Resource Management Plan

for

Lease 3963:
Integrated Habitat Network (IHN) at Homeland

2012 – 2022

Approved

Division of Water Resource Management
Bureau of Mining and Minerals Regulation

December 14, 2012

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LAND MANAGEMENT PLAN EXECUTIVE SUMMARY

Lead Agency: Florida Department of Environmental Protection, Division of Water Resource Management, Bureau of Mining and Minerals Regulation
Common Name: Integrated Habitat Network (IHN) at Homeland or "Homeland"
Location: Polk County, Florida
Acreage Total: 785 acres

Land Cover Classification	Acreage	Percent Coverage
Improved Pasture	504	64.20%
Freshwater Marsh	80	10.19%
Upland Coniferous Forest	80	10.19%
Wetland Mixed Forest	51	6.50%
Lake	41	5.22%
Abandoned Field	8	1.02%
Institutional	7	0.89%
Stream and Lake Swamp (Bottomland)	5	0.64%
Upland Hardwood-Coniferous Mixed Forest	4	0.51%
Impoundment/Artificial Pond	4	0.51%
Wetland Coniferous Forest	1	0.13%

(A current natural communities mapping project by FNAI has not been completed)

Lease/Management Agreement Number: 3963 Use: Single _ Multiple X

MANAGEMENT AGENCY	RESPONSIBILITY
FDEP, Division of Water Resource Management, Bureau of Mining and Minerals Regulation	LEAD – Natural and cultural resource management

Designated Land Use: Water resource and habitat protection / field office and aquatic weed control research area
Sublease(s): Yes
Encumbrances: Yes
Type Acquisition: Settlement agreement
Unique Features: Sinkholes; extensive phosphate mining
Archaeological/Historical: Yes
Management Needs: Exotic species control; FNAI and archaeological/historical surveys; restoration of native and disturbed ecosystems; additional staff
Acquisition Needs/Acreage: 1,653
Surplus Lands/Acreage: None
Public Involvement: Management Advisory Group Meeting; Public Hearing

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DO NOT WRITE BELOW THIS LINE (FOR DIVISION OF STATE LANDS USE ONLY)

ARC Approval Date: _____ BTIITF Approval Date: _____
Comments: _____

ABBREVIATIONS AND ACRONYMS

Agrico	Agrico Chemical Company
BMPs	Best Management Practices
Board of Trustees	Board of Trustees of the Internal Improvement Trust Fund
Bureau	Bureau of Mining and Minerals Regulation, Division of Water Resource Management, Florida Department of Environmental Protection
CARL	Conservation and Recreation Land
CDA	Coordinated Development Area
CEA	Concentrated Enhancement Area
CHNEP	Charlotte Harbor Natural Estuary Program
Coastal Settlement	Coastal Petroleum Litigation Settlement Agreement
County	Polk County, Florida
DSL	Division of State Lands, Florida Department of Environmental Protection
Department	Florida Department of Environmental Protection
DHR	Division of Historical Resources, Florida Department of State
Division	Division of Water Resource Management, Florida Department of Environmental Protection
EO	Element Occurrence
Estech	Estech, Inc.
F.A.C.	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FFS	Florida Forest Service, Florida Department of Agriculture and Consumer Services
FFWCC	Florida Fish and Wildlife Conservation Commission
FGS	Florida Geological Survey
FLUCFCS	Florida Land Use, Cover and Forms Classification System
FNAI	Florida Natural Areas Inventory
FPTA	Florida Paddling Trails Association
F.S.	Florida Statutes
IFAS	Institute of Food and Agricultural Sciences
IHN	Integrated Habitat Network
IMC	International Minerals & Chemical Corporation (now Mosaic Fertilizer, LLC)
MFLs	Minimum Flows and Levels
Mobil	Mobil Mining and Minerals Company
Mosaic	Mosaic Fertilizer, LLC
MSL	Mean Sea Level
NGVD	National Geodetic Vertical Datum
NRCS	Natural Resources Conservation Service, U.S. Department of Agriculture
OAWP	Office of Agricultural Water Policy, Florida Department of Agricultures and Consumer Services
OGT	Office of Greenways and Trails, Division of Recreation & Parks, Florida Department of Environmental Protection
PBP	Prescribed Burn Plan
PBS&J	Post, Buckley, Schuh, and Jernigan
PCPD	Polk County Planning and Development
PCSB	Polk County School Board

PREEN	Peace River Environmental Education Network
SCS	Soil Conservation Service (now Natural Resources Conservation Service, U.S. Department of Agriculture)
SEGS	Southeastern Geological Society
SWFWMD	Southwest Florida Water Management District
SWUCA	Southern Water Use Caution Area
TFMA	Tenoroc Fish Management Area
TMDLs	Total Maximum Daily Loads
UF	University of Florida
USGS	United States Geological Survey
ZWI and CCI	Zellars-Williams, Inc. and Conservation Consultants, Inc.

I. MANAGEMENT PLAN OVERVIEW

A. INTRODUCTION

The Coastal Petroleum Litigation Settlement Agreement (Coastal Settlement), finalized on November 3, 1987, set up a matrix whereby five phosphate mining companies were required to deed approximately 6,250 acres in various-sized tracts along the Peace, North Prong Alafia, and South Prong Alafia river floodplains to the State of Florida for alterations made by the companies in the State-owned natural channels of these rivers. The lands involved are predominantly streams and rivers with adjacent floodplains, together with isolated parcels of reclaimed uplands, all within the southern phosphate district. The five companies – Agrico Chemical Company; American Cyanamid Company; Estech, Inc.; International Minerals & Chemical Corporation; and, Mobil Mining and Minerals Company – were to conduct these transfers over a period of 12 years, with the agreement mandating that the transfers be accomplished on either a date or event positive. Through an elaborate procedure, the settlement lands were to be transferred in fee to the Board of Trustees of the Internal Improvement Trust Fund (Board of Trustees) through normal Division of State Lands (DSL) procedures and then leased by the DSL to an appropriate managing agency. The Homeland tract, an approximately 785-acre parcel, was transferred to the State in April 1989 and the Bureau of Mine Reclamation, now the Bureau of Mining and Minerals Regulation (Bureau), was informally assigned management responsibilities.

One of the powers and duties of the Florida Department of Natural Resources, Division of Resource Management as set forth in Section 370.02(3)(g), Florida Statutes (F.S.), was that "….the division shall also perform functions including, but not limited to, preservation, management, and protection of lands held by the State other than parks and recreational and wilderness areas…." The Attorney General and the Florida Department of Natural Resources, now the Florida Department of Environmental Protection (Department), identified the Division of Resource Management, now the Division of Water Resource Management, (Division) as the entity to manage the lands transferred to the State that had not been leased to another agency. The Bureau became active in land management in the late 1980's through the statutory charge of the Division, to which the Bureau was assigned. In 1992, the Division requested and was appropriated funds to construct a field office on the Homeland tract. On October 30, 1992, Lease No. 3963 was entered into between the Board of Trustees and the Division, which was charged with managing the leased premises for the establishment and operation of a field office and aquatic weed control research area. Bureau personnel in central Florida moved to this location and were assigned management responsibilities for the property.

In 1992, the Bureau published a guide entitled ***A Regional Conceptual Plan for the Southern Phosphate District of Florida*** in which the largely undisturbed lands in the riverine floodplains that were transferred to the State pursuant to the Coastal Settlement were to become the "core" lands of the Integrated Habitat Network (IHN). The IHN is linear and diffuse in nature, covering primarily undisturbed lands within the floodplains of the Peace, North Prong Alafia, and South Prong Alafia river systems as well as some adjacent, isolated upland buffer lands. The IHN component consists of a greenway network throughout the phosphate district that is designed to connect with regional hubs and linkages such as the Green Swamp, Myakka River State Park,

and Charlotte Harbor. The adjacent reclaimed "buffer" lands, or Coordinated Development Area (CDA), were to compliment and enhance the habitat value of the core lands. The CDA consists of those lands outside the IHN that are to be or have been reclaimed for various, more intensive land uses, which may include but are not limited to: intensive agriculture such as citrus or row crops; semi-intensive agriculture such as pasture or silviculture; intensive development such as power plants or other industrial facilities; and, semi-intensive development such as residential and commercial complexes. While the long-term goals of the IHN are to enhance the regional water quantity and quality while replacing and protecting natural communities, the goals of the CDA are to protect these same water quantity and quality values while providing opportunity for varied development. Managed properly, together these areas would benefit the water quality and quantity in the area, improve wildlife habitat, and serve as connections between the mining region's rivers and significant environmental features outside the southern phosphate mining region. The Bureau and phosphate industry have long used a variety of "tools", including reclamation, mitigation, preservation, best management practices, less-than-fee conservation agreements, litigation settlement lands, donated lands, and various land acquisition programs to accomplish the goal of protecting wildlife habitat and water resources in the Peace, North Prong Alafia, and South Prong Alafia River basins. The Bureau envisioned that the IHN plan would become part of the "toolbox" as a guide for the reclamation of mined phosphate lands throughout the mining district and began promoting the plan through numerous publications and meetings.

In 1994, House Bill 2445 repealed Section 370.02, F.S., related to the duties of the divisions of the Department. Section 377.07, F.S., states "The Division of Resource Management of the Department of Environmental Protection is hereby vested with power, authority, and duty to administer, carry out, and enforce the provisions of this law as directed in [1]s.370.02(3)." Because the lands within Lease 3963 are a complex mixture of diverse habitats and resident wildlife with assorted management and monitoring needs, current management activities within the IHN are incompatible with the current philosophies and strategies of other land management agencies. The Bureau's regulatory presence and familiarity with the central Florida phosphate mining district, as well as the commitment and experience of its staff, render it extremely qualified to provide, develop, conduct, assist, and monitor basic management activities for long-term protection of these lands; it is also quite capable of coordinating and supervising wide-ranging projects designed to improve habitat quality within the Integrated Habitat Network lands in Lease 3963. The Department's endorsement of the Bureau's work in the IHN provides further support of the Bureau's involvement in active land management.

B. PURPOSE AND SCOPE OF PLAN

This plan serves as the basic statement of policy and direction for the management of the Integrated Habitat Network (IHN) at Homeland property within Lease 3963 as a part of the Division of State Lands' policy of providing stewardship of the more than 3.8 million acres of State-owned conservation lands. It identifies the objectives, criteria, and standards that guide each aspect of its management and sets forth the specific measures that will be implemented to meet management objectives. This plan is intended to meet the requirements of Sections 253.034 and 259.032, Florida Statutes (F.S.), Chapter 18-2, Florida Administrative Code (F.A.C.), and is intended to be consistent with the State Lands Management Plan. All development and resource alteration actions encompassed in this plan are subject to the

acquisition of appropriate permits, easements, licenses, and other required legal instruments. Approval of this management plan does not constitute an exemption for compliance with the appropriate local, county, state, or federal agencies.

The plan consists of two interrelated components, with each component corresponding to a particular aspect of the management of the property. The Resource Management Component provides a detailed inventory and assessment of the resources of the property. Resource management problems and needs are identified and specific management objectives are established for each resource type. This component provides guidance on the application of such actions as prescribed burning, exotic species control, and restoration of natural conditions. The Land Use Component is the recreational resource allocation plan for the property. Based on considerations such as access, regional population, and adjacent land uses, an assessment of the property is made to determine any potential use areas and the types of facilities and possible volumes of use to be needed or provided.

In the development of this plan, the potential of these IHN lands for both single-use and multiple-uses were evaluated. Section 253.034(a), F.S., states that all submerged lands shall be considered "single-use" lands, which are to be managed "for one particular purpose to the exclusion of all other purposes, except that the using agency shall have the option of including in its management program compatible secondary purposes which will not detract from or interfere with the primary management purposes." Submerged lands are to be managed primarily for the maintenance of essentially natural conditions, the propagation of fish and wildlife, and limited public recreation (such as canoeing/kayaking, bird and wildlife viewing) permitted at the discretion of the managing agency.

Section 253.034(b), F.S., describes "multiple-use" management as "….the harmonious and coordinated management of timber, recreation, conservation of fish and wildlife, forage, archaeological and historic sites, habitat and other biological resources, or water resources so that they are utilized in the combination that will best serve the people of the state, making the most judicious use of the land for some or all of these resources, and giving consideration to the relative values of the various resources." These secondary management purposes ("multiple uses") were considered within the context of the Division's statutory responsibilities and an analysis was made of the resource needs and values of the property as well as presence of natural and cultural resources, management needs, and public use opportunities.

Paragraph 4 of Lease 3963 requires the lessee to "…manage the leased premises only for the establishment and operation of a field office and aquatic weed control research area, along with other related uses necessary for the accomplishment of this purpose as designated in the Management Plan required by paragraph 7 of this lease." For Lease 3963, it was decided that in addition to the administrative center, a major emphasis of management activities on the property would be the preservation and protection of the water resources, wildlife corridors, and habitat within the lease. Other uses would be considered on a case-by-case basis in the lease if these uses could be accommodated so that they would not interfere with the primary purposes. This analysis is presented in further detail in Part III, Land Use Component.

C. MANAGEMENT PROGRAM OVERVIEW

1. Management Authority and Responsibility

In 1989, an amendment to Chapter 370.02(3), Florida Statutes, provided that the Florida Department of Natural Resources, Division of Resource Management (now the Florida Department of Environmental Protection, Division of Water Resource Management) "…shall perform functions including, but not limited to, preservation, management, and protection of lands held by the state other than parks and recreational and wilderness areas." During the negotiations in the mid-1980s that lead to the Coastal Settlement, the Division of Resource Management was identified by the Attorney General and the Department as the entity to manage lands to be transferred to the State and not leased to another agency. In 1994, House Bill 2445 repealed Section 370.02, F.S., related to the duties of the divisions of the Department of Natural Resources. Section 377.07, F.S., states that "The Division of Resource Management of the Department of Environmental Protection is hereby vested with power, authority, and duty to administer, carry out, and enforce the provisions of this law as directed in [1]s.370.02(3)."

In 1999, an amendment to Chapter 378.035, F.S. (Department responsibilities and duties with respect to Nonmandatory Land Reclamation Trust Fund) further codified the Division's land management role and provided for "…funding basic management or protection of reclaimed, restored, or preserved phosphate lands". In 2000, a Legislative Budget Request was approved for a $200,000 Special Categories, Division of Water Resources budget line item to implement the responsibilities from both statutes. The $200,000 line item has remained viable through the 2012-2013 budget (note that this amount is divided among several leased properties that are managed or co-managed by the Bureau).

The land in Lease 3963 that was acquired by the State in fee simple title through the Coastal Settlement was transferred to the Board of Trustees through normal DSL procedures. The DSL then leased the Homeland property to the Department's Division of Resource Management, the Bureau's parent division, which was determined to be the appropriate management agency because of its statutory management authority, regulatory presence, and familiarity with the central Florida phosphate district.

2. Property Goals and Objectives

Using the goals, objectives, and priority management activities planned for Lease 3963 IHN at Homeland, estimates were developed for the funding and staff resources needed to implement the management plan. Funding priorities for all state property management and development activities are reviewed each year as part of the Division legislative budget process. The Division, based in part on input from the Bureau, prepares an annual legislative budget request based on the priorities established for the planned activities. The Bureau also pursues a wide range of other funding and staffing resources (such as grants, volunteers, and partnerships with other agencies, local governments, and the private sector – see Item 3 below) to supplement normal legislative appropriations to address unanticipated needs. The ability of the Bureau to implement the specific goals, objectives, and priority actions identified in this plan will be determined by the availability of funding resources for the purposes described in this document.

