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Subject: Attention Docket ID No. OW-2002-0050

Please accept the attached .pdf and Word documents as comments from the Division of Water Resources Management of the Florida Department of Environmental Protection for the Advanced Notice of Proposed Rulemaking on the Clean Water Act Regulatory Definition of "Waters of the United States", Docket ID No. OW-2002-0050. Please note that the .pdf document is a signed copy, but that the contents of the two attachments are identical. We have submitted both documents for your convenience.

<<Docket_ID_No_OW-2002-0050.doc>>

<<Docket_ID_No_OW-2002-00502.pdf>>

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April 16, 2003

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Attn: Docket ID No. OW-2002-0050
SAI # FL03-3327

To Whom It May Concern:

The following comments are provided by the Florida Department of Environmental Protection (FDEP) in response to the Advance Notice of Proposed Rulemaking (ANPR) on the Clean Water Act (CWA) Regulatory Definition of "Waters of the United States" published in the Federal Register at Vol. 68, No. 10, pages 1991-1998, on January 15, 2003.

First, we appreciate the opportunity to comment. As will be discussed below, vitally important isolated wetlands in Florida's panhandle will be at risk if the CWA jurisdiction of isolated waters is significantly narrowed under the proposed rulemaking. Our comments will attempt to describe the magnitude and consequences of that potential impact in Florida. As requested in the ANPR, we will also attempt to describe potential factors that could provide a basis for determining CWA jurisdiction in isolated, intrastate, non-navigable waters, and will provide a recommendation on whether the proposed regulations should define "isolated waters," including the factors for such definition.

Potential Impact under CWA Section 404 and 402 programs

In the current rulemaking proposal EPA appears to have taken a broad interpretation of the U.S. Supreme Court in *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*, 531 U.S. 159 (2001) (SWANCC). A different approach, which would reduce the acreage of isolated wetlands and other surface waters removed from federal jurisdiction would be to focus the rulemaking on the narrow jurisdictional issue actually addressed in the SWANCC

decision—that is, to define by rule that the Migratory Bird Rule (MBR) cannot be used as the *only* basis for asserting that isolated wetlands have a nexus to other Waters of the United States.

In any event, any proposed revision to the CWA rules that would reduce regulatory jurisdiction over isolated wetlands could adversely affect both federal and state protection of such wetlands. Obviously, states that lack their own state authority to protect isolated wetlands would be most directly adversely affected. Even the few states that have their own wetlands program may be adversely affected, depending on how those states derive and define their jurisdiction over wetlands in general, and isolated wetlands in particular. The basis to regulate wetlands in most states, including those with their own program, is derived from the federal program. Florida is one of very few states that not only has independent State laws and regulations to regulate wetlands, but that also defines the wetlands subject to State regulation based on our own wetland delineation methodology. However, even Florida's program would not be immune to a change in the federal regulation of isolated wetlands, as discussed below.

In the short term, the SWANCC decision is expected to have only minimal adverse affect in the regulation of isolated wetlands throughout *peninsular* Florida, which comprises 52.5 of Florida's 67 counties. Those counties are within the geographic limits of the Suwannee River, St. Johns River, Southwest Florida, and South Florida Water Management Districts. Within those water management districts, Florida implements a comprehensive environmental resource permitting (ERP) program under independent state authority contained in Part IV of Chapter 373 of the Florida Statutes. Issuance of an ERP constitutes a water quality certification or waiver thereto under section 401 of the CWA, 33 U.S.C. 1341, and a finding of consistency under Florida Coastal Zone Management Program under Section 307 (Coastal Zone Management Act). The ERP program is implemented jointly by the FDEP, the above four water management districts, and one delegated local government (Broward County) under Operating Agreements that divide responsibilities for permitting, compliance, and enforcement. The ERP program, together with a former Management and Storage of Surface Waters (MSSW) program, which also was authorized under of Part IV of Chapter 373 of the Florida Statutes, has regulated surface water management, dredging, and filling activities in isolated wetlands since 1987. As a result, with the exception of certain agricultural activities that are exempt from state regulation under Section 373.406 of the Florida Statutes, most dredging and filling (including discharges under the Section 404 program) in isolated wetlands throughout peninsular Florida are regulated under the independent state authority of the ERP program and would not, at this time, be affected by changes to the CWA under the proposed rulemaking.

However, the ERP program is not in effect in the 14.5 counties within the geographic limits of the Northwest Florida Water Management District (NFWMD) in Florida's panhandle. In that region, the FDEP implements a more limited wetland resource permitting (WRP) program under Section 373.4145 of the Florida Statutes. In addition, the NFWMD implements a limited surface water management program, also under Part IV of Chapter 373, F.S., that regulates agriculture, silviculture, and dam safety activities. The WRP program only regulates dredging and filling in natural lakes of more than 10 acres in size and tidal and freshwater wetlands and other surface waters to their landward extent (as defined by Chapter 62-340 of the Florida

Administrative Code) that are connected (by one or more natural or artificial waters) to other bays, bayous, streams, rivers, lakes, estuaries, or the Gulf of Mexico. *It does not regulate dredging or filling in isolated wetlands.* However, the alteration of isolated wetlands for non-exempt agriculture and silviculture activities is regulated by the NFWMD under Part IV of Chapter 373, F.S.

Issuance of a WRP also constitutes a water quality certification or waiver thereto under section 401 of the CWA, 33 U.S.C. 1341, and a finding of consistency under the Florida Coastal Zone Management Program under Section 307 (Coastal Zone Management Act). However, because the WRP does not regulate activities in isolated wetlands, Florida has waived water quality certification for dredging and filling in isolated wetlands in Florida’s panhandle. At this time, dredging and filling in the isolated wetlands in Florida’s panhandle are regulated only by the USACE, by two local governments (Leon and Escambia Counties) that have adopted isolated wetlands protection ordinances, and by the NFWMD solely for non-exempt agriculture and silviculture activities. As a result, any decision to further reduce the regulatory authority of the USACE in isolated wetlands from that which existed prior to the SWANCC decision has significant potential to reduce the protection of water resources in Florida’s panhandle.

We have attempted to quantify the potential effect of reducing the regulation of isolated wetlands in Florida’s panhandle through analyses of both GIS-based information and case studies.

GIS Analyses

Staff performed Geographic Information System (GIS) analyses to estimate the acreage of isolated wetlands within the geographic area of the NFWMD, as well as the acreage of “adjacent” wetlands. This study area encompassed the following counties: Escambia, Santa Rosa, Okaloosa, Walton, Holmes, Bay, Jackson, Gadsden, Calhoun, Liberty, Gulf, Franklin, Wakulla, Leon, and parts of western Jefferson. To estimate the area and extent of isolated wetlands within the study area, the acreage of “connected” waters was subtracted from the acreage of total wetlands using data from the National Hydrography Dataset (NHD – 1:100,000, latest version), Digital Line Graphs (DLG – 1:24,000), and the National Wetlands Inventory (NWI – 1:24,000) data sets. Attachment 1 contains further description of the methodology.

