

Research Report on the Sandalwood Canal and its Impact on Hogpen Creek

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Objective: To document the physical characteristics, origin, watershed, purpose, and earliest available records of the Sandalwood Canal in Jacksonville, Florida. This report also includes a profile of Hogpen Creek as the receiving waterbody, providing foundational information for potential regulatory review concerning stormwater management.

Executive Summary

This report provides a comprehensive analysis of the Sandalwood Canal, a significant component of the City of Jacksonville's stormwater management infrastructure, and its consequential impact on Hogpen Creek. The Sandalwood Canal was designed and constructed by the city's Public Works Department to manage stormwater runoff from a substantial 11-square-mile urban watershed [3, 4]. It collects and discharges this runoff directly into Hogpen Creek, a natural tidal waterway. While serving its primary drainage purpose, the canal's operation has become the center of a significant environmental and financial conflict.

Residents along Hogpen Creek have documented severe sedimentation that they allege is a direct result of sediment-laden discharges from the Sandalwood Canal, particularly during heavy rainfall [2, 3]. This siltation has drastically altered the creek's ecosystem, impeding navigability to the point where docks are rendered useless at low tide, and displacing wildlife, including manatees that previously frequented the area [3]. In response to these deteriorating conditions, a special taxing district was formed to fund a multi-million dollar dredging project, placing a substantial financial burden on affected property owners [3].

A significant dispute has emerged over liability. Residents and some former city officials assert that the City of Jacksonville is responsible for mitigating the downstream damage caused by its own infrastructure [3]. Conversely, the city maintains that its responsibility for dredging is limited to areas providing access to city-owned facilities and does not extend to a natural waterbody serving private residences [2, 3]. This report synthesizes the available information on the canal's history, its functional role within the city's regulatory framework, the documented impacts on Hogpen Creek, and the conflicting perspectives on accountability.

The Sandalwood Canal: Origin and Purpose

The Sandalwood Canal is a critical element of the municipal infrastructure designed to control and manage stormwater within a large, developed portion of Jacksonville. Its origin and purpose are fundamentally tied to the urban growth of the area and the need to prevent flooding by efficiently conveying rainwater away from residential and commercial properties. The canal was designed and constructed by the City of Jacksonville's Public Works Department to serve this specific function [3]. Research indicates its primary role is to collect stormwater from an extensive drainage basin covering approximately 11 square miles, geographically situated east of Interstate 295 and located between two major thoroughfares, Beach Boulevard and Atlantic Boulevard [3]. This area represents a significant catchment zone characterized by extensive impervious surfaces typical of suburban development, which increases the volume and velocity of stormwater runoff.

While detailed engineering plans or master plans from the initial development phases of the surrounding Sandalwood area in the 1970s were not identified in the available research, a more recent and significant milestone in the canal's history is the "Hodges Blvd./Sandalwood Canal project." This project appears to have been completed approximately 18 years prior to 2024, placing its timeline around the 2005-2006 period [2]. Immediately following the completion of this project, the City of Jacksonville conducted a small-scale dredging operation in Hogpen Creek. City officials have characterized this past dredging as a preemptive measure to address the potential for downstream sediment travel resulting from the construction activities [2, 3]. This event serves as the earliest and most concrete available record connecting the canal's modification directly to recognized impacts on its receiving waterbody, Hogpen Creek.

The fundamental purpose of the Sandalwood Canal is to function as a primary conveyance system within the city's tiered drainage network. In regions with flat topography like Jacksonville, engineered canals are essential for directing runoff that would otherwise lead to widespread surface flooding [10]. The canal moves vast quantities of water from populated areas to a discharge point, in this case, the natural channel of Hogpen Creek. By doing so, it fulfills a crucial public works objective. However, the operational effects of discharging millions of gallons of stormwater, particularly the sediment carried within that water, have become the central issue [3]. The canal effectively acts as a funnel, concentrating runoff and its associated pollutants and sediments from its large watershed and releasing them into a comparatively small and sensitive estuarine environment.

