

The inlet pipeline will be repositioned during dredging operations to minimize the mounding of the coarse sediment and to distribute the deposited material more uniformly. This will require extending the pipeline and resting each extension on the sediment mound formed at the previous position. A minimum distance of 100 ft must be maintained between the inlet and the inside toe of the dike to preclude erosion or undercutting of the interior dike slope. The resulting pattern of deposition will maintain a consistent slope from inlet to weir, minimize dead zones and channelization, and reduce the requirement for grading the deposited material to reestablish the desired 0.17 percent slope between successive dredging operations.

An additional, although secondary, advantage to extending the inlet pipeline in this manner comes as a result of the dredge plant being necessarily shut-down to allow each extension section to be added. These operational intermissions, together with temporary shutdowns to move the dredge, effectively increase the retention time of the containment basin, thereby increasing the solids retention efficiency of the basin. However, a preliminary analysis of basin performance indicates that adequate effluent quality can be attained without requiring intermittent dredge operation.

### **3.2.1 Monitoring Related to Inlet Operation**

During active dredging operations, several monitoring procedures related to inlet operations will be required. Ponding depth, as previously mentioned, is a critical parameter for best containment area performance. Maintaining as great a ponding depth as possible increases solids retention and improves effluent quality. However, unbalanced hydrostatic forces resulting from too great a ponding depth under saturated foundation conditions can lead to slope instability, slumping, and the potential for dike failure. Obviously, the latter situation must be avoided. Therefore, ponding depth should be increased above the 2.0-ft minimum only under close monitoring by visual inspection of dike integrity. Indications of impending instability include evidence of seepage related to piping and foundation saturation at the outer dike toe and small-scale slumping. If no effluent is released at the weirs, the design dredge output (i.e., 6,430 cy/hr slurry at a 20/80 solids/liquid mix, or 5,144 cy/hr liquid) will produce an increase in ponding depth of 0.66 inches/hr and a rise in the water surface (i.e. deposition layer plus ponding) of 0.83 inches/hr. These rates are slow enough to allow close continual monitoring of the entire dike perimeter. However, ponding depth should not be permitted to increase beyond a maximum of 5.0 ft. Dike stability should be monitored continuously during periods when ponding depth is maintained above the 2.0-ft minimum.

Optimal operating efficiency requires that flow through the containment basin approximate plug flow to the greatest degree possible, thereby minimizing the uneven distribution of flow velocities and sediment resuspension and maximizing retention time. Therefore, the pattern of sediment deposition should be monitored for indications of irregular distribution, channelization, and short-circuiting. If evidence of such anomalies is found, the inlet pipe should be repositioned until a more uniform depositional surface is formed.

Last, the incoming slurry should be periodically monitored at the containment basin inlet to confirm or refine dredge output specifications, including volumetric output and slurry solids content. These parameters, in combination with the duration of actual dredge operation, can be used as an independent measure of deposition volume for purposes of determining remaining site capacity. Additionally, the computed deposition volume can be used with pre- and post-dredging bathymetric surveys of the channel and topographic surveys within the containment basin following placement and dewatering of the deposition layer to refine the bulking factor employed to translate in-situ dredging volume to required storage volume. Also, within the same monitoring program, the quality of dredged sediment should be established by laboratory analysis of grain size distributions, settling velocities, specific gravity, and Atterberg limits.

### 3.3 Weir Operation

The most effective way to control effluent quality during dredging operations is to change the ponding depth and rate of flow over the weir through adjustments to the weir crest elevation. Before dredging, the weir crest elevation should be set as high as possible to preclude the early release of effluent. At the start of dredging operations, the crest should be set to provide the maximum anticipated mean ponding depth (4.0 ft). For the Pablo Creek site, this will result in an initial weir crest elevation of +18.29 ft NGVD, or 9.50 ft above grade at the weirs. As the deposited material reaches the base of the weirs, the crest elevation should be increased at approximately the same rate as the growth of the deposition layer. With the average depth of deposition per event projected to be 2.39 ft, maintaining a mean ponding depth of 4.0 ft (7.15 ft at the weirs) will result in a weir crest elevation at the completion of dredging of approximately +20.79 ft NGVD.

Once dredging begins, the weir crest should be maintained at its initial elevation until the ponded water surface approaches the weir crest. During this initial phase of operation when no effluent is released, the discharge of the dredge plant will increase the ponding depth at a rate of approximately 0.66 inches/hr and increase the ponded water surface elevation (ponding depth plus deposition layer) at a rate of less than 0.83 inches/hr. This relatively slow rise should allow for close continual monitoring of the entire dike perimeter for

indications of slope instability, as discussed. Inspection is most critical during the initial phase of operations and during subsequent periods when the ponded water surface is raised above its previous maximum elevation. Experience has shown that as the ponded water percolates into the interior dike slope, the coarser dike material filters the fine suspended sediment. This reduces the permeability of the dike and decreases the susceptibility of the dike to piping and saturation.

As ponding depth increases above the recommended minimum of 2.0 ft (approximately 5.15 ft at the weirs), release of the supernatant can begin. Note that the weirs are only flow control structures and therefore cannot improve effluent quality beyond that of the surface water immediately upstream of the weir crests. Thus, the decision to release must be based on the results of turbidity testing or suspended sediment concentration analysis conducted on the waters inside the containment basin. These tests must reflect conditions at the maximum depth of withdrawal. For the Pablo Creek site this was determined from recommended WES procedures to be 2.11 ft, based on a design weir loading of 1.07 cfs/ft. If adequate water quality is not achieved prior to the ponded water surface reaching the initial weir crest elevation, the dredge plant must be shut down until the surface water turbidity reaches acceptable limits or until alternative measures such as the installation of turbidity screens or floating baffles are implemented. If the desired water quality is achieved at a ponding depth less than the initial weir crest elevation, the water surface should still be permitted to rise to the weir crest provided dike integrity is not threatened.

Once flow over the weirs has begun and effluent of acceptable quality is being produced, as indicated by effluent sample analysis, the hydraulic head over the weir becomes the most readily used criterion for weir operation. For a design weir loading of 1.07 cfs/ft, the operational static head has been calculated to be 0.47 ft or 5.6 inches, based on an empirical relationship developed for sharp-crested weirs. This represents the operating head of the water upstream of the weir at a point where velocities are small (one to two percent of the weir loading rate).

Actual operating head over the weir can be measured on site by two methods. First, the static head can be determined by using a stage gauge, located in the basin where velocities caused by the weir are small (at least 40 to 50 ft from the weir). The elevation of the water surface can be read directly from the gauge, with the difference between the gauge elevation and the elevation of the weir crest indicating the static head. The static head can also be determined indirectly by measuring the depth of flow over the weir. The ratio of depth of flow over the weir to static head, shown to be 0.85 for sharp-crested weirs, yields a design depth of flow for the Pablo Creek site facility of 0.40 ft or 4.8 inches. If the head over the weir, as measured by either method, falls below

these design values as a result of unsteady dredge output or intermittent operation, effluent quality should increase. However, if the head exceeds these values, the ponding depth should be increased by adding a flash board or dredging should be interrupted to prevent a decrease in effluent quality, unless of course maximum ponding depth has been achieved.

At all times, each of the four weir sections must be maintained at the same elevation to prevent flow concentration and a decrease in effluent quality related to an increase in weir loading. Preventing floating debris from collecting in front of the weir sections is also important. This will result in an increase in the effective depth of withdrawal and a corresponding increase in effluent suspended solids concentration.

After dredging has been completed, the ponded water must be slowly released, allowing the flow over the weir to drop essentially to zero before the next flash board is removed. Monitoring of effluent quality should continue during this process. If turbidity violates water quality standards, the effluent must be retained until analysis of the interior surface waters shows the suspended solids concentration to be within acceptable limits. The decanting process should then continue in this manner until all ponded water is released over the weirs. Trenching and other dewatering techniques are considered post-dredging site operating procedures. These procedures are discussed in Section 4.0.

### 3.4 Monitoring of Effluent

The monitoring of effluent released from the Pablo Creek dredged material management area will be an integral part of the operation of the facility. The containment basin has been designed to produce effluent which meets the water quality standards for Class III waters as set forth in Chapter 17-302 of the Florida Administrative Code. These rules require that site compliance be documented by results obtained from a comprehensive monitoring program. Therefore, the monitoring program should be in place at all times during active dredging operations. Effluent samples should be taken and analyzed as often as practical. The minimum recommended sampling frequency is two times per eight hour shift.

Although turbidity of the effluent is but one of 29 parameters addressed in Florida's state water quality standards, compliance with these standards has been historically based on turbidity alone for several reasons. First, turbidity is reliably measured in the field and is the only water quality parameter over which the site operator may exercise direct control. Second, turbidity is a strong indicator of general effluent quality since many

contaminants, most notably metals, exhibit a strong affinity for fine particles. Thus, reducing turbidity should result in an overall improvement in effluent quality.

However, the disturbance of contaminated sediments may result in the release of other pollutants (predominantly nutrients and hydrocarbons) which do not necessarily associate with fine particles. Thus, if the in-situ sediments contain elevated levels of these contaminants, turbidity may be an inadequate indicator of effluent quality. Monitoring of effluent should therefore be based on the results of comprehensive elutriate and dry analysis of the sediment to be dredged before dredging begins. Testing required under the effluent monitoring program should then focus on those contaminants whose presence in the sediment has been established.

Because effluent turbidity is a primary water quality parameter for site operation, compliance with turbidity standards will control both the dredge plant output and the release of effluent. State turbidity standards are expressed in terms of nephelometric turbidity units (NTU), which measure the optical transparency of the effluent relative to the optical transparency of the receiving water. By comparison, containment area design guidelines published by the U.S. Army Corps of Engineers Waterways Experiment Station (WES) under the Dredged Material Research Program (DMRP) relate containment area performance to the suspended solids concentration of the effluent. However, the translation of solids concentration — expressed in grams per liter, for example — to a measure of turbidity is highly dependent on the characteristics of the suspended material. For the operation of this site, as well as the design and operation of similar sites, it would be advantageous to use the results of the effluent monitoring program in combination with known sediment characteristics to relate suspended solids concentration to the state performance criterion of turbidity or transparency. This should be a primary objective of the site monitoring program.

### **3.5 Groundwater Monitoring During Dredging**

As discussed in Section 2.4, a groundwater monitoring program will be implemented at the Pablo Creek site. A key element of this program will be sampling and analysis of groundwater during the time dredging and dewatering operations are under way. Each dredging and dewatering operation is expected to take approximately 10 to 12 weeks to complete.

The site's first use as a containment facility will likely be the most crucial period for the migration of saline water from the containment basin. During this time, soils forming the dike will be in their most porous state due to their disruption during site construction. However, operational experience has shown that dike

material filters and traps the finer fraction of dredged sediments, thus reducing dike porosity. Notwithstanding, the initial period of each dredging operation requires frequent sampling and analysis of groundwater. During this time, it is recommended that samples be taken twice every 24 hours. This sampling regimen should begin with the commencement of dredging and continue for a period equivalent to the time required for the hypothetical flow of groundwater from the basin to reach the furthestmost sampling well. The length of time for this to occur is a function of several factors including the permeability of the soil and the distance from the containment basin to the sampling wells. This will be determined as part of the final site design process. For the period of operation following the time at which potential saline water migration is expected to reach the furthest sampling well, sampling should be carried out a minimum of once every 24 hours for the remainder of the time saline water is impounded within the containment basin. If at any time elevated chloride levels are detected, pumping will be stopped and ponding depth will be reduced until chloride concentrations return to an acceptable level.

