

DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT CORPS OF ENGINEERS COCOA REGULATORY OFFICE 400 HIGH POINT DRIVE, SUITE 600 COCOA, FLORIDA 32926

ATTACHMENT 4

REPLY TO ATTENTION OF:

February 19, 2008

Regulatory Division SAJ-2004-3931(NW-JSC)

Craig Tepper Seminole Tribe of Florida 6300 Stirling Road Hollywood, Florida 33024

Dear Mr. Tepper:

Your application for a Department of the Army permit received on April 1, 2004, has been assigned number SAJ-2004-3931. This permit authorizes the mechanical removal of exotic/nuisance vegetation and establishment of the Big Cypress Advanced Mitigation Program (AMP). The AMP is located within the 14,723 acre "Native Area" of the Big Cypress Seminole Indian Reservation (BCSIR), Hendry County, Florida (Attachment 1).

Your project, as depicted on the enclosed drawing, is authorized by Nationwide Permit (NWP) Number 27. In addition, project specific conditions have been enclosed. This verification is valid until December 20, 2009. Please access the U.S. Army Corps of Engineers' Jacksonville District's Regulatory web address at http://www.saj.usace.army.mil/regulatory/permitting/nwp/nwp.htm to access web links to view the Final Nationwide Permits, Federal Register Vol. 72, dated March 12, 2007, the Corrections to the Final Nationwide Permits, Federal Register 72, May 8, 2007, and the List of Regional Conditions. These files contain the description of the Nationwide Permit authorization, the Nationwide Permit general conditions, and the regional conditions, which apply specifically to this verification for

You must comply with all of the special and general conditions and any project specific condition of this authorization or you may be subject to enforcement action. In the event you have not completed construction of your project

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within the specified time limit, a separate application or reverification may be required.

The following special conditions are included with this verification:

1. **Reporting Address:** All reports, documentation and correspondence required by the conditions of this permit shall be submitted to the following address: U.S. Army Corps of Engineers, Regulatory Division, Enforcement Section, P.O. Box 4970, Jacksonville, FL 32232. The Permittee shall reference this permit number, SAJ-2004-3931(NW-JSC), on all submittals.

2. Compensatory Mitigation: The Tribe is authorized to complete the following mitigation objectives, in accordance with the approved compensatory mitigation plan (Attachment 2), for the purpose of generating mitigation credit that may be used to offset wetland impacts within the BCSIR:

Onsite Mitigation

The AMP (Attachment 2) is authorized in the 14,723 acre native area of the BCSIR. The AMP includes primarily exotic vegetation removal within six wetland enhancement areas (totaling approximately 4,144 acres).

3. **Performance Standards**: To meet the objectives of the approved compensatory mitigation plan, the Tribe shall achieve the following performance standards:

a. At least 80 percent cover by appropriate wetland species (i.e., FAC or wetter).

b. Cover of Category I and II invasive exotic plant species, pursuant to the most current list established by the Florida Exotic Pest Plant Council at <u>http://www.fleppc.org</u>, and the nuisance species primrose willow (Ludwigia peruviana), dogfennel (Eupatorium capillifolium), Bermudagrass (Cynodon spp.), Bahiagrass (Paspalum notatum), and cattail (Typha spp.). shall total less than 5 percent.

c. Less than 20 percent mortality of planted wetland species.

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The Tribe shall achieve the above performance standards by the end of the 10-year monitoring period, with no maintenance during the 10th year of monitoring. In the event that the above performance standards have not been achieved, the Tribe shall undertake a remediation program approved by the Corps in accordance with the **Remediation** Special Condition of this permit.

4. Monitoring and Reporting Timeframes: To show compliance with the performance standards the Tribe shall complete the following:

a. Perform a time-zero monitoring event of the wetland mitigation area(s) within 60 days of completion of the compensatory mitigation objectives identified in the **Compensatory Mitigation** Special Condition of this permit.

b. Submit the time-zero report to the Corps within 60 days of completion of the monitoring event. The report will include at least one paragraph depicting baseline conditions of the mitigation site(s) prior to initiation of the compensatory mitigation objectives and a detailed plan view drawing of all created, enhanced and/or restored mitigation areas.

c. Subsequent to completion of the compensatory mitigation objectives, perform annual monitoring of the wetland mitigation areas for a total of no less than 10 years of monitoring.

d. Submit annual monitoring reports to the Corps within 60 days of completion of the monitoring event. The AMP credit/debit ledger shall be included in the annual report.

e. Monitor the mitigation area(s) and submit annual monitoring reports to the Corps until released in accordance with the **Mitigation Release** Special Condition of this permit.

5. **Remediation:** If the compensatory mitigation fails to meet the performance standards 10 years after completion of the compensatory mitigation objectives, the compensatory mitigation will be deemed unsuccessful. Within 60 days of notification by the Corps that the compensatory mitigation is unsuccessful, the

U.S. Army Corps of Engineers Permit # <u>SAJ-2004-03931 (PGP-JSC)</u> Date: <u>3/5/2015</u> Drawing Attachment <u>4 of 10</u> Tribe shall submit to the Corps an alternate compensatory mitigation proposal sufficient to create the functional lift required under the permit. The alternate compensatory mitigation proposal may be required to include additional mitigation to compensate for the temporal loss of wetland function associated with the unsuccessful compensatory mitigation activities. The Corps reserves the right to fully evaluate, amend, and approve or reject the alternate compensatory mitigation proposal. Within 120 days of Corps approval, the Tribe will complete the alternate compensatory mitigation proposal.

6. Mitigation Release: The Tribe's responsibility to complete the required compensatory mitigation, as set forth in the Compensatory Mitigation Special Condition of this permit will not be considered fulfilled until mitigation success has been demonstrated and written verification has been provided by the Corps. A mitigation area which has been released will require no further monitoring or reporting by the Permittee; however the Permittee, Successors and subsequent Transferees remain perpetually responsible to ensure that the mitigation area(s) remain in a condition appropriate to offset the authorized impacts in accordance with General Condition 2 of this permit.

If you are unable to access the internet or require a hardcopy of any of the conditions, limitations, or expiration date for the above referenced NWP, please contact Jeffrey S. Collins by telephone at 321-504-3771.

Thank you for your cooperation with our permit program. The Corps Jacksonville District Regulatory Division is committed to improving service to our customers. We strive to perform our duty in a friendly and timely manner while working to preserve our environment. We invite you to take a few minutes to visit

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the following link and complete our automated Customer Service Survey: http://regulatory.usacesurvey.com/. Your input is appreciated - favorable or otherwise.

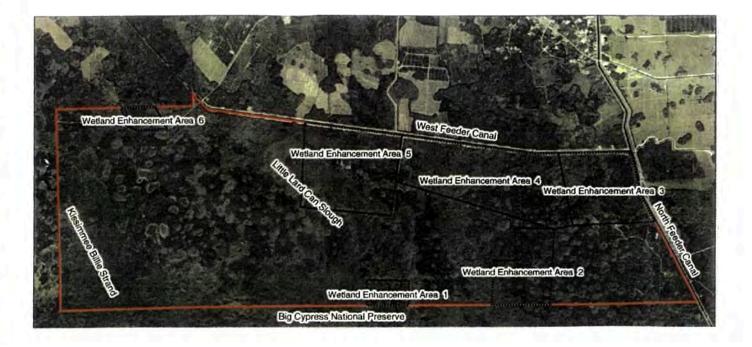
Sincerely,

David S. Hobbie Chief, Regulatory Division

Enclosures

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Big Cypress Seminole Indian Reservation Advanced Mitigation Program



Prepared by: The Phoenix Environmental Group, Inc. and Environmental Affairs Consultants, Inc.

> Prepared for: Seminole Tribe of Florida

> > March 16, 2005

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Big Cypress Seminole Indian Reservation Advanced Mitigation Program

1.0 INTRODUCTION

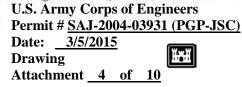
The proposed Big Cypress Advanced Mitigation Program (AMP) will provide for enhancement of 4,144.64 acres of habitat contained in six discrete wetland enhancement areas (WEA's) distributed within the 14,000 acre (approximate) "Native Area" of the Big Cypress Reservation (see Figure 1 – Location of WEA's in the Native Area). The selected management area boundaries encompass degraded wetland resources that exhibit reduced functional capacities as documented in the report entitled *Prospectus For Wetland Enhancement* (The Phoenix Environmental Group, Inc., July, 2004). Alterations to regional hydrologic patterns and heavy infestation by exotic species have resulted in the disruption of native plant associations and overall community structure. Key exotic species targeted for eradication and control by the AMP are melaleuca (*Melaleuca quinquenervia*) and old world climbing fern (*Lygodium microphyllum*), both classified as Category I invasive species by the Florida Exotic Pest Plant Council (1999). The Council defines Category I species as those "...that are invading and disrupting native plant communities in Florida."

The AMP provides detailed specifications for exotic species eradication and control as well as protocols for implementation, monitoring, maintenance and adaptive management. Pursuant to stipulations in the South Florida Water Management District's Sixth Amendment to the Sixteenth Annual Work Plan (2004) the AMP will include elements detailing the assignment of wetland lift/credits, threatened and endangered species mitigation credit, determination of service area, success criteria, monitoring and maintenance plan and administration and tracking.

The Seminole Tribe ("Tribe") is committed to the implementation of a comprehensive mitigation and ecosystem management plan within the designated WEA's that will result in a measure of functional, ecologic lift. The lift, in turn, will be translated into mitigation credits to offset wetland impacts incurred within the Big Cypress Reservation (see Assignment of Wetland Lift/Credits, Threatened and Endangered Species Mitigation Credit, and Determination of Service Area elements of the AMP).

Attaining the desired lift will require aggressive exotic species control, coupled with comprehensive monitoring and maintenance, to ensure successful enhancement and restoration of ecological functions in the targeted areas. Given the expansive area involved and variability in onsite conditions, the Tribe will integrate chemical, biological and mechanical processes into the exotic species control plan to derive the most beneficial results. Likewise, an adaptive management approach will be utilized to guide decision making through each phase of the AMP implementation.

Fundamentally, the AMP subscribes to the ecosystem management themes incorporated into the South Florida restudy Science Subgroup's report *South Florida Ecosystem Restoration* – *Scientific Information Needs* (September 9, 1994). These themes were adapted, in part, from R. E. Grumbine's treatment of the subject "*What is ecosystem management*?" (Conservation



Biology, 8:27-38, 1994). The following key points (with emphasis added) provide a synopsis of the "...dominant themes of ecosystem management" presented in the restudy report:

"Ecosystem management mandates examining a problem at more than one hierarchical scale and seeking connections between all levels. A major tenet of ecosystem management is conservation of **ecological integrity**. Ecological integrity is conserved by protecting native diversity and the ecological patterns and processes that maintain diversity."

"Ecosystem management requires more research and data collection. Managers must track the results of their actions so that success or failure can be evaluated quantitatively. Monitoring creates an ongoing **feedback loop** of useful information."

"Adaptive management is part of the ecosystem approach. It assumes that scientific knowledge is provisional and focuses on management as a learning process for continuous experiment in which incorporating the results of previous actions allows managers to remain flexible and adapt to uncertainty."

"Humans are part of the ecosystem and cannot be separated from it in ecosystem management."

"Management requires working across administrative political boundaries to address issues within ecological boundaries."

2.0 ADVANCED MITIGATION PROGRAM CRITERIA

The Big Cypress AMP will substantially conform to the criteria presented as *Fundamental Requirements of Mitigation Banks in the State of Florida* (State/Federal Mitigation Review Team Process For Florida, Operational Draft, October 1998). Although technically not a commercial mitigation bank, the AMP will provide similar services within a proprietary framework and will require approval from the South Florida Water Management District (SFWMD), U.S. Army Corps of Engineers, U.S. Environmental Protection Agency and U.S. Fish and Wildlife Service.

Subsections 2.1 through 2.10 provide narrative assessments of the design, operational, maintenance, legal and financial criteria.

2.1 Will Improve Ecological Conditions Of The Regional Watershed

The AMP will focus enhancement and management efforts on six WEA's that are located within the Big Cypress Reservation (see Figure 1 – Location of WEA's in the Native Area). The encompassing Native Area is bounded to the south by the Big Cypress National Preserve, to the west by private lands, to the north by the West Feeder Canal and to the east by the North Feeder Canal (L-28 Interceptor). It is also situated at the northern boundary of the "L-28 Tie-Back Basin", an Everglades western basins watershed. Historically, seasonal flows moved through the Native Area (generally from the northwest to the southeast) within the Kissimmee Billie and

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Little Lard Can slough systems and via overland sheet-flow. Depressional areas would remain ponded throughout an average year while intervening strands and wet prairies would experience a "dry season" during which the water table receded below ground surface allowing accumulated organics to desiccate and volatilize. After completion of the West Feeder and North Feeder canals under the Central and South Florida Flood Control District administration, surface flow and water table regimes were significantly altered. In addition to diverted flows and accelerated runoff rates, mechanical control of water levels within the feeder canal system has had the net affect of reducing the level and duration of seasonal water tables within the regional watershed.

The Native Area is a mosaic of hydric and mesic communities ranging from deep cypress swamps to South Florida pine flatwoods (see Figures 2-7). Community types within the WEA's are designated by conventional FLUCCS codes (Florida Land Use, Cover and Forms Classification System, Florida Department of Transportation, 2nd ed., 1999) on the WEA maps. Despite the affects of altered seasonal hydrology, overall landscape patterns within the Native Area remain intact. This phenomenon was also observed by the South Florida restudy science subgroup when comparing maps of the Everglades region made in the 1980's with those made in the 1800's. However, the 2004 *Prospectus* report (The Phoenix Environmental Group, Inc.) documented that numerous wetland communities in the Native Area have been invaded by melaleuca (see Figures 8-13), some to the point of being ecologically impaired. Conditions frequently observed within old growth melaleuca stands include the stress and die-off of native canopy trees; crowding and displacement of subcanopy (shrub) species; shading, crowding and displacement of native groundcover species; and abatement of native species propagation. All of these factors have contributed to the overall decline in the ecological integrity of WEA habitats through the loss of native diversity as well as ecological patterns and processes.

Ecological conditions within the regional watershed will be improved as a result of enhancing (and in some cases restoring) native diversity and productivity in the targeted WEA's. These improvements will require efforts on two fronts. The first entails implementation of an exotic species control plan (see Section 3.0). This effort will utilize a suite of proven techniques to eliminate dense stands of melaleuca growth, quarantine and stop the outward expansion of melaleuca into transitional and upland habitats, and reestablish native plant species coverage. Secondly, hydrologic conditions will be improved. Coincident with implementation of the AMP, construction of Big Cypress Critical Project features WRA1-E, WRA2-W and WRA3 north of the West Feeder Canal will result in the installation of three siphons allowing excess, treated stormwater from the reservoirs to be bypassed into the Native Area. These increased flows will help offset the watershed diversion and drainage affects of the feeder canal system by augmenting seasonal water levels and returning historic northerly to southerly sheet flow patterns needed for the successful enhancement of reclaimed wetland areas.

Following is a summary of cumulative benefits that will accrue to the regional watershed as a result of exotic plant removal/control and hydrologic enhancement:

Exotic seed and spore sources will be eliminated and controlled in proximity to the Big Cypress National Preserve.

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Threatened and endangered species habitat (eg. panther and panther prey base components) will be enhanced within the WEA's through the restoration of extensive cypress/flatwoods ecotonal fringes and other significant habitat types including mixed forested wetlands.

Compatibility with overall CERP (Comprehensive Everglades Restoration Project) objectives including delivery of clean surface water to the Big Cypress National Preserve and enhancement of significant wetland resources within the Everglades region.

2.2 Will provide viable and sustainable ecological and hydrological functions for the proposed mitigation service area

The AMP will provide advanced mitigation for unavoidable wetland impacts experienced within the Big Cypress Reservation service area and also has the potential to provide mitigation for impacts to threatened/endangered species habitat on Tribal lands (see *Determination of Service Area, Assignment of Wetland Lifts/Credits, and Threatened and Endangered Species Mitigation Credit* elements of the AMP). The AMP provides for the level of habitat enhancement, adaptive assessment and management needed to ensure sustainable ecological and hydrological functions (see *Success Criteria and Monitoring and Maintenance Plan* elements). Credits for impacts in the mitigation service area will be derived from the "lift" in overall ecological function of similar habitat types in the WEA's.

2.3 Will be effectively managed

Effective management of the AMP will be facilitated by a Tribal Council resolution approving the program and allocating Tribal resources for its implementation. The Seminole Water Resource Management Department (WRMD) will provide the necessary administration, oversight and quality assurance/quality control evaluations to ensure that all elements of the AMP are properly executed. These elements will include all phases of exotic species control and habitat restoration, data collection and reporting, maintenance and adaptive management assessments as well as program administration and mitigation credit tracking.

The WRMD will coordinate with other Tribal departments to ensure compatibility of their programs with the AMP objectives. This will entail close communication with the Bureau of Indian Affairs Forestry Department that manages an ongoing controlled burn program within the Native Area. The WRMD will coordinate communication with appropriate state and federal agencies

2.4 Will not destroy areas with high ecological value

The overarching objective of the AMP is to provide habitat impact mitigation by restoring the ecological integrity of habitats degraded by melaleuca and old world climbing fern invasion within the WEA's. A fully integrated exotic species eradication and control program will be employed utilizing the most effective techniques for specific habitats types and levels of infestation. Areas of higher ecological value within the WEA's, and Native Area at large, will be protected from collateral damage during operations that require the deployment of heavy

U.S. Army Corps of Engineers Permit # <u>SAJ-2004-03931 (PGP-JSC)</u> Date: <u>3/5/2015</u> Drawing Attachment <u>4 of 10</u> machinery or aerial application of herbicides. Every effort will be made to conduct eradication efforts in the dry season and to utilize existing roads and fire trails to access the targeted treatment areas. Staging, burn and/or mulching sites will be carefully located to minimize the potential for disturbing surface water flow patterns or adversely impacting wildlife utilization of preferred habitats. Natural contours will be restored in all areas of mechanical disturbance to discourage establishment of exotic/nuisance plant species and to facilitate restoration. Monitoring and maintenance protocols specified in the AMP provide assurance that any irregularities posing a threat to areas of high ecological value will be identified and remedied in a timely manner (see *Success Criteria and Monitoring and Maintenance Plan* elements). This level of protection will be further reinforced through interdepartmental communication within the Tribe.

Another significant factor that also warrants the protection and maintenance of valuable ecological resources within the WEA's and Native Area at large, is the religious and cultural use of indigenous natural resources by traditional Tribal members.

2.5 Will achieve mitigation success

The AMP Monitoring and Maintenance Plan specifies quantitative data collection methods that will be employed throughout all four phases of the program to ensure that it is moving toward success pursuant to the criteria stipulated by SFWMD in the Sixth Amendment to the Sixteenth Annual Work Plan. The monitoring and maintenance plan is structured to allow a "feedback loop" whereby monitoring data are continuously assessed and used by managers to manage the overall program. This allows for the adaptive assessment of pretreatment data to be used in determining the most effective treatment methodology for specific scenarios and for post-treatment monitoring data to be used for the prescription of maintenance activities.

Additional assurances that will facilitate attainment of success include the Tribe's Council resolution adopting the AMP and allocation of Tribal resources for implementation and maintenance, interdepartmental coordination, and enhanced hydrology resulting from construction of the Big Cypress Critical Project.

2.6 Will be adjacent to lands that will not adversely affect the viability of the Advanced Mitigation Plan due to unsuitable land uses or conditions

The proposed WEA's will not be adversely affected by incompatible land use activities. Management goals for the Big Cypress National Preserve located to the south are consistent with the goals of the AMP. The existing west and north feeder canals provide a linear buffer along the northern and eastern boundaries of the Native Area. Lands along the western border of the Native Area will have significant regulatory obstacles to any major development plans.

2.7 Will meet the requirements of all other applicable state or federal law

The proposed AMP will be reviewed and approved by the South Florida Water Management District and the U.S. Army Corps of Engineers (including appropriate consultations with EPA and USFWS). Authorization for execution of the enhancement/restoration activities proposed in

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the AMP will be provided by the Sixth Amendment to the Sixteenth Annual Work Plan from the state and either an individual Section 404 permit, NWP 27, Memorandum Of Agreement, or other form of consent from the federal government. The Tribe will provide water quality certification as necessary.

2.8 Will be implemented to ensure that any surface water management system constructed, altered, operated, maintained, abandoned, or removed within the mitigation area will meet the requirements of state and federal law

The proposed AMP does not include construction or operation of a surface water management system. Hydrologic improvement integral to the AMP will result from the development of Critical Project water management facilities authorized by a federal Section 404 permit (Permit No. 199800622 IP-SS) and Annual Work Plan approved by the South Florida Water Management District.

2.9 Applicant has sufficient legal or equitable interest in the property to ensure protection and management of the land within a mitigation area

The proposed WEA's are located within the Big Cypress Reservation, a federal reservation held in trust for use by the Seminole Tribe of Florida. The proposed AMP will be officially approved by the Seminole Tribe in a Tribal Council resolution.

2.10 Can meet the financial responsibility for implementing and maintaining the Advanced Mitigation Program

Implementation and operation of the proposed AMP will be financially secured by a Tribal Council resolution and allocation of Tribal resources for undertaking the physical works and administration required in the program.

3.0 EXOTIC SPECIES CONTROL PLAN

3.1 Melaleuca Control

Wetland enhancement will generally consist of the removal of melaleuca from the six WEAs. The University of Florida, Institute of Food and Agricultural Sciences (IFAS, 2005) lists the following mechanisms as an example of herbicide treatment. "Melaleuca will be removed in areas where it is the dominant species and in large areas of partially disturbed wetland and transitional wetland ecotypes. As described by Woodall (1981 a), a melaleuca control program should consist of a quarantine strategy. The least infected areas should be treated first, to eliminate potential seed trees from the outer fringes of the treatment areas and stop continued infestation from occurring. This can be done by hand-pulling trees less than two meters in height (average dbh ≤ 0.1 '). A follow through method of manual application of herbicide to smaller groups of trees may be used to eradicate the small to medium stands. Larger trees (average dbh ≥ 1.0 ') should be addressed with larger doses of herbicide and felling the individual trees, followed by other selective control methods. Monoculture stands (melaleuca infested areas greater than 75%) need to be identified for aerial application. A follow up treatment in 90 days

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is recommended after initial treatment to assure adequate control. Certified-use herbicides will be selected for specific FLUCCS or ecosystem types and will only be used under the supervision of a qualified and licensed herbicide applicator".

"If melaleuca trees are mixed in a forest with native species (such as slash pine or pond cypress), selectively killing melaleuca trees by hand might be the best choice. To accomplish this, the corky bark is cut away and herbicide is sprayed onto the cambium. This technique is often called "hack-and-squirt". For large stands of melaleuca trees (acres) with relatively few native plants, aerial application of herbicides is often used. The South Florida Water Management District mixes imazapyr and glyphosate with water (3 quarts/3 quarts/20 gallon solution), plus surfactant",

IFAS (2005) references the following mechanical control methods that the Tribe may be able to employ in conjunction with herbicide treatments. "While somewhat labor intensive, hand-tools, such as, machetes and chainsaws, are very good for removal of exotics when there is a lot of native vegetation present. Vegetation control companies that utilize the hand-tool/herbicide application method have found successful ways to keep labor costs down. The cut and stack method is utilized for small or larger trees. A follow-up treatment after 90 days should follow. When most people think of mechanically controlling melaleuca, they usually think of heavy machinery".

"In South Florida, the use of specialized tree-clearing equipment to clear melaleuca is common. Heavy machinery includes bulldozers, stump grinders, and specialized equipment such as the clear-more chipper/stumper, feller-buncher, and brontosaurus attachment for backhoes. While these methods also often include herbicide application, it may not always be necessary. It is possible (though yet not studied) that mulching of the tree trunks and branches will prevent seedling establishment, and grinding the stump will prevent the tree from re-growing".

It is often recognized that controlled burns are an added benefit for controlling melaleuca. However, it must be timed in the dry season and when the trees are not seeding. Utmost care will be taken to contain controlled burns within small treatment areas and to prevent their escape into deep cypress swamps and mesic oak hammocks. It is recommended that a control burn program be developed between the Bureau of Indian Affairs Forestry Department in Big Cypress and the WRMD. The program would specifically include a burn schedule, specifications and reporting protocol.

In additional to the traditional chemical and mechanical eradication/control methods, a measure of success is being experienced with the deployment of biological control agents. The Tribe may elect to use the melaleuca weevil (*Oxyops vitiosa*) and psyllid larva (*Boreioglycospis melaleuca*) in conjunction with traditional methods or as the preferred method in selected treatment areas.

The phasing sequence for implementation of the Exotic Species Control Plan is presented in the Success Criteria and Monitoring and Maintenance Plan.

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3.2 Old World Climbing Fern Control

Old world climbing fern occurs in the Native Area and adjacent Big Cypress National Preserve. The vertical growth rate for this species averages 1.16 meters per year within the Big Cypress Region (Volin et al, 2004). Ground transect data from within the Native Area indicate that infestations in the understory currently average 31.5 individuals plants established per km² (Volin et al, 2004). Within the next 10 years, canopy coverage could exceed 30% within the most susceptible habitats within the Native Area (D. Owen, personal communication). Therefore, old world climbing fern areas that are found during the initial site survey, in Phase I, will be treated with herbicides. Biological control may be employed as the preferred treatment method for dealing with widespread, chronic levels of infestation and areas that are difficult to access. The USDA Agriculture Research Service (ARS) has approved release of the "lygodium moth" (*Austromusotima camptonozale*) in Florida to help stop the rampant spread of old world climbing fern. According to the ARS "…caterpillars of this moth eat Lygodium leaves…killing small plants and reducing the competitiveness of larger plants."

3.3 Supplementary Enhancement Processes

Phase III may include soil scrape down in areas where dense melaleuca stands exist. Soil scrape down is considered as a means to discourage melaleuca re-establishment by removing the seed source and lowering the ground elevation to enhance hydroperiod conditions. Soil scrape down is also beneficial for the regeneration of native wetland plant species. This option should be carefully considered for optimal wetland enhancement in WEA #3 where hydrology has been severely modified by the proximity of the feeder canals.

It is anticipated that natural recruitment will improve ground cover in the melaleuca removal areas. If monitoring indicates a lack of native ground cover development, then native seed planting will be initiated to achieve 80% coverage of desirable herbaceous species. The Tribe also anticipates the need to plant canopy and/or subcanopy species (eg. cypress, oak, maple, pond apple, etc.) within selected depressional wetlands where these species have been displaced by melaleuca.

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Big Cypress Seminole Indian Reservation Advanced Mitigation Program Assignment of Wetland Lift/Credits

The amount of wetland functional value "lift" derived from the implementation of the Advanced Mitigation Program (AMP) for Big Cypress Seminole Indian Reservation (Reservation) is based upon the functional value attained from removal of exotic plant species and hydrologic enhancement within the six (6) designated Wetland Enhancement Areas (WEA) that lie within the Reservation and contain approximately 4,144.64 acres. These six areas are located in the "Native Area" which is south of the West Feeder Canal and west of the North Feeder Canal/L-28 Interceptor. The Wetland Rapid Assessment Procedure (WRAP) was used to determine the amount of lift within each of the areas.

The amount of "credit" derived has been determined using the results of the WRAP and evaluation of other societal related intangible considerations that help determine the overall importance of these functions. Due to the fact upland development adjacent to wetlands can result in secondary impacts to those wetland areas, the credits derived from the implementation of the AMP reflect appropriate consideration for the overall landscape in the context of an ecosystem and not just wetlands.

An initial WRAP was conducted by the staff biologist and environmental consultants for the Seminole Tribe of Florida (Tribe) in April of 2004. Melaleuca (*Melaleuca quinquenervia*) infestation within the 4,144.64 acre area is an ongoing problem that has increased in severity over recent years and threatens the ecological integrity of the Native Area, as well as portions of the Big Cypress National Preserve (BCNP), which lies along the southern border of the Reservation. Mitigation credit derived from the establishment of the AMP results primarily from the removal of this exotic/nuisance species and anticipated hydrologic enhancement within the areas as a result of the Critical Project. The results of the WRAP revealed an average lift of 0.12 would be attained, once removal of the melaleuca was completed. Scores ranged from a high of 0.17 within wetland coniferous forests to a low of 0.06 within some wetland prairie areas. For further WRAP and site location details, refer to the figures and WRAP data sheets attached.

To account for societal and overall regional ecological intangible considerations, such as direct and indirect benefits to the BCNP that are associated with water quality, removal of exotic plant species seed sources and other important ecological benefits, a multiplier of 1.5 was applied to the overall average WRAP score of 0.12, for a final credit value of 0.18 within the AMP program area. Therefore, each acre within the 4,144.64 acre AMP area may be utilized for mitigation at a rate of 0.18 functional value units per acre, to replace each 0.18 functional value unit of wetland loss outside the AMP (results in a nonet-loss of wetland functional value on the Reservation). Based upon this proposed Big Cypress Seminole Indian Reservation AMP, the six WEAs will ultimately produce a total of 746.03 functional units of credit.

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In accordance with agreed upon required mitigation conditions for previous permitted wetland impacts associated with the new motorcross facility on the Reservation, a total of 54.11 acres of exotic/nuisance species removal must be completed within Area #5. In addition to mitigation for the motorcross project, 2.61 acres of mitigation are required for the construction of the Mitchell Cypress Trail Of Fitness. The Tribe will also deduct this amount of acreage/credit from the total remaining available acreage in Area #5.

Due to the fact the Tribe has been able to mitigate for secondary wetland impacts in the past by setting aside "upland" areas within lands south of the West Feeder Canal, in accordance with the Water Rights Compact (does not apply to federal jurisdictional wetlands), the Tribe proposes to eliminate the need to maintain a separate ledger for this upland mitigation, by merging the current upland mitigation acreage requirement of approximately 418.94 acres with the new AMP at a rate of one (1) wetland acre of mitigation for each ten (10) acres of uplands that have been designated for mitigation in the past. Doing so will result in an added 41.9 acres of required exotic/nuisance species removal within the Native Area and further enhance the overall ecological value of the region. In addition, this action will further enable the Tribe to avoid wetland impacts associated with future development on the Reservation by reducing problematic constraints associated with development of upland areas on the Reservation.

