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SUBJECT: Detailed Proposal – Comprehensive Corrective Action Plan,
 International Paper Company, Pensacola Mill

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Executive Summary

International Paper Company (“IP”) is submitting this proposal for approval to the Florida Department of Environmental Protection (“Department” or “FDEP”). It constitutes the detailed proposal promised in IP’s Comprehensive Corrective Action Plan, submitted to the Department on December 17, 2021 (“Detailed Proposal”).

This Detailed Proposal provides for the construction of an additional berm south of the currently southernmost berm of the Effluent Distribution System (“EDS”) and incorporation of the EDS into IP’s wastewater treatment system. The project relocates IP’s point of discharge to marine waters while continuing to provide nutrient reduction benefits for lower Elevenmile Creek and Upper Perdido Bay. Discharging to marine waters from the project described in the Detailed Proposal allows IP to achieve all applicable state water quality standards.

This Detailed Proposal describes the project history, making clear that relocating IP’s discharge to marine waters is a logical outgrowth of previous plans, for which IP has already spent nearly \$100M and been engaged in wetland restoration for a decade. It demonstrates that IP is committed to environmental protection and regulatory compliance.

An overview of the project is provided, along with a discussion of delineating jurisdictional areas in the project area, including the demarcation between fresh and marine waters. A preliminary discussion of alternatives, focusing on the preferred alternative, is presented in this Detailed Proposal. The Detailed Proposal also includes a description of how functional impact and mitigation will be calculated, before concluding with a preliminary timeline and regulatory schedule overview for the various components of the project.

1.0 INTRODUCTION AND PROJECT HISTORY

The Detailed Proposal is the culmination of over a decade of work and, if approved, will provide for long-term compliance of IP's mill in Cantonment, Florida ("Mill") with all applicable state regulatory standards. Like any lengthy and complicated project, it has undergone changes since its approval in the Department's Final Order of 2010. The Detailed Proposal is designed to accommodate those changes and ensure compliance with state law.

Before 2005, the Mill discharged into the fresh water of upper Elevenmile Creek. 2007 RO at 5.¹ Because the effluent did not achieve water quality standards at the discharge location, IP proposed in a 2005 application for a National Pollutant Discharge Elimination System ("NPDES") permit to construct a new discharge location at the end of a 10.7-mile pipeline emptying into a 1,464-acre tract owned by IP. 2007 RO at 41, 60. The tract consisted of uplands and wetlands that had been impacted by decades of silvicultural activities and other work. See 2010 RO at 6, 36-37. From this impacted tract, ephemeral surface water flow was to the marine waters of lower Elevenmile Creek and Upper Perdido Bay. 2007 RO at 41, 60. In the 2005 NDPEs Application, IP sought an exemption from state water quality standards for pH, DO, transparency, turbidity, and specific conductance, under a regulation allowing for such exemptions in conjunction with the experimental use of wetlands. 2007 RO at 44. IP also proposed several significant upgrades to its wastewater treatment plant at this time. 2007 RO at 47-51.

As described in 2007, "[a] fundamental premise of the relocated discharge is that it solves the Mill's decades-long failure to meet the stricter water quality standards applicable in the fresh waters of Elevenmile Creek because the new receiving waters would be marine waters." 2007 RO at 145; see also 2007 RO at 60 (providing that discharging to marine waters was done to "avoid[] many of the problems associated with trying to meet the more stringent water quality standards applicable in a freshwater stream."). The impacted tract was reconfigured to provide nutrient uptake before the Mill's effluent reached lower Elevenmile Creek and Upper Perdido Bay. 2007 RO at 64. The reconfiguration consisted of constructing a system of berms running

¹ The Detailed Proposal uses the following citations:

1. 2007 RO at X refers to *Melita Lane, et. al v. Department of Environmental Protection*, DOAH no. 05-1609, et. al, (Recommended Order, May 11, 2007) by paragraph number;
2. 2007 FO at X refers to *Melita Lane, et. al, v. Department of Environmental Protection*, 2007 WL 236004, DOAH no. 05-1609, et. al, (Final Order, August 2007) by paragraph number;
3. 2010 RO at X refers to *Jacqueline Lane v. International Paper Company*, DOAH no. 08-3922, et. al (Recommended Order, January 27, 2010) by paragraph number;
4. 2010 FO at X refers to *Jacqueline Lane, et. al v. International Paper Company*, DOAH no. 08-1964, et. al (Final Order, March 11, 2010) by paragraph number; and
5. 2010 Consent Order at X refers to Consent Order, *State of Florida Department of Environmental Protection v. International Paper Company*, OGC no. 08-0358 (March 11, 2010) by paragraph number.

perpendicular to the effluent flow, spreading the effluent over the full width of the tract and therefore referred to as the Effluent Distribution System. 2007 RO at 61.

During an administrative challenge, the availability of exemptions under the regulation for experimental use of wetlands was rejected because “there was an insufficient demonstration that the discharge would not cause significant adverse impacts to the biological community within the wetland tract, and there was an insufficient demonstration that the Perdido River OFW would not be significantly degraded.” 2007 RO at 131. A significant reason for this problem was that portions of the EDS remained a freshwater wetland, and IP could not achieve water quality requirements for specific conductance in fresh water, leading to a concern that the effluent could potentially cause an adverse impact on the biological community in the wetland tract. 2007 RO at 154, 210. Similarly, the lack of baseline data for Tee and Wicker Lakes prevented a showing that no significant adverse impact would occur to the biological communities there. 2007 RO at 157, 210. The Department’s Final Order subsequently adopted the relevant provisions of the 2007 RO. 2007 FO at *33. A significant portion of this hearing involved disputes about nutrient impacts on Upper Perdido Bay, resolved in the Department’s and IP’s favor. 2007 RO at 92-122, 200-207. As explained in more detail below, subsequent restoration work and monitoring over the past decade has shown that there has not been adverse impact on the biological community in the EDS or on Tee and Wicker Lakes, and that Upper Perdido Bay is in compliance with Numeric Nutrient Criteria (“NNC”) established by the Department.

In 2008, IP reapplied for an NPDES permit, after making some changes to its manufacturing process, reducing the size of the EDS to 1,381 acres (to further minimize habitat impacts), and conducting additional studies of the expected impact of the effluent on the ecology in the EDS. 2010 RO at 33-34, 38-39, 41, 89. The additional studies determined that the revised project would not harm the ecology of the EDS or Tee and Wicker Lakes. 2010 RO at 53, 57-58, 63-64, 70-71. Overall biological diversity was expected to increase. 2010 RO at 66, 74. More information was provided regarding the existing nature of the impacted wetlands tract, which was shown to have little connectivity between small water bodies on the site, limiting the possibility of fish and other organisms to move across the site. 2007 RO at 36. Much of the ditches, sloughs, and depressions were ephemeral, holding water only after heavy rainfall or during the wet season. 2007 RO at 36. Other than Tee and Wicker Lakes, even the more frequently wetted features dried out, killing the minnows and other small fish that might be there temporarily. 2010 RO at 37. The 2010 Recommended Order recommended, and the Department’s Final Order agreed, that the 2010 NPDES Permit and the accompanying Consent Order (“2010 Consent Order”), including upgrades to the wastewater treatment system and construction of the EDS, be approved. 2010 RO at page 35; 2010 FO at page 42. The 2010 Consent Order contained the corrective actions required of IP.

At the time the 2010 Consent Order was approved, it was known that even with the process changes, wastewater treatment plant upgrades, and construction of the EDS, IP might not achieve default water quality standards for pH, dissolved oxygen (“DO”), specific conductance, turbidity, and color. If the default water quality criteria were not met, but there had been no significant adverse impact on the disturbed wetland tract, the 2010 Consent Order allowed IP to seek site-specific alternative water quality criteria (“SSAC”) under Rule 62-302.800, Fla. Admin. Code (“F.A.C.”), to replace the default water quality criteria. 2007 RO at 78; 2010 Consent Order at 10, 14(f). Rule 62-302.800, F.A.C., requires that such site-specific alternative criteria be fully protective of the environment. See Rule 62-302.800(2)(c), F.A.C. (“The petitioner must demonstrate that the proposed criterion would fully maintain and protect human health, existing uses, and the level of water quality necessary to protect human health and existing and designated beneficial uses.”).

For many years, IP dedicated itself to constructing the wastewater treatment plant upgrades and the EDS and conducting the associated extensive monitoring to demonstrate that the discharge was protective of the designated use of the waters. As of October 2012, Mill effluent had been entirely removed from the freshwater portions of Elevenmile Creek during normal operations. Other activities included in the 2010 Consent Order were associated with improving the conditions of the receiving wetlands, including planting over 160,000 canopy and 15,000 subcanopy native tree species; monitoring and research in the wetlands and adjacent water bodies to develop water quality criteria appropriate to the wetlands; establishment of a land management program to restore and/or enhance an adjacent approximately 1,258 acre mitigation area; hydrologic restoration of wetland areas impacted by the construction of historic firebreaks; and monitoring and research to document the benefits of removal of effluent flow from Elevenmile Creek. IP completed each of these activities.

By 2020, based on over a decade of habitat restoration and monitoring, IP had demonstrated that the EDS had no significant adverse impact on the disturbed wetland tract. On February 24, 2020, IP submitted a petition for site-specific alternative criteria for pH, specific conductance, and DO (“SSAC Petition”). Supporting information indicating that SSAC were not needed for turbidity, color, and transparency had previously been submitted to the Department in the September 10, 2014 NPDES permit renewal application. To demonstrate that the requirements of Rule 62-302.800, F.A.C., had been met, a report accompanying the SSAC Petition thoroughly documented the environmental improvements to the EDS region resulting from IP’s relocation of its discharge there, and their associated ecosystem restoration efforts.

After submittal of the SSAC Petition, the Department suggested that DO might be naturally low in the EDS and Tee and Wicker Lakes and that the discharge of effluent had not resulted in the 0.1 mg/L deviation from natural background conditions prohibited by state water quality

standards. As a result, IP removed DO from its petition and undertook a Level II Water Quality Based Effluent Limitation (“WQBEL”) study to ensure that IP’s effluent was not causing or contributing to the low DO, and to demonstrate that the effluent was not causing or contributing to exceedances of Upper Perdido Bay’s estuary-specific NNC.

The Department and IP subsequently learned through discussions with the U.S. Environmental Protection Agency (“USEPA”) that, relying on a 2015 change in federal regulations, USEPA would not approve the Department’s issuance of SSAC of the type sought by IP.

In April 2020, IP entered into a new Consent Order with the Department to resolve intermittent exceedances of chronic toxicity tests required by its NPDES permit. IP undertook extensive studies and learned that the exceedances were the result of variability from multiple sources. In addition to the natural variability of the test, sources included the concentration of salt-ions in the effluent and the impact of reclaimed water accepted from the local domestic wastewater authority, Emerald Coast Utility Authority (“ECUA”). The *Emerald Coast Utility Authority: Reclaimed Water Study Final Report*, submitted to the Department on November 1, 2021, documented the results of IP’s chronic toxicity studies, concluding that there were multiple sources for chronic toxicity and proposing submittal of a Comprehensive Corrective Action Plan (“CCA Plan”) to address all such sources. IP presented the CCA Plan to the Department on December 17, 2021. The CCA Plan promised to provide this Detailed Proposal to better establish the feasibility of the project initially proposed in the CCA Plan. Thereafter, in January 2022, IP passed the required six successive chronic toxicity tests required by the 2020 Consent Order, thereby removing chronic toxicity from the list of unresolved water quality issues.

As a result, IP remains engaged in two regulatory processes with the Department. First, since 2014, IP has had an application before the Department to renew its Industrial Wastewater / NPDES Permit. Second, IP has the SSAC Petition seeking adoption of SSAC for pH and specific conductance within the existing freshwater portions of the EDS. USEPA still does not anticipate approving Department SSACs.

To resolve all outstanding regulatory matters, IP is submitting this Detailed Proposal. It will allow IP to assure compliance with water quality standards for pH and specific conductance and provide the basis for renewal of IP’s NPDES Permit. The Detailed Proposal also provides a margin of safety for chronic toxicity testing. This Detailed Proposal is not intended to provide the basis for final agency action, but to provide for a thorough pre-application process before submission of applications for an Environmental Resource Permit under s. 373.4131, Fla. Stat., (“ERP”) and State 404 Program permit (“404 Permit”) pursuant to s. 373.4146, Fla. Stat., and a revised NPDES Permit application.

IP's Detailed Proposal is based on a conversion of the current EDS system to a treatment wetland facility and relocation of the effluent discharge to marine waters. This conversion would occur through construction of a new berm south of the southernmost existing berm and north of Tee and Wicker lakes – where the freshwater wetlands transition to marine waters. The new berm is proposed to evenly distribute effluent into marine waters, and compliance with water quality standards would be measured against the Department's marine standards at this location. Appropriate mitigation, to be established through subsequent permitting, would be provided.

2.0 DESCRIPTION OF THE COMBINED EFFLUENT DISTRIBUTION PROJECT

As generally described above, and as authorized by NPDES Permit No. FL0002526-008-IW1S issued on March 15, 2010 for the Mill, removal of effluent from Elevenmile Creek and the reapplication to the EDS adjacent to the Perdido Bay was initiated in February 2012. The principal components of the project were the upgrade of the Mill's treatment plant resulting in an improvement of effluent quality and relocation of the discharge from Elevenmile Creek to the EDS. The effluent is delivered to the wetland by a gravity-flow pipeline approximately 10 miles in length. The overall Combined Effluent Distribution Project ("CEDP") includes the EDS and a large conservation and mitigation area adjacent to the EDS that does not receive effluent (Figure 1). The EDS was designed to accommodate IP's and ECUA's treated effluent. The EDS totals approximately 1,381 acres and encompasses fresh and marine water wetlands and open waters.

