

Town Wide Canal Restoration

The Town of Loxahatchee Groves is at a pivotal juncture in its history, poised to address critical infrastructure needs that have long been overlooked. Established over a century ago by the Palm Beach Loxahatchee Company, the town's foundation lies in its intricate canal network and roadways, designed primarily for agricultural drainage and transportation. However, the evolution of the town since its inception in 1925 has outpaced the capabilities of its aging infrastructure, presenting challenges that demand immediate attention.

Current State of Affairs:

The original blueprint of the town, dating back to 1925, envisioned a robust system of canals and roadways. Over time, these canals, spanning over 30 miles, have become the lifeblood of Loxahatchee Groves, facilitating both drainage and irrigation for agricultural purposes. Yet, as the town transitioned from rural to residential, the infrastructure failed to adapt accordingly. With limited planning and inconsistent construction practices, the town's drainage system struggles to meet modern demands, resulting in recurrent flooding, compromised roadways, and environmental concerns.

Challenges and Environmental Concerns:

The challenges facing Loxahatchee Groves are multifaceted. Limited space for drainage within roadside corridors, coupled with improvised grading and drainage solutions, has led to inefficiencies and suboptimal performance. Moreover, the lack of maintenance and unclear responsibilities for privately managed drainage features exacerbates the situation, posing risks to property access, public safety, and environmental integrity.

The Regulatory Landscape:

Navigating the regulatory framework governing water quality, discharge rates, and flood insurance requirements further complicates matters. Compliance with FEMA regulations is essential for the town's inclusion in the National Flood Insurance Program, safeguarding both property values and public safety. However, meeting these standards necessitates substantial investment and strategic planning.

Building an Action Plan:

To address these pressing issues, Loxahatchee Groves must adopt a comprehensive action plan encompassing various facets of infrastructure improvement. From enhancing maintenance practices to acquiring necessary easements and updating ordinances, a concerted effort is required to modernize the town's drainage and roadway systems. Moreover, securing funding through state appropriations, grant initiatives, and infrastructure improvement programs is imperative to ensure the feasibility of proposed interventions.

Proposed Solutions:

Several key initiatives are outlined to mitigate existing challenges and fortify the town's resilience against future threats. These include:

Canal Restoration and Stabilization: Implementing dredging and maintenance protocols to preserve canal integrity and prevent bank collapse.

Infrastructure Upgrades: Modernizing critical equipment and control structures to enhance operational efficiency and storm resilience.

Exploring Alternative Solutions: Investigating innovative approaches such as retaining wall installation and hydraulic improvements to optimize system performance.

Community Engagement: Fostering collaboration between stakeholders to ensure buy-in and support for proposed initiatives.

Conclusion:

In conclusion, the Town of Loxahatchee Groves stands at a crossroads, facing significant challenges but also unprecedented opportunities for revitalization. By prioritizing infrastructure improvement and adopting a proactive stance towards resilience-building, the town can secure a prosperous future for its residents and businesses. Through strategic planning, concerted action, and community involvement, Loxahatchee Groves can reclaim its legacy as a desirable place to live, work, and thrive.

Collecting Canal Road Rehabilitation LMS Verbiage

This project includes preparation of contract documents, bidding, and contractor selection for canal bank clearing, reshaping, restoration of design cross-sections, and sediment stabilization. Collecting Canal is approximately 40' wide at the top of bank and eleven feet deep from the top of bank to the bottom of the channel. Contract documents will be based on existing technical design standards, reducing time and expense related to the design process. Maintenance of existing conveyance channels by a Water Control District does not require additional permitting through any additional agencies, reducing time and expenses related to permitting.

The timeframe required to complete the entire project is dependent on the available funding, and impacted heavily by the scale of the effort required to restore an estimated 6.4 bank-miles of bank. The overall effort will be phased in accordance with the availability of financial resources by fiscal year. The current proposed phase for which funding is being requested includes approx. 13,000 linear feet of canal bank along 6,500 linear feet of roadway between E Rd and Folsom Rd. This portion of the Town is generally lower in elevation than other areas and therefore more susceptible to standing water and drainage-related issues.

Contract document preparation will be conducted by a single consulting firm (Consultant) in close cooperation with Town staff and administration, with the hope of securing one or two contracting companies capable of completing the desired scope of work within the established timeframe. Town staff will oversee construction in cooperation with the Consultant for engineering-related reviews, communications, or modifications to the technical requirements as needed.

