



Fiscal Year 2020-2021 Districtwide Cost-Share (FY 2020-2021 DWCS) Application

This form is designed to assist in submitting a complete application for consideration by the St. Johns River Water Management District (District) for Districtwide Cost-Share Program. Detailed guidance on completing this application can be found in the Funding Guidance Document. All sections of the form must be completed to be considered a complete application. **Any information listed on the checklist that is not included in the application will result in an automatic deduction of 5 points in the evaluation.** If additional space is needed to fully complete a section, please attach separately. County governments, municipalities, water supply authorities, and other interested public and private entities as determined eligible may apply.

A. BASIC INFORMATION	
A-1	<p>NAME OF ENTITY / ORGANIZATION: City of Palatka</p> <hr/> <p>PROJECT NAME <i>(please see below):</i> City of Palatka Permeable Paving Improvements</p>
A-2	<p>Contact information of project manager or contact person:</p> <p><i>(The District will send correspondence concerning this application ONLY to this person)</i></p> <p>Name/title: Jonathan Griffith</p> <p>Email address: jcgriffith@palatka-fl.gov</p> <p>Mailing address: 201 N 2nd Street, Palatka, FL 32177</p> <p>Office Phone: 386-329-0107 Mobile Phone:</p>
A-3	<p>Contact information of person with authority to enter into a contractual agreement, if other than project manager or contact person:</p> <p>If same as A-2 above, do not complete this section.</p> <p>Name/title: Terrill Hill</p> <p>Email address: thill@palatka-fl.gov</p> <p>Mailing address: 201 N. 2nd Street, Palatka, FL 32177</p> <p>Office Phone: 386-329-0100 Mobile Phone:</p>
A-4	<p>What County is this project located?</p> <p> <input type="checkbox"/> Alachua <input type="checkbox"/> Baker <input type="checkbox"/> Bradford <input type="checkbox"/> Brevard <input type="checkbox"/> Clay <input type="checkbox"/> Duval <input type="checkbox"/> Flagler <input type="checkbox"/> Indian River <input type="checkbox"/> Lake <input type="checkbox"/> Marion <input type="checkbox"/> Nassau <input type="checkbox"/> Orange <input type="checkbox"/> Osceola <input checked="" type="checkbox"/> Putnam <input type="checkbox"/> Seminole <input type="checkbox"/> St. Johns <input type="checkbox"/> Okeechobee <input type="checkbox"/> Volusia </p>

A-5	<p>What Water Supply Planning Region is this project located (<i>Refer to map at https://www.sjrwmd.com/water-supply/planning/</i>)</p> <p><input checked="" type="checkbox"/> North Florida (North Florida Regional Water Supply Partnership/North Florida Water Initiative)</p> <p><input type="checkbox"/> Central Springs and East Coast</p> <p><input type="checkbox"/> Central Florida (Central Florida Water Initiative)</p>						
A-6	<p>Does this project benefit a spring? <i>Please use the FDEP Springs Funding Guidance calculation method to calculate the benefit for projects that benefit a spring. Click here for the FDEP Springs Funding Guidance calculation method.</i></p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <hr/> <p>If yes, please check the spring:</p> <p><input type="checkbox"/> Volusia Blue <input type="checkbox"/> Silver <input type="checkbox"/> Wekiwa-Rock <input type="checkbox"/> DeLeon <input type="checkbox"/> Gemini <input type="checkbox"/> Other:</p> <hr/> <p>Is this project located in a Springs Priority Focus Area (PFA)?</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <hr/> <p>Is this project listed in a Prevention Strategy for the Implementation of Minimum Flows and Levels?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>						
A-7	<p>a. Is the project located in an area that has an established Total Maximum Daily Load (TMDL) or Basin Management Action Plan (BMAP)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes, provide the name of the TMDL waterbody, BMAP, and WBID(s). If no, just provide the WBID(s). Refer to FDEP's interactive map at https://ca.dep.state.fl.us/mapdirect/?focus=tmdlvi.</i></p> <table border="1" data-bbox="196 1073 1503 1360"> <tr> <td data-bbox="196 1073 678 1171">Name of TMDL Waterbody:</td> <td data-bbox="678 1073 1503 1171">St Johns River above Rice Creek</td> </tr> <tr> <td data-bbox="196 1171 678 1270">Name of BMAP:</td> <td data-bbox="678 1171 1503 1270">Lower St Johns, Lower St Johns Mainstem Group 2</td> </tr> <tr> <td data-bbox="196 1270 678 1360">WBID(s):</td> <td data-bbox="678 1270 1503 1360"></td> </tr> </table> <p>Is the project specifically named in the BMAP identified above? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes, provide the BMAP project number (e.g., VC-3 or LM-4). Be sure that your project name corresponds to the BMAP project name. If your project is part of a BMAP project but is not identical, please provide the BMAP project name and project number that most closely corresponds to your project and explain the relationship between the two in section B-2.</i></p> <p>b. Does the project benefit a water body with an established Minimum Flows & Levels (MFL)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>Name of MFL Waterbody:</p> <hr/> <p>Prevention/Recovery Strategy Implemented for the MFL Waterbody above?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes, provide the name of the Prevention/Recovery Strategy</i></p>	Name of TMDL Waterbody:	St Johns River above Rice Creek	Name of BMAP:	Lower St Johns, Lower St Johns Mainstem Group 2	WBID(s):	
Name of TMDL Waterbody:	St Johns River above Rice Creek						
Name of BMAP:	Lower St Johns, Lower St Johns Mainstem Group 2						
WBID(s):							