As a result of these previous commitments associated with required mitigation and the proposed change to the upland mitigation ledger (requires a total of 98.62 acres), a balance of 4,046.02 acres of mitigation credit will remain in the AMP and available at a mitigation value of 0.18 per acre (total of 728.28 functional units). This credit will be utilized by the Tribe for projects that contain unavoidable impacts to jurisdictional wetlands on the Reservation.

The overall value of this portion of the Reservation, for purposes of wildlife utilization is recognized and appreciated by all members of the Tribe, as well as all regulatory agency staff that are familiar with this Reservation and its resident wildlife inhabitants. The area contains threatened and endangered plant and animal species and is generally recognized as prime habitat for the endangered Florida panther (*Felis concolor coryi*). A predominance of melaleuca throughout large portions of the six areas within the AMP, arguably result in a significant loss of overall habitat value for the Florida panther, as well as many other threatened/endangered species and non threatened species. Therefore, the removal of this nuisance species will greatly enhance the value of this habitat for this rare animal.

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Big Cypress Seminole Indian Reservation Advanced Mitigation Program Threatened and Endangered Species Mitigation Credit

Negotiations are currently taking place between the Tribe and the U.S. Fish and Wildlife Service (FWS) in an effort to have threatened and endangered species mitigation credits included as an element of the AMP. The Tribe and FWS have agreed that the designated WEA's will provide threatened and endangered species (habitat impact) mitigation as well as wetland mitigation credits.

Details for this element and a U.S. Army Corps of Engineers general permit are under development at this time and will be forthcoming in the near future.

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Big Cypress Seminole Indian Reservation Advanced Mitigation Program Determination of Service Area

The service area associated with this Advanced Mitigation Program (AMP) shall be the Big Cypress Seminole Indian Reservation, for purposes of wetland mitigation. The AMP may also be used to meet mitigation requirements associated with impacts to threatened/endangered species habitat, on other lands owned by the Seminole Tribe within Florida.

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Big Cypress Seminole Indian Reservation Advanced Mitigation Program Monitoring and Maintenance Plan

Six subplots within the Native Area (NA) are identified as potential Wetland Enhancement Areas (WEAs) proposed by the Seminole Tribe of Florida (STOF) for advanced mitigation purposes. The various wetlands found within this area include: cypress domes and strands, hardwood wetland forests, wet prairies and marshes that are interspersed with *Melaleuca quinquenervia* (melaleuca) and *Lygodium microphyllum* (lygodium).

These areas will receive a variety of treatment methods for the removal of exotic plant species. Native vegetation is expected to improve considerably with control/removal of exotics, regeneration of native vegetation, re-establishment of scheduled burning events and utilization of a long-term maintenance plan.

A general outline of the program is as follows:

Phase I --- year one, will involve initial ground confirmation of acreages and locations of the WEAs. A biological survey will also be conducted during this phase to determine the optimal control procedures for areas within each WEA.

Phase II --- will consist of exotic species control, mainly for melaleuca and Lygodium microphyllum (old world climbing fern).

Phase III --- enhancement procedures will include: continued monitoring for native recruitment, soil scrape down in selected areas (if necessary), replanting (if necessary) and re-seeding (if necessary).

Phase IV --- will entail post-treatment monitoring of the success criteria for vegetative, biological, and hydrological goals. For example, exotic species abundance should be below 10% and native animals should frequent the area.

MONITORING PROGRAM

PRE-TREATMENT MONITORING

Color aerial photography from 2004, was rectified with Arc View GIS 8.3 software and overlaid with Florida Land Use Cover Classification System (FLUCCS) community boundaries (developed from past 1998 aerial surveys), which depict melaleuca distributions. Initial site visits will be made to identify random areas for transect setup. Monitoring transects will encompass a hydrological and vegetative gradient. Setup and monitoring for pre-existing conditions is suggested before Phase II, exotic removal, is begun. Transects will be monitored throughout Phases I - IV and will help determine overall program success. Pre-treatment procedures (**Table 1**) include setting up fixed photo points that will be randomly selected within exotic species removal sites. Identification and setup of monitoring transects, chosen to encompass a hydrological and vegetative gradient, will be

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established before work begins. Once the monitoring and fixed photo areas are established, monitoring for pre-existing conditions will follow. A biological survey within the transects will be conducted quantitatively and the data will be used to statistically measure success. Monitoring techniques will address the following: timelines, guidelines, success criteria, monitoring, adaptive management plan and equipment use.

WEA	Setup fixed photo points	Identify and setup monitoring transects	Survey of pre-existing vegetative conditions	Survey of pre-existing biological conditions	Hydrological monitoring (digital well installation)
1.6	Phase I	Phase I	Phase I	Phase I	Phase I
1 - 6		These efforts shou	ld be staggered wit	thin WEAs 1 - 4, a	nd 6.

	Table 1: Description of	procedures p	prior to initiation of	of mitigation work
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According to the US Army Corps of Engineers, examples of acceptable procedures are as follows:

- Line intercept transects are commonly used to measure shrub or tree cover, species composition, density, height, and frequency. Line intercept is most appropriate for sampling shrubs and trees with well-defined, dense crowns. Line intercept transect sites should be randomly selected if the study area is large and the shrub/tree communities are homogeneous. If the study area consists of communities that have widely diverse structural components (i.e., species composition, density, and plant height), it may be preferable to select representative sites in proportion to the amount of the area occupied by each.
- Aerial photographs can be used to detect differences in plant densities and distributions. Transects may be randomly or systematically located at a site but must be spaced far enough apart to prevent sampling overlap. Line transect length varies but is generally from 10 to 100 meters long (35 to 350 feet). A 15-meter (49.21-foot) transect line is sufficient for sampling areas with an estimated 15 to 60 percent canopy cover or more.
- Line point transects are often used to measure understory vegetation, such as grasses and forbs. These transects are normally between 30 and 46 meters (100 and 150 feet) long where vegetative cover is from 35 to 60 percent. The transect should be long enough to sample the plant community, but it should not connect two different vegetation types. Line point transects may be randomly or systematically located along a compass bearing or another route that can be duplicated in the future. Plants, litter and bare ground or rock are recorded at measured or paced intervals along the transect line. A wire loop, 1 inch in diameter or a notch in the toe of a boot, are often used to mark the point to be recorded.

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- Many short transect lines are preferable to a few long lines. Chambers and Brown (1983) stated that a minimum of 5 to 10 transect lines is required for adequate sampling.
- Plots may be used for monitoring shrub and tree habitats, as well as grasses and forbs. Several plot sizes are commonly used. Plots of one-tenth acre are frequently used to sample trees and shrubs, because they are convenient to use and data is easy to analyze. Plots of 0.96, 9.6, and 96 square feet are commonly used to sample grasses depending on the density of the vegetation to be sampled. The smaller plot sizes are used for dense, continuous vegetation. Circular plots are frequently used, but they may also be square or rectangular. Plots should be randomly located along a fixed compass bearing for statistical integrity and convenience. Smaller plots may be combined with vegetative cover estimates and photographs to quickly record plant succession. These types of plots should be permanently marked in order to make statistically sound estimates of vegetative condition and trend over time.
- Baseline vegetation data would be collected before work is started at each project. There
 should be more than one transect located within the immediate vicinity of each project site
 and at least one transect located outside the project vicinity to serve as a reference site.
 Permanent photographic points may be established if the sponsor or a contributing agency
 expresses a need. Whether permanent plots or transects are used or not, one photo should be
 taken from the beginning end of every transect looking toward the other end. Two additional
 photos should be taken at the beginning end of the transect, offset to the left and right of the
 transect by approximately 15 degrees. Transects would be measured and recorded during the
 same summer month (e.g., August) each year.

HYDROLOGICAL MONITORING

Where adequate monitoring well data is not available, wells will be installed within each WEA and will be monitored as a part of each regularly scheduled monitoring effort, as described in **Table 2**.

POST-TREATMENT MONITORING

Inspection of the monitoring sites within the melaleuca stands and other reference sites is needed to ascertain the level of exotic species eradication and degree of natural recruitment. It is expected that as more sites are completed throughout the NA, it will be possible to stagger the monitoring efforts and focus on the treated areas. A biannual monitoring sequence (wet and dry season) for two years after initial exotic species removal, and then annually for years three through five is necessary to document effective project success. All monitoring efforts will include biological and vegetative surveys as well as groundwater monitoring well readings.

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Table 2: Description of procedures for monitoring work

Timetable	WEA Description	Fixed Photo Points	Monitoring Transects	Vegetative Survey	Biological Survey	Hydrological Monitoring (Well Reading)	
Phase I will be completed in year 1	WEA #5 Acreage: 1,119.26	Phase II - IV	Phase II - IV	Phase II - IV	Phase II - IV	Phase II - IV	
Phases II-III will be completed in years 2-4 Phase IV will be completed in years 2-5.	Melaleuca Coverage: 99.08 acres (min.)	Photos to be taken after exotic species removal w/biannual vegetative and biological surveys conducted first two years into project, then annually thereafter.					
1	WEA #1 Acreage: 148.20	Phase II - IV	Phase II - IV	Phase II - IV	Phase II - IV	Phase II - IV	
Work on WEAs will not be completed concurrently. After completion of WEA #5, work on the remaining areas will be staggered every 2 years according to the WEA Enhancement Schedule.	Melaleuca Coverage: 31.95 acres (min)	Photos to be taken after exotic species removal w/biannual vegetative and biological surveys conducted first two years into project, then annually thereafter.					
	WEA #2 Acreage: 544.14	Phase II - IV	Phase II - IV	Phase II - IV	Phase II - IV	Phase II - IV	
	Melaleuca Coverage: 11.69 acres (min)	Photos to be taken after exotic species removal w/biannual vegetative and biological surveys conducted first two years into project, then annually thereafter.					
	WEA #3 Acreage: 756.31	Phase II - IV	Phase II - IV	Phase II - IV	Phase II - IV	Phase II - IV	
	Melaleuca Coverage: 127.43 acres (min)	Photos to be taken after exotic species removal w/biannual vegetative and biological surveys conducted first two years into project, then annually thereafter.					
	WEA #4 Acreage:1459.71	Phase II - IV	Phase II - IV	Phase II - IV	Phase II - IV	Phase II - IV	
	Melaleuca Coverage: 91.10 acres (min)	Photos to be taken after exotic species removal w/biannual vegetative and biological surveys conducted first two years into project, then annually thereafter.					
	WEA #6 Acreage: 117.02	Phase II - IV	Phase II - IV	Phase II - IV	Phase II - IV	Phase II - IV	
	Melaleuca Coverage: 61.02 acres (min)	Photos to be taken after exotic species removal w/biannual vegetative and biological surveys conducted first two years into project, then annually thereafter.					

MONITORING REPORTS

As Phases I and II are completed, results will need to be reported. The monitoring reports are due at the same time as completion of pre-monitoring work (Phase I) and completion of exotic species removal (Phase II). The schedule for the reports will then follow an annual sequence for five years. The reports will be inclusive of all monitoring efforts and will include a comparison of previous monitoring report results as well as an update on the status of work in all phases, maintenance activities undertaken during the reporting interval, recommendations for future maintenance and an estimation of the current degree (%) of success attainment. Each report will follow a logical sequence that STOF utilizes for other compliance reports. These reports will be reviewed by STOF

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staff (wildlife biologist or environmental scientist) to ensure project success. If the data site or environ condition, ecosystem function or recruitment goals are not met, then development of an action/recommended adaptive management plan will follow suit (according to the successicriteria.c.m.) developed for each WEA enhancement goal).

MAINTENANCE PROGRAM

It is necessary to maintain wetland enhancement procedures for the entire life cycle of the Mitigation Bank. An Operations and Maintenance Plan will be documented for all WEAs, using tribal resources. If enhancement procedures are included in this portion of the plan, modules will be created for soil enhancement and native seed recruitment procedures. Native recruitment, biological and vegetative establishment are important keys in maintaining the WEAs and therefore, will need ongoing monitoring. Other specifics for ongoing monitoring will include fixed photo points, biological and vegetative monitoring, and ongoing hydrological monitoring (**Table 3**).

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WEA #	Procedure Description	Maintenance Program Phase I	Maintenance Program Phases II - IV	Maintenance Program Continuation for Lifecycle of Project
	Wildlife monitoring	Establish areas within vegetative quadrants Creation of data sheets	Biannual monitoring for first two years after exotic treatment, annually thereafter	Annual monitoring for minimum of 5 years Determine if reports establish success of project according to established success criteria. Utilize adaptive management plan strategies in order to come into compliance, if needed.
1 - 6	Quantitative vegetation monitoring	Establish quadrants or line vegetative monitoring areas	Biannual monitoring for first two years after exotic treatment, annually thereafter	
	Hydrological monitoring	Placement of wells in deepest areas of WEAs	Biannual monitoring for first two years after exotic treatment, annually thereafter	
	Fixed photo point pictures	Establish photo points	Immediately after exotic species treatment, biannual monitoring for first two years after exotic treatment, annually thereafter	

Table 3: Description of procedures for monitoring and maintenance

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- Fixed Area Plot Sampling for Forest Inventory: Section 6.2.4, U.S. Army Corps of Engineers Wildlife Resources Management Manual, Technical Report EL-95-27, 1995. U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.
- U.S. Army Corps of Engineers. Upper Salmon River Aquatic Ecosystem Restoration Challis. Idaho: Detailed Project Report and Environmental Assessment. Internet. February 5, 2005. http://www.nww.usace.army.mil/salmonriver/appk.pdf

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Big Cypress Seminole Indian Reservation Advanced Mitigation Program Administration and Tracking

Administration of the overall Advanced Mitigation Program (AMP) and the tracking of mitigation credits/acreages associated with this program will fall within the management oversight of the Seminole Tribe of Florida (Tribe), Water Resource Management Department. The day-to-day administration of the program may be assigned to other entities within the Tribe, so long as no delegation of authority or relinquishment of ultimate responsibility for the management of the program results.

A ledger will be maintained by the Tribe for the purpose of tracking the distribution of mitigation credits/acreages. This ledger will be made available to the South Florida Water Management District (SFWMD), U.S. Army Corps of Engineers (Corps) and other federal agencies. Annually (beginning March 1, 2006), an updated ledger and any written recommendations and/or requests to modify the administration and/or tracking procedures associated with the AMP will be provided to these agencies. The ledger shall consist of the following information:

- Permitted Project Name & Reservation
- Corps Application/Permit Number
- Date of Permit
- Permitted Impact Acres
- Wetland Mitigation Credit/Acreage Required Debit
- Wetland Mitigation Credit/Acreage Balance Remaining in AMP
- Threatened and Endangered Species Mitigation Credit/Acreage Required Debit
- Threatened and Endangered Species Mitigation Credit/Acreage Balance Remaining in AMP
- AMP Credit(s)/Acreage(s) Added or Subtracted (based upon work completed)

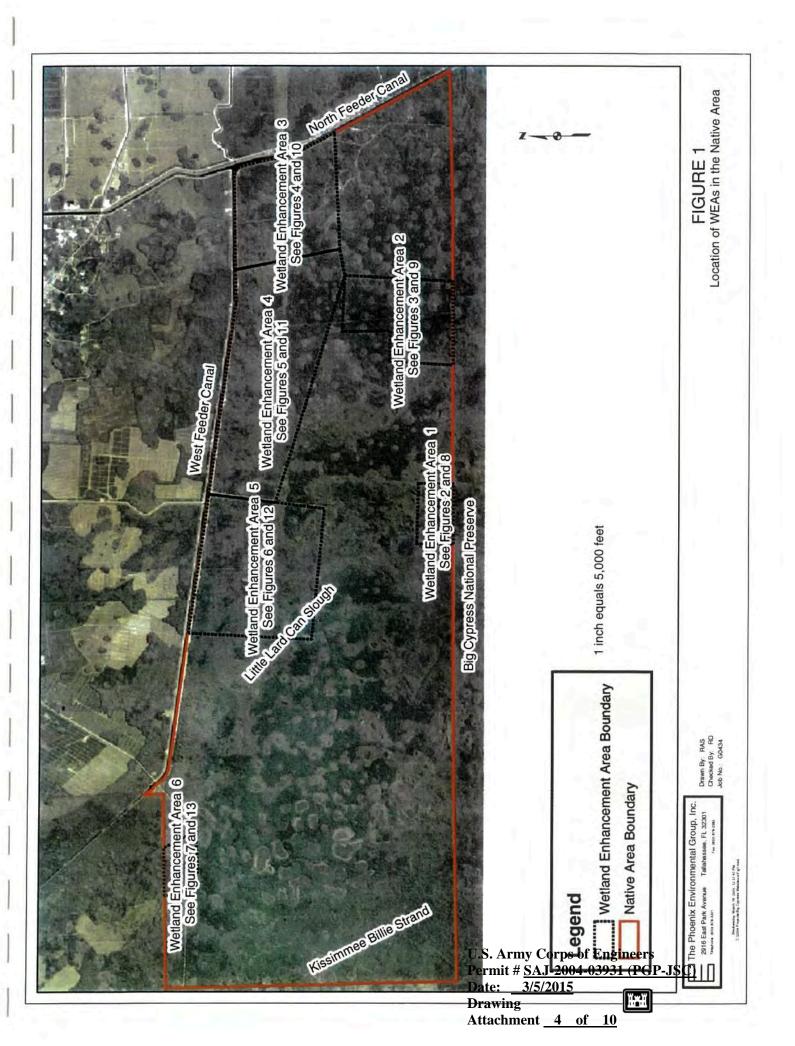
It is recognized that administration and tracking procedures associated with the AMP are subject to change, as more effective and/or efficient methods of administering the program are discovered and approved by the Tribe and agencies involved.

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FIGURES

Figure 1: Location of WEAs in the Native Area Figure 2: FLUCCS Vegetative Communities in WEA 1 Figure 3: FLUCCS Vegetative Communities in WEA 2 Figure 4: FLUCCS Vegetative Communities in WEA 3 Figure 5: FLUCCS Vegetative Communities in WEA 4 Figure 6: FLUCCS Vegetative Communities in WEA 5 Figure 7: FLUCCS Vegetative Communities in WEA 5 Figure 8: Community Types in WEA 1 Figure 9: Community Types in WEA 2 Figure 10: Community Types in WEA 3 Figure 11: Community Types in WEA 4 Figure 12: Community Types in WEA 5 Figure 13: Community Types in WEA 6

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Big Cypress Seminole Indian Reservation Advanced Mitigation Program

Code	Description
211	Improved Pasture
411	Pine Flatwoods
422	Brazilian Pepper
424	Melaleuca
426	Tropical Hammock
510	Streams & Waterways
610	Wetland Hardwood Forest
617	Mixed Wetland Hardwoods
620	Wetland Coniferous Forests
621	Cypress
621-2	Cypress - hatrack
625	Popash
630	Mixed Swamp
641	Freshwater Marsh
643	Wet Prairie
646	Wet Shrubs
740	Disturbed Lands
814	Roads

The Phoenix Environmental Group, Inc.

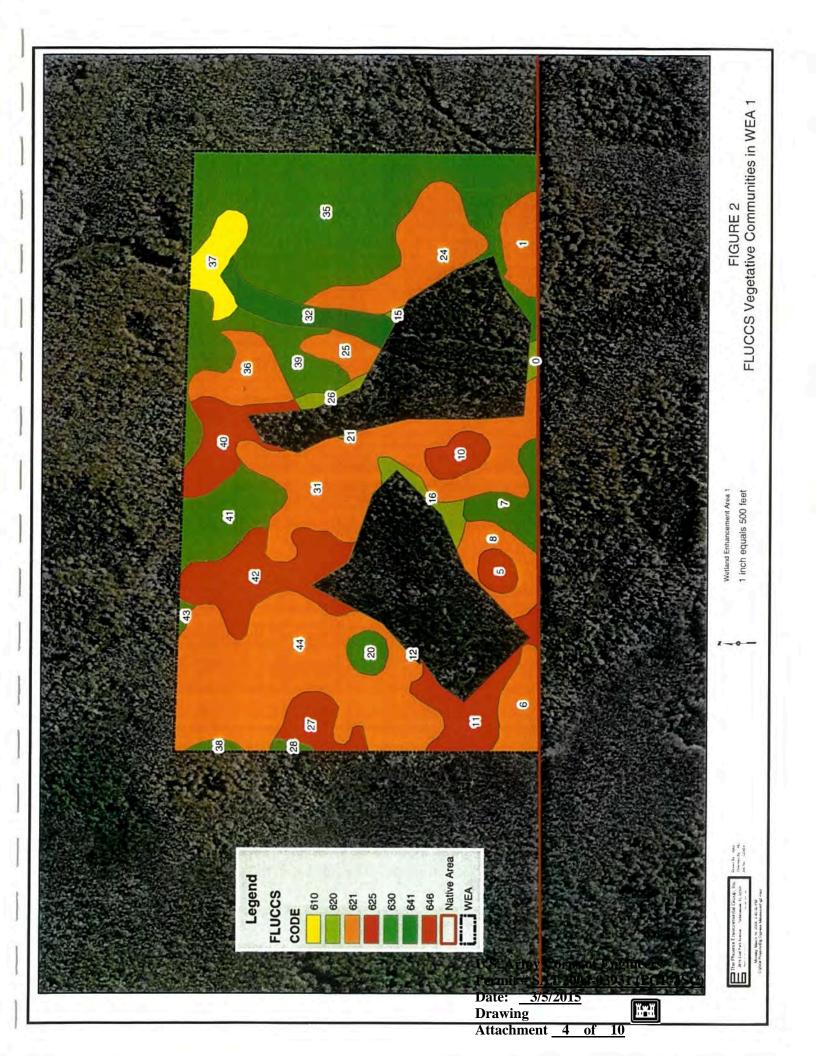
 Florida Land Use, Cover and Forms
 Figure 1 A

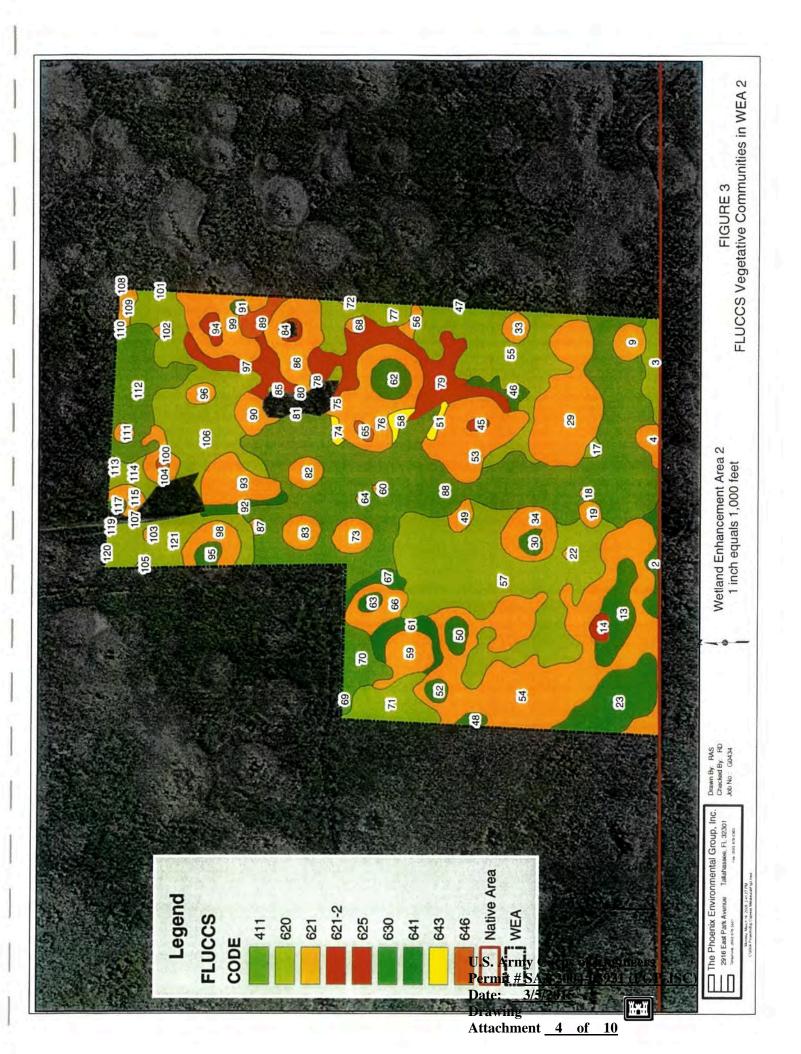
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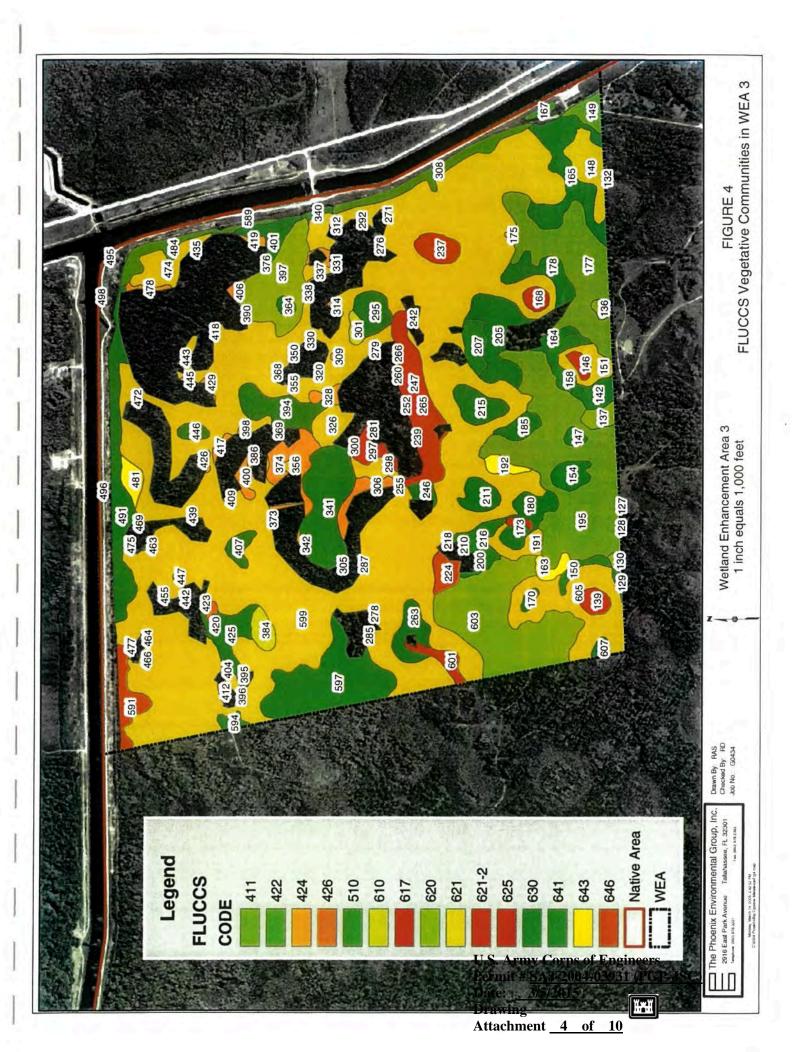
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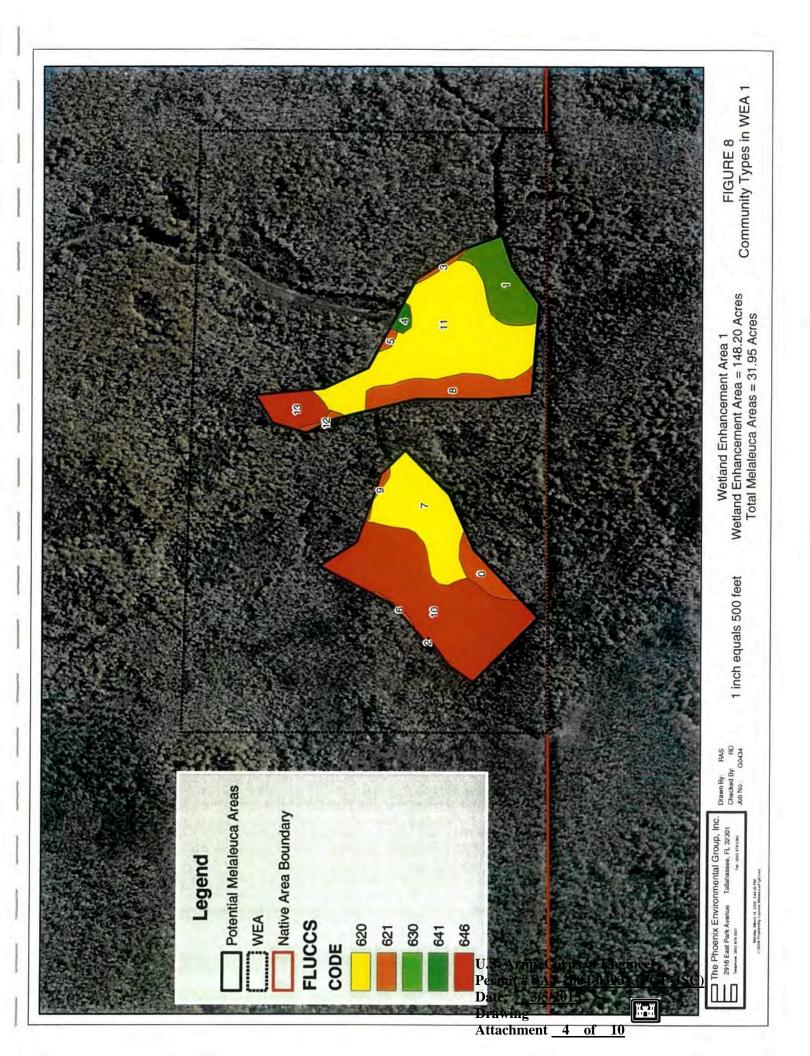