## 4.0 POST-DREDGING SITE MANAGEMENT

The post-dredging phase of site operation begins following the completion of dredging and the decanting of all ponded water over the weirs. It continues until the start of the next planned dredging event. During the post-dredging phase, dredged material deposited within the containment basin is actively managed to reduce its moisture content. In addition, the material is made suitable for handling and can be removed from the site should market conditions prove favorable. However, because the Pablo Creek site is intended to be a permanent site, other management procedures between active dredging operations will also be required. These include a comprehensive monitoring and data collection effort to guide the efficient use and environmental compliance of the dredged material management area, handling of stormwater runoff, monitoring and maintenance of site habitat, measures to control mosquitos, and the provision of adequate site security. These are discussed below.

### 4.1 Dewatering Operations

The techniques of dewatering to be used at the Pablo Creek site are highly dependent on the physical characteristics of the dredged material. The material to be placed in the containment basin is expected to be a mix of fine to medium quartz sand and a component of finer grained material. As discussed in Section 2.3.3, to ensure a conservative approach to site management, the assumption is made that the material may comprise up to 62 percent fine-grained materials. This fine-grained fraction will be the most difficult to dewater through natural evaporation alone. In addition, the thickness of the deposition layer may further retard drying because of limited surface area. Therefore, supplementary dewatering techniques may be required to lower the moisture content of the finer grained fraction of the deposited material to allow its efficient removal. The most appropriate dewatering techniques for the expected quantities of fine-grained material and the projected thickness of the deposition layer are surface water removal, progressive trenching to promote continued drainage and, if required, progressive reworking or removal of the dried surface layer. Each procedure and its specific application to the present situation is discussed below.

The decanting of all remaining surface water is necessary before significant evaporative drying of the fine-grained material can occur. Most of the ponded water is removed following the completion of dredging operations by simply continuing to lower the weir crest. However, it is unlikely that all ponded water can be drained off in this manner because of the topography of the deposition layer surface. As discussed, differential settling of the various size fractions of the sediment results in partial segregation of the dredged material within the containment basin. Coarser sand- and gravel-sized particles settle nearer the inlet, while finer particles settle

nearer the weirs. The thickness of the deposition layer, or lift, resulting from a single average dredging operation is projected to be approximately 2.39 ft. The fine-grained component of sediment is expected to concentrate near the weirs, which may result in the formation of a depression as it consolidates under its own weight. However, the sand-sized fraction, concentrated nearer to the inlet, should experience relatively little consolidation because of its lower initial water content. Therefore, to remove the ponded water which may remain in the area of fine material deposition, a trench connecting the depression to the weirs will have to be dug. Excavating a sump adjacent to the weirs to receive the remaining ponded water may also be necessary. During this phase of operations, the weir crest must be raised to prevent the premature release of the ponded water which, as a result of the excavation, will contain high suspended solids concentrations. Clarified water can then be released over the weirs as soon as effluent turbidity standards are met.

The area of predominantly sandy material is expected to be relatively free-draining. However, the crust that will eventually form over the layer of fine-grained material nearer the weirs will trap water beneath its surface. Therefore, a system of trenches will be required to completely dry the fine material. Before crust forms on the surface of the drying material, an initial perimeter trench can be excavated by dragline or clamshell operating from the crest of the containment dike. More intensive trenching should wait until a crust of significant thickness (greater than five to six inches) has developed on the deposition surface. During this phase of trenching, conventional low ground pressure equipment can be used within the interior of the containment basin. A system of radial or parallel trenches should then be constructed throughout the fine sediment area. The depth of each trenching operation is dictated by the resistance to slumping of the semi-liquid layer beneath the crust; however, a reasonable depth would vary between 1.0 and 1.5 ft. As drainage and evaporation lower the water table within the deposition layer and the thickness of the crust increases, the trenches can be deepened. The thickness of the deposition layer (2.39 ft average) will require one or two trenching operations to adequately lower its water content throughout. Alternatively, the dried surface material can be transferred to a more well-drained area within the containment basin. This would expose the wetter under layers and restore a relatively high rate of evaporative drying.

The dewatering process will continue until the crust extends over the entire depth of the deposition layer. The time required to complete this phase of site operation will depend on the physical characteristics of the sediment, as well as climatic conditions (e.g. rainfall, relative humidity, season, etc.). During the entire dewatering phase of the site operation, the weirs must be operated to control the release of residual water and impounded stormwater. The clarified effluent will be routed by culvert or ditch from the terminus of the outlet manifold to the ICWW.

## 4.2 Grading the Deposition Material

Following the completion of dewatering, the deposition material must be graded to prepare for the next dredging operation. The grading should consist primarily of distributing the mounded coarser sediment (sand, shell, gravel, etc.) over the remainder of the containment area to reestablish the initial uniform 0.17 percent downward slope from inlet to weir. Grading the mounded, coarse material over the entire containment basin affords additional benefits. Grading provides a free-draining substrate in the area of fine sediment deposition by separating successive depositions, thereby improving subsequent dewatering of this material. Distributing the mound of sand, shell, and gravel also reestablishes the effective plan area of the containment basin.

### 4.2.1 Control of Stormwater Runoff

Beyond simply preparing the site for the next dredging operation, grading of the dewatered deposition layer will provide several additional benefits. One is the control and release of stormwater runoff. A shallow, uniform slope toward the weirs will ensure adequate drainage and eliminate the ponding of runoff in irregular depressions. It will also minimize flow velocities and the risk of channelization and erosion. In compliance with regulatory policy, a sump or retention area of adequate capacity should be constructed adjacent to the weirs (with the weir flash boards in place) to retain the runoff from the first one inch of rainfall. For the Pablo Creek containment basin interior area of 83.27 acres (from the dike crest centerline inward), a circular basin with a radius of 178 ft and an average depth of 3.0 ft will provide a retention pond with the required minimum capacity of approximately 304,461 ft<sup>3</sup>. However, maintaining the weir crests above this minimum elevation is preferred. A site operator would then be responsible for the gradual release of the ponded runoff at intervals determined by local weather conditions. Providing shallow trenches or swales from the center of the retention basin to one or more weir sections may also be necessary to facilitate the rapid removal of runoff.

As discussed (Section 3.1), the clarified run-off will be transported via a culvert/ditch system from the terminus of the outlet manifold to an appropriate point of release by the most direct on-site route. However, construction details (required slope, culvert size, etc.) will be deferred to the final design phase of site development.

#### 4.3 Material Rehandling/Reuse

As discussed in Section 1.0, the Pablo Creek site is one of eight dredged material management areas being developed to serve the long-term maintenance requirements of the ICWW within Duval County. Throughout this report, as well as the accompanying permit documentation, it has been emphasized that although each site has been designed for a specific service life, the site is to be operated as a permanent facility for the intermediate storage and rehandling of dredged material. To fulfill this intended use, at some point the dewatered material must be removed off-site. The ultimate use of this material is discussed in the following paragraphs.

Based on a comprehensive analysis of dredging records, the bulked disposal volume projected over the 50-year design service life of the eight Duval County facilities is approximately nine million cy of predominantly fine to medium quartz sand. Although relatively minor by the standards of some dredging operations, this volume still represents a significant quantity of potentially valuable construction material. Even if the possible return on the sale of this material were disregarded, the cost saving of permanent storage alone would justify a concentrated effort on the part of the State of Florida to determine through a formal market analysis the potential demand for dewatered dredged material.

If such an analysis determines that material resale and/or reuse is practical, it must then be demonstrated that the engineering properties of the dredged material satisfy the requirements of commercial interests. It is anticipated that much of the material can be used "as is," having been partially segregated through differential settling. However, the feasibility of compartmentalized segregation of material during dredging or mechanical separation following dewatering should be explored if market conditions dictate. Portions of the material determined to be unsuitable for fill or other construction purposes because of high organic silt or clay content might be used for landfill capping or agricultural purposes.

If market analysis determines that resale or reuse is not feasible, locating and developing a centralized permanent storage facility will be necessary. The appropriate location for such a facility would appear to be inland where lower real estate values and development potential make permanent storage more economically feasible. The optimal distance from the initial containment area to the permanent storage site would represent a compromise between lower land costs and higher transportation costs.

#### 4.4 Monitoring of Containment Area Performance

Monitoring of the containment area between successive dredging events will include two topographic surveys of the deposition surface. First, a post-dredging survey should be performed as soon as possible following the completion of material dewatering operations and initial grading of the deposition surface. From this, a refined estimate of the quantity of material deposited can be obtained. Second, a pre-dredging survey should be performed prior to the start of the next dredging operation. Used in combination with information obtained from the previous post-dredging survey, the pre-dredging survey will establish the amount of material consolidation and remaining site capacity.

In conjunction with the monitoring of material consolidation, a series of core borings taken after the completion of de-watering will further define the progress of consolidation. Core borings will also provide a means to determine the engineering properties of the dewatered material and its suitability for reuse. Samples will be analyzed for grain size distribution, Atterberg limits, moisture and organic content, and other sediment characteristics which may affect its marketability.

#### 4.5 Monitoring of Habitat and Vegetation

A primary consideration in the design and operational guidelines for the Pablo Cree<sup>1</sup> site is the desire to limit adverse impacts to on-site vegetation communities and habitat due to the construction and operation of the dredged material management facility. Towards this end, the containment basin footprint, as shown in Figure 2-2 and discussed in Section 2.1, is limited to the disturbed central portion of the site where vegetation consists mainly of planted pine.

Notwithstanding the above, additional biological monitoring will be required within the buffer zone which lies outside the containment area. A comprehensive environmental survey of these areas will be completed prior to any construction to establish baseline habitat and vegetation conditions. Periodic resurveys should then continue throughout the service life of the site. Degradation of habitat related to saltwater intrusion, the interruption of natural drainage patterns, groundwater impacts, or other aspects of site construction or operation should be noted, corrective actions taken, and guidelines developed to minimize further adverse impact. Similarly, any beneficial aspects of site management should be recognized and encouraged, and the lessons learned should be applied to the future operation of this and other comparable dredged material management areas.

#### 4.6 Monitoring of Groundwater

As discussed in Sections 2.4 and 3.5, a groundwater monitoring program will be implemented at the Pablo Creek site to detect saline water migration from the containment basin into the local groundwater. The need to monitor groundwater is most critical while dredging and dewatering operations are in progress. However, sample collection and analysis will also be carried out between dredging events as part of the site operator's regular inspection routine.

After all ponded water resulting from the previous dredging operation has been released, a period of post-dredging sample collection will begin. During this period, groundwater samples will be collected and analyzed monthly for the first year following the cessation of dredging operations and quarterly thereafter unless otherwise needed. More frequent sampling intervals may be involved should conditions warrant. Should elevated chloride levels be detected at any time, the source will be determined. If the containment basin is the source, corrective actions will be taken. These may include the installation of a system of well points around the dike to reverse groundwater flow. Effluent from the well point system shall be routed to the ICWW. If the chlorides originate from a source external to the Pablo Creek facility (i.e. intrusion caused by off-site groundwater demand), the proper authorities will be notified.

