



Overview

On June 24, 2024, Attorney Kimberly Bonder Rezanka, of Lacey Lyons Rezanka, on behalf of Mr. Aaron Reninger and Mr. Roger Xavier (Applicants), submitted a request for a Public Interest Determination (PID) for “Widening Project within Pelican Creek” (Project) (Submittal) (attached). The subject properties are located at 1865-1935 South Banana River Drive, Merritt Island (Tax Parcel IDs: 2524354, 2524350, 2535314, 30222327, and 2524353) (Project Area). The application contains analyses by Ms. Rezanka; Mr. Clayton Bennett, P.E., the engineer for the Project; and Ms. Lisa Toland, environmental consultant. However, specific Project details were not provided, thus, the Brevard County Natural Resources Management Department (NRM) requested additional information. A Supplemental Engineering Assessment report (SEA) depicting a plan-view sketch showing the limits for the dredging, littoral shelf, and stormwater treatment swale was submitted by Mr. Bennett on September 6, 2024 (attached). Note that much of the dredging proposed in the PID request has already occurred illegally, without the benefit of any approval or permit from the County or any other jurisdictional agency [e.g., Florida Department of Environmental Protection (FDEP), U.S. Army Corps of Engineers (ACOE)].

In June 2022, the Brevard County Public Works Department (Public Works) conducted routine maintenance activities (i.e., muck removal and tree and vegetation trimming) in the Pelican Creek Ditch both north and south of Old Causeway Road to improve drainage in the area. In November 2022, over Thanksgiving week, illegal and unpermitted dredging of the shoreline occurred adjacent to the Applicants’ properties. In fact, between 2015 and 2017, the Public Works Department’s former Director and current Assistant County Manager, Mr. John Denninghoff personally denied Mr. Reninger’s requests for the County to dredge the area(s) in question on at least two prior occasions and informed him of the required permitting should he decide to undertake such an initiative. The dredging activity destroyed environmentally sensitive areas. Specifically, based on the wetland delineations identified in both Applicants’ Brevard County single-family home Building permits, mangrove wetlands and uplands were excavated in favor of the new surface water area for the applicant’s sole benefit.

Brevard County NRM Code Enforcement (NRM CE) received a complaint as the dredging was on-going at that time. The NRM CE Officer (CEO) Mr. Jeff Cooke investigated and documented active dredging of the Applicants’ properties. The NRM CEO specifically noted:

- A track hoe and dredged muck and sandy soils piled along the west shoreline of the Project Area;
- Turbid waters; and
- A turbidity barrier boom piled up along the area of excavation.

The NRM CEO advised Mr. Reninger to cease any additional alterations in the area, and to install the turbidity barrier to help capture the copious volumes of debris and silt flowing downstream from the dredging activity into the Indian River Lagoon. As the NRM CEO left the area he noted that the boom had been installed across the newly expanded ditch and observed that, in defiance of his advice to Mr. Reninger, the track hoe dredging operation resumed and continued to excavate soil from the reported properties along the drainage ditch and pile it along the west property lines. Photographs were taken to support these observations; two of which are included below for the Board's consideration. Both photographs, looking south to the Indian River Lagoon outfall, were taken by the NRM CEO on November 23, 2022 (the day before Thanksgiving).



Photograph 1



Photograph 2

Importantly, it should be noted that this dredging activity was decidedly **not** conducted by, or at the direction of, Brevard County. Notices of Violation were issued to both Applicants by Brevard County. Florida Department of Environmental Protection (FDEP) and the U.S. Army Corps of Engineers (ACOE) also have pending enforcement actions against the Applicants. Additionally, FDEP issued a Proposed Consent Order to Brevard County for alleged improper removal of mangroves deemed excessive for maintenance, which, at least a portion of, occurred in the Project Area dredged by the Applicants. The County strenuously disputes the current Draft Consent Order for Brevard County activities and, on October 15, 2024, requested that FDEP withdraw the consent order and/or bifurcate the two events. As of this writing, the dispute between FDEP and Brevard County has not been resolved. Mr. Reninger has falsely stated in written communication to FDEP that the County performed the dredging activity. The County has disputed that statement and stands prepared to vigorously refute the veracity of such allegations.