The concept of "basic" land management as set forth in Subsection 378.035(6)(a), F.S., which deals with preservation, management and protection of lands other than parks, recreation and wilderness areas, was strongly influenced by Chapter 370, F.S. and assumed that any lands to be made available to the public would be managed by an entity experienced in providing such services. "Basic management" to be provided to those lands being used for protection of wildlife habitat and water resources was defined by Cates and Woodard (1999) as:

1. Identification of property through legal description
2. Determination of boundaries via surveying and mapping
3. Establishment of access
4. Assessment of natural and cultural resources
5. Acquisition of GPS coordinates
6. Demarcation of boundaries
7. Inspection of property at a minimum once per year
8. Resolution of infringements
9. Installation of fencing or other impediments in high infringement areas
10. Management of nuisance/exotic plant infestations

In its management of Lease 3963, the Bureau seeks a balance between the goals of maintaining and enhancing natural areas and providing recreational opportunities for the public. Natural resource management activities are directed towards management of natural systems and the restoration or enhancement of disturbed systems to return them towards more natural conditions. Providing public access to and within Lease 3963 and providing recreational opportunities (such as canoeing/kayaking and wildlife observation) would provide a reasonable balance with the goal of creating and maintaining natural habitats and conditions. Program emphasis is on the preservation of natural areas and the restoration and enhancement of disturbed sites, with a secondary aim of developing potential aesthetic, recreational, and educational opportunities on site.

The goals and objectives discussed later in this management plan describe the Division's long-term plans for managing the Lease 3963 IHN at Homeland property. The Bureau developed goals and objectives for inclusion in this plan that were meaningful and practical, thus ensuring that the goals and objectives would be relevant over time.

3. Management Coordination

The Bureau has been or is currently involved in numerous multi-party projects and will continue to participate in these cooperative efforts with other agencies and interests (many of which are listed below) to benefit the resources of the Peace River watershed:

Campfire USA – Participated in the plantings of native tree and herbaceous species in numerous Concentrated Enhancement Areas (CEAs) and in potting collected and produced native species for the plant nursery at the Homeland property.

Central Florida Ecotours – Provides information to the public about the Integrated Habitat Network and the Peace River watershed during children's environmental festivals that are funded totally by the organization.

Charlotte Harbor National Estuary Program (CHNEP) – The CHNEP is a partner in education programs and research about environmental influences that affect the Peace River watershed. CHNEP and FDEP staffs continue to consult and coordinate on watershed management strategies, including public meetings supporting common goals for land and water management objectives. Bureau staff has successfully procured grants through the CHNEP to establish a stormwater pond community education project in Bartow.

City of Bartow – Grant coordination with CHNEP for stormwater pond community education garden.

City of Winter Haven – Assistance with Water Sustainability Plan affecting water quality and quantity within the Upper Peace River IHN lands; cooperative development of Upper Peace River Blueway designation and cooperative support for Florida Paddling Trails Association.

Clear Springs Land Company – Ongoing cooperative planning and development of conservation easements and protection of natural resources adjacent to Lease 3963 along the Upper Peace River.

Cooperative Invasive Species Management Areas – Bureau staff works closely with this regional working group in addressing invasive plant management on State lands.

Florida Department of Agriculture & Consumer Service, Florida Forest Service – Cooperative planning and implementation of emergency fire suppression, reforestation efforts, and plant procurement and research for improved BMPs involving agricultural practices; planned coordination with development of prescribed fire program for Homeland.

Florida Department of Environmental Protection, Division of Historical Resources – Curation of artifacts and ongoing assessment and cataloging of new historical resources found on State lands.

Florida Department of Environmental Protection, Division of Recreation and Parks – Cooperative educational exchanges and land management support for control of invasive plants.

Florida Department of Environmental Protection, Office of Greenways and Trails – Cooperative programs involving planning and development of public trails associated with local waterways and communities near Lease 3963 IHN Homeland, such as the Upper Peace River Blueway and Homeland Heritage Canoe Launch.

Florida Fish and Wildlife Conservation Commission – The Bureau currently coordinates with the FFWCC's Invasive Plant Management Section, which occupies the Homeland offices along with the Bureau of Mining and Minerals Regulation) on the control of invasive aquatic and upland plants on its public conservation lands and waterways. In addition, Bureau staff will also work with the FFWCC to develop a Wildlife Management Strategy that will address all potential fish

and wildlife species on the area, with specific focus on imperiled species and associated management prescriptions including species surveys and monitoring where appropriate, for their habitats and their sustainability based on site-specific population data.

Florida Geological Survey – Shared hydrogeologic studies focused on restoration of the Upper Peace River.

Florida Industrial and Phosphate Research Institute – Cooperative efforts on ongoing research into reclamation activities on Lease 3963.

Florida Natural Areas Inventory – Collaborative mapping of natural element occurrences and invasive species.

Florida Paddling Trails Association (FPTA) – Joint involvement in the creation of the Florida Paddling Trails Blueway on the Peace River from Bartow to Zolfo Springs. Bureau staff also serve as "riverkeepers" for the Upper Peace River on behalf of the FPTA while FPTA members provide year-round volunteer assistance with river clean-ups and natural resource protection.

Florida Wildlife Corridors Expedition – Bureau staff coordinates regional interest and involvement in the ongoing development of the IHN which is an integral part of the conservation lands that are the focus of the Statewide Wildlife Corridor development process.

Keep Polk County Beautiful – Partnership clean-ups and special projects development involving local communities; Department staff was awarded "Volunteer of the Year" award in 2011 by this organization.

Mosaic Fertilizer, LLC – Collaborative effort to develop special restoration projects to create ecologic benefits that enhance the environmental quality of lands adjacent to Lease 3963 IHN Homeland; special projects include mitigation plantings, Conservation Easement enhancements related to off-site mine mitigation requirements, and cooperative public outreach promoting development of regional wildlife corridors.

Northern Bobwhite Quail Conservation Initiative – Bureau staff coordinates with the Initiative on the collection and exchange of census data, habitat conditions, and management recommendations to assist with the recovery of natural bobwhite quail populations in the area.

Peace Creek Alliance – Created to foster sustainable water resource management by linking land development with natural systems restoration; Bureau staff continues to interact with Alliance members in developing water quality and quantity standards and expanding wildlife habitat connections to the IHN in the southern phosphate district.

Peace River Environmental Education Network (PREEN) – Organization formed by the Bureau's Environmental Resources staff which is dedicated to creating a watershed network of citizens, educators, and resource managers to foster awareness of watershed environmental issues and solutions; group also intends to develop and site a premier Environmental Education Center in the Upper Peace River region. From 2000 to 2010, PREEN was funded by SWFWMD

and CHNEP which cooperated with Bureau staff to host meetings; in 2011, CHNEP assumed the primary role of guiding the PREEN watershed network and continues to partner with Bureau staff to foster key public outreach programs affecting both the Peace River watershed and Lease 3963.

Polk County Parks and Natural Resources Division – The Bureau works closely with this group on cooperative land management projects including prescribed fire application and monitoring the environmental quality of area habitats. Cooperative investigations of environmental impacts on the Upper Peace River regarding public recreation and safety and environmental evaluations of watershed TMDLs are regularly conducted.

Polk County Office of Planning and Development – Bureau staff works collaboratively with the agency by providing technical and regulatory information about phosphate-mined lands within the county and the PCPD works with Bureau staff to include the Integrated Habitat Network lands within the Polk County Conservation GreenPrint Masterplan.

Polk County School Board – Bureau staff coordinates with the School Board Office of Academic Rigor to plan in-school visitations for environmental education programs such as the Southeastern Geologic Society *Maps in Schools Project*.

Polk State College – Bureau staff worked with the college's Geology Department to develop a laboratory program for students to visit the Upper Peace River karst areas twice each year, enabling them to experience these unique hydrogeologic features.

Sierra Club – Provides ongoing consultation and recommendations for priority public interest concerns about protection of local natural resources.

Southeastern Geological Society (SEGS) – Bureau staff and SEGS representatives have (a) developed a program involving visits to the Upper Peace River for professional geologists and members of other scientific organizations who study karst features; (b) created a project called "Tapestry in Time and Terrain" using USGS/SEGS Maps in Schools; and, (c) encouraged the pursuit of geologic studies by presenting the Map program to regional high school classes and science teachers. SEGS leaders also provide technical consultation to Bureau staff regarding geologic issues affecting land management programs in the Upper Peace River.

Southwest Florida Water Management District – Coordinated efforts regarding ongoing Water Resource Recovery plan implementation for Minimum Flows and Levels associated with the Upper Peace River; cooperative information exchanges and consultations for permitting development, compliance, and enforcement.

U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) – Bureau staff is using a species of maidencane (*Panicum hemitomon*) released by the NRCS to develop large fields at Homeland for use in reclamation projects here and other locations in Polk County; NRCS and Bureau staffs are also involved in cooperative educational training and development of programs associated with BMPs for conservation lands.

U.S. Geological Survey (USGS) – Bureau staff works closely with USGS technical and field staff to monitor hydrologic and geologic conditions of the Peace River; Bureau staff also provides logistical support to scientific studies, offers background information about local environmental histories and conditions, and monitors field gauges in Lease 3963 waterbodies.

University of Florida, Geoplan Center – Bureau staff coordinates events with Geoplan personnel to facilitate completion of the Integrated Habitat Network and to foster cooperation among landowners, agencies, nongovernmental organizations, and others working to create the Florida Wildlife Corridor project. Bureau staff continues to work with Dr. Tom Hoctor to foster regional interest in the dedication and mapping of conservation lands to make important regional wildlife corridor connections with the Bureau's Integrated Habitat Network.

University of Florida, Institute of Food & Agricultural Sciences (IFAS) – In addition to providing the Bureau with required technical training for Pesticide Application licensing, IFAS and Bureau staff cooperate on invasive plant research, plant identification, and plant cultivation practices that assist with land restoration techniques. Bureau staff recently assisted with the IFAS-sponsored 2012 Polk County Water School by developing a syllabus and speaker bureau to assist regional public officials and citizens learns about water resources and FDEP programs that improve water quality and conservation.

University of Florida, School of Forest Resources and Conservation (SFRC) – Bureau staff has supported SFRC researchers with the development of an experimental biofuel tree plantation. Bureau staff also supported undergraduate projects designed to provide technical information about the use of short-rotation woody crops to inhibit the spread of cogongrass. Other cooperative research projects with the SFRC include supporting the creation of Florida Wildlife Corridors through its Integrated Habitat Network concept, working with the late Dr. L. D. Harris to foster regional awareness of the need for wildlife movement corridors.

University of South Florida (USF) – Bureau staff works with USF staff to facilitate graduate student studies pertaining to restoration of mined lands. Published graduate theses include the works of Raina O'Neil on amphibian biology in natural and reclaimed wetlands and Chrysa Mitrika's work on comparative water quality in reclaimed and natural lakes.

4. Public Participation

The Bureau conducted a combined public workshop and Advisory Group meeting in Lakeland, FL on August 9, 2012 to present the draft Lease 3963 IHN at Homeland Management Plan for discussion; details of this meeting are provided in Addendum 6. After revising the management plan to incorporate appropriate comments and recommendations, the Bureau presented the Lease 3963 Management Plan to the Acquisition and Restoration Council for consideration on its December 13 and 14, 2012 agenda.

5. Other Designations

Lease 3963 IHN at Homeland is not within an Area of Critical State Concern as defined in section 380.05, F.S. and currently are not under study for such designation. The lands within

Lease 3963 are not a component of the Department's Office of Greenways and Trails (OGT) Trail System but the waters in the Peace River adjacent to this lease form the upper portion of a Designated Paddling Trail (http://www.dep.state.fl.us/gwt/guide/paddle.htm).

No waters within the property have been designated as Outstanding Florida Waters, pursuant to Chapter 62-302, F.A.C. The property within Lease 3963 is not an aquatic preserve as designated under the Florida Aquatic Preserve Act of 1975 (section 258.35, F.S.). Surface waters on this property are classified as Class III waters by the Florida Department of Environmental Protection. The Homeland property has been included in the Southern Water Use Caution Area, a 5,100 square mile area including all or part of eight counties in west-central Florida that has been identified by the Southwest Florida Water Management District (SWFWMD) as an area where water resources are or will become critical in the next 20 years (SWFWMD, 2006).

II. RESOURCE MANAGEMENT COMPONENT

A. INTRODUCTION

The Division of Water Resource Management has implemented resource management programs throughout the State for the preservation of representative examples of natural and cultural resources of statewide significance under its administration. This component of the management plan describes the natural and cultural resources of the Lease 3963 property and identifies the methods that will be used to manage them. The stated management measures in this plan are consistent with the Division's overall mission in ecosystem management.

The Bureau's main goal of natural resource management at Homeland is to restore or enhance and then maintain, to the extent possible, the natural processes that shaped the structure, function, and species composition of Florida's diverse natural communities as they originally existed prior to any man-made disturbances. In the case of Lease 3963, the emphasis of natural resources management is on the restoration or enhancement of lands adversely impacted by the activities of agriculture and phosphate mining.

The management goal of the cultural resources on Homeland is to preserve and protect sites and objects that represent all of Florida's cultural periods as well as significant historic events or persons. This goal may require active measures to stabilize, reconstruct, or restore resources that may be discovered on lease lands.

Because the Division's properties are often components of larger ecosystems, their management is often affected by conditions and events that occur beyond the property boundaries. Management on State-owned property is implemented through a resource management evaluation program (to assess resource conditions, evaluate management activities, and refine management actions), a review of local comprehensive plans, and a review of permit applications for impacts to this property and adjacent lands.

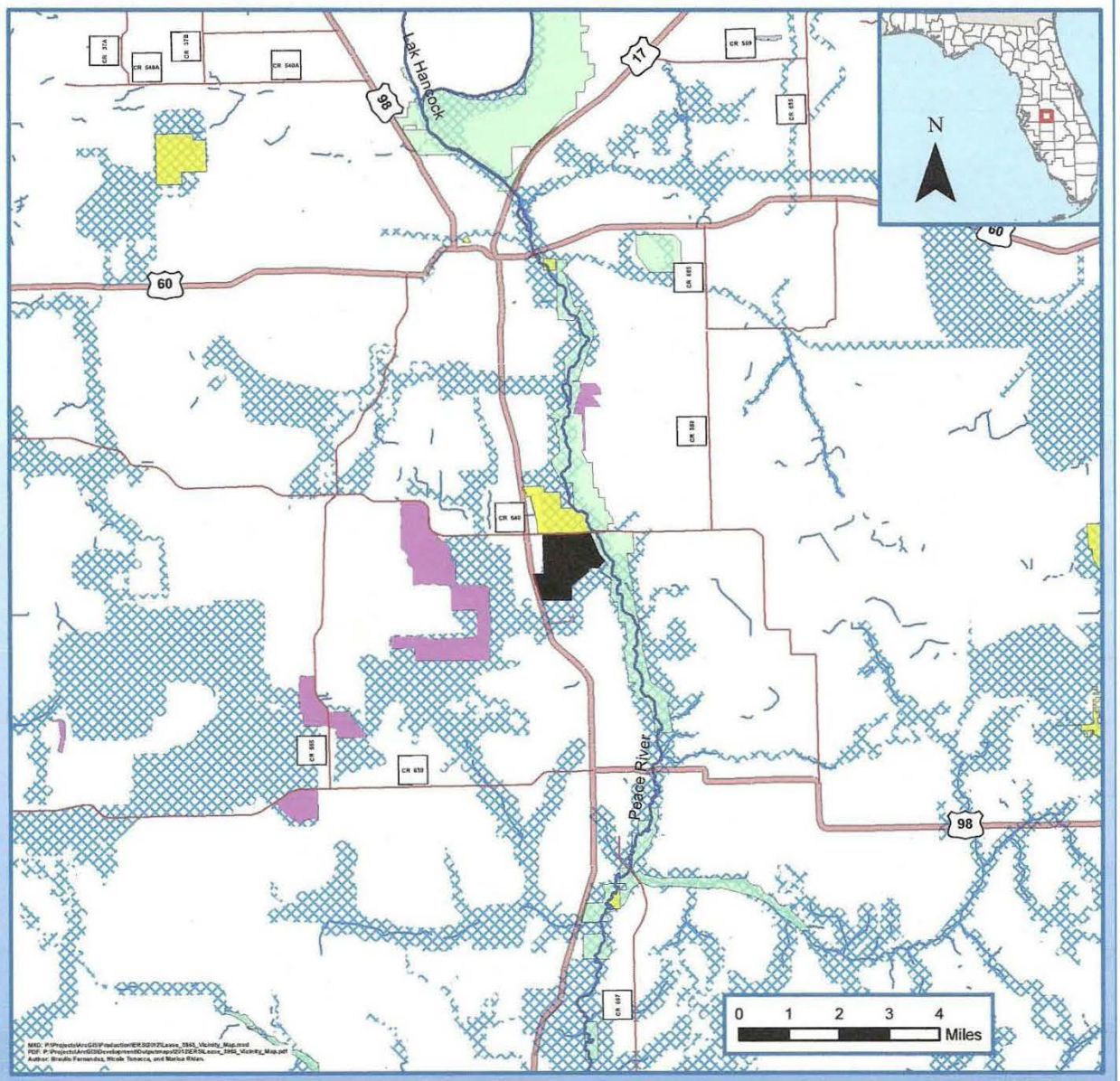
B. RESOURCE DESCRIPTION AND ASSESSMENT

The aggregation of properties comprising the Integrated Habitat Network in general and Lease 3963 in particular is located within the southern phosphate district in west central Florida (see Vicinity Map and Aerial View). The common name, previous or current owner, acreage, means of acquisition, and status of Lease 3963 are described below and in Addendum 1. Copies of the lease (with the legal descriptions of the property) and sublease are in Addendum 1.