Based on that methodology, the total wetland acreage and isolated wetland acreage within the study area are as follows:

| Wetlands in Northwest Florida | | |
|--------------------------------------|--------------|--|
| Wetland System | Acres | Number of “Individual Wetlands” |
| Estuarine | 155,632 | 3,566 |
| Lacustrine | 43,278 | 388 |
| Marine | 8,406 | 52 |
| Palustrine | 2,126,341 | 81,899 |
| Riverine | 13,369 | 467 |

| | | |
|--------------|------------------|---------------|
| Total | 2,347,026 | 86,372 |
|--------------|------------------|---------------|

| Isolated wetlands in Northwest Florida | | |
|---|----------------|--|
| Wetland System | Acres | Number of "Individual Wetlands" |
| Estuarine | 4,116 | 497 |
| Lacustrine | 6,219 | 202 |
| Marine | 0 | 0 |
| Palustrine | 796,064 | 60,173 |
| Riverine | 329 | 148 |
| Total | 806,728 | 61,020 |

From the above, it is estimated that approximately 61,020 individual isolated wetlands exist in the NFWFMD, encompassing approximately 806,728 acres, based on a 1:100,000 GIS-based mapping analyses using the above data sets. This represents approximately 34.3 percent of the total wetland acreage that is estimated to exist within the NFWFMD, but 70.6 percent of the total number of wetlands in that area.

To determine how many of those isolated wetlands are on lands zoned for agriculture and other land uses, the isolated palustrine wetlands from the above data sets were intersected with 1995 land use data (1:24,000) from the NFWFMD, as summarized below.

| Selected Land Cover Types Containing Isolated Wetlands in Northwest Florida | |
|--|----------------|
| Level 1 | Acres |
| Unclassified | 18,136 |
| Urban and built-up | 14,045 |
| Agriculture | 18,069 |
| Rangeland | 19,160 |
| Upland Forests | 343,855 |
| Water | 17,465 |
| Wetlands | 361,896 |
| Barren Lands | 831 |
| Transportation | 2,607 |
| Total | 796,064 |

From the above, agriculture lands containing isolated wetlands comprise only about 2.3% of all the land use types, while forestry lands comprise 43.2% of the land uses.

In addition to the above, analyses were performed to determine the approximate acreage of "non-adjacent, isolated" wetlands in the NFWFMD. This is based on the assumption that waters of the United States include all wetlands (isolated or not) that are "adjacent" to waters of the United States. Two different levels of "adjacency" were considered. The first included isolated wetlands within a 200 foot buffer, which corresponds to the methodology currently used by the

Jacksonville office of the Corps of Engineers, which currently identifies “adjacent wetlands” as those that are located within approximately 200 feet of a water of the United States, excluding those waters of the United States that are themselves wetlands. The second was a 1,000 foot buffer, which was recommended for consideration by the Association of State Wetland Managers. For purposes of our analyses, the approximate acreage of “non-adjacent, isolated” wetlands in the NFWFMD was derived by subtracting the acreage of wetlands within both a 200 foot buffer and a 1000 foot buffer from the acreage of total wetlands, as summarized below.

| Non-adjacent, Isolated Wetlands in Northwest Florida using a 200 ft. Buffer | | |
|--|----------------|--|
| Wetland System | Acres | Number of “Individual Wetlands” |
| Estuarine | 1,043 | 242 |
| Lacustrine | 5,047 | 165 |
| Marine | 0 | 0 |
| Palustrine | 297,705 | 41,375 |
| Riverine | 128 | 57 |
| Total | 303,923 | 41,839 |

Thus, approximately 41,839 individual isolated wetlands, totaling approximately 303,923 acres, appear to not be subject to post-SWANCC federal dredge and fill jurisdiction under the current CWA definition of wetlands, with the 200 foot buffer. These 303,923 acres are not being regulated by either the State of Florida or the U.S. Army Corps of Engineers at this time.

This would be reduced to 28,279 individual isolated wetlands encompassing approximately 206,359 acres, using a buffer zone of 1,000 feet, should the CWA rules be amended to allow such a definition of waters adjacent to Waters of the United States to be used by the Section 404 and 402 regulatory agencies.

| Non-adjacent, Isolated Wetlands in Northwest Florida using a 1000 ft. Buffer | | |
|---|----------------|--|
| Wetland System | Acres | Number of “Individual Wetlands” |
| Estuarine | 223 | 91 |
| Lacustrine | 3,915 | 123 |
| Marine | 0 | 0 |
| Palustrine | 202,108 | 28,022 |
| Riverine | 113 | 43 |
| Total | 206,359 | 28,279 |

Case Study Analyses

Staff also reviewed the potential changes in jurisdiction that may result from the proposed rulemaking based on two case studies as outlined in Attachment 2. These case studies are based

on actual state and federal site inspections at the proposed Panama City Airport and the PCS Phosphate mine.

CWA Section 404 Implications

From the above, it is estimated that 34.3 percent (806,728 acres) of the total wetlands in Florida's panhandle are isolated and at risk if the CWA rules are revised to exempt all non-adjacent isolated wetlands from CWA regulation at this time. This estimated figure is reduced to 12.9 percent (303,923 acres) if jurisdiction allows for a 200 feet buffer, although the case studies suggest that actual acreage may be higher. Unfortunately, it is not possible to precisely determine how many of these wetlands might have been claimed as waters of the United States based solely on the Migratory Bird Rule (MBR). Therefore it is not possible to estimate how many of those 303,923 acres of non-adjacent or 806,728 total acres of isolated wetlands would be at risk if the rule is amended solely to exempt from regulation those isolated wetlands that could be determined to be waters of the United States as a result of the MBR.

Because Florida's WRP program does not regulate isolated wetlands in the panhandle, the Corps' 404 regulatory program plays a vitally important role in regulating adverse impacts to the isolated wetlands in Florida's panhandle, and the functions those wetlands provide. Ephemeral wetlands provide essential habitat for numerous species of fish and wildlife, many of which are specially adapted to take advantage of the seasonal wet-dry regimes of these habitats. Many species feed in ephemeral wetlands and use these areas for their migratory and, in the case of some species such as frogs, breeding habitat. Those functions include:

- Breeding, feeding, and nursery habitat for many invertebrate and vertebrate species, including frogs and other amphibians that form the lower rungs of the food chain for higher consumers. Such higher consumers include numerous waterfowl species, other migratory birds, and humans. As many isolated wetlands cycle through periods of dry conditions following wetter conditions, they concentrate fish and other aquatic wildlife. These concentrated food sources are critical to providing sustenance for many higher level consumers, such as wood storks and ibis.
- Drinking water sources, for many species such as the endangered wood stork, the threatened black bear, the threatened Florida sandhill crane, several species listed as Species of Special Concern by the State of Florida, including Sherman's fox squirrel, little blue heron, snowy egret, tricolored heron, limpkin, American alligator, gopher frog, and other species such as the round-tailed muskrat, river otter, and bobcat.
- Shelter, resting, and feeding habitat for threatened and endangered species such as the endangered wood stork, the threatened Florida sandhill crane, and several species listed as Species of Special Concern by the State of Florida including the roseate spoonbill, little blue heron, snowy egret, tricolored heron, and limpkin. This includes interdunal isolated wetlands, which provide critically important and rare drinking and bathing habitat, along parts of Florida's shoreline, for rails and other shorebirds.
- Providing for the collection and storage of surface waters, which, in turn, ameliorates rapid overland flows following storm events, thereby reducing the potential for flooding of properties both within Florida, as well as in Alabama and Georgia.

- Recreational opportunities for birders, hunters, and other persons who enjoy nature.
- Groundwater recharge, particularly in Karst-sensitive areas.

A list of mammals, birds, reptiles, amphibians, fishes, and listed species that use depressional herbaceous wetlands of South Peninsular Florida is provided in Attachment 3 as an example of the variety of species that also can be expected to use the isolated wetlands in north Florida.