A-8	<p>Is the Applicant a Rural Economic Development Initiative (REDI) Community? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, please attach a signed Waiver of Matching Funds Letter on your letterhead. See format at https://www.sjrwmd.com/funding</p>
A-9	<p>For County or Municipal applicants: Have you adopted the District's model Landscape Irrigation Ordinance and is it listed on our website? (Scoring Criterion #5): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>B. PROJECT INFORMATION</p>	
B-1	<p>PROJECT TYPE <i>Check the primary core mission and provide evidence in Section B-3.</i></p> <p><input type="checkbox"/> Water Supply <input type="checkbox"/> Water Conservation <input checked="" type="checkbox"/> Water Quality</p> <p><input type="checkbox"/> Flood Protection <input type="checkbox"/> Natural Systems</p>
B-2	<p>PROJECT DESCRIPTION (Scoring Criterion #1) a. Short Description: <i>Succinctly describe the project, e.g. what is being constructed or what is the program to be implemented? Attach supporting documentation if necessary.</i></p> <p>Existing impervious street intersections on St. John's Avenue and N 11th Street (approximately 19,305 square feet) along with the existing impervious train platform and approximately 21,375 square feet of the parking lot at the A Phillip Randolph Transportation Hub will be reconstructed utilizing interlocking permeable pavers. The extension of the train platform will be constructed out of the permeable pavers instead of impervious materials. The total approximate square footage of the permeable platform will be 13,050. A total of approximately 53,730 square feet of permeable paving will be constructed to facilitate storm water treatment in basins 12 and 13. This permeable paving system consists of solid concrete pavers abutted as to leave thin joints in between each adjoining paver. The pavers are placed over a porous aggregate base/sub-base to allow a significant amount of stormwater to infiltrate into the highly permeable base/sub-base thereby reducing surface runoff and pollutants.</p>

b. Measures of Success: *Describe how you will measure the effectiveness of your project.*

The street sweeper is utilized to clean the permeable pavers placed within the intersections and parking lot and the nutrient collected by the sweeper is tracked as part of a BMAP. The amount of nutrient collected in these areas can be tracked and compared to prior years.

c. Is this project multi-phased or part of a larger overall effort? If so, describe the larger project.

This project is the larger overall effort. A scaled down Phase I of this project is a proposed REDI application within this cost share cycle. This project is priority 1 within the General Cost Share cycle and can be scaled back to \$1,000,000 if the City is granted both a REDI and a General Cost Share so as to not exceed the allowable amount of cost share funds. The Phase I REDI application addresses permeable pavers at the intersections on St. Johns Avenue from 5th to 11th Streets. This project is supported by multiple goals and objectives of the City's Comprehensive Plan aimed at protecting the St. Johns River and the City's natural resources from harmful impacts of stormwater runoff, including Future Land Use Element Objective A.1.4, Public Facilities Element Goal D.2 and Objective D.2.2, Conservation Element Goal E.1 and Objective E.1.2, and others. The City's core development pre-dates current stormwater management requirements and thus the majority of the City provides no stormwater treatment. The City's long term goal is to ultimately retrofit the entire urban City with stormwater treatment measures and systems. The City of Palatka has been proactively seeking the repair and modernization of its utility systems for the past seven years. The City recently completed two phases of Riverfront Park projects that included water quality elements and construction will begin this year on a SJRWMD cost share funded stormwater improvement in the Southern Historic District. The City plans to continue to update its infrastructure with public health, water quality, water conservation, and natural system improvements in mind.

d. Describe the location and include a map. The map should identify any potentially affected MFL, TMDL, BMAP, impaired water bodies or other affected wetlands or springs.