To construct the EDS, four berms (Berms 1 through 4) were constructed in a generally east to west configuration to evenly distribute flow across the project site (Figure 1). The pipeline currently discharges upgradient of Berm 1 in the northeastern corner of the EDS, and flow sequentially passes through each berm using a series of flow control structures installed along the entire length of each berm that act to distribute flow evenly from multiple points. The southernmost berm, Berm 4, represents the final control point, after which effluent flows generally southward via overland flow and ultimately discharges into lower Elevenmile Creek and Upper Perdido Bay. A fifth berm (Berm 5) forms the eastern boundary of the EDS and was constructed to maintain southerly flow and to prevent discharge into upstream portions of Elevenmile Creek. The construction of the EDS was authorized by the June 28, 2010 U.S. Army Corps of Engineers

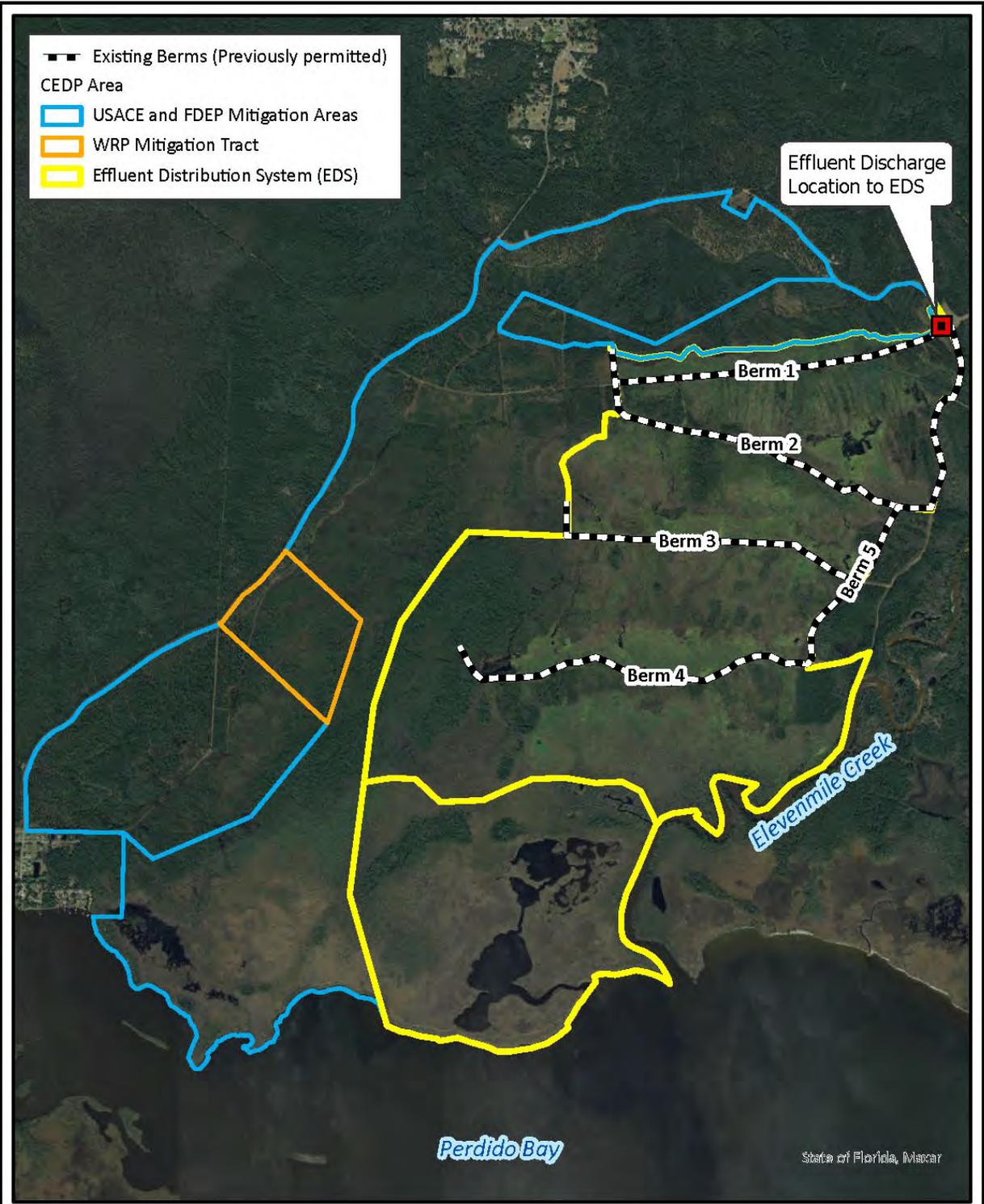


Figure 1. Overview of the Combined Effluent Distribution Project (CEDP) and current site configuration, Escambia County, Florida.



(USACE), Jacksonville District (Project No. SAJ-2002-08212-IP-EPS) Clean Water Act (“CWA”) Section 404 permit and the June 23, 2010 Florida Department of Environmental Protection Wetland Resource Permit (No. 17-207101-002-DF).

In its current configuration, the receiving wetlands located upgradient of Berm 4 are classified as Class III freshwaters. Downgradient of Berm 4, vegetative communities transition to those characteristic of an estuarine marsh as salinities increase due to tidal influence. Given the topography of the site, this transition is gradual, with the degree of tidal influence driven by elevation, seasonal tidal dynamics, micro-topographic variability, and vegetative roughness. The final discharge from the EDS is to the marine lower Elevenmile Creek and Upper Perdido Bay receiving waters.

2.1 Purpose and Need

The Detailed Proposal can best be understood as the plan IP would have selected in 2010, if it had foreknowledge of USEPA’s change in position on SSACs and had the ten years of long-term monitoring data demonstrating compliance with NNC established for Upper Perdido Bay and the improvement of the wetlands located in the EDS. IP is expanding upon the 2007 plan to relocate its discharge to marine receiving waters. IP has concluded that discharge to marine receiving waters will allow it to achieve all applicable water quality standards, including pH and specific conductance. The conversion of the EDS to a treatment wetland facility will assure continued compliance with the Upper Perdido Bay NNC as shown based on ten years of measured parameter reductions across the EDS and updated WQBEL modelling studies required by the April 2020 Consent Order.

Relocating the discharge to marine receiving waters requires the construction of an additional berm with specific discharge points, as depicted in the attached drawings (Attachment A). Because of the additional berm, and secondary impacts associated with incorporating the EDS into the Mill’s wastewater treatment system, IP anticipates submission of applications for an ERP and 404 Permit.

The purpose of the ERP and 404 Permit are to allow IP to incorporate the EDS into the Mill’s wastewater treatment system and achieve a marine water discharge. By implementing this modification, it would ensure that all applicable water quality standards would be attained, that the designated use of the receiving waters would be supported, and would allow the EDS to continue to provide nutrient reduction benefits to the effluent before it reaches Upper Perdido Bay. The need is demonstrated by the background above showing that IP has exhausted all other practicable alternatives.

2.2 Overview of Proposed Activities

To achieve the project's purpose and need, preliminary engineering and environmental evaluations were completed to relocate the discharge point fully into marine waters. Included in this evaluation are descriptions of the approach that will be utilized to evaluate the environmental impacts necessary to support ERP and 404 Permit applications. This Detailed Proposal also includes a review of regulated portions of the EDS, preliminary engineering design and modelling, and a proposed regulatory permitting strategy.

3.0 PRELIMINARY ALTERNATIVES ANALYSIS

3.1 Previous Alternatives Considered

Prior to issuance of the 2010 404 Permit for construction of the EDS, several alternatives were evaluated with the goal of removing effluent discharge from the upper reaches of Elevenmile Creek. As a result of this analysis, it was ultimately concluded that construction and operation of the EDS was the most practicable alternative with the least environmental impact necessary to meet the identified project purpose. While it was contemplated that the selected alternative (construction of the EDS) would not achieve compliance with freshwater quality standards, alternative regulatory pathways were provided to achieve compliance which are no longer available to IP.

3.2 Detailed Proposal Preferred Alternative

Because all alternative regulatory compliance pathways have been exhausted, the preliminary preferred alternative is to convert the EDS to a treatment wetland facility and relocate the permitted discharge to marine waters, at which point the discharge would be compliant with all state water quality standards. This alternative would achieve the objective of meeting effluent pH and specific conductance standards in the least environmentally impactful way. Direct impacts resulting from dredge and fill activities would include only those infrastructure elements needed to relocate the discharge to marine waters. Direct impacts are anticipated to occur as a result of construction of an additional berm downgradient of Berm 4 and the new berm's associated outlet structures. It is anticipated that a detailed alternatives analysis will be necessary as a part of ERP and 404 Permit applications.

It is the opinion of IP that the preliminary preferred alternative, as described above, will result in the least environmental impact while achieving the purpose and need of the project. To this

effect, IP contracted with Arcadis to develop a conceptual plan for implementing the preferred alternative. This plan, the Effluent Treatment System Reconfiguration (“Reconfiguration Plan”), is included as Attachment A and provides preliminary engineering design and plans for construction of an additional berm located downgradient of Berm 4 (herein referred to as “Berm 6”).

The Reconfiguration Plan provides details regarding the design of Berm 6, hydrologic and hydraulic modeling outputs utilized during the design, and projected impacts associated with the construction. In the proposed reconfiguration, direct impacts associated with construction of Berm 6 total approximately 8 acres. The preliminary design of Berm 6 mimics that of the previously constructed berms in that water control structures will be installed along the length of the berm to evenly distribute surface water to downstream areas with the intent of minimizing erosion and concentrated flow. Based on the current design, it is anticipated that the current outlet points of the EDS into lower Elevenmile Creek and Upper Perdido Bay will remain unchanged in regard to location and distribution of flow volume.

4.0 REGULATORY OVERVIEW AND PROCESS

4.1 Delineation of Jurisdictional Areas of the Effluent Distribution System

As the application of effluent has affected the pre-project hydrologic condition of the site’s wetlands, IP proposes to rely upon the historical jurisdictional determination prior to the application of effluent as to the extent and quantity of jurisdictional features present across the project site.

As a part of the original USACE and Department’s permitting of the project, wetland jurisdictional delineations were completed across the CEDP project area, as detailed below:

- Edmisten and Associates: circa 2001
- Nutter & Associates, Inc.: May and June 2006
- Nutter & Associates, Inc.: October 2007

Previous delineations were conducted across the entirety of the CEDP project site and adhered to methods described in the Corps of Engineers *Wetlands Delineation Manual* (1987) and *The Florida Wetlands Delineation Manual* (no date). Within the EDS, 57.24 acres of upland were identified with the remainder classified as jurisdictional wetland. Formal acceptance of the

jurisdictional delineations was incorporated into the June 28, 2010 USACE 404 permit which authorized work associated with construction of the EDS.

4.2 Demarcation of the Freshwater/Marine Water Boundary

As defined by the Department, all waters located within the CEDP project area are classified as Class III waters which have an associated designated use of fish consumption, recreation, propagation and maintenance of a healthy, well-balanced population of fish and wildlife (Chapter 62-302.400, F.A.C.). Class III waters are further subdivided into “predominantly fresh waters” and “predominantly marine waters” based upon surface water chloride concentration or specific conductance. As specified in Rule 62-302.200, F.A.C., “predominantly marine waters” mean surface waters in which the chloride concentration is greater than or equal to 1,500 milligrams per liter or specific conductance is greater than or equal to 4,580 $\mu\text{mhos/cm}$ as measured in the bottom half of the water column.

As the preliminary stated purpose of the proposed project is to relocate the effluent discharge to marine waters, the demarcation of the Class III freshwater and marine water boundary is critical to the design and implementation of the project. Similar to the assessment of jurisdictional waters present on the project site, post-effluent hydrologic conditions have affected the landward extent of marine water influence as a result of increased hydrologic head and surface water flow. As a result, observations and data collection made during pre-effluent characterization, as well as the Department’s geospatial datasets were relied upon to approximate the freshwater / marine water boundary.

To establish the extent of predominantly marine waters across the EDS, the Department’s Water Body Identification number (“WBID”) geospatial dataset was utilized to identify the location of Class III predominantly marine waters. Two Class III marine water WBIDs are mapped within the southern portions of the EDS (Table 1, Figure 2). Although not depicted in Figure 2, conveyance structures running through Berm 6 will discharge to marine waters.

Table 1. Class III predominantly marine WBIDs located within the Effluent Distribution System project area.

WBID	Waterbody	Class
489D	Elevenmile Creek (Marine Portion)	3M
784	Tee and Wicker Lakes	3M

The remainder of the EDS is covered by predominantly freshwater WBIDs.

To further refine the extent of predominantly marine areas, site-specific Florida Land Use Cover and Form Classification System (“FLUCCS”) mapping of the CEDP project area completed in 2007 was utilized to identify vegetative communities comprised of “saltwater” species. On the CEDP site, these FLUCCS classes included Saltwater Marshes (Code 642) which were primarily dominated by needlerush (*Juncus roemerianus*) and sawgrass (*Cladium jamaicensis*). In most cases, the salt marsh vegetative communities were located within the marine WBIDs (489D and 784), but this community type also extended outside of the mapped marine water WBIDs (Figure 2). Pre-project hydrologic and water quality monitoring of these areas supports that waters and wetlands within these WBIDs would be classified as “predominantly marine waters” as based on the Department’s regulations.