Hogpen Creek: A Profile of the Receiving Waterbody

Hogpen Creek is a natural tidal waterway that has become intrinsically linked to the Sandalwood Canal, which uses the creek as its terminal discharge point. Before the current issues of sedimentation became prominent, Hogpen Creek was a functioning estuarine habitat supporting local wildlife and providing recreational access for waterfront residents. However, its role as the receiving basin for the Sandalwood Canal's substantial stormwater output has profoundly altered its physical and ecological characteristics. The direct connection means that during and after rainfall events, the creek's flow, depth, and water composition are heavily influenced, if not dominated, by the discharge from the canal [2, 3].

The most significant and visually evident impact on Hogpen Creek is the extreme accumulation of sediment. Residents of the Intracoastal West area, whose properties line the creek, report a dramatic and progressive shoaling process [2]. This has resulted in a significant reduction of the creek's water depth, creating vast mudflats at low tide. Docks that were once functional for boating now sit far above the water or are embedded in mud, rendering them useless for their intended purpose [2]. Residents have described the creek as being "clogged" with silt, making navigation difficult or impossible for many vessels [3]. This physical transformation has not only diminished the recreational value of the creek but has also raised concerns about property values and the overall health of the waterway.

Beyond the navigational and aesthetic degradation, the sedimentation has had severe ecological consequences. The once-diverse habitat is reportedly in decline. One of the most notable ecological impacts mentioned by residents is the displacement of manatees [3]. The Florida manatee is known to inhabit Jacksonville's rivers, estuaries, and shallow coastal waters year-round, seeking refuge and forage in calm, protected areas like tidal creeks [7, 12]. The shallowing of Hogpen Creek has reportedly made it inaccessible for these large marine mammals, which require sufficient depth to navigate and feed [3]. Although Hogpen Creek itself is not designated as a specific critical habitat, its connection to the larger St. Johns River and Intracoastal Waterway system makes its accessibility an important factor in the regional movement and health of the manatee population [11]. The loss of manatees is a powerful indicator of broader habitat degradation, as the conditions that exclude them—namely, ex-

cessive sedimentation and loss of water depth—also negatively affect other aquatic species by smothering benthic organisms, reducing water clarity, and altering the natural channel structure.

The Dispute Over Dredging and Responsibility

The severe sedimentation of Hogpen Creek has catalyzed a protracted and contentious dispute over which entity bears the responsibility for remediation and the associated financial costs. The conflict pits waterfront property owners against the City of Jacksonville, with both sides presenting distinct arguments rooted in policy, precedent, and perceptions of fairness. At the heart of the matter is the residents' assertion that the city's infrastructure is the direct and ongoing source of the problem, making the city liable for the millions of dollars required for corrective dredging [3].

From the perspective of affected residents and their advocates, including former city councilman Robin Lumb, the chain of causation is clear and undeniable [3]. They argue that the Sandalwood Canal, an artificial drainage system designed, built, and operated by the city, collects stormwater from an 11-square-mile area and discharges it, along with a significant load of sand and silt, directly into Hogpen Creek. This process, repeated with every major rain event, has resulted in the progressive filling of the natural waterway [3]. Consequently, they contend that the city is directly responsible for the ensuing damage. This viewpoint posits that it is fundamentally inequitable to compel private citizens to pay for the mitigation of a problem created by public infrastructure. The damage to Hogpen Creek is not seen as a natural process but as a direct consequence of the canal's designed function.

In contrast, the City of Jacksonville has consistently disavowed responsibility for dredging Hogpen Creek. The official position, articulated by spokespersons for the mayor's office and the Public Works Director, is that the city's dredging activities are exclusively reserved for projects that maintain access to city-owned or operated facilities, such as public boat ramps [2, 3]. Because Hogpen Creek primarily serves private residences, it falls outside the purview of this policy. City officials acknowledge the small dredging project undertaken nearly two decades ago following the Hodges Boulevard/Sandalwood Canal construction but frame it as a one-time, preventative action related to construction, not an admission of perpetual liability for the creek's condition [2, 3]. They maintain that subsequent changes to Hogpen Creek are part of the dynamics of a natural water body, thereby absolving the city of ongoing responsibility for its maintenance.