Mobil Mining and Minerals Company (Mobil) acquired the Homeland property from another phosphate company in 1962 and continued operating the phosphate mine and a washer plant until the mid-1970s. Mobil reclaimed a significant amount of the property that had been impacted by phosphate mining operations, but large portions of the Homeland property, primarily the clay settling areas, were only partially reclaimed by 1978. As part of the Coastal Petroleum Litigation Settlement Agreement, which was finalized on November 3, 1987, Mobil conveyed title to the Homeland tract to the State in April 1989 and the Bureau was informally assigned management responsibilities.

Vicinity Map

Department of Environmental Protection
Bureau of Mining and Minerals Regulation
Map produced in June 2012.



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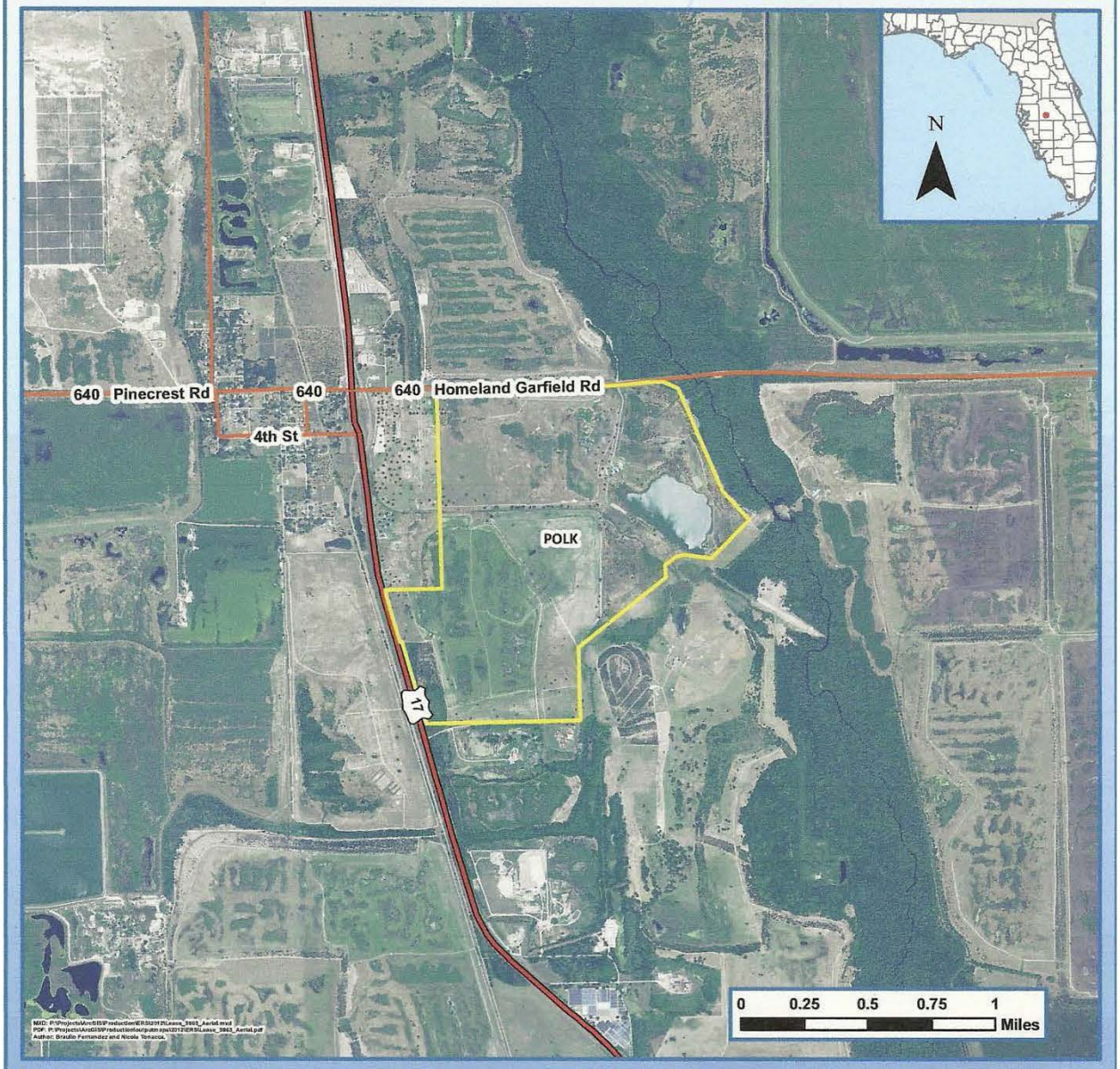
Aerial View of Lease 3963

Department of Environmental Protection
Bureau of Mining and Minerals Regulation
Map produced in June 2012.



Lease 3963
Interstate
Primary and US Highways
Secondary, State and County Highways
Counties
Cities

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1. Natural Resources

a. Topography

Lease 3963 is within the Central Highlands physiographic province, mainly on the Polk and Lake Uplands. Elevations within Polk County range from 50 to 305 feet above National Geodetic Vertical Datum (NGVD) with the lowest elevation in the Kissimmee River Valley and the highest elevation along the crest of the Lake Wales Ridge. Elevations within the Polk Upland range generally between 100 and 130 feet above MSL (SCS, 1990); in Lease 3963, the topography varies widely throughout the parcel from low-lying areas in and near the floodplain of the Peace River to the forested uplands and open areas in which the field offices are found.

b. Geology

The U.S. Geological Survey has identified nine geologic units in Polk County, Florida (USGS, 2012); of these, the three most prevalent are:

1) Reworked Cypresshead sediments (Pliocene/Pleistocene): Covering 34 percent of the surface, this unit is the result of post-depositional reworking of the Cypresshead Formation, which occurs only in peninsular Florida and eastern Georgia and forms peninsular highlands from northern Nassau County southward to Highlands County. Original fossil material is not present in the sediments although poorly preserved molds and casts of mollusks and burrow structures are occasionally present, documenting the marine influence of the depositions (USGS, 2012).

2) Hawthorn Group, Peace River Formation, Bone Valley Member (Miocene/ Pliocene): Covering 22 percent of the surface, the Bone Valley Member (originally the Bone Valley Formation) occurs in a limited area on the southern part of the Ocala Platform in Hillsborough, Polk, and Hardee Counties. Throughout its extent, the Bone Valley Member is a clastic unit consisting of sand-sized and larger phosphate grains in a matrix of quartz sand, silt, and clay in a highly variable lithology. Mollusks are found as reworked, often phosphatized casts. Vertebrate fossils occur in many of the beds within the Bone Valley Member, with silicified corals and wood occasionally present and shark's teeth often abundant. The Bone Valley member is an extremely important, unique phosphate deposit and has provided much of the phosphate production in the United States during the twentieth century (USGS, 2012). Polk County contains more individual fossil recovery sites than any other county due to phosphate mining activities in this member; representative vertebrate fossils that have been collected include: turtles, crocodiles, horses, camels, deer, dolphins, seals, whales, mammoths, mastodons, elephants, rabbits, cotton rats, and moles (FIPR, 2012; USGS, 2012; Wikipedia, 2012).

3) Undifferentiated sediments (Pleistocene/Holocene): Covering 21 percent of the surface, these sediments consist of siliciclastics, organics, and freshwater carbonates and are found in alluvial and floodplain deposits as well as in ridges, dunes, and terraces. Clay or mud, beach sand, silt, gravel, peat, and sand all comprise the lithology of this geologic unit (USGS, 2012).

The most outstanding feature of the Peace River is its geology and the upper Peace River has a geology that is unique from the remainder of the watershed. Between Bartow and Fort Meade in Polk County, a number of karstic features occur in the limestone beds that form the river channel and associated floodplain. Large limestone formations frequently emerge from the banks and river bottom, creating shoals and gentle rapids (depending on water levels). Limestone, with its high calcium carbonate content, is easily dissolved by the weak solution of carbonic acid in rainwater and most natural Florida surface streams. When this acidic water enters the ground and interacts with the limestone, the water dissolves the limestone to form karst topography—a combination of caves, underground channels, and an irregular ground surface which creates a direct connection between the river channel and the Floridan aquifer. These well-documented sinkholes and karst features are present in the Peace River channel and floodplains primarily on other State-owned lands to the north of Homeland that are also managed by the Bureau. As many as 150 to 200 sinkholes may exist between Bartow and Fort Meade (Patton and Klein, 1989) and some have been observed by Bureau staff on the Homeland property (see Points of Interest Map); it has been speculated that at least half of these would not have occurred had the potentiometric surface remained at its 1949 levels (Patton, 1981; Metz and Lewelling, 2009).

c. Soils

The Homeland property contains mainly unreclaimed and reclaimed uplands and wetlands with adjacent, largely undisturbed floodplains. Of the seven soil types (excluding the eighth type, 99-Water) found on the Homeland property, six types are the result of phosphate mining operations, including mining, by-product disposal, and reclamation activities and all six are very different from the original soils (see Soils Map and Addendum 3). Nittaw sandy clay loam, frequently flooded (found in the extreme northeast corner of the property next to the Peace River floodplain) is an undisturbed soil. Disturbed but unmined soils (Arents, 0 to 5 percent slopes) occur in the created "Homeland ditch" and in the vicinity of the former washer plant site. Descriptions of soil types are provided in Addendum 3 (Ford et al, 1990; NRCS, 1990).

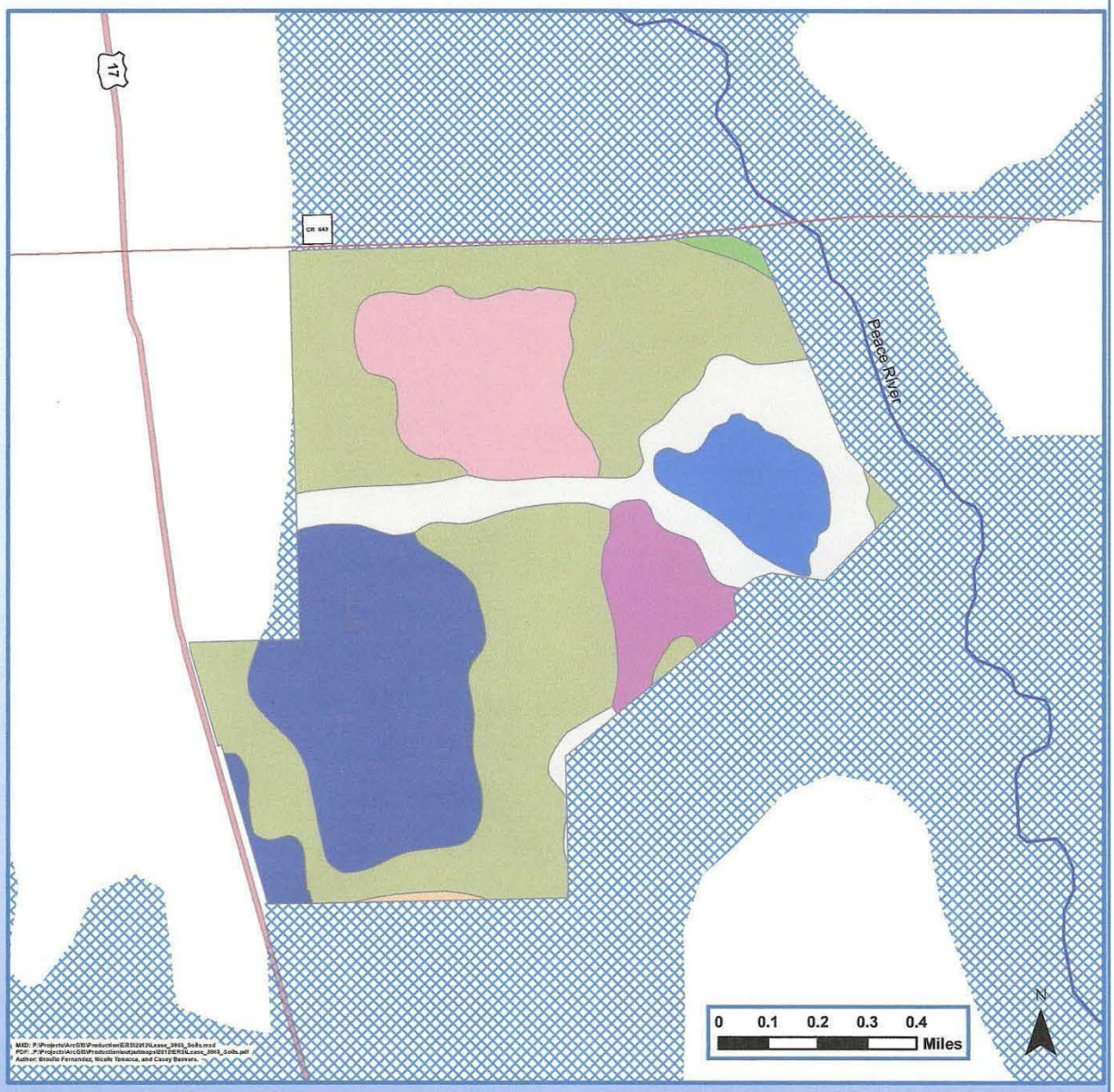
d. Minerals

The surface and near surface sediments in Polk County consist of quartz sand, clay, phosphorite, limestone, and dolomite. These sediments range in age from Late Eocene age to Holocene age (40 millions years ago to present). Deposits of Holocene age (10,000 years ago to present) are mainly limited to present stream floodplains, beaches, swamps, marshes, and lakes. They consist of sand, silt, clay, and organic material. Undifferentiated surficial sand, clayey sand, and clay blanket essentially all of Polk County; in the region which includes the Lease 3963 property, these undifferentiated surficial sediments are less than 10 feet to more than 120 feet thick (Campbell, 1986; NRCS, 1990).

Phosphate mining and mining operations have taken place on or adjacent to the Homeland property within Lease 3963. No records of oil, gas, or remnant phosphate resources of economic importance have been found for the Bureau-managed Lease 3963. Due to the environmental sensitivity of these areas and the need to protect them for water resources and wildlife corridors, the Bureau has no plans to attempt to locate and/or use any resources that may be discovered.

Soils

Department of Environmental Protection
Bureau of Mining and Minerals Regulation
Map produced in June 2012.



