"City on the Gulf"

CITY OF VENICE
401 West Venice Ave, Venice, Florida 34285
(941) 882-7399 Fax (941)480-3031
www.venicegov.com

September 9, 2020

Southwest Florida Water Management District
Attn: Cooperative Funding Initiative (CFI) Administrator
2379 Broad Street
Brooksville, FL 34604

Dear CFI Administrator:

The City of Venice Utilities Department has submitted three CFI applications for FY2022 consideration. We have detailed the matching funds as stated below:

- City of Venice - Utilities Aquifer Storage and Recovery Well System - Phase 3 – The City is committed to funding this project and will include matching funds in the City's FY2022/FY2023 budget.
- City of Venice – Utilities RO Second Stage Membrane Addition Phase I – The City is committed to funding this project and will include matching funds in the City's FY2022/FY2023
- City of Venice - Toilet Rebate Phase 9– The City is committed to funding this project and will include matching funds in the City's FY2022/FY2023 budget.

If there are any questions or additional information needed, please contact me at (941)882-7399.

Sincerely,

Edward Lavallee
City Manager

cc: Javier Vargas, Utilities Director
Patience Anastasio, Acting Assistant Utilities Director

"City on the Gulf"

CITY OF VENICE
401 W. Venice, Venice, Florida 34285
(941) 486-2626 Fax (941) 480-3031
www.venicegov.com

September 9, 2020

Southwest Florida Water Management District
Attn: Cooperative Funding Initiative (CFI) Administrator
2379 Broad Street
Brooksville, FL 34604

Dear CFI Administrator:

Please accept this letter as the priority listing for the Southwest Florida Water Management District fiscal year 2022 Cooperative Funding applications for the City of Venice.

Priority 1: Aquifer Storage and Recovery Well System
Priority 2: RO Second State Membrane Addition Phase I
Priority 3: Toile Rebate and Retrofit Project – Phase 9

If there are any questions or additional information needed, please contact me at (941) 882-7399.

Sincerely,

Edward Lavallee
City Manager

CC: Javier Vargas, Utilities Director
Patience Anastasio, Acting Assistant Utilities Director

CFI Application Information

Application Id: 134
New Project? 0
Project Name: SWFWMD FY2022 Grant Application
Counties Benefited: Sarasota
Available Programs: REDI
Cooperator Information: City of Venice
Contact Name: Javier Vargas
Contact Email: jvargas@venicegov.com
Contact Phone: 9418827309
Contact Ext:
Contact Address: 3510 Laurel Road E
Contact City: North Venice
Contact State: FL
Contact Zip: 34275

Project Type and Scheduling

Project Type	Strategic Initiative
Water Supply	Reclaimed Water

Application Milestones

NONE

Description

The City of Venice (COV) Eastside Water Reclamation Facility (EWRF) has a permitted capacity of 8 MGD. The demand for reclaimed water (RCW) is projected to be 4.8 MGD by 2020 based on the amount of RCW available (i.e., demand is expected to meet or exceed the amount available). The use of this RCW offsets the need for pumping shallow coastal wells to meet irrigation needs or the use of potable water for this purpose. However, during periods of peak irrigation demands, spring and early summer, the demand for RCW is greater than Plant flow and must be met from storage. Current storage is limited to 65 million gallons. Conversely, during low irrigation demand periods the COV must dispose of excess RCW through alternative methods. In order to maximize the availability of RCW for current peak demand periods an estimated additional 31 million gallons of storage is needed. One alternative is to construct storage facilities on the land surface at an estimated cost of $40 million. The other alternative is the addition of an aquifer storage and recovery well which could provide well in excess of the 31 million gallons currently needed, thus allowing the COV system to meet irrigation demands well into the future. The estimated cost of this alternative would be $4.4 million. The COV RCW system includes bulk users (golf courses, parks, development common areas) as well as individual commercial and residual properties. The ASR Well will be located on the EWRF site.

Benefit

This project will maximize the use of RCW for irrigation purposes thus reducing the amount of withdraws from shallow wells or using potable water for irrigation. Reduced shallow well withdraws reduces salt-water intrusion in the upper aquifer. Reduced use of potable water for irrigation reduces the demand on the potable water supply system.

