5-Year Capital Improvements Plan
and
20-Year Capital Needs Assessment
Fiscal Period: 2021 - 2040
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Ongoing Projects 2020

The Maintenance Warehouse and Office at the Peace River Facility

Regional Interconnect Phase 1 Pipeline in DeSoto and Charlotte Counties included a 3,500 foot long directional drill (under Shell Creek) downstream of the dam.

Regional Interconnect Phase 3B Pipeline in Sarasota County

The Filter Covers at the Peace River Facility
Background

The Peace River Manasota Regional Water Supply Authority's 5 Year Capital Improvement Plan (CIP) and 20-Year Capital Needs Assessment (CNA) reflect comprehensive plans of proposed capital projects to meet the region’s water supply needs. These plans are primarily a planning vehicle which is adjusted annually subject to the shifting needs and priorities of the region and also as projects grow closer to implementation and so become more refined in both scope and cost. The CIP and CNA documents reflect the collective input of many stakeholders and is useful to those parties in understanding and communicating both funding obligations as well as grant funding opportunities associated with future projects. The CIP and CNA are developed with oversight of the Water Supply Authority’s Board of Directors and are consistent with Board Policy, our Mission, our Vision Statement and the Strategic Plan.

Although there is no policy establishing a minimum value for a project to be considered a CIP/CNA project, they typically reflect projects expected to cost more than $1 million. The Authority is continually in the process of updating and expanding its Water Supply Facilities to serve increasing demand, capacity requirements, and new regulatory requirements and improve and upgrade existing infrastructure, which will provide service to the members increasing demand.

Capital Improvement Projects are categorized into three primary categories: (1) New Water Supply Projects, (2) Regional Transmission System Projects, or (3) Systemwide Benefit Projects:

1) **New Water Supply Projects**
   Includes projects that provide expansion of the Authority's Water Supply Facilities and appurtenant or associated installations owned, leased or otherwise controlled by the Authority and used for the provision of potable water supply. This category also includes any water transmission projects needed for water supply. These projects are funded in accordance with the Master Water Supply Contract (MWSC).

2) **Regional Transmission System Projects**
   Includes transmission pipelines and, where needed, remote storage and booster pumping facilities to improve or extend delivery of water within the regional system. These projects generally interconnect members/customers based on need and bolster plant-to-plant connections to facilitate rotational supply capability for droughts and other emergencies. Also includes projects whereby elements of the regional transmission system must be relocated such as may be required for roadway widening projects or replaced due to age or condition.

3) **System-Wide Benefit Projects**
   A “System-Wide Benefit CIP Project” is defined as any capital project of shared benefit to Authority Members and Customers. System-Wide Benefit CIP Projects exclude Renewal and Replacement and New Water Supply Projects and funding will be established on project-specific basis as approved by the Board. System-Wide Benefit Projects will generally exceed $500,000 but fall below $5,000,000 in anticipated cost for implementation and may include the following general types of projects:
   - New buildings, or expansion of an existing building, at Authority water supply facilities;
   - Projects which improve the performance, enhance treatment capability or improve water quality in the Authority’s water supply system;
   - Projects which bolster resiliency and reliability of the Authority’s water supply system;
   - Projects which promote sustainability, safety and system security of the regional water system.
   - Projects involving major facility control/communications system upgrades; and
   - Any other project so designated by the Authority Board of Directors.
Summary Graphs

**Water Supply Capacity Generated by Projects**

<table>
<thead>
<tr>
<th>Supply (MGD)</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
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<tbody>
<tr>
<td><strong>S1</strong> PRF Expansion - Minor (Previously Phase 2 Capacity Increase)</td>
<td>12.0</td>
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<td><strong>S2a</strong> Reservoir 3</td>
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<td><strong>S4</strong></td>
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<td><strong>A2</strong> ASR Wellfield Expansion</td>
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**Schedule of Projects**

- **Phase 2**
  - **S1**: PRF Expansion - Minor (Previously Phase 2 Capacity Increase) - 2028
  - **S2a**: Reservoir 3 - 2029
  - **S4**: 5 MGD Brackish Water RO Facility at PRF - 2036
  - **A2**: ASR Wellfield Expansion - 2038
  - **TOTAL**: 20.0

**Miles of Transmission Pipeline Installed, Relocated or Replaced**

- **158.8 miles of Regional Transmission**
  - 76 miles of current pipelines
  - 77.3 miles of new pipelines
  - 5.5 miles of relocated/replaced pipelines

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<thead>
<tr>
<th>Distance (miles)</th>
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**Schedule of Projects**

- **Phase 3B**
  - **T2**: Regional Integrated Loop - Phase 3B [SR 681 to Clark Rd.] - 5.0 - 2021
  - **T4**: Replace Kings Highway Pipeline due to Road Widening - 2.5 - 2022
  - **T6**: Regional Integrated Loop - Phase 3C [Clark Rd. to Lakewood Ranch includes Pump Station] - 10.0 - 2023
  - **T9**: Regional Integrated Loop - Phase 2B [from Serris west for 10 miles includes Pump Station] - 10.0 - 2024
  - **T10**: Regional Integrated Loop - Phase 2C [from 2B to Carlton WTP includes Pump Station] - 14.0 - 2025
  - **T8**: Replace 12" PVC Line - 1.5 - 2032
  - **T11**: Regional Integrated Loop - Phase 2D [US 41 to Englewood Water District includes Pump Station] - 12.5 - 2033
  - **T12**: Regional Integrated Loop - Phase 4 [Cleveland to Burnt Store Facility includes Pump Station] - 15.0 - 2034
| | | | | | | | | | | | | | | | | | | | |
| **TOTAL** | | | | | | | | | | | | | | | | | | | | |

Will reach 81 miles in 2021 with completion of Phase 3B.
Our Mission
To provide the region with a sufficient, high quality, safe drinking water supply that is reliable, sustainable and protective of our natural resources now and into the future.

Our Vision
Through cooperation and collaboration, the Peace River Manasota Regional Water Supply Authority and its members shall create, maintain and expand a sustainable, interconnected regional water
5 Year Capital Improvements Program Summary by Year and Type of Project

Total Investment Planned Over the Period $ 74,961,902 excludes prior year and feasibility study costs
Anticipated Offsetting Grant Funding $ 23,701,504 excludes prior year and feasibility study costs

Note: Although many capital projects are projected to benefit from a 50% Cooperative Funding match, within this period there are significant investments in property and mitigation which occur early in the project life cycle and not eligible for cooperative funding assistance. There are also several system-wide benefit projects which are typically ineligible for grant funding as well.
### Project Description Sheet

**Project Name or Title:** Regional Integrated Loop - Phase 3B [S.R. 681 to Clark Rd.]

**Shorthand Identifier:** T2

**Project Location, Site or Route:** From the Preymore Interconnect at 681 northward to Clark Road

**Type of Project - Related to Major Purpose**
- [ ] Raw Water Pumping, Storage or Conveyance
- [ ] Water Treatment
- [ ] Finished Water Storage and Pumping
- [ ] Finished Water Pipelines
- [ ] Plant Power, Switchgear, Fuel & Generator Sets

**Does the Project Generate Additional Water Supply/Yield?**
- [ ] Yes
- [ ] No

**Reference and Description of Need**
The Phase 3B pipeline includes approximately 5 miles of pipe to extend water service northward within Sarasota County from the current termination of the regional integrated loop system at the Preymore Interconnects (681) near the Sarasota County Central Solid Waste Management Complex northward to Clark Road (SR72). These improvements will enable the regional system to better serve central Sarasota County, an area which is rapidly developing and also move the system one step closer to being able to interconnect with with Manatee County. The project is under construction (Spring 2020) and consists of about 4 miles of 48” diameter steel pipe and 1 mile of 36” diameter ductile iron pipe.