The intersections of 5th and St John's Ave, 6th and St. John's Ave, 7th and St. John's Ave, 8th and St. John's Ave, 9th and St. John's Ave, 10th and St. John's Ave, 11th and St. John's Ave, 11th and Main Street, 11th and Madison Street, and 11th Street at the entrance to the A Phillip Randolph Transportation Hub the existing train platform and the extension of the train platform, and the parking lot at the A Phillip Randolph Transportation Hub. Please see the attached Map.

e. Coordinates for the project in decimal degrees to 6 places. Use centroid for large area project area:

Latitude: 29.647501

Longitude: -81.636694

B-3 BENEFITS TO DISTRICT MISSIONS (Scoring Criterion #2)

Describe the benefits to one or more of the District's main missions (Water Supply/Conservation, Water Quality, Flood Protection and/or Natural Systems). Clearly identify the primary and secondary mission benefits. Attach separate pages if necessary. Refer to the Funding Guidance Manual for additional pertinent information that should be included with your application.

Primary benefit:

Water Quality: This project will utilize a permeable paving system that consists of concrete pavers abutted as to leave thin joints in between each adjoining paver. The pavers are placed over a porous aggregate base/sub-base to allow a significant amount of stormwater to infiltrate through and around the pavers into the highly permeable base/sub-base thereby reducing surface runoff and pollutants. The benefits to Water Quality of utilizing permeable pavers according to William Selbig, Research Hydrologist with the Upper Midwest Water Science Center "a more natural hydrological balance and reduce runoff volume by trapping and slowly releasing precipitation? instead of allowing it to flow into storm drains and out to recipient waters as effluent. This...also reduces the peak rates of discharge by preventing large, fast pulses of precipitation through the stormwater system... By slowing down the process, permeable pavements can cool down the temperature of urban runoff, reducing the stress and impact on the environment."

https://www.usgs.gov/science/evaluating-potential-benefits-permeable-pavement-quantity-and-quality-stormwater-runoff?qt-science_center_objects=0#qt-science_center_objects. When rainfall occurs stormwater either evaporates, infiltrates into the soil/stormwater infrastructure, or creates runoff. The kinds of ground cover greatly influence the proportions of each of these actions. If the rainfall intensity exceeds the evaporation rate and infiltration capacity of the area, surface runoff occurs. Runoff occurs on impervious surfaces, such as roadways and other paved areas carrying contaminants from the surface.

<https://training.fema.gov/hiedu/docs/fmc/chapter%20%20-%20types%20of%20floods%20and%20floodplains.pdf> The project will have a nutrient reduction of 57 lbs/year nitrogen and 9 lbs/year phosphorous by allowing stormwater to infiltrate through the surface and base aggregate material and into the ground. |

Secondary benefit(s), if applicable:

Flooding: Permeable pavement is part of the low impact development (LID) measurement, which can decrease urban surface runoff by more than 50% and slow flood peak flow. It also has a better effect on reducing runoff coefficient and flood peak, which can effectively reduce the pressure of urban drainage and reduce the risk of stormwater flooding

<https://www.sciencedirect.com/science/article/pii/S2046043018301060>. When rainfall occurs stormwater either evaporates, infiltrates into the soil/stormwater infrastructure, or creates runoff. The kinds of ground cover greatly influence the proportions of each of these actions. If the rainfall intensity exceeds the evaporation rate and infiltration capacity of the area, surface runoff occurs. Runoff occurs on impervious surfaces, such as roadways and other paved areas carrying contaminants from the surface. If local stormwater drainage conditions are inadequate to accommodate rainfall this can cause localized flooding problems. Flooding problems resulting from runoff of surface water generally increase as areas become more urbanized. Greater population density generally increases the amount of impervious area, e.g., pavement and buildings. <https://training.fema.gov/hiedu/docs/fmc/chapter%202%20-%20types%20of%20floods%20and%20floodplains.pdf> | This project will utilize a permeable paving system that consists of concrete pavers abutted as to leave thin joints in between each adjoining paver. The pavers are placed over a porous aggregate base/sub-base to allow a significant amount of stormwater to infiltrate through and around the pavers into the highly permeable base/sub-base thereby reducing surface runoff.

