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Walton County
Dune Lakes
Advisory Board
Manual

2002

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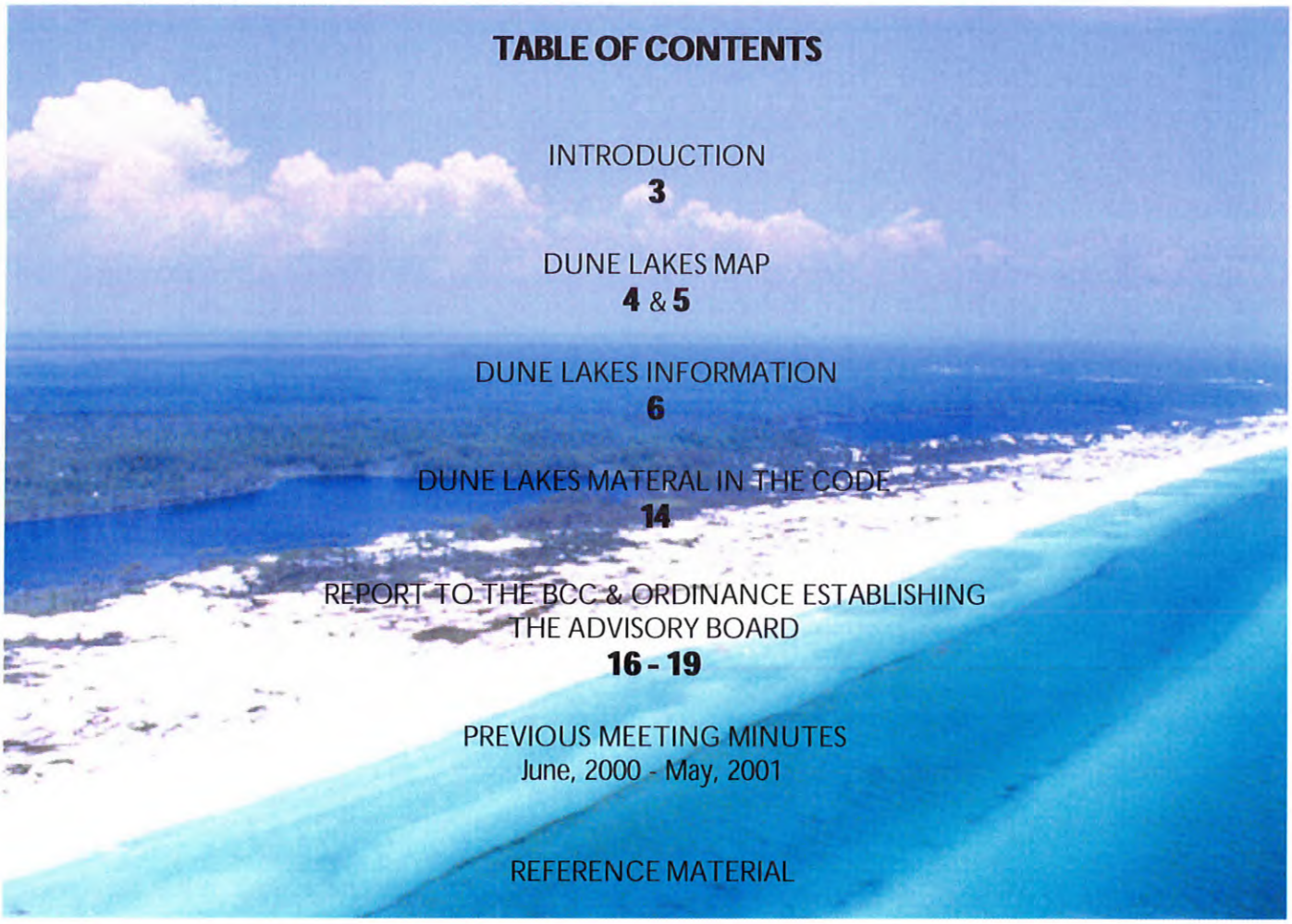

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INTRODUCTION

The Walton County Dune Lakes Advisory Board Manual is the first attempt to assemble materials, which are relevant to the preservation of the eighteen (18) coastal dune lakes existing in Walton County. Walton County holds unique treasures in its pristine coastal dune lakes. These freshwater, sometimes brackish lakes, are located immediately next to saltwater, and are very rare in the world. Coastal dune lakes are important breeding areas for birds and mammals inhabiting surrounding coastal ecosystems.

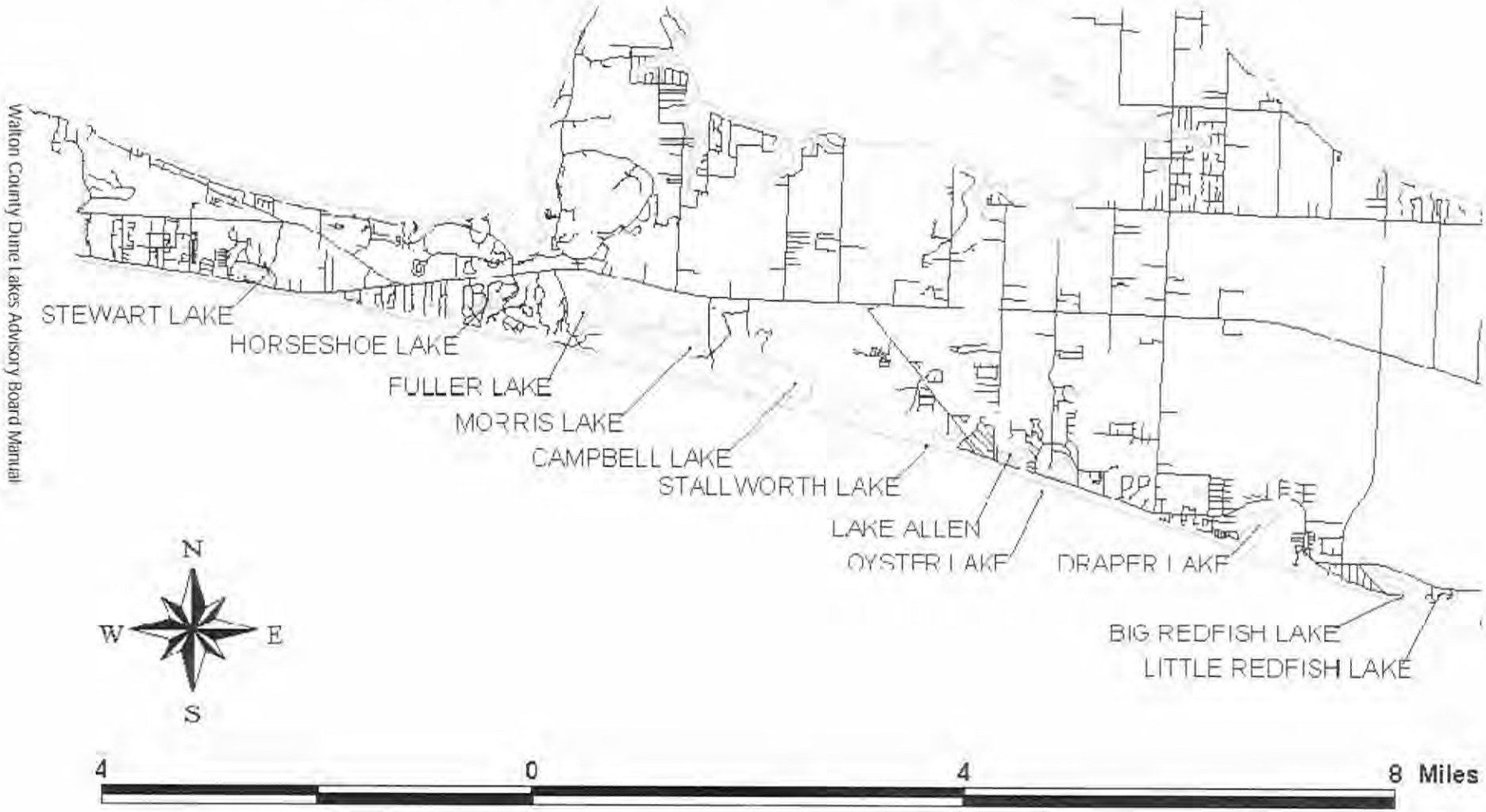
With the initial establishment of the Coastal Dune Lakes Task Force, Walton County recognized the importance of these dune lakes. County leadership realized that its resources and personnel were not being used effectively to address the protection of these lakes.

Most recently, the County established the Dune Lakes Advisory Board to perpetuate the progress that was made by the Task Force. As a member of this board, it is important to understand the history, the location and the significance of these natural resources and assets.

This manual is assembled to provide each Dune Lakes Advisory Board member with geographical information to understand where each lake is located and how the future development of the area might be impacted. Additionally, the County codes and comprehensive plan references are included to allow an understanding of where the County "is now". The background information on the original Coastal Dune Lakes Task Force and their mission is referenced in the Appendices area. Minutes from the meetings, action plans, and reference material is provided to give you an understanding of what resources may be used to accomplish the "protection of the dune lakes".

In assembling this material, the Walton County Growth Management Department's goal has been to present the most accurate and informative material for each board member on the dune lakes. Please help us in striving to improve this document by reporting any errors, comments, or suggestions to Ken Shannon, AICP at 892-8157, by mail at P.O. Drawer 689, DeFuniak Springs, FL, 32435 or by e-mail at shaken@co.walton.fl.us.

Walton County Coastal Dune Lakes



Walton County
Coastal Dune Lakes
LITTLE REDFISH LAKE
ALLIGATER LAKE
WESTERN LAKE
EASTERN LAKE
TRESCAL AKE
DEER LAKE
CAMP CREEK LAKE
LAKE POWELL
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8 Miles
2 of 2

PHOTO COURTESY: U.S GEOLOGICAL SURVEY

Dune Lake Trivia

- 10 Dune Lakes are accessible from the four State Parks:
  - Deer Lake State Park
  - Grayton Beach State Park
  - Point Washington State Park
  - Topsail Hill State Preserve
- 12 Dune Lakes are visible from County Road 30-A.
- County Road 30-A separates 6 dune lakes.

Stewart Lake:

Location: Located between US Highway 98 and CR 30 in the Miramar Beach Area. This is the western most dune lake in Walton County, not far from the Okaloosa-Walton County Line.