**Feasibility Study -$**
- Engineering Services $2,672,000
- Construction Cost $14,016,000
- Land Acquisition (mitigation, property or easements) $12,000

**Total Capital Cost (includes Feasibility Study) $16,700,000**

**Projected Sources of Funding**
- Projected Authority (Cooperator) $8,106,000
- Projected SWFWMD Grant Funding $8,094,000
- State and Other Grant Funding $500,000

**Total $16,700,000**

**Note:** Feasibility Studies are typically funded through planning assessments with a cooperative funding match and funds are collected and expended generally within the same period. Land Acquisition, Engineering Services and Construction expenses are typically financed through debt issuance.

### Schedule

| Year (starts on fiscal/year calendar Oct 1st) | Prior Period | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | Future Period |
|--------------------------------------------|--------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| **Feasibility Study**                      |              |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| **Property and Easement Acquisition**      |              |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| **Final Design & Permitting**              |              |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| **Mitigation**                             |              |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| **Construction**                           |              |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |

**Location Map or Concept Sketch**

A 50-foot long spool piece of 48” diameter steel pipe being maneuvered into a trench box.

A 20-foot long spool piece of 36” diameter ductile iron pipe being maneuvered into a trench box.
### Reference and Description of Need

The Peace River Facility is not equipped with filter enclosures to prevent airborne debris, and disinfection credit cannot be accrued through filters. Since we cannot accrue the contact time in the filters, the tradeoff is that we must maintain high storage tank levels at all times. This forced the plant to constantly adjust its rate of production to match demands, constraining operational flexibility. Screening in the filters will allow the plant to operate at a constant rate of production which will improve treatment efficiency, treatment effectiveness, reduce chemical consumption and also provide a measure of safety to operators, maintenance men and equipment from weather and lightning strikes atop the filter structures.

### Does the Project Generate Additional Water Supply/Yield?

- **No**
  - If Yes, any Requisite Companion Projects?
    - none
  - Collective Capital Cost of Associated Projects
    - NA
  - Participant Cost (inclusive of expected grant funds)
    - NA

### Effective Net Unit Capital Cost - cost per gallon of yield generated

- NA

### Estimated Project Cost

<table>
<thead>
<tr>
<th>Type of Project</th>
<th>Cost</th>
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<tbody>
<tr>
<td>Feasibility Study</td>
<td>$ -</td>
</tr>
<tr>
<td>Engineering Services</td>
<td>$ 864,000</td>
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<tr>
<td>Construction Cost</td>
<td>$ 3,936,000</td>
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<tr>
<td>Total Capital Cost (includes Feasibility Study)</td>
<td>$ 4,800,000</td>
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### Projected Sources of Funding

<table>
<thead>
<tr>
<th>Source</th>
<th>Amount</th>
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<tr>
<td>Projected Authority (Cooperator) Funding or TBD</td>
<td>$ 4,800,000</td>
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### Project Description Sheet

- **Project Name or Title:** Facility Improvements [Filter Covers]
- **Shorthand Identifier:** B2
- **Project Location, Site or Route:** At the Peace River Facility (and associated property holdings either fee simple or via permanent easements)

### Type of Project - Related to Major Purpose

<table>
<thead>
<tr>
<th>Type of Project</th>
<th>Related to Major Purpose</th>
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<tbody>
<tr>
<td>Water Pumping, Storage or Conveyance</td>
<td>☐</td>
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<tr>
<td>ASR Systems</td>
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<tr>
<td>General Buildings, Structures &amp; Security</td>
<td>☐</td>
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<tr>
<td>SCADA, ADAS or General IT Systems</td>
<td>☐</td>
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<tr>
<td>Roads and Sitework</td>
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<tr>
<td>Solid Residuals Management</td>
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### Project Classification

- **Transmission**: ☐
- **Water Supply**: ☐
- **System-Wide Benefit**: ☒
- **Other (If Other, describe)**: Other

### Location Map or Concept Sketch

- Work on the Plant 1 superstructure Spring 2020.

### Schedule

| Schedule | Prior Period | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | Future Period |
|----------|--------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Preliminary Engineering | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| Property and Easement Acquisition | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| Final Design & Permitting | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| Mitigation | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| Construction | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
**Project Name or Title:** Regional Integrated Loop - Phase 2B [from Serris west for 10 miles includes Pump Station]  
**Shorthand Identifier:** T9

**Project Location, Site or Route:** Extension of the Regional Loop System from Serris Blvd. west to near the Myakkahatchee WTP.

### Reference and Description of Need
This pipeline project is comprised of 10 miles of pipe tentatively sized as 36” or 42” diameter running from the current terminus of the Phase 2A regional loop pipeline westward to near North Port’s Myakkahatchee Creek WTP. A booster pumping station is included with the project; the location of the booster pump station is to be decided by the selected project team. This segment of the regional integrated loop system will boost regional resiliency, bi-directional water transfer capability and lays the groundwork for the southern regional loop with future pipeline projects. The project will also bring improved delivery to the western portions of Charlotte County’s service area and the City of North Port.

### Does the Project Generate Additional Water Supply/Yield?
- Yes if Yes, How Much? 0.00 MGD on AADD basis
- No  

### Collective Capital Cost of Associated Projects
- Finish Water Storage and Pumping SCADA, ADAS or General IT Systems
- Roads and Sitework
- Plant Power, Switchgear, Fuel & Generator Sets

### Finished Water Pipelines, Roads and Sitework
- Participant Cost (inclusive of expected grant funds)

### Effective Net Unit Capital Cost
- cost per gallon of yield generated

### Estimated Project Cost
- Feasibility Study $200,000
- Engineering Services $7,902,780
- Construction Cost $47,922,220
- Land Acquisition (mitigation, property or easements) $1,852,000
- Total Capital Cost (includes Feasibility Study) $57,877,000

### Projected Sources of Funding
- Projected Authority (Cooperator) Funding or TBD $29,964,500
- Projected SWFWMD Grant Funding $27,912,500
- Projected State and Other Grant Funding -
- Total $57,877,000

**Note:** Feasibility Studies are typically funded through planning assessments with a cooperative funding match and funds are collected and expended generally within the same period. Land Acquisition, Engineering Services and Construction expenses are typically financed through debt issuance.

### Schedule
<table>
<thead>
<tr>
<th>Schedule Item</th>
<th>Prior Year</th>
<th>2021</th>
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</table>

**Future Period:** Board Approved: May 27, 2020
Reference and Description of Need

Reliability Modeling reflects that a combination of 6 BG additional raw water storage combined with newly permitted 258 MGD of river diversion pumping and raw water conveyance capacity and a treatment plant capacity expansion of 12 MGD will produce an additional annual average day safe yield of 12 MGD out of this system. The shape, depth, footprint and location of the new reservoir and the manner in which it will connect to the existing storage reservoirs and the location for the expanded river diversion pumping capacity will be considered in a Feasibility Study beginning in FY 2020.

Does the Project Generate Additional Water Supply/Yield?

Yes If Yes, How Much? 12.00 MGD on AADD basis

No If Yes, any Requisite Companion Projects?

Collective Capital Cost of Associated Projects

$257,000,000

Participant Cost (inclusive of expected grant funds)

$136,562,500

Effective Net Unit Capital Cost $11.38 cost per gallon of yield generated

Capital Improvement Plan/Capital Needs Assessment
Project Description Sheet

Project Name or Title: Reservoir 3

Shorthand Identifier: 52a

Project Location, Site or Route: On the RV Griffin Reserve

Type of Project - Related to Major Purpose
(check multiple boxes if applicable)

- Raw Water Pumping, Storage or Conveyance
- Water Treatment
- Finished Water Storage and Pumping
- Finished Water Pipelines
- Roads and Sitework
- Plant Power, Switchgear, Fuel & Generator Sets
- ASR Systems
- General Buildings, Structures & Security
- SCADA, ADAS or General IT Systems
- Solid Residuals Management

Project Classification: Water Supply

Estimated Project Cost

Feasibility Study $1,500,000

Engineering Services $26,330,000

Construction Cost $199,570,000

Land Acquisition (mitigation, property or easements) $14,600,000

Total Capital Cost (includes Feasibility Study) $242,000,000

Projected Sources of Funding

Projected Authority (Cooperator) Funding or TBD $129,050,000

Projected SWFWMD Grant Funding $112,950,000

Projected State and Other Grant Funding $ -

Total $242,000,000

Note: Feasibility Studies are typically funded through planning assessments with a cooperative funding match and funds are collected and expended generally within the same period. Land Acquisition, Engineering Services and Construction expenses are typically financed through debt issuance.