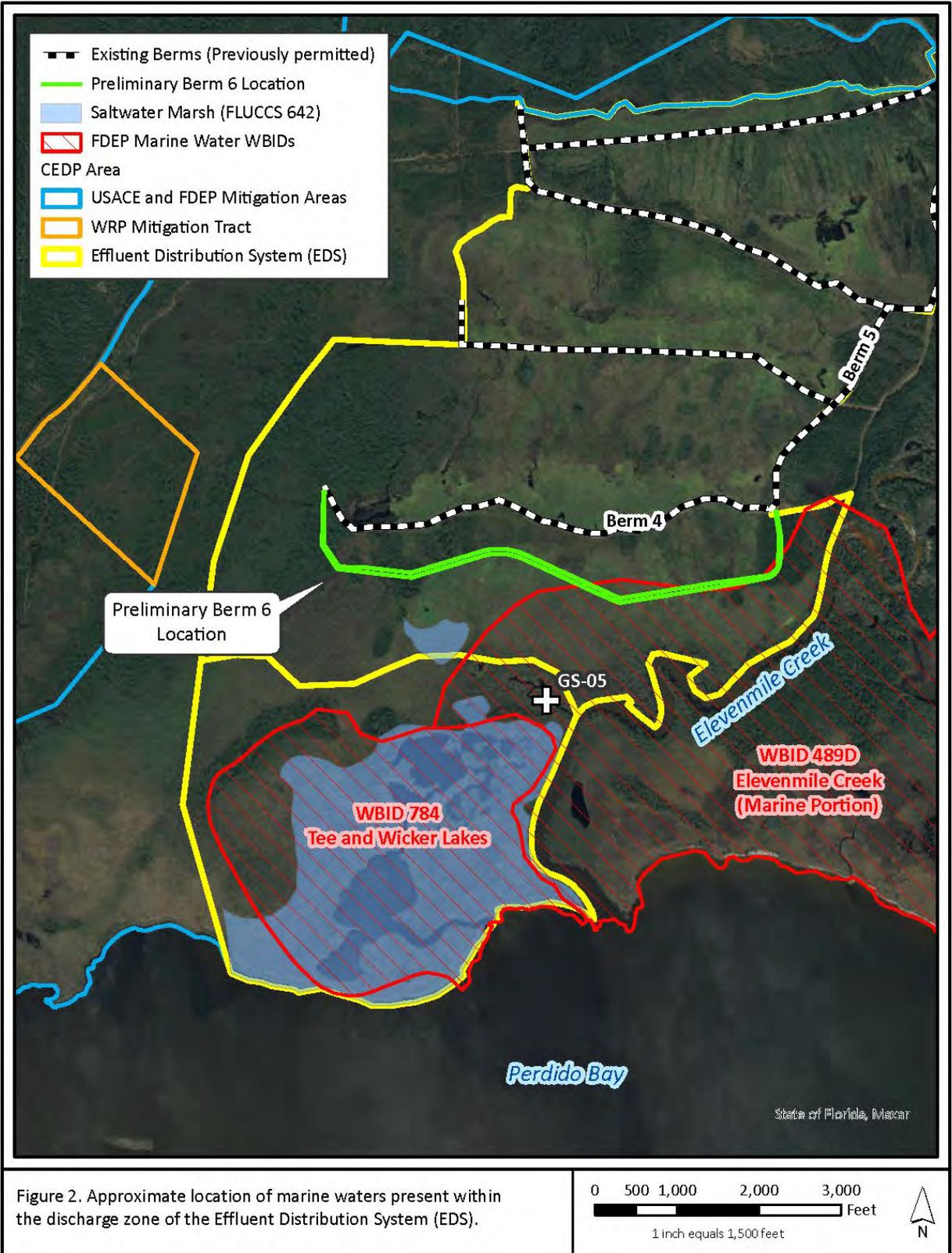


Figure 2. Approximate location of marine waters present within the discharge zone of the Effluent Distribution System (EDS).

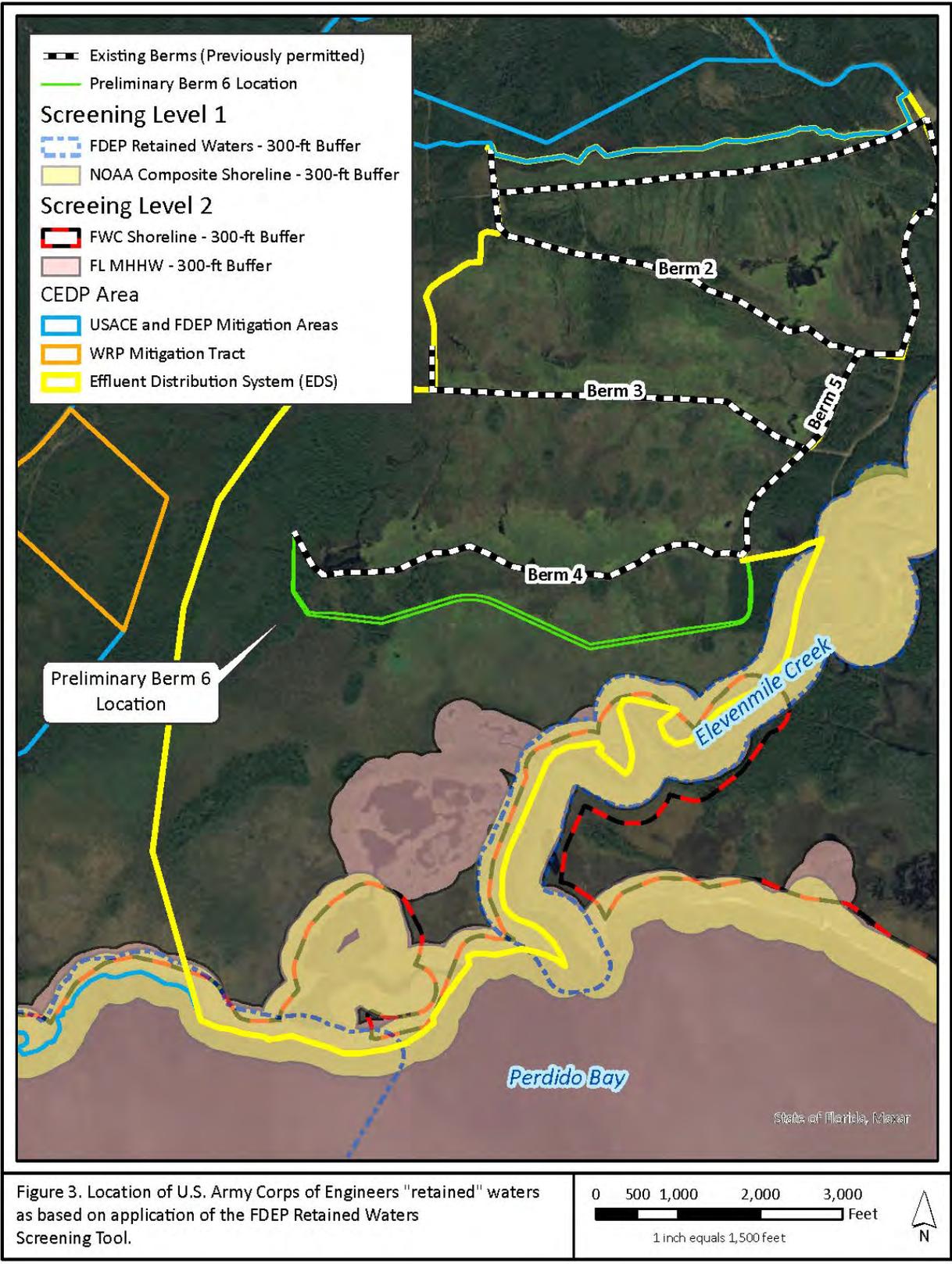
4.3 Preliminary Clean Water Act Regulatory Jurisdiction Evaluation

As specified in the State 404 Program Applicant’s Handbook (December 22, 2020), the Department’s Retained Waters Screening Tool was utilized to document the approximate locations of “retained” waters (i.e. those waters in which the USACE maintains regulatory authority as defined in the Memorandum of Agreement between the USACE and the Department) in the vicinity of the proposed project. In total, four discrete “retained” waters polygons lie adjacent to the EDS project area (Table 2, Figure 3). These include Elevenmile Creek, Perdido River, Perdido Bay, and apparent tidal waters that lie adjacent to Elevenmile Creek and the Perdido River.

Table 2. List of “Retained” Waters adjacent to the Effluent Distribution System project area.

Feature	Name	Waterbody Description
Retained Waters – Approximate Tidal Waters (check MHWL)	Approximate Tidal Waters (check MHWL)	Perdido Bay
Retained Waters – Approximate Tidal Waters (check MHWL)	Approximate Tidal Waters (check MHWL)	Tidal waters adjacent to Elevenmile Creek and Perdido River
Retained Waters – Listed Retained Waters	Listed Retained Waters	Elevenmile Creek
Retained Waters – Listed Retained Waters	Listed Retained Waters	Perdido River

A review was completed to evaluate if direct impacts associated with the proposed configuration of the new Berm 6 would occur in “assumed” or “retained” waters. Based on this review, the preliminary location of Berm 6 is located outside of the USACE “retained” waters, and thus regulatory permitting of the project would be conducted through the Department.



4.4 Identification and Quantification of Impacts

The construction of Berm 6 downgradient of Berm 4, and conversion of the EDS to a treatment wetland facility will require a quantification of all permanent direct and secondary impacts to the entire EDS system that currently receives effluent. Permanent direct impacts will include dredge and fill activities associated with construction of Berm 6 and the narrow channel excavated directly upgradient of the constructed berm. Permanent secondary impacts will include the EDS that currently receives effluent with several caveats. The following areas will be excluded from the total area of permanent direct and secondary impacts associated with the preferred alternative:

- Permanent direct wetland impact areas of the EDS that were previously mitigated for as detailed in the fully executed 2010 404 Permit and ERP;
- Areas within the EDS containing S2 habitats that were previously mitigated for in the S2 mitigation offset conservation area;
- Previously mitigated areas comprised of inundations zones within the EDS greater than or equal to 1 foot in depth;
- Areas in the current EDS footprint that were previously delineated as upland during pre-project jurisdictional determinations prior to 2010;
- Areas that are mapped or previously projected to be part of the EDS as part of the 2010 404 Permit, but that do not currently receive effluent; and,
- Predominantly marine water portions of the EDS.

A full accounting of all permanent direct and indirect impacts will be conducted upon completion of final design drawings and prior to submittal of the new ERP and 404 Permit applications.

4.5 Determination of Functional Impacts and Mitigation Need

A functional assessment utilizing the Department's Uniform Mitigation Assessment Method ("UMAM") was completed for all areas of the EDS prior to submittal of the 2010 404 Permit and ERP. The UMAM assessment included comprehensive desktop and field analysis of distinct wetland habitat polygons situated throughout the EDS wetted effluent footprint. The results of the UMAM assessment are detailed in the *S2 Habitats Conservation and Management Technical Memorandum* (NAI, 2008), which was attached to the 2010 404 Permit and ERP. The UMAM assessment included an analysis of the existing conditions prior to initiation of effluent flows to the EDS, based on a silvicultural impacted wetland condition and also included projections of the post-effluent EDS conditions based on the final EDS design.

To quantify the functional impacts and mitigation needs necessary for the conversion of the current EDS to a permanent treatment wetland facility, the projected post-effluent functional score of each mapped FLUCCS polygon (“2010 Projected Function”) included in the 2010 404 Permit will be used to represent the current existing conditions within the EDS. For all areas of the EDS for which direct or secondary impacts are proposed in the final design, the newly proposed function for all FLUCCS polygons will be reduced to zero (“Detailed Proposal Function”). The overall functional loss will be calculated as the difference between the EDS area-weighted Detailed Proposal Function and 2010 Projected Function. All areas previously mitigated for as a part of the 2010 404 and/or ERP Permits will be excluded from this analysis.

Finally, the functional condition for all marine water FLUCCS polygons will be assumed to be consistent with the projected functional conditions included in the 2010 404 Permit. If necessary, updated functional assessments will be completed within the marine water FLUCCS polygons to confirm this assumption.

4.6 Section 404 Permitting Overview

Upon quantification of proposed direct and secondary impacts to jurisdictional waters and completion of more detailed engineering, a joint permit application will be submitted to the Department utilizing form 62-330.060, F.A.C., assuming that an Individual Permit is required for the project. Prior to submittal of the joint permit application, a pre-application meeting will be held and will provide an opportunity for the Department to provide comments on the alternatives analysis, provide details about information needed for the permit including any necessary consultations with other agencies.

At a minimum the joint permit application will include a detailed discussion and data presentation for the items detailed below.

4.6.1 Environmental Considerations

The joint permit application (62-330.060(1), F.A.C.) requires a detailed environmental considerations evaluation. Several of these considerations were evaluated during the initial permitting process but may need to be updated depending on the final alternative selected for implementation.

1. Avoidance and Minimization
2. Fish, Wildlife, Listed Species, and their Habitats
3. Water quantity impacts to wetlands and other surface waters

4. Public Interest Test
5. Water Quality
6. Secondary Impacts
7. Cumulative Impacts
8. Mitigation Plan

During the original permitting of the project, significant coordination was initiated with several regulatory agencies specifically regarding Federal and State threatened and endangered species, essential fish habitat, avoidance and minimization, water quality, historical resources, and other environmental considerations. Based upon this coordination, it was determined that through project modifications and implementation of enhancement and restoration activities that the project would not have significant impacts to the environment within or adjacent to the EDS. IP proposes to rely upon these historical studies and determinations to support the current permit application described herein. Where necessary, supplemental studies may be required to provide reasonable assurance to the agencies that the proposed project will achieve the stated purpose and need while minimizing, to the greatest extent practicable, environmental impact.

4.6.2 Conceptual Mitigation Plan

Upon quantification of impacts associated with the preferred alternative, a detailed mitigation plan will be developed that will utilize a function-based approach to offset functional losses associated with conversion of the EDS to a part of IP's wastewater treatment system.

Based on review of the Department's Mitigation Bank Service Area Map, the Perdido Watershed, in which the EDS lies, is currently not serviced by an existing mitigation bank (Figure 4). As specified in s. 373.4135(1)(b), Fla. Stat., permittee-responsible mitigation is allowed when mitigation bank credits are unavailable. As a result, IP is proposing to implement a permittee-responsible mitigation project given the unavailability of mitigation credits.

It is anticipated that, at a minimum, the area proposed for mitigation will adhere to the requirements of s. 373.4136(1), Fla. Stat., as required, and are listed below:

- Improve ecological conditions of the regional watershed
- Provide viable and sustainable ecological and hydrological functions for the proposed mitigation service area
- Be effectively managed in the long term
- Not destroy areas with high ecological value

- Achieve mitigation success
- Be adjacent to lands that will not adversely affect the long-term viability of the mitigation bank due to unsuitable land uses or conditions

As specified in Rule 62-342.450, F.A.C., the mitigation plan will include all required information necessary to characterize the lands to be utilized for mitigation. Similar to the calculation of functional loss quantification within the EDS, UMAM will be utilized to establish the functional lift associated with any proposed restoration or enhancement activities within the mitigation area. The UMAM functional assessment will be used to ensure that, at a minimum, functional losses within the EDS are fully offset by functional gain within the mitigation area.