The PID Request is being sought by the Applicants to pursue after-the-fact local, State, and Federal permits, as applicable, to retain the existing dredged areas and conduct further dredging activities as discussed below. It is assumed that the Applicants will leverage this PID

determination to be better situated to obtain permits from State and/or Federal agencies that also have jurisdiction. The Applicants provide several reasons why the Board should find the Project to be in the public's interest. A summary of these purported benefits is provided below. However, the following considerations are of primary concern:

- Wetland impacts for the completed and proposed dredging are not consistent with the Brevard County Comprehensive Plan, Conservation Element, Objective 5, including Policy 5.2.E.8., or Brevard County Code, including Chapter 62, Article X, Division 4, entitled Wetlands Protection, Section 62-3694(e), which establishes allowable residential land uses within wetlands. The uses are limited to the structural building area requirements for the primary use, on-site sewage disposal system requirements, the 100-year flood elevation requirement for first floor elevations, required stormwater management and parking, and required access to the onsite structure.

Additionally, Section 62-3695(a) prohibits all other development, except as provided in Section 62-3694, in functional wetlands, unless it pertains to access to the water or shoreline hardening as permitted in accordance with Chapter 62, Article X, Division 3, Surface Water Protection.

- Brevard County Comprehensive Plan, Conservation Element, Policy 3.3.G prohibits channelization, dredging and filling, and impoundment of natural waters of the State unless the activity is clearly in the public interest and does not adversely impact water quality, natural habitat, and adjacent shoreline uses. Chapter 62, Division 3, entitled Surface Water Protection, Section 62-3666(12) prohibits new navigation canals connected to the Indian River Lagoon. In addition, this Section provides, in pertinent part, that “[e]xisting ditches, drainage rights-of-way, drainage easements and stormwater facilities which connect to the Indian River Lagoon system shall not be widened or deepened to accommodate boat traffic, *except when in the best public interest.*” (*emphasis added*). Section 62-3666(12) criteria, being more specific and restrictive, applies to the project.

The dredging activity that is part of the Project impacts natural mangrove wetland habit and does not meet the definition of “Best Public Interest,” as required and as defined in the Comprehensive Plan and Brevard County Code. Best Public Interest is defined as “public projects which clearly demonstrate a net benefit to the public, as determined by the Board of County Commissioners, and which adequately mitigate adverse environmental impacts.” See, Section 62-3661, Brevard County Code; Comprehensive Plan, Chapter XVI, Glossary (December 2022). Furthermore, Public Interest is defined as “demonstrable environmental, social, and economic benefits which would accrue to the public at large as a result of a proposed action, and which would clearly exceed all demonstrable environmental, social, and economic costs of the proposed action. In determining the public interest in a request for use, sale, lease, or transfer of interest in sovereignty lands or severance of materials from sovereignty lands, the board shall

consider the ultimate project and purpose to be served by said use, sale, lease, or transfer of lands or materials.” See, Section 62-3661, Brevard County Code; Comprehensive Plan, Chapter XVI, Glossary (December 2022).

The Brevard County Manatee Protection Plan (MPP) establishes certain guidelines and recommendations as it relates to the use of dredging to accommodate boat traffic. Specifically, “[t]he creation of new navigation canals or expansion (widening and/or deepening) of existing ditches, drainage right-of-ways [*sic*], drainage easements and stormwater facilities connected to the Indian River Lagoon to accommodate boat traffic shall be prohibited unless it is in the public interest . . . and does not adversely impact water quality or natural habitat, or unless the activity is an approved maintenance dredging [project] on existing public navigational channels and public canals, or an existing marina’s maintenance dredging.” MPP II.C.2.C. It prohibits dredging in or connected to Class II Waters, Outstanding Florida Waters (OFW), and Aquatic Preserves (AP) unless the activity is a Federal navigation project, in the best public interest, such as approved maintenance dredging of existing public or private navigational channels, or where dredging may improve water quality by removing accumulated silt or improving circulation, or for maintenance of existing structures and utility structures and utility crossings, or for shoreline hardening as allowed. The ditch in question is a waterway connected to the Banana River, which is a Class II Water, AP, and OFW.