#### 4.7 Mosquito Control

The basic approach of the mosquito control program for the Pablo Creek site will emphasize physical rather than chemical control. The time during which standing water remains inside the containment area will be kept to a minimum, thereby reducing the potential for mosquito breeding. The phase of operation most favorable for breeding occurs during the dewatering of sediment when desiccation cracks form in the crust as the fine sediment deposits shrink through evaporative drying. Trenching procedures (Section 4.1) will accelerate the dewatering process by allowing much of the moisture within the cracks to drain to the weirs. However, adverse climatic conditions could delay the dewatering phase long enough to result in successful breeding within the desiccation cracks. This would require a short-term spray program coordinated through the local mosquito control authority.

#### 4.8 Site Security

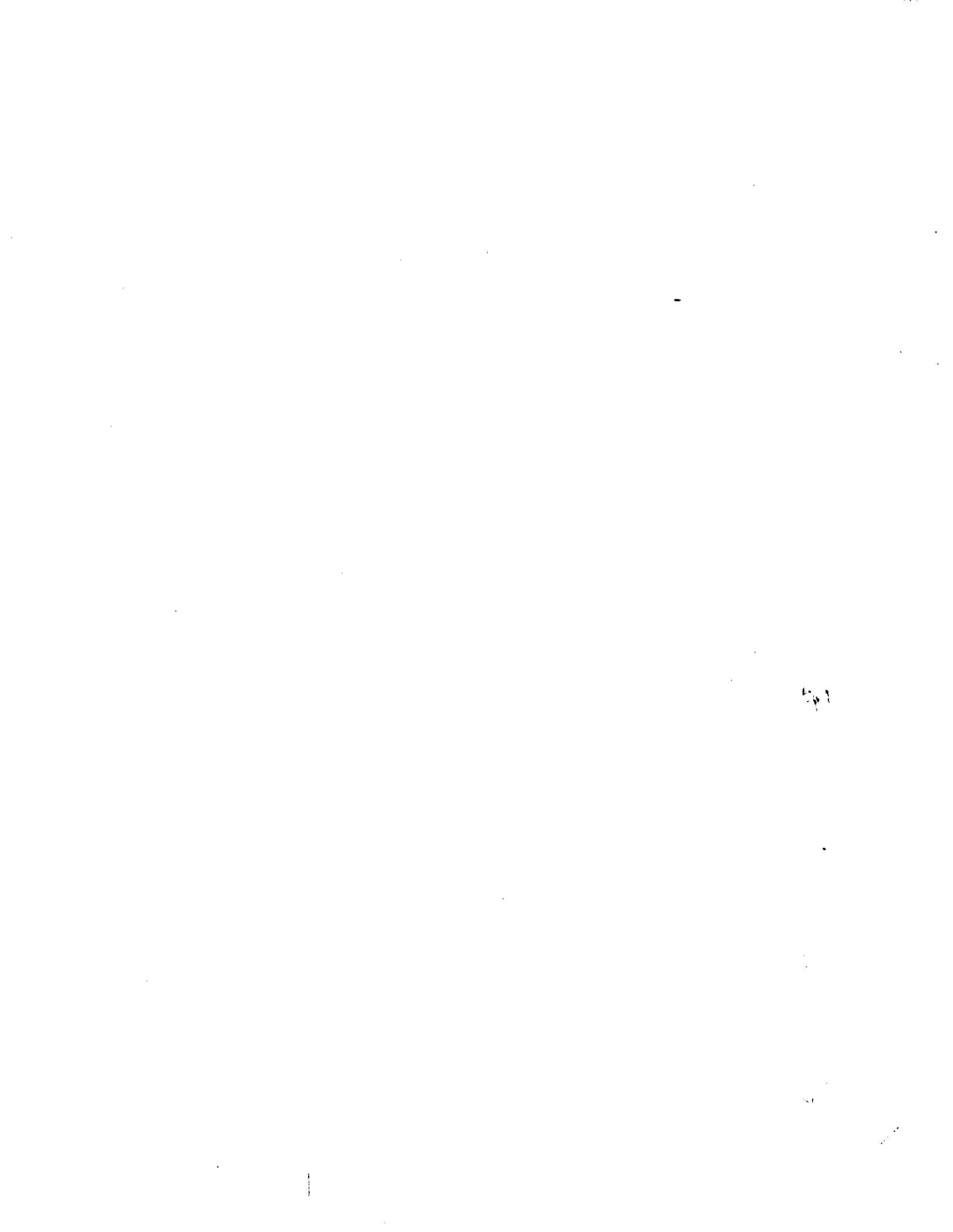
A key element in the proper management of the Pablo Creek site is the provision of adequate site security. Dredged material containment areas have typically been subject to a variety of unauthorized activities including illegal dumping, vandalism, hunting, and the destruction of dikes through the use of off-road vehicles. The occurrence of such activities on the Pablo Creek site will be controlled by the installation of security fencing around the entire site perimeter. Access to the site will at all times be limited to agents and representatives of the FIND and the Jacksonville District Corps of Engineers. Containment area access gates will remain locked at all times except during dredging and maintenance operations. The presence of an on-site operator during all phases of active dredging and de-watering operations should further discourage unauthorized entry to the site and the occurrence of non-sanctioned activities. Between operations the site operator will be responsible for carrying out regularly scheduled inspections. The primary purpose of these inspections will be to perform routine operational functions and to ensure that the security of the facility is maintained. Breaches in site security will be identified and appropriate actions will be taken as quickly as possible to restore the site to a fully operational standby condition. Other responsibilities of the operator during these visits will include weir operation and stormwater release, monitoring of stormwater effluent quality and groundwater monitoring wells, as well as the performance of routine inspections of dike integrity and buffer area conditions.

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APPENDIX IV

ENDANGERED SPECIES CONSULTATION





# Water and Air Research, Inc.

CONSULTING ENVIRONMENTAL ENGINEERS, SCIENTISTS AND PLANNERS

6821 S.W. ARCHER RD. • P. O. BOX 140307 • GAINESVILLE, FL 32614-0307 • TEL. (904) 372-1500 • FAX 378-1500

December 22, 1992  
WAR No. 92-5195

Dr. Bruce Taylor  
Taylor Engineering, Inc.  
9086 Cypress Green Drive  
Jacksonville, Florida 32256

Re: Red Cockaded Woodpecker Survey

Dear Bruce:

On December 21, 1992, Ray E. Ashton, Jr. and I surveyed portions of the Pablo Creek Alternative 2 Site (extended southerly) for the presence of Red-cockaded woodpeckers and nest cavities. No Red-cockaded woodpeckers, sign or nest cavities were observed anywhere on the proposed dredged material management site.

Our survey methodology consisted of a two-tiered approach. First, all pine habitat on site was visited and spot checked for the presence of suitability sized longleaf pine. Second, those areas having longleaf pine greater than 8" dbh were surveyed by pedestrian transects. Two biologists traversed the pine stand on parallel transects approximately 200' apart. Each biologist surveyed the same pine stand visually from opposite sides thereby viewing the pine trees from two sides.

Trees were checked for nest cavities, pine sap rings, pecker holes from insect foraging and the presence of birds.

The attached map shows areas where the second stage surveys were conducted.

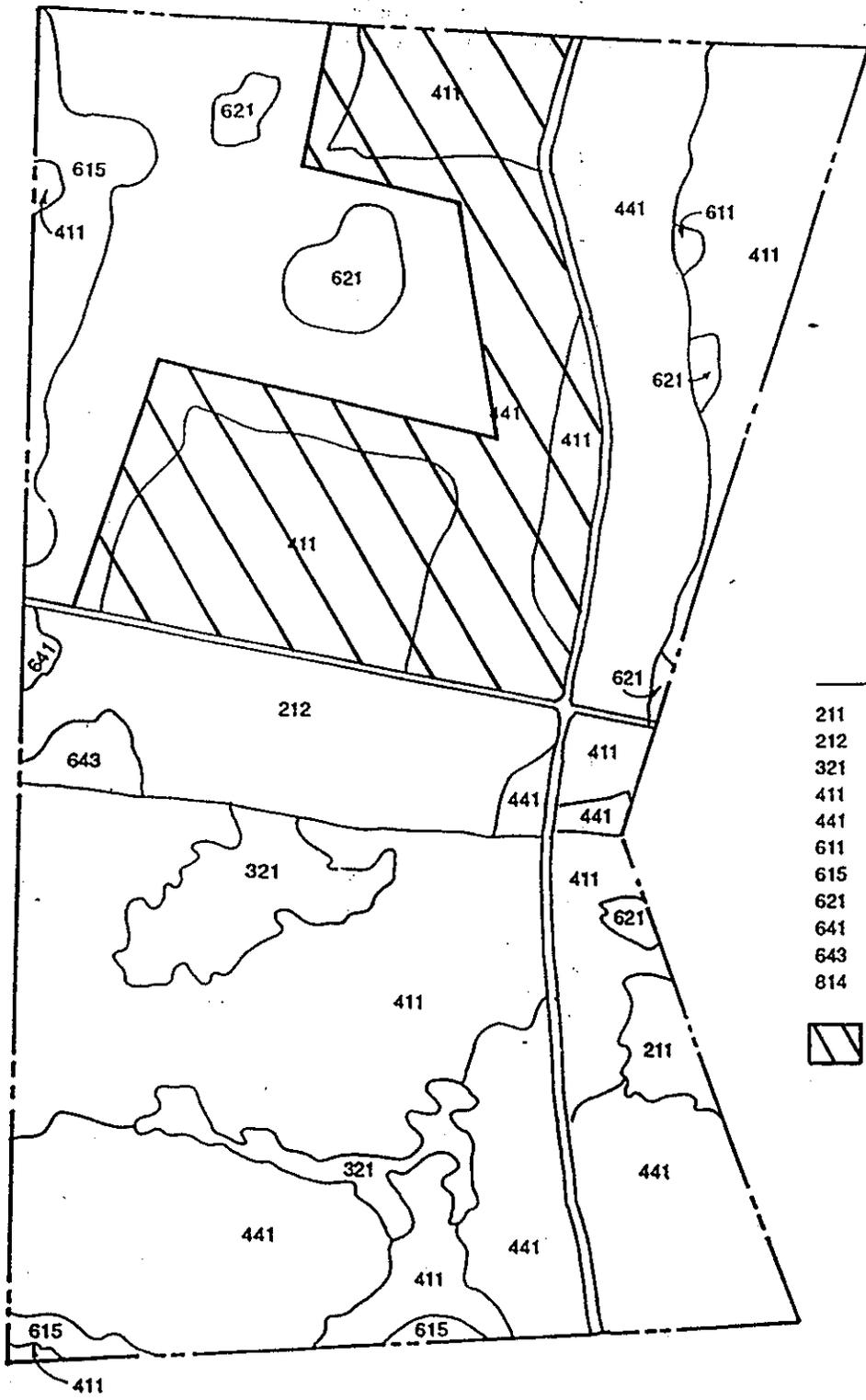
If you have any questions about this survey, please contact me or Ray Ashton.

Sincerely,

WATER AND AIR RESEARCH, INC.