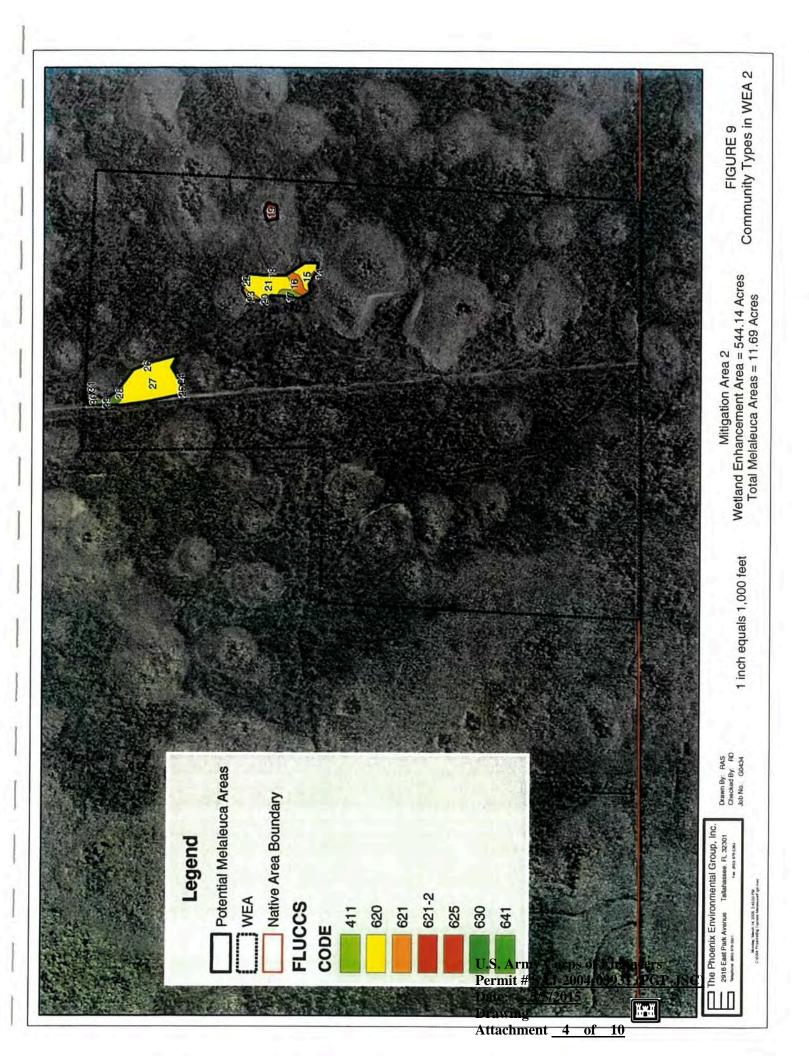


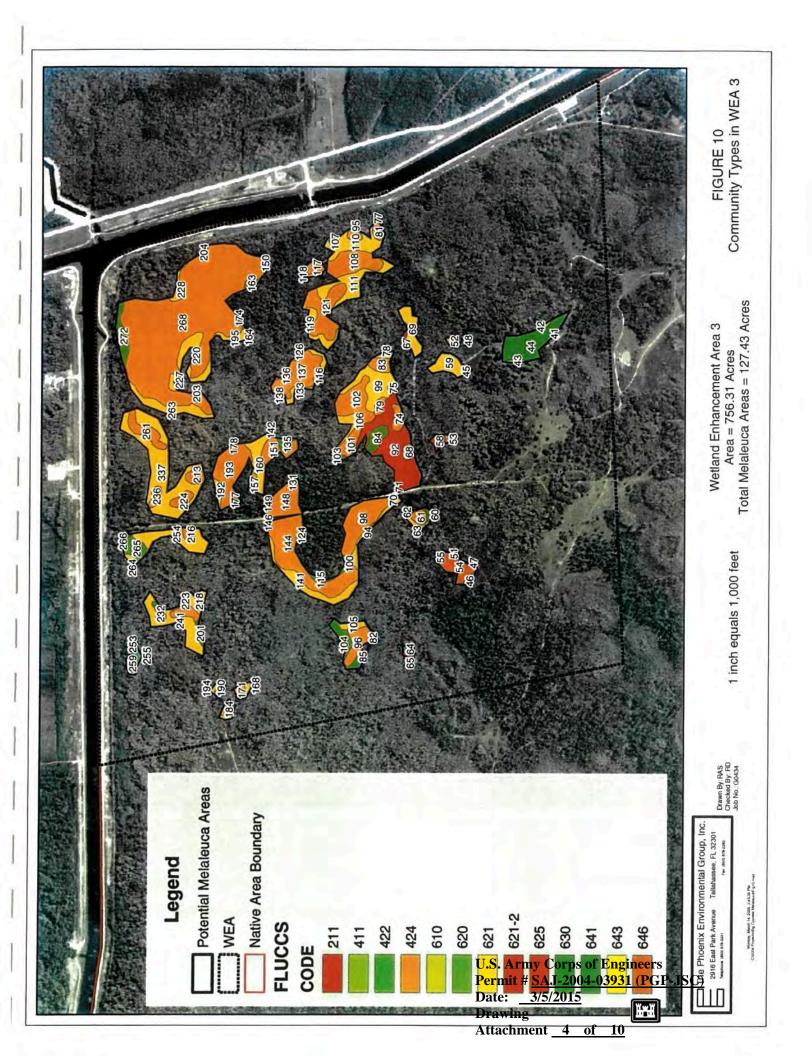


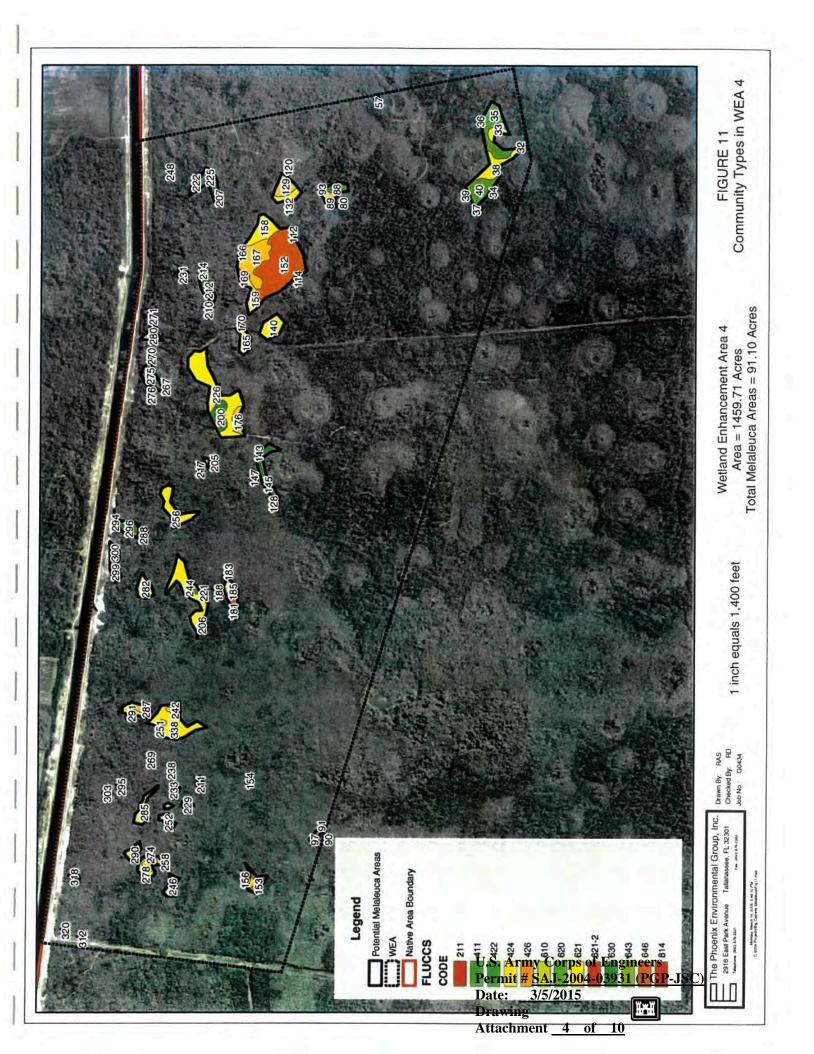
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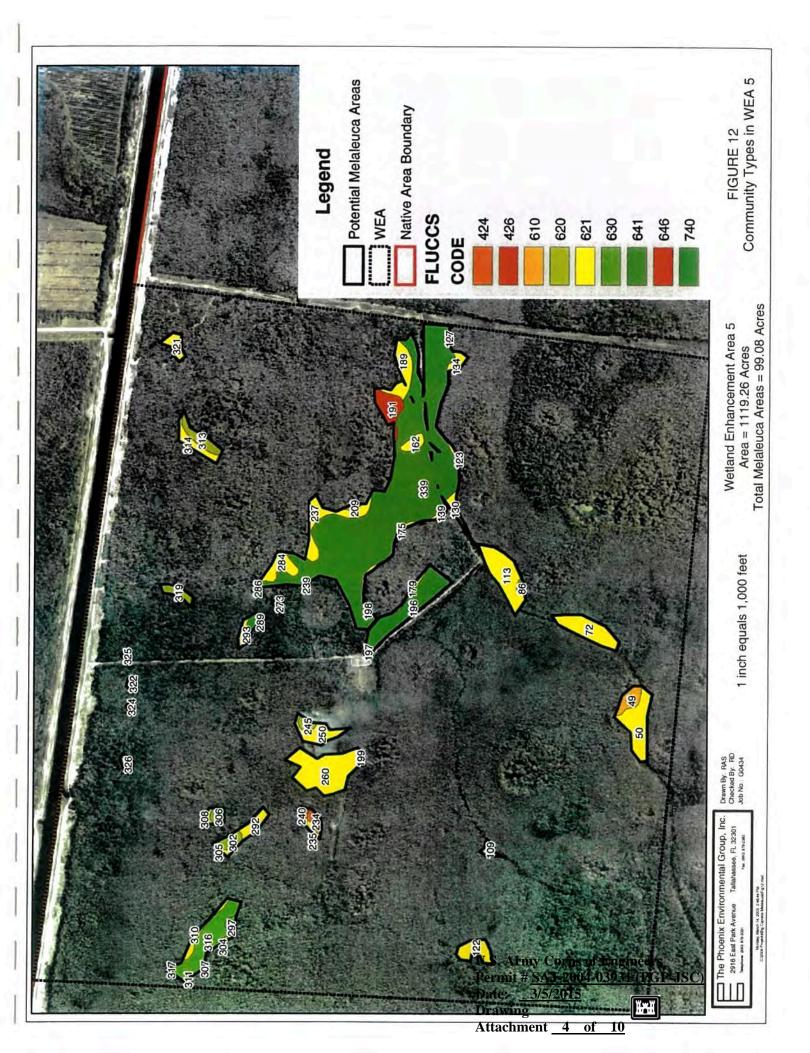


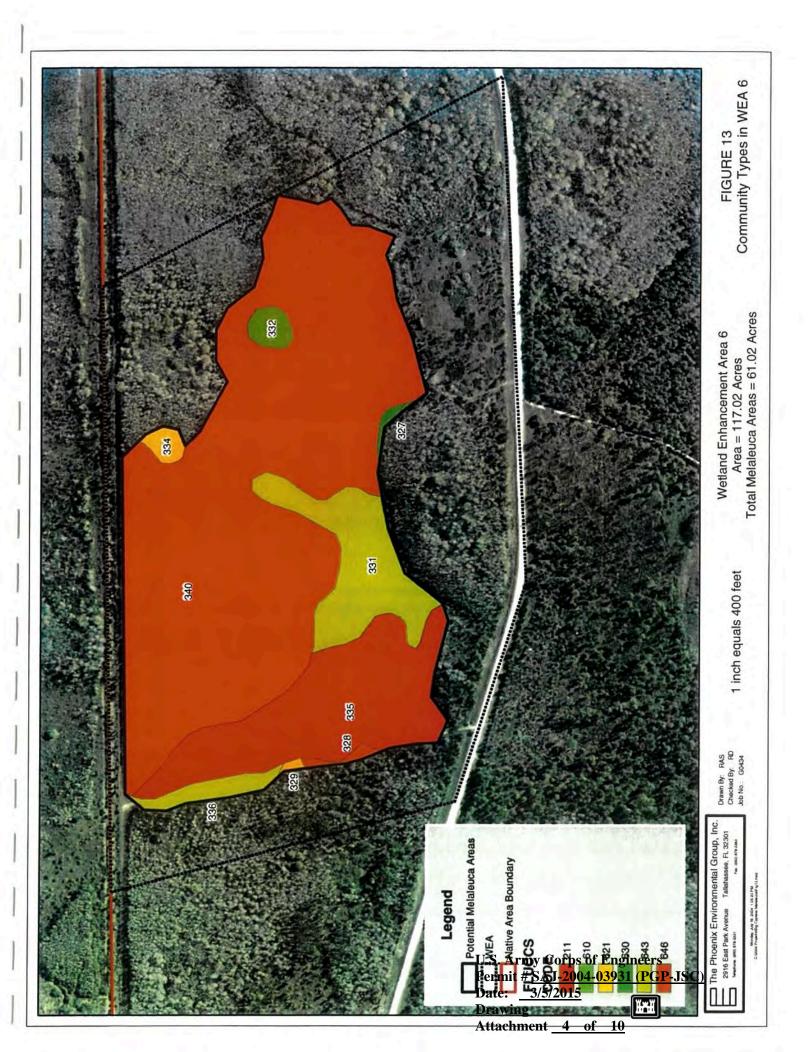












APPENDIX II

Non-melaleuca Areas within each WEA

	Area ID	FLUCCS	AREA (SQ. Ft.)	Į	Area (Acres)
			Vetland		
		Enhan	cement Area		
	0	620	11,703		0.27
	1	621	96,917		2.22
	5	625	41,870		0.96
	6	621	111,356		2.56
	7	630	104,863		2.41
	8	621	118,616		2.72
	10	625	65,247		1.50
	11	646	170,385		3.91
	12	646	178		0.00
	15	620	4,360		0.10
	16	620	50,755		1.17
	20	630	44,154		1.01
	21	620	1,991		0.05
	24	621	278,068		6.38
	25	621	67,205		1.54
	26	620	24,712		0.57
	27	646	96,109		2.21
	28	630	13,004		0.30
	31	621	582,811		13.38
	32	641	128,147		2.94
	35	630	1,028,045		23.60
	36	621	141,201		3.24
	37	610	106,600		2.45
	38	630	15,826		0.36
	39	630	250,075		5.74
	40	646	153,135		3.52
	41	630	196,247		4.51
	42	646	289,517		6.65
	43 44	630 621	11,491 855,118		0.26 19.63
o. of Areas:	30	Total Area	and the second second		116.16
		- fotal / a ca		5 a 2	
			etland		
			cement Area 2		
	2	630	129,382		2.97
	2 3 4	620	180,824		4.15
		621	85,689		1.97
	9	621	116,212		2.67
					6.62
	13	630	288,552		
	13 14	625	288,552 56,829		1.30
	13 14 17	625 620	56,829 30,229		1.30 0.69
	13 14 17 18	625 620 621	56,829 30,229 12,099		1.30 0.69 0.28
	13 14 17 18 19	625 620 621 621	56,829 30,229 12,099 58,953		1,30 0.69 0.28 1.35
	13 14 17 18 19 22	625 620 621 621 621	56,829 30,229 12,099 58,953 17,914	ці.	1.30 0.69 0.28 1.35 0.41
	13 14 17 18 19 22 23	625 620 621 621 621 621 630	56,829 30,229 12,099 58,953 17,914 538,836		1.30 0.69 0.28 1.35 0.41 12.37
	13 14 17 18 19 22 23 29	625 620 621 621 621 630 621	56,829 30,229 12,099 58,953 17,914 538,836 849,785		1.30 0.69 0.28 1.35 0.41 12.37 19.51
	13 14 17 18 19 22 23 29 30	625 620 621 621 621 630 621 630	56,829 30,229 12,099 58,953 17,914 538,836 849,785 57,796	ei.	1.30 0.69 0.28 1.35 0.41 12.37 19.51 1.33
	13 14 17 18 19 22 23 29 30 33	625 620 621 621 621 630 621 630 621	56,829 30,229 12,099 58,953 17,914 538,836 849,785 57,796 77,289		1.30 0.69 0.28 1.35 0.41 12.37 19.51 1.33 1.77
	13 14 17 18 19 22 23 29 30 33 34	625 620 621 621 621 630 621 630 621 621	56,829 30,229 12,099 58,953 17,914 538,836 849,785 57,796 77,289 245,394		1.30 0.69 0.28 1.35 0.41 12.37 19.51 1.33 1.77 5.63
	13 14 17 18 19 22 23 29 30 33 34 45	625 620 621 621 621 630 621 630 621 621 625	56,829 30,229 12,099 58,953 17,914 538,836 849,785 57,796 77,289 245,394 28,014		1.30 0.69 0.28 1.35 0.41 12.37 19.51 1.33 1.77 5.63 0.64
	13 14 17 18 19 22 23 29 30 33 34 45 46	625 620 621 621 630 621 630 621 621 625 630	56,829 30,229 12,099 58,953 17,914 538,836 849,785 57,796 77,289 245,394 28,014 91,108		1.30 0.69 0.28 1.35 0.41 12.37 19.51 1.33 1.77 5.63 0.64 2.09
	13 14 17 18 19 22 23 29 30 33 34 45 46 47	625 620 621 621 630 621 630 621 621 625 630 621	56,829 30,229 12,099 58,953 17,914 538,836 849,785 57,796 77,289 245,394 28,014 91,108 0	Corns	$\begin{array}{c} 1.30\\ 0.69\\ 0.28\\ 1.35\\ 0.41\\ 12.37\\ 19.51\\ 1.33\\ 1.77\\ 5.63\\ 0.64\\ 2.09\\ 0.00\\ \end{array}$
	13 14 17 18 19 22 23 29 30 33 34 45 46	625 620 621 621 630 621 630 621 621 625 630	56,829 30,229 12,099 58,953 17,914 538,836 849,785 57,796 77,289 245,394 28,014 91,108 0 U.S.1A5my	-	1.30 0.69 0.28 1.35 0.41 12.37 19.51 1.33 1.77 5.63 0.64 2.09 0.00 f Engiñfeers
	13 14 17 18 19 22 23 29 30 33 34 45 46 47	625 620 621 621 630 621 630 621 621 625 630 621	56,829 30,229 12,099 58,953 17,914 538,836 849,785 57,796 77,289 245,394 28,014 91,108 0 U.S.1A5rmy (Permit # <u>SA</u>	J-2004-	1.30 0.69 0.28 1.35 0.41 12.37 19.51 1.33 1.77 5.63 0.64 2.09 0.00 f Engiñfeers 03931 (PGP
	13 14 17 18 19 22 23 29 30 33 34 45 46 47	625 620 621 621 630 621 630 621 621 625 630 621	56,829 30,229 12,099 58,953 17,914 538,836 849,785 57,796 77,289 245,394 28,014 91,108 0 U.S.IAFmy (Permit # <u>SA</u> Date: <u>3/5</u>	-	$\begin{array}{c} 1.30\\ 0.69\\ 0.28\\ 1.35\\ 0.41\\ 12.37\\ 19.51\\ 1.33\\ 1.77\\ 5.63\\ 0.64\\ 2.09\\ 0.00\\ \end{array}$

Area ID	FLUCCS	AREA (SQ. Ft.)	Area (Acres)
49	621	67,514	1.55
50	630	85,501	1.96
51	643	34,949	0.80
52	630	53,124	1.22
53	621	600,679	13.79
54	621	2,420,167	55.56
55	620	1,192,634	27.38
56	621	47,817	1.10
57	620	2,365,730	54.31
58	643	51,398	1.18
59	621	247,205	5.68
60	621	17,507	0.40
61 62	641	182,425	4.19
63	630 641	156,343	3.59
64	621	43,696 13,783	1.00
65	646	31,674	0.32 0.73
66	621	212,184	4.87
67	641	98,148	2.25
68	621	32,836	0.75
69	621	1,582	0.04
70	411	290,341	6.67
71	620	364,929	8.38
72	621	8,305	0.19
73	621	137,024	3.15
74	643	28,212	0.65
75	620	9,841	0.23
76	621	561,550	12.89
77	620	306,393	7.03
78	620	35,349	0.81
79	621-2	717,144	16.46
80	620	368	0.01
81	620	1,238	0.03
82	621	103,728	2.38
83	621	127,956	2.94
84	625	30,819	0.71
85	620	10,914	0.25
86	621	387,357	8.89
87	621	20,902	0.48
88	411	4,336,577	99.55
89	646	113,507	2.61
90	621	132,651	3.05
91	630	27,541	0.63
92	641	89,777	2.06
93	621	326,827	7.50
94	625	59,442	1.36
95	630	65,028	1.49
96	621	60,860	1.40
97	621-2	273,868	6.29
98	621	197,622	4.54
99	621	417,725	9.59
100	646	15,670	0.36
101	621	1,370	0.03
102 103	621 621	25,365	0.58
		21,046	0.48
104	621 621	147,858	3.39
105 106	621	7,948	0.18
100	641	1,239,032	28.44
107	625	10 3,140	0.00 0.07
109	625		
110	620		rps of Engineers 2004-03931 (PGP-JSC
		Date: 3/5/20)15
	Pa		I I
		0	

	Area ID	FLUCCS	AREA (SQ. Ft.)	Area (Acres)
	111	621	40,138	0.92
	112	411	689,184	15.82
	113	630	6,559	0.15
	114	620	131,415	3.02
	115	621	81,491	1.87
	116	621	128	0.00
	117	630	26,769	0.61
	118	621	1,232	0.03
	119	641	5,171	0.12
	120	621	8	0.00
	121	620	572,230	13.14
lo. of Areas:	92	Total Ar	ea: 23,193,657	532.43
			Wetland	
		Enha	incement Area	
			3	
	126	621	2,027	0.05
	127	641	3,475	0.08
	128	620	9,016	0.21
	129	641	23,415	0.54
	130	620	31,349	0.72
	132	630	3,188	0.07
	136	620	35,617	0,82
	137	620	81,448	1.87
	139	625	79,179	1.82
	142	630	119,714	2.75
	146	625	46,089	1.06
	147	630	37,147	0.85
	148	621	245,350	5.63
	149	411	107,407	2.47
	150	641	62,922	1.44
	151	621	143,040	3.28
	154	630	109,732	2.52
	158	641	123,903	2.84
	163	643	69,856	1.60
	164	630	53,568	1.23
	165	630	472,954	10.86
	167	422	25,919	0.60
	168	625	63,218	1.45
	170	630	29,807	0.68
	173	617	22,577	0.52
	175	424	8,310	0.19
	177	411	917,006	21.05
	178	630	193,449	4.44
	180	630	195,414	4.49
	185	630	91,418	2.10
	191	621	113,601	2.61
	192	643	63,605	1.46
	195	411	1,630,581	37.43
	200	646	3,752	0.09
	205	630	352,315	8.09
	207	641	127,869	2.94
	210	646	1,780	0.04
	211	630	125,630	2.88
	215	630		
	215	641	170,394	3.91
			163,040	3.74
	218	646	639	0.01
	224	646	99,301 U ScArmy Co	2.28 orps of Engineers
	235	424		
			Permit # SAJ-	-2004-03931 (PGP-JS
			Date: 3/5/2	015
		Pa		

Area ID	FLUCCS	AREA (SQ. Ft.)	Area (Acres)
237	625	128,721	2.96
239	424	918	0.02
242	621	1	0.00
246 247	630	52,775	1.21
252	630 424	6,110	0.14
253	424	4,369 2,131	0.10 0.05
255	621	234	0.01
260	621	4,352	0.10
261	621	1,742	0.04
263	630	169,537	3.89
265	621-2	485,415	11.14
266	424	12,503	0.29
268	424	34	0.00
271	424	8,761	0.20
274	424 424	34	0.00
276 278	424	2,283 159	0.05
279	424	898	0.00 0.02
281	630	415	0.02
285	424	3,492	0.08
287	424	842	0.02
292	424	101	0.00
295	630	152,397	3.50
297	621-2	108,530	2.49
298	621	88,215	2.03
300	424	751	0.02
301	610	45,433	1.04
305 306	424 424	9 94,183	0.00
308	424	246,924	2.16 5.67
309	424	11,746	0.27
312	630	4,473	0.10
314	424	14,188	0.33
320	424	195	0.00
326	621	138,194	3.17
328	424	44,248	1.02
330	424	128	0.00
331	424	21,313	0.49
337	621	45,393	1.04
338 340	424 641	8,666 25,238	0.20 0.58
341	630	568,671	13.05
342	424	15,507	0.36
350	424	1,199	0.03
355	424	212	0.00
356	621	22,607	0.52
364	630	34,563	0.79
368	424	665	0.02
369	424	1,140	0.03
373 374	424 424	1,109 203,532	0.03
376	424	118	4.67 0.00
384	610	93,932	2.16
386	621	8,998	0.21
390	424	0	0.00
393	424	129	0.00
394	630	274,225	6.30
395	424	2,030	0.05
396	424	1	0.00
397 398	620 424		rps of Engineers 2004-03931 (PGP-JSC)
		Date: <u>3/5/20</u>	
	Pa	ge 4Drawing	
		Attachment	<u>4 of 10</u>

	Area ID	FLUCCS	AREA (SQ. Ft.)	Area (Acres)
	400	424	59,305	1.36
	401	630	132,745	3.05
	404	424	345	0.01
	406	424	30,150	0.69
	407	630	76,626	1.76
	409	424	4,855	0.11
	410	424	129	0.00
	412	424	16,813	0.39
	417	424	20,549	0.47
	418	424	1,227	0.03
	419	424	23,287	0.53
	420	426	31,938	0.73
	423 425	424	477	0.01
	425	630 424	210,987	4.84
	420		10,589	0.24
	429	424 424	12,634	0.29
	430	424	7 429	0.00 0.01
	439	424	2,779	0.01
	435	424	803	0.08
	442	424	530	0.02
	445	424	5,239	0.12
	446	630	49,848	1.14
	447	422	8,218	0.19
	455	422	2,827	0.06
	463	422	6,101	0.14
	464	422	11,678	0.27
	466	643	258	0.01
	468	422	9	0.00
	469	422	27	0.00
	472	424	1,516	0.03
	474	621	201,133	4.62
	475	422	9	0.00
	477	643	10,895	0.25
	478	424	20,029	0.46
	481	643	81,528	1.87
	484	422	174,337	4.00
	491	630	504,333	11.58
	495	510	1,921	0.04
	496	510	15,445	0.35
	498	510	1,945	0.04
	589	211	1,537,967	35.31
	591	646	169,861	3.90
	594	641	43,454	1.00
	597	630	760,145	17.45
	599	621	11,224,364	257.68
	601 603	625	88,194	2.02
	603	620	1,175,686	26.99
	605	621 630	660,880 33,385	15.17 0.77
o. of Areas:	155	Total Area:	27,382,398	628.59
		W	etland ement Area	
			4	
	122	625	47,676	1.09
	123	621	114	0.00
	124	620	0	0.00
	125	610		rps of Engineers
			Dormit # SAI	2004-03931 (PGI
			Date: 3/5/20	015
		Page	Date: 3/5/20	<u>015</u>