B-4 If the Project is for Water Resource Development or Alternative Water Supply Development identify the source water (check all that apply):

- Fresh Groundwater
- Brackish Groundwater
- Stormwater
- Reclaimed Water
- Surface Water: Identify surface water body: _____
- Brackish Surface Water: Identify surface water body: _____
- Other: Identify Source: _____

B-5 District Permit Information:
If the applicant has an SJRWMD-issued Consumptive Use Permit and or an Environmental Resource Permit for the project site, provide the following:

Permit Type:	Permit #	Expiration date/Compliant (yes / no)

B-6	Project Likelihood of Successful Completion (Scoring Criterion #3)			
	a. Project Readiness: <i>Check all that apply and supply requested dates (month/day/year) and attach a detailed project construction schedule. Include documentation that demonstrates that the construction start date is realistic (e.g. critical milestones, commission approval dates, procurement timeline, etc.).</i>			
		Current % Complete	Start Date	Completion Date
	Planning	100%	12/1/2017	2/1/2020
	Design	60%	11/1/2019	5/1/2020
	Permitting			
	Bidding	0%	8/1/2020	9/15/2020
	Construction		11/1/2020	11/1/2021
	Future Phases			
	Other			
b. Local Government / Public Support:				
<i>Describe the public support for your project (meetings attended, community workshops, presentations to councils, notification in newsletters, etc.). If your project requires participation from certain communities or homeowners, provide a description of methods used to ensure participation in your project. Provide the percentage of participation that can be documented at the time of the application.</i>				
<p>The components of this project have been discussed at multiple public open houses and workshops held on Improvements for St John's Avenue, the 11th Street Corridor, and the Transportation Hub. This project is supported by multiple goals and objectives of the City's Comprehensive Plan aimed at protecting the St. Johns River and the City's natural resources from harmful impacts of stormwater runoff, including Future Land Use Element Objective A.1.4, Public Facilities Element Goal D.2 and Objective D.2.2, Conservation Element Goal E.1 and Objective E.1.2, and others.</p>				
B-7	Applicant has identified all required permits necessary for project construction and has indicated whether any property needed is under its ownership or control. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			

C. PROJECT COST INFORMATION

C-1

a. Breakdown of project cost

Attach a table or spreadsheet with detailed project costs for each task or segment of the project. The District will contribute only to the construction costs of the project; however, the table should detail all project costs. Indicate at the end of the table/spreadsheet, a cost effectiveness evaluation as described below.

b. Cost-share request funding table

The District's cost-share (4.) cannot exceed 33% of the total construction cost (1.) for Alternative Water Supply, Water Quality, Flood Protection and Natural Systems projects and 50% for Water Conservation projects. REDI communities that have submitted a waiver, however, can be reimbursed up to 100% of total construction cost.

	Year 1	Year 2
Total Construction Cost:	\$750,000.00	\$750,000.00
1. Other Costs (includes capital, land acquisition, planning, design, permitting & bidding costs)	\$150,000.00	
2. Total Project Costs:	\$1,500,000.00	
3. Cost-share amount requested:	\$1,500,000.00	
4. Estimated Applicant's Annual Operation & Maintenance Costs:	\$100.00	
5. Estimated Service life of components:	40	years

c. Funding Sources: *Identify the Applicant' funding contribution and all other outside sources of funding including State or Federal appropriations, grant monies, or municipal bonds. Include the status of the specified funding.*

\$150,000 funding secured from US EPA

The District would like to recognize in-kind financial contributions for REDI communities requesting 100% funding of the construction costs. Describe your in-kind contribution and estimate the monetary value of that contribution.

Grant Administration and Project Management \$37,500

d. Project partners: Check one below and if multi-jurisdictional include the percent of funding to be contributed by each partner.

Single entity

Multi-jurisdictional (attach copy of partnership agreement or memorandum of understanding, if available, and includes status of agreement).

Identify other partners:

Quantification of Project Benefits: District staff will quantify benefits for Septic to Sewer projects, Flood Protection Projects and projects benefiting MFL water bodies using the information provided below and in B-2 and B-3.