Alternatives

The ANPR summarizes the potential for other federal programs to continue to provide protection to waters that would no longer be jurisdictional under the CWA following SWANCC. These include many Farm Bill programs such as Conservation Reserve, Wetlands Reserve, and Swampbuster. We have consulted with the Natural Resource Conservation Service, Florida's Department of Agriculture, and the Northwest Florida Water Management District to determine the extent to which such programs currently provide incentives to protect isolated wetlands in Florida's panhandle.

First, while approximately 70,000 acres of contiguous and isolated wetlands are enrolled under the Wetland Reserve Program in Florida, no acres are enrolled under that program in the panhandle. There have been 86,870 acres of wetlands enrolled in Florida under the Conservation Reserve Program (CRP) since 1986, of which a total of 653.3 acres are wetlands. Of those wetland acres, CRP has enrolled wetlands in only three panhandle counties—Holmes (134.5 acres), Jackson (442.5 acres), and Washington (34.8 acres), totaling 611.8 acres, or 0.02 percent of the total estimated wetland acreage in the panhandle. Unfortunately, the data is not broken down enough by the U.S.D.A. to determine how many of those 611.8 acres consist of isolated wetlands. However, from the analyses described above, the acreage of isolated wetlands on agriculture land and rangeland comprises only about 4.7 percent of the acreage of isolated wetlands on all land uses within the NFWMD. In general, therefore, while the Farm Bill programs certainly provide incentives and Best Management Practice guidance that have the potential to protect isolated wetlands, it appears that the Farm Bill programs are playing only a very small role protecting wetlands in Florida's panhandle. Therefore, these programs do not appear likely to play a significant role in protecting isolated wetlands that may no longer be subject to permitting jurisdiction under the Section 404 program.

The ANPR also discusses the role of States in protecting waters not addressed by Federal law. As described in the introduction to our comments, Florida's laws and rules already regulate dredging and filling in the isolated wetlands throughout peninsular Florida, but not in the panhandle. In accordance with Section 373.4145 of the Florida Statutes, the existing, limited, wetland resource program in the panhandle is currently scheduled to sunset on July 1, 2003, however, legislation is pending that would extend this date. The state of Florida is actively pursuing rulemaking to extend the ERP program into the panhandle by that date, subject to legislative funding. If a comprehensive ERP program is implemented, isolated wetlands in the panhandle would be protected as they are in peninsular Florida and the proposed federal rulemaking likely would have little effect on that degree of protection. However, for many reasons that are beyond the scope of these comments, it is possible the date for implementation of

the ERP program in the panhandle will be delayed. Depending on the outcome of the final federal regulations, there could be significant isolated wetland loss, in this rapidly developing area of Florida, during the lag time prior to implementation of the ERP program.

CWA Section 402 Implications

Construction involving new stormwater discharge facilities exceeding 5 acres in size (before May 1, 2003) or exceeding 1 acre in size (after May 1, 2003) require a National Pollutant Discharge Elimination System (NPDES) permit under Section 402 of the CWA, when such facilities discharge to a waters of the United States, a waters of the state, or an MS4. New stormwater discharge facilities and disturbance of land exceeding certain thresholds also requires a state ERP program in peninsular Florida, and chapter 62-25 of the Florida Administrative Code in the panhandle. At this time, it does not appear that the proposed rulemaking will significantly affect the federal NPDES program in Florida. This is because the NPDES program in Florida is authorized by EPA to be administered by the FDEP. The FDEP-administered NPDES program regulates land disturbance and new stormwater discharges from activities exceeding the above thresholds only if they discharge into waters of the state (as these are defined under Section 403.031(13) of the Florida Statutes. Any changes to waters of the United States as may be proposed under the proposed rulemaking will not change the jurisdiction of waters of the state or the ability to require NPDES permits for discharges to such waters. Similarly, new sources of stormwater runoff are regulated under the ERP program in peninsular Florida, and will not be significantly affected by the proposed rulemaking for the reasons described above. In Florida's panhandle, new sources of stormwater runoff are regulated under a separate rule, chapter 62-25 of the Florida Administrative Code. For reasons that are beyond the scope of our comments at this time, Florida's chapter 62-25 stormwater permitting program also will not be significantly affected by the proposed rulemaking.

Other Considerations

The ANPR requested comments on under what circumstances the factors listed in 33CFR 328.3(a)(i)-(iii), or other factors, provide a basis for determining CWA jurisdiction over isolated, intrastate, non-navigable waters. As stated in the ANPR, the goal of the CWA is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33U.S.C. 1251(a). The definition of "waters of the U.S." adopted by the USACE in 1977 includes "wetlands," without distinguishing between terms such as "tributary," "headwater," "connected," "adjacent," or "isolated." However, the jurisdictional scope of the CWA has been narrowed to "navigable waters," which includes "degradation or destruction . . . which could affect interstate or foreign commerce including any such waters," and waters "which are or could be used by interstate or foreign travelers for recreational or other purposes." 40CFR 230.3(a)(3). The isolated wetlands in the Florida panhandle are used by hunters, hikers, photographers, and birdwatchers, and for industrial purposes, such as collecting frogs and harvesting of cypress mulch by non-state residents who travel to Florida. Isolated wetlands also are used by migrating birds, which are protected under the Migratory Bird Treaty Act. We believe from the evidence in Florida and elsewhere that isolated wetlands do have a clear nexus to interstate commerce, and

that the CWA should regulate alterations to all isolated wetlands that are navigable waters, that are adjacent to navigable waters, that could affect interstate or foreign commerce, or that could be used by interstate or foreign travelers for recreational or other purposes. This could be accomplished by a narrow interpretation of the SWANCC decision. However, it may be appropriate to provide appropriate exclusions for artificially created isolated wetlands, such as those that existed in the sand and gravel pit that was at issue in the SWANCC decision.

Lastly, the ANPR requested comments regarding whether the regulations should define "isolated waters," and if so, what factors should be considered in determining whether a water is or is not isolated for jurisdictional purposes. The term "isolated wetlands" is generally defined in the ERP rules as "Any wetland without a direct hydrologic connection to a lake, stream, estuary, or marine water." except in the Southwest Florida Water Management District where the term is defined as "Any wetland without a direct hydrologic connection by standing or flowing surface water at seasonal high water level to a lake, stream, estuary, or marine waters." Under an ideal framework, the CWA rules could be amended to similarly define isolated wetlands, and to extend regulatory protection over such wetlands, as existed prior to the SWANCC decision, without having to make further determinations of whether such wetlands are "tributary," "headwater," "connected," or "adjacent" to navigable waters. To relieve any regulatory burden that might result from regulating all isolated wetlands, permitting exemptions or general permits could then be adopted by the regulatory agencies for activities in those isolated wetlands that would have minimal individual and cumulative adverse impacts to fish, wildlife, water quality, and the other functions provided by such wetlands. We believe a simple definition, such as that used under Florida law, would allow implementation of such exemptions and general permits, and would benefit both the regulated community and the regulatory agencies by being both clear and unambiguous, such that it could be understood by everyone who must comply with the term.

We again would like to thank you for providing us the opportunity to comment on this important rulemaking. If you have any questions regarding this matter, you may contact James W. Stoutamire, Administrator, Submerged Lands and Wetland Resources Office, (850) 245-8490, jim.stoutamire@dep.state.fl.us.

Sincerely,

Deputy Director
Resource Management

Janet G. Llewellyn,
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cc: Mimi Drew
Michael Sole

ATTACHMENT 1

GIS-BASED METHODOLOGY USED TO ESTIMATE ISOLATED WETLANDS IN NORTHWEST FLORIDA

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Study Area

The study area was limited to the Northwest District of the Florida Department of Protection. This area encompasses the following counties within the Florida panhandle: Escambia, Santa Rosa, Okaloosa, Walton, Holmes, Bay, Jackson, Gadsden, Calhoun, Liberty, Gulf, Franklin, Wakulla, Leon, and parts of western Jefferson.