Note that the Applicants’ Submittal specifically cites the allowance of boat traffic in the new canal as a social benefit, where the historical use of the waterbody has been as a stormwater management ditch for this portion of Merritt Island. This is not consistent with above quoted Policy and code.

The Applicants’ Submittal references a drainage study completed for Public Works in March 2021, entitled “Hanson Technical Memorandum, Newfound Harbor Drainage Study” (Study) (attached within the Submittal). The Study provided analysis and recommendations to improve surface drainage conditions within the study area of Newfound Harbor Drive from Worley Avenue to Monticello Avenue (~1.7 miles). Utilizing Interconnected Pond and Channel Routing (ICRP) hydrologic and hydraulic modeling software, multiple stormwater scenarios were analyzed using 37 nodes. Modelled improvements included upsizing of 11 culverts, and a combination of culvert upsizing and dredging of the existing channel.

The Study determined that upsizing all 11 cross-drains would provide faster drainage of flooded areas as the water level recedes and resolve trapped and standing water problems caused solely by poor drainage. The Study demonstrates that peak stage reductions are controlled by culvert sizing, and that **maintenance dredging of the entire study area would provide “only an average additional 0.02-foot (0.24 inches) stage reduction”**. The Study does not support such a reduction benefit being created strictly for the Project Area where the Applicants have conducted and propose to conduct additional dredging activities. The downstream outfall node (just south of the Project Area) is influenced only by the water level of the Indian River Lagoon,

with no effect from upstream dredging. The Study reported, **“Dredging would likely result in additional permitting/wetland impacts as well, so it is not recommended as a drainage improvement to reduce flooding.”** Additional discussion from the Applicants’ Submittal is provided below.

While the Applicants’ Submittal claims the Project could provide potential benefits (e.g., increased wind-driven turnover, flow rates, and flushing; removal of underwater blockages; reduced standing flood waters; lowering of tailwater conditions; reduction of the hydraulic grade; increase usage by fisheries; providing accessible shoreline habitat for aquatic nursery and fisheries functions; and increasing usage by manatees), it does not provide additional ICPR modeling or in any way quantify or substantiate the potential improvements of the already-completed and proposed dredging relevant to water quality, flood mitigation, seagrass production, and other stated demonstrable environmental, social, and economic benefits. Further, the Applicants’ Submittal does not describe what “underwater blockages” exist in the ditch or account for the maintenance trimming that was previously completed by the County. The Applicants’ Submittal indicates improved water quality from “possible restoration of wetland functionality” through the construction of littoral shelves, yet the historical natural mangrove wetlands located in the Project Area were impacted and excavated without county, State, or Federal approval by the Applicant(s) or at their direction, for their private benefit (recall, multiple prior requests for the County to perform the dredging were denied).

The Applicants’ Submittal makes several references to the benefits of muck dredging related to water quality. Please note that Section 62-3668(9), Brevard County Code, allows maintenance dredging under certain circumstances with County approval. NRM is delegated by the Board to approve maintenance dredging projects. However, the already completed and proposed dredging activity identified in the Applicants’ Submittal cannot be considered maintenance dredging. This information was provided to Mr. Reninger by Public Works and NRM CEO on multiple occasions. Instead, the privately funded, illegally performed dredging both deepened and widened the ditch well beyond its historical limits, transforming it into a navigable canal/channel. This is clearly not maintenance but rather new dredging.

Lastly, because of unresolved issues between the County and FDEP, approval of this PID could potentially put the County at significant financial risk for wetlands restoration/monitoring/maintenance and/or mitigation costs based on the Proposed Consent Order issued to the County. For example, the penalty against the County being proposed by FDEP could exceed \$250,000 to comply with a requirement to conduct exotic and nuisance vegetation removal and restoration of the illegally excavated area, or up to \$500,000 for State and Federal mitigation. Additionally, the Applicants’ Submittal does not contemplate the long-term maintenance responsibilities of either Public Works or the Applicants relative to stormwater management of this Merritt Island drainage ditch.