Schedule

(user starts on fiscal year calendar Oct 1st)

<table>
<thead>
<tr>
<th>Prior Period</th>
<th>2021</th>
<th>2022</th>
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<th>2040</th>
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</table>

Feasibility Study

Preliminary Engineering

Property and Easement Acquisition

Final Design & Permitting

Mitigation

Construction

Location Map or Concept Sketch

Challenges and Solutions: Reservoir Siteing

Authorizing Operational Flexibility through Successful Evaluation of String Options

Note: This is a conceptual level description and further analysis may be required.

To the left and right are respective figures presented by the 2 most highly ranked consulting teams vying to be selected as the engineering constant for this project. These figures reflect some of the many issues and concerns facing the project team in determining how this project will proceed.

Below is an aerial picture of the existing river diversion pump station and as a part of this project, the river diversion pumping capacity will more than double.

SHRINE IDENTIFIER: On the RV Griffin Reserve

Type of Project - Related to Major Purpose
(check multiple boxes if applicable)

- Does the Project Generate Additional Water Supply/Yield? Yes

- If Yes, How Much? 12.00 MGD on AADD basis

- If Yes, any Requisite Companion Projects?

- Collective Capital Cost of Associated Projects $257,000,000

- Participant Cost (inclusive of expected grant funds) $136,562,500

- Effective Net Unit Capital Cost $11.38 cost per gallon of yield generated

- Project Classification: Water Supply

- Estimated Project Cost $242,000,000

- Projected Sources of Funding

- Projected Authority (Cooperator) Funding or TBD $129,050,000

- Projected SWFWMD Grant Funding $112,950,000

- Projected State and Other Grant Funding $ -

- Total $242,000,000

- Note: Feasibility Studies are typically funded through planning assessments with a cooperative funding match and funds are collected and expended generally within the same period. Land Acquisition, Engineering Services and Construction expenses are typically financed through debt issuance.

- Schedule

- (user starts on fiscal year calendar Oct 1st)

- Feasibility Study

- Preliminary Engineering

- Property and Easement Acquisition

- Final Design & Permitting

- Mitigation

- Construction

- Location Map or Concept Sketch

- Challenges and Solutions: Reservoir Siteing

- Authorizing Operational Flexibility through Successful Evaluation of String Options

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- To the left and right are respective figures presented by the 2 most highly ranked consulting teams vying to be selected as the engineering constant for this project. These figures reflect some of the many issues and concerns facing the project team in determining how this project will proceed.

- Below is an aerial picture of the existing river diversion pump station and as a part of this project, the river diversion pumping capacity will more than double.

Page 11 Board Approved: May 27, 2020
**Capital Improvement Plan/Capital Needs Assessment**

### Project Description Sheet

**Project Name or Title:** Regional Integrated Loop - Phase 2C [from 2B to Carlton WTP](includes Pump Station)

**Shorthand Identifier:** 710

**Project Location, Site or Route:** Extension of the Regional Loop System from near Myakkahatchee WTP to the Carlton WTP

---

**Reference and Description of Need**

This pipeline project is comprised of 14 miles of pipe tentatively sized as 36" diameter running from the planned terminus of the Phase 2B regional loop pipeline near the Myakkahatchee WTP in North Port to the Carlton WTP. A booster pumping station is included with the project; the location of the booster pump station is to be decided by the selected project team. This segment completes a plant-to-plant connection that will boost regional resiliency, bi-directional water transfer capability and, along with Phase 2B, completes the southern regional loop.

---

**Does the Project Generate Additional Water Supply/Yield?**

- **No**

  - **If Yes, any Requisite Companion Projects?**
    - none

  - **Collective Capital Cost of Associated Projects**
    - NA

  - **Participant Cost (inclusive of expected grant funds)**
    - NA

  - **Effective Net Unit Capital Cost**
    - cost per gallon of yield generated

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**Estimated Project Cost**

<table>
<thead>
<tr>
<th>Estimated Project Cost</th>
<th>Cost (USD)</th>
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<tbody>
<tr>
<td>Feasibility Study</td>
<td>$200,000</td>
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<tr>
<td>Engineering Services</td>
<td>$7,780,440</td>
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<tr>
<td>Construction Cost</td>
<td>$51,545,560</td>
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<tr>
<td>Land Acquisition (mitigation, property or easements)</td>
<td>$1,862,000</td>
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<tr>
<td><strong>Total Capital Cost</strong></td>
<td><strong>$61,388,000</strong></td>
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**Projected Sources of Funding**

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<tr>
<th>Projected Sources of Funding</th>
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<td>Projected Authority (Cooperator) Funding or TBD</td>
<td>$31,725,000</td>
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<td>Projected SWFWMD Grant Funding</td>
<td>$29,663,000</td>
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<td>Projected State and Other Grant Funding</td>
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<td><strong>Total</strong></td>
<td><strong>$61,388,000</strong></td>
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Note: Feasibility Studies are typically funded through planning assessments with a cooperative funding match and funds are collected and expended generally within the same period. Land Acquisition, Engineering Services and Construction expenses are typically financed through debt issuance.

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**Schedule**

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**Location Map or Concept Sketch**

Challenges along this route will include crossing the Myakkahatchee Creek (above) and Myakka River (below) and minimizing impact on major transportation features like River Road (right) during construction. This project conceptually includes finished water storage, repumping and water quality adjustment capabilities.

---

**Regional Integrated Loop - Phase 2C**

This pipeline project is comprised of 14 miles of pipe tentatively sized as 36" diameter running from the planned terminus of the Phase 2B regional loop pipeline near the Myakkahatchee WTP in North Port to the Carlton WTP. A booster pumping station is included with the project; the location of the booster pump station is to be decided by the selected project team. This segment completes a plant-to-plant connection that will boost regional resiliency, bi-directional water transfer capability and, along with Phase 2B, completes the southern regional loop.

---

**Feasibility Study**

200,000$

**Engineering Services**

7,780,440$

**Construction Cost**

51,545,560$

**Land Acquisition (mitigation, property or easements)**

1,862,000$

**Total Capital Cost (includes Feasibility Study)**

61,388,000$

**Projected Authority (Cooperator) Funding or TBD**

31,725,000$

**Projected SWFWMD Grant Funding**

29,663,000$

**Projected State and Other Grant Funding**

- $ -

**Total 61,388,000$**

**Estimated Project Cost**

**Projected Sources of Funding**

**Schedule**

**Location Map or Concept Sketch**

**Regional Integrated Loop - Phase 2C**

This pipeline project is comprised of 14 miles of pipe tentatively sized as 36" diameter running from the planned terminus of the Phase 2B regional loop pipeline near the Myakkahatchee WTP in North Port to the Carlton WTP. A booster pumping station is included with the project; the location of the booster pump station is to be decided by the selected project team. This segment completes a plant-to-plant connection that will boost regional resiliency, bi-directional water transfer capability and, along with Phase 2B, completes the southern regional loop.

---

**Feasibility Study**

200,000$

**Engineering Services**

7,780,440$

**Construction Cost**

51,545,560$

**Land Acquisition (mitigation, property or easements)**

1,862,000$

**Total Capital Cost (includes Feasibility Study)**

61,388,000$

**Projected Authority (Cooperator) Funding or TBD**

31,725,000$

**Projected SWFWMD Grant Funding**

29,663,000$

**Projected State and Other Grant Funding**

- $ -

**Total 61,388,000$**

**Estimated Project Cost**

**Projected Sources of Funding**

**Schedule**

**Location Map or Concept Sketch**

Challenges along this route will include crossing the Myakkahatchee Creek (above) and Myakka River (below) and minimizing impact on major transportation features like River Road (right) during construction. This project conceptually includes finished water storage, repumping and water quality adjustment capabilities.