Data Used

National Hydrography Dataset (NHD – latest version, 1:100,000)
Digital Line Graphs (DLG – 1:24,000)
National Wetlands Inventory (NWI – 1:24,000)

Data Preparation

First, we estimate the area of “connected waters” by combining “navigable” and “interstate” waters. “Navigable” waters were determined using the NHD and DLG data sets. Within the NHD data, all reaches with a name attribution containing the word “River” were selected, as were all lake and pond water bodies larger than 100 acres. This data layer was then merged with all “Bays and Estuaries” selected from the DLG data set. Additionally, “interstate” waters were determined by selecting from NWI wetlands that intersect the state boundary. These “navigable” and “interstate” waters were merged, and then buffered by a distance of 50.8 meters to account for scale-dependent accuracy variations, to create the acreage of “connected waters”.

Next, the acreage of total “wetlands” was estimated by selecting the subset of NWI wetlands within the NFWFMD from a Department ArcSDE map library and removing all “open water” polygons. From that, wetland polygon acreage was calculated for different wetland system types.

Then, the acreage of “isolated wetlands” within the study area was estimated by selecting all wetlands that intersect the “connected waters” data layer, calculating the acreage for these “connected wetlands”, and subtracting this acreage from the total wetland acreage.

To estimate the acreage of "non-adjacent, isolated wetlands" within the study area, an iterative process was run to select all wetlands within a 200-foot buffer of the "connected wetlands". After running this process 7 times, nearly no new wetlands were selected, and an "adjacent wetlands" data layer was created. Wetland polygon acreage was then calculated for this data layer and subtracted from the total wetland acreage. Additionally, all wetlands within a 1000-foot buffer of the "connected wetlands" were selected and wetland polygon acreage calculated for this selection by wetland system type.

ATTACHMENT 2

CASE STUDY ANALYSES

Two sites are illustrative of how a change in the federal definition of isolated wetlands might affect the degree to which such wetlands would be regulated in Florida. The first is a 5,700-acre site that is being proposed for a new, relocated Panama City Airport in Bay County. Bay County is in Florida's panhandle, and the site is regulated under the state WRP program and the federal Section 404 dredge and fill permit program. The site consists of 5,700 acres located north of SR 388, east of Big Crooked Creek, and southeast of Pine Log State Forest (roughly north of Panama City) in Bay County. The site currently is dominated by scrubby and hydric pine flatwoods, with scattered depression swamps, depression marshes, seepage slopes, and streams scattered throughout the site. The site includes a very rare, and possibly unique, sphagnum bog community. An FDEP/USACE team performed a joint delineation of state and federal wetland and other surface water boundaries on the site from January through May 2002. Of the 5,700 total site acres, 3,197 acres (56.1 percent) were determined to be uplands (not subject to permitting jurisdiction by either the FDEP or the USACE); 2,409.30 acres (42.27 percent) were determined to be contiguous wetlands subject to both FDEP WRP and USACE Section 404 permitting jurisdiction; and 93.21 acres (1.63 percent) of the site consisted of isolated wetlands. None of the isolated wetlands are regulated under the FDEP WRP program. Those 93.21 acres would not be regulated by either the state of Florida or the USACE if the CWA rules are amended to exempt all isolated wetlands from federal dredge and fill regulatory jurisdiction. Of the 93.21 acres of isolated wetlands, 14.91 acres (0.26 percent of the total site acreage; 16.00 percent of the isolated wetland acreage) were determined to be "adjacent" to navigable waters. These wetlands could potentially continue to remain under USACE Section 404 permitting jurisdiction if the CWA rules are amended to only exempt isolated wetlands that are intrastate and non-navigable, where the sole basis for asserting CWA jurisdiction is the actual or potential use of the waters as habitat for migratory birds that cross State lines in the migrations. This assumes that the definition of "adjacency" is not subsequently amended to result in a change to the current practice of the USACE Jacksonville District Office. The remaining 78.30 acres of isolated wetlands (consisting of 1.37 percent of the total site acreage and 84.00 percent of the isolated wetland acreage) were determined to not be subject to either FDEP or USACE jurisdiction, because the USACE Jacksonville District is only claiming isolated wetlands that are adjacent to other waters.

The second site is the PCS Phosphate mine in Hamilton County. This site is in a portion of Florida that is covered by the ERP program. However, the conditions of the site are similar to conditions that may exist farther west within Florida's panhandle. The site was inspected jointly by FDEP and the USACE pre- and post-SWANCC. Of the total site acreage, 36,038 acres were under evaluation for a life-of-mine permit at the time of the SWANCC decision. Of that, 10,016 acres were determined before SWANCC to be USACE jurisdictional wetlands. After further evaluation, PCS determined they were only interested in mining 6,310 acres of the 10,016 acres of pre-SWANCC wetlands. PCS and the USACE initially determined that only 1,858 acres of the 6,310 acres of the wetlands could be claimed as jurisdictional wetlands post-SWANCC, and that the remaining 4,452 acres were isolated and no longer subject to USACE wetland jurisdiction post-SWANCC. However, because of some difficult issues, the parties agreed that further investigation was needed to determine post-SWANCC jurisdiction in four areas (totaling over 401 acres) within the 4,452 acres. These were:

- Approximately 185 acres in the vicinity of Roaring Creek, where the definition of “waters” was in question under 33 CFR 328.3a.7., 328.3.c, 328.e, and 328.4.c;
- A 109-acre wetland associated with Camp Branch which is 700 feet from, and connected to, the Suwannee River through a sinkhole. The issue is whether ground water can be used to sustain a jurisdictional connection;
- A 107 acre wetland associated with Northwest Hunter Creek where jurisdictional connections through drainage divides were in question; and
- Whether jurisdictional connections to other areas could be claimed through NPDES outfalls and internal water management systems under the 2nd paragraph in 33 CFR 328.3.a.7.

The USACE subsequently exerted jurisdiction over the 185 acres associated with Roaring Creek and the 109 acres associated with Camp Branch. As a result, of the 6,310 acres of pre-SWANCC wetlands, a total of 2,152 acres (34.1 percent) were determined to be USACE jurisdictional wetlands post-SWANCC, and 4,158 acres (65.9 percent) of the wetlands could no longer be claimed after SWANCC. Of note, these percentages compare similarly with the personal observation from one of the consultants who worked on the PCS site that approximately 2/3 of the wetlands in Florida’s panhandle are isolated and may no longer be subject to USACE jurisdiction post-SWANCC.

ATTACHMENT 3

MAMMALS, BIRDS, REPTILES, AMPHIBIANS, FISHES, AND LISTED SPECIES THAT USE DEPRESSIONAL HERBACEOUS WETLANDS OF SOUTH PENINSULAR FLORIDA (THESE ARE ILLUSTRATIVE OF THE VARIETY OF SPECIES THAT CAN BE EXPECTED TO USE NORTH FLORIDA ISOLATED WETLANDS (SOURCE: JAMES W. BEEVER III, FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION, 4-25-96).

