

# Tumblin Creek Watershed Management Plan

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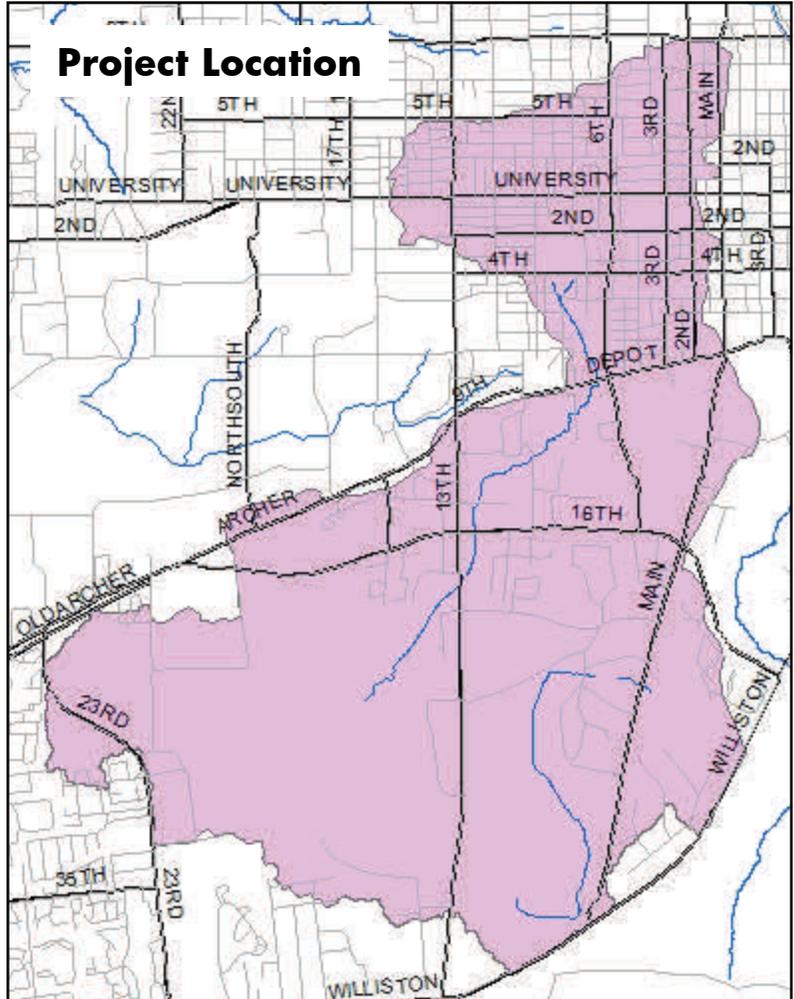
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**Executive Summary:**

This project has two primary and equally important goals.

The first goal is to improve the surface water quality of the flow in Tumblin Creek and East Tumblin Creek and the stormwater of the Tumblin Creek watershed. Improved water quality is essential to the health of the creeks, the sensitive and diverse ecosystem of Paynes Prairie and to groundwater quality as it enters the Floridan aquifer. The most noted water quality concerns in these watersheds and the receiving water bodies are elevated nutrients and excessive erosion and deposition.

The second goal is to improve water quality through means congruent with City redevelopment policies within the Tumblin Creek watershed and consistent with City, County, St. Johns River Water Management District (SJRWMD), State, and Federal environmental requirements. Characterization of redevelopment impacts on water quantity and water quality may not be adequately addressed by existing environmental requirements. Opportunities may exist for collaboration with those agencies to improve the envi-



ronmental requirements.

The initial effort to develop a watershed management plan for the restoration of the stream system involved collecting and synthesizing the large volume of watershed information, followed by a field data collection effort to characterize the stream system and the hydrology of its watershed. These data were then used

of its watershed. These data were then used to perform a geomorphic analysis, a hydrologic and hydraulic analysis, and a water quality analysis of the stream system. Regional, sub-regional, and onsite treatment systems for water quality and quantity were field inventoried and analyzed.

Findings from these analyses were used to formulate the restoration alternatives.

The recommended watershed improvement alternatives include the following:

- Five sub-regional ponds.
- Three sub-regional treatment wetlands.
- Three storm sewer improvement projects.
- At least eight potential exfiltration projects.
- A trash trap.
- Buried sill structures and other localized stabilization measures.
- A regional wetland treatment system.
- Twenty potential Best Management Practices (BMP) retrofit opportunities.
- Twenty potential on-site retrofit opportunities.
- Recommendations for future regulatory changes.
- A strategy for CRA for implementation.



**Public Works**

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