E. Lynn Mosura  
Senior Scientist

ELM:ljc



LEGEND

- 211 Improved Pasture
- 212 Unimproved Pasture
- 321 Palmetto Prairie
- 411 Pine Flatwoods
- 441 Coniferous Plantation
- 611 Bay Swamp
- 615 Stream and Lake Swamp
- 621 Cypress
- 641 Freshwater Marsh
- 643 Wet Prairie
- 814 Roads and Highways



Areas Surveyed for Red-cockaded Woodpeckers and Sign. (Second Stage Survey) 12/21/92

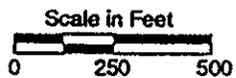


FIGURE 3-1.  
Land Use and Vegetation of Pablo Creek Alternative 2 Dredged Material Management Area (extended southerly), St. Johns County, Florida.



October 13, 1994

Environmental Branch  
Planning Division

Mr. David J. Wesley  
Field Supervisor  
U.S. Fish and Wildlife Service  
Suite 310  
6620 Southpoint Drive South  
Jacksonville, Florida 32216

Dear Mr. Wesley:

This is in reference to the construction of a new disposal area, Pablo Creek Dredged Material Management Area DU-9 Alt. 2 (see enclosed map), in conjunction with maintenance dredging of the Atlantic Intracoastal Waterway.

In accordance with Section 7 of the Endangered Species Act (ESA), we request a list of those species which could be affected by this construction.

If you have any questions concerning this request, please do not hesitate to contact us.

Sincerely,

A. J. Salem  
Chief, Planning Division

Enclosure

10/13  
DeMarco/CESAJ-PD-ES  
Fonferek/CESAJ-PD-ES  
Kurzbach/CESAJ-PD-ES 10/13  
Smith/CESAJ-PD-E 10/13  
Salem/CESAJ-PD





# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

6620 Southpoint Drive, South  
Suite 310

Jacksonville, Florida 32216-0912

NOV 16 1994

A. J. Salem, Chief  
Planning Division  
U.S. Army Corps of Engineers  
P.O. Box 4970  
Jacksonville, FL 32232-0019

FWS Log No: 1-4-95-045C  
Dated: October 13, 1994  
Applicant: U.S. Army Corps of Engineers  
County: Brevard, Duval & St. Johns

Dear Mr. Salem:

Thank you for your letters of 13 October 1994 requesting information on potential impacts from the proposed construction of new disposal areas in conjunction with maintenance dredging of the Intracoastal Waterway.

Section 7 (a)(2) of the Endangered Species Act of 1973, as amended (Act), requires Federal agencies to ensure that their actions do not jeopardize the continued existence of listed species or destroy or adversely modify critical habitat. The Federal agency responsible for authorizing, funding, or implementing an action is required to determine whether listed species, proposed species, critical habitat, or proposed critical habitat may be present in the area that would be influenced by that action. If such species or habitat may be present, the Federal agency is required to determine whether the action may affect such species or habitat. To make such a determination the following information should be included in the biological information report:

1. The results of an on-site inspection of the areas affected by the action.
2. The views of recognized experts on the species at issue.
3. A review of the literature and other information.
4. An analysis of the effects of the action on the species and habitat, including consideration of cumulative effects, and the results of any related studies.



5. An analysis of alternate actions considered by the Federal agency for the proposed action.

If a determination is made that listed species or critical habitat may be affected, the Federal agency must request formal consultation with the Fish and Wildlife Service. If the proposed action is likely to jeopardize the continued existence of proposed species or result in the destruction or adverse modification of proposed critical habitat, the Federal agency must confer with the Fish and Wildlife Service.

If the Federal agency determines that no listed species, proposed species, critical habitats or proposed critical habitats occur in the area of project influence, or there would be no effect on such species or habitats, this office requests the opportunity to review the information on which such determinations are based, and to concur with those determinations.

Section 7(d) of the Act underscores the requirement that the Federal agency and permit or license applicant shall not make any irreversible or irretrievable commitment of resources during the consultation period which, in effect, would deny the formulation or implementation of reasonable alternatives regarding their actions on listed species.

In our review of the project description maps provided, federally listed species may occur in habitats identified by your letters. Data on site specific locations are limited. Understandably, the potential of occurrence increases within habitats designated for listed species, such as the occurrence of the West Indian manatee in tributaries of the St. John's River and/or the Atlantic Intracoastal Waterway. Therefore, your office may have to make a site specific determination of occurrence. Additionally, we would be concerned with any project-related impacts occurring in wetlands. As per your request, I have enclosed a list of federally designated species for the referenced counties. For additional information, you may wish to contact Mr. Don Wood, Endangered Species Coordinator, Florida Game & Fish Commission, 620 Meridian Street, Tallahassee, FL 32399-1600.

If you have further questions, please contact Marc Epstein at 904-232-2580.

Sincerely yours,



for Michael M. Bentzien  
Acting Field Supervisor

Enclosure



FLORIDA

FEDERALLY LISTED THREATENED AND ENDANGERED SPECIES,  
AND CANDIDATE SPECIES

January 1994

COUNTY: DUVAL

Bat, Rafinesque's Big-eared = Southeastern	<i>Plecotus rafinesquii</i>	C2
Bear, Florida Black	<i>Ursus americanus floridanus</i>	C2
Butterfly, Sweadner's Olive Hairstreak	<i>Mitoura gryneus sweadneri</i>	C2
Crayfish, Black Creek	<i>Procambarus pictus</i>	C2
Crownbeard, Variable-leaf	<i>Verbesina heterophylla</i>	C2
Eagle, Bald	<i>Haliaeetus leucocephalus</i>	E
Frog, Florida Crawfish = Gopher	<i>Rana areolata aesopus</i>	C2
Groove-bur, Incised	<i>Agrimonia incisa</i>	C2
Kestrel, Southeastern	<i>Falco sparverius paulus</i>	C2
Ladies-tresses, Green	<i>Spiranthes polyantha</i>	C2
Manatee, West Indian	<i>Trichechus manatus latirostris</i>	E/CH
Milkweed, Florida	<i>Matelea floridana</i>	C2
Milkweed, Southern	<i>Asclepias viridula</i>	C2
Plover, Piping	<i>Charadrius melodus</i>	T
Rail, Black	<i>Laterallus jamaicensis</i>	C2
Salamander, Flatwoods	<i>Ambystoma cingulatum</i>	C2
Sandgrass, Curtiss'	<i>Calamovilfa curtisii</i>	C2
Skipper, Eastern Beard Grass	<i>Atrytone arogos arogos</i>	C2

FLORIDA

FEDERALLY LISTED THREATENED AND ENDANGERED SPECIES,  
AND CANDIDATE SPECIES

January 1994

Snake, Eastern Indigo	<i>Drymarchon corais couperi</i>	T
Snake, Florida Pine	<i>Pituophis melanoleucus mugitus</i>	C2
Sparrow, Bachman's	<i>Aimophila aestivalis</i>	C2
Squirrel, Sherman's Fox	<i>Sciurus niger shermani</i>	C2
Stork, Wood	<i>Mycteria americana</i>	E
Sturgeon, Shortnose	<i>Acipenser brevirostrum</i>	E
Sunflower, Lake-side	<i>Helianthus carnosus</i>	C2
Tortoise, Gopher	<i>Gopherus polyphemus</i>	C2
Turtle, Green Sea	<i>Chelonia mydas</i>	T
Turtle, Hawksbill Sea	<i>Eretmochelys imbricata</i>	E
Turtle, Kemp's Ridley Sea	<i>Lepidochelys kempii</i>	E
Turtle, Leatherback Sea	<i>Dermochelys coriacea</i>	E
Turtle, Loggerhead Sea	<i>Caretta caretta</i>	T
Woodpecker, Red-cockaded	<i>Picoides borealis</i>	E

June 19, 1995

Planning Division  
Environmental Branch

Mr. David J. Wesley  
Field Supervisor  
U.S. Fish and Wildlife Service  
6620 Southpoint Drive South, Suite 310  
Jacksonville, Florida 32216

Dear Mr. Wesley:

This is in reference to the construction of a new disposal area, Pablo Creek Dredged Material Management Area DU-9 Alt. 2, in conjunction with maintenance dredging of the Atlantic Intracoastal Waterway.

We have made a "No Effects" determination concerning the impacts of the proposed construction on Wood storks and red cockaded woodpeckers. Although wood storks have been known to fly over the site and a wood stork rookery is located about one mile west of the site, these birds do not nest on the site.

A survey for the presence of red cockaded woodpeckers was conducted by Florida Inland Navigation District biologists on December 12, 1992. Biologists first visited the site and checked for suitable longleaf pine woodpecker habitat. Those areas with suitable habitat were then surveyed by pedestrian transect. The biologists found no woodpeckers, sign, or nest cavities anywhere on the site.

Therefore, pursuant to Section 7 of the Endangered Species Act, we are asking for your concurrence in our no effects determination for these species. Enclosed is the site documentation for the subject project.

Sincerely,

A. J. Salem  
Chief, Planning Division

Enclosure

DeMarco/CESAJ-PD-ER/ljd  
Bonferek/CESAJ-PD-E  
Rugger/CESAJ-PD-ER  
Smith/CESAJ-PD-E  
Salem/CESAJ-PD

L:\GROUP\PDE\DU-9-ALT.2\WESLEY





# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

6620 Southpoint Drive, South  
Suite 310

Jacksonville, Florida 32216-0912

JUL 18 1995

Mr. A.J. Salem  
Chief, Planning Division  
U.S. Army Corps of Engineers  
P.O. Box 4970  
Jacksonville, Florida 32232-0019

FWS Log No: 4-1-95-369D

Dear Mr. Salem:

This responds to your letter of June 19, 1995, pursuant to Section 7 of the Endangered Species Act of 1973, as amended (Act)(16 U.S.C. 1531 *et seq.*). The Corps evaluated the impact this project would have on the red-cockaded woodpecker (*Picoides borealis*) and wood stork (*Mycteria americana*), and determined no effect for each species.

The Corps proposes to construct a new 180-acre disposal site, DU-9, 0.5 mile south of Pablo Creek and west of the Intracoastal Waterway, St. Johns County. The site consists of 1.6 acres of improved pasture, 13.8 acres of unimproved pasture, 7.2 acres of palmetto prairie, 61 acres of pine flatwoods, 82 acres of planted pine, 11 acres of wetlands, and 2.9 acres of roadways. The containment basin and perimeter ditch will occupy 102 acres. The remaining acreage will remain as a buffer.

The consultants surveyed the site for the presence of the above listed species. No listed species were found on the site; however, there is a wood stork rookery located approximately one mile west of the site. This rookery is the largest wood stork rookery in northeast Florida.

The conversion of this site from an undeveloped area to a disposal site will not affect the wood stork. We anticipate wood storks will be frequently observed within this general area once the disposal site is used because the containment basin will provide an alternative feeding site for this species. In the process of dredging the ICW, invertebrates and fish, the primary food source for wood storks, will be sucked up by the dredged and piped to the containment basin.