Mammals of Depressional Herbaceous Wetlands of South Peninsular Florida

| <u>Common Name</u> | <u>Scientific Name</u> | <u>Index</u> | <u>Habitat</u> <u>Source</u> |
|-----------------------------|--|--------------|---------------------------------|
| Virginia opossum | <i>Didelphis virginiana</i> | 2 | A, B, D, E, P R, S, W |
| southern short-tailed shrew | <i>Blarina brevicauda peninsulae</i> | 1 | B, D, P |
| least shrew | <i>Cryptotis parva floridana</i> | 1 | B, D, M, P |
| Eastern red bat | <i>Lasiurus borealis</i> | 1 | R |
| Seminole bat | <i>Nycteris seminolus</i> | 1 | B |
| evening bat | <i>Nycteris humeralis subtropicalis</i> | 2 | B, D |
| Rafinesque's big-eared bat | <i>Plecotus rafinesquii</i> | 1 | R |
| armadillo | <i>Dasypus novemcinctus mexicanus</i> | 2 | A, B, E, P, S |
| Eastern cottontail rabbit | <i>Sylvilagus floridanus floridanus</i> | 2 | B, E, P, R, S |
| marsh rabbit | <i>Sylvilagus palustris paludicola</i> | 3 | A, B, D, E, P, R |
| gray squirrel | <i>Sciurus carolinensis extimus</i> | 1 | A, B, S |
| Big Cypress fox squirrel | <i>Sciurus niger avicennia</i> | 1 | A, B, J, S |
| Sherman's fox squirrel | <i>Sciurus niger shermani</i> | 1 | A, B, S |
| southern flying squirrel | <i>Glaucomys volans</i> | 1 | B, S |
| marsh rice rat | <i>Oryzomys palustris coloratus</i> | 3b | B, D, P, R |
| Eastern harvest mouse | <i>Reithrodontomys humilis</i> | 1 | P |
| Florida cotton mouse | <i>Peromyscus gossypinus palmarinus</i> | 2 | B, M, P, S |
| Collier cotton mouse | <i>Peromyscus gossypinus telmaphilus</i> | 2 | B, M, P, S |
| Florida hispid cotton rat | <i>Sigmodon hispidus floridanus</i> | 2b | A, B, D, M, P, S |
| round-tailed muskrat | <i>Neofiber alleni</i> | 4 | B, D, R |
| house mouse | <i>Mus musculus</i> | 1 | P |
| nutria | <i>Myocastor coypus</i> | 1 | R |
| gray fox | <i>Urocyon cinereoargenteus floridanus</i> | 2 | A, B, D, M, P, S |
| red fox | <i>Vulpes vulpes fulva</i> | 1 | B |
| Florida black bear | <i>Ursus americanus floridanus</i> | 2 | B, L, M, P, S |
| Florida raccoon | <i>Procyon lotor elucus</i> | 3 | B, D, E, P, S, W |
| long-tailed weasel | <i>Mustela frenata peninsulae</i> | 1 | B, P |
| everglades mink | <i>Mustela vison evergladensis</i> | 1 | B, P, S |
| Florida mink | <i>Mustela vison lutensis</i> | 1 | B, R |
| striped skunk | <i>Mephitis mephitis elongata</i> | 3 | A, B, S |
| river otter | <i>Lutra canadensis lataxina</i> | 3 | A, B, D, P, W |
| Florida panther | <i>Felis concolor coryi</i> | 1 | B, L, M, P, S |
| bobcat | <i>Lynx rufus floridanus</i> | 2 | B, E, P, S |
| white-tailed deer | <i>Odocoileus virginianus seminola</i> | 2 | A, B, D, E, L, M, P, S |
| wild hog | <i>Sus scrofa</i> | 3 | B, E, P, S, W |

Birds of Depressional Herbaceous Wetlands of South Peninsular Florida

On this Table, neotropical migratory birds are indicated with an * after the common name. Other birds, including shorebirds, ducks, and perching birds, migrate to Florida as their wintering grounds and are found only in late autumn, winter, and early spring. On Table B, these wintering migrants are indicated with a + after the common name. A few birds visit Florida in the summer and then return south to the tropics for the winter. On Table B, these summer migrant species are indicated with a \$ after the common name.

| <u>Common Name</u> | <u>Scientific Name</u> | <u>Index</u> | <u>Habitat</u> |
|-------------------------------|------------------------------------|--------------|--------------------|
| | | | <u>Source</u> |
| pied-billed grebe | <i>Podilymbus podiceps</i> | R3 | A,B,P,R,T,W |
| anhinga | <i>Anhinga anhinga</i> | R3 | A,B,C,K,W |
| great blue heron | <i>Ardea herodias</i> | R3 | A,B,D,K,R,W |
| great white heron | <i>Ardea herodias occidentalis</i> | R1 | P |
| green-backed heron | <i>Butorides striatus</i> | R4 | A,B,C,D,K P,R,W |
| cattle egret | <i>Bubulcus ibis</i> | R3 | A,B,D,W |
| great egret | <i>Casmerodius albus</i> | R3 | A,B,C,D K,R,W |
| little blue heron | <i>Egretta caerulea</i> | R3 | A,B,C,D K,R,W |
| snowy egret | <i>Egretta thula</i> | R3 | A,B,C,D K,R,W |
| tricolored heron | <i>Egretta tricolor</i> | R2 | A,B,C,D K,R,W |
| black-crowned night-heron | <i>Nycticorax nycticorax</i> | R2 | A,B,C,D K,R,W |
| yellow-crowned night-heron | <i>Nycticorax violaceus</i> | R2 | B,D,K,P,R,W |
| least bittern | <i>Ixobrychus exilis</i> | R1 | B,K,P,R |
| American bittern + | <i>Botaurus lentiginosus</i> | W1 | A,P,R |
| wood stork | <i>Mycteria americana</i> | R2 | A,B,C,D,K,W |
| glossy ibis | <i>Plegadis falcinellus</i> | R2 | A,B,K,R |
| white ibis | <i>Eudocimus albus</i> | R3 | A,B,D,K,R,W |
| scarlet ibis + | <i>Eudocimus ruber</i> | W1 | B,E |
| roseate spoonbill | <i>Ajaia ajaja</i> | R1 | A,B,K,R |
| sandhill crane + | <i>Grus canadensis</i> | W2 | A,B,K,P R,S,W |
| Florida sandhill crane | <i>Grus canadensis pratensis</i> | R4 | A,B,K,P,R,S |
| limpkin | <i>Aramus guarana</i> | R1 | B,C,D,K,R |
| tundra swan | <i>Cygnus columbianus</i> | W1 | R |
| Canada goose | <i>Branta canadensis</i> | W1 | R |
| snow goose | <i>Chen caerulescens</i> | W1 | R |
| northern pintail + | <i>Anas acuta</i> | W1 | A,R |
| American wigeon + | <i>Anas americana</i> | W1 | A,P,R |
| northern shoveler + | <i>Anas clypeata</i> | W2 | A,P,R,W |
| green-winged teal + | <i>Anas crecca</i> | W2 | A,P,R,W |
| blue-winged teal + | <i>Anas discors</i> | W1 | A,P,R |
| mottled duck | <i>Anas fulvigula</i> | R2 | A,B,P,R |
| mallard + | <i>Anas platyrhynchos</i> | W2 | B,W |
| American black duck + | <i>Anas rubripes</i> | W1 | A,R |
| gadwall + | <i>Anas strepera</i> | W1 | A,P,R |
| wood duck | <i>Aix sponsa</i> | R1 | A,P,R,W |
| lesser scaup + | <i>Aythya affinis</i> | W2 | R |
| redhead + | <i>Aythya americana</i> | W1 | R |
| ring-necked duck + | <i>Aythya collaris</i> | W2 | A,R |
| canvasback + | <i>Aythya valisnaria</i> | W1 | R |
| ruddy duck + | <i>Oxyura jamaicensis</i> | W1 | P,R |
| hooded merganser + | <i>Lophodytes cucullatus</i> | W2 | P,W |