Project Description

Pelican Creek is an historical manmade ditch that has been modified by people over decades. Various documents call Pelican Creek a “ditch,” “drainage ditch,” “outfall ditch,” “drainage right-of-way,” “mosquito district control canal,” and “creek.” The Project Area is located approximately 420 feet north of Pelican Creek’s outfall into the Banana River, classified as a Class II Water, Outstanding Florida Water (OFW), and Aquatic Preserve (AP).

The Project is presented in the Applicants’ Submittal and SEA. The Project includes areas already dredged by the Applicants and additional dredging of the existing non-navigable ditch, deepening it from a presumed depth of 2-3 feet to 5 feet from Old Causeway Road to Mr. Xavier’s south property line. The Project proposes widening of a portion of the Project Area from ~25 feet wide to 60 feet wide along the east shoreline, creating a new canal for boat navigation. The Project also proposes wetland preservation where wetlands remain. Where mangrove wetlands were excavated, a new littoral shelf (“ . . . to be planted by others . . . ”, which is presumed to be the County based on the FDEP Proposed Consent Orders issued to the Applicants) and rear-lot swales capturing one-inch of runoff are proposed. As previously stated, the County disputes the FDEP’s Proposed Consent Order and findings as it relates to the County and that case has yet to be resolved as of this writing.

The Applicants’ Submittal and SEA reference a 1991 St. Johns River Management District (SJRWMD) Environmental Resource Permit (ERP No. 12-009-0056S) (attached) related to a 0.92-acre Pelican Creek dredging project that never commenced. The permit designated the existing land use as drainage ditch, saltmarsh wetlands, and uplands. The SJRWMD permit expired in 1996. The current Project proposes a modified version of the expired permit requirements and specifications. It is unknown if Brevard County ever received an application for these activities. Pertinent provisions of the County’s Comprehensive Plan and Code of Ordinances, however, remain nearly the same as they were in 1996 when the ERP was issued.

Brevard County’s original 1988 Comprehensive Plan established the residential density and allowable impacts within wetlands that is still reflected in the current version of the Comprehensive Plan and enacted in the land development regulations outlined in Chapter 62, Article X, Division 4, entitled Wetland Protection. The Comprehensive Plan also prohibits dredging and filling in of waters that are, or connected to, Class II waters, OFWs, or APs, unless the activity is clearly in the public interest, such as approved maintenance dredging on existing public navigational channels, where dredging may improve the water quality by removing accumulated silt, improving circulation, or maintenance of existing structures and utility crossings. The creation of new manmade canals was, and continues to be, prohibited. See, Section 62-3666(12), Brevard County Code.

These criteria are still reflected in Chapter 62, Division 3, entitled Surface Water Protection, except Section 62-3666(12) requires Best Public Interest for the widening and deepening of a drainage ditch:

*New navigation canals connected to the Indian River Lagoon system are not permitted. **Existing ditches, drainage rights-of-way, drainage easements and stormwater facilities which connect to the Indian River Lagoon system shall not be widened or deepened to accommodate boat traffic, except when in the best public interest.** New boat docks, boathouses and other related structures, or the expansion of these existing structures, shall not be allowed or permitted within or adjacent to existing ditches, drainage rights-of-way, drainage easements or stormwater facilities which connect to the Indian River Lagoon system. Maintenance of existing ditches, drainage rights-of-way, drainage easements or stormwater facilities which connect to the Indian River Lagoon system that have been **specifically designated for boat traffic on subdivision plats or site plans**, or which have been historically and effectively utilized for buoyant vessel navigation prior to the effective date of the ordinance from which this division is derived, shall be permitted upon review.*

Section 62-3661. Definitions:

Canal means a manmade linear waterway constructed through uplands and designed for navigation of vessels excluding those linear waterways whose primary purpose is conveyance of drainage.

Best public interest means public projects which clearly demonstrate a net benefit to the public, as determined by the board of county commissioners, and which adequately mitigate adverse environmental impacts.

