just below the Laguna Dam, the first dam built on the Colorado River to divert water for the Yuma Project.

The Bard Unit is part of the Yuma Project Reservation Division and has 2nd Priority Water under the California Seven Party Agreement. Return water flows back into the Colorado River and continues to Mexico as specified by the International Agreement. The most important crops grown in the Bard Water District are produce, Medjool dates, citrus, cotton, alfalfa hay, and wheat. Crops can be grown year-round in this warm dry climate with little need for frost protection.

Currently, the Bard Water District operates and maintains 67 miles (353,760 Linear Feet) of irrigation ditches and canals; only 30% are lined with concrete or concrete piping. YPRD diverts approximately 90,000-acre feet per year to irrigate approximately 15,000 acres. Efforts to conserve water are challenging in Bard's antiquated system, but Bard works closely with its Water Users, USBR and other agencies to be pro-active in addressing these issues.

Description, Background and History of the Bard Water District

Source of Water Supply:
Colorado River ➡ All American Canal ➡ Canals ➡ Laterals

Total Quantity of Water Supplied: Bard Unit: 50,000-acre ft/yr. Indian Unit: 49,000-acre ft./yr.

Current Users and Number Served: 217 Water Users (Farmers and Producers)

Current Water Demand: 17 cfs **Projected Water Demand:** 17 cfs

Estimated Water Loss Reduction if New pipeline installed: 120 – 200-acre feet/year

Major Crops: Wheat, Sudan Grass, Produce and Cotton (Listed by water demand: High➡ Low

Total Acres Served: Approximately 15,000

Potential Shortfalls in Water Supply: If drought continues, quantities could be reduced. Increased demand from new users. Water conservation measures are critical. Farmers here have already been encouraged to implement seasonal fallowing, use drip irrigation methods, eliminate crops that require large quantities of water (i.e., wheat or Sudan grass – Estimated total of 16-acre feet (48 hours @ 4-6 intervals).

Bard Water District Water Delivery or Distribution System: Agricultural Use only.

Type and Approximate Total Lengths of Canals, Laterals and Pipes: 67 Miles 353,760 LF
Concrete Lined/Pipe: 26 Miles 137,280 LF (39%) **Unlined:** 41 Miles or 216,480 LF (61%)

Type and Approximate Total Lengths of Canals:			13 Miles	68,640 LF
Concrete Lined:	8 Miles	42,240 LF	**Unlined:**	5 Miles	26,400 LF
Type and Approximate Total Lengths of Laterals:			50 Miles	264,000 LF
Concrete Lined:	12 Miles	63,360 LF	**Unlined:**	36 Miles	190,080 LF
Fragmented/Deteriorated Concrete Lined Lateral:			1 Mile	5,280 LF
Type and Approximate Total Lengths of Pipes:			3 Miles	15,840 LF

Number of Irrigation Turnouts: 450

Significant Irrigation Improvements: Automated Controls Structures: 2 SCADA: 0 Remote Monitoring Devices: 7

Other: 3 Ram type Cipolletti weirs, 2 Long-throated flumes.

Appendix B

Endangered Species in Bard Water District

Birds	Reptiles	Fish	Mammals
SW Willow Flycatcher Nest along our river corridor.	**Desert Tortoise** Nest/Feed in washes with creosote bushes.	**Colorado Pike Minnow** Not seen below Glen Canyon Dam anymore.	**Lesser Long Nosed Bat** Bat Boxes were placed along our river corridor to improve habitat.
Yuma Clapper Rail (Ridgeway) Nest in dense Cattail and Tule marshes along our river corridor.	**Flat Tailed Horn Lizard** Resides in areas surrounding our district, eats Harvester ants.	**Razorback Sucker** Not seen below Grand Canyon anymore.	**Sonoran Pronghorn** Rarely sighted, primarily Big Horn Sheep, Deer and Wild Donkeys utilize washes and river for food and water. YPG to the North provides water stations.
Burrowing Owl Nest on ground burrows near agricultural fields.			

Appendix C – Letters of Support

P.O. BOX 3230
SOMERTON, AZ 85350
PH: 928-920-4930/928-246-4223
FAX: 928-627-4606

June 27, 2024

SUBJECT: United States Bureau of Reclamation Funding No. R24AS00059
WaterSMART: Small Scale Water Efficiency Program Application
Bard Water District (BWD) Seminole Pipeline Project 1 of 2 (0.5 Section/1550')

To Whom It May Concern:

On behalf of T & P FARMS INC, I am pleased to write this letter of support for Bard Water District's application to the USBR Funding Opportunity R24AS00059 WaterSMART: Small Scale Water Efficiency Program (SWEP) to complete the **Seminole Pipeline Project, Phase 1 of 2, to improve the existing water conveyance and delivery infrastructure to increase water savings, improve efficiency, and reduce maintenance and operation expenses.**

BWD will accomplish the goals established for the WaterSMART Program by leveraging funds to conserve and better manage water resources and increase efficiency of the BWD by converting the currently dilapidated Seminole Canal to the Seminole Pipeline and replacing or rebuilding required appurtenances, thus, **conserving water.** The conversion of the Seminole Canal to the Seminole Pipeline would conserve approximately 103.96 acre-feet/year. We rely on the Seminole Canal system to water our winter produce vegetables and our summer wheat crops year round, improvements to the canal is crucial to us to be able to use the allocated water to its maximum efficiency and to promote sustainable water practices in the future.