Impacts: Lake is surrounded by the Seascape DRI (which includes Majestic Sun Towers).

Surroundings: Lake is located next to Frangista Beach 2nd Addition on the west side and to Tivoli Terrace on the east.

USGS Quadrangle Map of Stewart, Horsehoe, Fuller, Morris and Campbell Dune Lakes

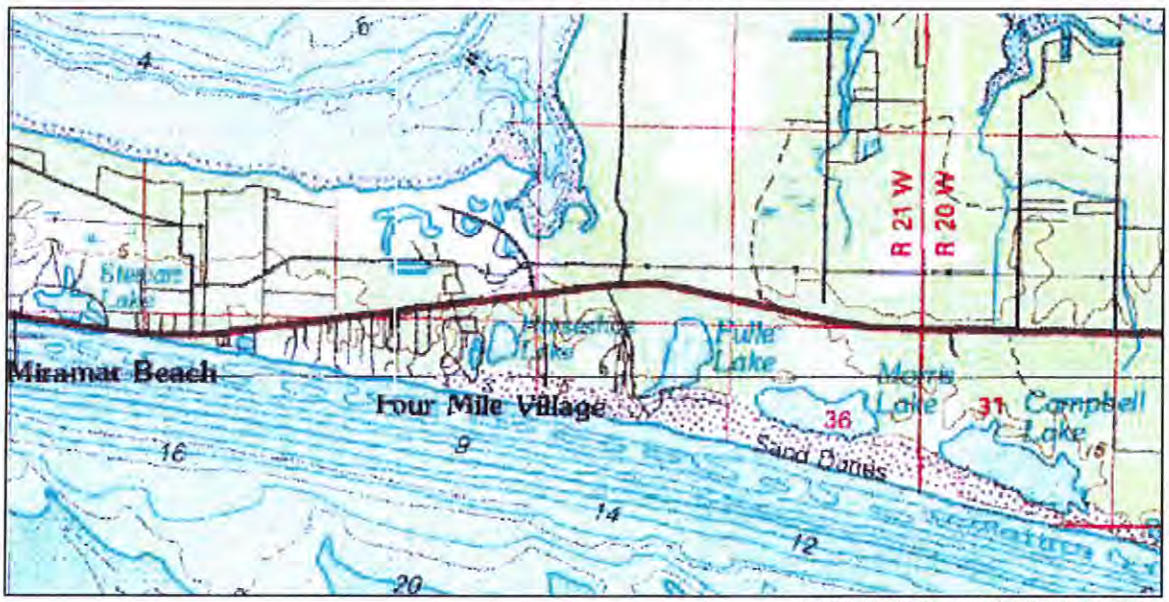

PHOTO COURTESY: U.S GEOLOGICAL SURVEY

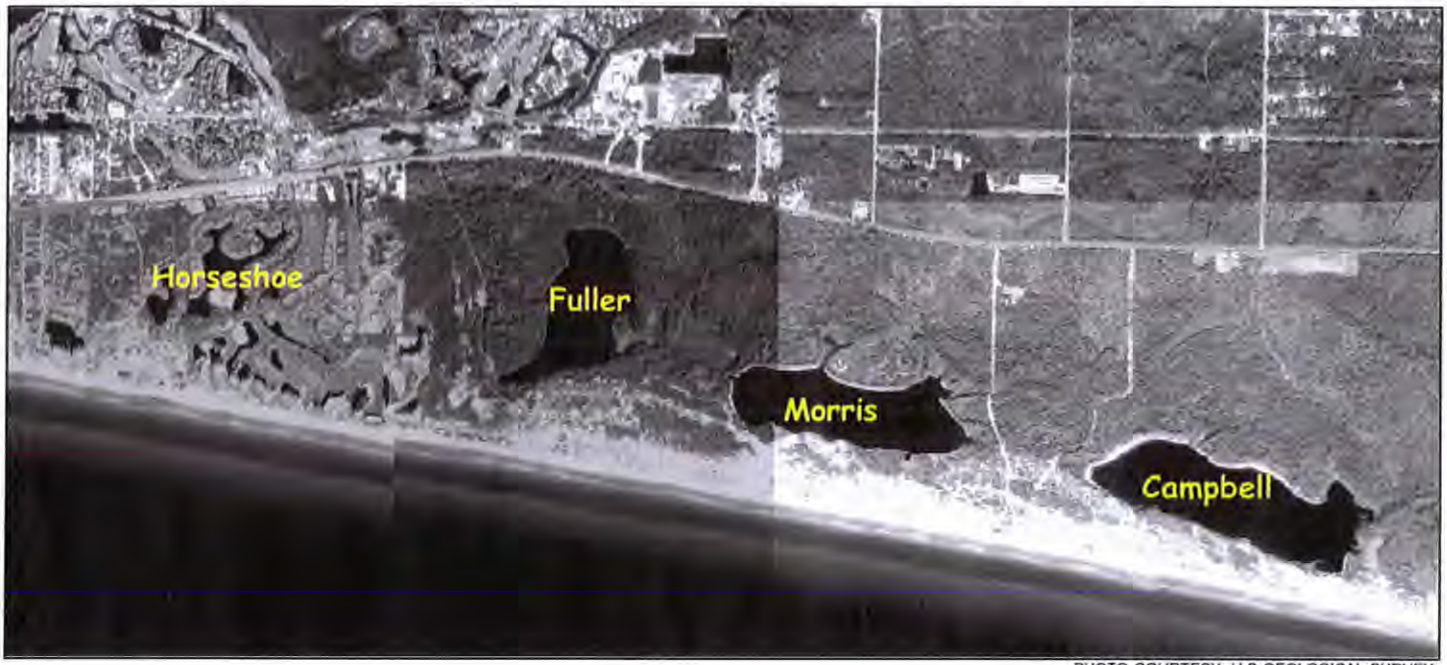

PHOTO COURTESY: U.S GEOLOGICAL SURVEY

Horseshoe Lake:
Location: Located south of US Highway 98 in the Sandestin Area.

Impacts: Lake is surrounded by the Sandestin DRI (which includes Elephant Walk, the Sandestin Hilton Hotel and Baytowne Golf Course).

Surroundings: Lake is located near Elephant Walk, Southwinds Condominiums and Beachwalk Villas, all elements of the Sandestin Beach Resort, a development of regional impact (DRI).

Fuller Lake: also referred to as Coffeen Lake.

Location: Located south of US Highway 98 and east of the Sandestin Area.

Surroundings: Lake is adjacent to Four Mile Village and the Tops'l DRI.

Morris Lake: also referred to as Bald Hill Lake.

Location: Located south of US Highway 98 in the Topsail Hill State Preserve.

Impacts: Topsail Hill State Preserve has been identified as the most pristine piece of coastal property in the state of Florida, which features 1,600 acres of stunning Gulf front, pine forests, nature trails over mountainous sand dunes.

Surroundings: Lake is one of two dune lakes located in the Topsail Hill State Preserve.

Campbell Lake:
Location: Located south of US Highway 98 in the Topsail Hill State Preserve.

Impacts: Topsail Hill State Preserve has been identified as the most pristine piece of coastal property in the state of Florida, which features 1,600 acres of stunning Gulf front, pine forests, nature trails over mountainous sand dunes.

Surroundings: Lake is one of two dune lakes located in the Topsail Hill State Preserve.

FLORIDA State Parks ...the Real Florida

TOPSAIL HILL STATE PRESERVE

PHOTO COURTESY: BEACH TO BAY CONNECTION WEBSITE

PHOTO COURTESY: U.S GEOLOGICAL SURVEY

Stallworth Lake:
Location: Located south of County Road 30A in the Dune Allen Area.

Impacts: Stallworth Preserve and Beach Highlands subdivisions surround the lake.

Surroundings: Lake is located on the eastern edge of Topsail Hill State Preserve.

Lake Allen:
Location: Located north of CR 30A in the Dune Allen area.

Impacts: Lake Allen is surrounded by Sea Dunes and Dune Allen Subdivisions.

Oyster Lake:
Location: Located south of CR 30A in the Dune Allen area.

Impacts: Oyster Lake is surrounded by Calypso Pointe, Maison Du Soleil near Vizcaya at Dune Allen, and Dune Allen Subdivisions.

Draper Lake:
Location: Located south of CR 30A in the Blue Mountain Beach Area..

Impacts: Draper Lake is surrounded by Crescent Caye at Draper Lake, Old Florida Beach and The Retreat, an Arvida-St. Joe Development.

Big Redfish Lake:
Location: Located south of CR 30A near Grayton State Park on the north side of Blue Lake Road.

Impacts: The lake is located adjacent to the Blue Mountain Beach Subdivision.

Little Redfish Lake:
Location: Located south of CR 30A near Grayton State Park and Big Redfish Lake.

Impacts: Little Redfish Lake is bounded to the north by two exclusive neighborhoods: Bannerman Beach and Redfish Lane.

Alligator Lake:
Location: Located south of CR 30A in the Grayton State Park Area..

Impacts: Alligator Lake, 24 acres in size, is surrounded by Gulf Trace Beach and Forest Dunes estates Subdivisions.

Western Lake:
Location: Located north and south of CR 30A in the Grayton Beach or Seagrove Beach Area..

Impacts: Western Lake, one of the largest lakes in South Walton, is surrounded by numerous subdivisions and is actually comprised of two connected bodies of water. The area in the Grayton State Park Area is often referred to as Grayton Lake.

Eastern Lake:
Location: Located on the north and south of CR 30A near Deer Lake State Park.