alea ID	FLUCCS	AREA (SQ. Ft.)	Area (Acres)
131	621	135,818	3.12
133	621	69,709	1.60
134	620	161,080	3.70
135	621	12,115	0.28
138	646	308,776	7.09
140	620	26,470	0.61
141	621	29,510	0.68
143	620	401	0.01
144	620	22,177	0.51
145	621	14,360	0.33
152	620	5,942	0.14
153	621	67,079	1.54
155	621	10,349	0.24
156	621	13,891	0.32
157	643	2,351	0.05
159	621	12,512	0.29
160	621	16,639	0.38
161	621	72,019	1.65
162	625	145,094	3.33
166	621	31,365	0.72
169	621	4,379	0.10
171	630	35,626	0.82
172	621	30,377	0.70
174	621	125,371	2.88
176	630	35,718	0.82
181 182	621 621	28,470	0.65
183	620	471,211 536,612	10.82 12.32
184	621	181,229	4.16
186	643	65,754	1.51
187	643	23,027	0.53
188	621	16,077	0.37
190	621	157,853	3.62
196	621	15,293	0.35
197	621	21,308	0.49
202	621	9,923	0.23
203	621	11,915	0.27
204	643	77,680	1.78
206	630	33,370	0.77
208	621	25,097	0.58
209	621	5,466	0.13
213	643	22,971	0.53
214	630	104,196	2.39
217	621	7,455	0.17
219 220	641 643	27,003	0.62
222	630	51,770 96,044	1.19 2.20
223	643	35,776	0.82
225	621	14,975	0.34
227	630	58,549	1.34
228	643	17,144	0.39
229	621	353,473	8.11
231	621	5,891	0.14
232	630	119,467	2.74
234	621	67,374	1.55
238	621	15,679	0.36
241	621	33,051	0.76
243	621	24,431	0.56
244	621	43,432	1.00
245	643	19,236	0.44
248	621	U.S.Army Co	rps of Engineers
249	621		2004-03931 (PGP-JS
		Date: $3/5/20$	
	D-	ge 6Drawing	<u>III</u>
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250 251 256 257 258 269 272 273 275 280 283 284 286 288 289 290 291 293 294 299 307 310 311 315 316 317 318 319 321 322 323 325 327 329 332 335 339 345 347 348 349	$\begin{array}{c} 610\\ 646\\ 630\\ 621\\ 621\\ 621\\ 621\\ 621\\ 621\\ 621\\ 621$	$\begin{array}{c} 270,199\\ 126,774\\ 60,097\\ 15,502\\ 51,344\\ 20,236\\ 19,339\\ 44,380\\ 25,392\\ 36,089\\ 11\\ 16\\ 122,421\\ 61,210\\ 2\\ 8\\ 18,902\\ 37,628\\ 18,954\\ 23,056\\ 289,174\\ 149,980\\ 31,730\\ 76,403\\ 30,956\\ 95,041\\ 124,577\\ 55,162\\ 413,070\\ 136,001\\ 15,812\\ 2,189\\ 41,477\\ 419\\ \end{array}$	$\begin{array}{c} 6.20\\ 2.91\\ 1.38\\ 0.36\\ 1.18\\ 0.46\\ 0.44\\ 1.02\\ 0.58\\ 0.83\\ 0.00\\ 0.00\\ 2.81\\ 1.41\\ 0.00\\ 0.00\\ 2.81\\ 1.41\\ 0.00\\ 0.00\\ 0.43\\ 0.86\\ 0.44\\ 0.53\\ 6.64\\ 3.44\\ 0.53\\ 6.64\\ 3.44\\ 0.73\\ 1.75\\ 0.71\\ 2.18\\ 2.86\\ 1.27\\ 9.48\\ 3.12\\ 0.36\\ 0.05\\ 0.95\\ \end{array}$
256 257 258 259 262 269 272 273 275 280 283 284 286 288 289 290 291 293 294 299 307 310 311 315 316 317 318 319 321 322 323 325 327 329 332 335 339 345 347 348	$\begin{array}{c} 630\\ 621\\ 621\\ 621\\ 621\\ 621\\ 621\\ 621\\ 621$	$\begin{array}{c} 60,097\\ 15,502\\ 51,344\\ 20,236\\ 19,339\\ 44,380\\ 25,392\\ 36,089\\ 11\\ 16\\ 122,421\\ 61,210\\ 2\\ 8\\ 18,902\\ 37,628\\ 18,954\\ 23,056\\ 289,174\\ 149,980\\ 31,730\\ 76,403\\ 30,956\\ 95,041\\ 124,577\\ 55,162\\ 413,070\\ 136,001\\ 15,812\\ 2,189\\ 41,477\\ \end{array}$	$\begin{array}{c} 2.91 \\ 1.38 \\ 0.36 \\ 1.18 \\ 0.46 \\ 0.44 \\ 1.02 \\ 0.58 \\ 0.83 \\ 0.00 \\ 0.00 \\ 0.00 \\ 2.81 \\ 1.41 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.43 \\ 0.86 \\ 0.44 \\ 0.53 \\ 6.64 \\ 3.44 \\ 0.73 \\ 1.75 \\ 0.71 \\ 2.18 \\ 2.86 \\ 1.27 \\ 9.48 \\ 3.12 \\ 0.36 \\ 0.05 \end{array}$
257 258 259 262 269 272 273 275 280 283 284 286 288 289 290 291 293 294 299 307 310 311 315 316 317 318 319 321 322 323 325 327 329 332 325 327 329 332 335 339 345 347 348	$\begin{array}{c} 621\\ 621\\ 643\\ 621\\ 621\\ 621\\ 621\\ 621\\ 621\\ 621\\ 621$	$\begin{array}{c} 15,502\\ 51,344\\ 20,236\\ 19,339\\ 44,380\\ 25,392\\ 36,089\\ 11\\ 16\\ 122,421\\ 61,210\\ 2\\ 8\\ 18,902\\ 37,628\\ 18,954\\ 23,056\\ 289,174\\ 149,980\\ 31,730\\ 76,403\\ 30,956\\ 95,041\\ 124,577\\ 55,162\\ 413,070\\ 136,001\\ 15,812\\ 2,189\\ 41,477\\ \end{array}$	0.36 1.18 0.46 0.44 1.02 0.58 0.83 0.00 0.00 2.81 1.41 0.00 0.00 0.43 0.86 0.44 0.53 6.64 3.44 0.73 1.75 0.71 2.18 2.86 1.27 9.48 3.12 0.36 0.05
258 259 262 269 272 273 275 280 283 284 286 288 289 290 291 293 294 299 307 310 311 315 316 317 318 319 321 322 323 325 327 329 332 325 327 329 332 335 339 345 347 348	$\begin{array}{c} 621\\ 643\\ 621\\ 621\\ 621\\ 621\\ 621\\ 621\\ 621\\ 621$	51,344 20,236 19,339 44,380 25,392 36,089 11 16 122,421 61,210 2 8 18,902 37,628 18,954 23,056 289,174 149,980 31,730 76,403 30,956 95,041 124,577 55,162 413,070 136,001 15,812 2,189 41,477	$\begin{array}{c} 1.18\\ 0.46\\ 0.44\\ 1.02\\ 0.58\\ 0.83\\ 0.00\\ 0.00\\ 2.81\\ 1.41\\ 0.00\\ 0.00\\ 0.43\\ 0.86\\ 0.44\\ 0.53\\ 6.64\\ 3.44\\ 0.73\\ 1.75\\ 0.71\\ 2.18\\ 2.86\\ 1.27\\ 9.48\\ 3.12\\ 0.36\\ 0.05\end{array}$
259 262 269 272 273 275 280 283 284 286 288 289 290 291 293 294 299 307 310 311 315 316 317 318 319 321 322 323 325 327 329 332 335 339 345 347 348	$\begin{array}{c} 643\\ 621\\ 621\\ 621\\ 424\\ 621\\ 621\\ 621\\ 621\\ 424\\ 424\\ 610\\ 621\\ 610\\ 646\\ 630\\ 610\\ 621\\ 630\\ 621\\ 625\\ 646\\ 630\\ 610\\ 641\\ 424\\ 610\\ 646\end{array}$	20,236 19,339 44,380 25,392 36,089 11 16 122,421 61,210 2 8 18,902 37,628 18,954 23,056 289,174 149,980 31,730 76,403 30,956 95,041 124,577 55,162 413,070 136,001 15,812 2,189 41,477	0.46 0.44 1.02 0.58 0.83 0.00 0.00 2.81 1.41 0.00 0.00 0.43 0.86 0.44 0.53 6.64 3.44 0.73 1.75 0.71 2.18 2.86 1.27 9.48 3.12 0.36 0.05
262 269 272 273 275 280 283 284 286 288 289 290 291 293 294 299 307 310 311 315 316 317 318 319 321 322 323 325 327 329 332 325 327 329 332 335 339 345 347 348	$\begin{array}{c} 621\\ 621\\ 621\\ 424\\ 621\\ 621\\ 621\\ 621\\ 424\\ 424\\ 610\\ 621\\ 610\\ 646\\ 630\\ 610\\ 621\\ 630\\ 621\\ 625\\ 646\\ 630\\ 610\\ 641\\ 424\\ 610\\ 646\end{array}$	$\begin{array}{c} 19,339\\ 44,380\\ 25,392\\ 36,089\\ 11\\ 16\\ 122,421\\ 61,210\\ 2\\ 8\\ 18,902\\ 37,628\\ 18,954\\ 23,056\\ 289,174\\ 149,980\\ 31,730\\ 76,403\\ 30,956\\ 95,041\\ 124,577\\ 55,162\\ 413,070\\ 136,001\\ 15,812\\ 2,189\\ 41,477\\ \end{array}$	0.44 1.02 0.58 0.83 0.00 2.81 1.41 0.00 0.00 0.43 0.86 0.44 0.53 6.64 3.44 0.73 1.75 0.71 2.18 2.86 1.27 9.48 3.12 0.36 0.05
269 272 273 275 280 283 284 286 288 289 290 291 293 294 299 307 310 311 315 316 317 318 319 321 322 323 325 327 329 332 333 335 339 345 347 348	621 621 621 621 621 621 424 424 610 621 610 621 620 621 625 625 646 630 621 625 625 646 630 610 641 424 610 641	44,380 25,392 36,089 11 16 122,421 61,210 2 8 18,902 37,628 18,954 23,056 289,174 149,980 31,730 76,403 30,956 95,041 124,577 55,162 413,070 136,001 15,812 2,189 41,477	$\begin{array}{c} 1.02\\ 0.58\\ 0.83\\ 0.00\\ 0.00\\ 2.81\\ 1.41\\ 0.00\\ 0.00\\ 0.00\\ 0.43\\ 0.86\\ 0.44\\ 0.53\\ 6.64\\ 3.44\\ 0.73\\ 1.75\\ 0.71\\ 2.18\\ 2.86\\ 1.27\\ 9.48\\ 3.12\\ 0.36\\ 0.05\end{array}$
272 273 275 280 283 284 286 288 289 290 291 293 294 299 307 310 311 315 316 317 318 319 321 322 323 325 327 329 332 325 327 329 332 333 335 339 345 347 348	621 621 621 621 621 621 621 621 610 621 610 621 625 625 646 630 610 621 625 625 646 630 610 641 424 610 646	25,392 36,089 11 16 122,421 61,210 2 8 18,902 37,628 18,954 23,056 289,174 149,980 31,730 76,403 30,956 95,041 124,577 55,162 413,070 136,001 15,812 2,189 41,477	0.58 0.83 0.00 2.81 1.41 0.00 0.00 0.43 0.86 0.44 0.53 6.64 3.44 0.73 1.75 0.71 2.18 2.86 1.27 9.48 3.12 0.36 0.05
273 275 280 283 284 286 288 289 290 291 293 294 299 307 310 311 315 316 317 318 319 321 322 323 325 327 329 332 333 335 339 345 347 348	621 424 621 621 424 424 610 621 610 646 630 610 621 625 625 646 630 610 641 424 610 646	36,089 11 16 122,421 61,210 2 8 18,902 37,628 18,954 23,056 289,174 149,980 31,730 76,403 30,956 95,041 124,577 55,162 413,070 136,001 15,812 2,189 41,477	0.83 0.00 2.81 1.41 0.00 0.00 0.43 0.86 0.44 0.53 6.64 3.44 0.73 1.75 0.71 2.18 2.86 1.27 9.48 3.12 0.36 0.05
275 280 283 284 286 288 289 290 291 293 294 299 307 310 311 315 316 317 318 319 321 322 323 325 327 329 332 325 327 329 332 333 335 339 345 347 348	424 621 621 424 424 610 621 610 646 630 610 621 625 625 646 630 610 641 424 610 646	11 16 122,421 61,210 2 8 18,902 37,628 18,954 23,056 289,174 149,980 31,730 76,403 30,956 95,041 124,577 55,162 413,070 136,001 15,812 2,189 41,477	0.00 0.00 2.81 1.41 0.00 0.00 0.43 0.86 0.44 0.53 6.64 3.44 0.73 1.75 0.71 2.18 2.86 1.27 9.48 3.12 0.36 0.05
280 283 284 286 288 289 290 291 293 294 299 307 310 311 315 316 317 318 319 321 322 323 325 327 329 332 325 327 329 332 333 335 339 345 347 348	621 621 424 424 610 621 610 646 630 610 621 625 625 646 630 610 641 424 610 646	16 122,421 61,210 2 8 18,902 37,628 18,954 23,056 289,174 149,980 31,730 76,403 30,956 95,041 124,577 55,162 413,070 136,001 15,812 2,189 41,477	0.00 2.81 1.41 0.00 0.43 0.86 0.44 0.53 6.64 3.44 0.73 1.75 0.71 2.18 2.86 1.27 9.48 3.12 0.36 0.05
284 286 288 289 290 291 293 294 299 307 310 311 315 316 317 318 319 321 322 323 325 327 329 332 335 339 345 347 348	621 424 424 610 621 610 646 630 610 621 625 625 646 630 610 641 424 610 646	61,210 2 8 18,902 37,628 18,954 23,056 289,174 149,980 31,730 76,403 30,956 95,041 124,577 55,162 413,070 136,001 15,812 2,189 41,477	2.81 1.41 0.00 0.43 0.86 0.44 0.53 6.64 3.44 0.73 1.75 0.71 2.18 2.86 1.27 9.48 3.12 0.36 0.05
286 288 289 290 291 293 294 299 307 310 311 315 316 317 318 319 321 322 323 325 327 329 332 325 327 329 332 335 339 345 347 348	424 424 610 621 646 630 610 621 625 625 646 630 610 641 424 610 646	2 8 18,902 37,628 18,954 23,056 289,174 149,980 31,730 76,403 30,956 95,041 124,577 55,162 413,070 136,001 15,812 2,189 41,477	0.00 0.00 0.43 0.86 0.44 0.53 6.64 3.44 0.73 1.75 0.71 2.18 2.86 1.27 9.48 3.12 0.36 0.05
288 289 290 291 293 294 299 307 310 311 315 316 317 318 319 321 322 323 325 327 329 332 325 327 329 332 335 339 345 347 348	424 610 621 646 630 610 621 625 625 646 630 610 641 424 610 646	8 18,902 37,628 18,954 23,056 289,174 149,980 31,730 76,403 30,956 95,041 124,577 55,162 413,070 136,001 15,812 2,189 41,477	0.00 0.43 0.86 0.44 0.53 6.64 3.44 0.73 1.75 0.71 2.18 2.86 1.27 9.48 3.12 0.36 0.05
289 290 291 293 294 299 307 310 311 315 316 317 318 319 321 322 323 325 327 329 332 333 335 339 345 347 348	610 621 646 630 610 621 625 625 646 630 610 641 424 610 646	18,902 37,628 18,954 23,056 289,174 149,980 31,730 76,403 30,956 95,041 124,577 55,162 413,070 136,001 15,812 2,189 41,477	0.43 0.86 0.44 0.53 6.64 3.44 0.73 1.75 0.71 2.18 2.86 1.27 9.48 3.12 0.36 0.05
290 291 293 294 299 307 310 311 315 316 317 318 319 321 322 323 325 327 329 332 333 335 339 345 347 348	621 610 646 630 621 621 625 625 646 630 610 641 424 610 646	37,628 18,954 23,056 289,174 149,980 31,730 76,403 30,956 95,041 124,577 55,162 413,070 136,001 15,812 2,189 41,477	0.86 0.44 0.53 6.64 3.44 0.73 1.75 0.71 2.18 2.86 1.27 9.48 3.12 0.36 0.05
291 293 294 299 307 310 311 315 316 317 318 319 321 322 323 325 327 329 332 325 327 329 332 333 335 339 345 347 348	610 646 630 621 630 621 625 625 646 630 610 641 424 610 646	18,954 23,056 289,174 149,980 31,730 76,403 30,956 95,041 124,577 55,162 413,070 136,001 15,812 2,189 41,477	0.44 0.53 6.64 3.44 0.73 1.75 0.71 2.18 2.86 1.27 9.48 3.12 0.36 0.05
293 294 299 307 310 311 315 316 317 318 319 321 322 323 325 327 329 332 333 335 339 345 347 348	646 630 621 630 621 625 625 646 630 610 641 424 610 646	23,056 289,174 149,980 31,730 76,403 30,956 95,041 124,577 55,162 413,070 136,001 15,812 2,189 41,477	0.53 6.64 3.44 0.73 1.75 0.71 2.18 2.86 1.27 9.48 3.12 0.36 0.05
294 299 307 310 311 315 316 317 318 319 321 322 323 325 327 329 332 333 335 339 345 347 348	630 610 621 630 625 625 646 630 610 641 424 610 646	289,174 149,980 31,730 76,403 30,956 95,041 124,577 55,162 413,070 136,001 15,812 2,189 41,477	6.64 3.44 0.73 1.75 0.71 2.18 2.86 1.27 9.48 3.12 0.36 0.05
299 307 310 311 315 316 317 318 319 321 322 323 325 327 329 332 325 327 329 332 333 335 339 345 347 348	610 621 625 625 625 646 630 610 641 424 610 646	149,980 31,730 76,403 30,956 95,041 124,577 55,162 413,070 136,001 15,812 2,189 41,477	3.44 0.73 1.75 0.71 2.18 2.86 1.27 9.48 3.12 0.36 0.05
307 310 311 315 316 317 318 319 321 322 323 325 327 329 332 325 327 329 332 333 335 339 345 347 348	621 630 625 625 646 630 610 641 424 610 646	31,730 76,403 30,956 95,041 124,577 55,162 413,070 136,001 15,812 2,189 41,477	0.73 1.75 0.71 2.18 2.86 1.27 9.48 3.12 0.36 0.05
310 311 315 316 317 318 319 321 322 323 325 327 329 332 333 335 339 345 347 348	630 625 625 646 630 610 641 424 610 646	76,403 30,956 95,041 124,577 55,162 413,070 136,001 15,812 2,189 41,477	1.75 0.71 2.18 2.86 1.27 9.48 3.12 0.36 0.05
315 316 317 318 321 322 323 325 327 329 332 333 335 339 345 347 348	625 625 646 630 610 641 424 610 646	30,956 95,041 124,577 55,162 413,070 136,001 15,812 2,189 41,477	0.71 2.18 2.86 1.27 9.48 3.12 0.36 0.05
316 317 318 321 322 323 325 327 329 332 333 335 339 345 347 348	625 646 630 610 641 424 610 646	124,577 55,162 413,070 136,001 15,812 2,189 41,477	2.86 1.27 9.48 3.12 0.36 0.05
317 318 319 321 322 323 325 327 329 332 333 335 339 345 347 348	646 630 610 641 424 610 646	55,162 413,070 136,001 15,812 2,189 41,477	1.27 9.48 3.12 0.36 0.05
318 319 321 322 323 325 327 329 332 333 335 339 345 347 348	630 610 641 424 610 646	413,070 136,001 15,812 2,189 41,477	9.48 3.12 0.36 0.05
319 321 322 323 325 327 329 332 333 335 339 345 347 348	610 641 424 610 646	136,001 15,812 2,189 41,477	3.12 0.36 0.05
321 322 323 325 327 329 332 333 335 339 345 347 348	641 424 610 646	15,812 2,189 41,477	0.36 0.05
322 323 325 327 329 332 333 335 339 345 347 348	424 610 646	2,189 41,477	0.05
323 325 327 329 332 333 335 339 345 347 348	610 646	41,477	
325 327 329 332 333 335 339 345 347 348	646		0.00
329 332 333 335 339 345 347 348	630		0.01
332 333 335 339 345 347 348		259,117	5,95
333 335 339 345 347 348	621	15,912	0.37
335 339 345 347 348	621	31,794	0.73
339 345 347 348	646	143,331	3.29
345 347 348	424 630	114	0.00
347 348	620	49,599 5,376,040	1.14 123.42
348	610	38,155	0.88
	630	197,175	4,53
0.10	411	5,526,306	126.87
351	424	2,679	0.06
352	621	240,320	5.52
354	625	103,720	2.38
357	625	144,231	3.31
358	641	35,679	0.82
361	426	65,734	1.51
362 363	630 646	2,813 11,018	0.06
367	630	40,028	0.25 0.92
370	630	427,971	9.82
371	630	390	0.01
378	646	76,953	1.77
379	646	115,414	2.65
381	621-2	1,263,162	29.00
382	625	168,483	3.87
385	630	490	0.01
387	424	932 USArmy Co	0.02
388	424		rps of Engineers
			2004-03931 (PGP-JSC
	De	Date: <u>3/5/2</u>	
	Pa	ge 7Drawing	
		Attachment	<u>4 of 10</u>

Area ID	FLUCCS	AREA (SQ. Ft.)	Area (Acres)
389	424	5,416	0.12
392	424	33	0.00
402	424	2,481	0.06
405	630	218,204	5.01
408	424	753	0.02
411	625	157,184	3.61
414	630	109,239	2.51
415	620	597,155	13.71
424	422	4,190	0.10
432	630	123,790	2.84
434	646	218,613	5.02
436 437	422	16,286	0.37
437	630 630	47,041	1.08
430	422	62 372	0.00
444	646	43,828	0.01
449	422	9,154	1.01 0.21
451	630	66,894	1.54
452	424	997	0.02
456	646	348,811	8.01
460	625	63,694	1.46
467	621	117,105	2.69
473	424	5,327	0.12
476	621	43,374	1.00
479	424	687	0.02
480	422	12,521	0.29
482	630	1,055,299	24.23
485	630	253,064	5.81
486	630	143,905	3.30
487	621	14,252	0.33
488	424	1,978	0.05
489	630	1,335,459	30.66
492	621	31,494	0.72
494	643	331,933	7.62
497	424	528	0.01
499	620	35,585	0.82
500 502	643 643	242,766	5.57 0.60
503	630	26,125 2,597	0.06
504	630	406,341	9.33
505	643	111,084	2.55
509	643	102,695	2.36
510	620	70,638	1.62
512	510	1,618	0.04
513	630	91,843	2.11
515	610	482,743	11.08
516	620	108,285	2.49
517	621	34,823	0.80
518	630	75,014	1.72
520	630	4,926	0.11
523	646	41,957	0.96
525	643	117,036	2.69
527	424	13,542	0.31
528	424	11,717	0.27
529	643	19,461	0.45
531	510	5,692	0.13
532	643	127,778	2.93
533	630	499,393	11.46
535	510	287	0.01
541 544	620	25,700	0.59
545	510 621	2U.S42 Kiny Con Permit # SAJ-2	rps of Engineers 2004-03931 (PGP-JSO
		Date: 3/5/20)15
	Pa		H-H

	Area ID	FLUCCS	AREA (SQ. Ft.)	Area (Acres)
	546 547	814 621	134,697	3.09
	550	510	50,092 3,944	1.15 0.09
	551	510	3	0.00
	590	211	1,211,858	27.82
	592	646	321,874	7.39
	593	621	381,369	8.76
	595	641	308,647	7.09
	596 598	621 630	2,479,247 788,022	56.92 18.09
	600	621	652,233	14.97
	602	625	51,621	1.19
	604	620	1,240,833	28.49
	606	621	97,279	2.23
	608	630	15,837	0.36
No. of Areas:	205	Total Area	a: 59,571,172	1,367.62
			Vetland	
		Enhan	cement Area 5	
	179	625	35,046	0.80
	189	646	60,319	1.38
	193 194	630 630	51,844	1.19
	194	646	3,902 73,066	0.09 1.68
	199	630	127,635	2.93
	201	630	106,304	2.44
	212	610	42,022	0.96
	221	621	120,413	2.76
	226 230	625 641	83,109 17,898	1.91 0.41
	233	630	27,479	0.63
	236	621	1,192,819	27.38
	240	620	64,436	1.48
	254	620	1,074,835	24.67
	264	610	298,479	6.85
	267 270	630 630	124,783	2.86
	277	621	97,570 140,829	2.24 3.23
	282	630	1,622,859	37.26
	296	620	1,157,378	26.57
	302	630	97,652	2.24
	303 304	630 625	283,072	6.50
	313	641	170,959 5,006	3.92 0.11
	324	641	7,951	0.18
	334	630	89,566	2.06
	336	641	12,157	0.28
	343	641	0	0.00
	344 346	630	513,534	11.79
	346	621 641	354 450	0.01 0.01
	359	641	450 9	0.00
	360	621	1,321,293	30.33
	365	641	697	0.02
	366	641	1,212	0.03
	372	641	1,953	0.04
	375 377	641 630	628	0.01
	911	000		rps of Engineers 2004-03931 (PGP-JSC)
		Pag		
		Fay	Attachment	
			Attachment	<u>T UI IV</u>

$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1	Area (Acres)	REA (SQ. Ft.)	FLUCCS A	Area ID
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		0.00			
$\begin{array}{cccccccccccccccccccccccccccccccccccc$					
403 641 355 0.01 413 641 $284,707$ 6.54 416 641 $95,668$ 2.20 421 630 $14,016$ 0.32 422 630 $152,713$ 3.51 427 646 $136,038$ 3.12 428 630 $139,242$ 3.20 431 740 $108,355$ 2.49 433 630 $209,302$ 4.80 440 630 $41,539$ 0.95 448 646 $147,802$ 3.39 450 424 $1,041$ 0.02 453 630 $99,952$ 2.29 454 630 $162,690$ 3.73 457 424 $1,376$ 0.03 458 621 $24,121$ 0.55 459 620 $28,856$ 0.66 461 620 $17,217$ 0.40 462 621 $182,794$ 4.20 465 426 $29,713$ 0.68 470 643 $6,947$ 0.16 471 641 $13,035$ 0.30 483 646 $10,818$ 0.25 490 630 $53,607$ 1.23 493 641 61 0.00 501 641 $738,732$ 16.96 506 620 $20,252$ 1.43 507 620 221 0.01 508 630 $127,679$ 2.93 511 620					
413 641 $284,707$ 6.54 416 641 $95,668$ 2.20 421 630 $14,016$ 0.32 422 630 $152,713$ 3.51 427 646 $136,038$ 3.12 428 630 $139,242$ 3.20 431 740 $108,355$ 2.49 433 630 $209,302$ 4.80 440 630 $41,539$ 0.95 448 646 $147,802$ 3.39 450 424 $1,041$ 0.02 453 630 $99,952$ 2.29 454 630 $162,690$ 3.73 457 424 $1,376$ 0.03 458 621 $24,121$ 0.55 459 620 $28,856$ 0.66 461 620 $17,217$ 0.40 462 621 $182,794$ 4.20 465 426 $29,713$ 0.68 470 643 $6,947$ 0.16 471 641 $13,035$ 0.30 483 646 $10,818$ 0.25 490 630 $53,607$ 1.23 493 641 61 0.00 506 620 $62,352$ 1.43 507 620 221 0.01 508 630 $127,679$ 2.93 511 620 $59,586$ 1.37 514 630 $364,982$ 8.38 526 630 <td< td=""><td></td><td></td><td></td><td></td><td></td></td<>					
416 641 $95,668$ 2.20 421 630 $14,016$ 0.32 422 630 $152,713$ 3.51 427 646 $136,038$ 3.12 428 630 $139,242$ 3.20 431 740 $108,355$ 2.49 433 630 $209,302$ 4.80 440 630 $41,539$ 0.95 448 646 $147,802$ 3.39 450 424 $1,041$ 0.02 453 630 $99,952$ 2.29 454 630 $162,690$ 3.73 457 424 $1,376$ 0.03 458 621 $24,121$ 0.55 459 620 $28,856$ 0.66 461 620 $17,217$ 0.40 465 426 $29,713$ 0.68 470 643 $6,947$ 0.16 471 641 $13,035$ 0.30 483 646 $10,818$ 0.25 490 630 $53,607$ 1.23 493 641 61 0.001 501 641 $738,732$ 16.96 506 620 $62,352$ 1.43 507 620 221 0.011 508 630 $127,679$ 2.93 511 620 $59,566$ 1.37 514 630 $319,040$ 7.32 522 620 $20,071$ 0.46 524 630 <					
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422 630 $152,713$ 3.51 427 646 $136,038$ 3.12 428 630 $139,242$ 3.20 431 740 $108,355$ 2.49 433 630 $209,302$ 4.80 440 630 $41,539$ 0.95 448 646 $147,802$ 3.39 450 424 $1,041$ 0.02 453 630 $99,952$ 2.29 454 630 $162,690$ 3.73 457 424 $1,376$ 0.03 458 621 $24,121$ 0.55 459 620 $28,856$ 0.66 461 620 $17,217$ 0.40 462 621 $182,794$ 4.20 465 426 $29,713$ 0.68 470 643 $6,947$ 0.16 471 641 $13,035$ 0.30 483 646 $10,818$ 0.25 490 630 $53,607$ 1.23 493 641 61 0.00 501 641 $738,732$ 16.96 506 620 $62,352$ 1.43 507 620 221 0.01 508 630 $127,679$ 2.93 511 620 $59,586$ 1.37 514 630 $7,433$ 0.17 519 620 $20,071$ 0.46 524 630 $364,982$ 8.38 526 630 <td< td=""><td></td><td></td><td></td><td></td><td></td></td<>					
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Attachment <u>4 of 10</u>		<u>of 10</u>	Attachment <u>4</u>		

	Area ID	FLUCCS A	REA (SQ. Ft.)	Area (Acres
	1.55			1. 1. 1. 1. 1. 1.
	567	211	821,519	18.86
No. of Areas:	102	Total Area:	44,470,276	1,020.83
			tland	
		Enhance	ement Area	
		6		
	560	646	98,884	2.27
	561	814	153,628	3.53
	565	643	229,672	5.27
	566	621	36,780	0.84
	568	643	22,849	0.52
	569	211	144,813	3.32
	570	630	394,444	9.06
	571	646	3,316	0.08
	572	630	155,987	3.58
	573	621	103,446	2.37
	574	646	74,454	1.71
	575	610	12,001	0.28
	576	646	131,091	3.01
	577	646	8,654	0.20
	578	646	13,523	0.31
	579	646	23,492	0.54
	580	621	117,832	2.71
	581	621	167,797	3.85
	582	643	140,315	3.22
	583	643	431	0.01
	584	621	69,577	1.60
	585	646	104,800	2.41
	586	621	942	0.02
	587	630	212,548	4.88
	588	643	17,894	0.41
No. of Areas:	25	- Total Area:	2,439,170	56.00

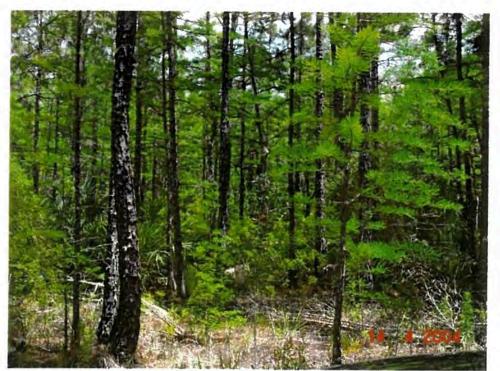
APPENDIX III

Photographs

Composite Photo 1: Stations 1-6



WRAP Station #1---wetland coniferous forest (620)



WRAP Station #2---cypress (621)

Composite Photo 1: Stations 1-6



WRAP Station #3---wetland forested mix (630)



WRAP Station #4---cypress (621)

D		T
U.S. Army Co	orps or	Engineers
Permit # SAJ	-2004-0	<u>)3931 (PGP-JSC)</u>
Date: <u>3/5/2</u>	<u>2015</u>	
Drawing		Ĭ
Attachment	4 of	10

Composite Photo 1: Stations 1-6



WRAP Station #5---cypress (621)



WRAP Station #6---cypress (621)

Composite Photo 2: Stations 7-12



WRAP Station #7---cypress (621)



WRAP Station #8---wet prairie (643)

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Date: 3/5/	2015	5	
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Attachment	4	of	10

Composite Photo 2: Stations 7-12



WRAP Station #9---wet prairie (643)



WRAP Station #10---wetland forested mix (630)

U.S. Army C	orp	s of]	Engineers	
Permit # SA.	J-20	04-0)3931 (PGP-JS	C)
Date: 3/5/	2015	5		
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Attachment	4	of	10	