---

**Regional Integrated Loop - Phase 2C**

This pipeline project is comprised of 14 miles of pipe tentatively sized as 36" diameter running from the planned terminus of the Phase 2B regional loop pipeline near the Myakkahatchee WTP in North Port to the Carlton WTP. A booster pumping station is included with the project; the location of the booster pump station is to be decided by the selected project team. This segment completes a plant-to-plant connection that will boost regional resiliency, bi-directional water transfer capability and, along with Phase 2B, completes the southern regional loop.

---

**Feasibility Study**

200,000$

**Engineering Services**

7,780,440$

**Construction Cost**

51,545,560$

**Land Acquisition (mitigation, property or easements)**

1,862,000$

**Total Capital Cost (includes Feasibility Study)**

61,388,000$

**Projected Authority (Cooperator) Funding or TBD**

31,725,000$

**Projected SWFWMD Grant Funding**

29,663,000$

**Projected State and Other Grant Funding**

- $ -

**Total 61,388,000$**

**Estimated Project Cost**

**Projected Sources of Funding**

**Schedule**

**Location Map or Concept Sketch**

Challenges along this route will include crossing the Myakkahatchee Creek (above) and Myakka River (below) and minimizing impact on major transportation features like River Road (right) during construction. This project conceptually includes finished water storage, repumping and water quality adjustment capabilities.
Capitol Improvement Plan/Capital Needs Assessment
Project Description Sheet

Project Name or Title: Regional Integrated Loop - Phase 3C [Clark Rd. to Lakewood Ranch Includes Pump Station]

Shorthand Identifier: T6

Project Location, Site or Route: Between Clark Road (SR 72) and Lakewood Ranch

Type of Project - Related to Major Purpose

- Raw Water Pumping, Storage or Conveyance
- Water Treatment
- Finished Water Storage and Pumping
- Finished Water Pipelines
- Plant Power, Switchgear, Fuel & Generator Sets
- ASR Systems
- General Buildings, Structures & Security
- SCADA, ADAS or General IT Systems
- Roads and Sitework
- Solid Residuals Management

Project Classification: Transmission Water Supply System-Wide Benefit Other (if Other, describe)

Estimated Project Cost

<table>
<thead>
<tr>
<th>Project</th>
<th>Cost</th>
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<tbody>
<tr>
<td>Feasibility Study</td>
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<td>Engineering Services</td>
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Projected Sources of Funding

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<tr>
<th>Project</th>
<th>Cost</th>
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<tr>
<td>Total</td>
<td>$57,603,000</td>
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Note: Feasibility Studies are typically funded through planning assessments with a cooperative funding match and funds are collected and expended generally within the same period. Land Acquisition, Engineering Services and Construction expenses are typically financed through debt issuance.

Reference and Description of Need

The Phase 3C Regional Integrated Loop project will consist of a segment of approximately 10 miles of 36" and/or 24" diameter water main installed between Clark Road (SR72) northward to Lakewood Ranch. This project includes a storage and booster pumping facility. The pumping facility will include chemical trim facilities and have the capability of pumping to both the north and south. Including a recently installed section of 24" pipe by Sarasota County, this project will largely complete a 66 mile linkage between the PRF and Manatee County and forms the backbone of the regional transmission system. It will bolster flows between Sarasota and Manatee Counties and provide operational resilience and flexibility in serving growth in the region.

Does the Project Generate Additional Water Supply/Yield?

- Yes
- If Yes, How Much? 0.00 MGD on AADD basis
- If Yes, any Requisite Companion Projects? none
- Collective Capital Cost of Associated Projects NA
- Participant Cost (inclusive of expected grant funds) NA
- Effective Net Unit Capital Cost - cost per gallon of yield generated

Location Map or Concept Sketch

Challenges along this route will include minimizing impact on major transportation features during construction and finding property in this fast growing area (Lakewood Ranch) for easements and the booster pumping station. This project conceptually includes finished water storage, repumping and water quality adjustment capabilities, the photos to the left and below present some recently completed storage and pumping projects. The configuration, location and capacity of these facilities is the subject of a Feasibility Study to be started in FY 2021.

Schedule

| Description                     | Prior 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | Future Period |
|---------------------------------|------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------------|
| Feasibility Study               |            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                |
| Preliminary Engineering         |            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                |
| Property and Easement Acquisition |          |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                |
| Final Design & Permitting       |            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                |
| Mitigation                      |            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                |
| Construction                    |            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                |
**Capital Improvement Plan/Capital Needs Assessment**

**Project Description Sheet**

**Project Name or Title:** Regional Integrated Loop - Phase 3C Extension [West to University Pump Station]

**Shorthand Identifier:** T13

**Project Location, Site or Route:** From Phase 3C westward, south of the Benderson/UTC Mall to west of Lockwood Ridge Road at University Pkwy

**Type of Project - Related to Major Purpose**

- Raw Water Pumping, Storage or Conveyance
- Water Treatment
- Finished Water Storage and Pumping
- Finished Water Pipelines
- Plant Power, Switchgear, Fuel & Generator Sets
- ASR Systems
- General Buildings, Structures & Security
- SCADA, ADAS or General IT Systems
- Roads and Sitework
- Solid Residuals Management

**Project Classification:** Transmission

**Estimated Project Cost**

- Feasibility Study $300,000
- Engineering Services $4,093,200
- Construction Cost $20,145,800
- Land Acquisition (mitigation, property or easements) $4,239,000
- Total Capital Cost (includes Feasibility Study) $28,688,000

**Projected Sources of Funding**

- Projected Authority (Cooperator) Funding or TBD $16,613,500
- Projected SWFWMD Grant Funding $12,074,500
- Projected State and Other Grant Funding $-
- Total $28,688,000

**Schedule**

- Year starts on fiscal year calendar Oct 1st

**Location Map or Concept Sketch**

The Phase 3C Extension Regional Integrated Loop project will consist of a segment of approximately 10.8 miles of 30" or 36" diameter water main installed between Phase 3C in the vicinity of Fruitville Road (780) westward under I-75, south of Benderson/UTC Mall area and then northwest to an existing facility at Lockwood Ridge Rd & University Pkwy. The pumping facility already includes chemical trim facilities and has the capability of pumping to both the north and south. Some minor modifications to this facility located at the western terminal end of the regional loop pipeline are envisioned. This pipeline project will facilitate regional flows westward from sources to the demand areas and significantly bolster resiliency in this region.

**Reference and Description of Need**

The route for the pipeline has not been evaluated. Challenges along this route will include crossing under I-75, avoiding the UTC Mall (below center) and Nathan Benderson Rowing Park (below right). There are also major established transportation features including University Parkway, Honore Avenue and Lockwood Ridge Road to be considered. The configuration, location and capacity of these facilities is the subject of a Feasibility Study expected to begin in 2021.

**Does the Project Generate Additional Water Supply/Yield?**

- No

**Collective Capital Cost of Associated Projects**

- Participant Cost (inclusive of expected grant funds) NA

**Effective Net Unit Capital Cost**

- cost per gallon of yield generated

**Location Map or Concept Sketch**

The route for the pipeline has not been evaluated. Challenges along this route will include crossing under I-75, avoiding the UTC Mall (below center) and Nathan Benderson Rowing Park (below right). There are also major established transportation features including University Parkway, Honore Avenue and Lockwood Ridge Road to be considered. The configuration, location and capacity of these facilities is the subject of a Feasibility Study expected to begin in 2021.

