

## **Stormwater Management: The Elephant in Florida's Urban Renaissance Bathtub.**

Florida's approach to managing stormwater is based on each project storing and treating rainfall on site. This regulatory strategy evolved while Florida's growth pattern was principally low density suburban development and space for onsite water management was generally not a problem. Even within historic downtown districts, redevelopment has until recently conformed to city codes based on the suburban development pattern (buildings set back from streets and surrounded by parking lots and landscaping), such that the stormwater regulations were still workable for individual development projects.

In the past decade, projects based on traditional "Main Street" development patterns have progressed from a sprinkling to a downpour of "New Urbanism." Many cities are revising land development regulations to permit or require that development in historic urban centers move up to the sidewalk, eliminate landscaped side setbacks and move parking to the rear of lots or into municipal parking garages. City planners have rediscovered the importance of using buildings and landscaping to form public spaces such as streets, plazas, and parks that people care to walk in; places that are interesting at three miles per hour instead of 45 miles per hour.

In order to create habitat that is more appealing to people than cars, it is necessary to build more compactly to keep things within walking distance. However, by eliminating dysfunctional landscaped spaces between buildings and allowing part or all parking requirements to be met offsite, less land is available for dealing with stormwater.

The result for developers in Florida's historic downtowns has been a struggle to cope with state stormwater management regulations. Many municipal stormwater management systems were historically designed to get the water from the street to the creek as quickly as possible. Removal of nutrients, pollutants, sediments and trash from stormwater were not goals, let alone priorities. More recently, as regulations designed to address the serious decline in the health of Florida's water bodies have been adopted, cities began installing more sophisticated stormwater systems and implementing best management practices such as street sweeping. Unfortunately, city codes often discourage or prohibit innovative stormwater technologies like porous pavement and landscaped green roofs, and even require that green areas be mounded, reducing their effectiveness for stormwater treatment.

Stormwater regulations allow permitting agencies to take into account the effectiveness of municipal stormwater systems when permitting individual projects, but municipal systems good enough to receive runoff from an individual urban redevelopment project with little or no treatment are the exception rather than the rule. And even though regulations allow flexibility for water *quantity* when redevelopment can pass the "will not increase stormwater runoff" test, redevelopment must still meet the same water *quality* standards as new development.

Notwithstanding these flexibilities provided in the regulations, developers of compact urban projects struggle with the very high cost of managing stormwater on a site by site basis. Vacant or previously underdeveloped sites that must meet new development standards for both water quantity and quality onsite have even greater difficulty finding cost-effective solutions that also

meet urban design objectives of compact urban development. A dry retention area in the middle of a group of mainstreet buildings is like a smile with a missing front tooth.