Integrated Habitat Network (Conceptual)

Soils

- 68, Arents, 0 to 5 percent slopes
- 39, Arents, clayey substratum
- 11, Arents-Water complex
- 57, Haplaquents clayey
- 8, Hydraquents, clayey
- 12, Neilhurst sand, 1 to 5 percent slopes
- 24, Nittaw sandy clay loam, frequently flooded
- 99, Water

e. Hydrology

The Integrated Habitat Network, of which Lease 3963 is a part, has been recognized by numerous regional, state, and local agencies as well as private and environmental entities as comprising a significant percentage of the historic and current watershed of the Peace River. Water resources in Lease 3963 include both natural river/stream systems, lakes and wetlands, reclaimed lakes, and unreclaimed mine cuts and clay settling areas. The natural waterbodies have been labeled Class III waterbodies but are not designated as Outstanding Florida Waters. The reclaimed and unreclaimed waterbodies, clay settling areas, and water-filled mine cuts in Lease 3963 are of varying quality but are also considered Class III waters; none of these artificially-created waterbodies are Outstanding Florida Waters (PBSJ, 2007; FDEP, 2007). The Homeland property within Lease 3963 is among those lands identified by ZWI and CCI (1980) and PBS&J (2007) as critical for the protection of the adjacent Peace River.

In its historic and natural state, the upper portions of the Peace River were spring-fed; during dry periods, the river flow contained amazingly clear, tannin-colored water. A steady, long-term decline in Peace River flows has been observed since the early-1960s due to a series of complex causes. Average annual rainfall over the last 30 years is about five inches/year lower than in the previous 30 years. Groundwater withdrawals for public supply, agriculture, and mining have lowered the potentiometric surface of the Floridan aquifer since the early-1930s and reversed the hydraulic gradient between the river and underlying confined aquifers. This has caused gravity drainage of the river into sinkholes in the upper part of the basin. The karstic section of the Peace River channel was first observed to go dry during unusually dry spring seasons in the 1980s. Following the severe drought of 1999-2001, however, the channel has gone dry every spring except during the above-average rainfall years of 2003-2005 (PBSJ, 2007).

Major restoration activities and initiatives are under way in the river's headwaters to enhance the hydrology and ecology of the river's upper portion. The Lease 3963 property has been included in the Southern Water Use Caution Area, a 5,100 square mile area including all or part of eight counties in west-central Florida that has been identified by the Southwest Florida Water Management District as an area where water resources are or will become critical in the next 20 years (SWFWMD, 2006). Although not part of Lease 3963, the Peace River has been included in several other projects and programs headed by the SWFWMD and the FDEP with the goal of protecting and restoring water and related resources; several of these include: Minimum Flows and Levels, Central Florida Coordination Area Action Plan, Upper Peace River/Saddle Creek Restoration Project, and the West-Central Florida Water Restoration Action Plan, and the Lake Hancock Restoration Project, among others. TMDLs for Fecal Coliform Bacteria have been adopted for the Peace River above Bowlegs Creek; no BMAP is anticipated, however other TMDL implementation options are being explored (SWD, 2012). The Peace River was also the subject of several studies, including the *Final Report for the Peace River Cumulative Impact Assessment* (PBSJ, 2007) and the *Peace River Basin Resource Management Plan* (FDEP, 2007), to assess the cumulative effects of climate change, land use, and water use on basin ecology, water quantity, and water quality.

f. Natural Communities

The last FNAI map and database search that was performed on Lease 3963 IHN at Homeland was conducted only on a small area of the lease in April 1999. Another FNAI map and database search for listed species and natural communities in Polk County (FNAI, 2011) that encompasses all the lands within this lease is needed to determine current presence or absence of rare, threatened, or endangered species; this search should then be followed by a site specific survey.

In the absence of recent FNAI information for Lease 3963, vegetation communities were identified using the Florida Land Use, Cover and Forms Classification System (FLUCFCS), a uniform land classification developed by the Florida Department of Transportation (FDOT, 1999). Descriptions of the land uses are provided in the following sections and locations of the various habitat types are shown on the Land Cover Map.

FLUCFCS 170 – Institutional (7 acres of 0.89% of the total) – This classification contains educational, religious, health, military facilities, and other typical compounds. This grouping includes all buildings, grounds, and parking lots that make up the facility but does not contain area not specifically related to the purposes of the institution. On Lease 3963, this classification pertains to the office buildings, equipment sheds, and other structures within the immediate surroundings.

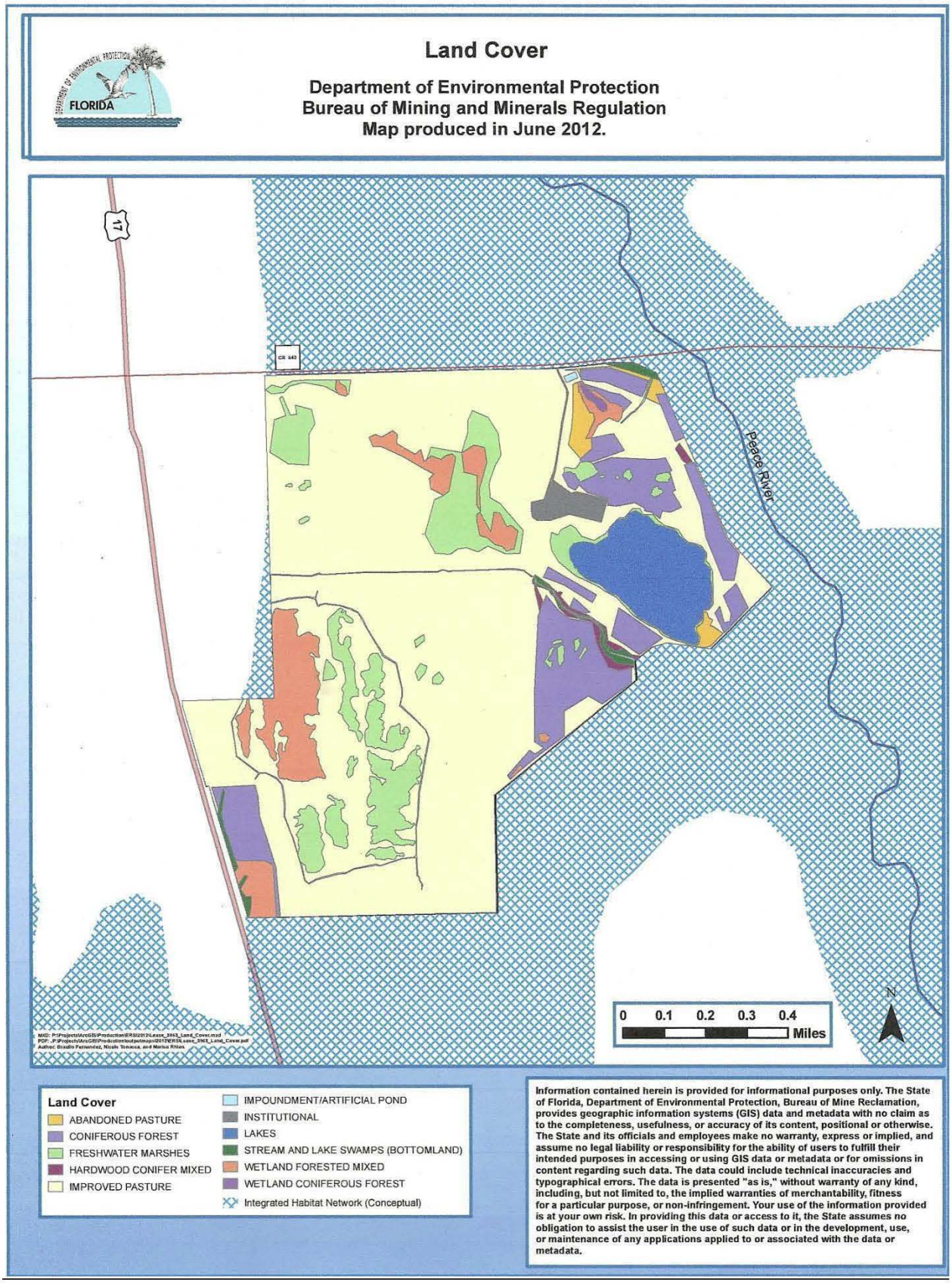
FLUCFCS 210a – Improved Pasture (504 acres or 64.20% of the total) – Pastures may be drained and/or irrigated lands where the management objective is to establish or maintain stands of grasses, either alone or in mixtures. In Lease 3963, some of these pastures have had appropriate management and are being grazed by cattle while the remainder of the improved pastureland is dominated by cogongrass (*Imperata cylindrica*) in various stages of management. This is the largest habitat type within Lease 3963 and is located throughout the property.

FLUCFCS 210b – Abandoned Field (8 acres or 1.02% of the total) – In the case of Lease 3963, these areas have not had any of the management activities needed to maintain a pasture, such as brush control, fertilization, or irrigation, and the majority of this habitat has become infested with invasive species, especially cogongrass; no management activities have been attempted in these areas.

FLUCFCS 410 - Upland Coniferous Forest (80 acres or 10.19% of the total) – A natural forest stand whose canopy is composed of at least 66 percent coniferous species. Although covering only 80 acres of the property, this community is one of the largest habitat types on the Homeland lease.

FLUCFCS 434 - Upland Hardwood-Conifer Mixed Forest (4 acres or 0.51% of the total) – This class is reserved for those forested areas in which neither upland conifers nor hardwoods achieve 66 percent crown canopy dominance. This upland forest community, like the upland coniferous forests described above, is limited in its distribution and is found only in the eastern portion of the property.

FLUCFCS 520 - Lake (41 acres or 5.22% of the total) – This category covers all areas that are predominantly or persistently water-covered and usually does not include those portions that are


Land Cover
Department of Environmental Protection
Bureau of Mining and Minerals Regulation
Map produced in June 2012.
FLORIDA
17
CR 640
Peace River
0 0.1 0.2 0.3 0.4
Miles
N
Land Cover
ABANDONED PASTURE
CONIFEROUS FOREST
FRESHWATER MARSHES
HARDWOOD CONIFER MIXED
IMPROVED PASTURE
IMPOUNDMENT/ARTIFICIAL POND
INSTITUTIONAL
LAKES
STREAM AND LAKE SWAMPS (BOTTOMLAND)
WETLAND FORESTED MIXED
WETLAND CONIFEROUS FOREST
Integrated Habitat Network (Conceptual)
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emergent vegetation or observable submerged vegetation. The waterbody that is classified as a "lake" in Lease 3963 is located in the southeastern portion of the property.

FLUCFCS 530 - Impoundment/Artificial Pond (4 acres or 0.51% of the total) – This waterbody was classified as an "artificial impoundment of water" primarily because some form of water control structure (pipe) or the excavation used to create the impoundment is evident and was used in determining the classification.

FLUCFCS 615 - Stream and Lake Swamp (Bottomland) (5 acres or 0.64% of the total) – Wetlands are those areas where the water table is at, near, or above the land surface for a significant portion of most years. Extensive parts of river floodplains qualify as wetlands (rather than streams and waterways) because of the predominance of vegetation in the area. This community is usually found on, but not restricted to, river, creek, and lake floodplains or overflow areas. This swamp habitat is found near the Peace River in the northeastern portion of the Homeland property.

FLUCFCS 620 - Wetland Coniferous Forest (1 acre or 0.13% of the total) – The smallest habitat type within the Homeland lease, this wetland forest is located in the eastern portion of the property. These wetlands, which are commonly found in places such as river floodplains, bogs, bayheads, and sloughs, meet the crown closure requirements for coniferous forests and are the result of natural regeneration.

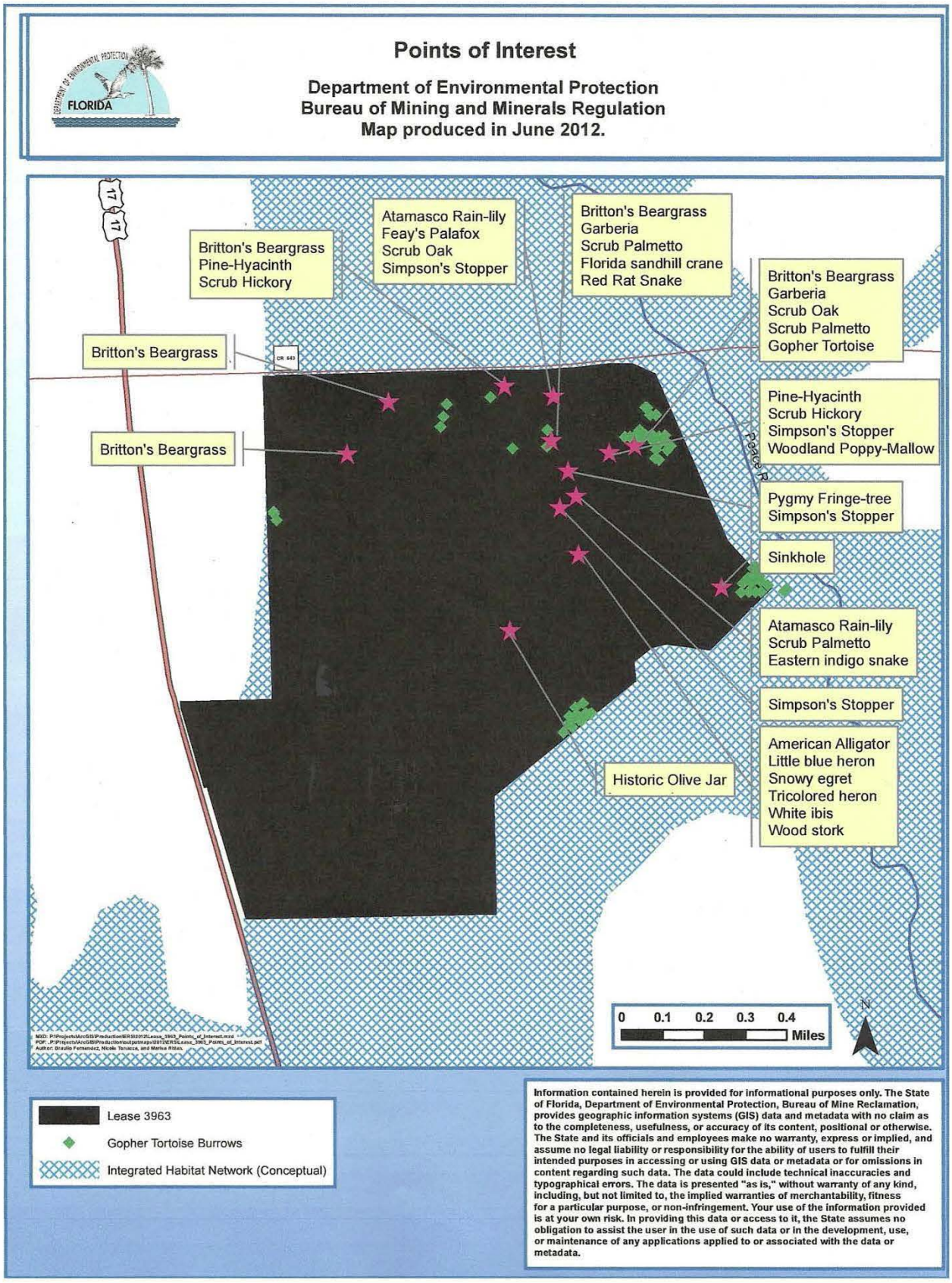
FLUCFCS 630 - Wetland Mixed Forest (51 acres or 6.50% of the total) – This category includes mixed wetland forest communities in which neither hardwoods nor conifers achieve a 66% dominance of the crown canopy composition.

FLUCFCS 641 - Freshwater Marsh (80 acres or 10.19% of the total) – These communities typically have one or more emergent vegetation species present. One of the larger categories within Lease 3963, this habitat type is found scattered throughout the property.

g. Designated Species

Designated plant and animal species (FNAI, 2012) that have been observed on the Lease 3963 IHN at Homeland by Bureau staff are listed in Addendum 4 and shown on the Points of Interest Map below.

The Homeland native plant nursery consists of a shade-house, mist-house, open mats, open tubs, sod mats, open fields, and potting area. Bureau staff is actively engaged in increasing the numbers and species of native plants that have been purchased, donated, collected (both plants and seeds), or propagated by cutting, layering, and division, for use in reclamation and restoration projects both on the Homeland property and in other locations in Polk County; currently, the nursery facilities contain 330 native plant species. Because there a very few locations on the lease with naturally-occurring listed and non-listed native species, Bureau staff has been using the plants produced at its nursery facilities to revegetate areas throughout the Homeland property (see Points of Interest Map and Addendum 4).