Impacts: Eastern Lake, 58 acres in size, is surrounded by Lakewood Pointe Estates , Lakewood of Seagrove Beach, Heron's Watch,

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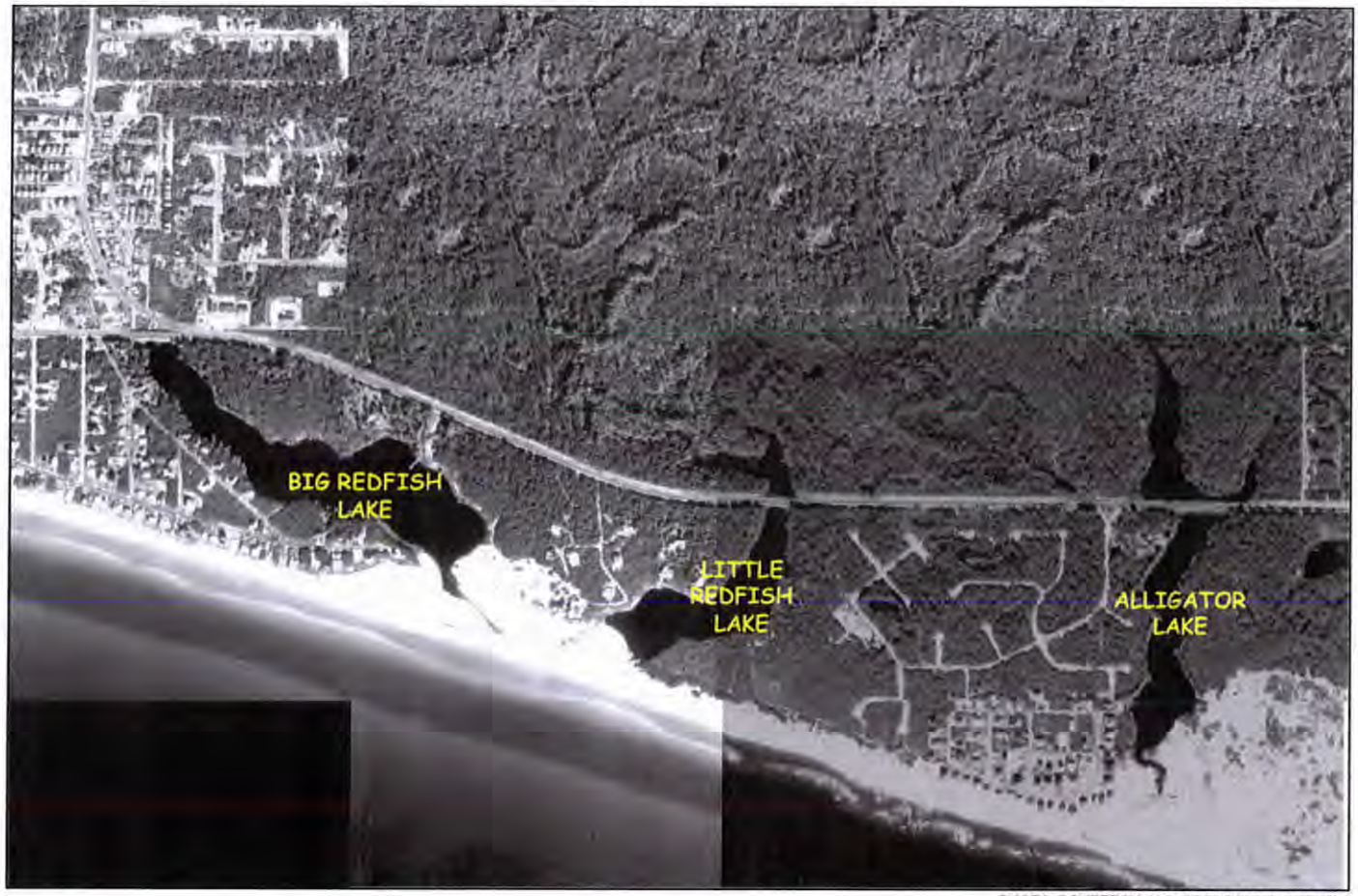


PHOTO COURTESY: U.S GEOLOGICAL SURVEY

USGS Quadrangle Map of Oyster, Big Redfish, Little Redfish, Alligator and Western Dune Lakes

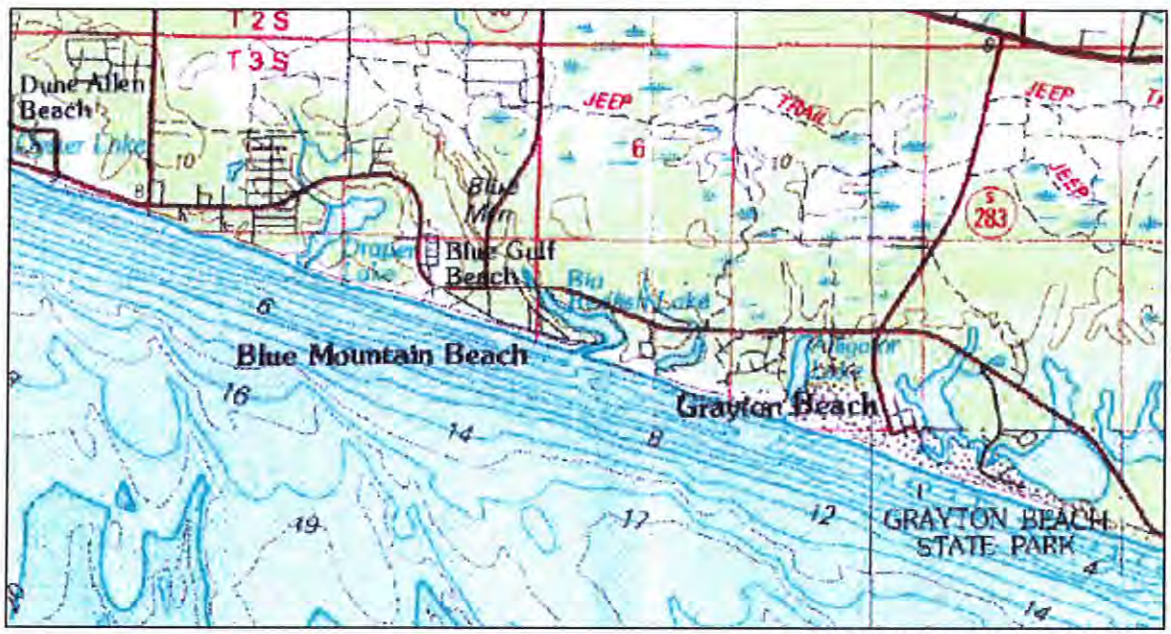


PHOTO COURTESY: U.S GEOLOGICAL SURVEY

Eastern Lake Estates, Pompano Point, and Summer Dream subdivisions.

Tresca Lake:
Location: Located south of CR 30A adjacent to Eastern Lake.

Impacts: Tresca Lake is located to the east of Eastern Lake. It is surrounded by Beachside Villas, Sugar Dunes, and Sun Gulf Duplex.

Camp Creek Lake:
Location: Located north and south of CR 30A in the Deer Lake State Park Area.

Impacts: Camp Creek Lake, approximately 91 acres in size, is surrounded by Watersound, Country Cabins, Seabreeze, Camp Creek Cove, Ramsgate Townhomes, and Villas at Camp Creek subdivisions.

Lake Powell:
Location: Located predominately in Bay County on both the north and south sides of US Highway 98.

PHOTO COURTESY: U.S GEOLOGICAL SURVEY

Impacts: Lake Powell is impacted by the North Inlet Beach Community, as well as Lake Shore Estates, Watson's View, and Lake Powell Estates Subdivisions.

USGS Quadrangle Map of Alligator, Western, Eastern, Tresca, and Deer Dune Lakes

PHOTO COURTESY: U.S GEOLOGICAL SURVEY

PHOTO COURTESY: BEACH TO BAY CONNECTION WEBSITE

PHOTO COURTESY: U.S GEOLOGICAL SURVEY

USGS Quadrangle Map of Camp Creek and Lake Powell Dune Lakes

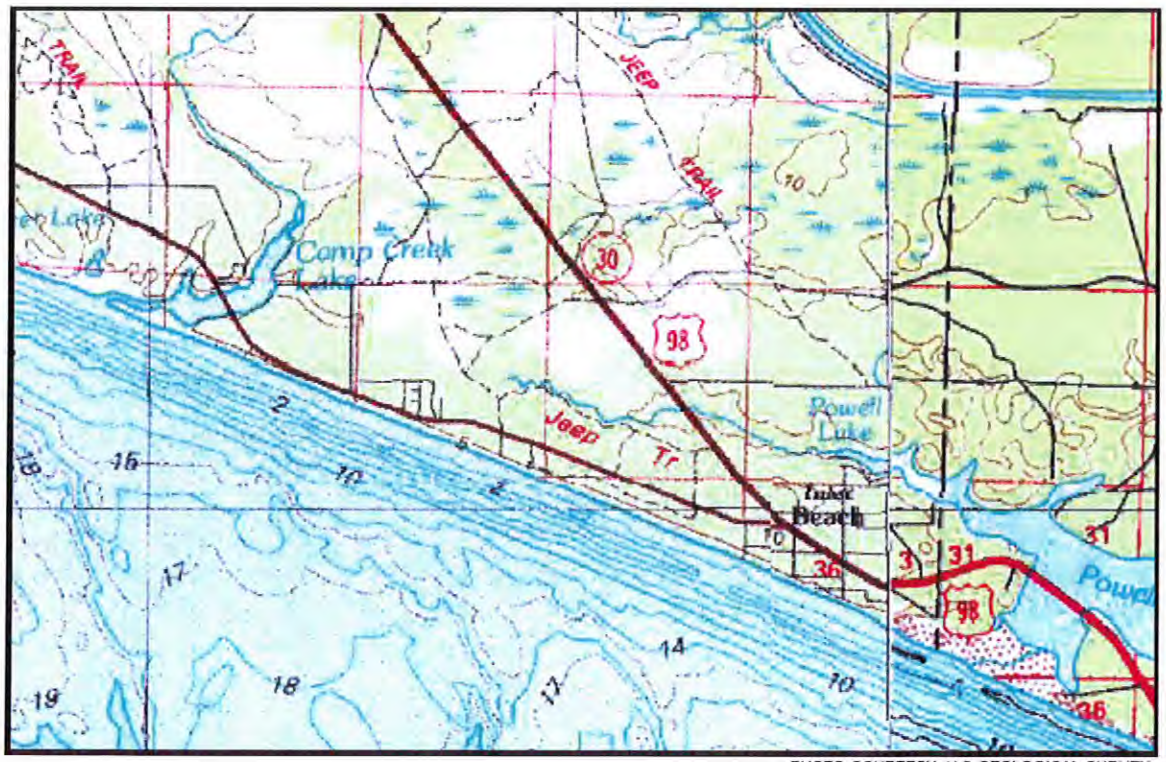


PHOTO COURTESY: U.S GEOLOGICAL SURVEY

Dune Lake (FAQ)

Frequently Asked Questions

Extracted from the LAKEWATCH Website

What is a dune lake?

