St. Johns River Water Management District Fiscal Year 2015–2016 Cost-Share Funding Program Application Form							
			nse to each so nd Street Poor	ection is require	d. Attach add	tional pages as ne	eeaea.) +
PROJ			Street Reco	Distruction and	Stormwater P	OCKEL PAIK Projec	ι
A. AP	PLICA	NT INFOR	MATION				
A-1	Nam	e of entity	y/organizatio	n: City of Gaines	sville Public W	orks Department	
A-2	Conta	act inforn	nation of proj	ect manager or	contact perso	n: Betsy Waite	
	(Dist	rict will se	end correspon	dence concernii	n <mark>g this applic</mark> a	tion ONLY to the	below person.)
	Name	e/title: Be	tsy Waite, P.E	., Project Mana	ger		
	Emai	l address:	waiteed@cit	yofgainesville.or	g		
	Maili	ng addres	s: City of Gair	nesville Public W	orks, 405 NW	39 [™] Ave., Gainesv	ille, FL 32609
	Office	e Phone: (352) 393-84	105	Mobile Ph	one: (N/A)	
A-3	Cont	act inforn	nation of pers	on with authori	ty to enter int	o a contractual a	greement, if other
	than	project m	nanager or co	ntact person: Ru	iss Blackburn		
	If sar	ne as A-2	above, do no	t complete this	section.		
	Name	e/title: Ru	ss Blackburn,	City Manager			
	Emai	address:	blackburnrd	@cityofgainesvill	e.org		
	Maili	ng addres	s: City of Gair	nesville City Hall,	200 East Univ	ersity Ave., Gaine	sville, FL 32601
	Office	Phone (252) 22/-5(10	Mohile Ph	one: (N/A)	
Δ-4	Discl	osure:	552 554 50	,10	Woblict		
	Does	any Distr	ict employee,	Governing Boar	d member, co	ntractor or other a	affiliate of the
	appli	cant have	a financial in	terest in this pro	ject, the prop	erty associated wi	th this project, or
	with	any party	that may pro	fit financially fro	m this project	? Yes No	X
	If yes	, identify	all such partio	es and describe t	heir interests:		
A-5	Chec	k where t	his project is	located:			
	X	Alachua	Baker	Bradford	Brevard	Clay	Duval
		Flagler	Indian River	Lake	Marion	Nassau	Orange
		Osceola	Putnam	Seminole	St. Johns	Okeechobee	Volusia
	Is the	e Applicar	nt a Rural Eco	n <u>omic</u> Developr	nent Initiative	(REDI) Communit	ty?
					x		
			Yes				
	If yes, please attach a signed Waiver of Matching Funds Letter on your letterhead. See format						
	at floridaswater.com/funding.						
B-1	WATER RESOURCE AND PROJECT INFORMATION 1 Project Type: floridaswater com/overview						
	,	cet i ypei	nonauswater				
	Benefits to District Core Mission Area(s): Check all that apply and provide a brief explanation.						
	If your project benefits a water body through nutrient-loading reduction or a natural system						
	(i.e., wetlands) describe the water bodies or natural system and how it will be enhanced.						
	Projects that benefit one or more Core Mission Area will receive additional scoring						
	consideration.						

	Water Supply: Description:						
x	Flood Protection: Description: Please see the attached memorandum						
	Water Quality: Description: Please see the attached memorandum and Exhibit G						
X	<u>72.29</u> Lbs/year TN Reduced Annually <u>24.34</u> Lbs/year TP Reduced Annually						
	Natural Systems: Description:						
Con (Ch init	Itributes to a District Strategic Initiative: <i>floridaswater.com/initiatives</i> eck all that apply and provide a brief description how your project benefits the iative(s).						
	Springs Protection Initiative: Description:						
	North Florida Water Initiative: Description:						
	Central Florida Water Initiative: Description:						
	Minimum Flows and Levels Prevention and Recovery Initiative: Description:						
	Indian River Lagoon Protection Initiative: Description:						
x	Middle and Lower St. Johns River Water Quality Improvement Initiative: Description: Please see the attached memorandum						
	Northern Coastal Basins Initiative: Description:						
lf th ide	ne project is for Water Resource Development or Alternative Water Supply Development ntify the source water (check all that apply):						
	Fresh Groundwater						
	Brackish Groundwater						
X	Storm Water						
	Surface Water: Identify surface water body:						
	Surface Water: Identify surface water body: Brackish Surface Water: Identify surface water body:						
	Surface Water: Identify surface water body: Brackish Surface Water: Identify surface water body: Reclaimed Water						