The report did not discuss the time of year the containment basin would be constructed. Wood storks nest from May through July. The Service's wood stork management guidelines identifies primary and secondary zones to protect rookery sites. The primary zone has a radius between 500-1,500 feet, and the secondary zone is an additional 1,000-2,000 feet from the

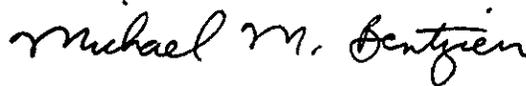
edge of the primary zone. While the disposal site is located about one mile from the rookery, we recommend that no construction be done from May 1 through July 31. The reason is that heavy equipment will be required to construct the containment basin, and construction outside of the breeding window will minimize disturbance.

Based on our review of the information contained in the report, the Service believes this disposal site is not likely to adversely affect the above listed species.

Although this does not represent a Biological Opinion as described in Section 7 of the Act, it does fulfill the requirements of the Act and no further action is required. If modifications are made in the project or additional information becomes available on listed species, reinitiation of consultation may be required.

We want to take this opportunity to also comment on potential wetland impacts that may occur as a result of this project. In the information provided, approximately 11 acres of wetlands are found on-site. There was no information in the report indicating how many acres of wetlands will be affected by the containment basin and perimeter ditch. We recommend that the Corps develop a mitigation plan to offset the anticipated wetland loss. We request the opportunity to review the mitigation plan.

Sincerely yours,



Michael M. Bentzien  
Assistant Field Supervisor

APPENDIX V

PUBLIC COORDINATION





DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT CORPS OF ENGINEERS  
P. O. BOX 4970  
JACKSONVILLE, FLORIDA 32232-0019

JUL 13 1995

REPLY TO  
ATTENTION OF

Construction-Operations Division  
Public Notice Number PN-SPH-203

PUBLIC NOTICE

TO WHOM IT MAY CONCERN: The District Engineer, Jacksonville District, U.S. Army Corps of Engineers, has been working with the Florida Inland Navigation District (FIND) to develop sites suitable for placement of material dredged from the Intracoastal Waterway (IWW). FIND, being the local sponsor for the IWW, has prepared a Long-Range Dredged Material Management Plan for the IWW for Northeast Florida (which includes St. Johns County). This Plan predicts the 50 year dredging requirements and identifies preferred sites for placement of material dredged from the IWW. These sites are referred to as Dredged Material Management Areas (DMMA's). Development of these DMMA's initially includes acquiring the lands necessary and obtaining the appropriate environmental clearances to use these sites. The sites are then cleared and grubbed, graded if necessary, and fenced. Dikes with weir structures are then constructed when required or when funding becomes available. Material dredged from the IWW will be deposited into the DMMA's. After the material is dried out, it will be removed, thus recycling a valuable resource. This public notice includes all efforts to fully develop and operate two DMMA's, designated SJ-14 and DU-9 (Palm Valley and Pablo Creek).

The dike construction has been authorized by the Environmental Protection Agency's National Pollution Discharge Elimination System, Storm Water General Permit pursuant to Section 402 of the Clean Water Act. Full compliance with the General Permit requires preparation of an Environmental Protection Plan and submittal with a Notice of Intent to construct.

If a Water Quality Certificate is required, an application will be forwarded to the State of Florida Department of Environmental Protection pursuant to Section 401 of the Clean Water Act of 1977. This Federal project is being evaluated and coordinated pursuant to 33 CFR 335 through 338.

Wetlands impacted by the clearing and grubbing of the DMMA's will be mitigated, preferably on-site, but if not, on nearby property.

Comments regarding the project should be submitted in writing to the District Engineer at the above address within 30 days from the date of this notice. Any person who has an interest which may be affected by the construction of this project may request a public hearing. The request must be submitted in writing to the

District Engineer within 30 days of the date of this notice and must clearly set forth the interest which may be affected and the manner in which the interest may be affected by this activity.

If you have any questions concerning this public notice, you may contact Mr. Donald Fore of this office, telephone 904-232-3729.

WATERWAY & LOCATION: Intracoastal Waterway (IWW) Jacksonville to Miami, Florida (St. Johns County). Both sites are located west of the IWW in St. Johns County, as shown on the attached area and site plans.

WORK & PURPOSE: The proposed work will be done in two phases. Phase one will be the routine clearing and grubbing and grading of SJ-14 and DU-9. Grading of the site may be required. Phase two will be the construction of the dikes. These dikes are detailed in the attached conceptual drawings, and their purpose is to retain the material dredged from the IWW.

PROJECT AUTHORIZATION: Intracoastal Waterway Jacksonville to Miami, Florida - House Document 740, 79th Congress, 2nd Session, modified by Chief of Engineers Report 22 July 1960.

EVALUATION: An environmental assessment is being prepared to evaluate the impacts of the project. A preliminary environmental evaluation indicates that the proposed action would have no significant impact on the quality of the human environment and an Environmental Impact Statement pursuant to the National Environmental Policy Act (NEPA) is not required. A final determination will be made when all comments are reviewed. The appropriate NEPA documents will be made available upon request.

APPLICABLE LAWS: The following laws are, or may be, applicable to the review of the proposed disposal sites and to the activities affiliated with this Federal project:

1. Section 404 of the Clean Water Act of 1977 (PL 95-217) (33 U.S.C. 1344).
2. Section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972 (PL 92-532) (33 U.S.C. 1413, 86 Stat. 1052).
3. Section 302 of the Marine Protection, Research, and Sanctuaries Act of 1972 (PL 92-532, 86 Stat. 1052).
4. The National Environmental Policy Act of 1969 (PL 91-190) (42 U.S.C. 4321-4347).
5. Sections 307(c) (1) and (2) of the Coastal Zone Management Act of 1972 (16 U.S.C. 1456 (c)(1) and (2), 86 Stat. 1280).

6. The Fish and Wildlife Act of 1956 (16 U.S.C. 472a et seq.).

7. The Migratory Marine Game-Fish Act of 1959 (16 U.S.C. 760c-760g).

8. The Fish and Wildlife Coordination Act of 1958 (16 U.S.C. 661-666c).

9. The Endangered Species Act of 1973 (PL 93-205) 16 U.S.C. 668aa-668cc-6, 87 Stat. 884).

10. The National Historic Preservation Act of 1966 (16 U.S.C. 470, 80 Stat. 915).

11. Section 313 of the Clean Water Act of 1977 (33 U.S.C. 1323, 82 Stat. 816).

COASTAL ZONE MANAGEMENT: The proposal has been evaluated in accordance with the Florida Coastal Zone Management Act and was determined to be consistent with the goals and intent of the appropriate State statutes. This determination is based on the Preliminary Environmental Assessment and the Coastal Zone Consistency Determination. Full compliance will be achieved by issuance of the necessary permits from the State.

ENDANGERED SPECIES: Consultation with the National Marine Fisheries Service and the U.S. Fish and Wildlife Service pursuant to Section 7 of the Endangered Species Act has been conducted. Based on our evaluation a "No Effects" determination has been made for species listed as threatened or endangered pursuant to the Act.

OTHER IMPORTANT RESOURCES: Other important resources considered in the environmental assessment will include wetlands. Some isolated wetlands (2.7 acres at Pablo Creek and 6.5 acres at Palm Valley) would be filled as a result of Phase II construction. Federal policy requires no net loss of wetland values. Any mitigation required to offset impact to these wetlands would be determined during final project design.

Another important resource considered in the environmental assessment is historical resources. Through coordination with the State Historic Preservation Officer it was determined that no known archeological or historical resources would be affected by construction of SJ-14 and DU-9.

EVALUATION FACTORS: All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs,

safety, food and fiber production, mineral needs, consideration of property ownership and, in general, the needs and welfare of the people.

DISSEMINATION OF NOTICE: You are requested to communicate the information contained in this notice to any other parties whom you deem likely to have an interest in this matter.

COORDINATION: This notice is being sent to, and coordinated with, the following agencies:

FEDERAL AGENCIES:

Federal Highway Administration, Room 2015, Tallahassee, FL  
Commanding Officer, 7th Coast Guard District, Miami, FL  
Regional Director, U.S. Fish & Wildlife Service, Atlanta, GA  
Dir Atlantic Marine Center, Hydro Process Unit, Norfolk, VA  
N. M. F. S., Habitat Conservation Division, St Petersburg, FL  
Regional Hydrologist, NOAA, Nat. Weather Service, Fort Worth, TX  
N. M. F. S., Habitat Conservation Division, Panama City, FL  
Field Supervisor, U.S. Fish & Wildlife Service, Vero Beach, FL  
Postmaster, General Delivery, Jacksonville, FL  
Nat Park Service, Ft Caroline Nat Memorial, Jacksonville, FL  
Postmaster, General Delivery, Neptune Beach, Jacksonville, FL  
Postmaster, General Delivery, Jacksonville, FL  
Postmaster, General Delivery, Jax Beach, Jacksonville, FL  
District Chief, U.S. Geological Survey, WRD, Tallahassee, FL  
Office of Federal Activity, E.P.A. Office, Washington, D.C.  
U.S. Geological Survey, Spalding Woods Office, Norcross, GA  
Regional Director, National Park Service, SE Region, Atlanta, GA  
Federal Energy Regulations, Atlanta Regional Office, Atlanta, GA  
U.S. E.P.A. Fed Act, Branch NEPA Review, ENV Policy, Atlanta, GA  
N.O.A.A. National Oceanic Service (C-GC-2211), Rockville,  
MD., Commanding Officer, U.S. Coast Guard Base, Mayport, FL  
U.S. Dept of Interior, N.P.S., Atlanta, GA  
U.S. Coast Guard, Marine Safety Office, Jacksonville, FL

STATE AGENCIES:

Jacksonville City Council, Jacksonville, FL  
Mr Brett D. Moore, Dept of Natural Resources, Tallahassee, FL  
Division of Solid Waste Management, Admin Assist, Fort Myers, FL  
Executive Director, F.I.N.D., Jupiter, FL  
Executive Director, Dept Natural Resources, Tallahassee, FL  
Game & Fresh Water Fish Commission, T Champeau, Lakeland, FL  
Florida Game & Fresh Water Fish Commission, Tallahassee, FL  
Director Div of Archives, History & Records, Tallahassee, FL  
State Historic Pres. Officer, Div of Hist. Res., Tallahassee, FL  
Office of Environment DOT, Tallahassee, FL  
Off of The Secty, DNR Environmental Regulation, Tallahassee, FL  
Planning Manager of Submerged Lands DP, Tallahassee, FL  
Soil Conservation Service, Gainesville, FL  
Florida Times Union, City Editor, Jacksonville, FL

Florida Office of Entomology, William R. Opp, Jacksonville, FL  
Florida Dept of Nat Resources, Div of Beaches, Tallahassee, FL  
Florida Game & Fresh Water Fish Commission, Vero Beach, FL  
Department of Transportation, User Statistics, Tallahassee, FL  
Lucy Beebe, Fernandina News Leader, Fernandina Beach, FL  
Florida D.E.P., Office of Aquatic Preserves, Jacksonville, FL  
Board of County Commissioner, Pinellas County, Clearwater, FL  
Exec Dir, Florida Wildlife Federation, West Palm Beach, FL  
Lawton Chiles, Florida State Clearinghouse, Tallahassee, FL  
Captain Alan S. Richard, Florida Marine Patrol, Tallahassee, FL  
Bureau of State Planning, Div of Res Plan & Mgt, Tallahassee, FL