Points of Interest
Department of Environmental Protection
Bureau of Mining and Minerals Regulation
Map produced in June 2012.
FLORIDA
17
17
Britton's Beargrass
Pine-Hyacinth
Scrub Hickory
Atamasco Rain-lily
Feay's Palafox
Scrub Oak
Simpson's Stopper
Britton's Beargrass
Garberia
Scrub Palmetto
Florida sandhill crane
Red Rat Snake
Britton's Beargrass
Garberia
Scrub Oak
Scrub Palmetto
Gopher Tortoise
Britton's Beargrass
CR 649
Britton's Beargrass
Pine-Hyacinth
Scrub Hickory
Simpson's Stopper
Woodland Poppy-Mallow
Peace R.
Pygmy Fringe-tree
Simpson's Stopper
Sinkhole
Atamasco Rain-lily
Scrub Palmetto
Eastern indigo snake
Simpson's Stopper
American Alligator
Little blue heron
Snowy egret
Tricolored heron
White ibis
Wood stork
Historic Olive Jar
0 0.1 0.2 0.3 0.4
Miles
N
Lease 3963
Gopher Tortoise Burrows
Integrated Habitat Network (Conceptual)
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Despite the dearth of naturally-occurring designated plant species, numerous listed wildlife species are present on the Homeland property (see Points of Interest Map and Addendum 4). Bureau staff is actively managing for these and other native wildlife species by creating wildlife trails, food plots, birdhouses, birdbaths, wild bee houses, herp cairns, lick cairns, brush piles, snags, and supplemental plantings. The Homeland property served as the initial relocation site in 2009 for gopher tortoises (*Gopherus polyphemus*) removed from a nonmandatory reclamation project in Polk County known as Highland Lakes under FFWCC Permit No. WR07649. The relocated tortoises, initially corralled south of the Homeland offices, have since moved to many other locations within Lease 3963 (see Point of Interest Map); a survey conducted in June 2012 revealed the presence of 69 burrows scattered around the property. The tortoises are apparently reproducing, since although no juveniles were relocated to Homeland juvenile-sized burrows were observed on the property during the latest survey.

The lack of current information regarding listed species on the property is indicative of the need for updated FNAI and FFWCC map and database searches to determine current presence or absence of rare, threatened, or endangered species so that protective measures can be implemented.

h. Special Natural Features

The most outstanding feature of the Peace River is its geology and the upper Peace River has a geology that is unique from the remainder of the watershed. Between Bartow and Fort Meade in Polk County, a number of karstic features occur in the limestone beds that form the river channel and associated floodplain. Large limestone formations frequently emerge from the banks and river bottom, creating shoals and gentle rapids (depending on water levels). Limestone, with its high calcium carbonate content, is easily dissolved by the weak solution of carbonic acid in rainwater and most natural Florida surface streams. When this acidic water enters the ground and interacts with the limestone, the water dissolves the limestone to form karst topography. This combination of caves, underground channels, and irregular ground surface creates a direct connection between the river channel and the Floridan aquifer where it is not unusual for river water to enter these sinkholes and be lost to surface flows (PBSJ, 2007; FDEP, 2007). These well-documented sinkholes and karst features are present in the Peace River channel and floodplains primarily on other State-owned lands to the north of Homeland (also managed by the Bureau) but some sinkholes have been observed by Bureau staff on Lease 3963 (see Points of Interest Map below).

2. Cultural Resources

Large sections of the Peace River and its associated tributaries in Polk County were mined beginning in the late 1800's for phosphate. After being clear-cut for timber to operate the steam shovels and other equipment used to mine the rivers and floodplains, the adjacent uplands were then strip-mined for phosphate beginning in the 1940's. While the majority of the floodplains within the IHN are relatively undisturbed by phosphate mining operations, many acres of nearby uplands were mined or disturbed with a significant portion of the area used as waste sand and clay disposal areas for several more years.

Any areas in the Lease 3963 IHN Homeland property that were merely clear-cut for timber or grazed by cattle have the potential to contain intact archaeological or historical resources below the disturbance. However, the Homeland property was heavily impacted by phosphate mining operations which would probably have destroyed any artifacts on the property. Despite the unlikelihood, artifacts have been found on the site. An olive jar, purportedly left by early Spanish explorers, and Native American Indian remains were found circa 1915 on the Homeland property southwest of the lake. These items were reported to the Florida Department of State, Division of Archives, History and Records Management and were assigned Florida Master Site File No. PO-13 (see Points of Interest Map and Addendum 7).

C. RESOURCE MANAGEMENT PROGRAM

The managing agency for Lease 3963 is tasked with (a) managing the property to ensure the conservation of the state's plant and animal species and the habitats needed to sustain them; and, (b) managing the lands for the benefit and enjoyment of all people of the state, both present and future generations. The resources administered by the Bureau are divided into two principal categories: natural resources and cultural resources. The Bureau's primary objective in natural resource management is to restore and maintain to the extent possible the conditions that existed prior to man-made impacts within the Lease 3963. The desired outcome of managing cultural resources is to protect any extant resources from human-related and natural threats, which will arrest deterioration and help preserve the cultural resources for future generations.

1. Management Needs and Problems

Existing and potential needs and problems that are part of this lease are briefly described below and will be addressed in more detail in the following sections of this management plan:

a. Property boundaries of Lease 3963 have been completely surveyed and fencing installed where needed but not all of the property lines have been marked; ensuring that the limits of the property are delineated would aid in identifying and limiting infringements from off-site sources;

b. Complete inventories of all plants and animals that are present within the Homeland property need to be generated so that these populations can be properly managed;

c. With the permission of the Bureau's Homeland-based Environmental Resources staff, a cattle rancher is allowed to use a portion of the lease property to graze cattle even though a formal sublease was never finalized;

d. Portions of the Lease 3963 lands were searched in the Florida Natural Areas Inventory database in 1999 but in order to preserve and protect any existing sensitive species and habitats property within the lease, a current and complete search is needed;

e. The acreages, species, and exact locations of invasive nuisance and exotic plant species have not yet been determined, making it difficult to develop the specific management activities and treatment schedules needed to eliminate or control these plants;

f. A Prescribed Burn Plan (PBP) has not yet been completed for the Lease 3963 property;

g. No documentation has been collected on the presence of potentially problematic insects and diseases within the lease and no arthropod control plan has been developed;

h. Research studies of a variety of topics of interest to phosphate mining and reclamation, habitat and wildlife management and preservation, and water quality protection have been promoted by Bureau staff but need to be formalized and instituted;

i. Several archaeological/historical resources were found on the property but other artifacts may be present, especially in undisturbed floodplains; studies and searches are needed to locate these artifacts so that preservation and protection measures can be implemented;

j. While no known soil and water protection issues currently exist, inspections are needed to determine the current status of these resources and strategies should be developed in the event that problems are discovered or develop later;

k. Additional staff is essential if the desired outcomes of this management plan are to be achieved; while even greater emphasis on working cooperatively with personnel from other agencies, private contractors and consultants, and volunteers will be stressed, the addition of four staff members will bring the team back up to a number sufficient to meet all management goals on these lands;

l. The identification, acquisition, and management of "connections" between the protected floodplains and wetlands in the IHN is essential for wildlife corridors and water flows along the river systems;

m. The Polk County 2030 Comprehensive Plan *Existing Land Use Map* classifies Lease 3963 property as "Conservation", but this land in the *Future Land Use Map* are shown as "Recreation and Open Space"; amending the land use classification to "Preservation" would assure that the Homeland property would remain part of the Integrated Habitat Network and can continue to be used for the preservation and protection of the water resources, wildlife corridors, and habitat; and,

n. A determination is needed as to what, if any, types and levels of "resource-based public outdoor recreation" may be possible on the property that will not be detrimental to the natural and cultural resources or interfere with the designated use as a "field office and aquatic weed control research area".

2. Management Measures for Natural and Cultural Resources

As part of the development of the Management Plan for Lease 3963 IHN at Homeland, the Bureau defined priority issues that need to be addressed based on the management needs and problems listed above. The management goals, objective, and activities (or "strategies") planned to address these issues are described below. The estimated schedule and budget for these items

are provided in Addendum 5. This section will discuss the management goals, objectives, and activities that will be used to preserve and protect the natural and cultural resources of Lease 3963.

GOAL #1 – Property Definition and Security

While all of the boundaries in Lease 3963 have been surveyed and fencing installed where necessary, the property lines were not marked by the surveyors. Encroachment from adjacent landowners and individuals has been a common occurrence at times over the years, and includes dumping, vandalism, and illegal motorized vehicle use. Completion of property delineation, fence repairs, and marking with Integrated Habitat Network signage is necessary to prevent continuing and future encroachment and improve property security. Finalization of an agreement with an adjacent property owner who has been granted permission to use a portion of the Homeland property for cattle grazing in exchange for providing beneficial services such as nuisance/exotic species control, fire break construction, wildfire suppression, and fence installation is needed to formalize the situation.

Objective #1: **Define property boundaries**

Activity: Obtain services of private surveyor and/or DSL's Bureau of Survey and Mapping to affix property boundaries on portions of the property that have not been but need to be surveyed

Schedule: Complete all needed surveys by December 31, 2022

Objective #2: **Mark property boundaries**

Activity: Install *Integrated Habitat Network* signs and fencing in areas as needed that have not yet been marked using Bureau staff and/or private contractors

Schedule: Complete by December 31, 2017

Objective #3: Finalize sublease agreement

Activity: The Bureau staff currently has an arrangement with a cattle rancher that allows him to use a portion of the Homeland property for cattle grazing in exchange for providing beneficial services such as nuisance/exotic species control, fire break construction, wildfire suppression, and fence installation at no cost to the State; a formal sublease per Paragraph 13 of the lease is needed to legitimize this informal agreement.

Schedule: Complete by June 30, 2013

Objective #4: Protect against infringements

Activity: Use Bureau staff, private contractors, and/or volunteers to conduct boundary maintenance, including the constructing ditches, repairing fences, installing gates and locks, replacing signs, or installing barriers along boundaries where trespass and vandalism are recurrent problems

Schedule: Complete by December 31, 2017

Activity: Conduct inspections of entire Homeland property at least annually to detect and deal with unauthorized entries
Schedule: On-going through December 31, 2022

Activity: Continue to work with FFWCC and local law enforcement agencies regarding prosecution of violators
Schedule: On-going through December 31, 2022

GOAL #2 – Protection of Renewable Resources

While many species of fish and wildlife are presumed present on Lease 3963, no definitive field surveys have been conducted to document the listed and non-listed animal species and numbers on site. The habitats that support these animals also have not been extensively investigated and documented, so habitat types, designated plants, site conditions, etc. are not adequately known.

Objective #1: Evaluate status of renewable natural resources

Plant and Animal Surveys

The management strategies needed to protect and preserve designated flora and fauna will vary depending on existing conditions, the species to be protected, and the desired results. The well-being of both listed and non-listed plant and animal species is an important concern for the Bureau on Lease 3963. In most cases these species will benefit from proper management of their habitats but in some cases additional management measures are needed to overcome poor or unusual conditions that may impact a particular species.

Activity: Contact FNAI and Florida Fish and Wildlife Conservation Commission about database review and map searches
Schedule: Complete by June 30, 2013

Activity: Bureau staff, in cooperation with other agencies, private contractors, and volunteers will conduct detailed surveys of animal and plant species, with emphasis on designated species, within the lease to document the presence, location, densities, etc.
Schedule: Annual surveys, ongoing through December 31, 2022

Activity: In cooperation with the FFWCC, Bureau staff will develop a Wildlife Management Strategy that addresses all appropriate fish and wildlife species, including appropriate imperiled species, their habitats, and their sustainability based on site-specific population data. In conjunction with this plan, Bureau staff will also work with the FFWCC to institute a continuous monitoring program to ensure the viability of these populations.
Schedule: Ongoing through December 31, 2022

Timber Surveys

Chapters 253 and 259, F.S., require an assessment of the feasibility of managing timber in land management plans for parcels greater than 1,000 acres if the lead agency determines that timber management is not in conflict with the primary management objectives of the land. The Homeland property in Lease 3963 is only 785 acres in size, so a timber survey is not required as part of this management plan. Upland forests on the lease cover only 84 acres (11% of the lease) and the Bureau's long-term management goal for the upland forest communities in Lease 3963 is to maintain or re-establish old-growth forest characteristics to the greatest extent possible. In addition, the extensive bottomland swamps filled with hardwoods and cypress serve as critical buffers to adjacent waterways and timbering in this habitat type would be contrary to the Bureau's long-term management goals. Timber management will be reevaluated during the next revision of this management plan to determine if timbering would be a beneficial management tool.

Activity: Contact Florida Forest Service about conducting a timber survey to determine efficacy of conducting a timber harvest

Schedule: Contact FFS in January 2021 in preparation for next revision of management plan in 2022

Exotic Species Control

Exotic plant and animal species are those which are not native to Florida but which were introduced through human interference. Exotic species have fewer natural enemies and likely have higher survival rates than do native species. They may also harbor diseases or parasites that can have significant adverse effects on native species that are not resistant to these introductions. The policy of the Bureau is to remove exotic species from native natural communities wherever possible.

Exotic species are a threat to the integrity of the Lease 3963 natural and reclaimed communities and are in conflict with the Bureau's goal of restoring and maintaining previously impacted habitats to more closely resemble the natural communities that existed prior to the impacts. Of the nuisance or invasive plant species that occur within Homeland, cogongrass (*Imperata cylindrica*), natal grass (*Rhynchelytrum repens*, syn. *Melinis repens*), cattails (*Typha* spp.), Bermudagrass (*Cynodon dactylon*), Brazilian pepper (*Schinus terebinthifolius*), Chinese tallow (*Triadica sebifera,* syn. *Sapium sebiferum*), dog fennel (*Eupatorium capillifolium*), and torpedograss (*Panicum repens*) are the most common, pose the greatest threat due to their ability to readily invade and disrupt communities, and necessitate the highest priority for removal. In addition, invasive species that have been found on nearby lands but have not yet been found on Lease 3963 are Old World climbing fern (*Lygodium microphyllum*) and skunk vine (*Paederia foetida*); Bureau staff will monitor the lease and adjacent properties to ensure that the invasive species do not become established on these lands. Other exotic plants which exhibit a lesser threat to the reclaimed and native communities of the Lease 3963 IHN at Homeland will be the subject of control measures on an as-needed basis as soon as their presence is detected. The Bureau staff coordinates with adjacent property landowners, managing agencies, and volunteers on cooperative projects to remove these exotics.

Two exotic animal species that create significant habitat damage and which has been observed on the Lease 3963 IHN at Homeland property are the feral hog (*Sus scrofa*) and red imported fire ant (*Solenopsis invicta*).

While using a variety of habitat types in Florida, hogs prefer large forested areas with abundant food interspersed with marshes, hammocks, ponds, and drainages with dense cover to use as bedding areas and protection from predators and hunters (Giuliano, 2010). Wild hogs directly compete with game animals such as deer, turkey, and squirrels (all present on Homeland) for hard mast, have been reported to consume the nests and young herpetiles, ground-nesting birds, and mammals, and feed on tree seeds and seedlings, causing considerable damage in existing and newly planted forests (Giuliano, 2010). In good habitat, it is unlikely that any amount or type of population control will eradicate wild hog populations but it may be possible to limit further population expansion by using a combination of methods on a sustained basis.

The red imported fire ants (RIFA), native to central South America, was first introduced from Brazil into either Mobile, AL or Pensacola, FL between 1933 and 1945. The diet of foraging workers typically consists of dead animals including insects, earthworms, and vertebrates but these ants are also known to reduce ground-nesting populations of rodents and birds and, in certain instances, may completely eliminate them from a given area. As long as food is plentiful, egg production is at its maximum, with the queen capable of producing as many as 1,500 eggs per day (Collins and Scheffrahn, 2008). Since introduction of the RIFA, it has become a major agricultural and urban pest throughout the southeastern United States and causes both medical and environmental harm as well. Although numerous treatment methods are available, reinfestation of any treated area may occur despite the treatment methodology used (Collins and Scheffrahn, 2008).