It is a lake formed by wind. The larger category is "Aeolian lake" which is defined as "a lake formed by wind activity in arid regions, which may erode rock or redistribute sand forming dune lakes." Most of these coastal dune lakes in South Walton are "mesotrophic," which means they have moderate levels of algae and plant production. They contain beach and dune sand with silty sand, silt and many different formations of clay. They are unusually shallow, averaging about 5 feet, and were formed between 2,000 and 10,000 years ago. They are generally permanent water bodies, although water levels may fluctuate substantially due to rain, groundwater seepage through the surrounding coastal sands, and storms. Sand dunes ranging in height from a few to more than 30 feet separate the lakes from the gulf.

Where are they found in the United States?

Coastal dune lakes are rare worldwide. In the U.S., they are almost exclusively found along the Gulf Coast.

Are they unique? How so?

The lakes often have passes that open to the Gulf, which allow salt water and fresh water to continually exchange and flush out the lakes, creating some of the most distinct ecosystems in the world, according to Lakewatch Director Julie Terrell. They are characterized by the intermittent nature of this connection to the Gulf. When the water level, through rain or other inflow, reaches a certain critical height, the lake will "blow out" and release its water into the gulf. At that point, seawater may enter to create an estuary.

After the lake water level subsides, the connection to the Gulf will disappear until the lake is ready to discharge once more. The outfall (inlet) areas are part of the dynamic ever-changing coastal environment. These areas are not stable and are continually subjected to storm and wave overwash and shifting sands. The fact that they share salt water and fresh water is what separates these lakes from all others, according to Harold Mitchell, an environmental specialist at the Department of Environmental Protection.

Because of the changing nature of the water, these lakes are known to be biologically diverse with many different marine species. They are also an important source of freshwater to migrating birds and other beach organisms. Wise use and management of coastal dune lakes and their connection to the sea is important to the integrity of the coastal ecosystem, according to Gail Carmody, Field Supervisor with the Fish and Wildlife Service.

How many do we have in South Walton and what are their names? Where can we see them?

They are seen as one travels from west to east along U.S. Highway 98 and County Road 30-A. Their names are:

Stewart Lake · Horseshoe Lake · Fuller Lake · Morris Lake · Campbell Lake · Stallworth Lake · Lake Allen Lake · Oyster Lake · Draper Lake · Big Redfish Lake · Little Redfish Lake · Alligator Lake · Western Lake · Eastern Lake · Tresca Lake · Deer Lake · Camp Creek Lake · Lake Powell

What kind of protection exists for these lakes? What is being done currently to protect them? Is development impeding?

The Florida Natural Areas Inventory has classified these lakes as "critically imperiled in Florida because of extreme rarity" and has identified drainage alteration as a threat to these lakes. The Walton County Comprehensive Plan states in Policy L-1.6.2. that "no construction or disturbance will be allowed in the natural outlet from a coastal dune lake. A buffer area of not less than fifty (50) feet of vegetated area will be left undisturbed along either side of the natural outlet from the lake."

The county has formed a Coastal Dune Lakes Advisory Board to keep a watchful eye on development's impact on the lakes. Most researchers agree that the lakes are understudied unique bodies of water and are endangered by ever-encroaching development. Most conservationists say the dune lake system's intrinsic value is incalculable.

What can the general population do to help?

"What folks need to do is talk to their local government about planning issues and controlling growth," states Department of Environmental Protection biologist in Pensacola, Randall Payne. He continues," developers need to be reminded to avoid disturbing the land and to maintain the dunes protecting the lakes. People have to learn to live with, accept, and appreciate the natural environment without trying to change it into something else."

For more information on coastal dune lakes or on how to become a volunteer for the nonprofit organization Lakewatch, call 1-800-**LAKEWATCH**.

Florida LAKEWATCH
7922 NW 71st Street
Gainesville, FL 32653-3071
352/392-4817 Fax 352/392-4902
1-800-LAKEWATCH (525-3928)
E-mail lakewat@ufl.edu

EXCERPTS FROM THE WALTON COUNTY LAND DEVELOPMENT CODE

CHAPTER IV. RESOURCE PROTECTION STANDARDS

4.02.00. COASTAL RESOURCE PROTECTION

4.02.03. Coastal Dune Lake Protection Zone.

*Location of Coastal **Dune Lake** Protection Zones.* All lands within an area beginning at the mean or ordinary high water line of the coastal dune lakes and their tributaries and extending 300 feet landward.

4.02.06. Restrictions on Development.

B. *Within the Coastal **Dune Lake** Protection Zone.* Development shall be allowed within this zone, subject to the following restrictions:

1. **Septic tanks:** Septic tank drain fields must be located at least 100 feet from the ordinary or mean high water line, whichever applies;

2. **Stormwater management:** New lots shall be graded to ensure untreated stormwater runoff from lawn fertilizers, pesticides, or patios, driveways, etc. do not enter the lake. If regional stormwater facilities will not provide this standard, the lot shall utilize a vegetated swale and berm system, underground seepage system or other stormwater treatment method between the developed area and the lake to hold and treat runoff, consistent with the level of service standard for drainage facilities adopted in this plan.

3. **Erosion control:** Specific erosion control measures shall be utilized during construction activity, such as staked and staggered hay bales, siltation barriers, floating silt and filter berms. Further, erosion and sedimentation controls shall be left in place until the disturbed areas are stabilized with permanent vegetation that will prevent the transport of sediment off site.

In addition to erosion control during construction, stabilization of the shoreline shall be provided by limiting clearing of natural vegetation within 100 feet of the mean or ordinary high water line of the shoreline to 25 percent of the site.

4. **Hazardous wastes:** No land use shall be allowed within the zone which stores, handles or generates hazardous wastes.

5. **Seawalls, bulkheads, revetments** and **rip-rap** are not permitted.

6. **Endangered Species:** Native vegetative communities, including habitat for listed species, in this zone shall be protected in accordance with Policy C-3.2.7. of the Comprehensive Plan.

7. No new point or non-point sources of pollution shall be discharged into the lakes, such as treated wastewater effluent or untreated stormwater runoff.

8. **Open Space:** all new development and redevelopment shall preserve at least 75 percent of the portion of the parcel within the 300-foot protection zone in open space. Vegetative clearing within this preserved area shall be limited to that which is necessary to accommodate the 25 percent development that is permitted, plus a 10 foot cleared buffer immediately adjacent to buildings.

9. No construction or disturbance will be allowed in the natural outlet from a coastal ***dune lake***. A buffer area of not less than fifty (50) feet of vegetated area will be left undisturbed along either side of the natural outlet from the lake.

CHAPTER IV. RESOURCE PROTECTION STANDARDS

4.06.00. WILDLIFE HABITAT AND UNIQUE NATURAL AREAS

4.06.02. General Native Vegetation & Wildlife Habitat Preservation Requirements.

3. For development on parcels of two acres or more in areas characterized by sand pine scrub, longleaf pine sandhill, or xeric oak scrub communities, 50 percent of the natural scrub vegetation on the site shall be retained. Where the natural community on one parcel is contiguous with native plant natural community on one or more adjacent parcels, the developable portion shall be located to minimize disruption of this contiguity to the maximum extent possible. This requirement shall be applied on a site-by-site basis and shall apply to public as well as private development. Within coastal ***dune lake*** drainage basins, the above-mentioned percentage of native vegetation shall be preserved, and in addition, the removal of native vegetation and its replacement by lawns and landscaping shall be kept to the minimum which is reasonably necessary to develop the property.

EXCERPTS FROM THE WALTON COUNTY COMPREHENSIVE PLAN

GOAL L-1C: PROTECT PEOPLE & PROPERTY BY LIMITING PUBLIC EXPENDITURES IN AREAS SUBJECT TO DESTRUCTION BY NATURAL DISASTERS & BY RESTRICTING DEVELOPMENT ACTIVITIES THAT WOULD DAMAGE OR DESTROY COASTAL OR NATURAL RESOURCES.

Objective L-1.6: Natural Resource Protection

Policy L-1.6.2: No construction or disturbance will be allowed in the natural outlet from a coastal ***dune lake***. A buffer area of not less than fifty (50) feet of vegetated area will be left undisturbed along either side of the natural outlet from the lake.

Objective C-3.2: Protection of Environmentally Sensitive Areas

Policy C- 3.2.7:

3. For development on parcels of two acres of more in areas characterized by sand pine scrub, longleaf pine sandhill, or xeric oak scrub communities, 50 percent of the natural scrub vegetation on the site shall be retained. Where the natural community on one parcel is contiguous with natural community on one or more adjacent parcels, the developable portion shall be located to minimize disruption of this contiguity to the maximum extent possible. This requirement shall be applied on a site-by-site basis and shall apply to public as well as private development. Within coastal ***dune lake*** drainage basins, the above-mentioned percentage of native vegetation shall be preserved, and in

addition, the removal of native vegetation and its replacement by lawns and landscaping shall be kept to the minimum which is reasonably necessary to develop the property.

4. For development on parcels of two (2) acres of more in the mixed hardwood and pine native upland vegetation community, 25 percent of the natural community vegetation on the site shall be retained. Where the community on one parcel is contiguous with native plant community on one or more adjacent parcels, the developable portion shall be located to minimize disruption of this contiguity to the maximum extent possible. This requirement shall be applied on a site-by-site basis and shall apply to public as well as private development. Within coastal ***dune lake*** drainage basins, the above-mentioned percentage of native vegetation shall be preserved, and in addition, the removal of native vegetation and its replacement by lawns and landscaping shall be kept to the minimum which is reasonably necessary to develop the property.

Policy C-3.2.8: The coastal dune lakefront protection zone is defined as the zone beginning at the mean or ordinary high water line of the coastal dune lakes and extending 300 feet landward for all coastal dune lakes and their tributaries depicted on the map entitled: Walton County Coastal ***Dune Lake*** System. Development shall be allowed within this zone, so long as the following standards will be met:

1. **Septic tanks:** Septic tank drain fields must be located at least 100 feet from the ordinary or mean high water line, whichever applies;

2. **Stormwater management:** New lots shall be graded to ensure untreated stormwater runoff from lawn fertilizers, pesticides, or patios, driveways, etc. do not enter the lake. If regional stormwater facilities will not provide this standard, the lot shall utilize a vegetated swale and berm system, underground seepage system or other stormwater treatment method between the developed area and the lake to hold and treat runoff, consistent with the level of service standard for drainage facilities adopted in this plan.

