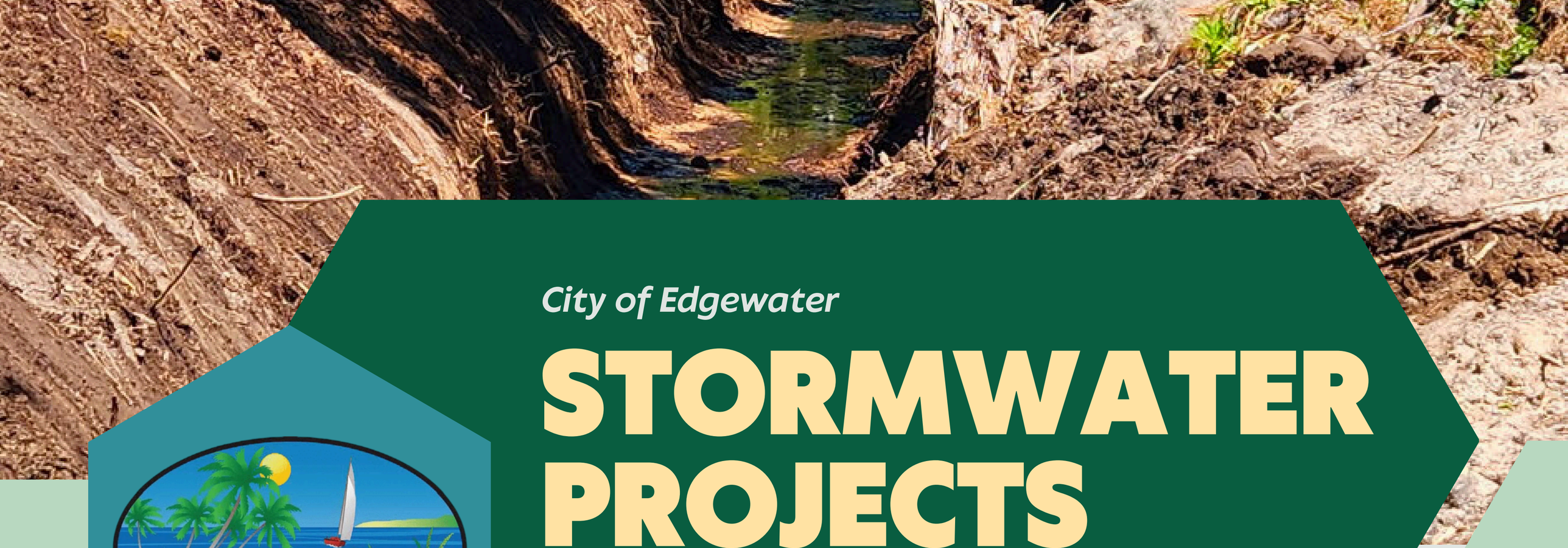


City of Edgewater

STORMWATER PROJECTS

PUBLIC WORKS DEPARTMENT

TABLE OF CONTENT

STORMWATER & FLORIDA SHORES

Overview of the Stormwater System

The Florida Shores stormwater system is designed to collect rainwater from neighborhoods and roadways and guide it safely into a network of canals and drainage features. Water enters through roadside swales into the side street retention areas, where it flows through control structures into drainage canals. These canals provide a controlled pathway for water to move, reducing standing water in residential areas and ensuring it is carried to designated natural basins.

Specific Area Flow

In the area west of Willow Oak Drive, south of 22nd Street, and north of 36th Street, stormwater follows a planned route toward the Turnbull Hammock. Once collected, the water gradually moves westward through connected drainage structures and canals until it reaches the Hammock, which acts as a large natural basin. This engineered system makes use of both man-made channels and natural features to manage water efficiently and return it to the environment in a controlled way.

"A major stormwater upgrade delivering relief today and protection for tomorrow."

29 ½ STREET CANAL - PROJECT OVERVIEW

Volusia County completed the acquisition of 2,600 acres west of Florida Shores, which has since been transferred to the State of Florida for long-term environmental management. Prior to this transfer, the City secured ownership of a 50-foot wide parcel covering the Silver Palm Canal and a 50-foot wide drainage easement covering the east-west canal between 29th and 30th Street (now referred to as the 29 ½ Canal).

The project provides Public Works with permanent access to the canal west of Silver Palm, an important waterway that had been inaccessible for many years. With this access in place, the City can now perform routine maintenance to keep the canal clear and functioning as intended within the larger stormwater system.

In addition, the 29 ½ Canal was established to provide both storage volume and dispersal of water. By directing flows through this canal, the system helps balance water levels and ensures stormwater is carried away from neighborhoods in a safe and controlled manner.

29 ½ STREET CANAL CONSTRUCTION

Public Works crews successfully cleared and reshaped the entire 1-mile stretch of canal running perpendicular to Silver Palm Drive. This effort restored the canal to its designed capacity and created a clean, consistent channel for water movement. This effort will now allow more water to flow into the Turnbull Hammock.

This was a significant undertaking that was completed efficiently and with lasting impact. The improvements not only provide immediate relief for this portion of Florida Shores but also ensure the City's stormwater infrastructure is protected well into the future, supporting both neighborhood safety and long-term system reliability.