**Project Description Sheet**

- Year starts on fiscal year calendar Oct 1st

- Future Period

**Feasibility Study**

**Preliminary Engineering**

**Property and Easement Acquisition**

**Final Design & Permitting**

**Mitigation**

**Construction**

**Schedule**

- Year starts on fiscal year calendar Oct 1st

- Feasibility Study

- Preliminary Engineering

- Property and Easement Acquisition

- Final Design & Permitting

- Mitigation

- Construction

- Future Period

Page 14

Board Approved: May 27, 2020
### Project Name or Title:
Replace Kings Highway Pipeline due to Road Widening

### Shorthand Identifier:
T4

### Project Location, Site or Route:
Kings Highway from Peace River Street to the Charlotte/DeSoto county line.

#### Reference and Description of Need
The Kings Highway 24" Regional Transmission Main provides water to Charlotte and DeSoto Counties and was installed within the roadway right-of-way. The FDOT is planning to widen a portion of Kings Highway since it represents a significant arterial connector between Arcadia and Port Charlotte, is an area of growing commerce and land development and can serve as a major hurricane evacuation route. A significant portion of this pipeline will be replaced with the same size line in an easement or the revised right-of-way.

#### Estimated Project Cost

<table>
<thead>
<tr>
<th>Cost Item</th>
<th>Amount</th>
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<tr>
<td>Engineering Services</td>
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#### Projected Sources of Funding

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<tr>
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<td>Projected Authority (Cooperator) Funding or TBD</td>
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<td><strong>Total</strong></td>
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#### Location Map or Concept Sketch

From the I-75 Overpass looking northeast along Kings Highway (CR 769) Walmart is to the left and Sandhill Blvd. to the right.

From Kings Highway at Peace River Street looking towards I-75 approximately 2.5 miles to the southwest.

#### Schedule

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</table>

### Does the Project Generate Additional Water Supply/Yield?

- **Yes**: If Yes, How Much? 0.00 MGD on AADD basis
- **No**: If Yes, any Requisite Companion Projects? none
- Collective Capital Cost of Associated Projects NA
- Participant Cost (inclusive of expected grant funds) NA
- Effective Net Unit Capital Cost - cost per gallon of yield generated

#### Note:
Feasibility Studies are typically funded through planning assessments with a cooperative funding match and funds are collected and expended generally within the same period. Land Acquisition, Engineering Services and Construction expenses are typically financed through debt issuance.
**Capital Improvement Plan/Capital Needs Assessment**

**Project Description Sheet**

**Project Name or Title:** Phase 3A Loop Pipeline Relocation Due to Laurel Road Widening

*S shorthand Identifier: T14

**Project Location, Site or Route:** Kings Highway from the Peace River Facility to the County Line

**Type of Project - Related to Major Purpose**

- Raw Water Pumping, Storage or Conveyance
- Water Treatment
- Finished Water Storage and Pumping
- Plant Power, Switchgear, Fuel & Generator Sets
- ASR Systems
- General Buildings, Structures & Security
- NCADA, ADAS or General IT Systems
- Roads and Sitework
- Solid Residuals Management

**Project Classification:**

- Transmission
- Water Supply
- System-Wide Benefit
- Other (if Other, describe) __________________________________________________________________________

**Estimated Project Cost**

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
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<tr>
<td>Land Acquisition (mitigation, property or easements)</td>
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**Projected Sources of Funding**

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<th>Source of Funding</th>
<th>Cost</th>
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<td>Projected SWFWMD Grant Funding</td>
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<td>Projected State and Other Grant Funding</td>
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<tr>
<td><strong>Total</strong></td>
<td>$ 3,200,000</td>
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</table>

**Note:** Feasibility Studies are typically funded through planning assessments with a cooperative funding match and funds are collected and expended generally within the same period. Land Acquisition, Engineering Services and Construction expenses are typically financed through debt issuance.

**Location Map or Concept Sketch**

Far left photo, an aerial view of the 3A Pipe strung out along Laurel Road as it was being installed in 2010. Center photo, 48" diameter steel pipe being unloaded upon delivery. Above photo, workers in trench box joining 2 pieces of pipe.

**Schedule**

(year starts on fiscal year calendar Oct 1)

| Prior Period | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | Future Period |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|
| Feasibility Study | | | | | | | | | | | | | | | | | | | | | Board Approved: May 27, 2020 |
**Capital Improvement Plan/Capital Needs Assessment**

**Project Description Sheet**

<table>
<thead>
<tr>
<th>Project Name or Title:</th>
<th>Reservoir 1 Pump Station and Retaining Wall Rehab</th>
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</thead>
<tbody>
<tr>
<td>Shorthand Identifier:</td>
<td>BS</td>
</tr>
<tr>
<td>Project Location, Site or Route:</td>
<td>At Reservoir #1</td>
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</tbody>
</table>

**Type of Project - Related to Major Purpose**

- Raw Water Pumping, Storage or Conveyance
- Water Treatment
- Finished Water Storage and Pumping
- SCADA, ADAS or General IT Systems
- Finished Water Pipelines
- Roads and Sitework
- Plant Power, Switchgear, Fuel & Generator Sets
- Solid Residuals Management

**Project Classification:**

- Transmission
- Water Supply
- System-Wide Benefit

**Reference and Description of Need**

The Reservoir Pump Station building enclosure was constructed by GDU in the late 1970s. It is a CMU block structure built over a floating slab that spans a clearwell. A series of skylights provides roofing and the ability to pull VT pumps by crane. The building, roof system and confined spaces underneath the floor slab require refurbishment. Finally, the steel sheet pile retaining wall system which creates the buttressed walls are also severely corroded and have failed in sections and require replacement. This facility typically pumps 100% of the raw water to the PRF. Although we can pump directly from the river or backfeed by gravity from Reservoir #2 if it is full, neither of those are sustainable solutions. This building and its retaining wall system require refurbishment.

**Does the Project Generate Additional Water Supply/Yield?**

- Yes
  - If Yes, How Much? 0.00 MGD on AADD basis
- No
  - If Yes, any Requisite Companion Projects? none

**Location Map or Concept Sketch**

- Typical step cracks in walls
- Reservoir Pump Station and north retaining wall system
- Failed span of sheet pile from 2003, this was subsequently replaced

**Estimated Project Cost**

- Feasibility Study: $-
- Engineering Services: $360,000
- Construction Cost: $2,040,000
- Land Acquisition (mitigation, property or easements): $-
- Total Capital Cost (includes Feasibility Study): $2,400,000

**Projected Sources of Funding**

- Projected Authority (Cooperator) Funding or TBD: $2,400,000
- Projected SWFWMD Grant Funding: $-
- Projected State and Other Grant Funding: $-
- Total: $2,400,000

**Schedule**

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**Notes:**

- Feasibility Studies are typically funded through planning assessments with a cooperative funding match and funds are collected and expended generally within the same period. Land Acquisition, Engineering Services and Construction expenses are typically financed through debt issuance.
Project Name or Title: PRF Expansion - Minor (Previously Phase 2 Capacity Increase)

Project Location, Site or Route: At the Peace River Facility.

Type of Project - Related to Major Purpose
(check multiple boxes if applicable)
- Raw Water Pumping, Storage or Conveyance
- Water Treatment
- Finished Water Storage and Pumping
- Plant Power, Switchgear, Fuel & Generator Sets
- ASR Systems
- General Buildings, Structures & Security
- SCADA, ADAS or General IT Systems
- Roads and Sitework
- Solid Residuals Management

Project Classification: Water Supply

Estimated Project Cost
Feasibility Study $ -
Engineering Services $ 2,250,000
Construction Cost $ 12,725,000
Land Acquisition (mitigation, property or easements) $ 25,000
Total Capital Cost (includes Feasibility Study) $ 15,000,000

Projected Sources of Funding
Projected Authority (Cooperator) Funding or TBD $ 7,512,500
Projected SWFWMD Grant Funding $ 7,487,500
Projected State and Other Grant Funding $ -
Total $ 15,000,000

Note: Feasibility Studies are typically funded through planning assessments with a cooperative funding match and funds are collected and expended generally within the same period. Land Acquisition, Engineering Services and Construction expenses are typically financed through debt issuance.

Reference and Description of Need
The Phase 2 Capacity Expansion reflects modifications to the PRF to increase the permitted capacity of the facility by about 12 MGD and with the new reservoir, will generate 12 MGD AADF of annual yield. Several of the oldest ASR wells located near the headworks of the PRF are poorly sited and require significant costly rehab for continued operation. Staff had already proposed to plug and abandon these wells which creates an opportunity to add a 3rd SCU treatment unit to Plant 1. Additional treatment capacity will stem from uprating Plants 3 & 4. Other improvements would include: consolidation of raw water lines, additional alum storage capacity, an additional high service pump and a 3rd sludge press. Other minor improvements may also be necessary and will be evaluated by a study at the initiation to this project.