| | | | |
|------------------------------------|------------------------------------|----|-------------------|
| king rail | <i>Rallus elegans</i> | 2B | P |
| sora + | <i>Porzana carolina</i> | W1 | P |
| common moorhen | <i>Gallinula chloropus</i> | R1 | A,B,P |
| American coot + | <i>Fulica americana</i> | W1 | A,P |
| purple gallinule \$ | <i>Porphyryla martinica</i> | R2 | A,B,P |
| killdeer | <i>Charadrius vociferus</i> | R2 | A,B,D,P,S,W |
| American avocet + | <i>Recurvirostra americana</i> | W1 | P,R |
| black-necked stilt \$ | <i>Himantopus mexicanus</i> | W2 | A,B,R |
| black-bellied plover * | <i>Pluvialis dominica</i> | W1 | P |
| greater yellowlegs * | <i>Tringa erythropus</i> | W3 | A,B,P,R,W |
| lesser yellowlegs + | <i>Tringa flavipes</i> | W3 | B,P,R,T,W |
| solitary sandpiper + | <i>Tringa solitaria</i> | S1 | A,B,K,P,R |
| spotted sandpiper + | <i>Actitis macularia</i> | W2 | A,B,K,P,R,W |
| Baird's sandpiper + | <i>Caladris bairdii</i> | W1 | R |
| white-rumped sandpiper * | <i>Caladris fuscicollis</i> | W1 | R |
| stilt sandpiper + | <i>Caladris hemantopus</i> | W1 | R |
| western sandpiper + | <i>Calidris mauri</i> | W1 | P,R |
| pectoral sandpiper + | <i>Calidris melanotus</i> | W1 | P,R |
| least sandpiper + | <i>Calidris minutilla</i> | W1 | B,K,P,R |
| semipalmated sandpiper | <i>Caladris pusilla</i> | W1 | P |
| ruff * | <i>Philomachus pugnax</i> | T1 | R |
| short-billed dowitcher + | <i>Limnodromus griseus</i> | W2 | A,P,R |
| long-billed dowitcher + | <i>Limnodromus scolopaceus</i> | W1 | P,R |
| buff-breasted sandpiper + | <i>Tryngites subruficollis</i> | T1 | R |
| marbled godwit + | <i>Limosa fedoa</i> | W1 | R |
| Hudsonian godwit + | <i>Limosa haemastica</i> | W1 | R |
| common snipe + | <i>Gallinago gallinago</i> | W3 | K,P,R,T,W |
| woodcock + | <i>Scolopax minor</i> | W1 | P,S |
| barred owl | <i>Strix varia</i> | R1 | B,C,D,K, |
| black vulture | <i>Coragyps atratus</i> | R2 | A,B,C,D, K,S |
| turkey vulture | <i>Cathartes aura</i> | R2 | A,B,C,D,K |
| American swallow-tailed kite \$ | <i>Elanoides forficatus</i> | S1 | B,C,D, K,R |
| Everglades kite | <i>Rostrhamus sociabilis</i> | S1 | A,B,R |
| bald eagle + | <i>Haliaeetus leucocephalus</i> | R1 | A,B,D,K,R,S |
| northern harrier + | <i>Circus cyaneus</i> | W1 | A,B,K,P,R,S |
| osprey | <i>Pandion haliaetus</i> | R1 | B,D,K,R,S |
| short-tailed hawk | <i>Buteo brachyurus</i> | R1 | B,C,D,K,P |
| red-tailed hawk | <i>Buteo jamaicensis</i> | R2 | A,B,C,D, K,S |
| red-shouldered hawk | <i>Buteo lineatus</i> | R3 | B,C,D, K,P,S,W |
| Eastern American kestrel + | <i>Falco sparverius sparverius</i> | R1 | B,C,D, K,P,R,S |
| Southeastern American kestrel | <i>Falco sparverius paulus</i> | R1 | B,C,D, K,P,R,S |
| Arctic peregrine falcon + | <i>Falco peregrinus</i> | W1 | A,B,D,K,R,S |
| merlin + | <i>Falco columbarius</i> | W1 | R |
| wild turkey | <i>Meleagris gallopavo</i> | R1 | A,B,C,D, K,P,S |
| northern bobwhite | <i>Colinus virginianus</i> | R1 | A,B,C,D, K,P,S |

| | | | |
|-------------------------------------|-----------------------------------|-----|------------------------------|
| | | | P, S, T |
| mourning dove | <i>Zenaida macroura</i> | R3 | B, W |
| common ground-dove | <i>Columbina passerina</i> | R2 | B, D, K, S, T, W |
| belted kingfisher + | <i>Ceryle alcyon</i> | W2 | A, B, K, O P, T, W |
| Eastern phoebe + | <i>Sayornis phoebe</i> | W2 | A, B, C, D, K, R, S, T |
| Eastern kingbird \$ | <i>Tyrannus tyrannus</i> | T2 | B, C, D, K, R, S, T |
| barn swallow * | <i>Hirundo rustica</i> | W1 | R |
| cliff swallow * | <i>Petrochelidon pyrrhonota</i> | S1 | P, R |
| purple martin \$ | <i>Progne subis</i> | S3 | B, C, D, K, R, S, T |
| tree swallow + | <i>Tachycineta bicolor</i> | W3 | A, B, D, P, R S, T, W |
| chimney swift | <i>Chaetura pelagica</i> | S1 | P |
| northern rough-winged swallow \$ | <i>Stelgidopteryx serripennis</i> | W2 | P, R, W |
| American crow | <i>Corvus brachyrhynchos</i> | T3 | B, W |
| fish crow | <i>Corvus ossifragus</i> | T3 | A, B, C, D, K, O, P, S, W |
| Carolina wren | <i>Thryothorus ludovicianus</i> | R2 | A, B, C, D, K, P, S, T |
| marsh wren + | <i>Cistothorus palustris</i> | R2b | P, R |
| sedge wren * | <i>Cistothorus platensis</i> | W1 | R |
| water pipit * | <i>Anthus spinoletta</i> | W3 | R, W |
| American robin + | <i>Turdus migratorius</i> | W3 | A, B, D, K, R, S, T, W |
| gray catbird | <i>Dumetella carolinensis</i> | R2 | A, B, C, D, K, P, T |
| northern mockingbird | <i>Mimus polyglottos</i> | R2 | A, B, C, D, K, P, S, T |
| yellow-rumped warbler + | <i>Dendroica coronata</i> | W2 | A, B, D, K, P, T |
| palm warbler * | <i>Dendroica palmarum</i> | W3 | B, W |
| yellow warbler * | <i>Dendroica petechia</i> | W1 | B, D, P |
| American redstart * | <i>Setophaga ruticilla</i> | T3 | D, K, R, T |
| ovenbird + | <i>Seiurus aurocapillus</i> | W1 | B, D, K, P, T |
| northern waterthrush * | <i>Seiurus noveboracensis</i> | W1 | B, C, D, K, P, R |
| Louisiana waterthrush * | <i>Seiurus motacilla</i> | S1 | C, D, K, P, R |
| common yellowthroat | <i>Geothlypis trichas</i> | R2b | A, B, C, D, K, P, R, T |
| swamp sparrow + | <i>Melospiza georgiana</i> | W2 | R |
| red-winged blackbird | <i>Agelaius phoeniceus</i> | R3 | A, B, K, D, P R, T, W |
| orchard oriole | <i>Icterus spurius</i> | S1 | R |
| northern oriole | <i>Icterus galbula</i> | W1 | R |
| boat-tailed grackle | <i>Quiscalus major</i> | R3 | A, B, D, K P, T, W |
| common grackle | <i>Quiscalus quiscula</i> | R3 | A, B, D, K, R, S, T, W |
| brownheaded cowbird + | <i>Molothrus ater</i> | W1 | A, B, K, R |