The landowners rely on the proper maintenance of the canal system for protection of wells, ground water, and the roads. Without the ability to keep water levels consistent in the canals the canal banks are in jeopardy and trees that rely on ground water to remain within a predictable range will be lost. It is urgent the town resolve these issues immediately to protect the rural future of our properties.

The proposed project directly supports the existing surface water management infrastructure through restructuring and stabilizing canal banks, restoring or preserving design conveyance capacity below the level at which roadway, property, or infrastructure damage may occur, enhances floodplain protection and storm event response. Maintenance of the drainage system proactively addresses the stability of roadway shoulders, edges, and base materials, therefore this project benefits the stormwater infrastructure while maintaining the safety and operability of routes for evacuation and for the transportation of emergency personnel and supplies.

Title: Enhancing Community Resilience through Canal Gate Upgrades in Loxahatchee Groves

The proposed project aims to enhance the resilience and operational efficiency of the canal gate infrastructure in the town of Loxahatchee Groves. We are requesting funding so that we may upgrade the existing gate structures to remote-operated slide gates. The Town will significantly improve its ability to manage water flow, move and store water at the north end of the town, and respond effectively to emergencies. This mitigation project is designed to benefit citizens by ensuring reliable water access, enhancing flood control measures, and bolstering overall community resilience.

Community Benefit: The community of Loxahatchee Groves stands to derive substantial benefits from the proposed canal gate upgrades:

Enhanced Water Management: The installation of remote-operated slide gates will enable precise control over water flow within the canal system. This enhanced management capability ensures optimal water storage at the north end of the town, improving water availability for agricultural, residential, and commercial users. By maintaining adequate water levels, the project mitigates the risk of water shortages during dry periods, supporting local agriculture and economic activities.

Improved Flood Resilience: During times of heavy rainfall or storm events, the upgraded canal gates will facilitate efficient water discharge, reducing the risk of flooding in residential and commercial areas. By swiftly managing water levels, the project enhances flood control measures, safeguarding infrastructure, properties, and public safety. This resilience against flooding fosters a safer and more secure living environment for residents, promoting community well-being and stability.

Enhanced Emergency Response: The remote-operated slide gates enable rapid response capabilities during emergencies such as hurricanes, tropical storms, or flooding events. With remote operation functionality, authorities can adjust water flow and levels promptly to mitigate risks and protect critical infrastructure. This agile emergency response mechanism minimizes the impact of natural disasters, ensuring the safety and security of residents and their properties.

Sustainable Development: By investing in resilient canal gate infrastructure, Loxahatchee Groves demonstrates a commitment to sustainable development practices. The project aligns with long-term community goals of environmental stewardship and resource conservation. By optimizing water management, the town can sustainably meet the needs of current and future generations while preserving the ecological balance of the region.

Overall, the proposed canal gate upgrades offer tangible benefits to the citizens of Loxahatchee Groves by enhancing water management, improving flood resilience, enabling swift emergency response, and fostering sustainable development practices. By investing in these critical infrastructure upgrades, the community strengthens its capacity to withstand environmental challenges and ensures a prosperous and resilient future for all residents.

Grant Proposal Narrative: Town-Wide SCADA and Telemetry System Implementation

Project Overview: The Town of Loxahatchee Groves seeks approximately \$50,000 in funding to implement an updated comprehensive Supervisory Control and Data Acquisition (SCADA) and telemetry system across our municipality. This system will replace the current terminal located in our Public Works facility as well as provide a backup system at our Town Hall location. This initiative aims to enhance our canal level maintenance capabilities, ensuring efficient water management and mitigating potential flooding risks. The proposed system will integrate advanced technology to monitor and control water levels in real-time and gauge water depth in canals providing actionable data to support informed decision-making and proactive maintenance strategies.

The implementation of a town-wide SCADA and telemetry system offers significant benefits to our community:

Enhanced Flood Resilience: By providing real-time monitoring of canal levels, the system enables timely response to changing water conditions and can detect blockage and debris in culverts, reducing the risk of flooding in residential and commercial areas.

Improved Water Management: The system facilitates precise control over water levels, optimizing irrigation, drainage, and stormwater management practices to conserve resources and protect water quality.

Increased Public Safety: Proactive monitoring and management of canal levels enhance public safety by minimizing the potential for water-related accidents and property damage during extreme weather events.

Efficient Infrastructure Maintenance: Access to accurate data allows for proactive maintenance of canal systems, reducing operational costs and prolonging the lifespan of critical infrastructure assets.

Emergency Preparedness Plans: The implementation of a SCADA and telemetry system has been identified as a structural improvement in our emergency preparedness plans, enhancing our ability to respond effectively to water-related emergencies.