Does the Project Generate Additional Water Supply/Yield?
Yes If Yes, How Much? 12.00 MGD on AADD basis
No

Collective Capital Cost of Associated Projects $ 257,000,000
Participant Cost (inclusive of expected grant funds) $ 136,562,500
Effective Net Unit Capital Cost $ 11.38 cost per gallon of yield generated

Location Map or Concept Sketch
The orange lines are ASR and disappear if we get rid of these wells. We could consolidate the twin 30" into a single 48 and lay it parallel to the existing 48. A single 48 also provides a 10% increase in hydraulic capacity as compared with the 2 smaller lines.

Now that we have the 48" raw connection across the street, we can sacrifice this raw connection and remove piping or abandonment in place.

Schedule
Year starts on fiscal year calendar Oct 1st

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## Capital Improvement Plan/Capital Needs Assessment
### Project Description Sheet

**Project Name or Title:** Water Resources/Construction Department Building  
**Project Location, Site or Route:** Near Reservoir No. 1

### Reference and Description of Need
The Water Resources office is a converted ranch-style caretaker/hunting lodge built in the 1960’s by a developer. The structure, owned by SWFWMD, sat mostly empty for about 20 years and has fallen into disrepair and the Authority had received approval from the District to raze it so that it would not attract vandals. Later it was decided to utilize the building for office space during construction of Reservoir # 2 in 2007 and this space has since housed our Water Resources and Construction Departments. The building, now 60 years old, needs major refurbishment.

Considering extensive building code issues involved with updating this building, staff believe it more prudent and cost effective to construct a new building instead.

### Does the Project Generate Additional Water Supply/Yield?
- **Yes**  
  - If Yes, How Much? 0.00 MGD on AADD basis

### Estimated Project Cost

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
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<td>Feasibility Study</td>
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### Projected Sources of Funding

<table>
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<tr>
<th>Description</th>
<th>Cost</th>
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<td>Projected Authority (Cooperator) Funding or TBD</td>
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<td>Projected SWFWMD Grant Funding</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>$ 1,000,000</strong></td>
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</table>

### Location Map or Concept Sketch

The 'Ranch House' was built by a developer in the 1960's to house a caretaker and it was believed the site was also used to also entertain investors and company officers with hunting trips in the 1960's and 70's. The building was originally constructed with a front and back patio. It was equipped with a kitchen area, central fire pit, several bunkrooms and bathrooms on either end. When the Authority converted this structure to office space in 2007, the back patio was enclosed and converted to interior space, the firepit was filled in and the chimney sealed. Half a dozen staff are based in the main building, some of them splitting time between this location and the more northern Lakewood Ranch office. Two additional staff are housed in the ancillary detached shed to the left.

### Schedule

| Year start on fiscal year calendar Oct 1 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | Future Period |
|----------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|
| Feasibility Study                      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          |
| Preliminary Engineering                |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          |
| Property and Easement Acquisition     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          |
| Final Design & Permitting Mitigation   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          |
| Construction                           |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          |

Note: Feasibility Studies are typically funded through planning assessments with a cooperative funding match and funds are collected and expended generally within the same period. Land Acquisition, Engineering Services and Construction expenses are typically financed through debt issuance.
Our Mission
To provide the region with a sufficient, high quality, safe drinking water supply that is reliable, sustainable and protective of our natural resources now and into the future.

Our Vision
Through cooperation and collaboration, the Peace River Manasota Regional Water Supply Authority and its members shall create, maintain and expand a sustainable, interconnected regional water supply system.
20 Year Capital Needs Assessment Summary by Year and Type of Project
*(includes the 5-Year CIP)*

### Breakdown of Project Costs by Type

- **Water Supply Projects, $330,900,000, 52.5%**
- **Water Transmission Projects, $285,864,451, 45.4%**
- **System-Wide Benefit Projects, $13,086,000, 2.1%**

### Total Investment Planned Over the Period

<table>
<thead>
<tr>
<th>Period</th>
<th>Authority CIP Funds</th>
<th>SWFWMD Cooperative Funds</th>
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<tbody>
<tr>
<td>FY 2021</td>
<td>$0</td>
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<tr>
<td>FY 2022</td>
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<tr>
<td>FY 2040</td>
<td>$380,000,000</td>
<td>$400,000,000</td>
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</tbody>
</table>

### Total Investment Planned Over the Period

- **$629,850,451**
  - Excludes prior year and feasibility study costs
  - $89,500,000 identified beyond the 20-year horizon

### Anticipated Offsetting Grant Funding

- **$293,158,226**
  - Excludes prior year and feasibility study costs
  - $44,575,000 identified beyond the 20-year horizon

**Board Approved: May 27, 2020**
**Capital Improvement Plan/Capital Needs Assessment**

**Project Description Sheet**

**Project Name or Title:** Raw Water ASR [Pilot Testing, Permitting, Implementation]

**Project Location, Site or Route:** At the Peace River Facility (and associated property holdings either fee simple or via permanent easements)

**Type of Project - Related to Major Purpose**

<table>
<thead>
<tr>
<th>(check multiple boxes if applicable)</th>
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</thead>
<tbody>
<tr>
<td>Raw Water Pumping, Storage or Conveyance</td>
</tr>
<tr>
<td>Water Treatment</td>
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<tr>
<td>Finished Water Storage and Pumping</td>
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<tr>
<td>Finished Water Pipelines</td>
</tr>
<tr>
<td>Plant Power, Switchgear, Fuel &amp; Generator Sets</td>
</tr>
<tr>
<td>ASR Systems</td>
</tr>
<tr>
<td>General Buildings, Structures &amp; Security</td>
</tr>
<tr>
<td>SCADA, ADAS or General IT Systems</td>
</tr>
<tr>
<td>Roads and Sitework</td>
</tr>
<tr>
<td>Solid Residuals Management</td>
</tr>
</tbody>
</table>

**Project Classification:**

- Transmission
- Water Supply
- System-Wide Benefit
- Other (If Other, describe)

**Estimated Project Cost**

<table>
<thead>
<tr>
<th>Estimated Project Cost</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Feasibility Study</td>
<td>$ 225,000</td>
</tr>
<tr>
<td>Engineering Services</td>
<td>$ 1,269,000</td>
</tr>
<tr>
<td>Construction</td>
<td>$ 6,806,000</td>
</tr>
<tr>
<td>Land Acquisition (mitigation, property or easements)</td>
<td>$ -</td>
</tr>
<tr>
<td>Total Capital Cost (includes Feasibility Study)</td>
<td>$ 8,300,000</td>
</tr>
</tbody>
</table>

**Projected Sources of Funding**

<table>
<thead>
<tr>
<th>Projected Sources of Funding</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Projected Authority (Cooperator) Funding or TBD</td>
<td>$ 4,262,500</td>
</tr>
<tr>
<td>Projected SWFWMD Grant Funding</td>
<td>$ 4,037,500</td>
</tr>
<tr>
<td>Projected State and Other Grant Funding</td>
<td>$ -</td>
</tr>
<tr>
<td>Total</td>
<td>$ 8,300,000</td>
</tr>
</tbody>
</table>

**Note:** Feasibility Studies are typically funded through planning assessments with a cooperative funding match and funds are collected and expended generally within the same period. Land Acquisition, Engineering Services and Construction expenses are typically financed through debt issuance.

**Reference and Description of Need**

The raw water ASR project consists of pilot testing, permitting, design and construction of facilities to partially treat raw water from the reservoirs and inject it below ground in the ASR system. The expected benefits of this program would be significant operational cost savings because the water injected below ground would no longer have to go through potable water treatment first. This would leverage our injection capability, improve recovered water quality and free up treatment capacity at the water treatment plant providing additional operational flexibility. Permitting hurdles are driving the projected timeframe.