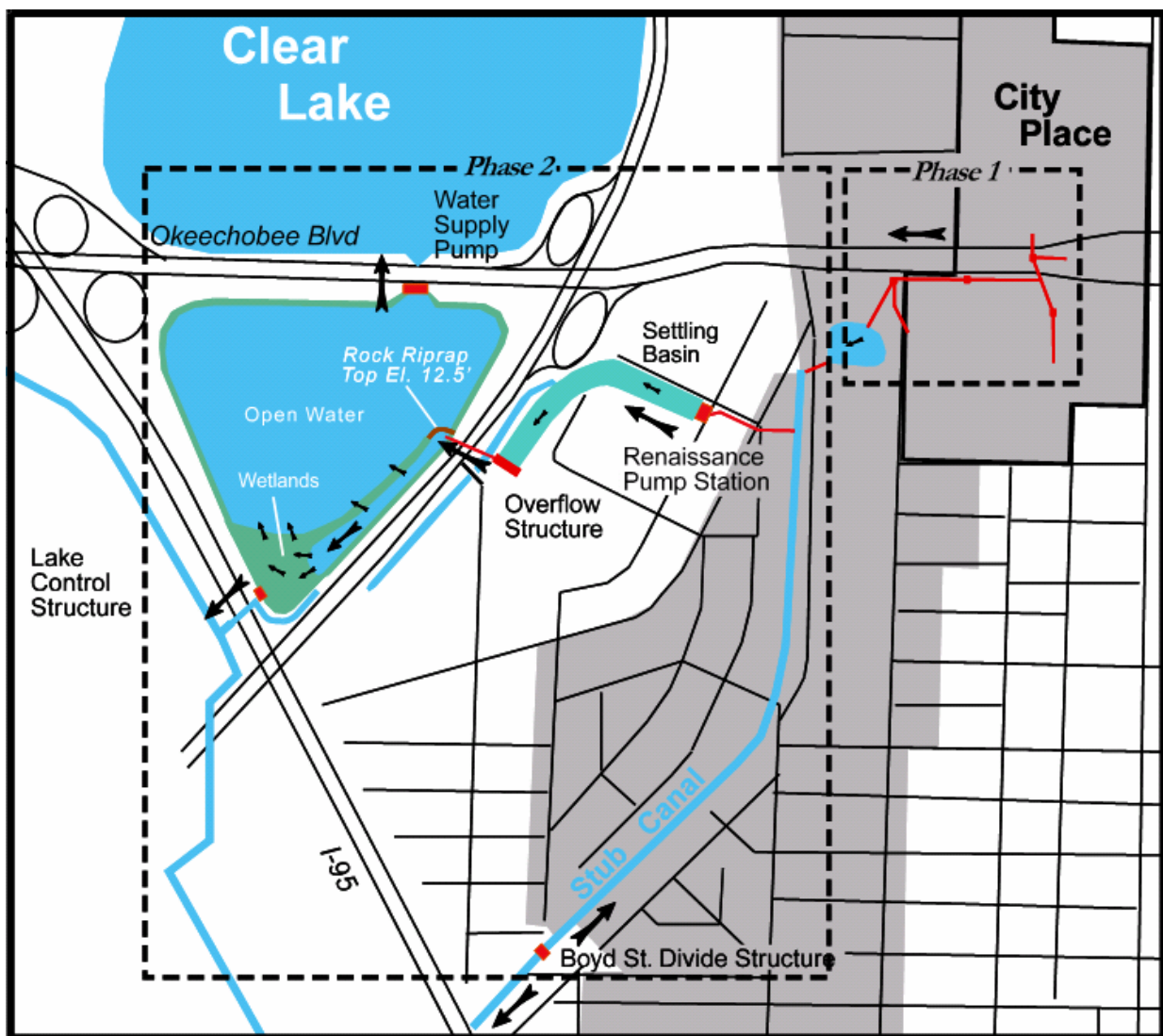


The photograph of the dry retention area on East Las Olas Boulevard in Ft Lauderdale illustrates the difficulty of creating urban continuity that people find interesting to observe while walking. It isn't ugly, just out of place in the urban fabric. Imagine the great plaza in Sienna with a dry retention area replacing several buildings; the glorious outdoor room created by the disciplined line of buildings would suddenly feel unenclosed and awkward with the discontinuity.

Fortunately, there are examples of good urban stormwater solutions that are possible when the redevelopment of larger areas is undertaken as a whole. The best example is the system developed by West Palm Beach in connection with City Place. The runoff from the 50 acre plus City Place site (along with the stormwater from two larger neighborhoods) is collected in a system that treats the water as a municipal supply source rather than a waste stream dumped into the Lake Worth Lagoon. The stormwater passes through a treatment system that removes nutrients and pollutants, with a substantial portion ultimately flowing into the city water supply lake, contributing over 300,000 million gallons per year to the water supply system.

The result from an urban design perspective is an exceptional human habitat that is one of the more interesting new urban environments in Florida. (My measure of good human habitat is whether the space is populated by people *and* cars or by people *in* cars.)

City Place illustrates the potential for a visionary solution (with multi-agency funding) to the treatment of stormwater as a municipal function that enabled development of a dense, very urban place, rather than a problem that each property owner must address onsite, one project at a time. The renaissance of Florida's cities and their viability as a place to accommodate our inevitable growth depends upon the recognition of this elephant in the bathtub and treatment of the looming urban stormwater issue as a problem to be addressed comprehensively as a public utility rather than site by site as a regulatory permitting program.



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