- *Restorative*
- *Efficient*
- *Protective*
- *Enduring*

City of EDGEWATER Inc. 1951

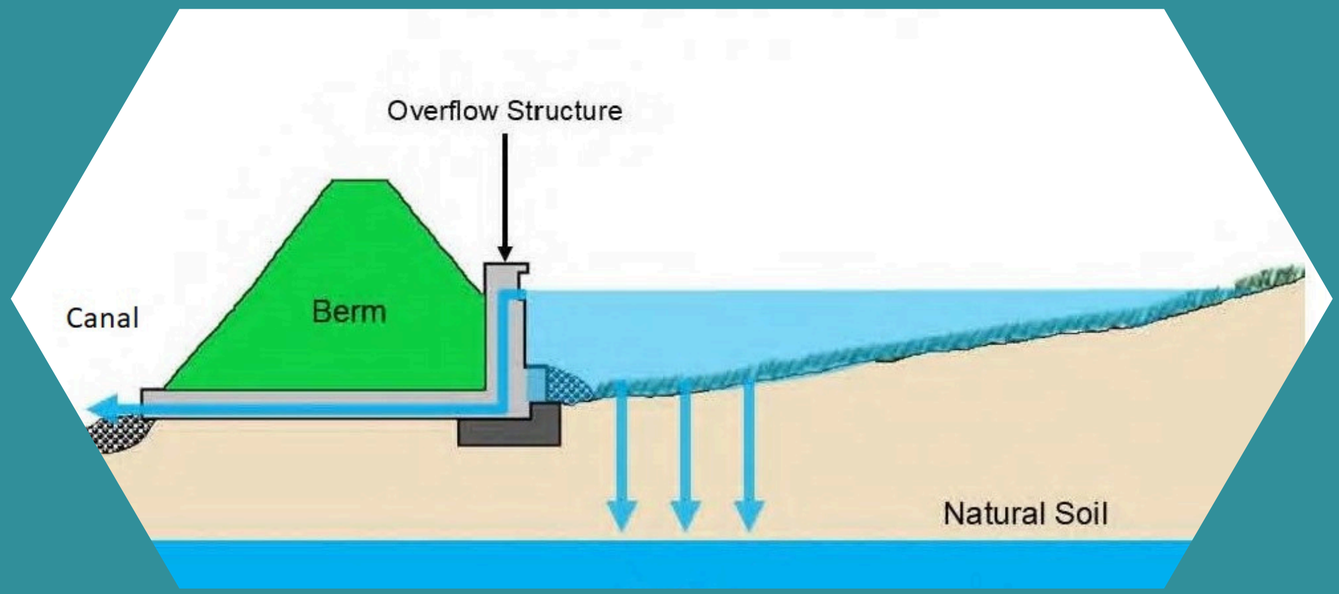
CATCH BASIN - FLORIDA SHORES

Water Storage and Percolation

Control structures are used in retention basins to carefully manage how stormwater is stored and released. By setting the inlet above the bottom of the pond, water is allowed to remain in place long enough to soak into the ground, or percolate. This natural process helps recharge the groundwater table and improves overall water quality by allowing sediments and nutrients to settle before the water leaves the basin.

Controlled Release of Excess Water

When the pond fills to the level of the raised inlet, any extra water flows into the control structure and is directed through underground pipes into the canal system. This controlled release prevents the pond from overflowing while still ensuring that much of the water is absorbed on site. The combination of percolation and controlled flow makes control structures an important part of protecting both local neighborhoods and the larger stormwater system.



CATCH BASIN LONG TERM PLAN

In response to urgent flooding concerns in past years, City staff intentionally modified 40 drainage basin boxes as a temporary measure to move water more quickly during heavy rain events. While this provided short-term relief for neighborhoods, it also altered the basins from their original engineered design. Over time, these changes required formal restoration to ensure the system remained in compliance with regulatory standards and could function properly for the long term.

All 40 drainage basins have since been repaired and restored to their original specifications in accordance with St. Johns River Water Management District guidelines. With the system now fully functioning as designed, the City is also taking additional steps by installing emergency drainage pipes. These pipes will serve as a backup release during extreme rain events, giving the community added protection while maintaining the integrity of the engineered stormwater system.

PROJECT SUSTAINABILITY & FUTURE

Long-Term Sustainability

Stormwater management is not a one-time effort but an ongoing commitment to the future of our community. Each project completed is part of a larger, long-term strategy designed to protect infrastructure, preserve natural resources, and support sustainable growth in Edgewater. By investing in durable systems today, we ensure that future generations benefit from reliable protection against heavy rains and changing environmental conditions.

Service to Citizens and Community

For the citizens of Edgewater, these stormwater projects are more than engineering achievements; they represent a promise. We are committed to providing the best services possible, continuously looking for ways to strengthen our systems and adapt to future needs. The projects highlighted here are only a small portion of a much larger vision. Together, they lay the foundation for long-term planning, ensuring that Edgewater remains safe, sustainable, and prepared for the challenges ahead.

THANK YOU

We appreciate your time and support as we continue working together to strengthen Edgewater's stormwater system and protect our community for the future.

More Information : cityofedgewater.org/public-works/page/stormwater

Interim Deputy Director of Public Works, Sean Maroney