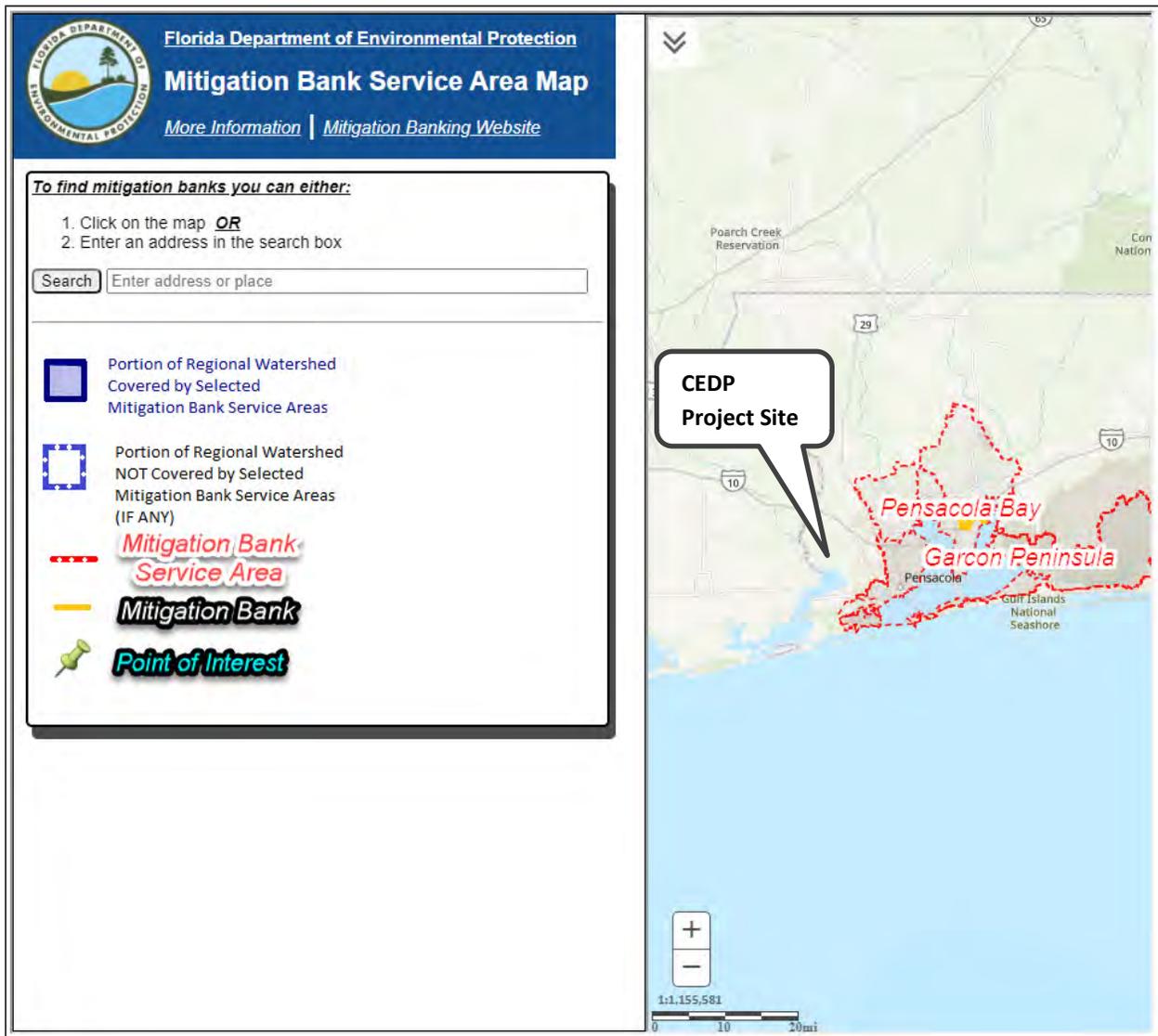


Figure 4. Mitigation Bank Service Areas in the vicinity of the CEDP project site, Florida Department of Environmental Protection’s Mitigation Bank Service Area Map.

5.0 INITIAL PROJECT TIMELINE AND REGULATORY SCHEDULE OVERVIEW

5.1 Anticipated Schedule and Project Timeline

- March 31: IP submission of the Detailed Proposal
 - Respond to any Request for Additional Information within 30 days of receipt
 - Schedule ERP and 404 permitting pre-application meeting within 14 days of Department approval of Detailed Proposal.
- Several action items will be required to be completed prior to submittal of the ERP and 404 Permit applications that may depend on Department feedback provided before or during the pre-application meeting. Upon completion of these action items, the ERP and 404 Permit applications will be submitted. These action items include:
 - Detailed engineering studies and design
 - Development of the Mitigation Plan
 - Alternative Analysis, if deemed necessary to be updated
- Upon submittal of the ERP and 404 Permit applications, consultation with federal and State agencies will be required either as a part of the application or during the public comment period. Prior consultation was completed as a part of the original project permitting, but additional consultation may be required based upon the proposed project changes.
- Sixty days from IP submission of the ERP and 404 Permit applications, the Department makes a “completeness” determination of the ERP and 404 Permit and, upon this determination, issues the public notice (assumes Departmental approval of the 404 Permit, rather than USACE).
- Thirty days from issuance of the public notice, FDEP may take final agency action granting approval of the permits, and IP submits a revised NPDES Permit application

5.2 NPDES Permit Application

IP anticipates that following approval of the ERP and 404 permits by the Department, IP would submit a revised NPDES permit application to reflect compliance with marine water quality standards and an updated point of compliance located immediately downstream of the EDS. IP anticipates that the ERP and 404 Permits would provide reasonable assurance for meeting marine water quality standards, and that the NPDES Permit would include a new consent order requiring completion of the expanded EDS and achievement of the marine water quality standards by a specific date. The existing permit limits, including the existing interim limits for pH, specific conductance, turbidity, and dissolved oxygen, would remain in place until

completion of the construction, commencement of discharges in the new location, and a possible period for grow-in and testing.

ATTACHMENT A
EFFLUENT TREATMENT SYSTEM RECONFIGURATION

International Paper – Pensacola Mill

Effluent Treatment System Reconfiguration

March 2022

Effluent Treatment System Reconfiguration

Effluent Treatment System Reconfiguration

March 2022

Prepared By:

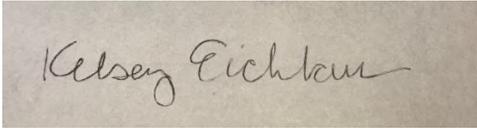
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Richard K. Lowe
Technical Specialist



Mike Purvis
Project Manager

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Version Control (optional)

Issue	Revision No.	Date Issued	Page No.	Description	Reviewed By

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Acronyms and Abbreviations

Cfs	Cubic feet per second
DEP	Department of Environmental Protection (Florida)
ECUA	Emerald Coast Utilities Authority
EDS	Effluent Distribution System
GIS	Geographic Information System
HDPE	High Density Polyethylene
IP	International Paper
MGD	Million Gallons per Day
NPDES	National Pollution Discharge Elimination System
PVC	Polyvinyl Chloride
SPPP	Stormwater Pollution Prevention Plan
USGS	United States Geological Survey

Executive Summary

International Paper owns and operates an integrated pulp and paper mill on Muscogee Road in Cantonment, Florida. The mill treats process effluent in a multi-stage treatment system on the South side of the mill. In 2010 IP constructed a 10-mile long pipeline to a constructed Effluent Distribution System (EDS) on an IP-owned tract of land near Perdido Bay situated just North of where Elevenmile Creek empties into Perdido Bay, in Southern Escambia County.

The EDS construction occurred during 2010 and early 2011, and the system began operation during 2012. The EDS consists of five earthen embankments, averaging 1 mile in length. Four of the berms (Berms 1 through 4) are constructed with an East-to-West alignment, and the fifth (Berm 5) forms the Eastern boundary of the facility by separating the system from Elevenmile Creek when the creek overflows its banks. The earthen berms are constructed with nearly level tops and descend in surface elevation from Berm 1 on the North to Berm 4 on the South. These berms function as level spreaders by evenly distributing the effluent along their upstream (North) side. The berm tops descend from elevation +25.5 at Berm 1 on the North to +8.6 at Berm 4 on the South. Each berm contains 12 or 13 flow control structures that are 18-inch diameter pipes, flowing through boxes fitted with adjustable weir plates, near the inlet end of each pipe, to permit flow regulation and balancing. Each berm also contains several 50 to 100-foot long armored depressions, averaging eighteen inches in depth, that manage storm flows exceeding the capacity of the flow control pipes.

IP is proposing to convert the EDS into an NPDES permitted treatment system by constructing a sixth earthen berm South of current Berm 4 to expand the current distribution system to a treatment facility having a marine (salt water) discharge. Effluent quality and flow measurements will be used to report discharge parameter metrics as part of a new NPDES-permitted treatment system.

1 Project Overview

1.1 Background

IP installed a 10-mile long, 48-inch diameter pipeline, to route treated mill effluent Southward to a constructed Effluent Distribution System (EDS) on a large tract of IP-owned land West of Elevenmile Creek and North of Perdido Bay. The EDS consisted of five earthen embankments that distributed treated effluent across approximately four, mile-long embankments that act as level spreaders that promote;

1. Effluent distribution in front of the four embankments, and
2. Dilution of the effluent by combination with precipitation.

The EDS was designed to distribute treated mill effluent prior to discharge into Lower Elevenmile Creek and Upper Perdido Bay.

1.2 Purpose

The EDS reconfiguration will extend the point of discharge of treated effluent further South of the current Berm 4 location to create a marine water discharge point by adding a sixth effluent distribution berm and flow control structures with flow monitoring capabilities and sampling provisions. The objective of these reconfiguration actions is to provide for a marine water discharge point (outfall), and to convert the EDS system into a new NPDES permitted treatment system.

2 Site History

The EDS consists of five earthen embankments averaging 1 mile in length, four of which have East to West trending centerlines. The East-West trending earthen embankments are each fitted with multiple flow control structures. These embankments function as level spreaders that function to evenly distribute the effluent flow over the mile-long embankment length. The berm metrics are summarized in **Table 1** below.

Table 1 – Level Spreader Berm Metrics

Level Spreader Berm Metrics

Berm Number	Length	Berm Top Elev.	Overflow Spillway Elev.	Number of Flow Control Structures	Number/Size of Overflow Spillways
No. 1	5,500	25.5	24.2	13 @ 18"	4 @ 50'
No. 2	6,400	19.9	18.6	12 @ 18"	2 @ 50' & 2 @ 100'
No. 3	5,000	13.4	12	12 @ 18"	5 @ 50'
No. 4	8,700	8.6	6.94	13 @ 18"	8 @ 100'
No. 5	4,000	20	N/A	None	None

Effluent Treatment System Reconfiguration

Level Spreader Berm Metrics

No. 6*	7,300	7	5.5	10 @ 24"	8 @ 100'
* = Proposed					

The attached **Figure 1** shows the existing EDS facility outlined with a green boundary line. The magenta-colored line visible on the edges of **Figure 1** is the approximate IP property line near the EDS facility as reported on the Escambia County GIS website tax records.

3 Current Operation

The current EDS receives combined flow at the Northeast corner of the facility. The effluent is distributed Westward on the North side of Berm 1 and the flow is distributed through 13 flow control structures spaced along Berm 1. The water discharged through Berm 1 then flows in a Southerly direction either overland or via remnant drainage features until it is gathered and redistributed on the North side of Berm 2 located an average of 1,700 feet to the South of Berm 1. Water is accumulated and redistributed on the North side of Berm 2 and is then distributed through Berm 2 via 12 flow control structures. This pattern repeats through the four East-West trending berms as flow moves in a Southerly direction through the EDS. The attached **Figure 2** provides a North-to-South cross-section view of the EDS facility with the vertical scale exaggerated by a factor of 40 in order to improve the readability.

The flow control structures are Agri Drain flow control boxes, each fitted with adjustable PVC weir plates, as shown in **Figure 3**. The inlet end of each flow control structure is fitted with a concrete U-type endwall covered by a welded steel bar grate, galvanized with bars arranged to provide 4" by 4" openings. The top bars are vertically oriented to facilitate removal of weed growth using a rake pulled by hand from the shore next to the flow control box. The flow control structures are sized and spaced to transmit normal effluent flows combined with stormwater flow volumes for up to about a 4 year, 24-hour storm event. Tropical storms or heavy rainfall events resulting in flow volumes that exceed the capacity of the flow control boxes and pipes are managed through overflow spillways spaced and sized to transmit storm flows up to a 25-year, 24-hour storm event. There are four overflow spillways in Berm 1 and 2, ranging from 50 to 100 feet in length. Berm 3 contains five overflow spillways, all 50 feet in length. Berm 4 contains eight overflow spillways, all measuring 100 feet in length. Berm 4 is low enough in elevation that hurricane storm surges can overtop it from the South, hence the larger number and size of overflow spillways. The Berm and flow control structure metrics are summarized in **Table 1**.



Figure 3 – Agri Drain Flow Control Structure

4 System Improvement Plans

Design and construction objectives include;

1. Convert the EDS into an NPDES permitted treatment system,
2. Achieve marine discharge,
3. Perform facility operation & maintenance,
4. Develop a system that can reliably be controlled and monitored for NPDES permit compliance.

4.1 New Effluent Distribution and Flow Control Berm 6

Prominent activities in this project will be construction of a sixth flow distribution berm further South of Berm 4 to redistribute effluent, enhance treatment system performance, and create discharge into a marine environment further to the South of the current EDS boundary. Additional flow control structures and distribution pipes in the new Berm 6 will provide access points to quantify and characterize effluent quality under normal system and climatic operating conditions. Treated effluent discharged from the reconfigured treatment system will be discharged into or very near the marine boundary line, or the flows will pass through marine areas prior to entering the tidally influenced portion of Elevenmile Creek or Tee and Wicker Lakes. The historic marine boundary line is shown on **Figure C-1** in **Appendix A**. This arrangement will result in the new Effluent Treatment System effluent entering marine waters.