B-3 Cont.	For Water Resource and Alternative Water Supply Development projects, if the applicant has a consumptive use permit issued by the District, provide the requested information and describe if/how your project may affect your permit(s) in the future. Permit Types: Individual CUP <500,000 gpd; Individual CUP <500,000 gpd; Minor Individual CUP <100,000 gpd						
	Permit Type: Permit # Expiration date/Compliant (yes / no)						
	CUP > 500,000 gpd 11339-6 2033/ Yes						
				(it is not anti any effect o f	icipated that this project will have on the consumptive use permit or uture water demands)		
В-4	Project information: What is the project going to do and how is it going to do it? Describe the problem and how the project will address the problem. If the project is a water quality project, discuss if the receiving water body has a TMDL and approved BMAP and what percentage of the total TMDL nutrient-load reduction will be achieved by the project. Attach pages as needed.						
	a. Description: P	lease see the	attached mer	norandum			
	b. Purpose and goal of the project: Please see the attached memorandum						
	c. How will you measure success? Describe your plan of action to measure the effectiveness of your project: Please see the attached memorandum						
	d. Describe how this project relates to larger projects and or goals of the applicant: Please see the attached memorandum e. Describe the location, include a map: Please see the attached memorandum Project likelihood of successful completion within the current fiscal year: a. Project status: Check all that apply and supply requested dates (month/day/year). Attach a detailed project construction schedule. (Please see Exhibit F)						
B-5							
		Current% Complete					
	X Planning	100%	Start Date: 2	/16/2010	Completion Date: 2/11/2014		
	X Design	60%	Start Date: 2	/11/2014	Completion Date: 8/17/2015		
	X Permitting	0%	Start Date: 6	/1/2015	Completion Date: 8/30/2015		
	X Bidding	0%	Start Date: 8	/30/2015	Completion Date: 10/29/2015		
	X Construction: 0% Start Date: 1/26/2016 Completion Date: 10/13/2016						
	X FY 2015–2016	Construction C	omplete 0	% FY2016–2	2017 Construction Complete 95%		
	Future Phases: Start Date: Completion Date:						

		Other:	Start Date:	Completion Date:				
	hΡ	roject partners: Check one	helow and if multi-i	urisdictional include the percentage of				
	5. I	ding to be contributed by or	sch nortnor	ansaletional, merade the percentage of				
		Cingle entity City of Coince						
	×	Single entity: City of Gaines	SVIIIE PUDIIC WORKS					
B-5		Multi-jurisdictional (Attach	a copy of the partn	ership agreement or memorandum of				
Cont.		understanding, if available	and include status of	of agreement):				
	a Applicant's Funding Courses Identify your course of funds to convulsta the unstant							
	c. Applicant's Funding Source: Identity your source of funds to complete the project:							
	CI	Funds for FY 15						
	ls t	the project included in your	5-Year Capital Imp	rovement Program (CIP)?				
	Х	Yes – This project was incl	uded within the CIP	Plan and partial funding allocated in FY15				
		No						
		Not Applicable						
		Not Applicable						
	d. T	echnology or Methodology	Describe the techn	ology or methodology to be used in the				
	proj	ject and provide documenta	ation of how and wi	nere the technology has successfully been				
	use	d in the past:						
	Ple	ease see the attached memo	orandum					
	- 0	uhlia Commente Describes the		······································				
	е. Р	ublic Support: Describe the	public support for y	our project (meetings attended,				
	community workshops, presentations to councils, notification in newsletters, etc.)							
	Х	X Yes: Please see the attached memorandum						
	No Unknown							
	f Past Parformance: Identify all District cost share projects your organization completed							
	i. Past Performance: Identity all District cost-share projects your organization completed							
	within the last three years, or projects still underway (explain status) funded in part with							
	District support. If a completed or ongoing project has required a time extension, provide the							
	original completion date the actual completion date and explain the discremency							
	1.	The Paynes Prairie Sheetflow	v Restoration Projec	t received assistance from the SJRWMD with				
	a s	tart date of August 20, 2012	and an original con	pletion date of June 20, 2014. Not being				
	ab	ble to work during rain delays and having to repair damage from heavy rainfall have extended						
	the	he construction schedule to May 1, 2015.						
	2.							
C. PRO	C. PROJECT COST INFORMATION							
	Bre	eakdown of project cost (pr	ovide attachment)					
	Dre	wide a table or spreadshoot	with project costs f	or each task or segment of the project. The				
			the construction of	to of the project. Construction costs do not				
	District will contribute only to the construction costs of the project. Construction costs do not							
	include planning, design, permitting, bidding or the acquisition of land. Identify any other							
	outside sources of funding, including state or federal appropriations or grant monies, municipa							
				•				