Composite Photo 2: Stations 7-12



WRAP Station #11---wet prairie (643)



WRAP Station #12---cypress (621)

U.S. Arn	ny Coi	rps of	Engineers	
Permit #	SAJ-2	2004-(03931 (PGP-	JSC)
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Drawing	5		Ĭ	
Attachm	ent 4	4 of	10	

Composite Photo 3: Safari and Hunt Club Stations



Hunt Club Station #3---cypress (621)

APPENDIX IV

Wetland Rapid Assessment Procedure (WRAP) Sheets

Application Number We Land Use Native	Project Name etland Enhancement Area	Date				
Land Use		4/14/04	Evaluator Mamie Billie, Russ Da	nser & Martin Roessler	Wetland Ty Wetland Coniference	
Native	FLUCCS Code				tland Acreage	
	620 Wetland	Coniferous Forest	1			
Vildlife Utilization (WU) 2.5		Wetland Canopy 1.0	(O/S)	Wetland	Groundcover (GC) 1.5	
		Field Hydrology	(HYD)	WQ Inp	ut & Treatment (WQ)*	
Habitat Support / I	Ruffer	2.0			3.0	
Buffer type Natural undeveloped are	(Score) X (% of an	ea) =Sub Totals	scores o	te of WQ is obtained by of Land use Category and y then by dividing by 2	adding the TOTAL I Pretreatment	
				,,		
		TOTAL 3.0				
						
	Land Use Ca se Category (Score) X	(% of area) =Sub		Pretreatment Category	the second se	a) =Sub Tota
Natural undeve	loped area 3.0	1.0 3	3.0 N	atural undeveloped area	3.0 1.0	3.0
						1
		LU Total 3	3.0		PT Tota	al 3.0
VRAP Score					11100	
0.72						
Field Notes: 26 26.	.757 N 81 00.01	W Native	Area			
Vildlife Utilization (WU)						_
None observed.						
Vetland Canopy (O/S)						
Cypress and pine with abundar	nt Melaleuca.					
Vetland Ground Cover (GC) parse cover of ferns and gram	nenoide					
sparse cover of terms and gran	nenolus.					
labitat Support / Buffer	1					_
labitat support buffer is undis	sturbed native area, creating	ng congruent habitat.				
ield Hydrology (HYD)						
Vater to area has decreased sig	gnificantly after creation	of north and west feed	er canals.			
Q Input & Treatment (WQ)						
heet flow passes through adja	ecent natural areas before	reaching this area, cre	ating a buffer for wate	treatment.		
				U.S. Army Corp	s of Engineers	
						(a. a)
				Permit # <u>SAJ-</u> 20	04-03931 (PGP-J	<u>SC)</u>
				Permit # <u>SAJ-20</u> Date: <u>3/5/201</u> Drawing		<u>ISC)</u>

Application Number Project Name Date Evaluation Welland Configures Freedows Land Use Incord Billie, Rais Dancer & Mutan Rossier Welland Configures Freedows Wildie Utilization (VU) Incord Billie, Rais Dancer & Mutan Rossier Welland Configures Freedows Wildie Utilization (VU) Welland Configures Freedows Welland Configures Freedows Welland Configures Freedows Wildie Utilization (VU) Incord Billie, Rais Dancer & Mutan Rossier Welland Configures Freedows Welland Configures Freedows Water Configures Score (X) (% of area) = Sub Totals Welland Category (UD) Welland Category (CD) Welland Category (CO) Welland Category (CO		Existing Co	Rapid Asses		(WRAP)	
Land Use ELUCES Code Wetland Conferences Forest Wetland Conferences Forest Widtle Utilization (WU) 2.5 Wetland Conferences Forest Wetland Groundcover (GC) 12.5 Field Hydrology (HVD) Wetland Conferences Forest Wetland Groundcover (GC) 13.0 10 3.0 10 4.0 14.0 Use Category (Cos) (% of area) =Sub Totals Wetland Conferences Forest 14.0 Use Category (Cos) (% of area) =Sub Totals Wetland Conferences Forest 14.0 Use Category (Cos) (% of area) =Sub Totals Wetland Conferences (% of area) =Sub Totals 14.0 Use Category (Cos) (% of area) =Sub Totals Winard undeveloped area = 3.0 10 3.0 14.0 Use Category (Cos) (% of area) =Sub Totals Winard undeveloped area = 3.0 10 3.0 15.0 Earl Use Category (Cos) (% of area) =Sub Totals Winard undeveloped area = 3.0 10 3.0 16.0 Total area 2.0 Total area 2.0 10 3.0 16.0 Total area 2.0 Total area 2.0 10 3.0 10 Total area		the second se			fartin Roessler	
Wildlife Utilization (WU) Weiland Canopy (OS) Weiland Groundcover (GC) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1<		A 197 1 197		e brite, russ buiser or it		
25 25 Habitat Support / Buffer 25 The differ type (Score) X (% of area) = 5ub Totals 1 10 1	Native	620 Wetland	Coniferous Forest			
Haitua Support / Buffer Yuling C (feo of area) = 50k Tetals Image: Support / Buffer TotAL Image: Support / Buffer Support / Buffer Support / Buffer Support / Buffer Support / Buffer Support / Buffer Substant support / Buffer Support / Buffer Substant support / Buffer Support / Buffer Substant support / Buffer Support / Buffer Support Buffer is umdistanched native area, creating congusent ba	And in case of the local data in the local data				printer and a second se	and the second
Ibitial Support / Buffer 30 Image: Statural undeveloped area 3.0 1.0 Image: Statural Undeveloped area			Field Hydrology (HYI		T. Carner 2 a	And States
Buffer type: Score) X (% of area) = sbb Totals intuinal undeveloped area 3.0 intuinal undeveloped ar	Habitat Comment	Duffer		j	A REAL PROPERTY OF TAXABLE PARTY.	and the local division of the local division of the
Autural undeveloped area 3.0 1.0 3.0 Image: transmission of the second sec			-Sub Totals	* The value of Wo	Q is obtained by adding	the TOTAL
Image: Sub Total Sub Tota				Gategory then b	y dividing by 2	athem
Image: Sub Total Sub Tota	2		тота			
Land Use Category (Score) X (% of area) =Sub Totals Natural undeveloped area 3.0 1.0 3.0 LU Total 3.0 1.0 3.0 LU Total 3.0 1.0 3.0 WAP Score 0.80 PT Total 3.0 PT Total 3.0 0 0 Widtlife Utilization (WU) Widtlife Utilization (WU) Widtlife Utilization (WU) Widtlife Utilization (WU) Widtlife Utilization (WU) Midtlife Utilization (WU) Midtlife Utilization (WU) Midtlife Utilization (WU) Spectral Canopy (O/S) Cyperst and pine abundant after melaleuca removal. Medand Ground Cover (GC) Increased cover of ferns and gramenoids after melaleuca removal. Wetland Support / Buffer Iabitat Support / Buffer Iabitat Support / Buffer Iabitat support buffer is undisturbed native area, creating congruent habitat. Widtle Hydrology (HYD) Water to area will increase significantly with creation of critical project. VS. Army Corps of Engineers VQ Input & Treatment (WQ) Vater passes through adjacent natural areas before reaching this area, creating a buffer for water treatment. U.S. Army Corps of Engineers Permit # SAJ-2004-03931 (IPCP-JSC) Date: 3.0/20215 Date: </td <td></td> <td></td> <td>Contraction of the local division of the loc</td> <td> /</td> <td></td> <td></td>			Contraction of the local division of the loc	/		
Natural undeveloped area 3.0 1.0 3.0 LU Total 3.0 1.0 3.0 LU Total 3.0 1.0 3.0 VRAP Score 0.89 PT Total 3.0 Field Notes: 2 6 26.757 N 81 00.01 W Native Area Wildlife Utilization (WU) Will increase significantly, usage by more deer, woodstork, bobcat, macro invertebrates and wading birds. Wetland Canopy (O/S)						
WIAP Score 0.89 Field Notes: 26 26.757 N 81 00.01 W Native Area Wildlife Utilization (WU) Will increase significantly, usage by more deer, woodstork, bobcat, macro invertebrates and wading birds. Vetland Canopy (O/S)						
WRAP Score 0.89 Field Notes: 26 26.757 N 81 00.01 W Native Area Wildlife Utilization (WU) Will increase significantly, usage by more deer, woodstork, bobcat, macro invertebrates and wading birds. Wetland Canopy (O/S) Cypress and pine abundant after melaleuca removal. Wetland Ground Cover (GC) Increased cover of ferns and gramenoids after melaleuca removal. Habitat Support / Buffer Jabitat support / Buffer Jabitat support buffer is undisturbed native area, creating congruent habitat. ield Hydrology (HYD) Vater to area will increase significantly with creation of critical project. VQ Input & Treatment (WQ) Vater passes through adjacent natural areas before reaching this area, creating a buffer for water treatment: US. Arency Coeps of Engineeers Permit # SAJ-2004-03931 (PGP-JSC) Date:						
WRAP Score 0.89 Field Notes: 26 26.757 N 81 00.01 W Native Area Willife Utilization (WU) Will increase significantly, usage by more deer, woodstork, bobcat, macro invertebrates and wading birds. Vetland Canopy (O/S) Cypress and pine abundant after melaleuca removal. Vetland Ground Cover (GC) Increased cover of ferns and gramenoids after melaleuca removal. Iabitat Support / Buffer Iabitat support buffer is undisturbed native area, creating congruent habitat. ield Hydrology (HYD) Vater to area will increase significantly with creation of critical project. VQ Input & Treatment (WQ) Vater passes through adjacent natural areas before reaching this area, creating a buffer for water treatment: US. Areny: Coeps of Eagineeers: Permit # SAJ-2004-03931 (PGP-JSC) Date:				A 📖		
VRAP Score 0.89 Field Notes: 26 26.757 N 81 00.01 W Native Area Willife Utilization (WU) Will increase significantly, usage by more deer, woodstork, bobcat, macro invertebrates and wading birds. Vetland Canopy (O/S) Cypress and pine abundant after melaleuca removal. Vetland Ground Cover (GC) Increased cover of ferns and gramenoids after melaleuca removal. Iabitat Support / Buffer Iabitat support buffer is undisturbed native area, creating congruent habitat. ield Hydrology (HYD) Vater to area will increase significantly with creation of critical project. VQ Input & Treatment (WQ) Vater passes through adjacent natural areas before reaching this area, creating a buffer for water treatment: US. Arency Coeps of Engineeers Permit # SAJ-2004-03931 (PGP-JSC) Date:			LU Total 3.0	/		PT Total 3.0
Will increase significantly, usage by more deer, woodstork, bobcat, macro invertebrates and wading birds. Wetland Canopy (O/S) "cypress and pine abundant after melaleuca removal. Wetland Ground Cover (GC) Increased cover of ferns and gramenoids after melaleuca removal. Iabitat Support / Buffer Iabitat support buffer is undisturbed native area, creating congruent habitat. Tield Hydrology (HYD) Vater to area will increase significantly with creation of critical project. VQ Input & Treatment (WQ) Vater passes through adjacent natural areas before reaching this area, creating a buffer for water treatment. U.S. Army Corps of Engineers Permit # SAJ-2004-03931 (PGP-JSC), Date:	Field Notes: 26 2	5.757 N 81 00.01	W Native Area			
Wetland Canopy (O/S) Cypress and pine abundant after melaleuca removal. Wetland Ground Cover (GC) Increased cover of ferns and gramenoids after melaleuca removal. Habitat Support / Buffer Habitat Support / Buffer Habitat Support buffer is undisturbed native area, creating congruent habitat. Field Hydrology (HYD) Water to area will increase significantly with creation of critical project. VQ Input & Treatment (WQ) Water passes through adjacent natural areas before reaching this area, creating a buffer for water treatment. U.S. Army Corps of Engineers Permit # <u>SAJ-2004-03931 (PGP-JSC)</u> Date:						
Typress and pine abundant after melaleuca removal. Wetland Ground Cover (GC) Increased cover of ferns and gramenoids after melaleuca removal. Habitat Support / Buffer Iabitat Support / Buffer Iabitat support buffer is undisturbed native area, creating congruent habitat. Tield Hydrology (HYD) Vater to area will increase significantly with creation of critical project. VQ Input & Treatment (WQ) Vater passes through adjacent natural areas before reaching this area, creating a buffer for water treatment. U.S. Army Corps of Engineers Permit # SAJ-2004-03931 (PGP-JSC) Date:	Will increase significantly, t	sage by more deer, woodsto	ork, bobcat, macro inverteb	rates and wading birds.		
Wetland Ground Cover (GC) Increased cover of ferns and gramenoids after melaleuca removal. Habitat Support / Buffer Tabitat Support / Buffer Tabitat support buffer is undisturbed native area, creating congruent habitat. Tield Hydrology (HYD) Water to area will increase significantly with creation of critical project. VQ Input & Treatment (WQ) Water passes through adjacent natural areas before reaching this area, creating a buffer for water treatment. U.S. Army Corps of Engineers Permit # SAJ-2004-03931 (PGP-JSC) Date:	Wetland Canopy (O/S)	100.000				
Increased cover of ferns and gramenoids after melaleuca removal. Habitat Support / Buffer Habitat support buffer is undisturbed native area, creating congruent habitat. Field Hydrology (HYD) Water to area will increase significantly with creation of critical project. VQ Input & Treatment (WQ) Water passes through adjacent natural areas before reaching this area, creating a buffer for water treatment. U.S. Army Corps of Engineers Permit # <u>SAJ-2004-03931 (PGP-JSC)</u> Date:3/5/2015	Cypress and pine abundant a	fter melaleuca removal.				
Habitat Support / Buffer Habitat support buffer is undisturbed native area, creating congruent habitat. Tield Hydrology (HYD) Vater to area will increase significantly with creation of critical project. VQ Input & Treatment (WQ) Vater passes through adjacent natural areas before reaching this area, creating a buffer for water treatment. U.S. Army Corps of Engineers Permit # SAJ-2004-03931 (PGP-JSC) Date:	Wetland Ground Cover (GC					
Habitat support buffer is undisturbed native area, creating congruent habitat. Field Hydrology (HYD) Water to area will increase significantly with creation of critical project. VQ Input & Treatment (WQ) Water passes through adjacent natural areas before reaching this area, creating a buffer for water treatment. U.S. Army Corps of Engineers Permit # SAJ-2004-03931 (PGP-JSC) Date: <u>3/5/2015</u>	ncreased cover of ferns and	gramenoids after melaleuca	removal.			
Habitat support buffer is undisturbed native area, creating congruent habitat. Field Hydrology (HYD) Water to area will increase significantly with creation of critical project. VQ Input & Treatment (WQ) Water passes through adjacent natural areas before reaching this area, creating a buffer for water treatment. U.S. Army Corps of Engineers Permit # SAJ-2004-03931 (PGP-JSC) Date: <u>3/5/2015</u>	Habitat Support / Buffer					
Water to area will increase significantly with creation of critical project. WQ Input & Treatment (WQ) Water passes through adjacent natural areas before reaching this area, creating a buffer for water treatment. U.S. Army Corps of Engineers Permit # <u>SAJ-2004-03931 (PGP-JSC)</u> Date: <u>3/5/2015</u>		isturbed native area, creatin	g congruent habitat.			
Vater to area will increase significantly with creation of critical project. VQ Input & Treatment (WQ) Vater passes through adjacent natural areas before reaching this area, creating a buffer for water treatment. U.S. Army Corps of Engineers Permit # <u>SAJ-2004-03931 (PGP-JSC)</u> Date: <u>3/5/2015</u>			_		_	
WQ Input & Treatment (WQ) Water passes through adjacent natural areas before reaching this area, creating a buffer for water treatment: U.S. Army Corps of Engineers Permit # <u>SAJ-2004-03931 (PGP-JSC)</u> Date: <u>3/5/2015</u>	ield Hydrology (HVD)					
Vater passes through adjacent natural areas before reaching this area, creating a buffer for water treatment. U.S. Army Corps of Engineers Permit # <u>SAJ-2004-03931 (PGP-JSC)</u> Date: <u>3/5/2015</u>		gnificantly with creation of	critical project.			
U.S. Army Corps of Engineers Permit # <u>SAJ-2004-03931 (PGP-JSC)</u> Date: <u>3/5/2015</u>		gnificantly with creation of	critical project.			
Permit # <u>SAJ-2004-03931 (PGP-JSC)</u> Date: <u>3/5/2015</u>	Vater to area will increase si		critical project.			
Date: <u>3/5/2015</u>	Vater to area will increase si VQ Input & Treatment (WQ)		ffer for water treatment.		
	Water to area will increase si WQ Input & Treatment (WQ)			Army Corps of I	Engineers
	Vater to area will increase si VQ Input & Treatment (WQ)		U.S. Pern	nit # <u>SAJ-2004-0</u>	

Wetland Type Cypress reage cover (GC) atment (WQ)* by adding the TOTAL and Pretreatment category (RD))X (% of alrca) = Sub Tota 5 1.0 3.0 PT Total 3.0
cover (GC) atment (WO)* by adding the TOTAL and Pretreatment Category (RD)) X (% of area) = Sub Tota 5 1.0 3.0
atment (WQ)* by adding the TOTAL nd Pretreatment 2 Category (PT)) X (% of area) =Sub Tota 5 1.0 3.0
by adding the TOTAL and Pretreatment 2 Category (RT)) X (% of area) = Sub Tota 5 1.0 3.0
Category (RT)) X (% of arca) =Sub Tota 5 1.0 3.0
) X (% of aca) =Sub Tota 5 1.0 3.0
) X (% of aca) =Sub Tota 5 1.0 3.0
PT Total 3.0
-
igineers 31 (PGP-JSC)

		☑ Chec		Procedure ™ ⊠	(WRAP)	
Application Number	Project Name	Date	Evaluator			Wetland Type
	Vetland Enhancement Are	ea 4/15/04	Mamie Billie, Rus	s Danser & Martin Roessle		Cypress
Land Use Low Intensity Commercial	FLUCCS Code	Cypress			Wetland Acreas	ge
Wildlife Utilization (WU)		Wetland Canopy (O	(\$)	Wetland	Groundcover (GC	
2.5		2.5	3)		2.5	Ċ
		Field Hydrology (H	YD)	WQ Input	t & Treatment (W	<u>(Q)*</u>
Habitat Support /	Buffer	2.5	-T	~	3.0	1
	Score) X (% of area) =Su	ib Totals		* The value of WQ is ob scores of Land use Cat		
Natural undeveloped area	3.0 1.0 3	3.0		Category then by divid		
		TOTAL				
		3.0				
	Land Use Ca				tment Category	
Land U Natural undev	se Category (Score) X eloped area 3.0	(% of area) =Sub Tot 1.0 3.0		Pretreatment Category atural undeveloped area	(Score) X (%)	of area) =Sub Totals
			\neg			
		LU Total 3.0	1		P	Total 3.0
WRAP Score 0.89						
0.89						
Field Notes: 26 17	.00N 81 02.04	4 W Native Ar	ea			
Wildlife Utilization (WU)		the state of the state	1			
Will increase significantly, u	age by more deer, woods	stork, bobcat, and wading	birds.			
Wales I Careers (O/P)						
Wetland Canopy (O/S) Cypress will be in a healthier		alaleuca.				
Wetland Ground Cover (GC)						
Normal fern and graminoid	opulations will recruit fro	om adjacent areas in more	open areas and uno	ler healthier conditions.		
Habitat Support / Buffer						
Habitat support buffer is und	sturbed native area, creati	ing congruent habitat.				
Field Hudesloon (UVD)	1				_	
Field Hydrology (HYD)		محاصبت المتاشية				
water to area will increace ci	gnificantly with creation of	or enucar project.				
water to alca will increase st						
	¥					
WQ Input & Treatment (WQ		ching this area, creating a	buffer for water tre	aument.		
WQ Input & Treatment (WQ		ching this area, creating a	buffer for water tre		. C E	_ 2,
WQ Input & Treatment (WQ Water passes through adjacer		ching this area, creating a	buffer for water tre	U.S. Army Corps		
WQ Input & Treatment (WQ		ching this area, creating a	buffer for water tre	U.S. Army Corps Permit # <u>SAJ-200</u> Date: <u>3/5/2015</u>	4-03931 (PG	<u>P-JSC)</u>
VQ Input & Treatment (WQ		ching this area, creating a	buffer for water tre	U.S. Army Corps Permit # <u>SAJ-200</u>	4-03931 (PG	<u>P-JSC)</u>

	Wetland Rapid	 Check One Proposed Condit 		(WRAP)	
Application Number	Project Name Date tland Enhancement Area 4/15/04		uator & Martin Roessler	Wetland Ty Cypress	pe
Land Use Native	FLUCCS Code 621 Cypress		v	Vetland Acreage	
Wildlife Utilization (WU)		Canopy (O/S)	Wetla	nd Groundcover (GC)	
2.5	Wenand	3.0	Wetha	3.0	
	Field Hy	ydrology (HYD)	WQ Ir	put & Treatment (WQ)*	
Habitat Support / Bi	uffer	2.5		3.0	
	Score) X (% of area) =Sub Totals	sq	value of WQ is obtained to bres of Land use Category a	nd Pretreatment	
Natural undeveloped area	3.0 1.0 3.0	9	tegory then by dividing by		
	т	OTAL			
		3.0			
	Land Use Category (LU) e Category (Score) X (% of area		Pretreatment Catego		i) =Sub Totals
Natural undevelo	oped area 3.0 1.0	3.0	Natural undeveloped are	a 3.0 1.0	3.0
	LU Total	3.0		PT Tota	1 3.0
WRAP Score 0.94					
Field Notes: 26 17.7	717 N 81 04.901 W N	Native Area			
	17 N 81 04.501 W F	Valive Area			
Wildlife Utilization (WU) None observed.					
Wetland Canopy (O/S)					
Cypress and hardwoods with no	o exotics with healthy shrub layer.				
Wetland Ground Cover (GC)					
	 cous layer normal for cypress head.				
					_
Habitat Support / Buffer	urbed native area, creating congruent	habitat			
	under nauve alea, creating congruent	habitat.			
riaonal support outlet is undisti					
Field Hydrology (HYD)					
Field Hydrology (HYD)	ation of north and west feeder canals.				
Field Hydrology (HYD) Water to area affected with crea WQ Input & Treatment (WQ)					
Field Hydrology (HYD) Water to area affected with crea WQ Input & Treatment (WQ)			er treatment.		
Field Hydrology (HYD) Water to area affected with crea WQ Input & Treatment (WQ)			U.S. Army Cor	ps of Engineers	
Field Hydrology (HYD) Water to area affected with crea WQ Input & Treatment (WQ)			U.S. Army Cor	004-03931 (PGP-J	<u>SC)</u>

	Existing Condition	Ins Check One Proposed Co	nditions 🗹 (WRAP)	
pplication Number	Project Name tland Enhancement Area 4/		Evaluator ser & Martin Roessler		Wetland Type Cypress
Land Use Native	FLUCCS Code 621 Cypress			Wetland Acrea	ge
Wildlife Utilization (WU) 3.0	W	etland Canopy (O/S) 3.0		Wetland Groundcov 3.0	er (GC)
	Fie	eld Hydrology (HYD) 2.5		WQ Input & Treatm 3.0	ent (WQ)*
Habitat Support / E Buffer type	uffer (Score) X (% of area) =Sub T	otals	* The value of L	WQ is obtained by and use Category and	adding the TOTAL
Natural undeveloped area	3.0 1.0 3.0	3		hen by dividing by 2	
		TOTAL 3,0	/		
Land Ifs	Land Use Category (e Category (Score) X (% c	(LU) of area) =Sub Totals	Pretreatment	Pretreatment Cat Category (Score) X	
Natural undevel	B		Natural undevel		1.0 3.0
1		A			
	LU	Total 3.0 /			PT Total 3.0
WRAP Score 0.97					
The second second					
Field Notes: 26 17.	717 N 81 04.901 W	Native Area			
Wildlife Utilization (WU)					
Will increase significantly, us	age by more deer, woodstork, bo	obcat, macro invertebrates a	nd wading birds.		
Wetland Canopy (O/S)			_		
	no exotics with healthy shrub lay	yer.			
Wetland Ground Cover (GC)	1	_			
	eous layer normal for cypress h	ead.			
Habitat Support / Buffer	1				
Habitat support buffer is undi	turbed native area, creating con	igruent habitat.			
Field Hydrology (HYD)	1.				
	nificantly with creation of critic	cal project.			
Water to area will increase sig					
WQ Input & Treatment (WQ)					
WQ Input & Treatment (WQ)	t natural areas before reaching th	his area, creating a buffer fo	r water treatment.		
WQ Input & Treatment (WQ)		his area, creating a buffer fo	U.S. Arm	y Corps of Eng	
WQ Input & Treatment (WQ)		his area, creating a buffer fo	U.S. Arm Permit #	y Corps of Eng <u>SAJ-2004-0393</u> 3/5/2015	

Date. $3/3/$	401	5	
Drawing			
Attachment	4	of	10

	Wetland Rapid A Existing Conditions	SSESSMENT Proc Check One Proposed Conditions	(WRAP)	
Application Number W	Project Name Date etland Enhancement Area 4/15/04	Evaluator Russ Danser & Martin Roes	wetland Type Cypress	I I
Land Use Native	FLUCCS Code 621 Cypress		Wetland Acreage	
Wildlife Utilization (WU) 2.5	Wetland Can 1.5		Wetland Groundcover (GC) 2.5	
	Field Hydrolo		WQ Input & Treatment (WQ)*	
	2.0	7	3.0	
Habitat Support / Buffer type	(Score) X (% of area) =Sub Totals	* The value of WC	Q is obtained by adding the TOTAL use Category and Pretreatment	
Natural undeveloped area	3.0 1.0 3.0	Category then by		
		DTAL		
	Land Use Category (LU)		Pretreatment Category (PT)	
Land U Natural undeve	se Category (Score) X (% of area) =5		atment Category (Score) X (% of area) adeveloped area 3.0 1.0	=Sub Totals 3.0
				1
	LU Total	3.0	PT Total	3.0
WRAP Score 0.80				
A STATE OF A STATE OF A STATE	.78 N 81 05.09 W Nati	ve Area		
	.78 N 81 05.09 W Nau	ve Area		
Wildlife Utilization (WU)				
None observed.				
Wetland Canopy (O/S)	_			
	elaleuca common to abundant.			
Wetland Ground Cover (GC)				
Ferns, graminoids and herbs	normal.			
Habitat Support / Buffer Habitat support buffer is undi	sturbed native area, creating congruent habi	tat		
autorial support currents and	annora han is med erenang sangerna			
field Hydrology (HYD)				
	d by Melaleuca and nearby canals.			
WQ Input & Treatment (WQ)				
		ating a buffer for water treatment.		
		U.S. <i>A</i>	Army Corps of Engineers it # <u>SAJ-2004-03931 (PGP-JS</u> O	