The Berm 6 flow control structure will have a crest elevation of about +7, with overflow spillway surfaces at about elevation +5.5. Berm 6 will create an upstream normal pool elevation of about +4. Flow control structures will be sized and spaced to transmit combined effluent and storm drainage flows up to approximately a 5-year, 24-hour storm event. Flows from larger storms, or tropical systems will be routed through overflow spillways sized and spaced to manage flows from 25-year, 24-hour storm flows. The overflow spillways will have armored surfaces where concentrated stormwater flows, and hurricane storm surges may overtop Berm 6.

4.1.1 Design Basis Metrics

Flow control structures and pipes are sized and spaced to manage flows for up to approximately a 5-yr, 24-hr storm flow capacity. Overflow spillways are sized and spaced to manage storm flows up to a 25-year, 24-hour storm flow.

Flow control and measuring structures will be all PVC, HDPE, aluminum, or stainless steel to survive the saline environment.

Overflow spillways will be spaced, sized, and armored to protect Berm 6 from normal storm overflows, heavy storm overflow, and storm surges resulting from hurricane and tropical storm events. We expect that some hurricane storm surge events will overtop Berm 6 and result in trapping brackish water upstream of Berm 6. Such hurricane events have already overtopped and trapped brackish water upstream of Berm 4. Such saltwater incursions will be infrequent, limited in duration, but may temporarily impact system water quality, negatively impact treatment system vegetation, and may diminish treatment system effectiveness until vegetation recovers and salinity levels return to pre-storm levels.

4.1.2 Hydrologic and Hydraulic Modeling

Arcadis utilized the Hydrologic Engineering Center River Analysis System (HEC-RAS) model version 6.0.0 to create the existing and proposed conditions two-dimensional (2D) unsteady state hydraulic routing model for the site. The model was used to determine the number and size of overflow spillways and flow control structures for Berm 6. Flow control structures were sized and spaced to transmit combined effluent and storm drainage flows up to approximately a 5-year, 24-hour storm event. Flows from larger storms, or tropical systems will be routed through overflow spillways sized and spaced to manage flows from 25-year, 24-hour storm flows. A base flow conditions model was also run for the site.

4.1.2.1 Model Development and Assumptions

Figure 4 shows the extent and components of the model. Berm 6 was modeled with eight overflow spillways and ten 24-inch flow control structures distributed along the length of the berm.

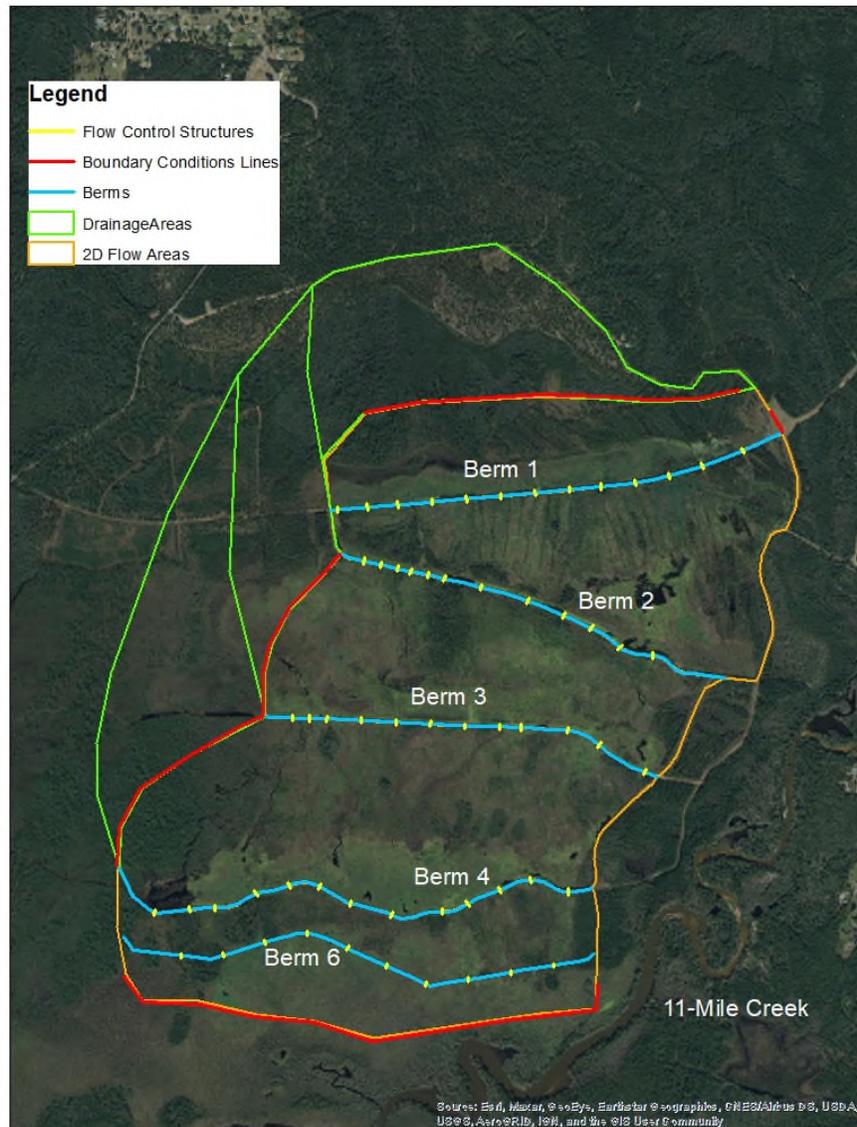


Figure 4 – 2D Model Components

The effluent from the mill was entered into the model as a boundary condition on the east, upstream side of Berm 1. Rainfall runoff and flow from surrounding areas was also entered as boundary conditions for the areas around Berms 1 through 4. The downstream boundary condition for the site was modeled as a constant water surface elevation in the wetlands of 2.5 (WSEL). There was assumed to be no infiltration over the site, as groundwater flows upward into the wetlands.

4.1.2.2 Results

Figure 5 shows the inundated areas for the base flow condition. The WSEL upstream of Berm 6 for this condition is about 4.

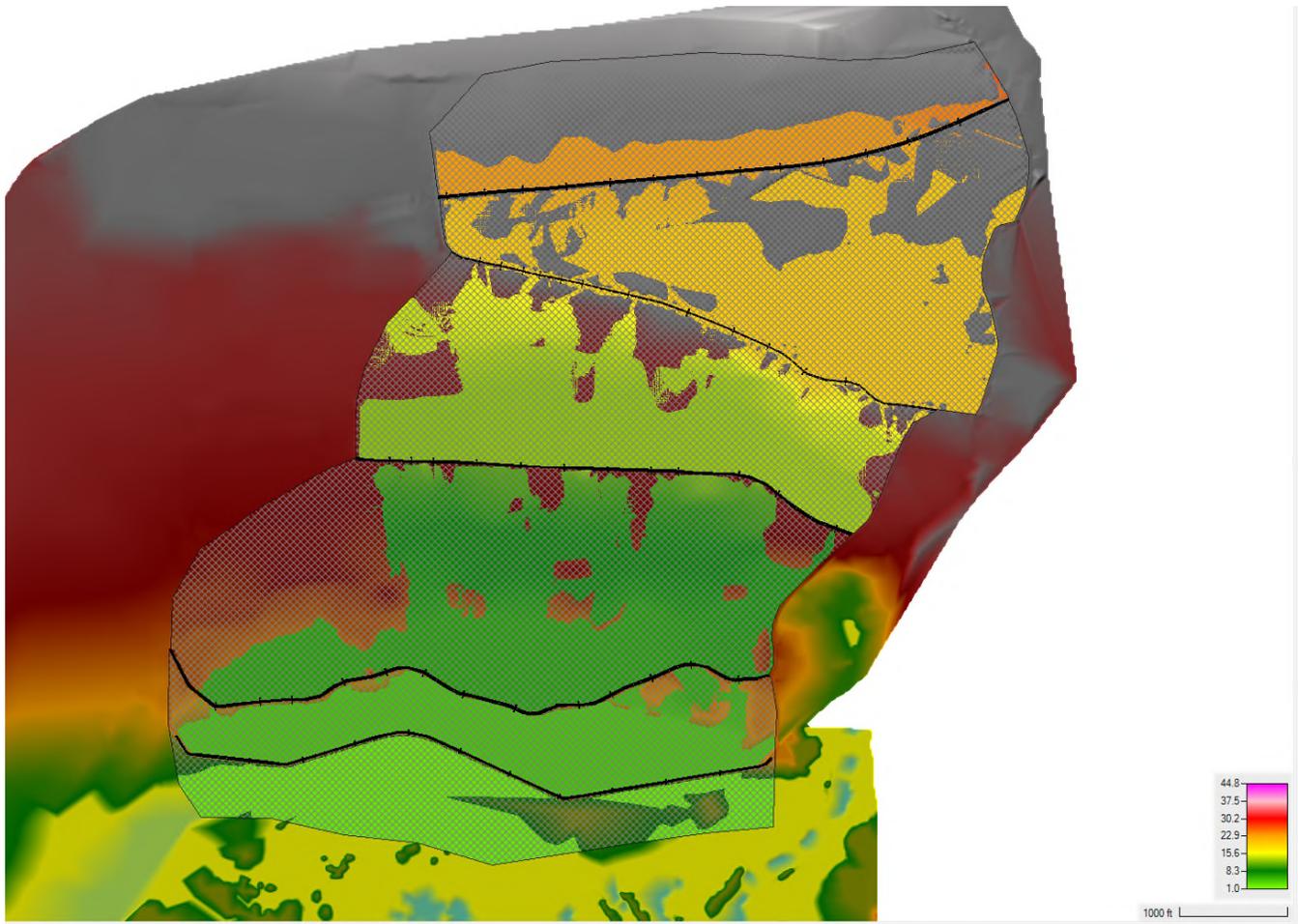


Figure 5 – Base Flow Model Water Surface Elevation Results

Figure 6 shows the inundated areas for the proposed model with the 5-year design storm. The WSEL upstream of Berm 6 for this condition is about 5.5.

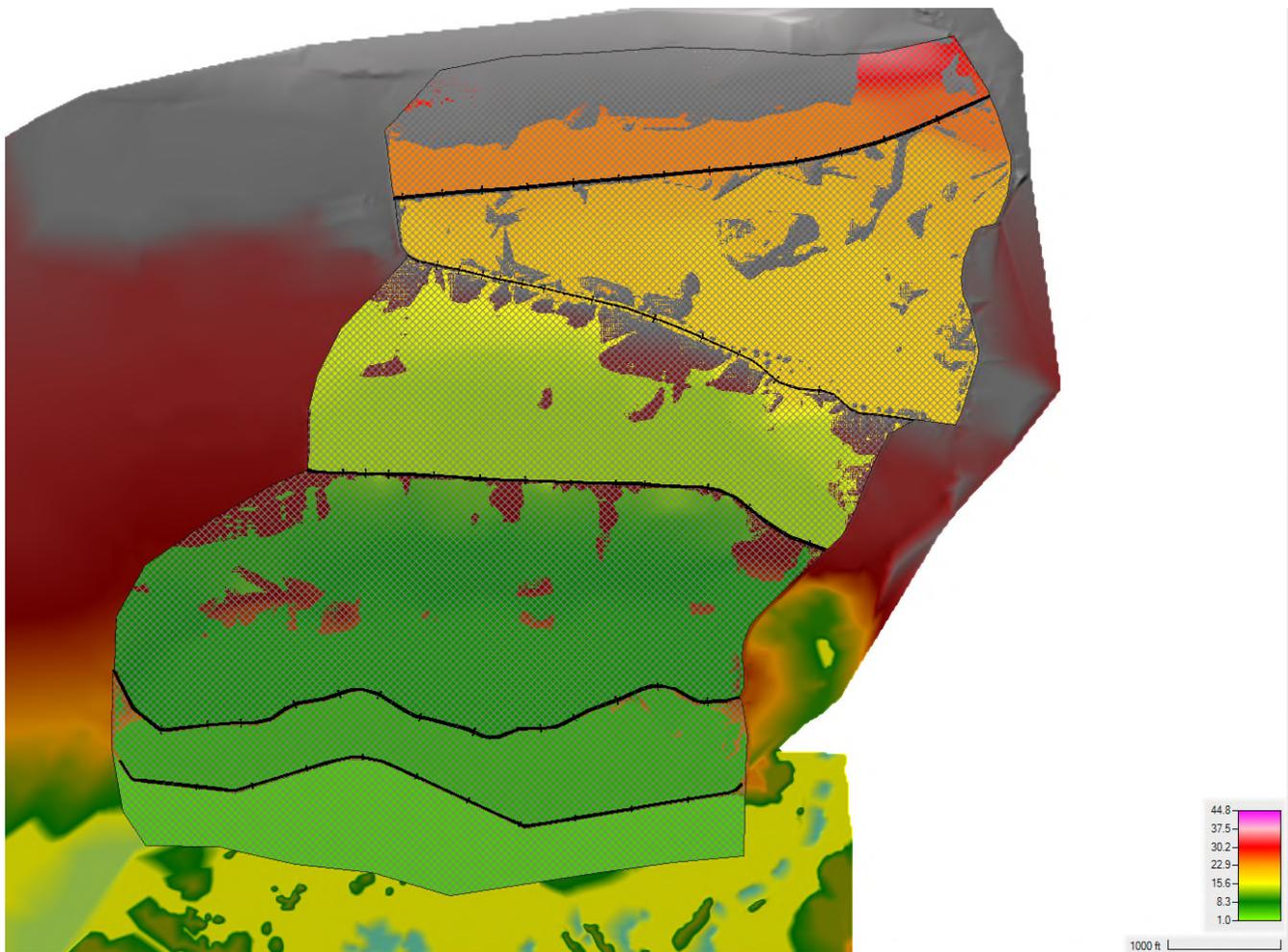


Figure 6 – 5-year Model Water Surface Elevation Results

Figure 7 shows the inundated areas for the proposed model with the 25-year design storm. The WSEL upstream of Berm 6 for this condition is about 6.4. The 25-year storm passes through the overflow spillways with a half-foot of freeboard between the water surface and the top of berm elevation.

