



**PRIORITY/ACTION TITLE: Update to “Fund Opportunity Infrastructure Work that Supports Transportation Projects” (2018-2023 Action Plan)**

**Branch/Division:** Water

**Executive Sponsor:** Rick Scott

**Project Manage/Lead:** Alex Chen

**Priority/Action Type:**

- 2018-2023 Existing Action Plan with continued funding for 2021-2026
- 2018-2023 Existing Action Plan with increased funding for 2021-2026
- New Priority requiring new funding
- Priority with existing Funding

**Summary of the Priority or Action Plan:**

**Original Summary of Project (2018).** This action plan adds funding to the Water capital programs so that SPU can take advantage of additional transportation project driven impact-based and opportunity replacements.

Transportation projects create impacts to SPU infrastructure through unavoidable conflicts, damage from construction, and impaired/more costly access. They also provide opportunities for SPU to improve service and replacing failing infrastructure at reduced costs through shared pavement restoration, mobilization, and traffic control costs. SPU has identified three categories of transportation project investments: asset protection and rehabilitation, impact-based replacements, and opportunity replacements. For each transportation project, SPU will evaluate existing asset conditions, project impacts, and opportunities to determine the appropriate level of investment.

This item focused on additional CIP funding for “opportunity projects,” or CIP projects for water system improvements that took advantage of the street being opened for roadway projects in order to save cost and impact of opening up the street again at a later date.

This item did not include water system projects that were required as part of an SDOT project – those were considered part of the SBP baseline.

**1. 2021-2026 Funding Recommendation**

*We anticipate that opportunity projects will continue to occur in the next 6 years. SPU has planned for all opportunity projects with SDOT since 2017. However, several large water system opportunity projects were delayed by SDOT. These include:*

- *Madison Bus Rapid Transit – estimated SPU CIP cost of \$12M. Project delayed.*
- *East Marginal Way Heavy Haul Corridor – estimated SPU CIP cost of \$23M. Project delayed.*

*We anticipate that the opportunity projects that were delayed will occur sometime in the next 3 to 6 years. The CIP funding associated with these projects will still be needed, just later than anticipated in 2017.*

*The current schedule for the two opportunity projects mentioned above is:*



- *Madison Bus Rapid Transit – starting in 2020 (depending on SDOT funding success)*
- *East Marginal Way Heavy Haul Corridor – starting in 2021 (depending on SDOT funding success)*

*The table below summarizes future opportunity projects with SDOT, including Madison Bud Rapid Transit, and East Marginal Way Heavy Haul Corridor, over the next 6 years.*

(\$000's)	2021	2022	2023	2024	2025	2026	Total
O&M \$ Amount							
CIP \$ Amount	\$9,157,479	\$16,410,813	\$9,375,701	\$2,655,000	\$2,600,000	\$2,600,000	\$42,798,993
Total \$ Request	\$9,157,479	\$16,410,813	\$9,375,701	\$2,655,000	\$2,600,000	\$2,600,000	\$42,798,993
FTEs Added/Changed							

**2. Alternatives Considered**

What alternatives were considered in addition to what is being recommended (if any)? How would these alternatives impact service levels?

*We are still recommending the path forward from the last SBP. We did not consider the alternative of discontinuing potential opportunity projects, given the potential cost benefits and reduced public disturbance of working on water main projects with SDOT, when streets are already open for construction.*

**3. Capacity plan to Deliver (Capital Only)**

What is your staffing plan for delivery? If there was difficulty in delivering in the past, what has changed?

*SPU plans to continue to plan projects in coordination with SDOT, and to follow the schedules established by SDOT.*

**4. Milestones/performance metrics**

What are the short and long-term metrics for measuring progress? How will you measure whether the action has been successful? Note: measures may not be different than your original plan but milestones should be updated to reflect the 2026 time horizon.

*Performance Metrics will be tracked and reported as follows:*

- *Percent of SDOT opportunity projects that were planned in a timely manner.*





*\*Note: The narrative below was originally provided to the CRP on 12/17/2019.*

**Part 2. Targeted Commitments & Actuals (2018-19).** *The 2017 metrics were as follows:*

*“As part of SPU’s programmatic approach to transportation projects, SPU staff will provide annual updates to the Asset Management Committee. Updates will include accomplishments, historic spending and future spending predictions, and current project schedules.*

*Metric: Cost per lineal feet or cost per each project depending on asset type”*

*Since 2017, SPU has provided annual updates to the Asset Management Committee. The updates included accomplishments, historic spending and future spending projections, as well as current project schedules.*

*The metric of cost per lineal foot has not been useful yet to date, as the opportunity projects completed to date have had relatively short lengths of watermain and mostly fixed contractor mobilization costs, resulting in costs per lineal foot that appear very high.*

• **Part 3. Financial Plan & Actuals for 2018-2019.**

	2018	2018 Actuals	2019	2019 Actuals	2020	2021	2022	2023
O&M (Non- Labor) Budget								
Capital Budget	10,382,383	155,844	20,919,155	235,343	8,813,318	8,732,479	15,060,813	6,775,701

**1. Have there been any significant changes in scope or assumptions since this action plan was approved in 2017? If so, please describe.**

*The financial table above reflects that SPU planned for all opportunity projects with SDOT since 2017. However, several large water system opportunity projects were delayed by SDOT. These include:*

- *Madison Bus Rapid Transit – estimated SPU CIP cost of \$12M. Project delayed.*
- *East Marginal Way Heavy Haul Corridor – estimated SPU CIP cost of \$23M. Project delayed.*

**PRIORITY/ACTION TITLE:**
**Update to “Expand Maintenance of the Water Distribution System” (2018-2023 Action Plan)**
**Branch/Division:** Water

**Executive Sponsor:** Rick Scott

**Project Manage/Lead:**
**Priority/Action Type:**

- 2018-2023 Existing Action Plan with **continued** funding for 2021-2026
- 2018-2023 Existing Action Plan with **increased** funding for 2021-2026
- New Priority requiring new funding
- Priority with existing Funding

**Summary of the Priority or Action Plan:**

**Original Summary of Project (2018).** This action plan adds two crews (four positions total) to perform essential maintenance of the water system. This includes hydrant maintenance and valve maintenance. Over time, SPU has had to scale back this work and reallocated staff to competing priorities, including meeting the needs of new development (new water service taps) and other capital programs. These competing priorities are not temporary in nature, therefore SPU is proposing adding additional resources to perform this essential maintenance function.