	Wetland Existing Co		SSESSMEN Check One Proposed Con		(WRAP)		
		Date	Evalu		(WKA)	Wetland Type	
Application Number	Project Name etland Enhancement Area	the second se		Martin Roessler		Cypress	
Land Use Native	FLUCCS Code 621 Cypress				Wetland Ad	creage	
Wildlife Utilization (WU)		Wetland Can			Wetland Ground 3.0	and the second se	
3.0		2.5	and the second				
		Field Hydrold 2.5	ogy (HYD)		WQ Input & Tre 3.0	eatment (wQ)*	
Habitat Support /	Buffer		* The	value of WQ is obt	ained by adding	the TOTAL	
Buffer type Natural undeveloped area	(Score) X (% of area) 3.0 1.0	=Sub Totals 3.0	sco	res of Land use Cate egory then by dividi	egory and Pretrea	atment	
					/		
		тот					
		3.	0				
Land U	Land Use Ca Jse Category (Score) X		Sub Totals	Pretreatment		Category (PT) re) X (% of area)	=Sub Total
Natural undeve		1.0	3.0	Natural undevelo		3.0 1.0	3.0
			/		- 네네 -	A Later	
		LU Total	3.0 7			PT Total	3.0
WRAP Score							
0.04							
0.94							
	7.78 N 81 05.0	9 W Nati	ve Area				
Field Notes: 26 17	7.78 N 81 05.0	9 W Nati	ve Area				
Field Notes: 26 17 Wildlife Utilization (WU)				ding birds.			
Field Notes: 26 17 Wildlife Utilization (WU)				ding birds.			
Field Notes: 26 17 Wildlife Utilization (WU) Will increase significantly, us Wetland Canopy (O/S)	sage by more deer, woods	stork, bobcat, macn	o invertebrates and wa	ding birds.			
Field Notes: 26 17 Wildlife Utilization (WU) Will increase significantly, us Wetland Canopy (O/S)	sage by more deer, woods	stork, bobcat, macn	o invertebrates and wa	ding birds.			
Field Notes: 26 17 Wildlife Utilization (WU) Will increase significantly, us Wetland Canopy (O/S) Cypress and a few shrubs. A	sage by more deer, woods	stork, bobcat, macn	o invertebrates and wa	ding birds.			
Field Notes: 26 17 Wildlife Utilization (WU) Will increase significantly, us Wetland Canopy (O/S) Cypress and a few shrubs. A Wetland Ground Cover (GC)	sage by more deer, woods	stork, bobcat, macri a, area will be able	o invertebrates and wa to recruit cypress.	ding birds.			
Field Notes: 26 17 Wildlife Utilization (WU) Will increase significantly, us Wetland Canopy (O/S) Cypress and a few shrubs. A Wetland Ground Cover (GC)	sage by more deer, woods	stork, bobcat, macri a, area will be able	o invertebrates and wa to recruit cypress.	ding birds.			
Field Notes: 26 17 Wildlife Utilization (WU) Will increase significantly, us Wetland Canopy (O/S) Cypress and a few shrubs. A Wetland Ground Cover (GC) Ferns, graminoids and herbs i	sage by more deer, woods	stork, bobcat, macri a, area will be able	o invertebrates and wa to recruit cypress.	ding birds.			
Field Notes: 26 17 Wildlife Utilization (WU) Will increase significantly, us Wetland Canopy (O/S) Cypress and a few shrubs. A Wetland Ground Cover (GC) Ferns, graminoids and herbs of Habitat Support / Buffer	sage by more deer, woods	stork, bobcat, macro a, area will be able a removal of Melale	o invertebrates and wa to recruit cypress. euca.	ding birds.			
Field Notes: 26 17 Wildlife Utilization (WU) Will increase significantly, us Wetland Canopy (O/S) Cypress and a few shrubs. A Wetland Ground Cover (GC) Ferns, graminoids and herbs of Habitat Support / Buffer	sage by more deer, woods	stork, bobcat, macro a, area will be able a removal of Melale	o invertebrates and wa to recruit cypress. euca.	ding birds.			
Field Notes: 26 17 Wildlife Utilization (WU) Will increase significantly, us Wetland Canopy (O/S) Cypress and a few shrubs. A Wetland Ground Cover (GC) Ferns, graminoids and herbs in Habitat Support / Buffer Habitat support buffer is undi	sage by more deer, woods	stork, bobcat, macro a, area will be able a removal of Melale	o invertebrates and wa to recruit cypress. euca.	ding birds.			
Field Notes: 26 17 Wildlife Utilization (WU) Will increase significantly, us Wetland Canopy (O/S) Cypress and a few shrubs. A Wetland Ground Cover (GC) Ferns, graminoids and herbs a Habitat Support / Buffer Habitat support buffer is undi	sage by more deer, woods fter removal of Melaleuca normal, will încrease with isturbed native area, creat	stork, bobcat, macro a, area will be able a removal of Melale	o invertebrates and wa to recruit cypress. euca.	ding birds.			
Field Notes: 26 17 Wildlife Utilization (WU) Will increase significantly, us Wetland Canopy (O/S) Cypress and a few shrubs. A Wetland Ground Cover (GC) Ferns, graminoids and herbs a Habitat Support / Buffer Habitat support buffer is undi	sage by more deer, woods fter removal of Melaleuca normal, will încrease with isturbed native area, creat	stork, bobcat, macro a, area will be able a removal of Melale	o invertebrates and wa to recruit cypress. euca.	ding birds.			
Field Notes: 26 17 Wildlife Utilization (WU) Will increase significantly, us Wetland Canopy (O/S) Cypress and a few shrubs. A Wetland Ground Cover (GC) Ferns, graminoids and herbs of Habitat Support / Buffer Habitat support / Buffer Habitat support buffer is undi	sage by more deer, woods fiter removal of Melaleuca normal, will increase with isturbed native area, creat	stork, bobcat, macro a, area will be able a removal of Melale	o invertebrates and wa to recruit cypress. euca.	ding birds.			
Field Notes: 26 17 Wildlife Utilization (WU) Will increase significantly, us Wetland Canopy (O/S) Cypress and a few shrubs. A Wetland Ground Cover (GC) Ferns, graminoids and herbs i Habitat Support / Buffer Habitat support / Buffer Habitat support buffer is undi Field Hydrology (HYD) Water to area will increase si WQ Input & Treatment (WQ	sage by more deer, woods ifter removal of Melaleuca normal, will increase with isturbed native area, creat gnificantly with creation (atork, bobcat, macro a, area will be able a removal of Melalo ing congruent habi	o invertebrates and wa to recruit cypress. euca. tat.				
	sage by more deer, woods ifter removal of Melaleuca normal, will increase with isturbed native area, creat gnificantly with creation (atork, bobcat, macro a, area will be able a removal of Melalo ing congruent habi	o invertebrates and wa to recruit cypress. euca. tat.	r treatment.	v Corps of E	Ingineers	
Field Notes: 26 17 Wildlife Utilization (WU) Will increase significantly, us Wetland Canopy (O/S) Cypress and a few shrubs. A Wetland Ground Cover (GC) Ferns, graminoids and herbs i Habitat Support / Buffer Habitat support / Buffer Habitat support buffer is undi Field Hydrology (HYD) Water to area will increase si WQ Input & Treatment (WQ	sage by more deer, woods ifter removal of Melaleuca normal, will increase with isturbed native area, creat gnificantly with creation (atork, bobcat, macro a, area will be able a removal of Melalo ing congruent habi	o invertebrates and wa to recruit cypress. euca. tat.	r treatment. U.S. Army	v Corps of E SAJ-2004-03		C)
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		ssessment Proce	dure	
	Existing Conditions 🗹	☑ Check One Proposed Conditions□	(WRAP)	
pplication Number	Project Name Date /etland Enhancement Area 4/14/04	Evaluator Marnie Billie, Russ Danser & Martin	Wetland Type Roessler Cypress	
Land Use Native	FLUCCS Code 621 Cypress		Wetland Acreage	
Vildlife Utilization (WU) 1.5	Wetland Ca.		Wetland Groundcover (GC) 2.0	
	Field Hydro 2.0		WQ Input & Treatment (WQ)*	
Habitat Support / Buffer type (Score) X (*		scores of Land use C	brained by adding the TOTAL ategory and Pretreatment	
Natural undeveloped area	3.0 1.0 3.0	Category then by div	iding by 2	
		0TAL 3.0		
			Pretreatment Category (PT) nt Category (Score) X (% of yrea) =S eloped area 3.0 1.0	ub T
Natural undev	eloped area 3.0 1.0	3.0 Natural undev	eloped area 5.0 1.0	2
			PT Total	3.
VRAP Score	LU Total	3.0 /	Pi Iotai	3,
0.67 Field Notes: Nativ	ve Area			
Vildlife Utilization (WU)	ve Alea			-
lone observed.				
Vetland Canopy (O/S)				
Cypress and shrubs with den	se Melaleuca.			
Vetland Ground Cover (GC				
erns and graminoids reduce	a by snading.			
labitat Support / Buffer	isturbed native area, creating congruent hal	nitat		
labitat support outlet is und	istutoed native area, creating congruent nat	Juar.		
ield Hydrology (HYD)	C.C. C.L.			
Vater to area affected after c	creation of north and west feeder canals.			
VQ Input & Treatment (WQ)) nt natural areas before reaching this area, ci	reating a huffer for water treatment		
valer basses infoligh adlace	nt natural areas before reaching uns area, ci	caung a burier for water reautient.		
riter pusses unough dejuse			ny Corps of Engineers	

Application Number	Project Name	Date	Proposed Conditio			Wetland Type	
- A section	/etland Enhancement An	i i i i i i i i i i i i i i i i i i i	Marnie Billie, Russ	Danser & Martin Roess		Cypress	
Land Use Native	FLUCCS Code 621 Cypres			We	tland Acreage		
Wildlife Utilization (WU)		Wetland Canopy (C	(5)	Wetland	Groundcover (C		
2.5		2.5		Wethank	2.5		
		Field Hydrology (H	YD)	WQ Inp	ut & Treatment (WQ)*	
The line for some	Duffer	2.5	\Box τ		3.0		
Habitat Support /			* The val	ue of WQ is obtained by	adding the TOT.	AL	
Buffer type Natural undeveloped	(Score) X. (% of a area 3.0 1.0		Categor	of Land use Category and y then by dividing by 2	Pretreatment		
-		TOTAL	- /		1		
		3.0	J /		/		
Land U	Land Use C Ise Category (Score)	Category (LU) X (% of area) =Sub To	tals	Pretre Pretreatment Category	atment Category (Score) X (9	(VPT) 6 of Stea) = Sub T	otals
Natural undev		1.0 3.0		atural undeveloped area	3.0	1.0 3.	
1.00							
							1
10 LD C		LU Total 3.0	1			PT Total 3.	
WRAP Score							
0.89							
0.89	Area						
0.89 Field Notes: Native	e Area						2
0.89 Field Notes: Native Wildlife Utilization (WU)		itat becomes suitable. Ree	ruitment of wading	birds, deer and macroins	ertebrates will o	ccur.	
0.89 Field Notes: Native Wildlife Utilization (WU)		itat becomes suitable. Rec	cruitment of wading	birds, deer and macroinv	ertebrates will o	ccur.	
0.89 Field Notes: Native Wildlife Utilization (WU) Increase will occur as Melale		itat becomes suitable. Ree	cruitment of wading	birds, deer and macroiny	ertebrates will o	ccur.	
0.89 Field Notes: Native Wildlife Utilization (WU) ncrease will occur as Melale Wetland Canopy (O/S)	uca is removed, and hab		eruitment of wading	birds, deer and macroinv	ertebrates will o	ccur.	
0.89 Field Notes: Native Wildlife Utilization (WU) Increase will occur as Melale Wetland Canopy (O/S)	uca is removed, and hab		cruitment of wading	birds, deer and macroinv	ertebrates will o	ccur.	
0.89 Field Notes: Native Wildlife Utilization (WU) Increase will occur as Melale Wetland Canopy (O/S) Cypress will increase through	natural recruitment afte		cruitment of wading	birds, deer and macroinv	ertebrates will o	ccur.	
0.89 Field Notes: Native Wildlife Utilization (WU) Increase will occur as Melale Wetland Canopy (O/S) Cypress will increase through Wetland Ground Cover (GC)	natural recruitment afte	er removal of Melaleuca.	eruitment of wading	birds, deer and macroiny	ertebrates will o	ccur.	
0.89 Field Notes: Native Wildlife Utilization (WU) Increase will occur as Melale Wetland Canopy (O/S) Cypress will increase through Wetland Ground Cover (GC)	natural recruitment afte	er removal of Melaleuca.	enuitment of wading	birds, deer and macroinv	ertebrates will o	ccur.	
0.89 Field Notes: Native Wildlife Utilization (WU) Increase will occur as Melale Wetland Canopy (O/S) Cypress will increase through Wetland Ground Cover (GC) Ferns and graminoids will increase Habitat Support / Buffer	natural recruitment afte	er removal of Melaleuca. Melaleuca.	cruitment of wading	birds, deer and macroins	ertebrates will o	ccur.	
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0.89	nuca is removed, and hab n natural recruitment afte crease after removal of M isturbed native area, crea gnificantly with creation	er removal of Melaleuca. Melaleuca. ating congruent habitat.			os of Engine	ers	

0.78 Field Notes: 26 27.46 N 80 99.805 W Native Area Vildlife Utilization (WU) Image: Comparison of Web Image: Comparison of Web Vetland Canopy (O/S) Image: Comparison of Meb Image: Comparison of Meb Sypress with a heavy invasion of Meb Image: Comparison of Meb Image: Comparison of Meb Vetland Ground Cover (GC) Image: Comparison of Meb Image: Comparison of Meb Vetland Ground Cover (GC) Image: Comparison of Meb Image: Comparison of Meb Iabitat Support / Buffer Image: Comparison of Meb Image: Comparison of Meb Iabitat Support / Buffer Image: Comparison of Comparison of Meb Image: Comparison of Comparison of Meb Iabitat support buffer is undisturbed native area, creating congruent habitat. Image: Comparison of Netland West feeder canals. Vet Input & Treatment (WQ) Image: Comparison of Netland West feeder canals.		Wetland Rapid A Existing Conditions	SSESSMENT Proc Check One Proposed Conditions	(WRAP)	
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25 1.5 20 W Guput & Treatment (WQ)* 20 1.0 20 W Guput & Treatment (WQ)* 20 1.0 20 W Guput & Treatment (WQ)* W Guput & Treatment (WQ) W Guput & Treatment (WQ) <t< td=""><td></td><td>Contract of the second s</td><td></td><td>Wetland Acreage</td><td></td></t<>		Contract of the second s		Wetland Acreage	
Holias Support / Buffer W (input & Treatment (WQ)* Image: Support / Buffer To TAL	and the second se			the second se	
20 Juit Support / Buffer Indire type: Score X (% of area) - Sub Torats Image: Score X (% of area) - Sub Torats Score Status (Score) X (% of area) - Sub Torats Image: Score X (% of area) - Sub Torats Score Status (Score) X (% of area) - Sub Torats Image: Score X (% of area) - Sub Torats Score X (% of area) - Sub Torats Image: Score X (% of area) - Sub Torats Score X (% of area) - Sub Torats Image: Score X (% of area) - Sub Torats Score X (% of area) - Sub Torats Image: Score X (X (% of area) - Sub Torats Score X (X (% of area) - Sub Torats Image: Score X (X (W of area) - Sub Torats Score X (X (W of area) - Sub Torats Image: Score X (X (W of area) - Sub Torats Score X (X (W of area) - Sub Torats Image: Score X (X (W of area) - Sub Torats Score X (X (W of area) - Sub Torats Image: Score X (X (W of area) - Sub Torats Score X (X (W of area) - Sub Torats Year Score X (X (W of area) - Sub Torats Year Area Year Score X (X (W of area) - Sub Torats Year Area Year Score X (X (W of area) - Sub Torats Year Area Year Score X (X (W of area) - Sub Torats Year Area Year Score X (X (W of area) - Sub Torats Year Area Year Area Year Area <					
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WRAP Score 0.78 Field Notes: 26 27.46 N 80 99.805 W Native Area Wildlife Utilization (WU) None observed. Wetland Canopy (O/S) Cypress with a heavy invasion of Melaleuca. Wetland Ground Cover (GC) Graminoids and herb layer present, but reduced due to shading. Habitat Support / Buffer Habitat support buffer is undisturbed native area, creating congruent habitat. Field Hydrology (HYD) Water to area affected after creation of north and west feeder canals. VQ Input & Treatment (WQ) Water passes through adjacent natural areas before reaching this area, creating a buffer for water treatment: US, Army Corps of Engineers		Land Use Category (LU) Use Category (Score) X (% of area) =5	Sub Totals Pretrea	atment Category (Score) X (% of great	
WRAP Score 0.78 Field Notes: 26 27.46 N 80 99.805 W Native Area Wildlife Utilization (WU) None observed. Wetland Canopy (O/S) Cypress with a heavy invasion of Melaleuca. Wetland Ground Cover (GC) Graminoids and herb layer present, but reduced due to shading. Habitat Support / Buffer Habitat support buffer is undisturbed native area, creating congruent habitat. Field Hydrology (HYD) Water to area affected after creation of north and west feeder canals. VQ Input & Treatment (WQ) Water passes through adjacent natural areas before reaching this area, creating a buffer for water treatment: US, Army Corps of Engineers					1
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Water to area affected after creation of north and west feeder canals. WQ Input & Treatment (WQ) Water passes through adjacent natural areas before reaching this area, creating a buffer for water treatment. U.S. Army Corps of Engineers	Field Notes: 26 2 Wildlife Utilization (WU) None observed. Wetland Canopy (O/S) Cypress with a heavy invasio Wetland Ground Cover (GC, Graminoids and herb layer p	on of Melaleuca.	ve Area		
Water to area affected after creation of north and west feeder canals. WQ Input & Treatment (WQ) Water passes through adjacent natural areas before reaching this area, creating a buffer for water treatment. U.S. Army Corps of Engineers	Field Notes: 26 27 Wildlife Utilization (WU) None observed. Wetland Canopy (O/S) Cypress with a heavy invasio Wetland Ground Cover (GC, Graminoids and herb layer p	on of Melaleuca.			
WQ Input & Treatment (WQ) Water passes through adjacent natural areas before reaching this area, creating a buffer for water treatment. U.S. Army Corps of Engineers	Field Notes: 26 27 Wildlife Utilization (WU) None observed. Wetland Canopy (O/S) Cypress with a heavy invasio Wetland Ground Cover (GC, Graminoids and herb layer p Habitat Support / Buffer Habitat support buffer is und	on of Melaleuca.			
Water passes through adjacent natural areas before reaching this area, creating a buffer for water treatment. U.S. Army Corps of Engineers	Field Notes: 26 27 Wildlife Utilization (WU) None observed. Wetland Canopy (O/S) Cypress with a heavy invasio Wetland Ground Cover (GC, Graminoids and herb layer p Habitat Support / Buffer Habitat support buffer is und	on of Melaleuca.			
Water passes through adjacent natural areas before reaching this area, creating a buffer for water treatment. U.S. Army Corps of Engineers	Field Notes: 26 27 Wildlife Utilization (WU) None observed. Wetland Canopy (O/S) Cypress with a heavy invasio Wetland Ground Cover (GC, Graminoids and herb layer p Habitat Support / Buffer Habitat support buffer is und	on of Melaleuca.			
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	Existing Con	Color Color	roposed Condition	. Ø	(WRAP)	2
pplication Number	Project Name etland Enhancement Area	Date 4/14/04	Evaluator Marnie Billie, Russ I	Danser & Martin Roessle	r Wetlan Cypres	
Land Use	FLUCCS Code			Wetl	and Acreage	
Native	621 Cypress					
Vildlife Utilization (WU) 2.5	1	Wetland Canopy (O/ 2.5	S)	Wetland	Groundcover (GC) 2.5	
		Field Hydrology (HY	′D)	WQ Inpu	& Treatment (WQ)*	
Habitat Support / I	Buffer	2.5			3.0	
Buffer type	(Score) X (% of are		scores of	of WQ is obtained by a Land use Category and	Iding the TOTAL Pretreatment	
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Vildlife Utilization (WU) Vill increase significantly, us		rk, bobcat, macro invert	ebrates and wading l	pirds.		
Vildlife Utilization (WU) Vill increase significantly, us Vetland Canopy (O/S)	age by more deer, woodstor	rk, bobcat, macro invert	ebrates and wading l	pirds.		
Vildlife Utilization (WU) Vill increase significantly, us Vetland Canopy (O/S)	age by more deer, woodstor	rk, bobcat, macro invert	ebrates and wading l	pirds.		
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Vildlife Utilization (WU) Vill increase significantly, us Vetland Canopy (O/S) Cypress will increase after rer Vetland Ground Cover (GC) Graminoids and herb layer pro Habitat Support / Buffer Habitat support buffer is undi Field Hydrology (HYD) Vater to area will increase aft	age by more deer, woodstor noval of Melaleuca. esent but, will increase after sturbed native area, creating er creation of Critical Proje	r removal of Melaleuca. g congruent habitat:	buffer for water treat	ment.	of Engineers	
Field Notes: 26 27. Wildlife Utilization (WU) Will increase significantly, us Wetland Canopy (O/S) Cypress will increase after rer Wetland Ground Cover (GC) Graminoids and herb layer pro Habitat Support / Buffer Habitat Support / Buffer Habitat support buffer is undi Field Hydrology (HYD) Water to area will increase aft WQ Input & Treatment (WQ) Water passes through adjacen	age by more deer, woodstor noval of Melaleuca. esent but, will increase after sturbed native area, creating er creation of Critical Proje	r removal of Melaleuca. g congruent habitat:	buffer for water trea	ment. U.S. Army Corps Permit # SAJ-200		SC)
Wildlife Utilization (WU) Will increase significantly, us Wetland Canopy (O/S) Cypress will increase after rer Wetland Ground Cover (GC) Graminoids and herb layer pro Habitat Support / Buffer Habitat support buffer is undi: Field Hydrology (HYD) Water to area will increase aft	age by more deer, woodstor noval of Melaleuca. esent but, will increase after sturbed native area, creating er creation of Critical Proje	r removal of Melaleuca. g congruent habitat:	buffer for water trea	ment. U.S. Army Corps		SC)

		Assessment	Procedure	
	Existing Conditions	Proposed Conditions	(WRAP)	
Application Number	Project Name Date etland Enhancement Area 4/14/04	Evaluato Marnie Billie, Rus	r s Danser & Martin Roessler	Wetland Type Cypress
Land Use	FLUCCS Code		Wetland Acr	eage
Native	621 Cypress			
Wildlife Utilization (WU)	Wetland	Canopy (O/S)	Wetland Grounde	over (GC)
2.5		2.5	3.0	
		Irology (HYD) 2.0	WQ Input & Trea 3.0	tment (WQ)*
Habitat Support / B				
	core) X (% of area) =Sub Totals	sebres	lue of WQ is obtained by adding th of Land use Category and Pretreatr	e TOTAL ment
Natural undeveloped area	3.0 1.0 3.0	Chtego	ry then by dividing by 2	
	тот			
	3			
	Land Use Category (LU)	_ /	Pretreatment C	Heron PT)
Land Use Natural undevelo	e Category (Score) X (% of area)	=Sub Totals	Pretreatment Category (Score)	X (% ofterea) =Sub Totals
- Hatural undeven		3.0	latural undeveloped area 3.0	1.0 3.0
	LU Total			
WRAP Score	LU Total	3.0 /		PT Total 3.0
0.89				
Field Notes: 26 27.4	420 N 80 99.816 W N	ative Area		
Wildlife Utilization (WII)				
Wildlife Utilization (WU) None observed.				
None observed.				
None observed. Wetland Canopy (O/S)				
None observed. Wetland Canopy (O/S) Cypress with few Melaleuca. Wetland Ground Cover (GC)				
None observed. Wetland Canopy (O/S) Cypress with few Melaleuca.	h ferns and graminoids.			
None observed. Wetland Canopy (O/S) Cypress with few Melaleuca. Wetland Ground Cover (GC) Herbaceous growth normal, wit	h ferns and graminoids.			
None observed. Wetland Canopy (O/S) Cypress with few Melaleuca. Wetland Ground Cover (GC) Herbaceous growth normal, wit				
None observed. Wetland Canopy (O/S) Cypress with few Melaleuca. Wetland Ground Cover (GC) Herbaceous growth normal, wit	h ferns and graminoids.	abitat.		
None observed. Wetland Canopy (O/S) Cypress with few Melaleuca. Wetland Ground Cover (GC) Herbaceous growth normal, wit Habitat Support / Buffer Habitat support buffer is undistu		abitat.		
None observed. Wetland Canopy (O/S) Cypress with few Melaleuca. Wetland Ground Cover (GC) Herbaceous growth normal, wit Habitat Support / Buffer Habitat support / Buffer Habitat support buffer is undistu	urbed native area, creating congruent h	abitat.		
None observed. Wetland Canopy (O/S) Cypress with few Melaleuca. Wetland Ground Cover (GC) Herbaceous growth normal, wit Habitat Support / Buffer Habitat support / Buffer Habitat support buffer is undistu		abitat.		
None observed. Wetland Canopy (O/S) Cypress with few Melaleuca. Wetland Ground Cover (GC) Herbaceous growth normal, wit Habitat Support / Buffer Habitat support / Buffer Habitat support buffer is undistu	urbed native area, creating congruent h	abitat.		
None observed. Wetland Canopy (O/S) Cypress with few Melaleuca. Wetland Ground Cover (GC) Herbaceous growth normal, wit Habitat Support / Buffer Habitat support buffer is undistu Field Hydrology (HYD) Water to area affected after crea	urbed native area, creating congruent h			
etland Canopy (O/S) press with few Melaleuca. etland Ground Cover (GC) erbaceous growth normal, wit abitat Support / Buffer abitat support buffer is undistu	urbed native area, creating congruent h	abitat.		

	Wetland Rapid A	Assessment	t Procedure	2	
	Existing Conditions	Proposed Conditi	ons 🗹 (WRA	P)	
Application Number We	Project Name Date etland Enhancement Area 4/14/04	Evaluat Mamie Billie, Ru	for uss Danser & Martin Roessle	Wetland Ty Cypress	pe
Land Use Native	FLUCCS Code 621 Cypress		Wetla	and Acreage	
Wildlife Utilization (WU) 2.5	Wetland Ca	anopy (O/S)	Wetland C	Froundcover (GC)	
2.5		ology (HYD)	WQ Input	3.0 & Treatment (WQ)*	
Habitat Support / E	Buffer 3.0		value of WQ is obtained by ad	3.0	
Buffer type Natural undeveloped area	(Score) X (% of area) =Sub Totals 3.0 1.00 3.0	score	s of Land use Category and F gory then by dividing by 2	retreatment	
	TOT/ 3.0				
Za	Land Use Category (LU)	- /		ment Category (PT)	
Land Us Natural undevel		=Sub Totals	Pretreatment Category Natural undeveloped area	(Score) X (% of area) =S 3.0 1.0	ub Total 3.0
-					1
	LU Total	3.0		PT Total	3.0
WRAP Score 0.89					
Field Notes: 26 27.4	420 N 80 99.816 W Nat	tive Area			
Wildlife Utilization (WU)					
	 ca is removed, and habitat becomes suitab	ole. Recruitment of wadin	ng birds, deer and macro inve	rtebrates will occur.	
Wetland Canopy (O/S)					
Cypress canopy will increase a	fter removal of Melaleuca.				
Wetland Ground Cover (GC)					-
Herbaceous growth normal, with	th ferns and graminoids.				
Habitat Support / Buffer	1				-
Habitat support buffer is undist	urbed native area, creating congruent hab	itat.			
			the second se		
	eased sheet flow and re-hydration due to	output from Critical Proje	ect water discharge.		
Most of this area will have increased will have increased with the second					
Most of this area will have increased will have increased with the second	eased sheet flow and re-hydration due to		reatment.		
Most of this area will have incr WQ Input & Treatment (WQ)			reatment. U.S. Army Corps		
WQ Input & Treatment (WQ)			reatment. U.S. Army Corps Permit # <u>SAJ-200</u>	of Engineers 4-03931 (PGP-JSC)	
Most of this area will have incr WQ Input & Treatment (WQ)			reatment. U.S. Army Corps		

Wetland Rapid Asses	
	Proposed Conditions (WRAP)
Application Number Project Name Date Wetland Enhancement Area 5/6/04 Mamie	Evaluator Wetland Type e Billie, Russ Danser & Martin Roessler Cypress
Land Use FLUCCS Code	Wetland Acreage
Natural 621 Cypress	37.38
Wildlife Utilization (WU) Wetland Canopy (O/S)	Wetland Groundcover (GC)
2.0 0.0	0.0
Field Hydrology (HYD) 1.5	
Habitat Support / Buffer	1.75
Buffer type (Score) X (% of area) =Sub Totals	* The value & WQ is obtained by adding the TOTAL scores of Landuse Category and Pretreatment
Canal 1.0 0.50 0.50 Native 2.5 0.50 1.25	Category then by dividing by 2
TOTAL	
1.75	
Land Use Category (LU)	Pretreatment Category (PT)
Land Use Category (Score) X (% of area) =Sub Totals	Pretreatment Category (Score) X (% observa) =Sub Total
Natural/open space 2.5 0.50 1.25 Low volume highway 2.0 0.50 1.00	Natural undeveloped area 2.5 0.5 1.25 Berm Road 0.0 0.5 0.0
WRAP Score LU Total 2.25 /	PT Total 1.25
Field Notes: 26 17.302 N 80 58.308W Hunting Adv	entures
Wildlife Utilization (WU) No tracks or indications of larger mammals. No indication of avifauna usage. Panth	her reports show telemetry of panther in area, not specifically within polygon.
Wetland Canopy (O/S)	
Severely disturbed site with high Melaleuca growth, almost a monoculture. No cypre	ess seedlings.
Wetland Ground Cover (GC)	
Non-existent, with one blechnum found.	
Habitat Support / Buffer	
Adjacent habitat is enclosed within Hunting Adventures, with low volume access nammalian species.	s road to remote areas. Adjacent habitat contains non-native vegetative ar
ield Hydrology (HYD)	
Severe dry out from Melaleuca and adjacent canal system.	
VQ Input & Treatment (WQ)	
latural rainfall will account for most hydrological input. Low volume sheet flow sus	pected,
	U.S. Army Corps of Engineers Permit # <u>SAJ-2004-03931 (PGP-JSC)</u>
	Date: <u>3/5/2015</u>
	Drawing
	Attachment <u>4 of 10</u>