	bonds. Indicate at the conclusion of the table/spreadsheet, a cost-effectiveness evaluation as described below. For water supply or water conservation projects, include the construction cost per gallon per						
6	day (\$/g.p.d). For water quality projects, include the construction cost per pound of Total Nitrogen (TN) and/or Total Phosphorus (TP) to be removed on an annual basis. (\$/ lb TN / TP/year). (Please see Exhibit H)						
Cont.	Cost-share request funding table For AWS and Water Quality, the District's share (C.) cannot exceed <u>33 percent</u> of the total construction cost (B).						
	For Wa cost (A	For Water Conservation, the District share (C.) cannot exceed <u>50 percent</u> of the total project cost (A).					
	А.	Total estimated project cost:	\$ 1,796,985.79				
	В.	Construction cost:	Year 1 (FY 2015-2016)	Year 2 (FY 2016-2017)			
			\$ 0	\$ 1,481,985.79			
	C. Cost-share amount requested:		\$ 493,945.86 (33% of Construction Costs)				
	D.	Applicant's share:	\$ 1,145,733 (Amount Allocated as of 2-17-15)				
	E.	Estimated Applicant's Annual	\$ 7,500 (Mowing, Trash F	Removal, Weir			
		Operation and Maintenance Costs:	iviaintenance, etc)				

Provide the required attachments: project map, construction schedule/timeline, project cost table or spreadsheet; plus additional information required for your specific project type in accordance with the District's 2016 CSFP Guidance. (Please see Exhibit A and E for a Project Map, Exhibit F for a Project Schedule/Timeline, and Exhibit H for a Cost Analysis)

I certify that all information on this form and the attached document(s), if applicable, is true and correct. Signature of the person with authority to enter into a contractual agreement.

Name (print): Russ Blackburn

Signature: _____

Title: City Manager, Gainesville, FL

Date:



Public Works Department 405 NW 39th Avenue Gainesville, FL 32609 (352) 334-5070 (352) 334-2093 (fax) www.cityofgainesville.org

March 3rd, 2015

RE: NE 2nd Street Reconstruction and Stormwater Pocket Park Project

Dear SJRWMD Cost-Share Program Coordinator,

This memorandum and its attachments serve to substantiate the request of the City of Gainesville Public Works Department. The City of Gainesville Public Works Department is asking that the NE 2nd Street Reconstruction and Stormwater Pocket Park Project be accepted into the St. Johns River Water Management District FY 2015-2016 cost-share funding program.

Background:

As a direct result of public participation during a Plan Board Public Hearing in 2005 a feasibility study was initiated to analyze the multi-modal, roadway and stormwater management improvements needed along the NE 2nd Street corridor between NE 10th and NE 16th Avenues. The outcome of this report was a recommendation to upgrade the existing stormwater structures, reconstruct the existing roadway using curb and gutter, add a sidewalk/shared use path and incorporate a stormwater detention and treatment pond (a stormwater pocket park). The proposed location for the neighborhood stormwater pocket park is a two acre parcel adjacent to both the corridor of concern (NE 2nd Street) and a community recreation area, Northeast Park, which would be connected by a walking path. Please see Exhibit A for a rendering of the proposed pocket park and trail connection.

Increasing the stormwater capacity with a stormwater pond and upgrading the existing conveyance system to an appropriate size are the focal points of this project with an end result of improved water quality. The proposed stormwater pocket park will improve water quality through wet detention with additional emphasis on lowering the phosphorus nutrient load. Paynes Prairie Sheetflow Restoration Project, one of our newest stormwater treatment initiatives downstream from the NE 2nd Street project location, concentrates on nitrogen load reduction. Phosphorus is also a concern in the Sweetwater Branch creek system and one we would like to try to address through a pilot project in this smaller stormwater pond. The City of Gainesville has started exploring environmentally conscious opportunities for reducing high phosphorus nutrient loads, one option being the use of recycled crushed concrete. In a study conducted by the University of Denmark in 2013 nearly 90% of their phosphorus load was reduced by filtering stormwater through recycled crushed concrete prior to it leaving their retention basin. We are currently exploring other technologies that have shown to achieve similar results. The aforementioned study can be found at:

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http://www.sdu.dk/en/om_sdu/fakulteterne/naturvidenskab/nyheder_2013/2013_08_22 (Exhibit B)

A site visit conducted with SJRWMD representatives Barbara Hatchitt and Upasana Srivastava on 11 February 2015 reinforced that this project would benefit water quality and provide necessary additional stormwater storage to the area. It was agreed that there is a net water quality benefit associated with this project.