Show all work and include assumptions for calculation of quantified benefits. Accepted engineering methods should be used to estimate project benefits, and backup information showing any calculations must be provided. Attach additional pages as needed. Note, if your project is specifically listed within a BMAP, provide the credited nutrient reduction value associated with the project within the BMAP.

For Water Supply Projects:

_____ MGD alternative water supplied

For Water Supply/Conservation Projects:

_____ MGD conserved

For Water Quality Projects:

57 _____ Lbs/year TN removed/reduced annually

9 _____ Lbs/year TP removed/reduced annually

	<p>For Natural Systems Projects:</p> <p>_____ Acres Wetlands Restored/Enhanced</p> <p>_____ Acres Uplands Restored/Enhanced</p> <p>_____ Linear feet of shoreline Restored/Enhanced</p>																										
	<p>For projects that benefit MFL waterbodies:</p> <p>_____ MGD of water recharged</p> <p>_____ MGD of alternative source to offset withdrawals.</p>																										
	<p>For Flood Protection Projects:</p> <p>_____ Acres protected from flooding</p> <p>Annual Exceedance probability As is: 1/_____ years</p> <p>After project implementation: 1/_____ years</p>																										
C-3	<p>Cost Effectiveness (Scoring Criterion #4)</p> <p><i>Cost effectiveness is calculated based on Total Project Cost, Annual Operation & Maintenance Costs, Estimated Service life of components (entered in section C-1b), Quantification of Project Benefits (entered in section C-2), and 2.875% Federal Water Resource Planning Discount Rate. Cost Effectiveness Calculator and all appropriate supporting documentation can be found at www.sjrwmd.com/funding/</i></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 20%;">Water Supply:</td> <td style="width: 40%;">_____</td> <td style="width: 40%;">per 1000 gallons made available</td> </tr> <tr> <td>Water Conservation:</td> <td>_____</td> <td>per 1000 gallons conserved</td> </tr> <tr> <td rowspan="2">Water Quality:</td> <td>\$1,117.35</td> <td>per lb TN removed</td> </tr> <tr> <td>\$7,076.54</td> <td>per lb TP removed</td> </tr> <tr> <td rowspan="3">Natural Systems:</td> <td>_____</td> <td>per acre wetland restored/enhanced</td> </tr> <tr> <td>_____</td> <td>per acre upland restored/enhanced</td> </tr> <tr> <td>_____</td> <td>per ft. shoreline restored/enhanced</td> </tr> <tr> <td>Flood Protection:</td> <td>_____</td> <td>per acre protected from flooding</td> </tr> <tr> <td rowspan="2">MFL</td> <td>_____</td> <td>per 1000 gallons of water recharged</td> </tr> <tr> <td>_____</td> <td>per 1000 gallons of alternative source to offset withdrawals</td> </tr> </table> <p><i>**District staff will calculate the benefits for Septic to Sewer, Flood Protection, and MFL projects based on the information provided in sections C-1 and C-2 of the application.</i></p>	Water Supply:	_____	per 1000 gallons made available	Water Conservation:	_____	per 1000 gallons conserved	Water Quality:	\$1,117.35	per lb TN removed	\$7,076.54	per lb TP removed	Natural Systems:	_____	per acre wetland restored/enhanced	_____	per acre upland restored/enhanced	_____	per ft. shoreline restored/enhanced	Flood Protection:	_____	per acre protected from flooding	MFL	_____	per 1000 gallons of water recharged	_____	per 1000 gallons of alternative source to offset withdrawals
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MFL	_____	per 1000 gallons of water recharged																									
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** To fit text in space available, all line breaks in text entries are replaced with "|".

Document Type	File	Description	
Other	60 design.pdf	60 Design	
Other	60' ROW - St Johns Avenue.jpg	60 ROW	
Benefit Calculation	Cost Effectiveness Calculator - 2020 Permeable Paving.xlsx		
Benefit Calculation	Depot_11th St_REV nutrient reduction.docx	engineers nutrient calculations 11th and depot	
Project Cost Table	Detailed cost estimate permeable pavers.pdf	Detailed Cost Estimate	
Application Checklist	Palatka checklist and signature page.pdf		
Construction Schedule/timeline	Permeable Paving Project Schedule.xlsx		
Funding Waiver Letter	Redi waver permeable.pdf		
Benefit Calculation	StJohnsAve_Permeable Intersections nutrient reductions.docx	engineers nutrient calculations SJA	
Project Map	project area map.pdf		