Land Use FLUCCS Code Midlife Utilization (WU) 621 Cypress Widdlife Utilization (WU) 2.0 Field Hydrology (O/S) 2.5 0.50 1.25 Habitat Support / Buffer 1.5 Image: Category (LU) Land Use Category Score) X (% of area) =Sub Totals Canal 0.50 0.50 1.25 Mative 1.75 Image: Category (LU) Image: Category (Score) X (% of area) =Sub Totals Land Use Category (Score) X (% of area) =Sub Totals Matural/open space 2.5 0.50 1.25 Low volume highway 2.0 0.50 1.00 Image: Category Matural/open space 2.5 0.50 1.00 Image: Category Matural/open space 2.5 0.50 1.00 Image: Category Matural Image: Category Matural/open space 2.5 0.50 1.00 Image: Category Matural Image: Category Matural/open space 2.5 0.50 1.00 Image: Category Matural/open space Image: Category Image: Category Matural/open space 2.5 Image: Catego	Anser & Martin Roessler Wet 37.3 Wetland Grou 2 WQ Input & 1. The value WQ is obtain scores of Land use Catego Category then by dividing Pretreatment Category (Sc tural undeveloped area Berm Road	Wetland Type Cypress land Acreage 8 undcover (GC) 10 Treatment (WQ)* 75 ed by adding the TOTAL and Pretreatment (by 2 nt Category (PT) core) X (% of area) Sub Total 2.5 0.5 0.0 0.5 0.0 0.5 PT Total 1.25
Wetland Enhancement Area 5/6/04 Mamie Billie, Russ Di Land Use FLUCCS Code Natural 621 Cypress Wildlife Utilization (WU) Wetland Canopy (O/S) 2.5 2.0 Field Hydrology (HYD) 1.5 Habitat Support / Buffer 1.5 Buffer type (Score) X (% of area) Solo 1.25 0.50 Native 2.5 0.50 Land Use Category (Bo farea) =Sub Totals Native 2.5 0.50 1.25 Land Use Category (Score) X (% of area) =Sub Totals Natural/open space 2.5 0.50 1.25 Low volume highway 2.0 0.50 1.00 LU Total 2.25 0.50 1.00 KRAP Score 0.64 0.64 Steld Notes: 26 17.302 N 80 58.308W Hunting Adventures Wildlife Utilization (WU) Wildlife Utilization (WU) Steld Notes: 26 17.302 N 80 58.308W Hunting Adventures Wildlife Utilization (WU) Wildlife Utilization (WU) Stell Notes:	Wet 37.3 Wetland Grou 2 WQ Input & 1 * The value & WQ is obtain scores of Lan use Catego Category then by dividing Pretreatment Category (Sc tural undeveloped area Berm Road	Cypress land Acreage 8 indcover (GC) 10 10 11 120 Treatment (WQ)* 75 ed by adding the TOTAL ory and Pretreatment (by 2 11 11 12.5 0.0 0.5 0.0 0.5 0.0 1.25 0.0 1.25
Natural 621 Cypress Wildlife Utilization (WU) 2.0 2.0 Image: Second State S	37.3 Wetland Grou 2 WQ Input & 1. The value of WQ is obtain scores of Lant use Catego Category then by dividing Pretreatment Pretreatment Category (Sc ural undeveloped area Berm Road	8 indcover (GC) :.0 Treatment (WQ)* 75 ed by adding the TOTAL ry and Pretreatment :by 2 int Category (PT) :core) X (% of area) = Sub Tota 2.5 0.5 0.0 0.5 0.0 0.5 PT Total 1.25
Wildlife Utilization (WU) 2.5 2.5 2.0 Field Hydrology (HYD) 1.5 Habitat Support / Buffer 1.5 Buffer type (Score) X (% of area) = Sub Totals Native 2.5 1.0 0.50 Native 2.5 0.50 1.25 VTAL 1.75 Land Use Category (LUD) 1.75 Land Use Category (Score) X (% of area) = Sub Totals Natural/open space 2.5 Low volume highway 2.0 0.50 VIdIfie Utilization (WU) 10 VidIdife Utilization (WU) 10 <	Wetland Grou 2 WQ Input & 1 * The value & WQ is obtain scores of Lancuse Catego Category then by dividing Pretreatment Pretreatment Pretreatment Berm Road	andcover (GC) .0 Treatment (WQ)* 75 ed by adding the TOTAL ry and Pretreatment (by 2 nt Category (PT) core) X (% of area) =Sub Tota 2.5 0.5 1.25 0.0 0.5 0.0 PT Total 1.25
2.5 2.0 Field Hydrology (HYD) Isot of the second seco	WQ Input & I. WQ Input & I. WQ is obtain scores of Lan use Catego Category then by dividing Pretreatment Category (Sc ural undeveloped area Berm Road	Treatment (WQ)* 75 ed by adding the TOTAL bry and Pretreatment by 2 nt Category (PT) core) X (% of orea) =Sub Tota 2.5 0.5 1.25 0.0 0.5 0.0 PT Total 1.25
1.5 Habitat Support / Buffer Buffer type (Score) X (% of area) =Sub Totals TOTAL Native 1.25 Interview of the second seco	The value CWQ is obtain scores of Lant use Catego Category then by dividing Pretreatment Category (Sc tural undeveloped area Berm Road	75 ed by adding the TOTAL by and Pretreatment (by 2 nt Category (PT) core) X (% of orea) =Sub Tota 2.5 0.5 1.25 0.0 0.5 0.0 PT Total 1.25
Habitat Support / Buffer Buffer type (Score) X (% of area) =Sub Totals Canal 1.0 0.50 1.25 Native 1.25 0.50 1.25 Native 1.75 1.75 Land Use Category (Score) X (% of area) =Sub Totals Natural/open space 2.5 0.50 1.25 Low volume highway 2.0 0.50 1.00 LU Total 2.25 0.50 1.00 Net 1.00 1.00 1.00 Lu Total 2.25 0.50 1.00 Net 1.04 2.25 1.00 Net 1.01 2.25 1.00 Net 1.02 1.00 1.00 RAP Score 0.64 1.01 1.02 Net 1.04 1.25 1.00 Idlife Utilization (WU) 1 1.01 1.02 Tidlife Utilization (WU) 1 1.01 1.02 Itdlife Utilization (WU) 1 1 1.02 Itdlife Utilization (WU) 1 1	The value C WQ is obtain scores of Land use Catego Category then by dividing Pretreatment Pretreatment Category (Sc ural undeveloped area Berm Road	ed by adding the TOTAL any and Pretreatment by 2 <u>nt Category (PT)</u> core) X (% of area) =Sub Tota 2.5 0.5 1.25 0.0 0.5 0.0 PT Total 1.25
Canal 1.0 0.50 0.50 Native 2.5 0.50 1.25 Image: Category (LU) 1.75 Land Use Category (Score) X (% of area) =Sub Totals Natural/open space 2.5 0.50 1.25 Low volume highway 2.0 0.50 1.00 LOW volume highway 2.0 0.50 1.00 LU Total 2.25 0.64 100 RAP Score 0.64 0.64 fildlife Utilization (WU) Tidlife Utilization (WU) 1 Tidlife Utilization (WU) 1 1 Total 2 1 1 Total 1 1 1 Tidlife Utilization (WU) 1 1 1 Total 1 1 1 1	Scores of Land use Catego Category then by dividing Pretreatment Pretreatment Category (Sc tural undeveloped area Berm Road	PT Total 1.25
Image: Interview of the second sec	Pretreatment Category (Sc nural undeveloped area Berm Road	Store) X (% of area) =Sub Tota 2.5 0.5 1.25 0.0 0.5 0.0 PT Total 1.25
Land Use Category (LU) Land Use Category (Score) X (% of area) =Sub Totals Natural/open space 2.5 Low volume highway 2.0 0.50 1.00 LU Total 2.25 TRAP Score 0.64 0.64 0.64 ield Notes: 26 17.302 N 80 58.308W Hunting Adventures iddife Utilization (WU) 1 1 1 iddife Utilization (WU) 1 1 1 iddife usage predicted to increase to normal levels. For example, after wetland enhancement, increated the usage predicted to increase to normal levels. For example, after wetland enhancement, increatelland Canopy (O/S) 1 though low natural recruitment of cypress expected due to low hydrology and subsided soil; with prestbilishment can be reached. 1 etland Ground Cover (GC) 1 1 ould increase significantly with natural recruitment from adjacent wetlands available. 1 ubitat Support / Buffer 1 1	Pretreatment Category (Sc nural undeveloped area Berm Road	Store) X (% of area) =Sub Tota 2.5 0.5 1.25 0.0 0.5 0.0 PT Total 1.25
Land Use Category (Score) X (% of area) =Sub Totals Natural/open space 2.5 0.50 1.25 Low volume highway 2.0 0.50 1.00 Lu Total 2.25 0.64 KAP Score 0.64 ield Notes: 26 17.302 N 80 58.308W Hunting Adventures fildlife Utilization (WU) 'Tidlife Utilization (WU) 'Tidlife usage predicted to increase to normal levels. For example, after wetland enhancement, increase feature of cypress expected due to low hydrology and subsided soil; with p tablishment can be reached. 'etland Ground Cover (GC) would increase significantly with natural recruitment from adjacent wetlands available. abitat Support / Buffer	Pretreatment Category (Sc nural undeveloped area Berm Road	Store) X (% of area) =Sub Tota 2.5 0.5 1.25 0.0 0.5 0.0 PT Total 1.25
Natural/open space 2.5 0.50 1.25 Low volume highway 2.0 0.50 1.00 Low volume highway 2.0 0.50 1.00 LU Total 2.25 0.64 LU Total 2.25 (RAP Score 0.64 ield Notes: 26 17.302 N 80 58.308W Hunting Adventures /ildlife Utilization (WU)	Berm Road	2.5 0.5 1.25 0.0 0.5 0.0 PT Total 1.25
TAP Score 0.64 0.64 0.64 ield Notes: 26 17.302 N 80 58.308W Hunting Adventures iidlife Utilization (WU) 1 1 1 iidlife usage predicted to increase to normal levels. For example, after wetland enhancement, increated and Canopy (O/S) 1 though low natural recruitment of cypress expected due to low hydrology and subsided soil; with p tablishment can be reached. 1 etland Ground Cover (GC) 0 0 ould increase significantly with natural recruitment from adjacent wetlands available. 1 abitat Support / Buffer 1 1		PT Total 1.25
RAP Score 0.64 ield Notes: 26 17.302 N 80 58.308W Hunting Adventures ildlife Utilization (WU)	ased wading bird, deer, and p	
RAP Score 0.64 ield Notes: 26 17.302 N 80 58.308W Hunting Adventures ildlife Utilization (WU)	ased wading bird, deer, and p	
RAP Score 0.64 ield Notes: 26 17.302 N 80 58.308W Hunting Adventures fildlife Utilization (WU)	ased wading bird, deer, and p	
ildlife usage predicted to increase to normal levels. For example, after wetland enhancement, incre etland Canopy (O/S) though low natural recruitment of cypress expected due to low hydrology and subsided soil; with p tablishment can be reached. etland Ground Cover (GC) ould increase significantly with natural recruitment from adjacent wetlands available.	ased wading bird, deer, and p	panther usage.
Ithough low natural recruitment of cypress expected due to low hydrology and subsided soil; with p tablishment can be reached. etland Ground Cover (GC) nould increase significantly with natural recruitment from adjacent wetlands available. abitat Support / Buffer		
tablishment can be reached. retland Ground Cover (GC) rould increase significantly with natural recruitment from adjacent wetlands available. abitat Support / Buffer		
ould increase significantly with natural recruitment from adjacent wetlands available.	anting of seedlings and mon	itoring of area, a good increase
ould increase significantly with natural recruitment from adjacent wetlands available.		
Constant and the second states and the		
ljacent habitat is enclosed within Hunting Adventures, with low volume access road to remote area ammalian species.	. Adjacent habitat contains r	non-native vegetative and
eld Hydrology (HYD)	a land	
vere dry out from Melaleuca and adjacent canal system. If Melaleuca removed, some hydrology sl	ould be improved.	
Q Input & Treatment (WQ)		
tural rainfall will account for most hydrological input. Low volume sheet flow suspected.		
	U.S. Army Corps of	Engineers
	Permit # <u>SAJ-2004-</u>	
		ć_
	Date: <u>3/5/2015</u> Drawing	Hrai

	Wetland Rapid Assessment Procedure
Application Number	Existing Conditions I Proposed Conditions I (WRAP) Project Name Date Evaluator Wetland Type
	/etland Enhancement Area 4/14/04 Marnie Billie, Russ Danser & Martin Roessler Wetland Fype
Land Use Native	FLUCCS Code Wetland Acreage
Wildlife Utilization (WU) 2.5	Wetland Canopy (O/S) Wetland Groundcover (GC) 3.0 2.5
	Field Hydrology (HYD) WQ Input & Treatment (WQ)*
Habita Gamma /	2.5 3.0
Habitat Support /	* The value of WQ is obtained by adding the TOTAL
Buffer type (Score) X (9 Natural undeveloped area	% of area) =Sub Totals scores of Land use Category and Pretreatment 3.0 1.0 3.0 Gategory then by dividing by 2
	TOTAL 3.0
	Land Use Category (LU) Pretreatment Category (PT)
Land U Natural undeve	se Category (Score) X (% of area) = Sub Totals / Pretreatment Category (Score) X (% of area) = Sub Totals
Ivaturar undeve	eloped area 3.0 1.0 3.0 Natural undeveloped area 3.0 1.0 3.0
	LU Total 3.0 / PT Total 3.0
WRAP Score	
0.91	
Contraction of the	
Field Notes: 26 27	.496 N 80 99.795 W Native Area
Wildlife Utilization (WU)	.496 N 80 99.795 W Native Area
Wildlife Utilization (WU)	.496 N 80 99.795 W Native Area
Wildlife Utilization (WU) None observed.	2.496 N 80 99.795 W Native Area
Wildlife Utilization (WU) None observed. Wetland Canopy (O/S)	
Wildlife Utilization (WU) None observed. Wetland Canopy (O/S)	
Wildlife Utilization (WU) None observed. Wetland Canopy (O/S) Pine, oak, cypress and many s Wetland Ground Cover (GC)	shrubs.
Wildlife Utilization (WU) None observed. Wetland Canopy (O/S) Pine, oak, cypress and many s Wetland Ground Cover (GC)	shrubs.
Wildlife Utilization (WU) None observed. Wetland Canopy (O/S) Pine, oak, cypress and many s Wetland Ground Cover (GC) Good graminoid and herb laye	shrubs.
Wildlife Utilization (WU) None observed. Wetland Canopy (O/S) Pine, oak, cypress and many s Wetland Ground Cover (GC) Good graminoid and herb laye Habitat Support / Buffer	shrubs: er.
Wildlife Utilization (WU) None observed. Wetland Canopy (O/S) Pine, oak, cypress and many s Wetland Ground Cover (GC) Good graminoid and herb laye Habitat Support / Buffer	shrubs.
Wildlife Utilization (WU) None observed. Wetland Canopy (O/S) Pine, oak, cypress and many s Wetland Ground Cover (GC) Good graminoid and herb laye Habitat Support / Buffer	shrubs: er.
Wildlife Utilization (WU) None observed. Wetland Canopy (O/S) Pine, oak, cypress and many s Wetland Ground Cover (GC) Good graminoid and herb laye Habitat Support / Buffer Habitat support buffer is undis	shrubs: er.
Wildlife Utilization (WU) None observed. Wetland Canopy (O/S) Pine, oak, cypress and many s Wetland Ground Cover (GC) Good graminoid and herb laye Habitat Support / Buffer Habitat support buffer is undis	shrubs.
Wildlife Utilization (WU) None observed. Wetland Canopy (O/S) Pine, oak, cypress and many s Wetland Ground Cover (GC) Good graminoid and herb laye Habitat Support / Buffer Habitat support buffer is undis Field Hydrology (HYD) Water to area affected after cre	shrubs. er. sturbed native area, creating congruent habitat. eation of north and west feeder canals.
Wildlife Utilization (WU) None observed. Wetland Canopy (O/S) Pine, oak, cypress and many s Wetland Ground Cover (GC) Good graminoid and herb laye Habitat Support / Buffer Habitat support buffer is undis Field Hydrology (HYD) Water to area affected after cro	shrubs. er. sturbed native area, creating congruent habitat. eation of north and west feeder canals.

Existing Con	apid Assessme Check One Proposed Con		
Application Number Project Name Wetland Enhancement Area	Date E	valuator lie, Russ Danser & Martin Roessler	Wetland Type Wetland Forested Mix
Land Use FLUCCS Code		Wetland A	
Native 630 Wetland For	rested Mix		
Wildlife Utilization (WU)	Wetland Canopy (O/S)	Wetland Ground	lcover (GC)
2.5	3.0	3.0	
	Field Hydrology (HYD) 3.0	WQ Input & Tre 3.0	atment (WQ)*
Habitat Support / Buffer		The value of WQ is obtained by adding	the TOTAL
	ib Totals 3.0	seores of Land use Category and Pretres Category then by dividing by 2	atment
	TOTAL		
	3.0		
	% of area) =Sub Totals	Pretreatment Pretreatment Category (Score	Category (PT) e) X (% of area) =Sub Totals
Natural undeveloped area 3.0	1.0 3.0		.0 1.0 3.0
WRAP Score	LU Total 3.0 /		PT Total 3.0
0.97			
Field Notes: 26 27.496 N 80 99.795 V	W Native Area		
	n Native Area		
Wildlife Utilization (WU) Wildlife utilization, i.e. Macro invertebrates, will increase s	ignificantly with increased sheet	Bow	
when a subscription of the second s	igniticality with increased sheet	now.	
Wetland Canopy (O/S)			
Pine, oak, cypress and many shrubs.			
Wetland Ground Cover (GC)			
Good graminoid and herb layer.			
Habitat Support / Buffer			
Habitat support buffer is undisturbed native area, creating co	ongruent habitat.		
ield Hydrology (HYD)			
	a particular parts	-	
Most of this area will have increased sheet flow and re-hydra	ation due to output from Critical	Project water discharge.	
VQ Input & Treatment (WQ) Vater passes through adjacent natural areas before reaching	this area, creating a buffer for w	ater treatment.	
	a control of the		•
		U.S. Army Corps of E Permit # <u>SAJ-2004-03</u>	
		Date: $3/5/2015$	_
		Drawing	H-H
		Attachment <u>4 of</u>	10

	Wetland Rapid As	Check One Proposed Conditions		
Application Number	Project Name Date Wetland Enhancement Area 4/15/04	Evaluator Russ Danser & Martin	(WRAP)	Wetland Type
Land Use	FLUCCS Code	Russ Danser & Martin		Wetland Forest Mix
Native	630 Wetland Forest Mix			
Wildlife Utilization (WU)	Wetland Canop	oy (O/S)	Wetland G	roundcover (GC)
3.0	3.0			3.0
	Field Hydrolog 2.0	y (HYD)	WQ Input	& Treatment (WQ)* 2.81
Habitat Support				
Buffer type	(Score) X (% of area) =Sub Totals	scores of I	of WQ is obtained by ad and use Category and Pr	ding the TOTAL retreatment
Natural undeveloped area Low volume road	3.0 0.75 2.25 2.5 0.25 0.63	gategory	then by dividing by 2	
	TOTA	JL /		$\langle \rangle$
	2.8	8 /		
	Land Use Category (LU)			ment Category (PT)
Land Natural unde			Pretreatment Category Iral undeveloped area	(Score) X (% oNerea) =Sub Tot. 3.0 0.75 2.25
Low volu		0.50	Berm	2.5 0.25 0.63
	LU Total	2.75		PT Total 2.88
Field Notes: 26 1	7.68 N 81 02.04 W Native	Area		
Wildlife Utilization (WU)				
None observed.				
Wetland Canopy (O/S)	The second second			
	h, and shrubs with some cypress and cabbage pa	alm.		
Wetland Ground Cover (GC	>			
Ferns, herbs, and graminoids	normal, but shaded by canopy.			
Labled Surgery / Duffer				
Habitat Support / Buffer Habitat support buffer is und	isturbed native area, creating congruent habitat.			
CTA - CORA - MARIE				
ield Hydrology (HYD)				
Vater to area affected after c	reation of north and west feeder canals.			
VQ Input & Treatment (WQ)			
in the first of the state of the property of the state of	nt natural areas before reaching this area, creating	ng a buffer for water treatm	ent.	
		Г	J.S. Army Corps	of Engineers
				4-03931 (PGP-JSC)
		D	ate: <u>3/5/2015</u>	
			Prawing	E 10
		A	ttachment <u>4</u>	o <u>f 10</u>

	Wetland	Rapid Asse	essment Pro	cedure	
	Existin		Proposed Conditions	(WRAP)	
Application Number	Project Name tland Enhancement Are	Date ea 4/15/04	Evaluator Russ Danser & Martin Roe	ssler	Wetland Type Wetland Forest Mix
Land Use	FLUCCS Code			Wetland	
Native	Contraction of the local division of the loc	nd Forest Mix			Acteage
Wildlife Utilization (WU)		Wetland Canopy (O/	/S)	Wetland Grou	ndcover (GC)
3.0		3.0		3.	0
		Field Hydrology (HY 2.5	YD)		reatment (WQ)*
Habitat Support / Bu	uffer	2.5	_ 7		
	ore) X (% of area)	=Sub Totals	scores of Land	Q is obtained by adding use Category and Pretry	g the TOTAL eatment
Natural undeveloped area Low volume road	3.0 0.75 2.5 0.25	2.25 0.63	Gategory then b	y dividing by 2	
		TOTAL		/	
		2.88			
	Land Use Ca				t Category (PT)
Land Use Natural undevelo	oped area 3.0	1.0 1.0	Natural un	atment Category (See ndeveloped area	ore) X (% of grea) = Sub Tota 3.0 0.75 2.25
Low volume	road 2.0	0.25 0.50	-/	Berm	2.5 0.25 0.63
			7 —		
		LU Total 2.75			PT Total 2.88
Field Notes: 26 17.68 Wildlife Utilization (WU)					
Wildlife utilization, i.e. macro in	avertebrates, will increa	ase significantly with incre	ased sheet flow.		
Watland Caraan (O/O)				_	_
wedano Canopy (U/S)	I nd shrubs with some cy	ypress and cabbage palm.			
and the second					
Mixture of laurel oak, popash, ar					
Mixture of laurel oak, popash, ar Wetland Ground Cover (GC)	rmal, but shaded by car	nopy.			
Mixture of laurel oak, popash, ar Wetland Ground Cover (GC) Ferns, herbs, and graminoids nor] rmal, but shaded by car	nopy.			
Mixture of laurel oak, popash, ar Wetland Ground Cover (GC) Ferns, herbs, and graminoids nor Habitat Support / Buffer					
Mixture of laurel oak, popash, ar Wetland Ground Cover (GC) Ferns, herbs, and graminoids nor Habitat Support / Buffer Habitat support buffer is undistur					
Mixture of laurel oak, popash, ar Wetland Ground Cover (GC) Ferns, herbs, and graminoids nor Habitat Support / Buffer Habitat support buffer is undistur	rbed native area, creati	ing congruent habitat.			
Mixture of laurel oak, popash, ar Wetland Ground Cover (GC) Ferns, herbs, and graminoids nor labitat Support / Buffer fabitat support buffer is undistur	rbed native area, creati	ing congruent habitat.	om Crítical Project water di	ischarge.	
Mixture of laurel oak, popash, ar Wetland Ground Cover (GC) Ferns, herbs, and graminoids nor Habitat Support / Buffer Habitat support buffer is undistur Field Hydrology (HYD) Most of this area will have increa	rbed native area, creati	ing congruent habitat.	om Critical Project water di	ischarge.	
Mixture of laurel oak, popash, ar Wetland Ground Cover (GC) Ferns, herbs, and graminoids nor Habitat Support / Buffer Habitat support buffer is undistur Field Hydrology (HYD) Most of this area will have increa	 rbed native area, creati 	ing congruent habitat. hydration due to output fro		ischarge.	
Mixture of laurel oak, popash, ar Wetland Ground Cover (GC) Ferns, herbs, and graminoids nor Habitat Support / Buffer Habitat support buffer is undistur Field Hydrology (HYD) Most of this area will have increa	 rbed native area, creati 	ing congruent habitat. hydration due to output fro	uffer for water treatment.		Engineers
Wetland Canopy (O/S) Mixture of laurel oak, popash, ar Wetland Ground Cover (GC) Ferns, herbs, and graminoids nor Habitat Support / Buffer Habitat support buffer is undistur Field Hydrology (HYD) Most of this area will have increa WQ Input & Treatment (WQ) Water passes through adjacent na	 rbed native area, creati 	ing congruent habitat. hydration due to output fro	uffer for water treatment.	Army Corps of	Engineers 3931 (PGP-JSC)
Mixture of laurel oak, popash, ar Wetland Ground Cover (GC) Ferns, herbs, and graminoids nor Habitat Support / Buffer Habitat support buffer is undistur Field Hydrology (HYD) Most of this area will have increa	 rbed native area, creati 	ing congruent habitat. hydration due to output fro	uffer for water treatment.	Army Corps of iit # <u>SAJ-2004-0</u> : <u>3/5/2015</u>	

Wetland Rapi	d Assessment Procedure
Existing Conditions 5	
Application Number Project Name Da Wetland Enhancement Area 5/6/0	ate Evaluator Wetland Type 4 Marnie Billie, Russ Danser & Martin Roessler Mixed Swamp
Land Use FLUCCS Code	Wetland Acreage
Low Intensity Commercial 630 Mixed Swi	
Wildlife Utilization (WU) Wetla 2.0	und Canopy (O/S) Wetland Groundcover (GC) 0.0 1.0
the second se	
Field	Hydrology (HYD) WQ Input & Treatment (WQ)* 2.0 2.06
Habitat Support / Buffer	* The value of WQ is obtained by adding the TOTAL
Buffer type (Score) X (% of area)=Sub Total Mixed swamp (630) 2.0 0.50 1.00	Is scores of Land use Category and Pretreatment Category then by dividing by 2
Moderately used road 0 0.25 0.0 Highly disturbed pasture 0 0.25 0.0	
	TOTAL
Land Use Category (LU Land Use Category (Score) X (% of ar	
Mixed swamp (630) 2.0 0.50	1.00 Natural undeveloped area 3.0 0.50 1.50
Moderately used road 2.0 0.25 Highly disturbed pasture 2.5 0.25	0.50 Berm 1.0 0.50 0.50
Field Notes: 26 19.569 N 81 03.442 W	Swamp Safari
Wildlife Utilization (WU)	
Macro inverts (dragonflies) and caracara.	
Wetland Canopy (O/S)	
Greater than 75% Melaleuca,	
Wetland Ground Cover (GC) Coreopsis, dog fennel, next to Melaleuca site, although low ground	desure in sub Otabalance estatement
coreopsis, dog renner, next to weraleuca site, autougn tow ground	icover in oak Melaleuca polygon.
labitat Support / Buffer	
	me access road to remote areas. Adjacent habitat contains non-native vegetative and mamma
pecies.	
ield Hydrology (HYD)	
Dry out from adjacent canal system. On site pumps & drainage are	as, has remenant wetland areas, but indications of drydown.
/Q Input & Treatment (WQ)	
Tatural rainfall will account for most hydrological input.	
	U.S. Army Corps of Engineers Permit # <u>SAJ-2004-03931 (PGP-JSC)</u>
	Date: 3/5/2015
	Drawing
	Attachment <u>4 of 10</u>

		Rapid Asse			NP)	
Application Number	Project Name tland Enhancement Are	Date ea 5/6/04 Ma	Evaluator mie Billie, Russ Da	anser & Martin Roessler	Wetland Mixed Swan	
Land Use	FLUCCS Co	ode Mixed Swamp		Wet	land Acreage	
Wildlife Utilization (WU) 2.0		Wetland Canopy (O/ 2.0	S)	Wetland	Groundcover (GC) 2.0	
		Field Hydrology (HY 2.0	(D)	WQ Inpu	t & Treatment (WQ)	
Habitat Support / B Buffer type	uffer (Score) X (% of area		* The valu	e of WQ is obtained by a f Land use Category and	dding the TOTAL	
Mixed swamp (630) Moderately used road	2.0 0.50 0 0.25	1.00	Gategor	y then by dividing by 2	Pretreatment	
Highly disturbed pasture	0 0.25	0.0 TOTAL 1.00	л /			
Lund Has		ategory (LU)			tment Category (PT)	
Mixed swamp Moderately use Highly disturbed	ed road 2.0	X (% of area) =Sub Tota 0.50 1.00 0.25 0.50 0.25 0.63		Pretreatment Category atural undeveloped area Berm	(Score) X (% oNe 3.0 0.50 1.00 0.50	
		LU Total 2.13	4 E		PT To	tal 2.00
0.61	CO.N. 01.02.4					
ield Notes: 26 19.5						
ield Notes: 26 19.5 /ildlife Utilization (WU) facro inverts (dragonflies) and						
Field Notes: 26 19.5 Addife Utilization (WU) Macro inverts (dragonflies) and Vetland Canopy (O/S)] I caracarawill get mo	ore wading bird species, adj				
ield Notes: 26 19.5 'ildlife Utilization (WU) facro inverts (dragonflies) and 'etland Canopy (O/S) nce Melaleuca removed, area fetland Ground Cover (GC)] caracarawill get mo] has natural recruitment	ore wading bird species, adj t for oak.	acent to rookery.			
Tield Notes: 26 19.5 /ildlife Utilization (WU) /acro inverts (dragonflies) and /etland Canopy (O/S) nce Melaleuca removed, area /etland Ground Cover (GC)] caracarawill get mo] has natural recruitment	ore wading bird species, adj t for oak.	acent to rookery.	ment.		
Tield Notes: 26 19.5 /ildlife Utilization (WU) /acro inverts (dragonflies) and /etland Canopy (O/S) nce Melaleuca removed, area /etland Ground Cover (GC) oryopsis, dog fennel, next to N abitat Support / Buffer	 caracarawill get mo has natural recruitment Melaleuca sīte, ground o	ore wading bird species, adj t for oak. cover will recover from adj	acent to rookery.			
ield Notes: 26 19.5 /ildlife Utilization (WU) /acro inverts (dragonflies) and /etland Canopy (O/S) nce Melaleuca removed, area /etland Ground Cover (GC) oryopsis, dog fennel, next to N abitat Support / Buffer djacent habitat is enclosed with	 caracarawill get mo has natural recruitment Melaleuca sīte, ground o	ore wading bird species, adj t for oak. cover will recover from adj	acent to rookery.		non-native vegetativ	e and mammalia
ield Notes: 26 19.5 (ildlife Utilization (WU) (acro inverts (dragonflies) and (etland Canopy (O/S) nce Melaleuca removed, area (etland Ground Cover (GC) oryopsis, dog fennel, next to N abitat Support / Buffer ljacent habitat is enclosed wite ecies.	caracarawill get mo bas natural recruitment Melaleuca site, ground o thin Swamp Safari, wi	ore wading bird species, adj t for oak. cover will recover from adj ith low volume access road	acent to rookery. acent natural recruit to remote areas. A	Adjacent habitat contains	non-native vegetativ	e and mammalia
Tield Notes: 26 19.5 /ildlife Utilization (WU) facro inverts (dragonflies) and /etland Canopy (O/S) nce Melaleuca removed, area /etland Ground Cover (GC) oryopsis, dog fennel, next to N abitat Support / Buffer djacent habitat is enclosed wite etela Hydrology (HYD) ry out from adjacent canal syst	caracarawill get mo bas natural recruitment Melaleuca site, ground o thin Swamp Safari, wi	ore wading bird species, adj t for oak. cover will recover from adj ith low volume access road	acent to rookery. acent natural recruit to remote areas. A	Adjacent habitat contains	non-native vegetativ	e and mammalia
Tield Notes: 26 19.5 /ildlife Utilization (WU) [acro inverts (dragonflies) and /acro inverts (dragonflies) and [acro inverts (dragonflies) and //etland Canopy (O/S) [acro Melaleuca removed, area /etland Ground Cover (GC) [acro yopsis, dog fennel, next to N /abitat Support / Buffer [acent habitat is enclosed witecies.] eld Hydrology (HYD) [avg out from adjacent canal system] Q Input & Treatment (WQ) [WQ]	caracarawill get mo bas natural recruitment Melaleuca sīte, ground o thin Swamp Safari, wi	t for oak. cover will recover from adj	acent to rookery. acent natural recruit to remote areas. A	Adjacent habitat contains	non-native vegetativ	e and mammalia
Field Notes: 26 19.5 Vildlife Utilization (WU) Macro inverts (dragonflies) and Vetland Canopy (O/S) Ince Melaleuca removed, area Vetland Ground Cover (GC) oryopsis, dog fennel, next to N abitat Support / Buffer djacent habitat is enclosed witk eld Hydrology (HYD) ry out from adjacent canal syst Q Input & Treatment (WQ)	caracarawill get mo bas natural recruitment Melaleuca sīte, ground o thin Swamp Safari, wi	t for oak. cover will recover from adj	acent to rookery. acent natural recruit to remote areas. <i>A</i> wetland areas, but	Adjacent habitat contains		e and mammalia
	caracarawill get mo bas natural recruitment Melaleuca sīte, ground o thin Swamp Safari, wi	t for oak. cover will recover from adj	acent to rookery. acent natural recruit to remote areas. <i>A</i> wetland areas, but	Adjacent habitat contains	of Engineers	