ENVIRONMENTAL ORGANIZATIONS:

Executive Director, Florida Audubon Society, Casselberry, FL

LOCAL GOVERNMENTS:

Board of Commissioners, St. Johns County

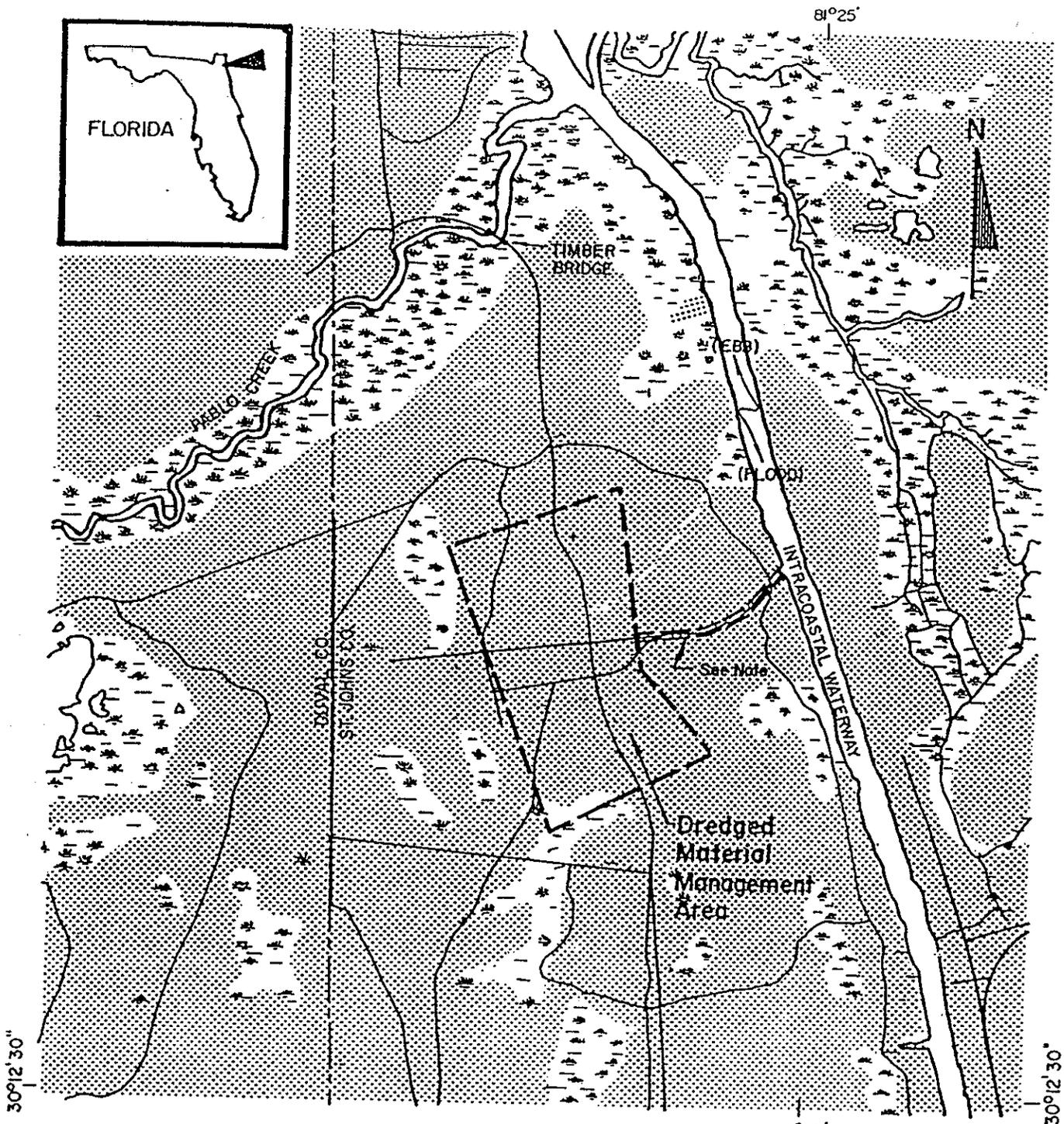
FOR THE COMMANDER:

*AGIRIAMO*  
AGIRIAMO DICHIARA  
Chief, Construction-Operations  
Division



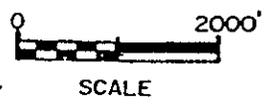


FLORIDA



**REFERENCES**  
 USGS PALM VALLEY QUAD-  
 RANGLE 1964, REVISED 1981

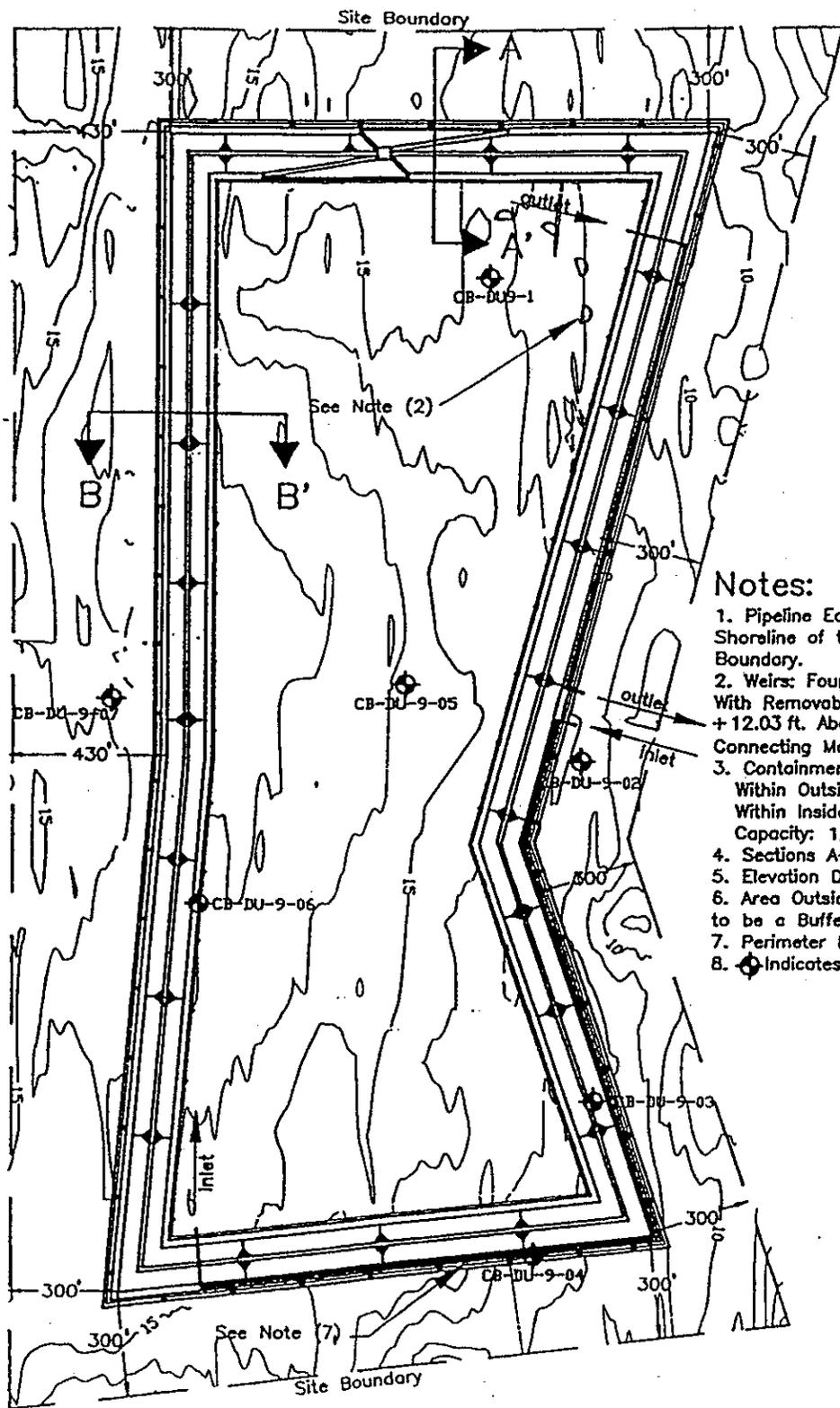
**NOTE:**  
 Approx. Location of Pipeline  
 Route, Which Follows Dirt  
 Road to R/W I.C.W.W.



TAYLOR ENGINEERING INC  
 9086 CYPRESS GREEN DRIVE  
 JACKSONVILLE FLORIDA 32216

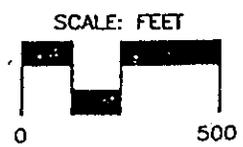
Location Map, Pablo Creek (DU-9)  
 Dredged Material Management Area  
 St. Johns County, Florida

PROJECT	CB610
REVISION	
SHEET	1 of 5
DATE	Nov., 1993



**Notes:**

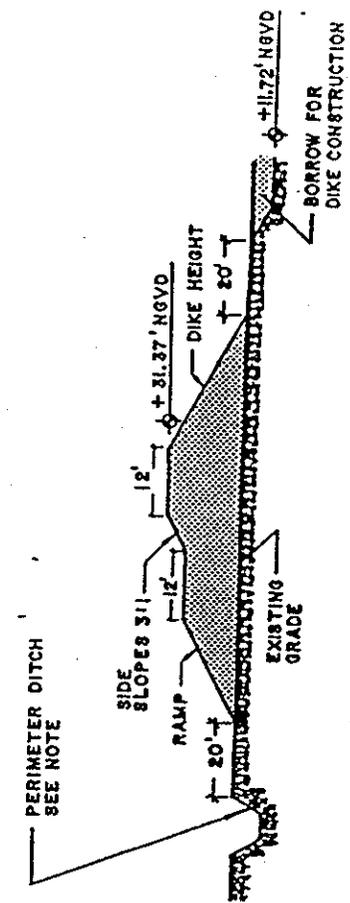
1. Pipeline Easement to Run From M.H.W. Shoreline of the I.C.W.W. to the Site Boundary.
2. Weirs: Four 9ft. Diameter CM Half-Pipe With Removable Flash Boards Adjustable (+12.03 ft. Above Grade to Below Grade Connecting Manifold.)
3. Containment Area:  
 Within Outside Toe of Dike: 96.0 Acres  
 Within Inside Toe of Dike: 72.3 Acres  
 Capacity: 1,877,073 Cubic Yards
4. Sections A-A', B-B', See Sheet 3 of 5.
5. Elevation Datum: NGVD of 1929.
6. Area Outside Dike Within Site Boundary to be a Buffer of Existing Vegetation.
7. Perimeter Ditch, See Sheet 3 of 5.
8. Indicates Core Boring Location.