This impasse led to a contentious political and financial resolution. In March 2023, the Jacksonville City Council approved the creation of the Hogpen Creek Dependent Special District [3]. This legal entity grants a group of 111 affected property owners the authority to issue bonds and levy taxes upon themselves to fund the necessary dredging. The estimated cost for the project stands at \$4.5 million, a figure that translates to an approximate burden of \$40,000 per homeowner, to be paid over a period of 10 to 15 years [3]. This solution has been met with significant opposition from many residents, some of whom claim they were not fully aware that signing an initial petition would lead to the formation of a taxing district [3]. The establishment of this district effectively transfers the financial burden from the city to the property owners, solidifying the city's position of non-liability while intensifying resident frustration over what they perceive as an abdication of municipal responsibility.

The Regulatory Framework for Stormwater Management

The management of stormwater and its associated impacts in Jacksonville is governed by a detailed and multi-layered regulatory framework involving municipal ordinances and state-level oversight. This framework is designed to balance development with environmental protection by controlling the quantity and quality of stormwater runoff. The core of the city's regulations is found in its Land Devel-

opment Procedure Manual (LDPM) and the 2030 Comprehensive Plan, which establish the standards that all new development must meet [8]. A central tenet of these regulations is the principle of non-degradation, which mandates that development activities must manage stormwater in a way that prevents damage to upstream or downstream properties [8].

Key components of this framework provide context for the Sandalwood Canal and Hogpen Creek situation. Chapter 655 of the Municipal Code, which addresses concurrency, requires that new developments ensure their post-development runoff does not exceed pre-development discharge volumes or rates. If a project connects to the city's existing drainage system, that system must have sufficient capacity to handle the additional flow. If capacity is insufficient, the developer may be required to fund downstream improvements [8]. Furthermore, the city's Floodplain Management Ordinance (Chapter 652) establishes minimum requirements to mitigate flood losses, applying stringent rules to any development within designated flood hazard areas [8]. These regulations collectively create a legal expectation that stormwater systems will be designed and operated to prevent negative off-site impacts, such as the deposition of sediment that impairs a downstream waterbody.

The St. Johns River Water Management District (SJRWMD) provides an additional layer of regulatory oversight, with a primary focus on protecting water quality and managing water resources on a regional scale [8]. The SJRWMD issues Environmental Resource Permits (ERPs) for development projects, which include specific design and performance standards for stormwater management systems. These standards often complement the city's requirements for flood control and water quantity, but with a greater emphasis on treating runoff to remove pollutants, including suspended solids and sediments, before discharge into state waters [8]. The principles underlying both city and SJRWMD regulations are consistent: stormwater should be managed at its source to the greatest extent possible, and its discharge should not degrade the receiving waters. This regulatory structure suggests that any entity operating a stormwater system, including a municipality, has an implicit or explicit responsibility to ensure its discharges do not cause environmental harm, a principle that lies at the core of the residents' case regarding Hogpen Creek.

Conclusion

The evidence surrounding the Sandalwood Canal and Hogpen Creek points to a clear and direct causal relationship between the operation of a major piece of public stormwater infrastructure and the significant environmental degradation of a natural waterway. The canal, while fulfilling its intended purpose of draining a large urban area, has done so at the expense of Hogpen Creek's ecological health and recreational utility. The resulting accumulation of sediment has transformed the creek, impeding navigation, harming wildlife habitats, and imposing a significant financial burden on local residents who are now tasked with funding a multi-million dollar dredging project [3].

The conflict over responsibility highlights a fundamental disconnect between the operational impacts of the city's infrastructure and its stated policies on liability. While the City of Jacksonville adheres to a policy of not dredging waterways that serve private residences, this stance does not address the core allegation: that the city's own system is the active agent causing the damage [2, 3]. The existing regulatory framework, at both the municipal and state levels, is built on the principle of preventing downstream harm from stormwater discharges [8]. The situation at Hogpen Creek appears to represent a case where the performance of a large-scale stormwater conveyance system is inconsistent with the protective intent of these regulations.

This report establishes that the Sandalwood Canal is the primary conduit for stormwater entering Hogpen Creek and that its discharges are contemporaneously linked with the severe sedimentation observed by residents [2, 3]. The city's historical dredging action following the canal's last major project,

though described as a one-time event, nonetheless serves as an acknowledgment of the system's potential to cause downstream sedimentation [2, 3]. The foundational information compiled herein provides a basis for further inquiry into whether the ongoing operation of the Sandalwood Canal constitutes a violation of stormwater management permits and regulations designed to protect Florida's water resources.

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