Activity: Coordinate with UF/IFAS Extension and FFWCC/Bureau of Invasive Plant Management to determine best management practices for nuisance and exotic plant control
Schedule: On-going through December 31, 2022

Activity: Become involved with the Heartland Cooperative Invasive Species Management Area (CISMA) to improve invasive plant management control knowledge/skills and better coordinate regional control efforts
Schedule: Initial involvement by December 31, 2012, then on-going participation through December 31, 2022

Activity: Coordinate with UF/IFAS Extension and FFWCC/Division of Habitat and Species Conservation to determine best management practices for nuisance and exotic animal control, especially wild hogs and fire ants
Schedule: On-going through December 31, 2022

Objective #2: Prepare specific management strategies

Prescribed Burning

The objectives of a prescribed burn plan (PBP) are to create those conditions that are most natural for a particular community and to maintain the desired ecological diversity within the property's natural communities. Prescribed burning is also important in preventing or minimizing the adverse impacts of wildfire on an area. To meet these objectives, Bureau staff will conduct surveys of the vegetative communities on Lease 3963 to determine what, if any, fire-dependent communities are present, are accessible, and can be burned on a routine basis (young restoration areas are not burned until the trees are old enough to withstand fire). The survey will also be used to examine imperiled areas adjacent to highways that have been and remain susceptible to human-caused wildfires. Using this information, a PBP will be developed for Lease 3963 that incorporates this tool into management strategies for the property.

Prescribed burn plans that are developed will be reviewed annually and updated as needed to meet current conditions. Any prescribed burns that are conducted will be with authorization from the FDACS' Florida Forest Service (FFS). Although fire lines have been installed on Homeland, in the event of a wildfire on the leased property suppression activities will be coordinated between the Bureau and the FFS. Due to issues such as lack of access onto portions of the property or its location near major roadways, it is possible that portions of Lease 3963 will not be able to undergo prescribed burns and will instead undergo mechanical and/or herbicide treatments of undesirable plant species to improve the community's condition. Upon removal of the undesirable species, either by prescribed fire, mechanical removal, or herbicide treatment, desirable trees, shrubs, and understory plants will be installed to facilitate the community's recovery.

Activity: Coordinate with Florida Forest Service about the development of prescribed burn plans and wildfire emergency plans for the individual parcels
Schedule: Complete by December 31, 2013

Arthropod and Disease Control

Property management activities will be conducted in such a way as to avoid insect and disease problems. If outbreaks do occur, operational and strategic plans will be implemented to control any such infestations. Specific long-term strategies to avoid and/or minimize losses to any future outbreaks will be the management objective. The Florida Forest Service will be consulted for assistance with the development of scientifically sound responses and/or management protocols to deal with any insect or disease problems.

In compliance with 388.4111, F.S., Lease 3963 will be evaluated to determine if the lands within the lease can or should be designated as environmentally sensitive and biologically highly productive. Such designation would be appropriate and consistent with the purposes of the property acquisition and would afford protection from arthropod control practices that would impose a potential hazard to fish, wildlife, and other natural resources on this property. If such a designation is granted, the local arthropod control agency will be contacted and provided with a description of the approved management objectives for this lease, upon which that agency must then prepare a public lands control plan to be reviewed and approved by the FFS prior to being allowed to conduct any arthropod control activities on Lease 3963 lands.

Activity: Coordinate with UF/IFAS Extension, FDACS/Division of Plant Industry, and Polk County Mosquito Control about developing arthropod and disease control plans, including possible designation as environmentally sensitive and biologically highly productive

Schedule: Complete by December 31, 2015

GOAL #3 – Conservation of Nonrenewable Resources

Archaeological and historical artifacts and outstanding and unique natural features are known to exist on Lease 3963 and preservation and protection efforts are in place for them. However, there is a possibility that more of these nonrenewable resources are present. Detailed field surveys and data reviews are needed to determine their existence so that guidelines can be developed for their conservation and preservation.

Protection of soil and water resources is also an important need for these leased lands. While there are no known major soil/erosion or water problems present on Homeland, any management activities conducted on the property will be executed in a manner that minimizes the potential for soil erosion and water quality impairment. All activities planned for Lease 3963 will be conducted in accordance with *Siliviculture Best Management Practices* (FDACS, 2004) and/or other appropriate measures as deemed necessary to prevent soil loss or water quality degradation. In addition, if soil or water resource problems should arise in the future, they will be immediately assessed and the appropriate action will be implemented in cooperation with and under the direction of the U. S. Department of Agriculture, Natural Resources Conservation Service and the University of Florida, Institute of Food and Agricultural Sciences.

Objective #1: Conservation of unknown cultural resources

The management of cultural resources is often complicated because, while these resources are irreplaceable and extremely vulnerable to disturbances, they are often intricately intertwined with natural resources and could easily be damaged during the course of routine management activities for these resources. The advice and approval from the Florida Department of State, Division of Historical Resources (DHR) is required prior to any actions that could affect or disturb cultural resources on State lands, in accordance with *Management Procedures for Archaeological and Historical Sites and Properties on State-Owned or Controlled Properties* (Addendum 7).

While there are known recorded sites within this lease (see Addendum 7), there are potentially other cultural resources on the property that have not yet been found or documented. Management measures for cultural resources should include drafting a proposal for a cultural resource reconnaissance survey on Lease 3963 IHN at Homeland. If any archaeological or historical resources are discovered during the recommended cultural resource reconnaissance survey, management measures should then develop a phased plan for managing these newly discovered resources in the context of their surroundings. This should include a workable written plan for the physical management of the identified resources as well as an outline of approved methodologies for executing the plan. Several Bureau staff have already received

training in Archaeological Resources Management, but as part of the proposed management actions, additional staff and volunteers would also receive training to ensure that all existing and newly discovered artifacts are preserved and protected.

Activity: Conduct field searches to locate previously reported or observed cultural resources using DHR's *Best Management Practices: An Owner's Guide to Protecting Archaeological Sites* (BAR, 2005) and cultural resource reconnaissance survey
Schedule: Complete by December 31, 2019

Activity: Contact DHR regarding any positive results of search for a project review and possible listing on Master Site File
Schedule: As needed

Activity: Obtain *Archaeological Resource Management Training* for Bureau staff as needed
Schedule: Complete by 2017

Objective #2: Conservation of outstanding and unique natural resources

Activity: Conduct field searches to locate previously reported or observed outstanding or unique features, reporting any findings to Florida Geological Survey (FGS)
Schedule: Complete by December 31, 2019

Activity: Develop management plan for preservation and protection of any newly discovered outstanding or unique features
Schedule: Complete within two months of locating new feature

Objective #3: Conservation of soil resources

Bureau staff has coordinated with adjacent property landowners to redirect stormwater run-off from these private lands to prevent scouring and alleviation of river bank soils into the Peace River floodplain during peak storm events. Reclaimed wetlands have been reconnected with grassed swales and rip-rap where needed to reduce the velocity of stormwater run-off and prevent erosion. Bureau staff has worked with private landowners to capture and remove cattle from the Peace River floodplain and encourage the use of *Water Quality Best Management Practices for Florida Cow/Calf Operations* (OAWP, 2008). All Bureau staff received certification as Florida Stormwater Erosion and Sedimentation Control inspectors from the Department's Nonpoint Source Management Section, which enables it to provide training to private and public employees in various construction-related fields to increase the proper design, construction, and maintenance of erosion and sediment control during and after construction is complete. By working with cooperative extension services to determine BMPs for fertilizers and pesticides used on the natural and reclaimed lands within Lease 3963 IHN at Homeland, Bureau staff will be able to minimize or avoid adverse impacts to surface and ground waters.

Activity: Conduct inspections of IHN leased lands to determine current condition of soil

resources, erosion on site, or other possible problems

Schedule: Complete by December 31, 2013, then monitor annually through December 31, 2022

Activity: Coordinate with NRCS, Polk County Soil and Water Conservation District, UF/IFAS, and SWFWMD for information and assistance with soil or erosion problems detected during inspections

Schedule: Immediately upon detection

Activity: Implement as needed the appropriate soil conservation BMPs to minimize or eliminate erosion and soil loss

Schedule: Immediately upon detection

Objective #4: Conservation of water resources

The Southwest Florida Water Management District and Florida Department of Environmental Protection are responsible for water quality and quantity in the Peace River on the Homeland portion of the IHN within Lease 3963 as well as in the surrounding properties. The Bureau works cooperatively with ongoing hydrologic and geologic studies and monitoring programs in conjunction with the USGS, the SWFWMD, and their consultants to implement several water resource projects for the Upper Peace River. Bureau support also includes promotion of water conservation practices (OAWP, 2003), logistical access to remote geologic features, coordination of optimal access and times for project work limited by flow conditions, and facilitation with adjacent landowners for access and easement agreements to monitoring locations.

Activity: Conduct inspections of Lease 3963 to determine current and potential condition of water resources

Schedule: Complete by December 31, 2013

Activity: Coordinate with NRCS, Polk County Soil and Water Conservation District, University of Florida – IFAS, and SWFWMD for information and assistance with water quality and quantity issues discovered during inspections

Schedule: Immediately upon detection

Activity: Coordinate with other agencies to develop site-specific guidelines to reduce or eliminate adverse impacts to water resources within Lease 3963

Schedule: Complete by December 31, 2014

GOAL #4 – Acquisition of Additional Resources and Considerations

The current number of Bureau personnel is insufficient to adequately complete the wide range of management activities on all the properties under Bureau management. Obtaining additional staff to replace those recently lost to resignation and promotional transfers is of utmost importance. Increasing the already significant level of cooperation with personnel from other State, regional, federal, and local agencies, private contractors and consultants, and volunteers is also imperative.

This need for additional personnel will become even more urgent as more property acquisitions are made to increase the protection and efficacy of the Integrated Habitat Network. The acquisition process will be facilitated by obtaining "Preservation" status for the Integrated Habitat Network in the 2030 Polk County Comprehensive Plan (OPD, 2012) as it will emphasize the importance of the Integrated Habitat Network in protecting in perpetuity the riverine habitats and wildlife corridors along the Peace River.

Objective #1: Increase Bureau staff

Activity: Hire two (2) Full-Time Employees and two (2) Other Personal Services
Schedule: Complete by December 31, 2013

Objective #2: Acquire lands to bolster the foundation and efficacy of the IHN system

Activity: Encourage groups to prioritize the areas within the optimal area
Schedule: Complete by December 31, 2016

Objective #3: Obtain "Preservation" status for Lease 3963 IHN lands in Polk County 2030 Comprehensive Plan

Activity: Engage representatives of Polk County Office of Planning and Development in discussions about changing Future Land Use designations in the Homeland portion of the IHN within Lease 3963 to "Preservation"
Schedule: Complete by June 30, 2012

3. Research Needs

a. Previous and Current Research

Research studies designed and conducted by outside entities on the Homeland Property are described below and depicted on the Research Projects map; publications resulting from these studies are listed in Addendum 9. With the exception of the cogongrass treatment trials, projects developed and performed by DEP or FFWCC staffs based at the Homeland office are described below only.

Research Project by Outside Entities

The objective of another study conducted by University of Florida researchers was to gain a better understanding of the ecological processes that affect the development of wetland ecosystems following phosphate mining and how some of these processes might be accelerated. The research consisted of several sub-projects conducted during the 1980s that primarily examined vegetation, hydrology, and soils at several clay settling ponds of various ages and in various stages of ecological succession, including some on the Homeland property. Results of this and other studies suggest that augmented natural succession can be the quickest and least

expensive means to restore lands to future uses for forestry, agriculture, water conservation, or wildlife habitat (Odum et al, 1990).

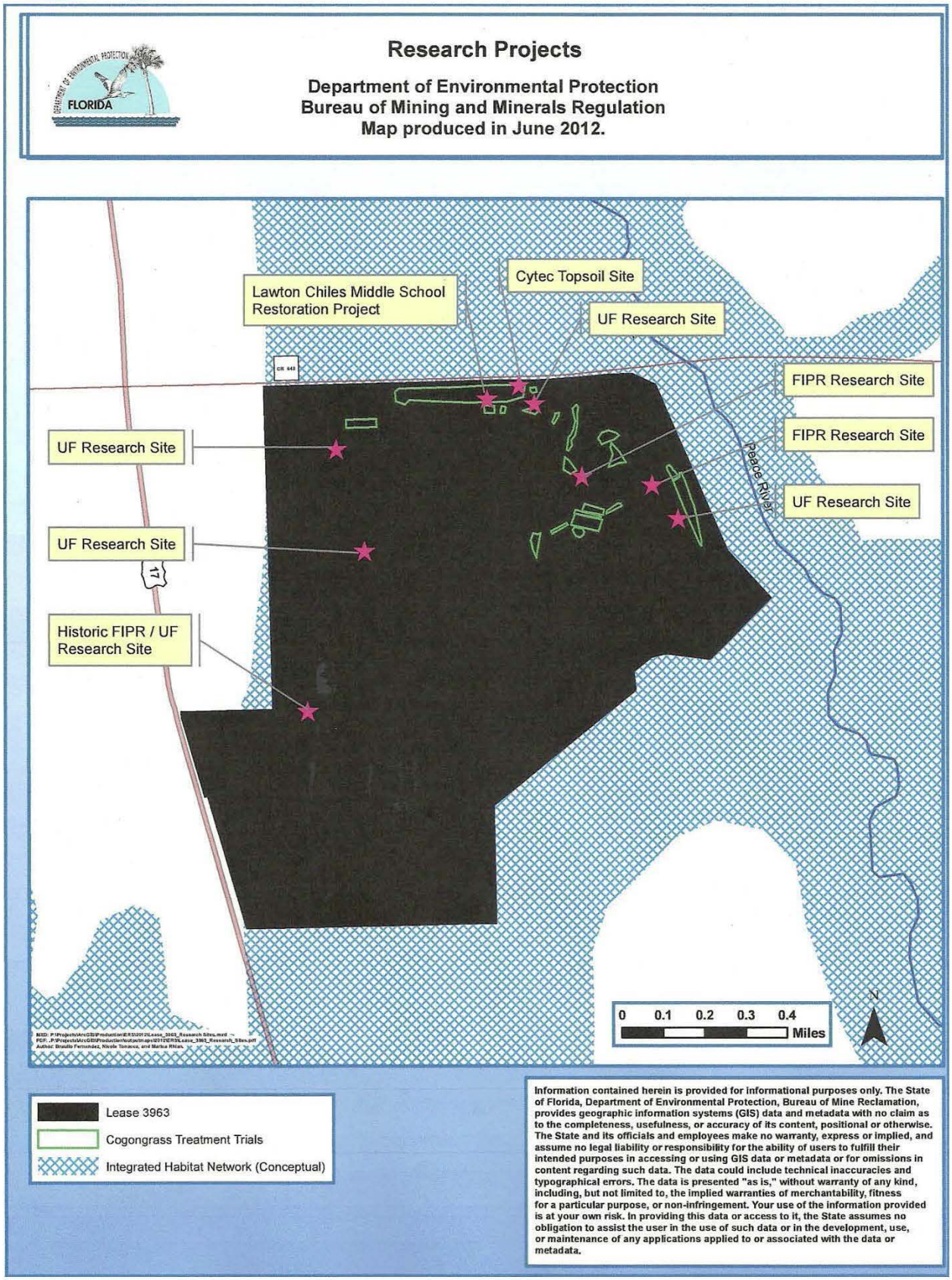
In 15 field studies and/or commercial-scale plantings (some conducted on the Homeland lease), scientists from the University of Florida, School of Forest Resources and Conservation and the Polk County Extension Service conducted a five-year study (2001-2005) of Short Rotation Woody Crops to further commercial forestry on underutilized phosphate mined lands in central Florida. Cypress (*Taxodium distichum*), cottonwood (*Populus deltoids*), and slash pine (*Pinus elliottii*) were initially assessed regarding genotype, management practices, productivities, and/or economic potential on clay settling areas and overburden sites and then expanded these reviews to include the noninvasive eucalyptus (*Eucalyptus grandis* and *Eucalyptus amplifolia*) (Rockwood et al, 2008).