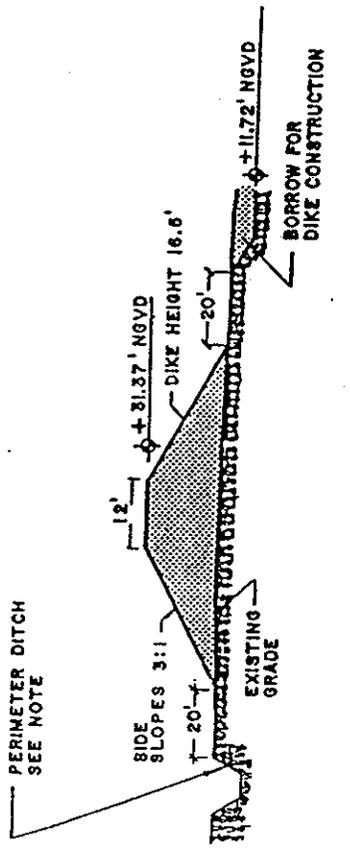

**TAYLOR ENGINEERING INC**  
 9086 CYPRESS GREEN DRIVE  
 JACKSONVILLE, FLORIDA 32256

Site Plan, Pablo Creek (DU-9)  
 Dredged Material Management Area  
 St. Johns County, Florida

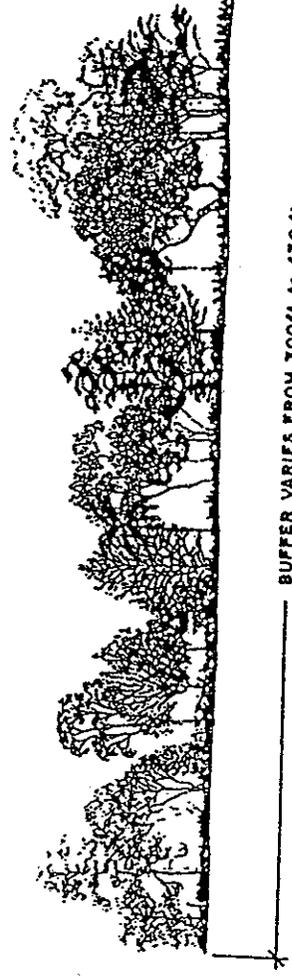
PROJECT	C8610
REVISION	
SHEET	2 of 5
DATE	Nov., 1993



SECTION A-A'  
N.T.S.



SECTION B-B'  
N.T.S.



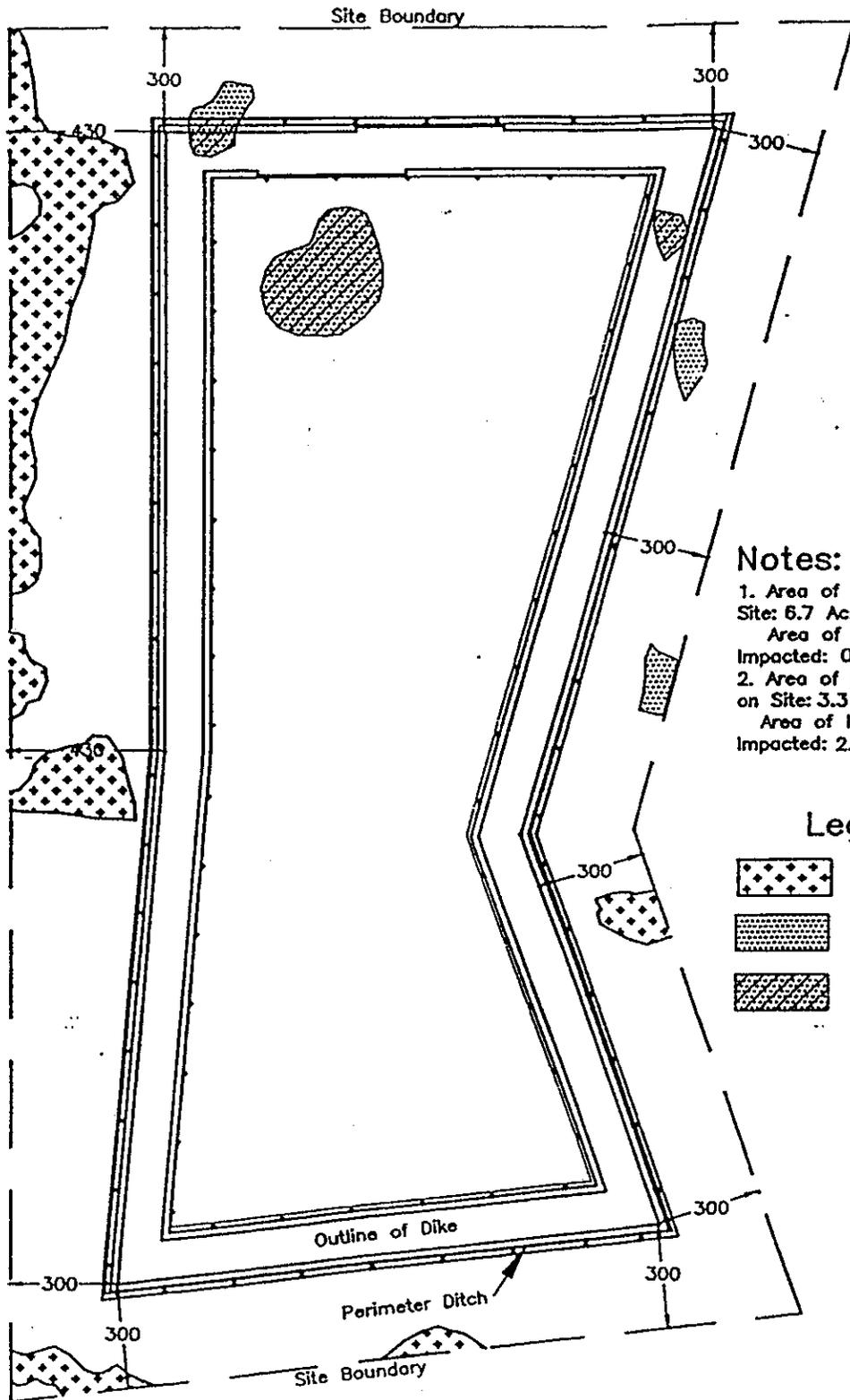
DISPOSAL AREA - VEGETATION PLAN  
N.T.S.

Note:  
PERIMETER DITCH,  
SIDE SLOPE: 3:1  
BOTTOM WIDTH: 3ft.  
MEAN INVERT ELEV.: 11.87' NGVD  
BOTTOM SLOPE AS REQUIRED  
FOR DRAINAGE

TAYLOR ENGINEERING INC  
9086 CYPRESS GREEN DRIVE  
JACKSONVILLE, FLORIDA 32256

Du-9  
Typical Dike and Ramp Sections, Vegetation Plan  
Pablo Creek, Dredged Material Management Area  
St. Johns County, Florida

PROJECT	C8610
REVISION	
SHEET	3 of 5
DATE	Nov., 1993

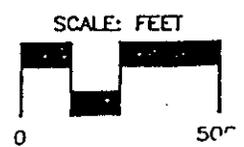


**Notes:**

- 1. Area of D.E.P. Wetlands on Site: 6.7 Acres  
Area of D.E.P. Wetlands Impacted: 0 Acres
- 2. Area of Isolated Wetlands on Site: 3.3 Acres  
Area of Isolated Wetlands Impacted: 2.7 Acres

**Legend**

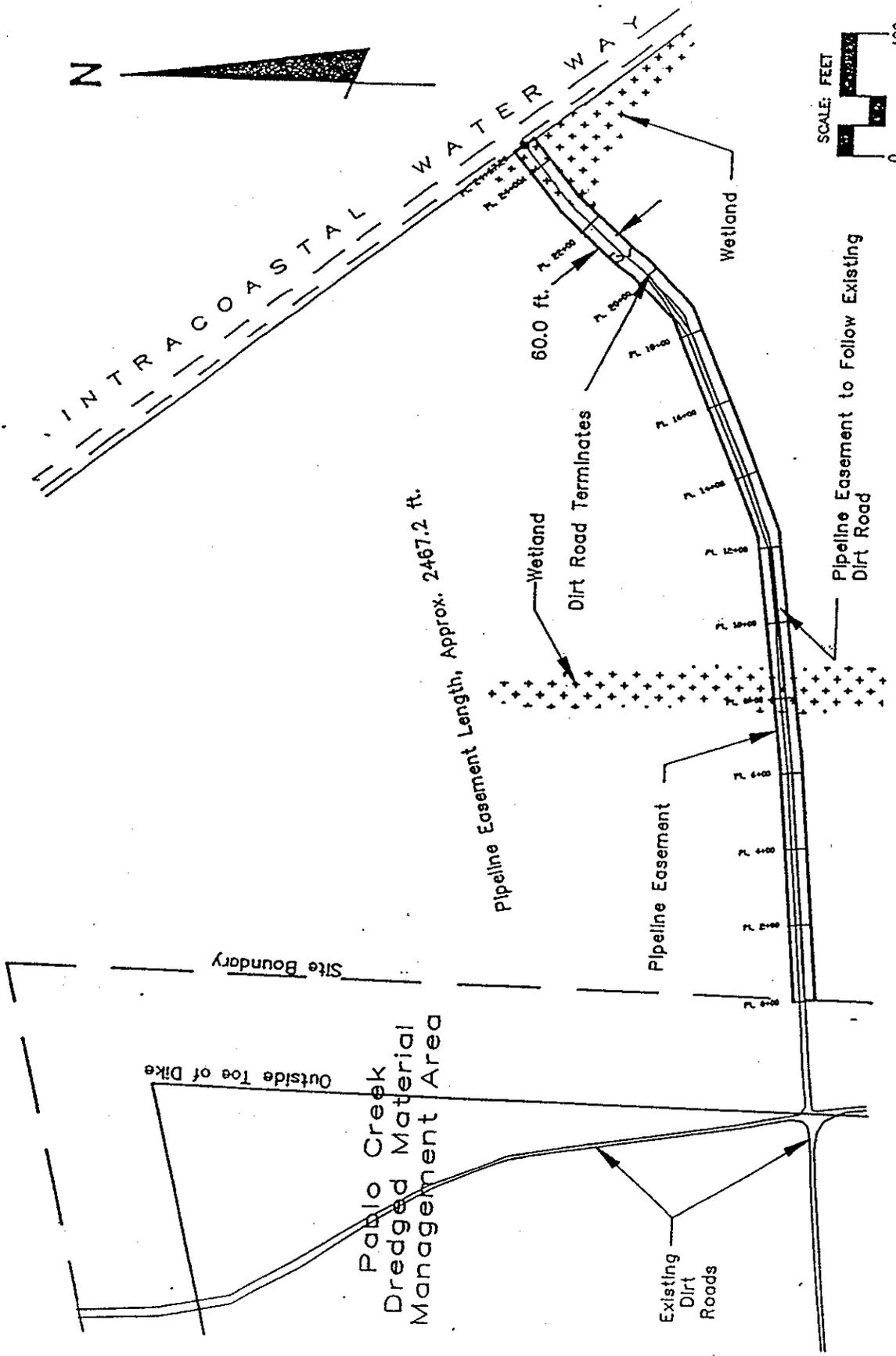
-  D.E.P. Wetlands
-  Isolated Wetlands
-  Impacted Isolated Wetlands



**TAYLOR ENGINEERING INC**  
9086 CYPRESS GREEN DRIVE  
JACKSONVILLE, FLORIDA 32256

**Wetlands Map, Pablo Creek (DU-9)**  
Dredged Material Management Area  
St. Johns County, Florida

PROJECT	CB610
REVISION	
SHEET	4 of 5
DATE	Nov., 1993



PROJECT	C8610
REVISION	
SHEET	5 of 5
DATE	

**DU-9**  
 Pipeline Easement Location, Pablo Creek  
 Dredged Material Management Area  
 St. Johns County, Florida

**TAYLOR ENGINEERING INC**  
 9086 CYPRESS GREEN DRIVE  
 JACKSONVILLE, FLORIDA 32256







STATE OF FLORIDA  
DEPARTMENT OF COMMUNITY AFFAIRS

EMERGENCY MANAGEMENT • HOUSING AND COMMUNITY DEVELOPMENT • RESOURCE PLANNING AND MANAGEMENT

LAWTON CHILES  
Governor

JAMES F. MURLEY  
Secretary

September 13, 1995

Mr. Donald Fore  
U.S. Army Corps of Engineers  
Jacksonville District  
Construction-Operations Division  
Post Office Box 4970  
Jacksonville, Florida 32232-0019

RE: Public Notice - Florida Inland Navigation District -  
Long-Range Dredged Material Management Plan for  
Atlantic Intracoastal Waterway (Northeast Florida) -  
St. Johns County, Florida  
SAI: FL9508100837C

Dear Mr. Fore:

The Florida State Clearinghouse, pursuant to Presidential Executive Order 12372, Governor's Executive Order 93-194, the Coastal Zone Management Act, 16 U.S.C. §§ 1451-1464, as amended, and the National Environmental Policy Act, 42 U.S.C. §§ 4321, 4331-4335, 4341-4347, as amended, has coordinated a review of the above-referenced project.