3. **Erosion control:** Specific erosion control measures shall be utilized during construction activity, such as staked and staggered hay bales, siltation barriers, floating silt and filter berms. Further, erosion and sedimentation controls shall be left in place until the disturbed areas are stabilized with permanent vegetation that will prevent the transport of sediment off site.

In addition to erosion control during construction, stabilization of the shoreline shall be provided by limiting clearing of natural vegetation within 100 feet of the mean or ordinary high water line of the shoreline to 25 percent of the site.

4. **Hazardous wastes:** No land use shall be allowed within the zone which stores, handles or generates hazardous wastes.

5. **Seawalls, bulkheads, revetments** and **rip-rap** are not permitted.

6. **Endangered Species:** Native vegetative communities, including habitat for listed species, in this zone shall be protected in accordance with Policy C-3.2.7.

7. No new point or non-point **sources of pollution** shall be discharged into the lakes, such as treated wastewater effluent or untreated stormwater runoff.

8. **Setback:** all new development and redevelopment, including septic tank drain fields shall be setback from the mean high water line at least 100 feet.

9. **Open Space:** all new development and redevelopment shall preserve at least 75 percent of the portion of the parcel within the 300-foot protection zone as open space. Vegetative clearing within this preserved area shall be limited to that which is necessary to accommodate the 25 percent development that is permitted, plus a 10 foot cleared buffer immediately adjacent to buildings.

Development in the Walton County Coastal Dune Lakefront Protection Zone shall be allowed with the following stipulations:

1. **Septic tanks:** Drain fields must be located 100 feet from the mean high water line;

2. **Stormwater management:** New lots shall be graded to ensure untreated stormwater runoff from fertilizers, pesticides, patios, driveways, etc. do not enter the lake.

3. **Erosion control:** Specific erosion control measures shall be utilized during construction activity, such as staked and staggered hay bales, siltation barriers, floating silt and filter berms.

4. **Hazardous wastes:** No land use shall be allowed within the zone which stores, handles or generates hazardous wastes.

5. **Seawalls, bulkheads, revetments** and **rip-rap** are not permitted.

6. **Endangered Species:** Native vegetative communities, including habitat for listed species, shall be protected.

7. No new point or non-point **sources of pollution** shall be discharged into the lakes.

8. **Setback:** All new development and redevelopment shall be setback from the mean high water line 100 feet.

9. **Open Space:** All new development and redevelopment shall preserve 75 percent of the portion of the parcel within the 300-foot protection zone as open space.

REPORT TO THE BOARD OF COUNTY COMMISIONERS FROM JACK ARTHUR,P.E., GROWTH MANAGEMENT DIRECTOR

DUNE LAKES ADVISORY BOARD

I have reviewed the information available to me about the Dune Lakes Advisory Board, including minutes of meeting from May 11, 2000 thru April 20, 2001. This presents my observations of their activities and some recommendations.

Originally established as the Dune Lakes Task Force, the Board of County Commissioners, in regular session on May 8, 2001, approved their position as an official advisory board, reporting to the Growth Management Director.

I commend the Board for recognizing the uniqueness of the coastal dune lakes. Citizens that are willing and eager to devote their time and energy to protection of the lakes are equally commendable.

The role of the Growth Management Director is thought to be to receive reports and recommendations from the Advisory Board and to bring to the Board of County Commissioners such matters that may or should be of interest to the Board. Recommendations by the Dune Lakes Advisory Board shall be reviewed and action taken, if felt to be appropriate. If recommendations are such as to require Board approval, a report by the Growth Management Division shall be prepared and attached to the recommendation for your consideration.

The Dune Lakes Advisory Board has and can continue to provide a valuable service to Walton County in its protection of the unique resource that is our coastal dune lakes.

The Advisory Board has developed a "suggested" Mission Statement, with "suggested" objectives in the areas of Education, Action and Perpetual Protection. This mission statement should be finalized and submitted to the Board for adoption as the mission that the Board desires the Advisory Board to undertake. Emphasis should be on environmental and ecological issues.

I can recommend that this board continue, with some restructuring.

COMMENTS ON RESTRUCTURING

The Advisory Board, as it is presently structured, is made up of twenty (20) individuals, twelve (12) of which represent regulatory agencies and interest groups. Only four (4) are identified as "citizen". Membership on the Advisory Board seems to be based on interest and invitation.

I feel that the Advisory Board is perhaps too large. While the minutes of the meetings do not reflect attendance, my guess is that attendance is by a core group with spotty attendance by others. It is questionable if a quorum (10) is consistently present.

Terms of members have not been established and appointments are among other appointed Board for consideration.

My recommendation is that the membership be reduced to a workable number of citizens with the outside agencies and interest groups included as non-voting ex officio members. My recommendation is that membership be seven (7), with qualifications along the following lines.

❑ Three of the members be permanent or part-time residents of Walton County, living within one-half mile of one of the coastal dune lakes.

❑ One member should be from the area north of the Bay, perhaps even north of DeFuniak Springs.

❑ The remaining three members should be people with special qualifications thru education, experience or history with the lakes that bring special knowledge, skills or abilities to the deliberations.

❑ The non-voting ex officio members should also be officially appointed and should freely participate in the debate and provide specific expertise and/or interest.

Meetings should be noticed as are all Boards of the County, with special emphasis given when the published agenda contains a matter on which a recommendation is to be made to the Board of County Commissioners. A quorum should be required and a record of any vote on any recommendation made a part of the minutes.

If and when a recommendation is to be considered on any development project or land use change, the land owner, developer, agent or proponent should be invited to attend and to freely comment.

I recommend three year terms, with initial terms being three members for three years, three members for two years and two members for one year. Subsequent terms should all be for three years.

Robert's or some other rules of order should be adopted.

COMMENTS ON RECOMMENDATIONS PRESENTLY PENDING

(recommendations are numbered)

1. Make the waters of all coastal dune lakes no-wake zones for the protection of the shorelines.

COMMENT: If there is demonstrated damage to the shorelines, then this should

be considered. When damage occurs that can be attributed to the wake of boats, I would prefer to see limited imposition of "no-wake" zones until the damage is repaired and the shoreline restored. Otherwise, it would appear to be an unnecessary intrusion in the recreational use of the lake.

2. Limit motorized access to electric motors except allow motors no more than 15 horsepower on Western, Eastern and Camp Creek Lakes.

COMMENT: Same comment as 1., above. There has been some discussion about safety relative to this recommendation. I feel that the activities and recommendations of the Dune Lake Advisory Board should be limited to environmental and ecological concerns and that boating safety be left to the Sheriff, the Coast Guard or other agencies.

Certain negotiations are in progress between the Dune Lakes Task Force and the neighbors on Eastern Lake to designate the area north of the bridge as low a low activity area with the area south of the bridge as is. Perhaps this type of approach has potential.

3. Request that the Walton County Health Department extend bacteriological testing to the coastal dune lakes that are contiguous with development and identify and correct the source of contamination or pollution.

COMMENT: I feel that this recommendation is good, pending the acknowledgment by the Health Department that they have the resources to provide this service. Initial contact with the Health Department reflects their genuine interest in providing this service.

4. Request that the Storm Water Master Plan being developed for Walton County by Hartman & Associates, Inc. be expanded to include a special section addressing coastal dune lake protection.

COMMENT: I am not familiar with the exact scope of the Hartman contract but would expect that it would be an inherent part of their work. If not, or if a special section is required, it would involve a change of scope and additional fees. This contract is being managed by the Public Works Department

This section should include:

❑ Retrofit of drainage from County Road 30A and bike path to storm water treatment facilities.

COMMENT: Same comment as above.

❑ Storm water management for anticipated subdivisions.

COMMENT: Stormwater management for anticipated subdivisions is included as a part of a project design, under the Land Development Code. Revisions to the Land Development Code are already being considered in this area. There is no need for Hartman & Associates, Inc. to address this recommendation, except in a general way in the overall context of recommendations concerning Best Management Practices (BMP) or in specific suggestions for revisions to the Comprehensive Plan or Land Development Code.

5. Strictly enforce the existing coastal dune lake protection provisions.

COMMENT: I concur that the existing coastal dune lake protection provisions should be enforced.

6. If a water utility fee is adopted, the County should use the funds to fulfill the obligations of the Comprehensive Plan Objective C-2.3, which is to protect, assess, and maintain the water quality of the coastal dune lakes.

COMMENT: I presume that this refers to the creation of a Stormwater Utility and the use of the funds generated there under. Stormwater Management includes both water quality and water quantity. A Stormwater Utility, if created, would provide for maintenance and improvements in which both of these concerns are considered.

7. Enact coastal dune lake protection zone requirements (setbacks, prohibition of vegetative clearing, location of septic tanks, etc.) for the construction that is allowed under Policy L-1.1.9 of a single family dwelling on any lot of record as of December 28, 1992 and anticipated subdivisions.

COMMENT: This matter is included in a proposed Large Scale Amendment to Policy C-3.2.8.8. in the Comprehensive Plan that will be considered by the Planning Commission on October 30, 2001. Language change should also be considered for the rebuilding of those structures (commercial and residential) located within the coastal dune lake buffers that are destroyed by fire

or natural event.

8. Expand water and sewer system to development around lakes as soon as practical and develop incentives and requirements for connection.

COMMENT: This aspect of planning (i.e., utilities) has received little attention. Activities in this area should be expanded.

9. Pass a resolution which urges the Florida Department of Environmental Protection

to expeditiously complete the South Walton Ecosystem CARL project by the purchase of remaining out-parcels within the project boundaries. Preservation of these lands would help protect the water quality of various drainages to several of the coastal dune lakes, as well as many tributaries of Choctawhatchee Bay.

COMMENT: Those parts of the CARL project which have a direct relationship with the coastal dune lakes should be identified to narrow the scope of this recommendation. The activities of the Dune Lakes Advisory Board should be confined to matters that affect the coastal dune lakes.

10. Enact ordinances to prevent opening of coastal dune lakes without appropriate regulatory permission and establish parameters, procedures and guidelines for opening outlets.