In 2005, representatives from the Florida Institute of Phosphate Research (FIPR) designed and implemented a torpedograss (*Panicum repens*) control prescription based on chemical treatments and establishment of nursery-grown maidencane (*Panicum hemitomon*). This successful research project demonstrated a practical method for replacement of invasive torpedograss growing in shallow wetland marshes and was adopted for inclusion among prescriptive recommendations offered by the FIPR and Bureau.

In 2006, researchers from the University of Florida, Agricultural and Biological Engineering Department conducted studies at Homeland on the use of vegetative filter strips (dense vegetation designed to reduce transport of sediment and pollutants from surface runoff) to control non-point source pollution from disturbed lands. Study results showed that runoff volume, sediment, total phosphorous, and dissolved phosphorus were significantly reduced in 6-m vegetative filter strips in two study sites on the lease (Muñoz-Carpena et al, 2007).

In August 2007, twenty-two students from Lawton Chiles Middle Academy designed a study plot and installed native plants grown in the nursery at their school to restore a reclaimed field at Homeland. The students collected data and prepared written reports and videos of their project. A team presentation of their project won State Science Fair awards and the students advanced to the National Science Fair competition as representatives of Lawton Chiles Middle Academy. Bureau staff assisted with the preparation of the study plots and research design and visited the school for classroom lectures.

Mosaic Fertilizer, LLC donated topsoil from a flatwoods area scheduled to be disturbed by phosphate mining operations for a small experimental plot (Cytec study site) at Homeland in mid-May 2010; the objective was to study the development of flatwoods topsoil spread on the sandy clay loam soils deposited by previous mining operations. Bureau staff continues to monitor the project as the plot continues to yield new species of native plants from the root material and soil seed bank transported to the site.


Research Projects
Department of Environmental Protection
Bureau of Mining and Minerals Regulation
Map produced in June 2012.
FLORIDA
Lawton Chiles Middle School Restoration Project
Cytec Topsoil Site
UF Research Site
FIPR Research Site
FIPR Research Site
UF Research Site
UF Research Site
UF Research Site
Historic FIPR / UF Research Site
Peace River
CR 640
17
0 0.1 0.2 0.3 0.4
Miles
N
Lease 3963
Cogongrass Treatment Trials
Integrated Habitat Network (Conceptual)
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Research Projects Conducted by Homeland Staff

Cogongrass (*Imperata cylindrica*) treatment trials are being carried out by Bureau staff at Homeland because it is the primary upland pest on the property, requiring large-scale control efforts. The importance of its control is due to its combination of extreme invasiveness, rapid creation of dense monocultures in openings, and the intensity of its fires, which usually kill all other inter-growing vegetation. A variety of treatments are conducted in the test plots, including herbiciding (sometimes after mashing or a few weeks after a prescribed burn), with follow-up spot-spraying and/or mechanical control.

Cogongrass control study – "mashing" prior to herbiciding

In the reclamation of an old clay settling area on the Homeland property in 2006-2007, Bureau staff designed and facilitated the establishment of several acres of new herbaceous wetlands to replace existing exotic, invasive cogongrass and primrose willow (*Ludwigia repens*). The introduction of a variety of native wetland species provided enhanced wildlife habitat as well as a donor source of native aquatic plants such as fireflag (*Thalia geniculata*), pickerelweed (*Pontederia* spp.), crinum lilies (*Crinum* spp.), and sawgrass (*Cladium jamaicense*) for other local restoration projects.

Bureau staff periodically introduces new aquatic plants into the retention pond on the Homeland property to improve water quality treatment and wildlife utilization in accord with the Best

Management Practices advocated by water management districts and other natural resource management agencies.

The FFWCC and DEP staffs at Homeland jointly maintain aquatic plant collections in the Homeland nursery for the purpose of plant identification, propagation, and public education. Staff routinely collects seed and plant material from locally rare or uncommon native species for propagation research studies to determine the most efficacious methods to conserve the species at Homeland or for use in phosphate mine reclamation projects. Other species are being tested to assess their capability to invade a habitat in response to various light levels or altered water chemistry; currently, the newly discovered invasive red root floater (*Phyllanthus fluitans*) is being tested to determine the effect of iron levels in the water and shade on survival and development.

A study was undertaken by researchers from the University of Florida, Center for Aquatic and Invasive Plants in coordination with the FFWCC, Invasive Plant Management Section to test the chemical topramezone on hydrilla (*Hydrilla verticillata*) in the lake at Homeland to determine if it was a viable replacement for fluridone. Following an initial treatment in 2009 with 50 ppb, in June 2012 the hydrilla was under control and chemical levels down to 1.0 ppb, the non-detection level required by the U.S. Environmental Protection Agency to re-open the lake for use by the Homeland staff.

b. Proposed Research

Proposed future research on Lease 3963 IHN at Homeland include:

(1) Develop Best Management Practices (BMPs) for controlling cogongrass (*Imperata cylindrica*) by using a variety of treatment methodologies and schedules to determine the most efficacious protocol in test plots on the property;
(2) Develop BMPs for producing native food and cover vegetation species on reclaimed lands within the lease property;
(3) Develop BMPs for using Integrated Pest Management to control nuisance and exotic vegetation (other than cogongrass) on reclaimed lands within the lease;
(4) Develop BMPs to determine appropriate uses of pesticide and fertilizer on the reclaimed lands within the lease;
(5) Continue to develop innovative ways to attract and sustain wildlife on the property;
(6) Conduct surveys of gopher tortoises (*Gopherus polyphemus*) to determine reproductive success of originally relocated tortoises; and,
(7) Continue aquatic plant control research studies in Homeland wetlands and waterbodies.

4. Resource Management Schedule

Lease 3963 will be thoroughly inspected at least once each year during the duration of the 2012-2022 management plan. The initial review will be to determine the general condition of the property and will consist of the collection of detailed data and a thorough assessment of the following: dominant and rare plant species; wildlife utilization; instances of encroachment and vandalism; potential for prescribed burning plan; signage needs; additional surveying needs;

presence and density of invasive nuisance and exotic species; new archaeological resources; water quality characterizations; and, potential list of management activities to be undertaken. Annual monitoring after the initial inspection will be to determine the property's condition since the previous year's inspection; minor corrective activity may be detected and scheduled for repair as a result of the inspection, (minor fence repairs, trash and mine debris removal, treatment of small areas of invasive plants, etc.), but if Bureau staff finds during an annual inspection that significant damage to the resources has occurred or is imminent, then emergency measures will be taken at the time of the inspection to immediately address these concerns by eliminating or preventing adverse impacts to the lease property.

This data collection and assessment process each year will be used to develop an annual operational management schedule for the Homeland property which will be used to guide Bureau staff and volunteers in the implementation of a variety of activities such as: herbicide treatments of invasive plants, followed by replanting with desirable native species; trash removal and repair damage caused by vandals; the development and execution of research studies and special projects; maintenance and repair of the nursery facilities; etc.

Currently the most crucial requirement on the lease is controlling invasive nuisance and exotic species followed by revegetating with native species. A priority schedule (based on the purposes for which these lands were acquired) that describes all management activities to be conducted and cost estimates for conducting priority management activities, based on the most cost effective methods and recommendations currently available, are presented in Addendum 5. While the Bureau allocates staff and equipment on all of the leased lands that it manages, the information provided in Addendum 5 shows only the portion of the Bureau's annual budget (estimated to be $400,000 for the 10-year period) that will be spent on Lease 3963 IHN at Homeland.

5. Land Management Review

Section 259.036, Florida Statutes, established land management review teams to determine whether conservation, preservation, and recreation lands titled to the Board of Trustees of the Internal Improvement Trust Fund are being managed for the purposes for which they were acquired and in accordance with a land management plan adopted pursuant to s. 259.032, F.S. The managing agency is to consider the findings and recommendations of the land management review team in finalizing the required updates of its management plan.

Lease 3963 IHN at Homeland has not been the subject of a land management review.

III. LAND USE COMPONENT

A. INTRODUCTION

Land use planning and management activities at Homeland are based on Paragraph 4 in Lease 3963, in which the Division is mandated to "… manage the leased premises only for the establishment and operation of a field office and aquatic weed control research area, along with other related uses necessary for the accomplishment of this purpose as designated in the Management Plan required by paragraph 7 of this lease." This management plan, submitted in accordance with Section 253.034, F.S. and Chapters 18-2 and 18-4, F.A.C., also incorporates management strategies and activities that emphasize the preservation and protection of the water resources, wildlife corridors, and habitat within the lease.

This portion of the management plan includes a brief accounting of the existing and planned uses (external conditions) of adjacent properties as well as an analysis of the existing and potential uses of the Homeland property lease. Existing uses, special conditions on use, and specific areas within the lease that will be given special protection are identified. The land use component then summarizes the current conceptual land use plan for the property and identifies the existing or proposed activities directed towards the particular parcel or resource.

B. EXTERNAL CONDITIONS

An evaluation of the conditions that exist beyond the boundaries of Lease 3963 can identify any special problems or opportunities that exist immediately adjacent to or in the vicinity of the leased property, which in turn helps to identify the opportunities and constraints they present for recreational uses on the Lease 3963 property.

1. Existing Use of Adjacent Lands

Although the IHN management plan pertains primarily to lands along the Peace and North and South Prong Alafia Rivers and their tributaries, the IHN is part of the Statewide Greenways System within the southern phosphate mining district that contains portions of the Peace, Manatee, Little Manatee, and Myakka Rivers. The Statewide Greenways System is expected to connect the IHN lands with nearby regional hubs and linkages such as the Green Swamp, Tampa Bay, Myakka River State Park/Carlton Preserve, Charlotte Harbor, Babcock-Webb Wildlife Management Area, and the Kissimmee River via the Avon Park Bombing Range-Arbuckle State Park and Forest reserves.

Several significant federal, state, or local land and water resources area located within the Integrated Habitat Network in this part of the State, of which the Lease 3963 IHN at Homeland property is a part. These areas, which provide wildlife habitat, improved water quality, and connections between various river systems include: Tenoroc Fish Management Area, Alderman Ford Park, Alafia River State Recreation Area, Payne Creek State Historic Site, the Polk County Saddle Creek and IMC-Peace River parks, SWFWMD's Medard Park, Balm Boyette Scrub, and Bullfrog Creek Scrub.

Other nearby existing public lands with significant land and water resources include: portions of the Green Swamp Area of Critical State Concern (a Conservation and Recreation Land or "CARL project), Choctawatchee River Water Management District Area, Circle B-Bar Reserve, Myakka River State Park, Manatee Watershed/Duette Park, Lake Arbuckle State Forest, Lake Wales Ridge Ecosystem, Avon Park Bombing Range, Brighthour Watershed, Babcock-Webb Wildlife Management Area, Catfish Creek State Preserve, and Disney Wilderness Preserve.

The Statewide Greenways System is expected to connect the significant land and water resources on and near the IHN lands with nearby regional hubs and linkages such as the Green Swamp, Tampa Bay, Charlotte Harbor, and the Kissimmee River. The efficacy of the IHN greenways system in the region would be greatly enhanced by these connections.

Just as there are significant areas within and near the Homeland lease lands that benefit this system, there area also adjacent properties with land uses that may conflict with the planned uses of the IHN. Land uses such as residential/industrial development, intensive recreation usage, and continuing phosphate mining operations, as well as conflicting management strategies on nearby lands for prescribed burns, livestock grazing, and nuisance/exotic species control, all pose potential conflicts with the Bureau-managed lands within Lease 3963. The Bureau is working with these adjacent property owners to ensure that lands within the IHN are protected and preserved for maximum benefit for habitat, wildlife, and water resources.

2. Planned Use of Adjacent Lands

There are no known planned uses for adjacent properties that would be detrimental to the Lease 3963 IHN at Homeland property.

C. PROPERTY ANALYSIS

Effective planning requires a thorough understanding of the lease property's natural and cultural resources. This section describes the resource characteristics and existing uses of the property. Past and present uses were assessed for their effects on the property, compatibility with the site, and relation to the property's classification. The lease's potential resource-based public outdoor recreation or other public use elements were examined to identify the opportunities and constraints they present for the property.

1. Assessment of Use

All legal boundaries, easements, significant natural and cultural features, and listed plant and animal species on Lease 3963 are delineated on the Points of Interest Map. Specific past, present, and potential uses of the leased lands are briefly described in the following sections.

a. Past Uses

Before acquisition by the State, the Homeland property was part of the Fort Meade Mine owned by Mobil Mining and Minerals Company, which mined phosphate at the Homeland portion of the mine through 1965 but continued to use the property for mine water disposal through the

early 1970s. Mobil reclaimed portions of the mined and disturbed lands on the property but because the mining at Homeland occurred before the institution of State mandates requiring the reclamation of all lands disturbed by mining or mining operations after July 1, 1975, not all of the Homeland property had to be or was reclaimed prior to its acquisition by the State.

In addition to phosphate mining operations, previous "approved" land uses within Lease 3963 included timbering and agricultural activities. "Unauthorized" activities that have occurred on the property in the past include the encroachment by adjacent property owners for cattle grazing and illegal hunting. Other illegal and often quite destructive activities that have occurred and may still be occurring on Homeland include vandalism, illegal dumping, marijuana cultivation, and off-road vehicle use. Other less destructive but "unapproved" activities such as trespassing, camping, and fishing have also been observed on these IHN lands. An adjacent landowner has been allowed by Bureau staff to graze cattle on portions of the Homeland lease to provide weed suppression and nutrient cycling in exchange for services to improve the property, such as construction and repair of boundary fence; security against vandalism and trespassing; and, participation in wildfire suppression and prescribed burn operations conducted by Bureau staff.

b. Existing Public Recreational Uses and Facilities

There currently is neither public recreational usage nor public facilities on the Lease 3963 IHN at Homeland property.

c. Protected Zones

A protected zone is an area of high sensitivity or outstanding character from which most types of development or human activities are excluded as a protective measure. Generally, facilities or activities that require extensive land alteration or result in intensive resource destruction, such as parking lots, camping areas, shops or maintenance areas, are not permitted. All decisions involving potential impacts to protected zones are made on a case-by-case basis after careful site planning and analysis.

In an effort to preserve and maintain the water resources and wildlife habitat and corridors along the linear core of the Integrated Habitat Network, the wetlands and waterbodies within Lease 3963 have been designated as protected zones. These areas (45 acres of waterbodies and 137 acres of wetlands, comprising approximately 23% of the lease property) are delineated on the Land Cover Map.

2. Public Use and Recreation Resource Elements

This section gauges the physical qualities of Lease 3963 that, either singly or in combination, could support the various resource-based recreation or other public use activities. Separating the property into such elements provides a way to measure the capability of the Lease 3963 IHN at Homeland to support individual public use activities.

Also part of the deliberations was the purpose for the lease to the Florida Department of Environmental Protection, Division of Resource Management (now the Division of Water

Resource Management), which says that the "Lessee shall manage the leased premises only for the establishment and operation of a field office and aquatic weed control research area, along with other related uses necessary for the accomplishment of this purpose as designated in the Management Plan required by paragraph 7 of this lease".

GOAL #5 – Determination of Public Recreation Usage

Approximately 57 acres of the Lease 3963 IHN at Homeland property contains sensitive floodplain wetlands or wetland forests that will not be able to support unrestricted or even limited public use. Other parts of the property contain listed plant and animal species need to be protected and preserved. Historic and cultural resources and unique geological formations have been found on the property and it is not inconceivable that other such resources may still exist at Homeland despite the heavy impacts from phosphate mining operations that occurred there. Many areas contain unconsolidated clays, mine debris, or unreclaimed lands that would make them unsafe for public use in their present condition. Seven acres of the lease are devoted to the field offices, equipment storage areas, and nursery facilities and numerous areas have been designated as research areas. All of these areas are unsuitable for resource-based public recreational usage.