Application Form Responses:

(B-1) Benefits to District Core Mission Area(s):

Flood Protection: Description: The proposed NE 2nd Street Reconstruction and Stormwater Pocket Park Project includes upgrading the existing roadway drainage system to curb and gutter, increasing the stormwater pipe size, and the creation of a stormwater pocket park. The stormwater pocket park will be constructed to both treat stormwater runoff and add additional stormwater storage for the mixed use area. The location of the proposed stormwater park allows it to function as an amenity to the neighborhood. The two acre pond parcel is adjacent to Northeast Park, a large recreational facility in the Duckpond neighborhood, close to the downtown Gainesville area. A path will be constructed between the stormwater pocket park and the existing trail system within Northeast Park to promote the wet detention pond as an amenity to the community and increase access to the City's park infrastructure.

Water Quality: Description: The proposed stormwater pocket park will improve water quality through wet detention as well as focusing additional treatment mechanisms on phosphorus nutrient loads. This stormwater project will treat 39 previously untreated acres, 23 of which are currently zoned for commercial use. This basin includes a large recreational park, two schools and various commercial and residential buildings. The wet detention basin will have a permanent pool volume of 4.31 acre-feet. Aquatic vegetation will be planted around the pond's perimeter to help filter sediment in stormwater runoff. According to a study presented in the Evaluation of Current Stormwater Design Criteria within the State of Florida, FDEP Contract No. S0108, a wet detention system with a detention time of 14 days can on average be expected to provide a net removal of approximately 20-40% for total nitrogen; 60-70% for total phosphorus and copper; and 75-85% or more for TSS, total lead and total zinc, (Please see Exhibit D).

Phosphorus is a critical component in the fertilization of Northeast Park and is likely also used on some of the surrounding residential and commercial parcels. In addition to wet detention we will treat stormwater for high phosphorus nutrient loads by filtering it through a crushed

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concrete system (or equivalent) before it continues downstream. Studies have shown that this method can remove nearly 90% of phosphorus by binding the nutrient to the cement that is found in crushed concrete. Stormwater from our proposed project area drains into the Sweetwater Branch Creek. As of 2012 Sweetwater Branch Creek was considered impaired for total phosphorus (TP), please see Appendix C. Major sources of TP in the watershed include naturally occurring phosphorus minerals in the Hawthorn Group formations that are eroded by high velocities in stormwater flows and runoff fertilizer used on lawns. Our goal is to create a wet detention pond that we can use as a pilot project for innovative phosphorus removal.

Proposed Nutrient Load Reduction:

<u>72.29</u> Lbs/year TN Reduced Annually <u>24.34</u> Lbs/year TP Reduced Annually (This assumes a wet detention period of 14 days and a conservative 70% removal efficiency from the use of crushed concrete or equivalent as a secondary treatment). Please refer to Exhibit G for the BMP and Stormwater Analysis.

(B-2) Contributes to a District Strategic Initiative: *floridaswater.com/initiatives*

Middle and Lower St. Johns River Water Quality Improvement Initiative: Description:

The proposed stormwater project will improve water quality downstream by decreasing the overall nutrient load from 39 previously untreated acres. We will treat stormwater first with wet detention and then treat the stormwater runoff specifically for phosphorus by running it through a crushed concrete filtration system as it leaves the detention pond. The Sweetwater Branch is considered an impaired creek for total phosphorus. Stormwater treated by our proposed retention pond will ultimately end up in Sweetwater Branch Creek, travel through the Paynes Prairie Sheetflow Restoration Project, and return to the Florida aquifer. The Paynes Prairie Sheetflow Restoration Project was created to reduce the nitrogen load on the aquifer. Algae blooms, which can likely be attributed to a high phosphorus nutrient load from upstream, have been seen at the Paynes Prairie Sheetflow Restoration site. By targeting phosphorus loading upstream we can help lower the burden on the Paynes Prairie Sheetflow Restoration Project the Florida aquifer.