With your support, Bard Water District's Seminole Pipeline Project will be completed in two phases and serve as an example of effective water efficiency management and conservation and support farm sustainability.

Sincerely,

Francisco Tovar, T & P Farms INC.

Lee Farms Produce LLC
6126 W County 11th St.
Yuma, AZ 85364
928-344-1584

July 1, 2024

SUBJECT: United States Bureau of Reclamation Funding No. R24AS00059
WaterSMART: Small Scale Water Efficiency Program Application
Bard Water District (BWD) Seminole Pipeline Project 1 of 2 (0.5 Section/1550')

To Whom It May Concern:

On behalf of Lee Farms Produce, I am pleased to write this letter of support for Bard Water District's application to the USBR Funding Opportunity R24AS00059 WaterSMART: Small Scale Water Efficiency Program (SWEP) to complete the **Seminole Pipeline Project, Phase 1 of 2, to improve the existing water conveyance and delivery infrastructure to increase water savings, improve efficiency, and reduce maintenance and operation expenses.**

BWD will accomplish the goals established for the WaterSMART Program by leveraging funds to conserve and better manage water resources and increase efficiency of the BWD by converting the currently dilapidated Seminole Canal to the Seminole Pipeline and replacing or rebuilding required appurtenances, thus, **conserving water.** The conversion of the Seminole Canal to the Seminole Pipeline would conserve approximately 103.96 acre-feet/year. The Seminole Canal delivers water to 185 acres of ground on my farm. These acres consist of winter vegetables and summer forage crops.

With your support, Bard Water District's Seminole Pipeline Project will be completed in two phases and serve as an example of effective water efficiency management and conservation and support farm sustainability.

Sincerely,

Ryan Lee
President
Lee Farms Produce

WaterSMART Grant: Small Scale Water Efficiency Program Category A

Bard Water District Seminole Pipeline Phase 1 of 2 (0.5/1550') Project

Budget Narrative

Salaries and Wages:

Project Manager – Nick Bahr, General Manager, 120 Hours
Manage Overall Project: Bid Procurement Process (Vendors and Contractual – Pipeline and Engineering); Scheduling of Staff and Equipment.

Water Master – Shawn Weddle, 120 Hours
Assist Project Manager – Help supervise BWD employees and Alert/Coordinate with Water Users

EQ Operators – 2 x 120 Hours
Initial site preparation – some excavation and demolition activity, provide support for all construction activities including logistics

Laborers – 2 x 120 Hours
Assist with all construction activities

Concrete Fabricator – 1 x 120 Hours
Assist with pipe installation and fitting gaskets/connections

Gate Fabricator – 1 x 120 Hours
On-site installation and modifications

Contracts & Grant Specialist – Lydia Mendoza, 120 Hours
Contract Administration, Tracking, Quarterly and Final Reports

Administrative Assistant – Maria Alonso, 40 Hours
Purchasing, Payroll. Tracking, Equipment/Staff Hours for Tracking

Fringe: Fixed
The Bard Water District certifies that the labor and fringe rates included in the budget proposal represent the actual labor rates of the identified personnel.

Travel: No Travel Required

Equipment:
(All Bard owned): Will use USACOE Region 7 rates for equipment listed on USA COE Table 2-1.

Motor Grader 12M3
CAT 420F Backhoe
Rubber Tired Excavator 318F
International Water Truck
Flatbed/Tiltbed
Ford F150 – Crew Cab Truck
CAT 938G
Tracked Excavator 330C
Dump Truck
Mac/Cozad Lowboy
Ford F150 PU Trucks (2)
Ford XLT Super Crew

WaterSMART Grant: Small Scale Water Efficiency Program Category A

Bard Water District Seminole Pipeline Phase 1 of 2 (0.5/1550') Project

Budget Narrative

Lighting (Night)
ARC Welder
Tamper
TIG Welder
Stihl Concrete Saw
Roller

Materials and Supplies:

Reinforced Concrete Pipe
Clean Fill Dirt
Fuel and Lubricants
Appurtenances and Gates, as needed

Other:

Steel plates, Steel Pipe, Fill Dirt, Gravel, Paint, Padlocks, Fencing

Safety: Barriers/Temporary Fencing, Level D Personal Vests, glasses, hard hats, gloves; Drinking Water; Shade Provided by BWD at **no** cost.

Contractual:

Construction management, on-site engineering; engineering and design