Proposal Justification: The need for an updated town-wide SCADA and telemetry system has been identified through comprehensive risk assessments and community engagement efforts. This initiative addresses critical infrastructure vulnerabilities and supports our ongoing efforts to enhance public safety, environmental stewardship, and quality of life for residents and businesses in the Town of Loxahatchee Groves

In conclusion, the implementation of a SCADA and telemetry system represents a proactive investment in the resilience and sustainability of our community. By leveraging advanced technology to monitor and manage canal levels, we can mitigate flooding risks, optimize water resources, and ensure the long-term viability of our infrastructure. We seek funding support to realize these objectives and safeguard the well-being of our citizens.

Pumps and Weirs

Loxahatchee Groves seeks funding totaling approximately \$750,000 - \$1,000,000 for the installation of canal pumps and weirs along its canal system, aiming to address recurring flooding and water management challenges, particularly during heavy rainfall or storm events. This project is designed to mitigate risks by enhancing storage and depth control, regulating water flow, and fortifying infrastructure resilience to protect residents from potential water-related hazards. The canal system encompasses various areas, including Folsom, the east end of G Square, along North Road, and roads designated as F, E, D, C, B, and A, as well as the Collecting Canal. Notably, the Loxahatchee Groves Public Works Yard, situated at D Road and Southern Boulevards, serves as a pivotal location housing the pump house where flood gates and pumps assist in managing water levels, overseen by the South Florida Water Management District. During the dry season, water will be pumped from the C-51 canal alongside Southern Boulevard, supplementing the canal system to maintain groundwater levels throughout the town. The proposed pumps and weirs also offer the potential for water storage at the north end of town, potentially reducing the volume needing extraction from the C-51 canal during dry periods. Town officials will be equipped to regulate water releases from storage, thereby assisting in maintaining consistent canal water levels despite elevation differences across town.

Given the community's vulnerability to water-related hazards due to its geographical location and topography, proactive measures are essential. Effective water management plays a vital role in addressing critical components of the community's drainage and flood control systems, enhancing overall infrastructure resilience. Low-lying areas are particularly susceptible to flooding, posing significant risks to residential properties, roads, and public infrastructure. Without intervention, the community remains exposed to the adverse impacts of frequent rainfall and storm events, including property damage, service disruptions, and threats to public safety.

By aligning with the goals outlined in the CIP, this project prioritizes objectives such as infrastructure resilience enhancement, improved drainage and flood control, and sustainable development practices promotion. Ensuring compliance with zoning regulations and development guidelines guarantees responsible infrastructure management and accommodates future growth while addressing current challenges. Moreover, extensive community engagement and stakeholder input during the plan's development have identified this project as a priority, ensuring alignment with the community's vision and objectives.

In conclusion, the installation of canal pumps and weirs in Loxahatchee Groves directly addresses vulnerabilities related to flooding and water management, effectively mitigating risks through proactive infrastructure measures. By regulating water flow and providing elevation control, the project enhances overall resilience, ensuring improved drainage, minimizing waterlogging, and promoting public safety. Additionally, proper water management benefits natural habitats and wildlife, fostering ecological sustainability. Through this project, the municipality demonstrates its commitment to ensuring the safety, well-being, and long-term

sustainability of its residents and infrastructure, marking a significant step towards flood mitigation, improved drainage, enhanced resilience, and environmental protection in Loxahatchee Groves.

Project Title: Loxahatchee Groves Public Works Facility Modernization Initiative

Project Overview: Loxahatchee Groves seeks funding for the construction of a new Public Works facility to replace the outdated structure currently in use, which surpasses 60 years in age. The proposed facility, spanning approximately 7,500 square feet, emphasizes functionality, sustainability, and community impact. It allocates 5,500 square feet for vehicle storage and maintenance bays, with an additional 2,000 square feet designated for office space. The two-story design integrates solar panels and covered parking, enhancing environmental efficiency and demonstrating leadership in sustainable infrastructure development. The estimated project cost ranges between \$250,000 and \$500,000.

Community Benefit: The project delivers significant benefits to the community:

Improved Services: The modern facility ensures efficient delivery of essential services, enhancing road maintenance, utilities management, and infrastructure upkeep.

Enhanced Safety: A new, structurally sound building provides a safer working environment for staff, reducing accidents and safeguarding equipment.

Increased Resilience: The investment in a modern facility enhances the municipality's ability to respond to natural disasters promptly, minimizing disruption and facilitating recovery efforts.