Reptiles of Depressional Herbaceous Wetlands of South Peninsular Florida

| | | | |
|-------------------------------|-----------------------------------|----|------------------|
| American alligator | <i>Alligator mississippiensis</i> | 3 | A, B, D, P, R, W |
| Florida snapping turtle | <i>Chelydra serpentina</i> | 3 | A, B, D, P, R |
| Florida red-bellied turtle | <i>Chrysemys nelsoni</i> | 3b | B, D, P, R |

| | | | |
|-------------------------|--|----|-------------|
| Florida chicken turtle | <i>Deirochelys reticularia chrysea</i> | 3 | A,B,D,P,R,W |
| peninsula cooter | <i>Pseudomys floridana peninsularis</i> | 2b | P,W |
| striped mud turtle | <i>Kinosternon bauri palmarum</i> | 3 | D,P,R,W |
| Florida mud turtle | <i>Kinosternon subrubrum steindachneri</i> | 3b | B,D,P,R |
| Florida box turtle | <i>Terrepenne carolina bauri</i> | 1 | B,E,,P,R,S |
| gopher tortoise | <i>Gopherus polyphemus</i> | 1 | A,B,E,P |
| Florida stinkpot turtle | <i>Stenotherus odoratus</i> | 3 | D,P,R,W |
| soft-shelled | | | |
| turtle | <i>Trionyx ferox</i> | 3 | A,B,D,P,W |
| carolina anole | <i>Anolis carolinensis carolinensis</i> | 2 | B,D,P,R,S |
| brown anole | <i>Anolis sangrei sangrei</i> | 1 | A,B,P |
| six-lined racerunner | <i>Cnemidophorus sexlineatus</i> | 1 | B,E,P |
| ground skink | <i>Scincella lateralis</i> | 1 | B,P,S |
| Southeastern five-lined | | | |
| skink | <i>Eumeces inexpectatus</i> | 1 | B,P |
| Eastern slender glass | | | |
| lizard | <i>Ophisaurus attenuatus longicaudus</i> | 1 | P,S |
| island glass lizard | <i>Ophisaurus compressus</i> | 1 | P |
| Eastern glass lizard | <i>Ophisaurus ventralis</i> | 1 | P,S |
| Florida green water | | | |
| snake | <i>Nerodia cyclopion floridana</i> | 3 | D,H,P,R |
| Florida water snake | <i>Nerodia fasciata pictiventris</i> | 3 | A,B,D,H |
| | | | P,R,W |
| brown water snake | <i>Nerodia taxispilota</i> | 1 | H,P |
| south Florida black | | | |
| swamp snake | <i>Seminatrix pygaea cyclas</i> | 3b | B,D,H,P,R,W |
| Florida brown snake | <i>Storeria dekayi victa</i> | 1 | D,H,P,R,S |
| peninsula ribbon snake | <i>Thamnophis sauritus sackeni</i> | 2b | B,D,H,P,R,S |
| Eastern garter snake | <i>Thamnophis sirtalis sirtalis</i> | 2b | A,B,D,E |
| | | | H,P,R,S |
| Eastern mud snake | <i>Farancia abacura abacura</i> | 3 | H,P,R |
| striped crayfish snake | <i>Regina alleni</i> | 2 | R |
| everglades racer | <i>Coluber constrictor paludicola</i> | 1 | H |
| black racer | <i>Coluber constrictor priapus</i> | 2b | A,B,D,E |
| | | | H,P,R,S,W |
| Eastern coachwhip | <i>Masticophis flagellum flagellum</i> | 1 | H,P |
| rough green snake | <i>Opheodrys aestivus</i> | 2 | B,D,E,H,P,S |
| Eastern indigo snake | <i>Drymarchon corais couperi</i> | 3 | A,B,D,H,S,W |
| red rat (corn) snake | <i>Elaphe guttata guttata</i> | 1 | A,B,H,P,R,S |
| yellow rat snake | <i>Elaphe obsoleta quadrivittata</i> | 1 | A,B,H,P,S |
| everglades rat snake | <i>Elaphe obsoleta rossalleni</i> | 1 | B,H |
| Florida king snake | <i>Lampropeltis getulus</i> | 1 | B,D,H,R,S |
| scarlet king snake | <i>Lampropeltis triangulum elapsoides</i> | 1 | H,P,S |
| Florida scarlet snake | <i>Cemophora coccinea coccinea</i> | 1 | H,P,S |
| pine woods snake | <i>Rhadinaea flavilata</i> | 1 | P |
| southern ringneck snake | <i>Diadophis punctatus punctatus</i> | 1 | A,B,H,P,S |
| Eastern coral snake | <i>Micrurus fulvius fulvius</i> | 1 | B,H,P,S |
| Florida cottonmouth | | | |
| snake | <i>Agkistrodon piscivorous conanti</i> | 2 | A,B,D,E |
| | | | H,P,R,S |
| dusky pygmy rattlesnake | <i>Sistrurus miliarius barbouri</i> | 1 | A,B,H,E |
| | | | P,R,S |
| Eastern diamondback | | | |
| rattlesnake | <i>Crotalus adamanteus</i> | 1 | B,E,H,P,S |

Amphibians of Depressional Herbaceous Wetlands of South Peninsular Florida

Habitat

| <u>Common Name</u> | <u>Scientific Name</u> | <u>Index</u> | <u>Source</u> |
|-----------------------------|--|--------------|--------------------------|
| two-toed amphiuma | <i>Amphiuma means</i> | 3b | B,D,H,P,R,W |
| greater siren | <i>Siren lacertina</i> | 2b | D,P,R |
| Eastern lesser siren | <i>Siren intermedia intermedia</i> | 3b | D,P,W |
| everglades dwarf | <i>Siren intermedia</i> | 2 | P |
| dwarf siren | <i>Pseudobranchius striatus</i> | 3 | R,W |
| striped newt (n) | <i>Notophthalmus perstriatus</i> | 2 | W |
| peninsular newt | <i>Notophthalmus viridescens piaro</i> | 3b | D,H,P,R,W |
| mole salamander(n) | <i>Ambystoma talpoideum</i> | 2 | W |
| tiger salamander(n) | <i>Ambystoma tigrinum</i> | 1 | W |
| dwarf salamander | <i>Eurycea quadridigitata</i> | 3 | R,W |
| Eastern spadefoot toad | <i>Scaphiopus holbrookii</i> | 2b | H,P,R,S,W |
| oak toad | <i>Bufo quericus</i> | 3b | A,B,H,M P,R,W |
| southern toad | <i>Bufo terrestris</i> | 4b | A,B,D,E,H P,R,W |
| Florida cricket frog | <i>Acris gryllus dorsalis</i> | 2b | A,B,D,H P,R,S |
| green treefrog | <i>Hyla cinerea</i> | 3b | A,B,D,P R,S,W |
| southern spring peeper | <i>Hyla crucifer</i> | 3 | H,S |
| pinewoods treefrog | <i>Hyla femoralis</i> | 3b | A,B,D,H M,P,R, S,W |
| barking treefrog | <i>Hyla gratiosa</i> | 2b | B,D,P,R,W |
| squirrel treefrog | <i>Hyla squirella</i> | 3b | D,H,P,R,W |
| little grass frog | <i>Limnaeodius ocularis</i> | 3b | D,H,P,R,S,W |
| Florida chorus frog | <i>Pseudacris nigrita verrucosa</i> | 3b | B,D,H,P R,S,W |
| ornate chorus frog (n) | <i>Pseudacris ornata</i> | 2b | W |
| greenhouse frog | <i>Eleutherodactylus planirostris</i> | 1 | P |
| Eastern narrow-mouthed toad | <i>Gastrophryne carolinensis</i> | 3b | B,H,P,R,W |
| bullfrog (n) | <i>Rana catesbeiana</i> | 4b | R,W |
| pig frog | <i>Rana grylio</i> | 3b | B,D,H,P,R,W |
| southern leopard frog | <i>Rana utricularia</i> | 4b | B,D,H,P R,S,W |
| gopher frog | <i>Rana areolata aesopus</i> | 4b | B,D,P,R,S,W |