COMMENT: Opening of the dune lakes to lower the water level can only be legally done with a permit from FDEP and/or USACOE. "Midnight" openings are already subject to action by these agencies and it is unlikely that additional County ordinances would be of benefit.

The Public Works Department is pursuing a management permit from the various agencies that would or should deal with this issue.

11. Encourage the County to employ an Environmental Director.

COMMENT: A position for an Environmental Planner within the Growth Management Division has been approved and will be filled soon.

ORDINANCE ESTABLISHING THE WALTON COUNTY DUNES LAKES ADVISORY BOARD, ITS DUTIES, MEMBERSHIP & TERMS

ORDINANCE NO. 2002-02

Editor's note—Ord. No. 2002-02, § 1, adopted Jan. 8, 2002, established the Coastal Dune Lakes Advisory Board designated as § 10.03.00 of the Land Development Code. For purposes of classification these provisions have been redesignated as § 9.07.00 on the MUNICODE.COM website.

•10.03.00. COASTAL DUNE LAKES ADVISORY BOARD

•10.03.01. Establishment.

There is hereby established a **Coastal Dune Lakes Advisory Board of Walton County**.

•10.03.02. Membership.

A. Generally. The Advisory Board shall consist of seven (7) members, appointed by the Board of county Commissioners for overlapping terms of three years. Not more than the terms of three (3) such members shall expire in any one year. A member whose term has expired may continue to serve until a successor is qualified and appointed. Any member may be removed from office by the Board of county Commissioners, with or without cause. No member shall be a paid or elected official or employee of the County.

B. Members shall have the following **qualifications**:

Four (4) of the members shall be full time or part time residents of Walton county, residing within one-half mile of one of the Coastal Dune Lakes.

One (1) member shall be a full-time resident of Walton County, residing north of Choctawhatchee Bay.

Two (2) members shall be appointed at large.

At least three (3) of the above shall be individuals with special qualifications thru education, experience or history with the lakes that bring special knowledge, skills or abilities to the deliberations.

C. Ex Officio Members:

The Advisory Board may have as many as ten (10) non-voting ex officio members representing recognized citizens groups, consultants under contract with the County and/or outside environmental agencies. The Advisory Board shall recommend these ex officio members to the Board of County Commissioners for appointment. The terms of ex officio members shall be for a two-year term.

D. Appointments:

Initial appointments shall be:

Three (3) members for three (3) years,

Two (2) members for two (2) years, and

Two (2) members for one (1) year.

Subsequent appointments and re-appointments shall be for three (3) years.

E. Vacancies.

Any vacancy in membership shall be filled by the Board of County Commissioners for the unexpired term. Such vacancy shall be filled within thirty (30) days after the vacancy occurs.

•10.03.03. Duties of the Advisory Board.

The duties of the Advisory Board shall be to monitor the coastal dune lakes and activities that effect the environmental conservation of the lakes that occur within the lake, within areas within the Coastal Dune Lake Protection Zone and within areas of the watersheds of the coastal dune lakes.

The Advisory Board shall adopt a Mission Statement describing the mission of the Advisory Board and shall submit it to the Board of County Commissioners for approval. Amendments and/or revisions to the approved Mission Statement may be submitted to the Board of County Commissioners at such intervals as the Advisory Board may determine.

The Board of County Commissioners may modify the Mission Statement of the Advisory Board at will.

•10.03.04. Rules and Procedures.

A. The Advisory Board shall elect a Chairman and a Vice-Chairman from within its membership.

B. The Advisory Board shall elect a secretary who shall record the activities of the Board and prepare minutes of all meetings for transmittal to the Board of County Commissioners.

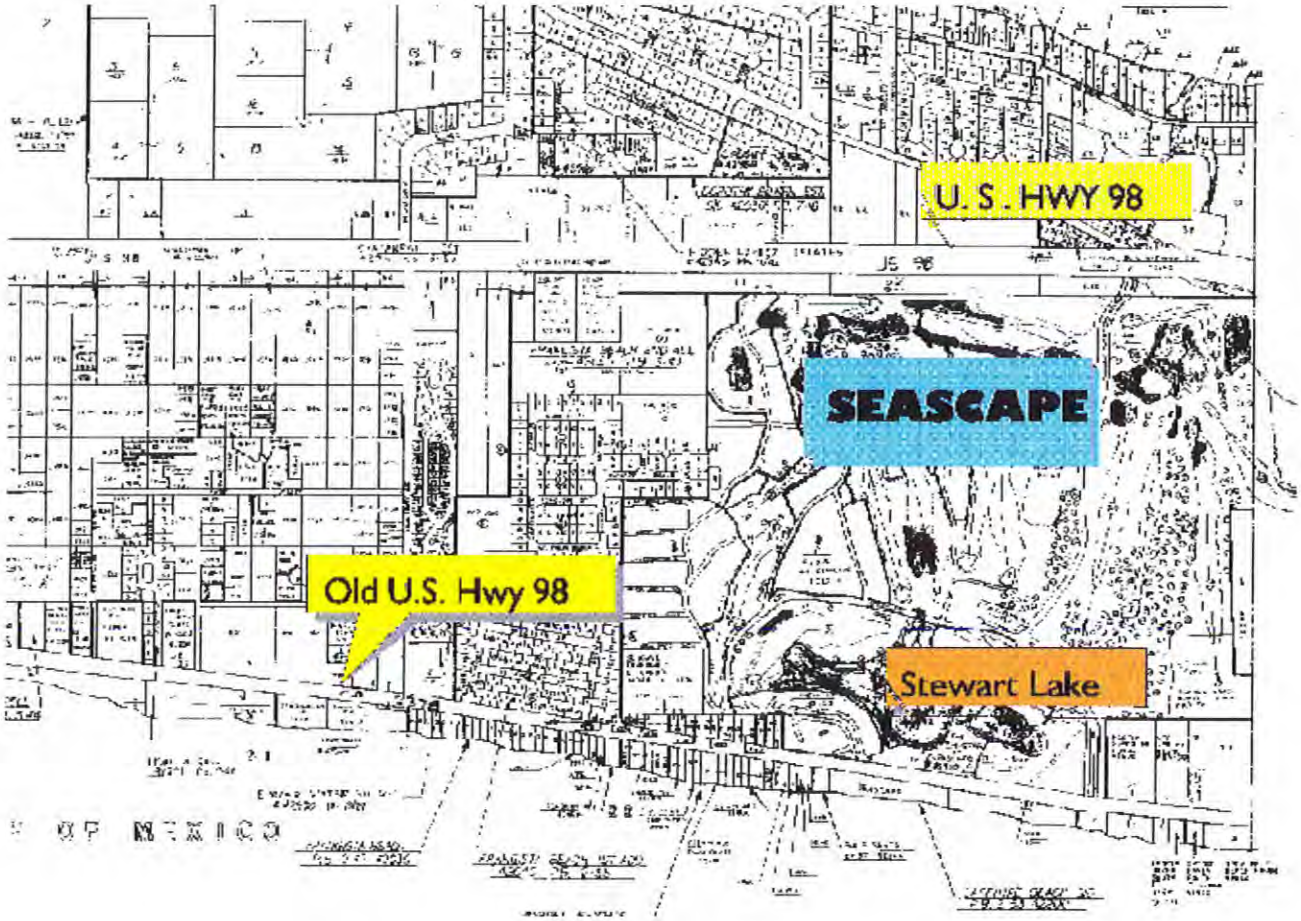
C. A quorum shall be required for any meeting and a record of attendance and a record of all votes, by member's name shall be a part of the minutes.

D. The Advisory Board may adopt such rules as they desire for the conduct of meeting.

E. All recommendations that are to be made shall be made to the Board of County Commissioners, in writing, through the Growth Management Director. Prior to submittal to the Board of County Commissioners, the Growth Management Director, or his designee, shall prepare a report offering comments and recommendations to the Board of County Commissioners and transmit same to the Board of County Commissioners at the earliest convenient and proper meeting.

F. All meetings of the Advisory Board shall be properly advertised and shall be subject to such open meetings laws as the State of Florida shall adopt. The advertisement shall include an agenda and no recommendation to the Board of County Commissioners shall be forwarded for any item that had not been on an advertised agenda.