Environmental Leadership: Integration of solar panels showcases commitment to sustainability, reducing carbon footprint and inspiring eco-friendly practices.

Community Infrastructure Elements:

Infrastructure Modernization: The new facility replaces outdated infrastructure, ensuring continued functionality and effectiveness in managing municipal assets.

Vehicle and Equipment Storage: Adequate space for storage and maintenance improves accessibility and maintenance of essential equipment and vehicles.

Office Space: Centralized office space enhances administrative functions related to infrastructure management, promoting coordination and efficiency.

Resilience to Hazards: Investment in a modern facility enhances resilience to natural disasters, ensuring prompt response and minimal disruption.

Environmental Sustainability: Integration of solar panels reduces reliance on traditional energy sources, contributing to environmental sustainability.

Mitigation of Frequently Occurring Problems:

Natural Hazards: Investment in a new facility enhances the municipality's ability to respond effectively to natural disasters, minimizing damage and disruption.

Aging Infrastructure: Replacement of the old building mitigates risks associated with deteriorating infrastructure, ensuring reliability and functionality.

Environmental Resilience: Sustainable design features reduce environmental risks and contribute to broader sustainability goals.

Public Support:

Community Engagement: Extensive outreach efforts garner public support and highlight the project's importance in maintaining a high quality of life.

Stakeholder Involvement: Involvement of key stakeholders strengthens advocacy for infrastructure improvements.

Documentation of Support: Public input documentation and letters of support enhance the credibility of the grant proposal.

Timeline:

Planning and Design Phase: 1-6 months

Procurement and Contracting: 3-6 months

Construction Phase: 6-12 months

Commissioning and Occupancy: 1-2 months

Total Timeframe: 12-26 months

By aligning with the Comprehensive Growth Management Plan, engaging stakeholders, and providing a clear implementation timeline, Loxahatchee Groves demonstrates commitment to strategic growth and community well-being, positioning itself for successful grant funding.

Town Hall Generator and Conversion

Project Overview: Loxahatchee Groves seeks approximately \$150,000 in funding from the Palm Beach County Local Mitigation Strategy (LMS) to equip the Town Hall building, located at 155 F Road, Loxahatchee Groves, FL 33470, with a generator. This initiative aims to enhance the town's emergency preparedness by ensuring that the Town Hall can serve as an Emergency Operations Center (EOC) during disasters or emergencies. Currently, the Public Works building, serving as the EOC, is inadequately equipped due to age and functionality. Equipping the Town Hall with a generator will provide a modern and reliable facility to coordinate emergency response efforts and support the safety and well-being of residents.

Loxahatchee Groves Town Hall will need to be equipped with a concrete pad to house the generator and be fitted for gas connection extended from the main line at Southern Blvd. The Town would utilize Florida Public Utilities to complete the connection of the gas line and will hire a contractor to complete the concrete pad and installation of the generator. We are looking at a 40 KW, Phase 1/3 generator. Equipping the Town Hall with a generator will significantly enhance the town's ability to respond to emergencies and disasters effectively. As a designated Emergency Operations Center, Town Hall will serve as a hub for coordinating emergency response efforts, disseminating critical information, and providing support services to residents during crises. Additionally, the Town Hall's accessible location ensures that essential services remain available to residents, including communication facilities, emergency shelter coordination, and coordination with external response agencies. This project improves the community's resilience by providing a reliable facility to manage and coordinate emergency response efforts, ensuring continuity of operations and minimizing disruptions during times of crisis.

Equipping the Town Hall with a generator enhances the town's critical infrastructure by providing a modern and reliable facility to serve as an Emergency Operations Center. This investment addresses a crucial gap in the town's emergency preparedness infrastructure, ensuring that the community has a designated facility equipped to manage and coordinate emergency response efforts effectively. Moreover, this strategic investment in community safety and resilience strengthens the town's ability to protect residents and property during disasters and emergencies.

Loxahatchee Groves is vulnerable to various natural and human-made disasters, including hurricanes, floods, and severe weather events. Equipping Town Hall with a generator mitigates the risk of disruptions to emergency response operations during such events, ensuring continuity of critical services and support for residents. Overall, equipping Loxahatchee Groves Town Hall with a generator represents a critical investment in the town's emergency preparedness and resilience, enhancing community safety, accessibility, and responsiveness during emergencies. We urge your support for this essential mitigation project, which will benefit residents across Loxahatchee Groves and contribute to the overall resilience of our community. Thank you for considering our grant proposal.