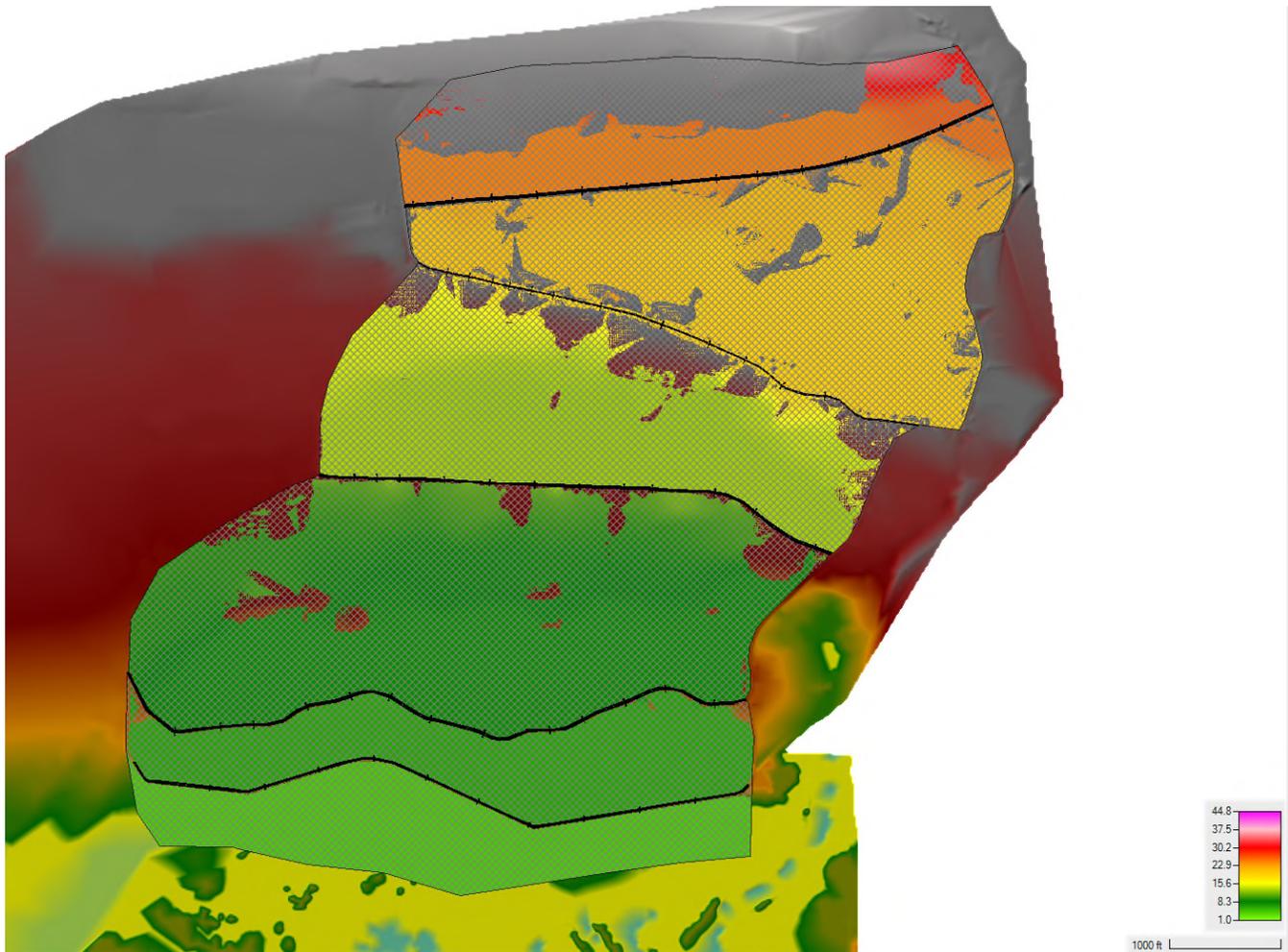


Figure 7 – 25-year Model Water Surface Elevation Results

4.1.3 Disturbed Acreage

Berm 6 disturbed area = 351,000 sq. ft. = **8 acres.**

Borrow needs = 29,100 cyds x 1.2 = 35,000 cyds. Requires **4 acres** (should be upland) with roughly a 6' average cut, not counting topsoil stripping, stockpile areas, and clearing and stump removal. The Berm 6 cut/fill quantities are summarized in **Figure 8**.

Volume Summary							
Name	Type	Cut Factor	Fill Factor	2d Area (Sq. Ft.)	Cut (Cu. Yd.)	Fill (Cu. Yd.)	Net (Cu. Yd.)
EG vs Subgrade	full	1.000	1.000	350867.00	12995.07	0.00	12995.07<Cut>
Subgrade vs. Proposed Berm 6	full	1.000	1.000	350867.00	605.92	42671.42	42065.50<Fill>

Totals				
	2d Area (Sq. Ft.)	Cut (Cu. Yd.)	Fill (Cu. Yd.)	Net (Cu. Yd.)
Total	701734.00	13601.00	42671.42	29070.43<Fill>

* Value adjusted by cut or fill factor other than 1.0

Figure 8 – Berm 6 Earthwork Quantities

4.1.4 Inundated Acreage

Berm 6 inundated area = 2,576,552 square feet = 59.1 acres between Berm 4 and 6.

4.1.5 Operating and Maintenance Strategy

Adjust weir plates within Berm 6 flow control structures to maintain upstream pool elevation as close to +3 as possible, but within range of +3 to +4 is expected upstream normal pool elevation.

Remove vegetation from inlet grates on inlet headwall structures to maintain free-flowing water movement.

Mow Berm top and side slopes to control woody vegetation and weed growth.

Perform frequent stability and erosion monitoring, especially after storm events and repair any observed erosion.

Adjust weir plates as necessary to control upstream pool elevations and evenly distribute system flow to maintain treatment system performance.

Figures

PENSACOLA EFFLUENT DISTRIBUTION SYSTEM – NORTH-SOUTH PROFILE 40X VERT EXAGGERATION

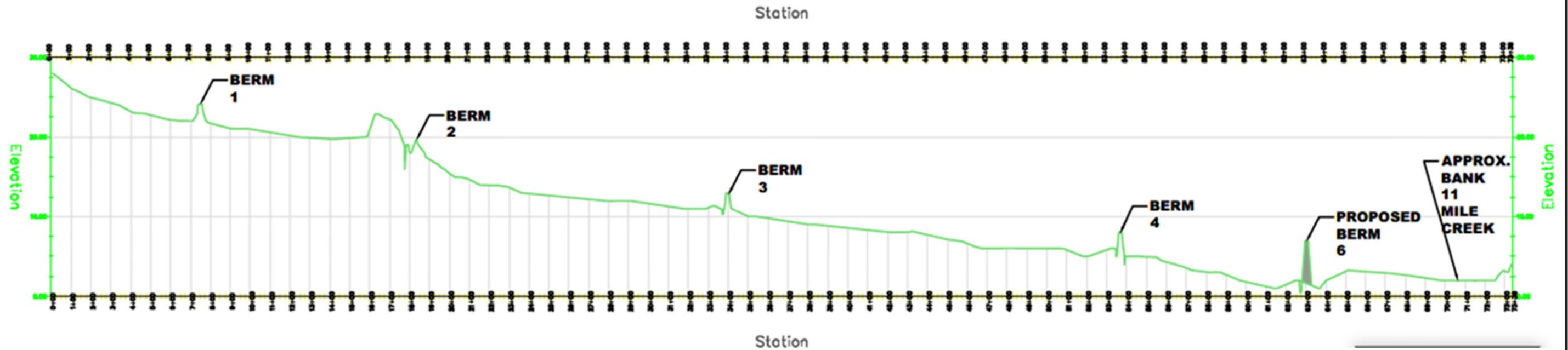


FIGURE 2

PENSACOLA EDS
NORTH-SOUTH PROFILE



Appendix A

DRAWINGS

Effluent Distribution System Modifications

INTERNATIONAL PAPER

PENSACOLA MILL

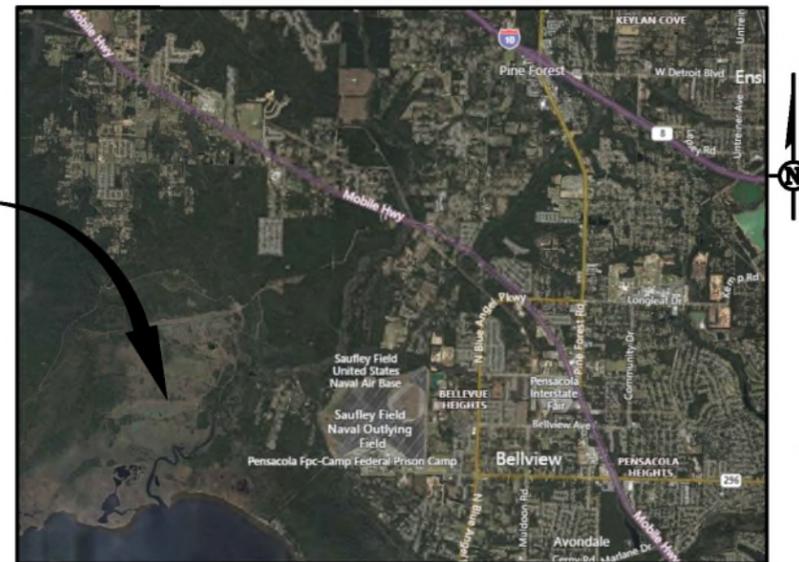
EFFLUENT DISTRIBUTION SYSTEM MODIFICATION

DATE ISSUED

MARCH 2022
ISSUED FOR PERMIT

INTERNATIONAL PAPER - PENSACOLA MILL
ESCAMBIA COUNTY, FLORIDA

PROJECT
 LOCATION



VICINITY MAP
 NOT TO SCALE

KEY CONTACTS:

PROJECT SITE/OWNER:
 INTERNATIONAL PAPER
 PENSACOLA MILL
 375 MUSCOGEE ROAD
 P.O. BOX 87
 CANTONMENT, FLORIDA 32533-0087
 (850) 968-2121

ENGINEER:
 ARCADIS U.S., INC..
 WADE 1, 5420 WADE PARK BLVD.,
 SUITE 350,
 RALEIGH, NC 27607

CONTACT: MIKE PURVIS (LICENSE APPLIED FOR)

24 HOUR CONTACT:
 XXXXXXXXXXXXX



INDEX TO DRAWINGS

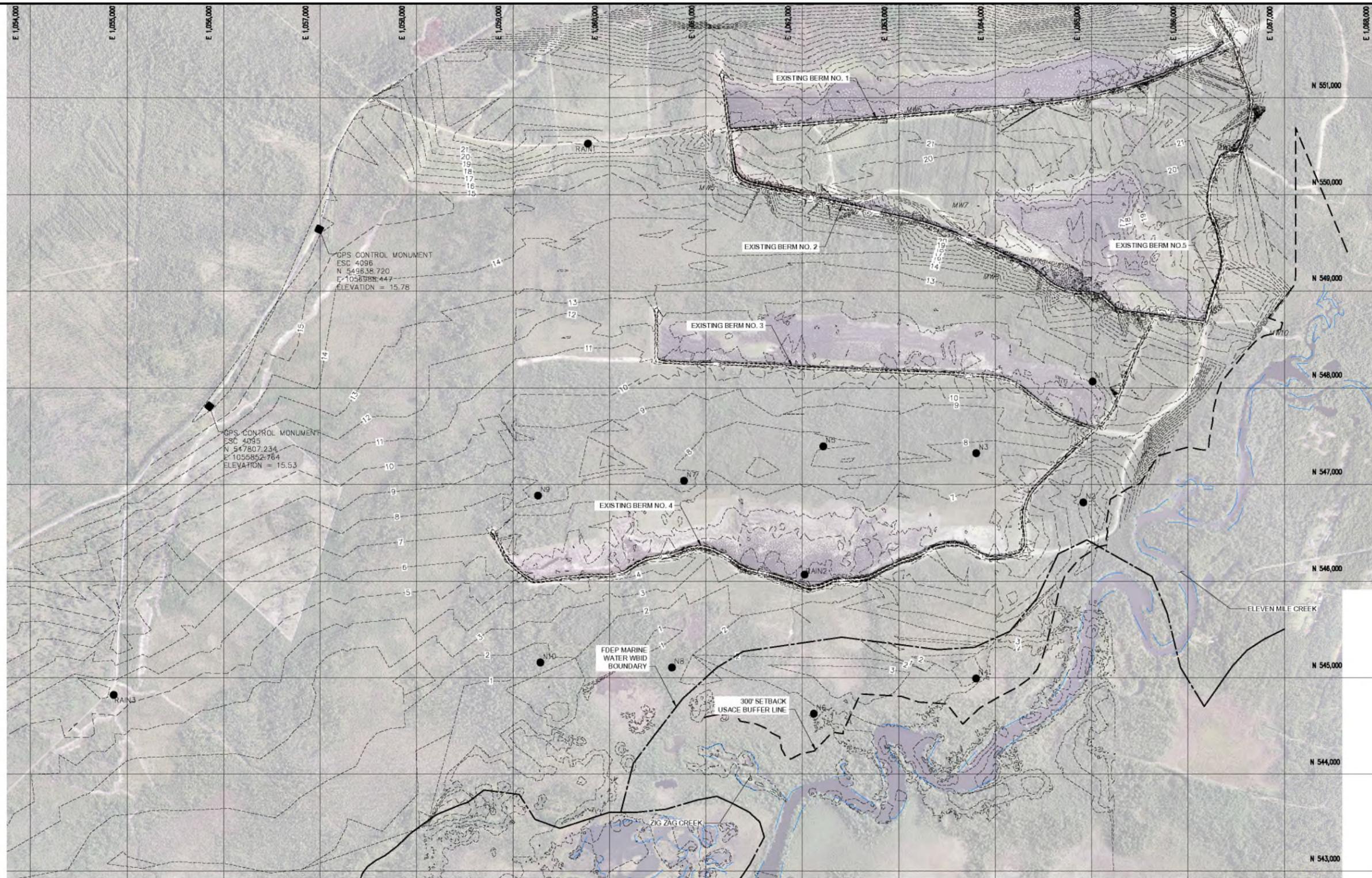
SHEET	NO.	SHEET TITLE
G-1	1	COVER SHEET
G-2	2	LEGEND, NOTES, AND HYDRAULIC PROFILE
CIVIL		
C-1	3	EFFLUENT DISTRIBUTION SYSTEM EXISTING CONDITIONS PLAN
C-2	4	EFFLUENT DISTRIBUTION SYSTEM PLAN WITH PROPOSED BERM 6
C-3	5	EFFLUENT DISTRIBUTION SYSTEM PLAN - ENLARGED PROPOSED BERM 6 PLAN
C-4	6	EFFLUENT DISTRIBUTION SYSTEM PROPOSED BERM 6 PROFILE
C-5	7	EFFLUENT DISTRIBUTION SYSTEM PROPOSED BERM 6 FLOW CONTROL STRUCTURE SECTION & DETAILS (SHEET 1 OF 2)
C-6	8	EFFLUENT DISTRIBUTION SYSTEM PROPOSED BERM 6 FLOW CONTROL STRUCTURE SECTION & DETAILS (SHEET 2 OF 2)

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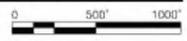
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LEGEND:

- EXISTING MAJOR CONTOUR LINE
- EXISTING MINOR CONTOUR LINE
- USACE BUFFER LINE
- FDEP MARINE WATER WBID BOUNDARY
- CREEK LIMITS

EXISTING CONDITIONS PLAN



- NOTES:
1. ELEVATIONS REFERENCE NAVD88 DATUM.
 2. COORDINATE SYSTEM IS FLORIDA NAD83 NORTH ZONE, US FEET.
 3. LIDAR DATA IS USED FOR A PORTION OF THE CONTOURS SHOWN ON THE SOUTHWEST END OF THE PROJECT AREA.
 4. FDEP MARINE WATER WBID BOUNDARY IS BASED ON FDEP WATERBODY IDS (WBID) THAT HAVE BEEN ASSESSED AS MARINE WATERS BY FDEP.