The Brevard County MPP further addresses the Comprehensive Plan and Code requirements on dredging:

- 1. The creation of new navigation canals or expansion (widening and/or deepening) of existing ditches, drainage right-of-ways, drainage easements and stormwater facilities connected to the Indian River Lagoon to accommodate boat traffic shall be prohibited unless it is in the public interest, as defined in the Glossary, and does not adversely impact water quality or natural habitat, or unless the activity is an approved maintenance dredging on existing public navigational channels and public canals, or an existing marina's maintenance dredging.*
- 2. Dredging shall not be permitted in or connected to Class II Waters, OFW's, Aquatic Preserves, areas that contain ten percent (10%) seagrass or more, and conditionally approved shellfish harvesting waters unless the activity is a Federal navigation project, in the best public interest, such as approved maintenance dredging of existing public or private navigational channels, or*

where dredging may improve water quality by removing accumulated silt or improving circulation, or for maintenance of existing structures and utility structures and utility crossings, or for shoreline hardening as allowed by this division.

Applicants' PID Justification

The Applicants' Submittal and SEA present to the Board the following purported environmental, social, and economic benefits for your consideration. The following summarizes a compilation of benefits claimed by Ms. Rezanka, Mr. Bennett, and Ms. Toland:

Environmental Benefits

Improved Water Quality:

- Adequate dredging to remove accumulated muck and organic materials that have built up over time in the canal, which would help facilitate improved water quality.
- Decreased nutrient loading and dissolved oxygen levels within the canal and adjacent waters of the Banana River.
- Project is consistent with the first Goal of the Indian River Lagoon CCMP, which aims to attain and maintain sufficient quality water and sediment to support a healthy estuarine lagoon ecosystem.
- Both the littoral shelf and the stormwater treatment swales would improve water quality.
- The County's Fresh and Storm Water Discharge Action Plan states in FSD-6 that the County should "reduce the impacts of muck on the Indian River Lagoon."

Wetlands:

- Increased flushing that leads to improved water quality will likely afford the capability to help restore lost wetland function and restore pre-existing mangrove fringe.
- "Possible restoration of wetland functionality" is consistent with Comprehensive Plan Conservation Element, Objective 5 (no net loss of wetland function).
- If any activity related to the Project degrades or destroys an existing functional wetland, then the Applicants intend to repair and mitigate such loss as is required by Section 62-3695.

Manatee Protection:

- MPP recommends that access channels be dredged and maintained for the purpose of navigation and manatee mobility, unless it is proven to be detrimental to the public interest.
- MPP outlines the basic habitat for manatees should include a steady and easily obtainable food supply (primarily seagrass), quiet, sheltered areas for resting, breeding and calving, warm waters and the possibility of fresh drinking water.

- Built up siltation and depth limitations preclude manatees from accessing the protected in-shore waters of the canal. Increased usage by manatees by providing protected calving, nursing and loafing areas.
- Contributing to the County's desired goal of allowing for and creating hospitable habitats for manatees.

Seagrass Production and Restoration:

- The improvements to the canal that intend to be accomplished, including but not limited to the removal of underwater blockages, will afford seagrass beds the opportunity to rehabilitate and thrive.
- Improved water quality, increased flow, and increased flushing - additional seagrass beds will create a more conducive environment for shellfish harvesting.
- Improving water quality by removing silt and improving circulation.

Social Benefits

- The Project would provide flood mitigation by assisting in reducing standing flood waters covering surface areas during and after storm events, thus in turn providing relief to local landowners, public roadways, public right of ways, and historic uplands.
- The dredging of the canal would not only increase the cross-sectional flow area of the Pelican Creek but would also reduce the Manning's roughness coefficient "n", both of which would reduce the hydraulic grade in Pelican Creek.
- The Project will allow boat traffic in the canal, as has historically occurred.

Economic Benefits:

- Alleviate the existing strain on the Pelican Creek drainage system by lowering the tailwater conditions for the existing culverts under Old Causeway Road, which would in turn provide added longevity to the existing culverts if the proposed culvert replacement improvements were to be delayed or abandoned.
- Enlarging the cross-sectional area of the canal will allow for increased waterflow rates, which would accommodate Hanson's recommended Pelican Creek culvert upgrades with little to no impacts on surrounding landowners.
- By removing the underwater blockages that currently exist complimented by accessible shoreline habitats, this will allow for increased usage of fisheries and aquatic nurseries.