There are some areas within the lease that under certain conditions may be capable of supporting public recreational, educational, or limited agricultural activities. Until it can be determined exactly what resources and conditions exist on Lease 3963, it is in the best interests of the public and the State to restrict public recreational use on these lands. The Bureau is aware of the need to facilitate public access to State-owned lands, but any encouragement must be tempered with the realization that any resource-based public outdoor recreational use must not compromise the original purpose for this lease or the Bureau's efforts to provide wildlife habitat and protect water resources on the property. The Bureau will continue to work with local governments to facilitate reviews and planning for proposed access and use of the Lease 3963 IHN at Homeland property in accordance with subsection 253.023(11), F.S.

Objective #1: Evaluate lands to determine appropriate types and levels of recreational use

Activity: Conduct inspections of the Homeland property to determine appropriate areas for future recreational use
Schedule: Complete by December 31, 2015

Table 1 lists the potential uses of Lease 3963 that were evaluated by Bureau staff as part of this management plan. After consideration, each potential use was assigned one of the following ratings: "approved" if it was deemed a resource-based public outdoor recreation or other activity that would be compatible with the primary goal of preserving and protecting natural and cultural resources on the property; "conditional" if the activity was either approved as part of this current management plan for specific circumstances on specific sites within the lease or could be re-evaluated during the management plan revision scheduled for 2023; and, "rejected" if the potential activity was determined to be detrimental to either the natural or cultural resources on the lease.

Table 1. Evaluation of Potential Resource-Based Public Outdoor Recreation or Other Public Use Activities on Lease 3963

Potential Activity	Approved	Conditional	Rejected
Apiaries		X	
Bicycling			X
Bird/wildlife viewing		X	
Camping			X
Canoeing/kayaking		X	
Cattle grazing		X	
Citriculture or other agriculture		X	
Community Supported Agriculture		X	
Ecosystem maintenance	X		
Environmental education	X		
Fishing		X	
Hiking			X
Horseback riding			X
Hunting			X
Linear facilities			X
Off-road vehicle use			X
Other uses (determined on individual basis)		X	
Photography		X	
Protection of endangered/threatened species	X		
Preservation of archaeological/historical sites	X		
Soil and water conservation	X		
Timber harvesting		X	

The purpose mandated in Lease 3963 is for the establishment and operation of field offices and research areas and a large portion of the leased property has been devoted to that purpose. Other areas within the Homeland property are considered sensitive floodplain wetlands, lands that may contain archaeological/historical resources, wildlife habitat, or unique geological formations, or areas that in their current condition are unsafe for public use. While there may be some areas within Lease 3963 that may under certain conditions be capable of supporting public recreational, educational, or limited agricultural activities, until it can be determined exactly what resources and conditions exist on Lease 3963, it is in the best interests of the public and the State to restrict public recreational use on these lands. The Bureau is aware of the emphasis on facilitating public usage of State-owned lands, but this advocacy must be tempered with the realization that any resource-based public outdoor recreational use must not compromise the original purpose for this lease or the Bureau's efforts to provide wildlife habitat and protect water resources on the property. The Bureau will continue to work with local governments to facilitate reviews and planning for proposed access and use of the Lease 3963 IHN at Homeland property in accordance with subsection 253.023(11), F.S.

As a result of these deliberations, the Bureau, as the sole managing agency determined that multiple-use management will be used for Lease 3963, with emphases on the mandated field offices and research areas as well as on the preservation and protection of the water resource and

wildlife habitat. Public recreation and other public uses will be considered on a case-by-case basis and approved only if these uses can be accommodated so that they do not interfere with the main focus of the property.

Objective #2: Designate areas where public recreational use could occur on Lease 3963 lands without causing adverse impacts to natural or cultural resources

Activity: Develop a comprehensive map designating areas where potential recreational use could occur

Schedule: Complete by December 31, 2016

Objective #3: Develop cooperative efforts with other groups to investigate potential for public recreational opportunities on IHN lands on Homeland property within Lease 3963

Activity: Meet with representatives from variety of public recreation organizations such as Florida Trail Association, Audubon of Florida, Great Florida Birding Trail, Florida Paddling Trails Association, Office of Greenways and Trails, etc. to discuss potential for public recreational opportunities on Lease 3963 lands and develop programs for those areas within the lease where public use is determined to be feasible

Schedule: On-going through December 31, 2022, with at least annual meeting with representatives

The Bureau is committed to providing long-term "basic management" for the protection of greenways and corridors, wildlife habitat, and riparian buffers as critical functions of the IHN lands within Lease 3963. This long-term protection may consist of active and/or passive land management activities intended to conserve the environmental qualities of each parcel; active management may include boundary identification and marking, habitat enhancement, prescribed burning, and exotic/nuisance species control while passive management may include property inspections and preparing reports, planning projects with other land management agencies, and educating stakeholders on appropriate land management methodologies of lands impacted by phosphate mining operations.

D. CONCEPTUAL LAND USE PLAN

During the development of this management plan, the Bureau reviewed the resource management and land use components of the leased property and assessed potential impacts of the proposed uses on the natural and cultural resources of Lease 3963. Resource management planning for this State-owned property began with a comprehensive review of the known existing natural and cultural resources on site and, after detailed management objectives and goals for these resources were developed, decisions were made as to the management measures that will be used to preserve and protect these resources. The land use component is a critical part of a plan as it allocates land and water resources on the property to be protected from public use as well as commits those resources that can be set aside for public use that is compatible with the conservation and protection of these public lands. Land use planning for Lease 3963 began

with an examination of the property, including consideration of such factors as access, public interest in use, adjacent land uses, and exceptional, rare or sensitive areas and features that require strict protection. Uses that could potentially result in unacceptable impacts were not included in the conceptual land use plan in accordance with the conditions found within Lease 3963.

1. Potential Uses/Facilities

The Florida Department of Environmental Protection defines "resource-based outdoor recreation" as "…dependent on a particular element or combination of elements in the natural and cultural environments that cannot be easily duplicated by man" in contrast to "user oriented recreation" which "…can generally be provided anywhere, assuming the availability of space and funds for development" (DRP, 2012a; DRP, 2012b).

Paragraph 4 of Lease 3963 states that the lessee "…shall manage the leased premised only for the establishment and operation of a field office and aquatic weed control research area, along with other related uses necessary for the accomplishment of this purpose as designated in the Management Plan required by paragraph 7 of this lease." Bureau staff at Homeland is also concerned with planning and undertaking management activities for the long-term protection of greenways, wildlife corridors, wildlife habitat, and riparian buffer are dissimilar from the current philosophies and strategies of other land management agencies.

While the Bureau neither encourages or discourages passive recreational uses such as canoeing/kayaking, wildlife viewing, or photography by the public on portions of Lease 3963 where there are no possible conflicts with the primary purpose of the lease, the purpose for the Homeland property as stated in the lease and potential conflicts with the goals of the Bureau regarding the preservation of water resources and wildlife habitat renders this property as generally unsuitable for public recreation. The Bureau believes that "resource-based outdoor recreation" on the Homeland property can be easily duplicated and more safely enjoyed on nearby public lands that are designed and managed primarily for public use. Some of these areas include: Alafia River State Park, Circle B Bar Reserve, Gator Creek Reserve, Hickory Lake Scrub, Lakeland Highlands Scrub, Mosaic Peace River Park, and Tenoroc Fish Management Area. As a consequence, no public use facilities are planned for construction within this lease during the next 10-year management period. If public interest in using these properties for resource-based public outdoor recreations increases during that period, the potential for developing facilities to accommodate this use will be reviewed for the management plan update for the period 2013-2023.

2. Property Improvements

No property improvements ("improvements" being characterized as permanent and adding to the value of the property) are planned for the 10-year period encompassed by this management plan. Any "improvements" to the Lease 3963 will involve activities that will restore or enhance the resources on the property, such as removing nuisance and exotic vegetation, supplementing native vegetation, expanding the plant nursery operations, etc. The priority schedule that describes all management activities to be conducted and the methods and means to be are

provided in Addendum 5. These cost estimates are based on the most cost-effective methods and recommendations currently available and may be revised as more information is collected through the planning and design phases or as new management methods are developed.

3. Existing Use and Optimum Carrying Capacity

"Carrying capacity" is an estimate of the numbers of users a recreational resource or facility can hold and still provide a high quality recreational experience while simultaneously preserving the natural and cultural resources of the site. A property's carrying capacity is calculated by identifying the resource requirements for each proposed recreational activity and then determining if the property can accommodate those requirements. The physical capacity of the property's natural communities to withstand the impacts of recreational uses without suffering significant adverse impacts are then considered; the results of this analysis identify the range within which the carrying capacity most appropriate to the specific recreational activity, activity site, and property's classification is determined.

The optimum carrying capacity for Lease 3963 is a preliminary estimate of the number and types of users that these lands could accommodate after the current conceptual development program has been implemented. Currently, there is no public use of the property. As a consequence, it is not possible to estimate an optimum carrying capacity for this sublease.

4. Optimum Boundary

Modification of the optimum boundary of Lease 3963 may be needed if property use, development impacts, research reports, and activities on adjacent lands indicate that management and protection of water resources, wildlife habitat, cultural resources, recreational uses, or management efficiency could be ameliorated. Identification of lands on the Optimum Boundary Map is specifically for planning purposes and the presence of any property on the map should not be used to constrain the landowner's property management or rights. Identification on the map does not authorize or require any government entity to impose additional or more restrictive environmental land use or zoning regulations, is not for regulatory purposes, and is not to be used as the basis for permit denial or the imposition of permit conditions.

Although not necessarily "essential" to the management of the Homeland lease, the efficacy of the IHN greenways system in the region would be greatly enhanced via its connection to nearby public lands with significant land and water resources (see Vicinity Map). The Bureau land management staff will continue its efforts to determine properties within the district that may be of value to the State and to recommend these lands for acquisition and lease to the Bureau for management.

Potential acquisitions recommended by Bureau staff are:

The Hooker's Prairie to Camp Meeting Ground Branch Connection, a heavily impacted tributary to the Peace River near Homeland, is an example of an area with properties that the Bureau recommends for State acquisition. The approximately 1,649-acre Camp Meeting Ground Branch connection serves as the main drainage system for approximately 3,000 acres and is a direct

conduit to the Peace River. The properties surrounding this tributary are under multiple ownerships and have a variety of land uses. Some land within the basin has been reclaimed and is part of pending donations/conservation easements, some has been developed into a Class III landfill, and the rest has been developed into sludge drying facilities. It is recommended that these properties, located between the existing Bureau-managed IHN properties in this portion of Polk County, be considered for inclusion in the regional Integrated Habitat Network via fee-simple acquisition or conservation easement agreement. Acquisition and reclamation of a strategic controlling interest within this basin would benefit water quality to the Peace River and downstream habitats. Acquisition of three small drainage lakes at the outfall of Camp Meeting Ground Branch near the Peace River would provide even more control over the hydrology and water quality of this area.

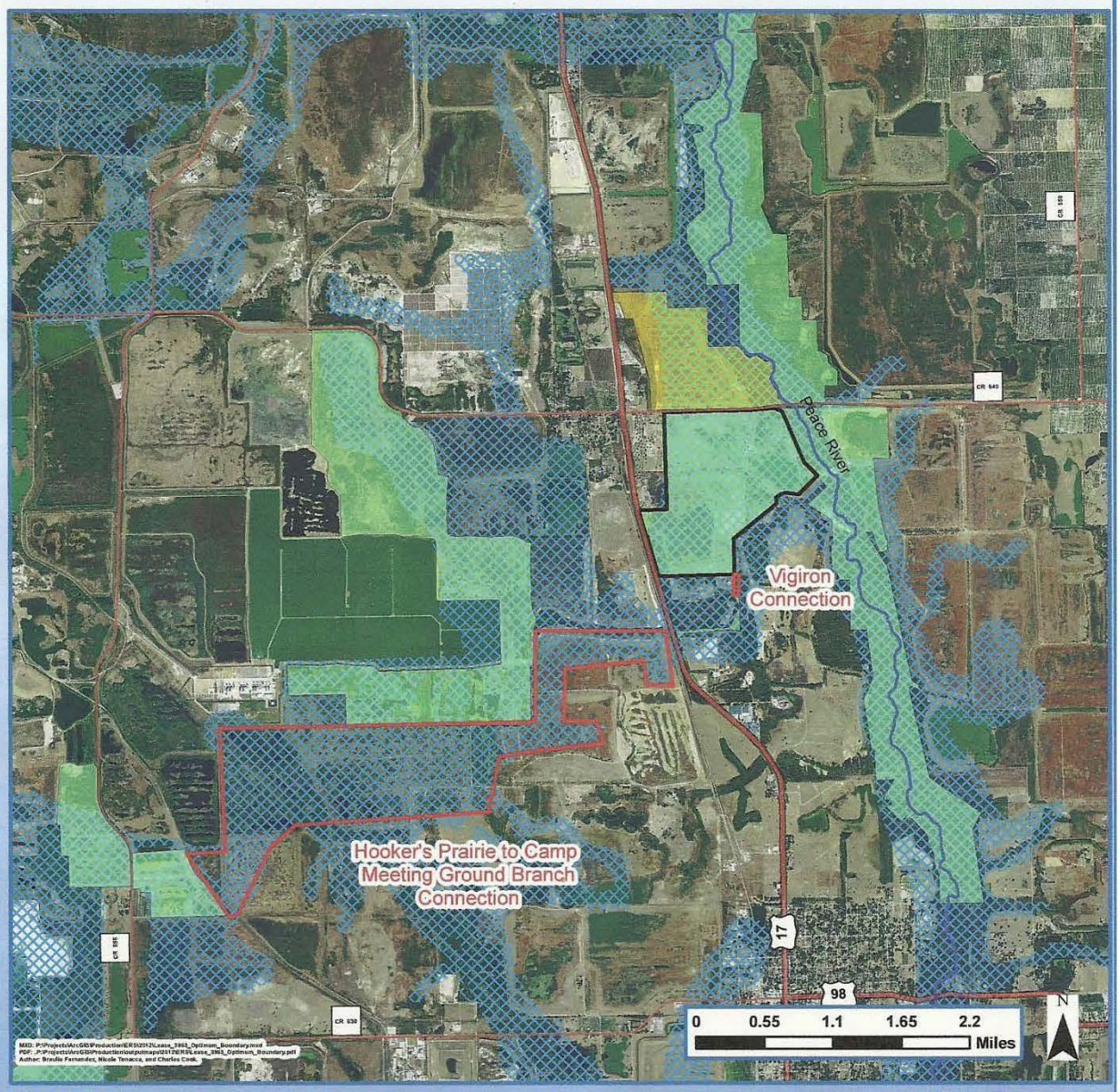
The Vigiron Connection is a small property located adjacent to the southern boundary of the Homeland property. Vigiron Inc., a fertilizer manufacturing company, is in negotiations with the Division of State Lands regarding the donation of this 4-acre property to the State in lieu of civil fines levied by a Consent Order. Its acquisition would contribute to the completion of the Integrated Habitat Network link between Hooker's Prairie and the Peace River.

The Optimum Boundary Map reflects lands, both public and private, identified by Bureau staff as having the potential to improve the continuity and functionality of the Integrated Habitat Network (including that portion contained within Lease 3963), provide additional natural and cultural resource protection, or allow for increased opportunities for recreational use. Less than fee simple options, such as conservation easements, should be considered to address the issue of limited or nonexistent access to several of these lands within Lease 3963. The areas denoted on this map will help Bureau staff communicate and coordinate with other planning agencies which could help bring regional connectivity to the IHN.

While there are several properties that have been identified as potentially beneficial if acquired by the State and amended to the lease, no lands within Lease 3963 are currently considered surplus to the needs of the Integrated Habitat Network.

Optimum Boundary

Department of Environmental Protection
Bureau of Mining and Minerals Regulation
Map produced in June 2012.



- Optimum Boundary
- Lease3963
- Federal
- State
- Local
- Private
- Integrated Habitat Network (Conceptual)