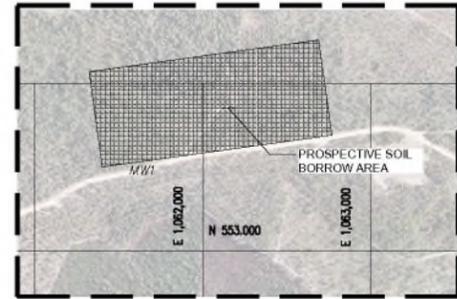


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EFFLUENT DISTRIBUTION SYSTEM EXISTING CONDITIONS PLAN			
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BORROW AREA INSET

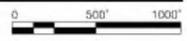


NOTES:
1. FDEP MARINE WATER WBID BOUNDARY IS BASED ON FDEP WATERBODY IDS (WBID) THAT HAVE BEEN ASSESSED AS MARINE WATERS BY FDEP.

LEGEND:

	EXISTING MAJOR CONTOUR LINE
	EXISTING MINOR CONTOUR LINE
	MAJOR CONTOUR LINE
	MINOR CONTOUR LINE
	USACE BUFFER LINE
	FDEP MARINE WATER WBID BOUNDARY
	CREEK LIMITS

OVERALL SITE PLAN



SEALS

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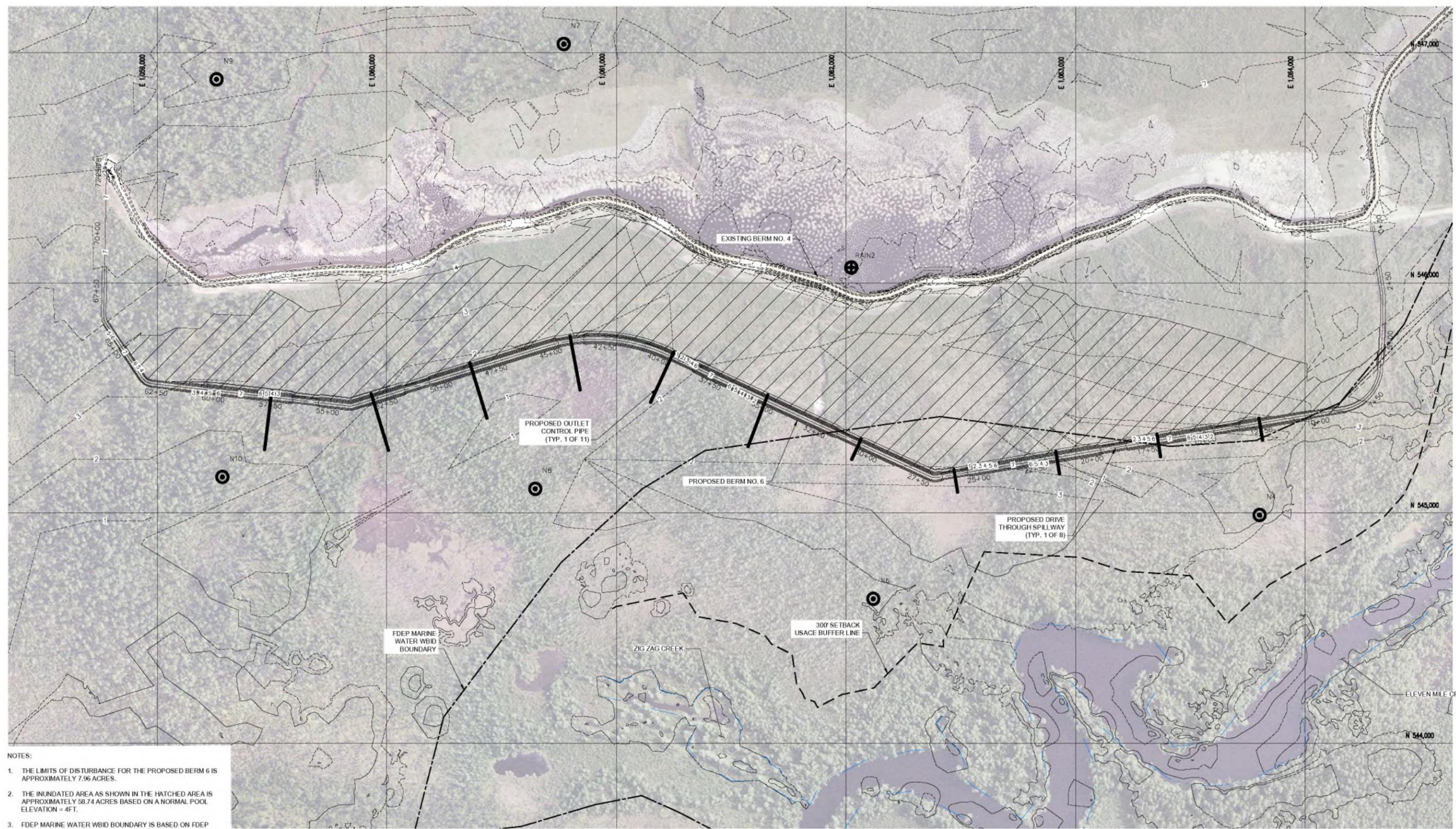
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- NOTES:**
1. THE LIMITS OF DISTURBANCE FOR THE PROPOSED BERM 6 IS APPROXIMATELY 7.96 ACRES.
 2. THE INUNDATED AREA AS SHOWN IN THE HATCHED AREA IS APPROXIMATELY 58.74 ACRES BASED ON A NORMAL POOL ELEVATION = 4 FT.
 3. FDEP MARINE WATER WBID BOUNDARY IS BASED ON FDEP WATERBODY IDS (WBID) THAT HAVE BEEN ASSESSED AS MARINE WATERS BY FDEP.

LEGEND:

	EXISTING MAJOR CONTOUR LINE
	EXISTING MINOR CONTOUR LINE
	MAJOR CONTOUR LINE
	MINOR CONTOUR LINE
	USACE BUFFER LINE
	FDEP MARINE WATER WBID BOUNDARY
	CREEK LIMITS
	INUNDATION LIMITS
	INUNDATION AREA

ENLARGED SITE PLAN

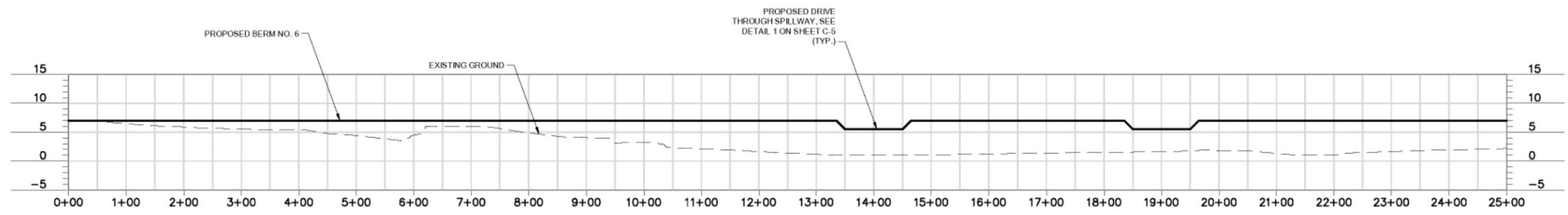


SEALS

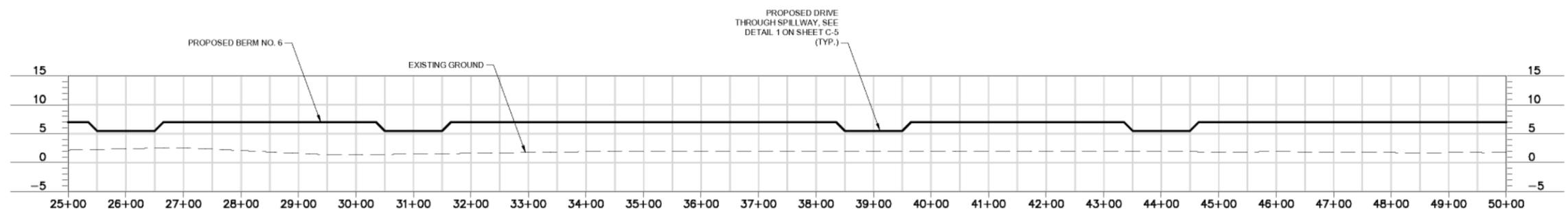
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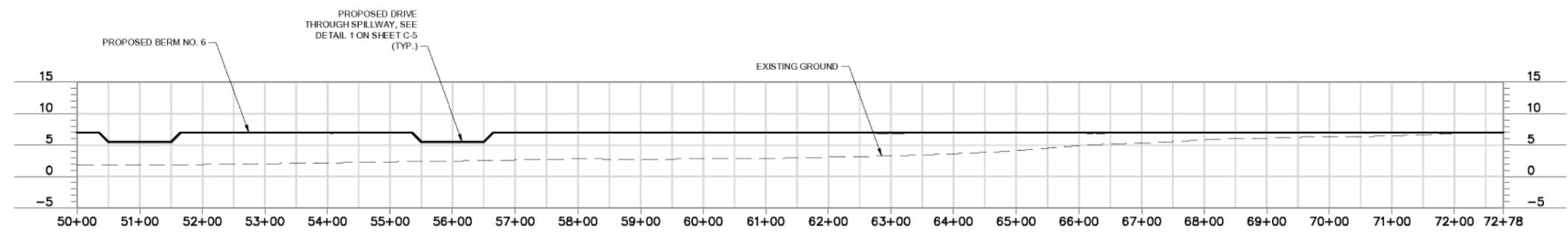
ISSUED FOR PERMIT		RL	3/2022
LTR	REVISION	BY	DATE
INTERNATIONAL PAPER PENSACOLA, FLORIDA			
EFFLUENT DISTRIBUTION SYSTEM MODIFICATION			
EFFLUENT DISTRIBUTION SYSTEM PLAN ENLARGED PROPOSED BERM 6			
ENGR:	SCALE:	CHANGES	
DESIGNED BY:	DATE:		
DRAWN BY:	DATE:	DRAWING NUMBER	
	MARCH 2022	C-3	
PROJ. NO. 30123441			