Fishes of Depressional Herbaceous Wetlands of South Peninsular Florida

| <u>Common Name</u> | <u>Scientific Name</u> | <u>Index</u> | <u>Habitat</u> <u>Source</u> |
|--------------------|-----------------------------------|--------------|---------------------------------|
| longnose gar | <i>Lepisosteus osseus</i> | 1 | R |
| Florida gar | <i>Lepisosteus platyrhincus</i> | 2 | B,R,U |
| bowfin | <i>Amia calva</i> | 2 | R |
| redfin pikerel | <i>Esox americanus americanus</i> | 2 | R |
| golden shiner | <i>Notemigonus crysoleucas</i> | 2 | B,R,U |
| twilight shiner | <i>Notropis maculatus</i> | 1 | B,U |
| lake chubsucker | <i>Erimyzon sucetta</i> | 3 | R |
| yellow bullhead | <i>Ictalurus natalis</i> | 2 | B,R,U |
| brown bullhead | <i>Ictalurus nebulosus</i> | 4 | B,R,U,W |
| walking catfish | <i>Clarias batrachus</i> | 1 | A,B,U |
| golden topminnow | <i>Fundulus chrysotus</i> | 3 | B,R,U,W |
| banded topminnow | <i>Fundulus cingulatis</i> | 1 | R,W |
| marsh killifish | <i>Fundulus confluentus</i> | 1 | B,U |
| lined topminnow | <i>Fundulus notti</i> | 2 | R,W |
| seminole killifish | <i>Fundulus seminolis</i> | 1 | R |

| | | | |
|--------------------------|-------------------------------|---|-----------|
| flagfish | <i>Jordanella floridae</i> | 4 | B,R,U,W |
| pigmy killifish (n) | <i>Leptolucania ommata</i> | 2 | W |
| bluefin killifish | <i>Lucania goodei</i> | 2 | R |
| mosquitofish | <i>Gambusia holbrooki</i> | 3 | A,B,R,U,W |
| least killifish | <i>Heterandria formosa</i> | 3 | B,R,U,W |
| sailfin molly | <i>Poecilia latipinna</i> | 2 | A,B,R,U |
| blue tilapia | <i>Tilapia aurea</i> | 3 | R |
| brook silverside | <i>Labidesthes sicculus</i> | 1 | B,R,U |
| gizzard shad | <i>Dorosoma cepedianum</i> | 1 | R |
| threadfin shad | <i>Dorosoma petenense</i> | 1 | R |
| Everglades pygmy sunfish | <i>Elassoma evergladei</i> | 1 | B,R,U |
| bluespotted sunfish | <i>Enneacanthus gloriosus</i> | 2 | B,R,U,W |
| redbreast sunfish | <i>Lepomis auritus</i> | 1 | R |
| warmouth | <i>Lepomis gulosus</i> | 2 | B,R,U |
| bluegill | <i>Lepomis macrochirus</i> | 3 | A,B,R,U,W |
| dollar sunfish | <i>Lepomis marginatus</i> | 2 | B,R,U,W |
| redear sunfish | <i>Lepomis microlophus</i> | 1 | B,R,U |
| spotted sunfish | <i>Lepomis punctatus</i> | 1 | B,U |
| largemouth bass | <i>Micropterus salmoides</i> | 3 | A,R,W |
| black crappie | <i>Pomoxis nigromaculatus</i> | 3 | R |
| swamp darter | <i>Etheostoma fusiforme</i> | 1 | B,R,U |
| pirate perch | <i>Aphredoderus sayanus</i> | 1 | R |
| fat sleeper | <i>Dormitator maculatus</i> | 1 | B,U |

**Listed animal species of Depressional Herbaceous Wetlands of South Peninsular
Florida**

| <u>Common Name</u> | <u>Scientific Name</u> | <u>Status</u> | |
|----------------------------------|--------------------------------------|---------------|----------------|
| | | <u>State</u> | <u>Federal</u> |
| roseate spoonbill | <i>Ajaia ajaja</i> | SSC | |
| American alligator | <i>Alligator mississippiensis</i> | SSC | T-SA |
| limpkin | <i>Aramus guarauna</i> | SSC | |
| Sherman's short-tailed shrew | <i>Blarina brevicauda shermanii</i> | SSC | C2 |
| Eastern indigo snake | <i>Drymarchon corais/couperi</i> | T | T |
| little blue heron | <i>Egretta caerulea</i> | SSC | |
| snowy egret | <i>Egretta thula</i> | SSC | |
| tricolored heron | <i>Egretta tricolor</i> | SSC | |
| Southeastern American kestrel | <i>Falco sparverius paulus</i> | SSC | C2 |
| Florida panther | <i>Felis concolor coryi</i> | E | E |
| gopher tortoise | <i>Gopherus polyphemus</i> | SSC | C2 |
| Florida sandhill crane | <i>Grus canadensis pratensis</i> | T | |
| bald eagle | <i>Haliaeetus leucocephalus</i> | T | T |
| everglades mink | <i>Mustela vison evergladensis</i> | E | C2 |
| wood stork | <i>Mycteria americana</i> | E | E |
| brown pelican | <i>Pelicanus occidentalis</i> | SSC | |
| gopher frog | <i>Rana areolata</i> | SSC | C2 |
| snail kite | <i>Rostrhamus sociabilis</i> | E | E |
| Big Cypress fox squirrel | <i>Sciurus niger avicennia</i> | T | C2 |
| Sherman's fox squirrel | <i>Sciurus niger shermani</i> | SSC | C2 |

Florida black bear *Ursus americanus floridanus* T C2

Candidate Listed Animals of the Depressional Herbaceous Wetlands of South
Peninsular Florida

| <u>Common Name</u> | <u>Scientific Name</u> | <u>Status</u> |
|----------------------------|------------------------------------|---------------|
| northern harrier | <i>Circus cyaneus</i> | CITE |
| merlin | <i>Falco columbarius</i> | CITE |
| Eastern American kestrel | <i>Falco sparverius sparverius</i> | CITE |
| river otter | <i>Lutra canadensis lataxina</i> | CITE |
| bobcat | <i>Lynx rufus floridanus</i> | CITE |
| long-tailed weasel | <i>Mustela frenata peninsulae</i> | CITE |
| round-tailed muskrat | <i>Neofiber alleni</i> | C2 |
| Southeastern big-eared bat | <i>Plecotus rafinesquii</i> | C2 |