(Ord. No. 2002-2, § 1, 1-8-02)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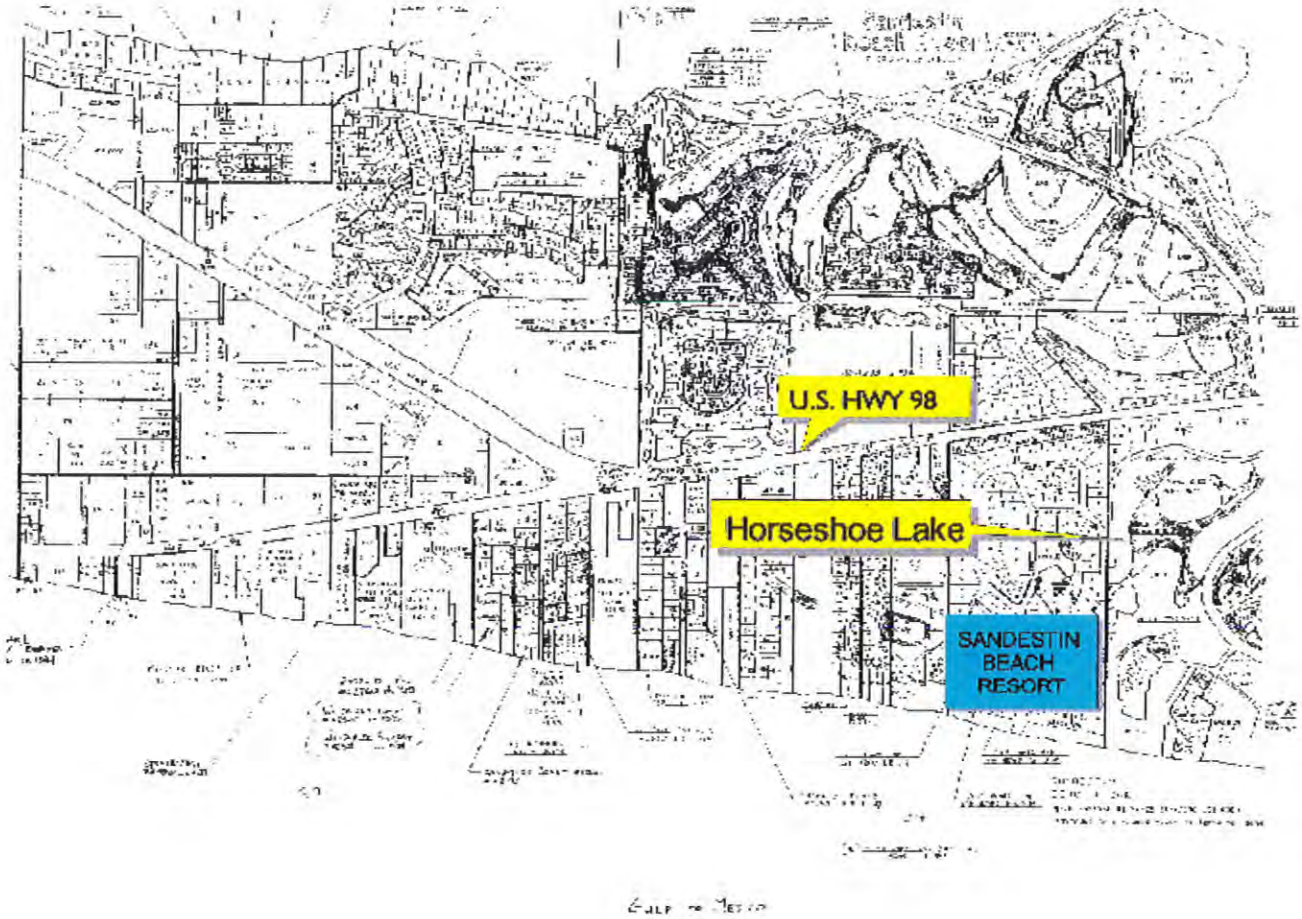
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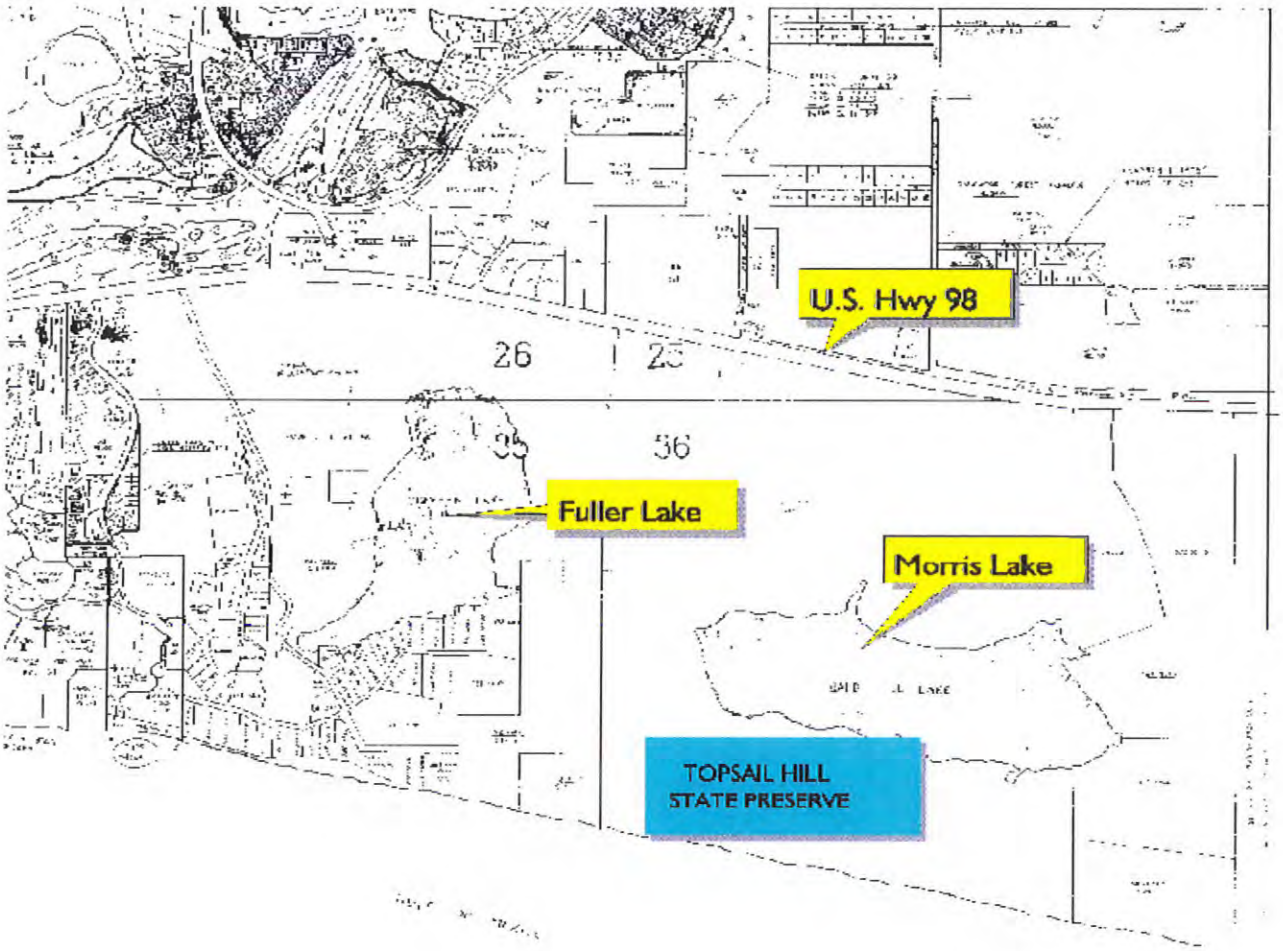
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Fuller Lake
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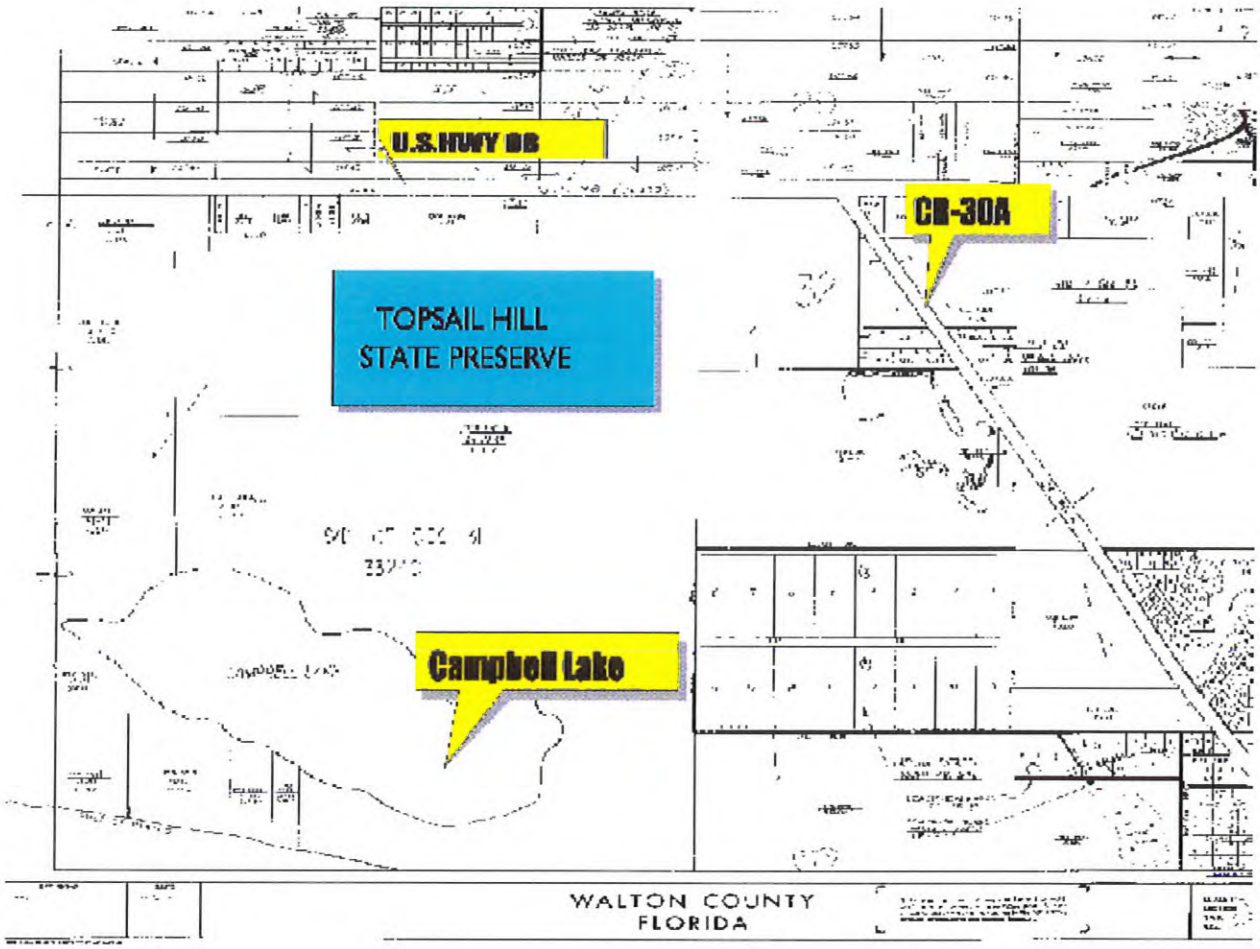
STATE PRESERVE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TOPSAIL HILL
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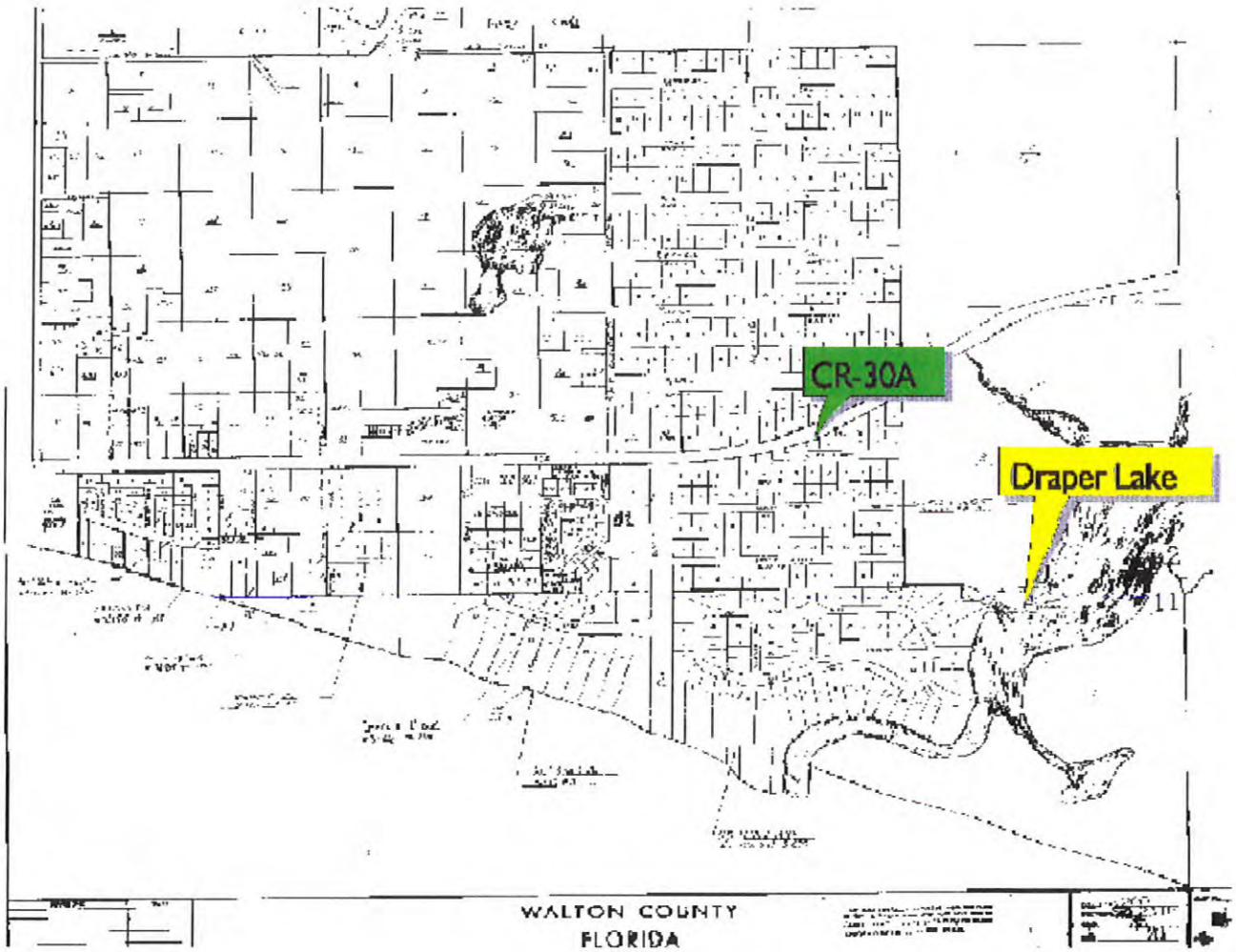
FLORIDA