PROPOSED BERM 6 PROFILE STA 0+00 TO 25+00

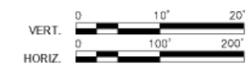


PROPOSED BERM 6 PROFILE STA 25+00 TO 50+00



PROPOSED BERM 6 PROFILE STA 50+00 TO 72+78

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SEALS

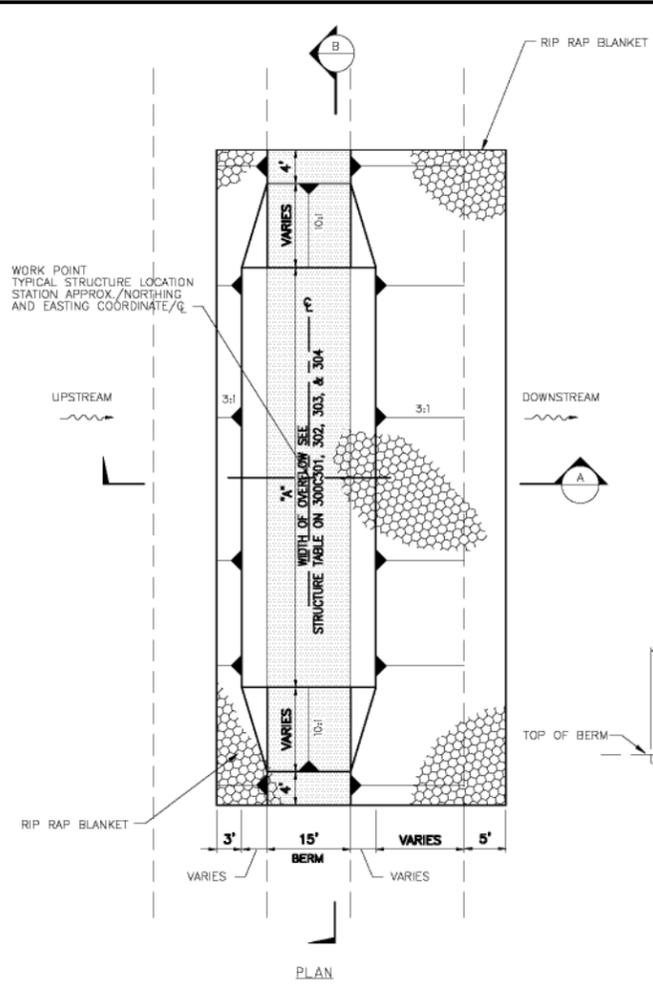
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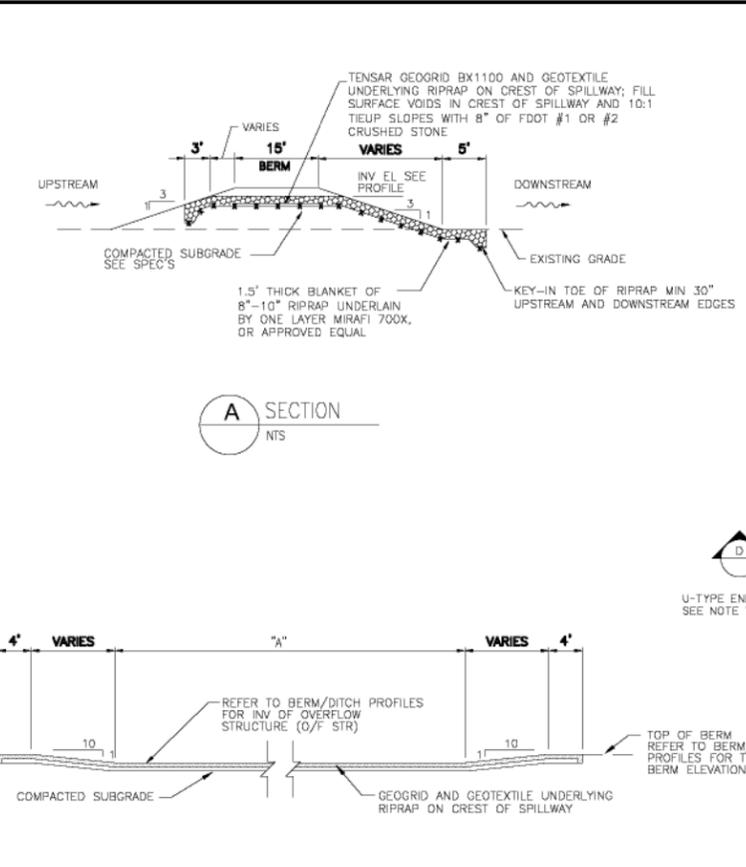
PROJ. NO. 30123441

ISSUED FOR PERMIT		RL	3/2022
LTR	REVISION	BY	DATE
INTERNATIONAL PAPER PENSACOLA, FLORIDA			
EFFLUENT DISTRIBUTION SYSTEM MODIFICATION			
EFFLUENT DISTRIBUTION SYSTEM PROPOSED BERM 6 PROFILE			
ENGR:	SCALE:	CHANGES	
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APPROVED BY:	DATE:		
DRAWN BY	DATE	DRAWING NUMBER	
	MARCH 2022	C-4	

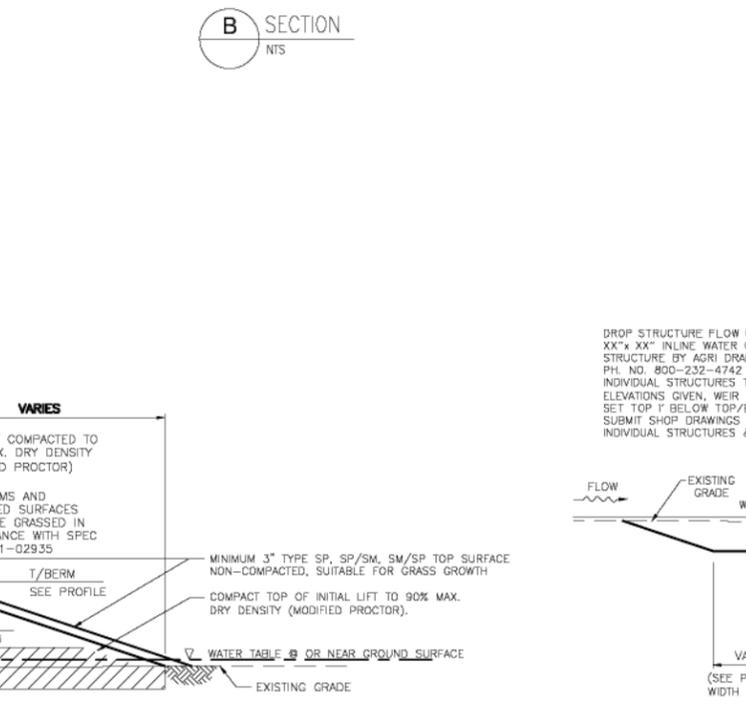
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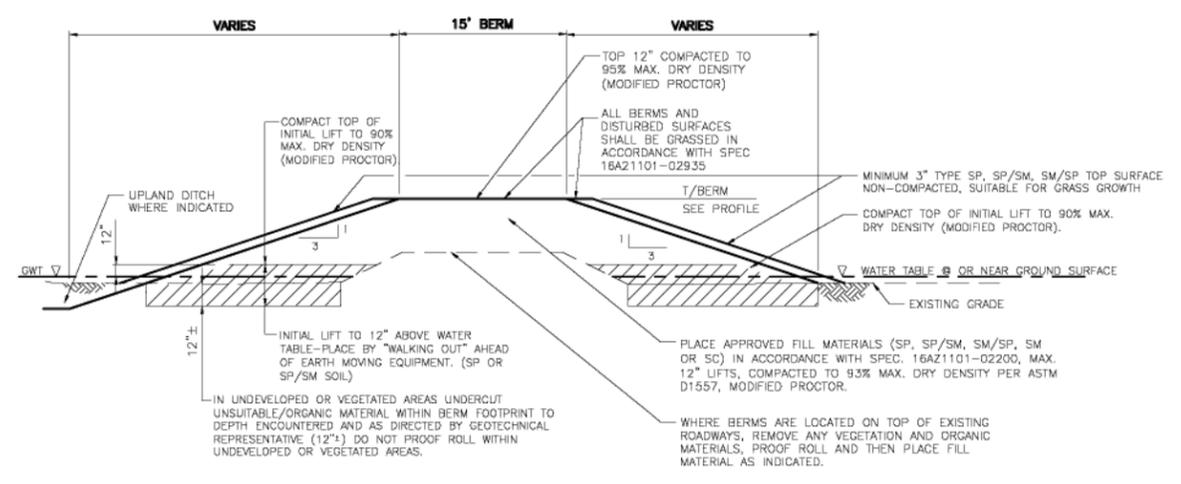
1 STORM OVERFLOW STRUCTURE
NTS



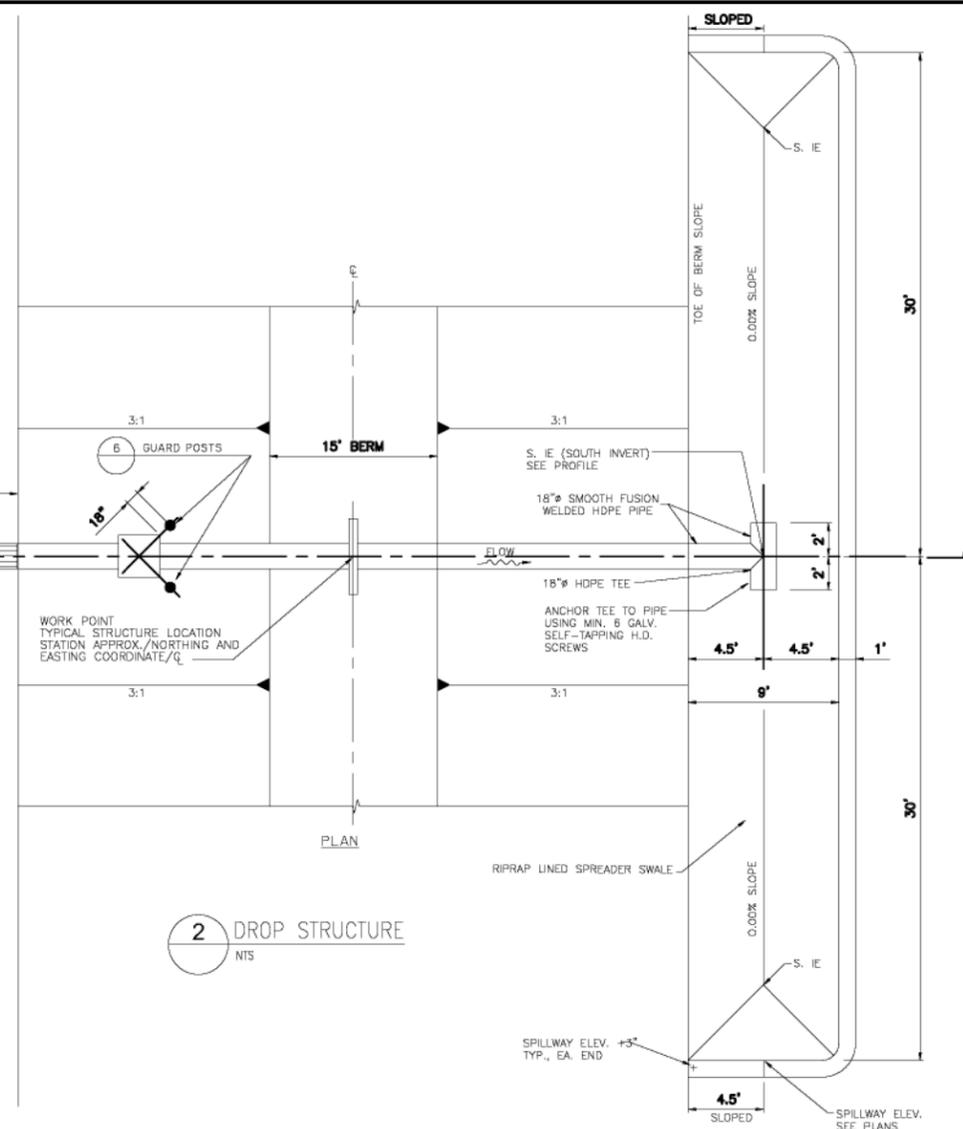
A SECTION
NTS



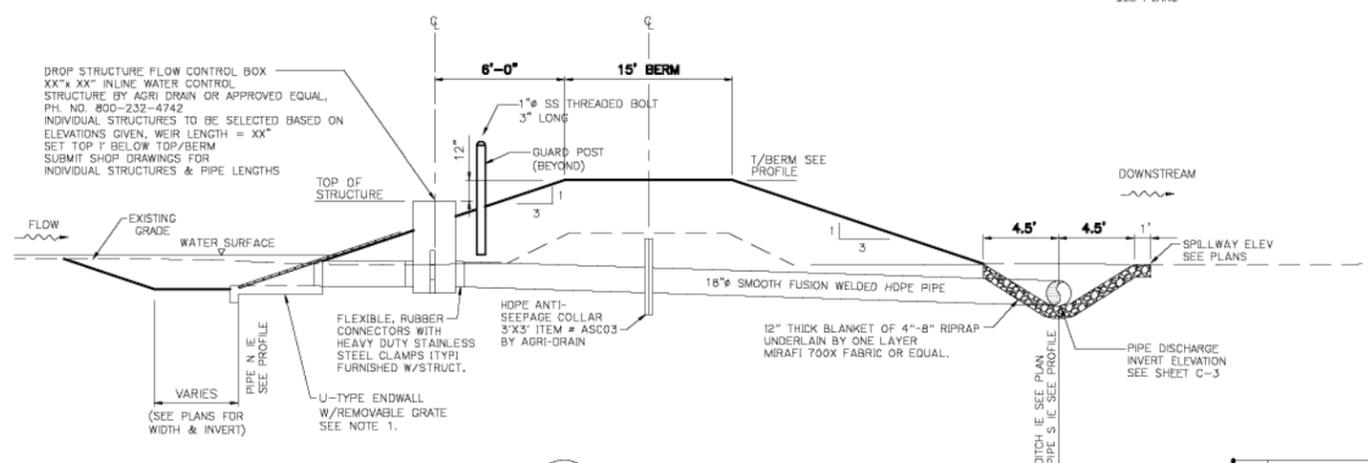
B SECTION
NTS



C TYPICAL BERM SECTION
NTS



2 DROP STRUCTURE
NTS



D SECTION
NTS

NOTES:
1. U-TYPE CONCRETE ENDWALL SHALL BE FOOT INDEX 261 STANDARD U-TYPE CONCRETE HEADWALL FOR 3:1 SLOPE, WITHOUT BAFFLE, PROVIDE WELDED STEEL BAR GRATE GALVANIZED, AND MODIFIED TO HAVE MAX 4" x 4" CLEAR OPENINGS; BARS SHALL BE CONTINUOUS FROM TOP TO BOTTOM AND SHALL COMPLETELY COVER OPENING; CROSS-MEMBERS SHALL BE WELDED TO UNDERSIDE OF GRATE TO FACILITATE CLEANING WITH RAKE FROM BERM; GRATE SHALL HAVE EYE BOLT WELDED TO UPPER END OF GRATE TO FACILITATE REMOVAL BY SLIDING UP TAPERED ENDWALL.

<p>SEALS</p> <p>DRAFT NOT FOR CONSTRUCTION</p>		ISSUED FOR PERMIT		RL	3/2022
		REVISION		BY	DATE
<p>INTERNATIONAL PAPER</p> <p>PENSACOLA, FLORIDA</p>					
<p>EFFLUENT DISTRIBUTION SYSTEM MODIFICATION</p>					
<p>EFFLUENT DISTRIBUTION SYSTEM PROPOSED</p> <p>BERM 6 FLOW CONTROL STRUCTURE</p> <p>SECTION & DETAILS (SHEET 1 OF 2)</p>					
ENGR:	SCALE:	GRADER:			
CREATED BY:	DATE:	APPROVED BY:			
DRAWN BY:	DATE:	DRAWING NUMBER			
PROJ. NO. 30123441	MARCH 2022	C-5			



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