**Does the Project Generate Additional Water Supply/Yield?**

- No

**Location Map or Concept Sketch**

**Schedule**

| (year starts on fiscal year calendar Oct 1st) | Prior Period | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | Future Period |
|--------------------------------------------|--------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------------|
| Feasibility Study                          |              |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |              |
| Preliminary Engineering                    |              |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | TE              |
| Property and Easement Acquisition          |              |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | TE              |
| Final Design & Permitting                  |              |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | TE              |
| Mitigation                                 |              |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | TE              |
| Construction                               |              |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | TE              |

**Projected Authority (Cooperator) Funding or TBD:** $ 4,262,500

**Projected SWFWMD Grant Funding:** $ 4,037,500

**Effective Net Unit Capital Cost:** $ cost per gallon of yield generated

**Estimated Project Cost:** $ 8,300,000

**Projected SWFWMD Grant Funding:** $ 4,037,500

**Total Project Cost:** $ 8,300,000

**Project Description Sheet:** Raw Water ASR [Pilot Testing, Permitting, Implementation]

**Shorthand Identifier:** A1

**Board Approved:** May 27, 2020
Capital Improvement Plan/Capital Needs Assessment
Project Description Sheet

Project Name or Title: Replace 12" PVC Line

Type of Project - Related to Major Purpose
(check multiple boxes if applicable)

- Raw Water Pumping, Storage or Conveyance
- ASR Systems
- Water Treatment
- General Buildings, Structures & Security
- Finished Water Storage and Pumping
- SCADA, ADAS or General IT Systems
- Finished Water Pipelines
- Roads and Sitework
- Plant Power, Switchgear, Fuel & Generator Sets
- Solid Residuals Management

Project Location, Site or Route: This Pipeline runs near the DeSoto/Charlotte County lines.

Feasibility Study

- $550,000

Construction Cost

- $1,750,000

Land Acquisition (mitigation, property or easements)

- $200,000

Total Capital Cost (includes Feasibility Study)

- $2,500,000

Projected Authority (Cooperator) Funding or TBD

- $2,500,000

Projected SWFWMD Grant Funding

- $0

Projected State and Other Grant Funding

- $0

Total

- $2,500,000

Note: Feasibility Studies are typically funded through planning assessments with a cooperative funding match and funds are collected and expended generally within the same period. Land Acquisition, Engineering Services and Construction expenses are typically financed through debt issuance.

Although small by today’s standards, this 12” diameter interconnect line was the primary feed to Lake Suzy and parts of Deep Creek in DeSoto and Charlotte Counties, respectively through about 2005. This line runs along the edge of a relic wastewater treatment sprayfield and airstrip north of the Kingsway development and ties together three major transmission mains.

Reference and Description of Need

This approximately 1.5 mile long pipeline interconnects the 24” Kings Highway Transmission Main, the 36” Southern Regional Transmission Main and the 42” Phase 2a Regional Loop Interconnect. It serves as a valuable intertie which can provide a backup water feed to Lake Suzy and Charlotte County in the event of a main break on the larger lines. It also helps to equalize system flow and provides operational flexibility during major pipeline construction projects.

The current pipeline was installed by GDU, it is PVC pipe nearly 40 years old, does not have adequate cover depth in many areas, it will be replaced with a larger diameter.

Does the Project Generate Additional Water Supply/Yield?

- No

Collective Capital Cost of Associated Projects

- NA

Participant Cost (inclusive of expected grant funds)

- NA

Effective Net Unit Capital Cost - cost per gallon of yield generated

- $0.00 MGD on AADD basis

Schedule

(year starts on fiscal year calendar Oct 1st) Prior Period 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 Future Period

Feasibility Study

Preliminary Engineering

Property and Easement Acquisition

Final Design & Permitting

Mitigation

Construction

Page 23 Board Approved: May 27, 2020
5 MGD Brackish Water Facility at PRF

At the Peace River Facility (and associated property holdings either fee simple or via permanent easements)

Type of Project - Related to Major Purpose

- Raw Water Pumping, Storage or Conveyance
- Water Treatment
- Finished Water Storage and Pumping
- Finished Water Pipelines
- Plant Power, Switchgear, Fuel & Generator Sets
- ASR Systems
- General Buildings, Structures & Security
- SCADA, ADAS or General IT Systems
- Roads and Sitework
- Solid Residuals Management

Does the Project Generate Additional Water Supply/Yield?

- Yes
  - If Yes, How Much? 5.00 MGD on AADD basis
- No
  - If Yes, any Requisite Companion Projects? none
  - Collective Capital Cost of Associated Projects $50,700,000
  - Participant Cost (inclusive of expected grant funds) $25,600,000
  - Effective Net Unit Capital Cost $5.12 cost per gallon of yield generated

Estimated Project Cost

- Feasibility Study $500,000
- Engineering Services $6,598,000
- Construction Cost $43,602,000
- Land Acquisition (mitigation, property or easements) $-
- Total Capital Cost (includes Feasibility Study) $50,700,000

Projected Sources of Funding

- Projected Authority (Cooperator) Funding or TBD $25,600,000
- Projected SWFWMD Grant Funding $25,100,000
- Projected State and Other Grant Funding $-
- Total $50,700,000

Note: Feasibility Studies are typically funded through planning assessments with a cooperative funding match and funds are collected and expended generally within the same period. Land Acquisition, Engineering Services and Construction expenses are typically financed through debt issuance.

Schedule

(year starts on fiscal year calendar Oct 1)

| Prior Period | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | Future Period |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Feasibility Study | | | | | | | | | | | | | | | | | | | | | |
| Property and Easement Acquisition | | | | | | | | | | | | | | | | | | | | | |
| Final Design & Permitting | | | | | | | | | | | | | | | | | | | | | |
| Mitigation | | | | | | | | | | | | | | | | | | | | | |
| Construction | | | | | | | | | | | | | | | | | | | | | |

Reference and Description of Need

This alternative water supply project would add 5 MGD AADD of safe yield to the regional system and also add a measure of drought resiliency to the regional water supply network. Brackish groundwater would be withdrawn from the Intermediate Aquifer and the Avon Park formation in the Floridan Aquifer. Reverse osmosis treatment membranes operating at an overall efficiency of 80% would be employed. Reject concentrate would be injected to a permeable zone well below the Avon Park zone. This project includes a combined clearwell for blending control.

Location Map or Concept Sketch

Typical RO systems have arrays or modules of vertically stacked pressure vessels, leading to a compact overall site footprint.

Typical RO system sampling panel allows for samples to be collected between stages for feed water, product (permeate) and reject (concentrate) streams.

Note: Board Approved: May 27, 2020
### Project Description Sheet

**Project Name or Title:** Regional Integrated Loop - Phase 2D (US 41 to Englewood Water District includes Pump Station)

**Shorthand Identifier:** T11

**Project Location, Site or Route:** Extension of the Regional Loop System from US 41 to the Englewood Water District at Keyway Road and SR 776

#### Type of Project - Related to Major Purpose

|---------------|------------------------------------------|-------------|----------------|------------------------------------------|-----------------------------------|----------------------------------|------------------------|-----------------|-----------------------------------------------|--------------------------|

**Project Classification:** Transmission

### Estimated Project Cost

<table>
<thead>
<tr>
<th>Cost Item</th>
<th>Cost ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feasibility Study</td>
<td>300,000</td>
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<tr>
<td>Engineering Services</td>
<td>4,566,900</td>
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<tr>
<td>Construction Cost</td>
<td>26,256,100</td>
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<tr>
<td>Land Acquisition (mitigation, property or easements)</td>
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<tr>
<td><strong>Total Capital Cost (includes Feasibility Study)</strong></td>
<td><strong>32,446,000</strong></td>
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</table>

#### Projected Sources of Funding

<table>
<thead>
<tr>
<th>Source of Funding</th>
<th>Cost ($)</th>
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<tbody>
<tr>
<td>Projected Authority (Cooperator) Funding or TBD</td>
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<tr>
<td>Projected SWFWMD Grant Funding</td>
<td>15,411,500</td>
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<tr>
<td>Projected State and Other Grant Funding</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>32,446,000</strong></td>
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</table>

**Note:** Feasibility Studies are typically funded through planning assessments with a cooperative funding match and funds are collected and expended generally within the same period. Land Acquisition, Engineering Services and Construction expenses are typically financed through debt issuance.