The Department of Environmental Protection (DEP) indicates that the above-referenced project will require an Environmental Resource Permit and may also require authorization for the use of sovereign submerged lands. Early coordination with the DEP may help to eliminate problems in the permitting process. In addition, the DEP recommends that the environmental assessment for the project include a thorough analysis of the project's potential impacts to listed species which occur in the project area; the impacts to adjacent water quality; and the alternatives for dredged material management. Please refer to the enclosed DEP comments for further discussion of these issues.

2740 CENTERVIEW DRIVE • TALLAHASSEE, FLORIDA 32399-2100

FLORIDA KEYS AREA OF CRITICAL STATE CONCERN  
FIELD OFFICE  
2796 Overseas Highway, Suite 212  
Tallahassee, Florida 32309-3337

SOUTH FLORIDA RECOVERY OFFICE  
P.O. Box 4022  
8600 N.W. 36th Street  
Miami Florida 33159-4022

GREEN SWAMP AREA OF CRITICAL STATE CONCERN  
FIELD OFFICE  
155 East Summerlin  
Bartow, Florida 33830-4641

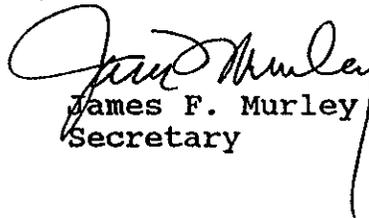
Mr. Donald Fore  
September 13, 1995  
Page Two

The St. Johns River Water Management District (SJRWMD) concurs that the project will require permits issued by the DEP. The SJRWMD also requests that it be consulted regarding mitigation plans for the two proposed disposal sites and during the identification and planning stages for future sites. Please refer to the enclosed SJRWMD comments.

The Department of Transportation indicates that the environmental assessment should include detailed information regarding the potential impacts of the project to state roadways, including plans for transporting the dredged materials from the two proposed disposal sites. Please refer to the enclosed DOT comments.

Based on the information contained in the notification and the enclosed comments provided by our reviewing agencies, the state has determined that, at this stage, the above-referenced project is consistent with the Florida Coastal Management Program (FCMP). All subsequent environmental documents prepared for this project must be reviewed to determine the project's continued consistency with the FCMP. The state's continued concurrence with the project will be based, in part, on the adequate resolution of the issues identified during this and subsequent reviews. All future documents prepared for this project must be submitted to the Florida State Clearinghouse for interagency review.

Sincerely,

  
James F. Murley  
Secretary

JFM/rk

Enclosures

cc: Lynn Griffin, Department of Environmental Protection  
Margaret Spontak, St. Johns River Water Management District  
Aage Schroder, Department of Transportation, District Two



# Department of Environmental Protection

Lawton Chiles  
Governor

Marjory Stoneman Douglas Building  
3900 Commonwealth Boulevard  
Tallahassee, Florida 32399-3000

Virginia B. Wetherell  
Secretary

September 8, 1995



Suzanne Traub-Metlay  
State Clearinghouse  
Office of Planning and Budgeting  
Executive Office of the Governor  
The Capitol  
Tallahassee, Florida 32399-0001

RE: U.S. Army Corps of Engineers Public Notice for Florida Inland Navigation District  
Long-Range Dredged Material Management Plan, St. Johns County  
SAI: FL9508100837C

Dear Ms. Traub-Metlay:

The Department has reviewed the two sites that the Florida Inland Navigation District (FIND) has proposed to use for placement of material dredged from the Atlantic Intracoastal Waterway (ICW) in St. Johns County. The dredged material disposal sites (DMMA's) are designated SJ-14 and DU-9 (Palm Valley and Pablo Creek). The referenced public notice states that the Corps is preparing an environmental assessment (EA) to evaluate the environmental impacts of constructing and operating the proposed DMMA's. We have the following comments concerning the identified sites:

### Permits

The construction of the DMMA's will require an Environmental Resource Permit (ERP). The public notice indicates that permits will be applied for only if water quality certification is required. Under the ERP rules scheduled to go into effect October 3, 1995, an ERP will be required for these projects despite the extent of the wetland impact involved and the discharges, if any, from the disposal sites. The processing of an ERP would be handled by the Bureau of Submerged Lands and Environmental Resources, Division of Environmental Resource Permitting.

The public notice states that construction of this disposal site within the 2.7 acres of the

Pablo Creek site and the 6.5 acres of the Palm Valley site will involve filling of isolated wetlands. There are also contiguous wetlands adjacent to the proposed DMMA's. The current condition of the wetlands and uplands within and adjacent to these project sites should be thoroughly evaluated in the EA before finalizing the design and engineering of the DMMA's and applying for permits. Approval of the ERP is unlikely if the project is determined to cause adverse impacts to wetlands and uplands that provide habitat functions for endangered or threatened wetland-dependent species. In order to fully evaluate the project, we recommend that the EA include a preliminary mitigation plan.

Disposal activities could adversely affect the resources of adjacent waters, including the Guana River Aquatic Preserve. Pipeline placement and the treatment of return water from the site should be thoroughly evaluated in the EA. The discharge of excessive quantities of suspended material could harm shellfish resources in adjacent estuarine waters. FIND will be required to conduct standard geophysical and chemical testing of the sediments to be dredged to determine the potential for water pollution associated with the dredging and the discharge of dredged slurry from the DMMA's.

#### Submerged and State-Owned Lands

The project may also require consent from the Board of Trustees of the Internal Improvement Trust Fund (Governor and Cabinet) to use sovereign submerged lands if the disposal sites are submerged lands or uplands which were formerly submerged lands, filled without consent. A title check with the Division of State Lands should clarify sovereignty issues. The dredging of submerged lands in the ICW will qualify under our consent-to-use procedure for public projects.

Based on the information provided, the proposed activity would not affect state-owned land, nor lands within a current or proposed Conservation and Recreation Lands (CARL) or Save Our Rivers (SOR) project. However, both sites are near the Guana River Aquatic Preserve.

#### Endangered and Threatened Species

Based on the Florida Natural Areas Inventory database for the Palm Valley site (SJ-14), located in Township 4S and 5S, Range 29E, sections 58, 61, 63, and 64 on the Durbin quadrangle, the following occurrences of threatened/endangered animals are known to be on or near the site: eastern indigo snake (Drymarchon corais couperi), Florida black bear (Ursus americanus floridanus), and, within the ICW, the West Indian manatee (Trichechus manatus).

For the Pablo Creek site (DU-9), located in Township 3S, Range 29E, sections 19 and 30 on the Palm Valley quadrangle, the following threatened or endangered animals are known to have been recorded within a two-mile radius of this area: great egret (Casmerodius albus), snowy egret (Egretta thula), tricolored heron (E. tricolor), little blue heron (E. caerulea), white ibis (Eudocimus albus), wood stork (Mycteria americana), manatee (T. manatus) and Florida black bear (U. americanus floridanus).

Ms. Traub-Metlay  
Page Three

The FNAI data base represents a compilation of information extracted from published and unpublished literature, museums and herbaria, field surveys, personal communications, and other sources. They should never be regarded as final statements on the elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments.

#### Site Management

The public notice indicates that the dredged material will be removed from the disposal sites and reused. The Department strongly supports and encourages this approach to dredged material management. The EA should explain the anticipated disposal site management scheme that would make this possible. Specifically, the EA should clarify whether FIND has identified potential uses or users and the likelihood for successful site rejuvenation so that they maintain adequate capacities.

A draft EA which thoroughly addresses the above issues should be prepared and provided to the state for review and comment before making a decision on the significance of the projects' impacts. The public notice refers to a CZMA federal consistency determination which has been prepared, but the determination did not accompany the notice. The consistency determination should be included in the draft EA.

We appreciate the opportunity to comment on these projects at this early stage. We recommend close coordination and pre-application consultation with our permitting staff in both Tallahassee and Jacksonville. If you have any questions concerning these comments, please contact me at 487-2231.

Cordially,



Lynn Griffin  
Environmental Administrator  
Office of Intergovernmental Programs

cc: Jan Brewer  
Eric Bush  
Karen Greenwood  
Barbara Lenczewski  
Larry Nall  
Fritz Wettstein





## DEPARTMENT OF TRANSPORTATION

District II  
 Jacksonville Urban Office  
 P.O. Box 6669  
 Jacksonville, FL 32236

BEN G. WATTS

August 18, 1995

Ms. Suzanne Traub-Metlay  
 State Clearinghouse  
 Executive Office of the Governor  
 Room 1603, The Capitol  
 Tallahassee, Florida 32399-0001b

SUBJECT: State Clearinghouse - #FL9508100837C  
 Proposed sites for storing materials  
 dredged from the Intercoastal Waterway

Dear Ms. Traub-Metlay:

The Department is required to review this project under Florida Statutes and presidential Executive Order 12372 for consistency with the applicable criteria listed in the routing sheet. Based on the information provided we raise no objections to the proposed projects. We offer the following comments for your consideration.

This Application was submitted by the Department of the Army to develop two sites suitable for placement of dredged materials from the Intercoastal Waterway (IWW) within Duval and St. Johns counties. The proposed sites do not seem to have negative impacts on the State Highway System. However, the site plans did not include sufficient detail about area roadways to enable us to determine where traffic impacts may occur. The Application did not address transportation activities and/or facilities such as hauling material from these sites. Previously such activities from similar sites have resulted in adverse impacts to residential areas through which material was hauled.

If you have any questions regarding this response, please contact Mr. James Dees at SC# 881-3673.

Sincerely,

Aage G. Schroder, III, P.E.  
 District Director of  
 Planning and Programs

cc: Sandra Whitmire (FDOT-Central)  
 Ronice Freeman (FDOT-Central)  
 Joe Stephenson (FDOT D-2)  
 Lea Gabbay (FDOT D-2)