**1. 2021-2026 Funding Recommendation**

*We anticipate this position as a continuing need – no reduction or increase anticipated. Our goal is to hire the 4 FTEs in 2020, with their major focus on reducing the maintenance backlog through 2020-2023. After hiring these FTEs, the plan is to have them reduce the maintenance backlog and track their efforts over time, so that we can better understand the staffing needs over a longer term.*

(\$000's)	2021	2022	2023	2024	2025	2026	Total
O&M \$ Amount	\$547,844	\$562,636	\$577,748	\$593,187	\$603,407	\$613,832	\$3,498,654
CIP \$ Amount							
Total \$ Request	\$547,844	\$562,636	\$577,748	\$593,187	\$603,407	\$613,832	\$3,498,654
FTEs Added/Changed							

**2. Alternatives Considered**

What alternatives were considered in addition to what is being recommended (if any)? How would these alternatives impact service levels?

*We are still recommending the path forward from the last SBP. We considered an alternative of hiring more FTEs in order to catch up with the backlog faster. However, given the hiring difficulties, this alternative was not seen as feasible.*



### **3. Capacity plan to Deliver**

What is your staffing plan for delivery? If there was difficulty in delivering in the past, what has changed?

*Over the past two years, SPU has not been able to attract qualified water pipe workers in the last several hiring processes. To address this issue:*

- *SPU plans to broaden the recruitment process to expand the number of applicants.*
- *SPU plans to consider use of private contractors to help catch up on deferred maintenance, as a short-term fix.*
- *SPU plans to hire an apprentice class in early 2020, to develop more qualified water pipe worker candidates.*

### **4. Milestones/performance metrics**

What are the short and long-term metrics for measuring progress? How will you measure whether the action has been successful? Note: measures may not be different than your original plan but milestones should be updated to reflect the 2026 time horizon.

*Performance Metrics will be tracked and reported as follows:*

- *Hydrants: backlog of minor maintenance work orders.*
- *Hydrants: backlog of major maintenance (out of service) work orders.*
- *Valves: backlog of maintenance work orders for critical valves.*





\*Note: The narrative below was originally provided to the CRP on 12/17/2019.

Part 2. Targeted Commitments & Actuals (2018-19). The 2017 metrics were as follows:

- "# of hours to fix a hydrant (that is out of service). Target: within 72 hours for above ground, 21 days below ground
# of work orders completed/# of work orders scheduled for hydrants. Target: 100%
# of work orders completed/# of work orders scheduled for valves. Target: 100%
Length of time since last maintenance (inspection) for hydrants. Target: 12 months
# of valves that failed due to lack of maintenance. Target: 0"

Since 2017, SPU has not hired the 4 FTEs. The reasons for that are shown in item 2, below.

Since 2017, SPU has updated its Asset Management Plans (AMPs) for Valve and for Hydrants. The updated AMPs included updated tools for tracking performance:

Hydrants:

- Minor maintenance work orders: hydrant still functions
Backlog continues to grow, currently at about 7,000 work orders. Goal is to substantially reduce that backlog over a period of years.
Out of service hydrants
We have about 30 out of service hydrants in any given month, with new hydrants reported out of service approximately equaling the number of hydrants being put back in service. Goal is to minimize the number of out of service hydrants.

Valves:

- Less-critical valves: includes all hydrant branch valves, as well as most smaller valves in the system. Maintenance is reactive only (maintenance in response to a failed valve).
Approximately 20,500 valves associated with large water service lines
Approximately 19,000 valves associated with fire hydrant branch lines
Approximately 16,000 distribution piping isolation valves that are less critical
Critical valves: includes most larger diameter valves and valves that are most critical to continued performance of the water system. The goal for preventive maintenance is a 5-year inspection interval.
Approximately 2,000 of these valves
SPU is not performing any valve maintenance currently, except for reactive maintenance. This is due to the resource limitation issues described in item 2, below.

Part 3. Financial Plan & Actuals for 2018-2019.

Table with 9 columns (Year) and 3 rows (O&M Budget, Capital Budget, Total Budget). Data for 2018-2019 is provided, with 2020-2023 as projections.

Note: the data for 2020-2023 is based on the projections developed in 2017. Revised projections are not ready at this time. However, the revised projections will generally follow the projections as shown.



**1. Have there been any significant changes in scope or assumptions since this action plan was approved in 2017? If so, please describe.**

*Yes, there have been two factors:*

- *The volume of work associated with new water service connections has continued at a historically high rate for the last 4+ years. In order to accomplish this work, some O&M work has continued to be deferred.*
- *Hiring for vacancies has not been successful. SPU has not been able to attract qualified water pipe workers in the last several hiring processes. To address this issue:*
  - *SPU plans to broaden the recruitment process to expand the number of applicants.*
  - *SPU plans to consider use of private contractors to help catch up on deferred maintenance, as a short-term fix.*
  - *SPU plans to hire an apprentice class in early 2020, to develop more qualified water pipe worker candidates.*