		☑ Chec	k One Proposed Conditions		AP)
Application Number	Project Name tland Enhancement Area	Date Mar	Evaluator mie Billie, Russ Danser &	Martin Roessler	Wetland Type Wet Prairie
Land Use Native	FLUCCS Code 643 Wet Prai	irie		Wetla	nd Acreage
Wildlife Utilization (WU) 3.0		Wetland Canopy (O N/A	/S)	Wetland G	roundcover (GC) 3.0
Habitat Support / B Buffer type Natural undeveloped area	Uffer (Score) X (% of area) 3.0 1.0	Field Hydrology (H ¹ 2.5) =Sub Totals 3.0		e value of WQ is obta	* Treatment (WQ)* 3.0 ained by adding the TOTAL gory and Pretreatment ig by 2
		TOTAL 3.0			
Land Use Natural undevelo	Land Use Cate category (Score) X oped area 3.0			Pretreatr reatment Category (undeveloped area	nent Category (RT) Score) X (% of area) =Sub 2.5 1.0
		LU Total 3.0			
WRAP Score 0.97	8 N 81 01.55	W Native Are	ea		
Field Notes: 26 16.1	1				
Field Notes: 26 16.1 Wildlife Utilization (WU) None observed.]				
Wildlife Utilization (WU)					
Wildlife Utilization (WU) None observed.					
Wildlife Utilization (WU) None observed. Wetland Canopy (O/S) N/A-although a few shrub and s Wetland Ground Cover (GC)	seedling pine present.				
Wildlife Utilization (WU) None observed. Wetland Canopy (O/S) N/A-although a few shrub and s	seedling pine present.	icocea, rhyncospora, junc	us, coreopsis, pluchea, th	istle and xyris.	
Wildlife Utilization (WU) None observed. Wetland Canopy (O/S) N/A-although a few shrub and s Wetland Ground Cover (GC) Excellent graminoid and herb co Habitat Support / Buffer	seedling pine present.		us, coreopsis, pluchea, th	istle and xyris.	
Wildlife Utilization (WU) None observed. Wetland Canopy (O/S) N/A-although a few shrub and s Wetland Ground Cover (GC) Excellent graminoid and herb co	seedling pine present.		cus, coreopsis, pluchea, th	istle and xyris.	
Wildlife Utilization (WU) None observed. Wetland Canopy (O/S) N/A-although a few shrub and s Wetland Ground Cover (GC) Excellent graminoid and herb co Habitat Support / Buffer Adjacent habitat contains native Field Hydrology (HYD)	seedling pine present.		us, coreopsis, pluchea, th	istle and xyris.	
Wildlife Utilization (WU) None observed. Wetland Canopy (O/S) N/A-although a few shrub and s Wetland Ground Cover (GC) Excellent graminoid and herb co Habitat Support / Buffer Adjacent habitat contains native	seedling pine present.		us, coreopsis, pluchea, th	istle and xyris.	
Wildlife Utilization (WU) None observed. Wetland Canopy (O/S) N/A-although a few shrub and s Wetland Ground Cover (GC) Excellent graminoid and herb co Habitat Support / Buffer Adjacent habitat contains native Field Hydrology (HYD)	seedling pine present.		us, coreopsis, pluchea, th	istle and xyris.	
Wildlife Utilization (WU) None observed. Wetland Canopy (O/S) N/A-although a few shrub and s Wetland Ground Cover (GC) Excellent graminoid and herb ca Habitat Support / Buffer Adjacent habitat contains native Field Hydrology (HYD) Dry out from adjacent canal syst	seedling pine present.	lian species,			
Wildlife Utilization (WU) None observed. Wetland Canopy (O/S) N/A-although a few shrub and s Wetland Ground Cover (GC) Excellent graminoid and herb co Habitat Support / Buffer Adjacent habitat contains native Field Hydrology (HYD) Dry out from adjacent canal syst WQ Input & Treatment (WQ)	seedling pine present.	lian species,	uffer for water treatment U.S	. Army Corps c	of Engineers -03931 (PGP-JSC)

•	Wetland Rapid	Assessment Pro	ocedure
	Existing Conditions		(WRAP)
Application Number	Project Name Date Wetland Enhancement Area 4/15/04		& Martin Roessler Wetland Type
Land Use Native	FLUCCS Code 643 Wet Prairie		Wetland Acreage
Wildlife Utilization (WU) 3.0	Wetland	Canopy (O/S) N/A	Wetland Groundcover (GC) 3.0
		/drology (HYD) 2.5	WQ Input & Treatment (WQ)*
Habitat Support Buffer type Natural undeveloped	(Score) X (% of area) =Sub T	fotals scores of Land	WQ is obtained by adding the TOTAL d use Category and Pretreatment by dividing by 2
		3	is a many offer
		3.0	
Land U Natural under	Land Use Category (LU) Use Category (Score) X (% of area) veloped area 3.0 1.0		Pretreatment Category (RT) reatment Category (Score) X (% of area) =Sub Tot undeveloped area 2.5 1.0 3.0
	LU Total	3.0	PT Total 3.0
VRAP Score 0.97			
Field Notes: 26 10	6.18 N 81 01.55 W N	Native Area	
Wildlife Utilization (WU) Macro Invertebrates.			
Vetland Canopy (O/S)			
I/A.			
Vetland Ground Cover (GC)			
xcellent graminoid and hert	b coverdog fennel, spermacocea, rhyno	cospora, juncus, coreopsis, pluchea, th	nistle and xyris.
	and the second s		
	in the second second		
abitat Support / Buffer	ive vegetative and mammalian species.		
labitat Support / Buffer djacent habitat contains nat ield Hydrology (HYD)			
labitat Support / Buffer djacent habitat contains nat ield Hydrology (HYD)	ive vegetative and mammalian species.	cover will occur as water is reintroduc	red to area.
labitat Support / Buffer djacent habitat contains nat ield Hydrology (HYD) ry out from adjacent canal s	system, improvement in wetland grounde	cover will occur as water is reintroduc	red to area.
labitat Support / Buffer djacent habitat contains nat ield Hydrology (HYD) try out from adjacent canal s /Q Input & Treatment (WQ	system, improvement in wetland grounde		N N N N N N N N N N N N N N N N N N N
Habitat Support / Buffer Adjacent habitat contains nat Field Hydrology (HYD) Ory out from adjacent canal s VQ Input & Treatment (WQ)	system, improvement in wetland grounde	, creating a buffer for water treatment. U.S	. Army Corps of Engineers
Habitat Support / Buffer Adjacent habitat contains nat Field Hydrology (HYD) Dry out from adjacent canal s WQ Input & Treatment (WQ	system, improvement in wetland grounde	creating a buffer for water treatment. U.S Perr	. Army Corps of Engineers mit # <u>SAJ-2004-03931 (PGP-JSC)</u>
Habitat Support / Buffer Adjacent habitat contains nat Field Hydrology (HYD) Dry out from adjacent canal s VQ Input & Treatment (WQ)	system, improvement in wetland grounde	, creating a buffer for water treatment. U.S Perr Dat	. Army Corps of Engineers mit # <u>SAJ-2004-03931 (PGP-JSC)</u>

	Wetland Rapic	Check One				
	Existing Conditions E	Proposed Conc	itions (WRA	P)		
Application Number Wetla	Project Name Date and Enhancement Area 4/15/04		luator & Martin Roessler		Wetland Type Wet Prairie	
Land Use	FLUCCS Code			Wetland Acre	S	
Native	643 Wet Prairie					
Wildlife Utilization (WU)	Wetland	d Canopy (O/S)		Wetland Groundco	over (GC)	
2.5		N/A		1.5		
	Field H	ydrology (HYD) 2.0		WQ Input & Treat	ment (WQ)*	
Habitat Support / Buf	ffer		1	3.0		
Buffer type	(Score) X (% of area) =Sut	o Totals sc	res of Land use Cate	gocy and Pretreatm	ent	
Natural undeveloped are	ea 3.0 1.0 3	<u>.0</u>	tegory then by dividi	ng by?		
		TOTAL /				
		3.0				
	Land Use Category (LU)] /		Pretreatment Ca	itegory (PT)	
Land Use C Natural undevelop		=Sub Totals 3.0	Pretreatment Natural undevelo		X (% of grea) = Su 1.0	b Totals 3.0
						510
			12	1.0		/
		3.0			Contract to the	-
	LU Total	5.0 1			PT Total	3.0
VRAP Score	LU Total	3.0 1			PT Total	3.0
0.86					PT Total	3.0
		Native Area			PT Total	3.0
0.86 Field Notes: 26 17.78 Vildlife Utilization (WU)					PT Total	3.0
0.86 Field Notes: 26 17.78					PT Total	3.0
0.86 Field Notes: 26 17.78 Vildlife Utilization (WU) Jone observed.					PT Total	3.0
0.86 Field Notes: 26 17.78 Vildlife Utilization (WU) None observed. Vetland Canopy (O/S)					PT Total	3.0
0.86 Field Notes: 26 17.78 Vildlife Utilization (WU) Jone observed.					PT Total	3.0
0.86 Field Notes: 26 17.78 Vildlife Utilization (WU) None observed. Vetland Canopy (O/S)					PT Total	3.0
0.86 Field Notes: 26 17.78 Vildlife Utilization (WU) Ione observed. Vetland Canopy (O/S) I/A. Vetland Ground Cover (GC)		Native Area			PT Total	3.0
0.86 Field Notes: 26 17.78 Vildlife Utilization (WU) Ione observed. Vetland Canopy (O/S) I/A. Vetland Ground Cover (GC)	N 81 05.09 W P	Native Area			PT Total	3.0
0.86 Field Notes: 26 17.78 Vildlife Utilization (WU) Jone observed. Vetland Canopy (O/S) //A. //etland Ground Cover (GC) og fennel, spermacocea, rhyncos abitat Support / Buffer	N 81 05.09 W P	Native Area			PT Total	3.0
0.86 Field Notes: 26 17.78 Vildlife Utilization (WU) Jone observed. Vetland Canopy (O/S) //A. //etland Ground Cover (GC) og fennel, spermacocea, rhyncos abitat Support / Buffer	N 81 05.09 W P	Native Area			PT Total	3.0
0.86 Field Notes: 26 17.78 Vildlife Utilization (WU) None observed. Vetland Canopy (O/S) //A. //etland Ground Cover (GC) og fennel, spermacocea, rhyncos abitat Support / Buffer djacent habitat contains native v	N 81 05.09 W P	Native Area			PT Total	3.0
0.86 Field Notes: 26 17.78 Vildlife Utilization (WU) Jone observed. Vetland Canopy (O/S) VA. Vetland Ground Cover (GC) og fennel, spermacocea, rhyncos abitat Support / Buffer djacent habitat contains native v eld Hydrology (HYD)	N 81 05.09 W P	Native Area			PT Total	3.0
0.86 Field Notes: 26 17.78 Vildlife Utilization (WU) None observed. Vetland Canopy (O/S) //A. //etland Ground Cover (GC) og fennel, spermacocea, rhyncos abitat Support / Buffer djacent habitat contains native v	N 81 05.09 W P	Native Area			PT Total	3.0
0.86 Field Notes: 26 17.78 Vildlife Utilization (WU)	N 81 05.09 W P	Native Area			PT Total	3.0
0.86 Field Notes: 26 17.78 Vildlife Utilization (WU) Ione observed. Vetland Canopy (O/S) //A. //etland Ground Cover (GC) og fennel, spermacocea, rhyncos abitat Support / Buffer djacent habitat contains native v eld Hydrology (HYD) ry out from adjacent canal system // Q Input & Treatment (WQ)	N 81 05.09 W P	Native Area			PT Total	3.0
0.86 Field Notes: 26 17.78 Vildlife Utilization (WU)	N 81 05.09 W P	Native Area		v Corps of En		3.0

		SSESSMENT Proc Check One Proposed Conditions	(WRAP)	
Application Number	Project Name Date Vetland Enhancement Area 4/15/04	Evaluator Russ Danser & Martin Roes	ssler Wetland Type Wet Prairie	
Land Use Native	FLUCCS Code 643 Wet Prairie		Wetland Acreage	Ϋ́,
Wildlife Utilization (WU) 3.0	Wetland Can		Wetland Groundcover (GC) 2.5	
	Field Hydrol		WQ Input & Treatment (WQ)*	
Habitat Support /	2.5		3.0	
Buffer type	(Score) X (% of area) =Sub Totals	stores of Land	Q is obtained by adding the TOTAL use Category and Pretreatment	
Natural undeveloped are	ea 3.0 1.0 3.0	Gategory then b	y dividing by 2	
	тот			
	3.0			
				=Sub Totals
Natural undeve	eloped area 3.0 1.0	3.0 Natural ur	ndeveloped area 3.0 1.0	3.0
				1
	LU Total	3.0	PT Total	3.0
/RAP Score	LU Total	3.0	PT Total	3.0
0.93			PT Total	3.0
0.93 Field Notes: 26 17.		3.0	PT Total	3.0
0.93 Field Notes: 26 17.	.78 N 81 05.09 W Nati	ve Area	PT Total	3.0
0.93 Field Notes: 26 17.		ve Area	PT Total	3.0
0.93 Field Notes: 26 17.	.78 N 81 05.09 W Nati	ve Area	PT Total	3,0
0.93 Field Notes: 26 17. Vildlife Utilization (WU) Vill increase with recruitment	.78 N 81 05.09 W Nati	ve Area	PT Total	3,0
0.93 Field Notes: 26 17. A contract of the second sec	.78 N 81 05.09 W Nati	ve Area	PT Total	3.0
0.93 Field Notes: 26 17. Vildlife Utilization (WU) Vill increase with recruitment Vetland Canopy (O/S) VA. Vetland Ground Cover (GC)	.78 N 81 05.09 W Nati	ve Area etc.	PT Total	3.0
0.93 Field Notes: 26 17. Vildlife Utilization (WU) Vill increase with recruitment Vetland Canopy (O/S) VA. Vetland Ground Cover (GC)	.78 N 81 05.09 W Nati	ve Area etc.	PT Total	3.0
0.93 Field Notes: 26 17. Vildlife Utilization (WU) Vill increase with recruitment Vetland Canopy (O/S) VA. Vetland Ground Cover (GC)	.78 N 81 05.09 W Nati	ve Area etc.	PT Total	3.0
0.93 Field Notes: 26 17. /ildlife Utilization (WU) /ill increase with recruitment /etland Canopy (O/S) /A. /etland Ground Cover (GC) og fennel, spermacocea, rhyn abitat Support / Buffer	.78 N 81 05.09 W Nati	ve Area etc.	PT Total	3.0
0.93 Yield Notes: 26 17. Vildlife Utilization (WU) Vill increase with recruitment Vetland Canopy (O/S) VA. Vetland Ground Cover (GC) og fennel, spermacocea, rhyr abitat Support / Buffer djacent habitat contains nativ	.78 N 81 05.09 W Nati	ve Area etc.	PT Total	3.0
0.93 Field Notes: 26 17. /ildlife Utilization (WU) /ill increase with recruitment /etland Canopy (O/S) /A. /etland Ground Cover (GC) og fennel, spermacocea, rhyn abitat Support / Buffer djacent habitat contains native eld Hydrology (HYD)	.78 N 81 05.09 W Nati	ve Area etc.	PT Total	3.0
0.93 Field Notes: 26 17. /ildlife Utilization (WU) /ill increase with recruitment /etland Canopy (O/S) /A. /etland Ground Cover (GC) og fennel, spermacocea, rhyn abitat Support / Buffer djacent habitat contains native eld Hydrology (HYD)	.78 N 81 05.09 W Nati	ve Area etc.	PT Total	3.0
0.93 Field Notes: 26 17. /ildlife Utilization (WU) /ill increase with recruitment /etland Canopy (O/S) /A. /etland Ground Cover (GC) og fennel, spermacocea, rhyn abitat Support / Buffer djacent habitat contains native eld Hydrology (HYD) hen ditch/canal system water	.78 N 81 05.09 W Nati	ve Area etc.	PT Total	3.0
0.93 Yield Notes: 26 17. /ildlife Utilization (WU) /ill increase with recruitment /etland Canopy (O/S) /A. /etland Ground Cover (GC) og fennel, spermacocea, rhyr abitat Support / Buffer djacent habitat contains nativ eld Hydrology (HYD) hen ditch/canal system wate Q Input & Treatment (WQ)	.78 N 81 05.09 W Nati	ve Area etc.	PT Total	3.0
0.93 Field Notes: 26 17. /ildlife Utilization (WU) /ill increase with recruitment /etland Canopy (O/S) /A. /etland Ground Cover (GC) og fennel, spermacocea, rhyn abitat Support / Buffer djacent habitat contains native eld Hydrology (HYD) hen ditch/canal system water	.78 N 81 05.09 W Nati	ve Area etc. , and xyris.	PT Total	3.0

	VVEIIANG Ra	Check C			
Application Number	Project Name etland Enhancement Area	Date 4/15/04 Russ	Evaluator Danser & Martin Roessler		Wetland Type Wet Prairie
Land Use	FLUCCS Code			Wetland Ac	
Native	643 Wet Prairie				
Wildlife Utilization (WU) 2.5		Wetland Canopy (O/S) N/A		Wetland Ground 1.0	cover (GC)
		Field Hydrology (HYD)	WQ Input & Trea	atment (WQ)*
Habitat Support / I	Buffer	2.5	J 7 V	2.63	
Buffer type (Natural undeveloped area	$\begin{array}{c c} (Score) X & (\% \text{ of area}) = Su \\ \hline 3.0 & 0.75 & 2. \end{array}$		* The value of WQ is scores of Land use (Category and Pretreat	ment
Low volume road		.25 .63	tategory then by di	viding by 2	
		TOTAL			
	Land Use Category	2.88		D	The second secon
Land Us Natural undevel	se Category (Score) X (%	of area) =Sub Totals 0.25 0.75			X (% of area) = Sub Totals
Low volume Low density re	e road 2.0	0.25 0.50 0.25 0.50 0.25 0.50	Natural under Ros		3.0 0.75 2.25 2.5 0.25 0.63
Unimproved		0.25 0.50	A		
	u	U Total 2.38			PT Total 2.88
WRAP Score 0.77					
Field Notes: 26 17.	78 N 81 05.40 W	Native Area			
	78 IN 81 05.40 W	Hative Alea			
Wildlife Utilization (WU)		Hallve Area			
Wildlife Utilization (WU)		Native Area			
Wildlife Utilization (WU) None observed. Wetland Canopy (O/S)		Native Area			
Wildlife Utilization (WU) None observed. Wetland Canopy (O/S)		Native Area			
Wildlife Utilization (WU) None observed.					
Wildlife Utilization (WU) None observed. Wetland Canopy (O/S) W/Aalthough Melaleuca inv: Wetland Ground Cover (GC)					
Wildlife Utilization (WU) None observed. Wetland Canopy (O/S) N/Aalthough Melaleuca inv Vetland Ground Cover (GC) Low due to Melaleuca seedling	ading area.				
Wildlife Utilization (WU) None observed. Wetland Canopy (O/S) WAalthough Melaleuca inva Vetland Ground Cover (GC) tow due to Melaleuca seedling Mabitat Support / Buffer	ading area.	ayer normal.			
Wildlife Utilization (WU) None observed. Wetland Canopy (O/S) WAalthough Melaleuca inva Vetland Ground Cover (GC) tow due to Melaleuca seedling Mabitat Support / Buffer	ading area.	ayer normal.			
Wildlife Utilization (WU) None observed. Wetland Canopy (O/S) WAalthough Melaleuca inva Wetland Ground Cover (GC) tow due to Melaleuca seedling Habitat Support / Buffer	ading area.	ayer normal.			
Wildlife Utilization (WU) None observed. Wetland Canopy (O/S) WAalthough Melaleuca inva Vetland Ground Cover (GC) tow due to Melaleuca seedling labitat Support / Buffer idjacent habitat contains nativ	ading area. g, herbacreous and graminoid l e vegetative and mammalian s	ayer normal.			
Wildlife Utilization (WU) None observed. Wetland Canopy (O/S) M/Aalthough Melaleuca invi Vetland Ground Cover (GC) Low due to Melaleuca seedling Mabitat Support / Buffer Adjacent habitat contains nativ field Hydrology (HYD) Dry out from adjacent canal sys	ading area. g, herbacreous and graminoid l e vegetative and mammalian s	ayer normal.			
Wildlife Utilization (WU) None observed. Wetland Canopy (O/S) M/Aalthough Melaleuca inva Vetland Ground Cover (GC) ow due to Melaleuca seedling Iabitat Support / Buffer Iabitat Support / Buffer	ading area. g, herbacreous and graminoid l e vegetative and mammalian s	ayer normal.	spected.		

	Existing C	Conditions Conditions		ocedure (WRAP)	
Application Number	Project Name	Date	Evaluator		Wetland Type
	nd Enhancement Area	a 4/15/04 Ru	iss Danser & Martin Ro		Wet Prairie
Land Use Native	FLUCCS Code 643 Wet Prai	irie		Wetlan	d Acreage
Wildlife Utilization (WU)		Wetland Canopy (O/	/S)	Wetland Gr	oundcover (GC)
3.0		N/A			3.0
		Field Hydrology (H) 2.5	YD)	the second se	2.63
Habitat Support / Buf	fer	2.5		/	and the second
Buffer type Natural undeveloped area Low volume road	(Score) X (% of area 3.0 0.75 2.5 0.25	2.25 0.63	s	f WQ is obtained by add cores of Landuse Categ Category then by dividin	ory and Pretreatment
1		TOTAL 2.88			\backslash
	Land Use Cat			Pretreatm	ent Category (PT)
Land Use C Natural undevelop Low volume re Low density resid	ed area 3.0 Dad 2.0 Iential 2.0	0.25 0.75 0.25 0.50 0.25 0.50	Natura	etreatment Category (S al undeveloped area Road	Score) X (% of area) =Sub Toi 3.0 0.75 2.25 2.5 0.25 0.63
Unimproved pas	sture 2.5	0.25 0.63	-A		
Field Notes: 26 17.78 Wildlife Utilization (WU)) W Native Are	ea		
Wetland Canopy (O/S)					
N/A.					
Care and the properties of the second second second	de contra baskasara	mand managers with the start			
CAR THE REPORT AND A LOCATED AND A STREET, AND	e in native herbaceous	and graminoid layer.			
After Melaleuca removal, increase	e in native herbaceous	and graminoid layer.			
After Melaleuca removal, increase Habitat Support / Buffer				_	
After Melaleuca removal, increase Habitat Support / Buffer Adjacent habitat contains native v					
After Melaleuca removal, increase Habitat Support / Buffer Adjacent habitat contains native v Field Hydrology (HYD)	egetative and mammal				
After Melaleuca removal, increase Habitat Support / Buffer Adjacent habitat contains native v Field Hydrology (HYD)	egetative and mammal				
After Melaleuca removal, increase Habitat Support / Buffer Adjacent habitat contains native v Field Hydrology (HYD) Dry out from adjacent canal system	egetative and mammal				
After Melaleuca removal, increase Habitat Support / Buffer Adjacent habitat contains native v Field Hydrology (HYD) Dry out from adjacent canal system	egetative and mammal	llian species.	suspected, unless canal	system blocked to incre	ease sheet flow to area.
Habitat Support / Buffer Adjacent habitat contains native v Field Hydrology (HYD) Dry out from adjacent canal system WQ Input & Treatment (WQ)	egetative and mammal	llian species.			
After Melaleuca removal, increase Habitat Support / Buffer	egetative and mammal	llian species.	U.;	S. Army Corps o	
After Melaleuca removal, increase Habitat Support / Buffer Adjacent habitat contains native v Field Hydrology (HYD) Dry out from adjacent canal system	egetative and mammal	llian species.	U. Pe Da	S. Army Corps o	f Engineers

		Conditions		(WRAP)	
pplication Number	Project Name Wetland Enhancement Are	Date ea 5/6/04 Marnie Billi	Evaluator e, Russ Danser & Martin Ro		etland Type Prairie
Land Use Unimproved Pastur	FLUCCS Code 643 Wet Pr			Wetland Acreage	
/ildlife Utilization (WU)	7	Wetland Canopy (O/S)		Wetland Groundcover	(GC)
2.5		N/A Field Hydrology (HYD)		2.5 WQ Input & Treatmen	t (WQ)*
Habitat Support	/ Buffer	2.0		2.63	
Buffer type	(Score) X (% of area) =	=Sub Totals 3.0	* The value of WQ is obta soores of Land use Cate Gategory then by dividir	gocy and Pretreatment	TAL.
Native	3.0 1.00		Gategory then by dividi	ig oy	
		TOTAL 3.0			2
Land	Land Use Category (Score) >	Category (LU) X (% of area) =Sub Totals /	Pretreatment C	Pretreatment Catego Category (Score) X	(% of scea) =Sub Totals
Low intensi Unimprov	ity highway 2.0	0.50 1.00 0.50 1.25	Natural undevelop		1.00 3.0
		LU Total 2.25			PT Total 3.00
/RAP Score 0.84					
ield Notes: 26 1	9.544 N 81 02.9	989W Swamp Safari			
/ildlife Utilization (WU)					
facro inverts and caracara.					
/etland Canopy (O/S)					
ess than 20% shrub/oak sp	ecies.				
etland Ground Cover (GC	Warmed and the second sec	THE PARTY OF THE AVE.			
round cover exhibits herb	aceous, but falls between I	10% - 20% undesirable species ind	icative of hydrological impa	ict.	
abitat Support / Buffer					10 St. 40 St.
djacent habitat is enclosed	I within Swamp Safari, w	with low volume access road to ren	note areas. Adjacent habita	at contains non-native	vegetative and mammalian
ield Hydrology (HYD)					
ry out from adjacent canal	system.				
	2)				-
/Q Input & Treatment (Wo		put. Low volume sheet flow suspe-	cted.		
and the second sec	t for most hydrological inp	put. Don forume sheet non suspe			

	sting Conditions Check One Proposed C	Conditions 🗹 (WRAP)	
pplication Number Project Name Wetland Enhancement		Evaluator Billie, Russ Danser & Martin Roessler	Wetland Type Wet Prairie
Land Use FLUCCS Co Unimproved Pasture 643 We	Code et Prairie	Wetland Acreage	
Vildlife Utilization (WU)	Wetland Canopy (O/S)	Wetland Groundcover	(GC)
2.5	N/A	2.5	
	Field Hydrology (HYD)	WQ Input & Treatmen	at (WQ)*
Habitat Support / Buffer	2.0	2.63	
Buffer type (Score) X (% of area	a) =Sub Totals	* The value of WQ is obtained by adding the TC scores of Land use Category and Pretreatment	TAL
Native 3.0 1.00	3.0	Category then by dividing by 2	
	TOTAL		
	3,0		
	se Category (LU) ore) X (% of area) =Sub Totals	Pretreatment Category (Score) X	(% of grea) =Sub Totals
Low intensity highway 2.0 Unimproved pasture 2.1	0 0.50 1.00	Natural undeveloped area 3.0	1.00 3.0
WRAP Score	LU Total 2.25 /		PT Total 3.00
0.84			
Field Notes: 26 19.544 N 81 0	02.989W Swamp Safari		
Wildlife Utilization (WU) Macro inverts and caracara.			
Wetland Canopy (O/S)			
ess than 20% shrub/oak species.			
	States and the states		
a second s	en 10% - 20% undesirable species indic	ative of hydrological impact.	
The second se			
Ground cover exhibits herbaceous, but falls betwe			
Ground cover exhibits herbaceous, but falls betwe Habitat Support / Buffer	i with low volume access mad to more	the areas Adjacent habitat contains non-native	vecetative and mammalian
Ground cover exhibits herbaceous, but falls betwe Habitat Support / Buffer Adjacent habitat is enclosed within Swamp Safar	ri, with low volume access road to remo	ste areas. Adjacent habitat contains non-native	vegetative and mammalian
Ground cover exhibits herbaceous, but falls betwe Habitat Support / Buffer Adjacent habitat is enclosed within Swamp Safar species.	ri, with low volume access road to remo	ote areas. Adjacent habitat contains non-native	vegetative and mammalian
Ground cover exhibits herbaceous, but falls betwe Habitat Support / Buffer Adjacent habitat is enclosed within Swamp Safar pecies.	ri, with low volume access road to rema	ote areas. Adjacent habitat contains non-native	vegetative and mammalian
Ground cover exhibits herbaceous, but falls betwe Habitat Support / Buffer Adjacent habitat is enclosed within Swamp Safar species.	ri, with low volume access road to remo	ote areas. Adjacent habitat contains non-native	vegetative and mammalian
Ground cover exhibits herbaceous, but falls betwe Habitat Support / Buffer Adjacent habitat is enclosed within Swamp Safar pecies. Field Hydrology (HYD) Dry out from adjacent canal system.			vegetative and mammalian
Ground cover exhibits herbaceous, but falls betwee Habitat Support / Buffer Adjacent habitat is enclosed within Swamp Safar species. Field Hydrology (HYD) Dry out from adjacent canal system.			vegetative and mammalian
Ground cover exhibits herbaceous, but falls betwe Habitat Support / Buffer Adjacent habitat is enclosed within Swamp Safar species. Field Hydrology (HYD) Dry out from adjacent canal system.		ed. U.S. Army Corps of Engir	neers
Wetland Ground Cover (GC) Ground cover exhibits herbaceous, but falls betwe Habitat Support / Buffer Adjacent habitat is enclosed within Swamp Safar species. Field Hydrology (HYD) Dry out from adjacent canal system. WQ Input & Treatment (WQ) Natural rainfall will account for most hydrological		ed.	neers