

**Tumblin Creek Regional
 Stormwater Treatment Facility**

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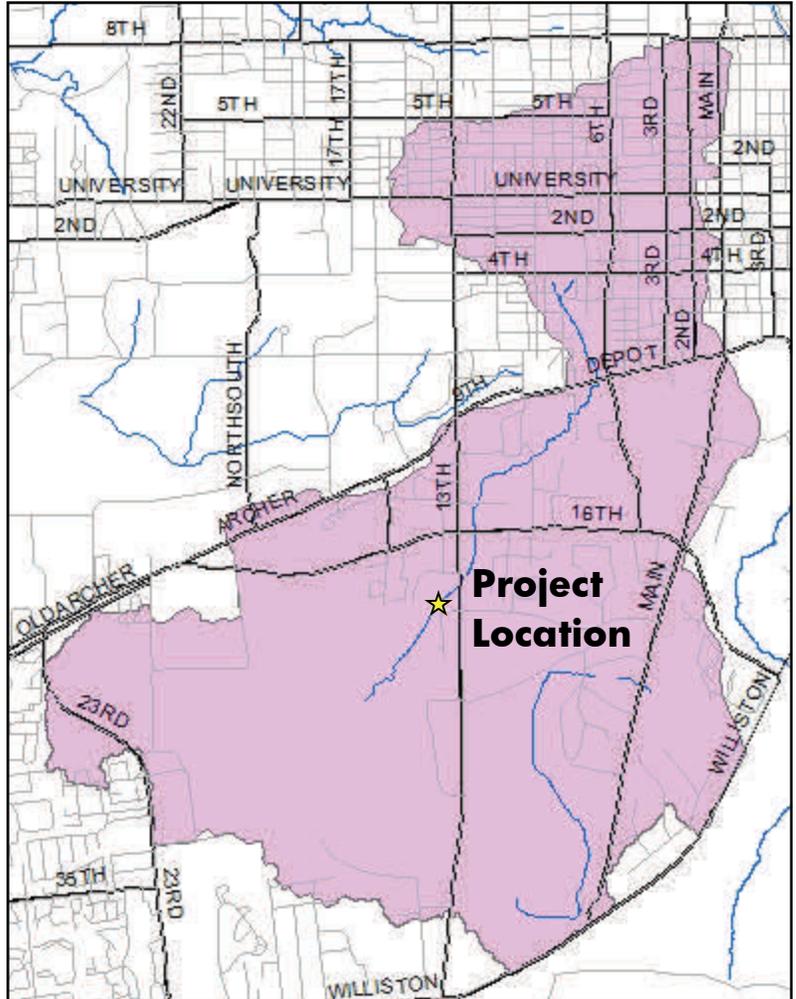
Project History & Scope of Work

The Tumblin Creek Regional Stormwater Treatment (RST) Facility project was first envisioned in the 2007 Tumblin Creek Watershed Management Plan prepared for the City of Gainesville by Jones Edmunds & Associates. In 1964, a 1,000-foot creek section was channelized and the adjacent wetland cleared and filled with the spoil from the creek excavation. Construction of this spoil pile removed natural sheet flow of Tumblin Creek to a large portion of the forested wetlands. In effect, the quantity of stormwater treatment provided by this area has been greatly reduced.

This project proposes two alternatives, the second of which builds off of the first. Alternative 1 includes the removal of the aforementioned spoil berm allowing the historical wetlands to become rehydrated. Alternative 2 includes the removal of the spoil berm as well as constructing a sheet pile weir that further impounds the water. This increases the hydraulic residence time thus increasing the provided stormwater treatment. The project also proposes to install a trash trap downstream of the culvert at US 441 which will remove trash and other debris before entering the RST Facility.

Environmental Impacts

The water quality improvements made from



this project are predicted to be substantial. With the implementation of Alternative 2 as described earlier, it is estimated that runoff entering Biven’s Arm would have Total Suspended Solids reduced by 65%, Total Nitrogen reduced by 15%, and Total Phosphorus reduced by 13%. With Biven’s Arm given a “Medium” priority by the EPA’s 303d List for TMDL development due to Total Nitrogen and Total Phosphorus concentrations, this project is key in remediating those issues.

This project directly correlates with the City of Gainesville's Strategic Initiative 7.1 to protect the quality of drinking water in Gainesville. Similarly, the project achieves the Florida Department of Environmental Protection's (FDEP) Clean Water State Revolving Fund (CWSRF) Long Term Goal #3 which states "the highest ranking projects are those projects that...protect groundwater or surface water...enable compliance with other pollution control requirements such as toxics control and nutrient removal...[and] restore wetlands..."

Economic Development Impacts

This project is also looking to be set up as a water quality credit system in the same manner as the SW 5th Avenue and Depot Park stormwater basins. Under the credit system, developers would be able to buy credits in the Tumblin Creek RST Facility in order to meet their stormwater quality requirements without expensive underground treatment systems or stormwater basins that take up valuable real estate. In turn, the City recovers capital expended on the implementation of the project.

Innovation Square is a 40 acre urban master plan that will build out over five million square feet of offices, research space, residences, retail, hotels, and open space.⁴ One building within Innovation Square, Infusion, has purchased credits within the 5th Avenue Credit Basin. With most of the master plan remaining to be built and credits in the 5th Avenue Basin running low, getting the Tumblin Creek RST Facility's credits available is a top priority to foster this and other developments in the area.

Establishing the Tumblin Creek RST Facility as a credit system ties into the City of Gainesville's Strategic Initiative 2.4 which has the desire outcome to "successfully attract Innovative Economy development to the Innovation Zone. Create and set the platform (regulatory regime, infrastructure) for the development of Innovation Square and surrounding property."⁵ This parallels the FDEP's CWSRF Long Term Goal #5 which calls to "promote wastewater and stormwater facilities that support orderly and environmentally sound growth, [and] discourage sprawl..." This project encourages compact development without sprawl by providing credits as an alternative to using land for water quality requirements.

Progress & Schedule of Remaining Tasks

To date, the City of Gainesville has contracted with an engineering consultant to begin the production of construction plans. The topographic survey has been completed and conceptual approval from the St Johns River Water Management District has been received. 30% plans are expected in August 2013 and will be presented to stakeholders for review and input. From there, we will work towards final plans with construction tentatively slated to be complete in the summer of 2014 and ready to receive application for water quality credits.



Public Works

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