### Schedule

<table>
<thead>
<tr>
<th>Prior Period</th>
<th>2021</th>
<th>2022</th>
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<tbody>
<tr>
<td>Feasibility Study</td>
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<tr>
<td>Preliminary Engineering</td>
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<td>May 27, 2020</td>
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<tr>
<td>Final Design &amp; Permitting Mitigation Construction</td>
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<td>May 27, 2020</td>
</tr>
</tbody>
</table>

#### Reference and Description of Need

This pipeline project is comprised of 12.5 miles of pipe tentatively sized as 24” diameter running from the Phase 2B regional loop pipeline near River Road and US 41 to the Englewood Water District. This segment completes a plant-to-plant connection that will boost local and regional resiliency and facilitate transfer of water in either direction. The project includes a pump station and storage elements as well as chemical trim facilities.

#### Does the Project Generate Additional Water Supply/Yield?

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASR</td>
<td>0.00 MGD on AADD basis</td>
<td>NA</td>
</tr>
</tbody>
</table>

#### Location Map or Concept Sketch

Interconnection to the Englewood Water District (EWD) is already accomplished through minor arterial distribution lines in member/customer systems. However, connecting this source of supply to the regional integrated system is mutually beneficial to the region and EWD. In times of drought or emergencies, plant-to-plant connections bolster regional resiliency. And an important benefit to EWD is that since groundwater quantities are limited and many coastal desalination systems are currently facing increasingly poor groundwater quality due to salt water intrusion, this pipeline importantly gives EWD an alternate, reliable source of supply.
**Capital Improvement Plan/Capital Needs Assessment**

**Project Description Sheet**

**Project Name or Title:** Regional Integrated Loop - Phase 4 [Cleveland to Burnt Store Facility includes Pump Station]

**Shorthand Identifier:** 712

**Project Location, Site or Route:** From the Regional System near the City of Punta Gorda to the Burnt Store WTP.

**Type of Project - Related to Major Purpose (check multiple boxes if applicable)**

- Raw Water Pumping, Storage or Conveyance
- Water Treatment
- Finished Water Storage and Pumping
- Plant Power, Switchgear, Fuel & Generator Sets
- ASR Systems
- General Buildings, Structures & Security
- SCADA, ADAS or General IT Systems
- Roads and Site Work
- Solid Residuals Management

**Project Classification:** Transmission

**Feasibility Study**

- **Cost:** $200,000

**Engineering Services**

- **Cost:** $5,217,100

**Construction Cost**

- **Cost:** $29,301,900

**Land Acquisition (mitigation, property or easements)**

- **Cost:** $1,395,000

**Total Capital Cost (includes Feasibility Study)**

- **Cost:** $36,114,000

**Projected Sources of Funding**

- **Projected Authority (Cooperator) Funding or TBD**
  - **Cost:** $18,854,500

- **Projected SWFWMD Grant Funding**
  - **Cost:** $17,259,500

- **Projected State and Other Grant Funding**
  - **Cost:** $0

**Total**

- **Cost:** $36,114,000

**Note:** Feasibility Studies are typically funded through planning assessments with a cooperative funding match and funds are collected and expended generally within the same period. Land Acquisition, Engineering Services and Construction expenses are typically financed through debt issuance.

**Schedule (year starts on fiscal year calendar Oct 1st)**

| Prior Period | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | Future Period |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----|
| Feasibility Study |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |    |
| Preliminary Engineering |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |    |
| Property and Easement Acquisition |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |    |
| Final Design & Permitting |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |    |
| Mitigation |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |    |
| Construction |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |    |

**Reference and Description of Need**

The Phase 4 Regional Integrated Loop project comprises approximately 15 miles of 24 inch water line commencing at the Burnt Store WTP and extending north to the Authority’s Phase 1A transmission main on the south side of the Peace River in the town of Cleveland on the outskirts of Punta Gorda. This completes a link between the Burnt Store WTP and the remainder of the regional loop system allowing water to flow in either direction boosting system resiliency and sustainability. This project also includes storage and pumping elements.

**Does the Project Generate Additional Water Supply/Yield?**

- Yes if Yes, How Much? 0.00 MGD on AADD basis
- NA
- NA

**Effective Net Unit Capital Cost**

- cost per gallon of yield generated

**Location Map or Concept Sketch**

Phase 4 ties in the Burnt Store WTP in with the Regional System

**Projected Authority (Cooperator) Funding or TBD**

- **Cost:** $18,854,500

**Projected SWFWMD Grant Funding**

- **Cost:** $17,259,500

**Projected State and Other Grant Funding**

- **Cost:** $0

**Total**

- **Cost:** $36,114,000

**Note:** Feasibility Studies are typically funded through planning assessments with a cooperative funding match and funds are collected and expended generally within the same period. Land Acquisition, Engineering Services and Construction expenses are typically financed through debt issuance.

**Reference and Description of Need**

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Capital Improvement Plan/Capital Needs Assessment
Project Description Sheet

Project Name or Title: ASR Wellfield Expansion

Project Location, Site or Route: At the Peace River Facility (and associated property holdings either fee simple or via permanent easements)

Type of Project - Related to Major Purpose
(checkbox multiple boxes if applicable)
- Raw Water Pumping, Storage or Conveyance
- ASR Systems
- Water Treatment
- General Buildings, Structures & Security
- Finished Water Storage and Pumping
- SCADA, ADAS or General IT Systems
- Finished Water Pipelines
- Roads and Sitework
- Plant Power, Switchgear, Fuel & Generator Sets
- Solid Residuals Management

Project Classification:
- Water Supply
- System-Wide Benefit
- Other (if Other, describe)

Estimated Project Cost

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Feasibility Study</td>
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<tr>
<td>Engineering Services</td>
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<td>Construction Cost</td>
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<td>Land Acquisition</td>
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<td>Total Capital Cost</td>
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Projected Sources of Funding

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<tr>
<th>Funding Source</th>
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<tr>
<td>Projected Authority (Cooperator) Funding</td>
<td>12,650,000</td>
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<tr>
<td>Projected SWFWMD Grant Funding</td>
<td>12,550,000</td>
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<tr>
<td>Projected State and Other Grant Funding</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
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Does the Project Generate Additional Water Supply/Yield?

<table>
<thead>
<tr>
<th>Yes / No</th>
<th>If Yes, How Much?</th>
<th>Collective Capital Cost of Associated Projects</th>
<th>Participant Cost (inclusive of expected grant funds)</th>
<th>Effective Net Unit Capital Cost</th>
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<tbody>
<tr>
<td>Yes</td>
<td>3.00 MGD on AADD basis</td>
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<td>$12,650,000</td>
<td>$25,200,000</td>
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<tr>
<td>No</td>
<td>none</td>
<td>$25,200,000</td>
<td>$12,650,000</td>
<td>$25,200,000</td>
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System storage is the key to sustainability and the Authority maintains 21 ASR wells for storing finished water. This is one of the largest potable water ASR systems in the world and the largest west of the Mississippi. The Authority can actually store more water below ground than it can in its off-stream reservoirs.

Reference and Description of Need
Success for the Peace River Facility is based upon capitalizing on seasonal storage and can either be accomplished with raw water off-stream reservoirs, or currently, as potable water ASR wells. The Authority has been an advocate for raw water ASR due to reduced operational costs and heightened operational efficiency and flexibility. Raw water (or partially treated) surface water will make ASR a more effective alternative, however, even without a permitting status change to allow raw water ASR, ASR remains an effective, reliable storage mechanism. This project will bring another 12 ASR wells online but will likely involve a layered approach with some aquifer recharge wells into the formation immediately under the current Suwannee storage formation.