Hanson Technical Memorandum, Newfound Harbor Drainage Study, March 16, 2021

Study Excerpts:

Study Scope:

“The purpose of this technical memorandum is to summarize the analysis and recommendations to improve drainage conditions within the study area of Newfound Harbor Drive (NFHD), located in Merritt Island, Florida. Drainage improvement concepts are based on strategies involving introducing/enhancing pipe collection systems to improve surface drainage. The analysis includes stormwater modeling to assess culvert capacity and staging performance for Pelican Creek, which serves as a primary outfall for this region of the island.”

Existing Conditions:

“...During tidal events higher than MHW, many areas likely will experience flooding regardless of any drainage improvements being implemented. Improvements proposed in this study will provide quicker drainage of the flooded area as the tide recedes and resolve trapped/standing water problems caused solely by poor drainage.”

Proposed Improvements:

“Because Pelican Creek is the primary connection to tide for the study area, it is the most critical piece of the proposed improvements. Hanson developed an ICPR4 stormwater model of Pelican Creek between Worley Avenue and Old Causeway Road to investigate the benefits of upsizing the eleven existing cross drains within the segment. **Based on the analysis, the proposed concept includes upsizing of all eleven cross drains to triple barrel 36-inch culverts. (emphasis added)** This will provide immediate benefits to adjacent areas and collection systems that discharge directly into the creek. These improvements can be divided into two phases: improvements to Pelican Creek north of the Banana River Lagoon Outfall and improvements to Pelican Creek south of the Banana River Lagoon Outfall.

“The total proposed culvert replacement improvements provide an average 0.42-foot reduction in the peak stage for the 25-year, 24-hour SJRWMD design storm along the creek. Peak stage reductions provided by the Phase 1 Pelican Creek improvements average 0.27-foot, while the Phase 2 improvements’ reductions average 0.19-foot. **Hanson also investigated the added benefit of dredging the canal segments and found that dredging provided only an average additional 0.02-foot stage reduction compared with only upsizing the culverts. Dredging would likely result in additional permitting/wetland impacts as well, so it is not recommended as a drainage improvement to reduce flooding. (emphasis added)** A node link diagram and summary table representing the creek stage

reductions associated with the culvert replacements and creek bed dredging are included on the following page.”

Permitting:

“The proposed concepts are anticipated to qualify for either a permit exemption or general permit with SJRWMD as long as wetland impacts are not too high. Wetland impacts were not estimated for the concept alternatives. Early coordination with SJRWMD and DEP to confirm permitting requirements for any concept alternatives being advanced to final design.”

Summary:

“Pelican Creek conveyance improvements will lower peak stages throughout the creek which will provide systemic improve reduction for drainage systems that discharge to the creek. The Angel Avenue and Fowler Drive improvements will add needed inlets to the lowest segment of NFHD within the study area. Based on the severity of the existing flooding impacts to residences as well as other factors such as costs and benefits, the projects were prioritized as follows:

Priority	Drainage System	Estimated Cost	Anticipated Benefit
1	Pelican Creek (Phase 1)	\$751,610	High
2	Fowler Drive and NFHD	\$474,769	High
3	Pelican Creek (Phase 2)	\$822,370	High
4	Angel Avenue (Phase 1)	\$363,101	Medium
5	Angel Avenue (Phase 2)	\$225,243	High
6	Piney Woods Circle	\$136,851	Medium
7	Orris Avenue	\$174,451	Medium
8	Mili Avenue	\$240,118	Low

Staff Discussion:

Study Methodology:

- The analysis includes ICPR4 stormwater modeling to assess culvert capacity and staging performance for Pelican Creek for the mean annual, 10-year, and 25-year 24-hour storms.
- Investigated the benefits of upsizing the 11 existing cross-drains and dredging.
- Two improvement phases for Pelican Creek:

- Phase 1 - Improvements north of the Banana River Lagoon Outfall (Banana River Marina)
- Phase 2 - Improvements south of the Banana River Lagoon Outfall down to Old Causeway Road. The Project Area is located immediately south of Phase 2.
- Multiple ICRP Stormwater scenarios were analyzed using 37 nodes:
 - Phase 1 only, Phase 2 only, culverts only, culverts & dredging, etc.
- The nodes in the Project Area are located on the upstream and downstream sides of the Old Causeway Road culvert (PC10US-EX and PC10DS-EX, respectively). The Indian River Lagoon outfall south of Old Causeway Road is identified as Node IRL-2-EX.
- The Study found that Phase 1 and Phase 2 dredging provided only an average additional 0.02 feet (0.24 inch) stage reduction. The Pelican Creek upstream node would see a 0.04 feet (0.48 inch) stage reduction. Dredging the entire study area has no influence at the downstream nodes (PC10DS-EX and IRL-2-EX).
- **“Hanson also investigated the added benefit of dredging the canal segments and found that dredging provided only an average additional 0.02-foot stage reduction compared with only upsizing the culverts. Dredging would likely result in additional permitting/wetland impacts as well, so it is not recommended as a drainage improvement to reduce flooding.”**

The Applicant’s Engineering Assessment focused on data analysis for the two nodes in the Project Area (the upstream and downstream sides of the Old Causeway Road culvert). The Applicants’ Submittal states that the landowners south of Old Causeway Road will be negatively impacted by culvert upgrades as the peak stage on the south side will increase by 0.08 feet (0.96 inches) due to the increase flow. However, this stage increase would result from modifications to Phase 2 only (Pelican Creek from south of the Banana River Lagoon Outfall), not the entire Study area. Should only Phase 1 be completed, there would be a stage reduction of 0.02 feet (0.24 inches). Should Phase 1 and Phase 2 be completed, there would be a stage increase of 0.03 feet (0.36 inches). The cross-drain upgrades have not been completed and are not included in the Fiscal Year 2024-2025 Capital Improvements Program.

The Applicants’ Submittal states that the proposed dredging will mitigate the negative impacts to the landowners south of Old Causeway by enlarging the cross-sectional and reduce the roughness coefficient of the canal, allowing the canal to convey the increased flow rates utilizing a hydraulic gradient equal to or less than the existing condition, thereby accommodating the proposed Pelican Creek culvert upgrades without negatively impacting landowners. Additionally, that the proposed dredging would be a benefit to the Pelican Creek drainage system by lowering the tailwater conditions for the existing culvert under Old Causeway Road. It also highlights the portion of the Study that identifies “Pelican Creek (Phase 2)” as the third of eight priorities, with a “high” anticipated benefit. However, “Pelican Creek (Phase 2)” includes culvert

improvements only and does not include any dredging. The Applicants' Submittal does not provide additional ICPR modeling or in any way quantify or substantiate the potential improvements of the already completed and proposed dredging relevant to flood mitigation.

Staff Conclusion

The dredging of mangrove wetlands and the widening/deepening of a drainage ditch are not consistent with the County's Comprehensive Plan, including the Conservation Element, nor is such activity permissible by Brevard County Code, including Chapter 62, Article X, Divisions 3 (Surface Water Protection) and 4 (Wetland Protection). Therefore, staff requests that the Board finds that the Applicants' Submittal does not meet the definitions of Public Interest or Best Public Interest (as defined in both the Comprehensive Plan and the Brevard County Code), and to deny the PID request.

Board Options

1. Deny PID request. This will allow Brevard County to continue to work with FDEP on its own draft consent order without any prejudice and will enable the County to continue code enforcement action(s) against the Applicants to resolve the documented violations of the Brevard County Code in front of the Brevard County Code Enforcement Special Magistrate.
2. Approve PID as presented by the Applicants.
3. Approve PID for the allowance of maintenance dredging only with appropriate State and Federal permitting. This would require the restoration of any areas that were dredged outside of the historical ditch configuration without approval.

Attachments: Request for a Public Interest Determination (PID) for "Widening Project within Pelican Creek," June 24, 2024 (Includes Hanson Technical Memorandum, Newfound Harbor Drainage Study, March 16, 2021)
Supplemental Engineering Assessment report (SEA), September 6, 2024
SJRWMD, Environmental Resource Permit No. 12-009-0056S, September 10, 1991