(B-4) Project information: What is the project going to do and how is it going to do it? Describe the problem and how the project will address the problem. If the project is a water quality project, discuss if the receiving water body has a TMDL and approved BMAP and what percentage of the total TMDL nutrient-load reduction will be achieved by the project.

a. Description: The proposed project encompasses upgrading the existing roadway drainage system to curb and gutter (with sidewalk), increasing the stormwater pipe size, and the creation

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of a stormwater pocket park. The stormwater pocket park will be constructed to both treat stormwater runoff and add additional storage capacity for the community. The proposed location of the stormwater park will allow it to function as an amenity to the neighborhood.

b. Purpose and goal of the project: The proposed project will increase the stormwater capacity in this area and result in improved water quality. The proposed stormwater pocket park will improve water quality by focusing on lowering nutrient loads through wet detention, with additional emphasis on phosphorus load reduction. Paynes Prairie Sheetflow Restoration Project, one of our newest stormwater treatment initiatives downstream from our project location, focuses on the treatment of nitrogen but the phosphorus load is also a concern we would like to try to address through a pilot project in this smaller stormwater pond. The 74 acre stormwater basin, 39 of which are currently untreated, ties into the Sweetwater Branch Creek system. Sweetwater Branch is considered an impaired creek for total phosphorus (see Exhibit C). Water treated by our proposed stormwater pond will ultimately end up in Sweetwater Branch Creek, travel through the Paynes Prairie Sheetflow Restoration Project site and return to the Florida aquifer.

c. How will you measure success? Describe your plan of action to measure the effectiveness of your project: The project will have achieved success if it mitigates the flooding concern for the community and removes high nutrient loads. This project strives for a net removal of approximately 20-40% for total nitrogen; 60-70% for copper; 75-85% or more for total lead and total zinc, and 90% for total phosphorus after secondary treatment over crushed concrete or equivalent (Please see Exhibit D). A reduction in algae blooms in the Paynes Prairie Sheetflow Restoration site will help validate our success.

d. Describe how this project relates to larger projects and or goals of the applicant: This project will serve as a pilot project for innovative phosphorus treatment programs throughout the region, increase the City's park infrastructure and ultimately promote the health of the Florida Aquifer. The City of Gainesville strives to create stormwater management and treatment systems that function efficiently and act as amenities to the community.

e. Describe the location, include a map: The proposed project is located along the NE 2nd Street corridor in Gainesville, Florida from NE 10th Avenue to NE 16th Avenue. The drainage basin and a contour map can be seen in Exhibit E.

(B-5) d. Technology or Methodology: Describe the technology or methodology to be used in the project and provide documentation of how and where the technology has successfully been used in the past:

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The Stormwater Model that was used in the creation of the Wet Detention Basin is Interconnected Channel and Pond Routing (ICPR). This analysis evaluates the existing conditions and proposed design model results generated from the ICPR model. The modeled events are storms lasting 24 hours that have a 10%, 4%, 2%, and 1% chance, respectively, of occurring in any given year. These storm events are specific to a geographic area and are based on local historical hourly rainfall records. Wet Detention will be our primary means of treatment for this stormwater system with crushed concrete filtration (or other similar pilot project) being added as secondary means of treatment. As seen in Exhibit B the chemical composition of concrete makes it highly effective at binding a higher percentage of phosphorus than wet detention alone. The City of Gainesville would like to explore a pilot project of this nature to see if we can have a more dramatic effect on stopping algae bloom outbreaks from occurring downstream at the Paynes Prairie Sheetflow Restoration project site. BMP Analysis and Stormwater modeling can be found in Exhibit G.

e. Public Support: Describe the public support for your project (meetings attended, community workshops, presentations to councils, notification in newsletters, etc.)

Citizen comments during a Plan Board Public Hearing in 2005 initiated interest in this project. A feasibility study was conducted in 2010 which analyzed the multi-modal, roadway and stormwater management improvements needed along the NE 2nd Street corridor between NE 10th and NE 16th Avenues. As part of the 2010 feasibility study a public workshop was held. A mailing was sent out to residents along the corridor and a meeting advertisement was published in the Gainesville Sun. Upon reaching 30% design plans another public workshop was held in January of 2015. This meeting was advertised through a mailing to residents along the corridor, Facebook announcements, and an announcement in the Gainesville Sun as well as outreach through both the City of Gainesville Website and the Public Works Website. Neighborhood Associations were also contacted directly. Updates are posted periodically on the City of Gainesville's Public Works project webpage which can be viewed at: http://www.gainesvillepublicworks.org/ne-2nd-street/.

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For any questions or comments concerning the proposed NE 2nd Street Reconstruction and Stormwater Pocket Park Project please contact the Project Manager, Betsy Waite, via email or phone as listed below. We appreciate your assistance and interest in our project.

Respectfully,

mabeth D Waite

Betsy Waite, P.E. City of Gainesville Public Works Office: (352)-393-8405 waiteed@cityofgainesville.org