Cost

Project Cost : 1) Feasibility Study (ongoing COV funded) $175,000 2) Preliminary Design, Permitting, 3rd Party Review (CFI Funded 2020) $165,000 3) ASR Design and Bidding: $300,000 4) ASR Construction: $4,400,000 5) Cycle Testing: $100,000 6) Operational Permit: $100,000

Complementary Efforts

The City of Venice is actively working to develop additional RCW customers, extending RCW distribution and transmission lines, enforcing shallow irrigation well prohibitions where RCW distribution is available, and enforcing existing RCW use requirements for new development. The COV has self-funded the initial feasibility study of the project that is currently ongoing.

Application Funding

Funding Source	Prior FY($)	Current FY($)	Current FY + 1($)	Future($)
Applicant Share	0		150000	2200000
District Share	0		150000	2200000

Application Documents

Document Name	Document Type

CFI Application Information

Application Id: 124
New Project? 1
Project Name: Reverse Osmosis Water Treatment Plant Efficiency Improvements, (RO Second Stage Membrane Addition).
Counties Benefited: Sarasota
Available Programs:
Cooperator Information: City of Venice
Contact Name: Javier Vargas
Contact Email: jvargas@venicegov.com
Contact Phone: 9414803333
Contact Ext: 7309
Contact Address: 200 N. Warfield Ave
Contact City: Venice
Contact State: FL
Contact Zip: 34285

Project Type and Scheduling

Project Type	Strategic Initiative
Water Quality	Water Quality Maintenance and Improvement
Water Supply	Strategic Initiative

Application Milestones

Milestone: Project Design	Due Date: 5/30/2021 12:00:00 AM
Milestone: Project Start	Due Date: 11/29/2021 12:00:00 AM
Milestone: Project Bidding	Due Date: 9/30/2021 12:00:00 AM
Milestone: Project Complete	Due Date: 9/30/2022 12:00:00 AM
Milestone: Project Closeout	Due Date: 12/30/2022 12:00:00 AM

Description

The City of Venice, Florida owns and operates a brackish groundwater Reverse Osmosis [RO] Water Treatment Plant. The plant rated capacity is 4.48 MGD and the current average production is around 2.2 MGD. The treatment plant produces treated water quality that meets, and or, exceeds all state and federal drinking water requirements before pumping in to the distribution system. The RO process has four RO skids, split evenly into two, phases, buildings. Each RO skid is separate and independent of the other skids. Each skid is rated for approximately
1.1 MGD of permeate production. The current RO process operates at an overall recovery rate of 50% and produces approximately 1.1 MGS of permeate per skid, using a RO feed rate of 2.2 MGD. The proposed project provides secondary RO train capacity for two existing RO trains. This would result in increased recovery of 75% for half of the plant, while the other half would continue to operate at the current recovery of 50%. Thus, depending on the number of primary RO trains in operation, the overall plant recovery would vary from 62.5% to 75%. However, each secondary RO train will produce 1,140 gpm, per skid, for up to 2.280 gpm, (3.2 MGD), from the two secondary RO trains. This is equal to the current system running with three RO trains at 760 gpm each, 2,280 gpm, (3.2 MGD). It is noted that the current demand the city occasionally requires the plant to run three RO trains at one time. However rarely, if ever, is the city

Benefit

With proper piping and valves, the proposed project can meet the current demands, allow for rotation of the primary RO trains and still achieve 75% recovery for the majority of the demands for the plant. Of note, if all four RO trains were running at one time the recovery would be 62.5% and the supply would be 3,800 gpm or 5.5 MGD. Therefore, the proposed project can meet the projected average daily demands of the plant through 2045, allow the rotation of the primary RO trains and still achieve 75% recovery.

Cost

Engineering Design and Permitting: $300,000 Estimated Construction Cost: $3,000,000

Complementary Efforts

The City of Venice completed a preliminary pilot testing and feasibility study, as required in the city's WUP, special conditions, to determine the technical and financial feasibility of this upgrade to the city's water treatment system. The city is also working to complete a full scale pilot study to determine the optimal choice of membranes and pretreatment chemicals. The City of Venice also completed a permit renewal application to incorporate the results of feasibility study, which includes an analysis of the effects of increased recovery rates and on the reject water outfall discharge.

Application Funding

Funding Source	Prior FY($)	Current FY($)	Current FY + 1($)	Future($)
Applicant Share	0	150000	1500000	0
District Share	0	150000	1500000	0

Application Documents

DocumentName	Document Type

CFI Application Information

Application Id: 138
New Project? 1
Project Name: City of Venice Toilet Rebate and Retrofit Project – Phase 9
Counties Benefited: Sarasota
Available Programs: REDI
Cooperator Information: City of Venice
Contact Name: Javier Vargas
Contact Email: jvargas@venicegov.com
Contact Phone: 9418827309
Contact Ext:
Contact Address: 200 North Warfield Ave.
Contact City: Venice
Contact State: FL
Contact Zip: 34285

Project Type and Scheduling

Project Type	Strategic Initiative
Water Supply	Conservation

Application Milestones

Milestone: Project Start	Due Date: 1/1/2022 12:00:00 AM
Milestone: Project Complete	Due Date: 12/31/2022 12:00:00 AM
Milestone: Project Closeout and Final Reporting	Due Date: 4/1/2023 12:00:00 AM
Milestone: Project Closeout and Final Reporting	Due Date: 4/30/2023 12:00:00 AM
Milestone: Project Complete	Due Date: 12/31/2022 12:00:00 AM

Description

The City of Venice Toilet Rebate and Retrofit Program consists of offering financial incentives to potable water customers for replacing conventional toilets and urinals with water-conserving equivalents, providing rebates for certain water saving improvements, providing do-it-yourself kits, and an educational component. The City will provide a $100 credit to the customer's water bill upon WaterSense toilet or urinal installation and inspection. In order to assure that the replaced conventional toilets or urinals will not be reinstalled at another location, the City will require permanent disposal of the conventional toilet or urinal as a condition of the rebate. It is estimated that 50 percent of the City's water customers are eligible for this component. The other component of the program consists of providing 400 water conservation do-it-yourself kits and educational materials at no charge to City potable water customers. These kits contain such items as a low-flow showerhead, bath and kitchen faucet aerators, toilet flapper valve, toilet tank leak detection dye tablets, and water conservation educational materials. The total project cost is $47,800, and the City is requesting $23,900 from the District in FY2022. The City of Venice will match the funding request with funds within the Utilities Department water production budget. The City plans to hire a consultant to administer the project. The consultant will perform the rebate qualifications, educational component, installation inspections, and customer surveys while the City will track actual pre and post water usage. Toilet installation rebates and conservation kit distribution will begin by January 1, 2022. It is anticipated that the project will be complete by December 31, 2022 with project close out and final reporting occurring no later than April 30, 2023.

Benefit

The project will replace approximately 175 high-volume toilets or urinals and provide up to 400 water conservation DIY kits, producing a water savings of approximately 5,372 gpd. The project's estimated cost/ benefit ratio is $2.53 per thousand gallons (20 years at 8% interest). This cost/benefit ratio is based on the project cost of $47,800 over a 20 year life of toilets/urinals.

Cost

1) Estimated Cost: $47,800 2) 175 Toilet Rebates to include, Single, & Multi-family, and Commercial toilets @ $100.00, with the total cost of $17,500.00 3) Program Administration, 175 @ $60.00, with a total cost of $10,500.00 4) 400 DIY Kits at a total cost of $8,400.00 5) Educational Materials and Program Promotion at a total cost of $13,150.00 6) In no instance will the rebate exceed the actual cost of the related toilet(s) and installation(s)

Complementary Efforts

The City of Venice makes water conservation a priority. The Utilities Department has in place a comprehensive water distribution and supply system with a tiered water rate structure along with a robust reclaimed water distribution system. Periodic water conservation tips and techniques are disseminated through messages printed on each bill or on separate bill inserts. The city also provides water conservation education and promotional materials, and in prior years provided plumbing retrofit kits. Under the Water Conservation Plan, utilities staff researches other water conservation practices for possible use. The stormwater division oversees flood protection ordinances. New subdivision regulations require all properties with a SWFWMD permit to recertify their system yearly. Public outreach, regular stormwater system inspections and a capital improvement program are just a few of the flood protection and water quality improvement initiatives

performed. The Utilities Department educates the public on water conservation and offers promotional materials (i.e. toilet leak tablets, water charts, contests and water saver gadgets). Yearly, utilities sponsors a water conservation poster contest with the local schools. The city provides reclaimed water for commercial and residential properties in portions of the city. The watering restriction ordinance is regularly updated to be consistent with the restrictions implemented by SWFWMD and adopted by Sarasota County.

Application Funding

Funding Source	Prior FY($)	Current FY($)	Current FY + 1($)	Future($)
Applicant Share	259350	24775	24775	23900
District Share	259350	24775	24775	23900

Application Documents

DocumentName	Document Type