Stallworth Lake
Lake Allen
CR-30A


Oyster Lake
CR-30A
GULF PLACE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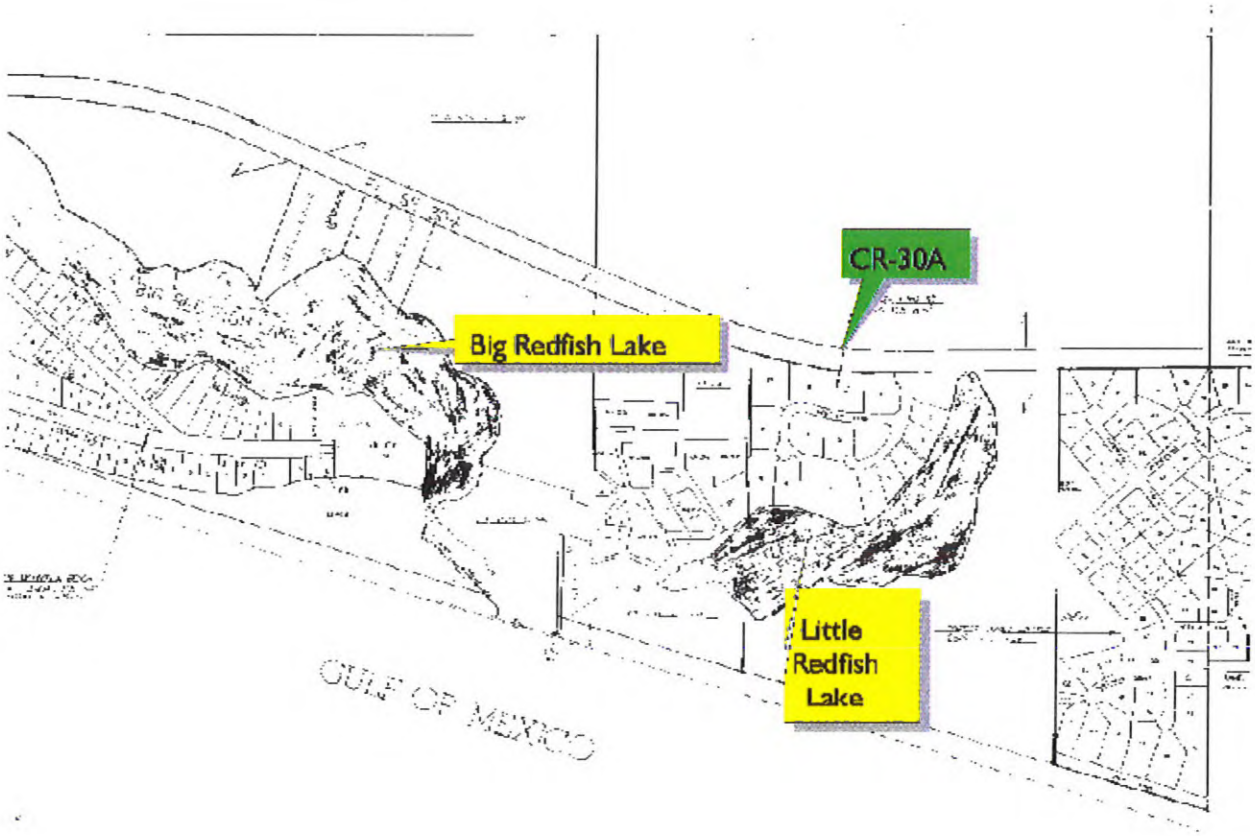
WALTON COUNTY
FLORIDA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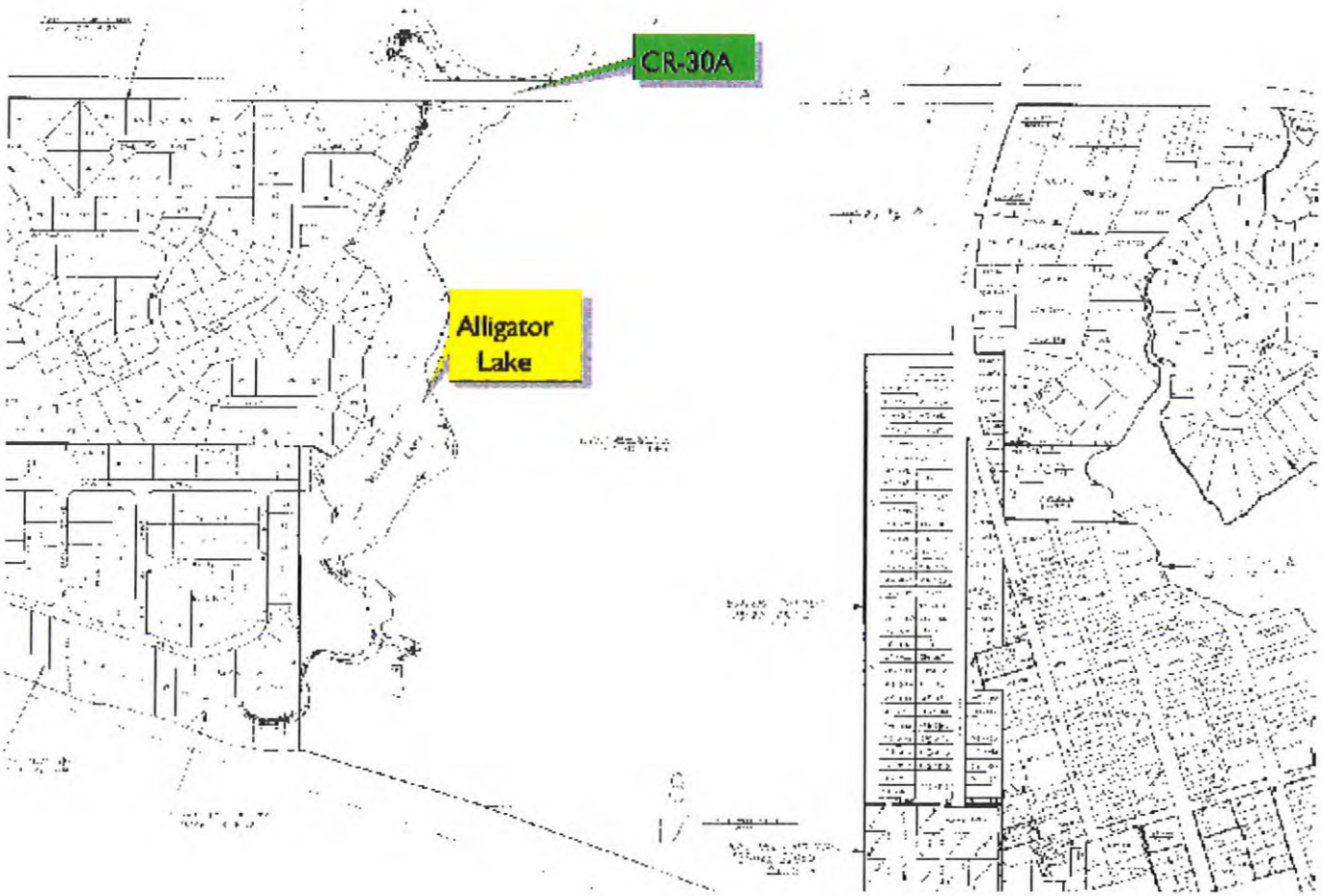
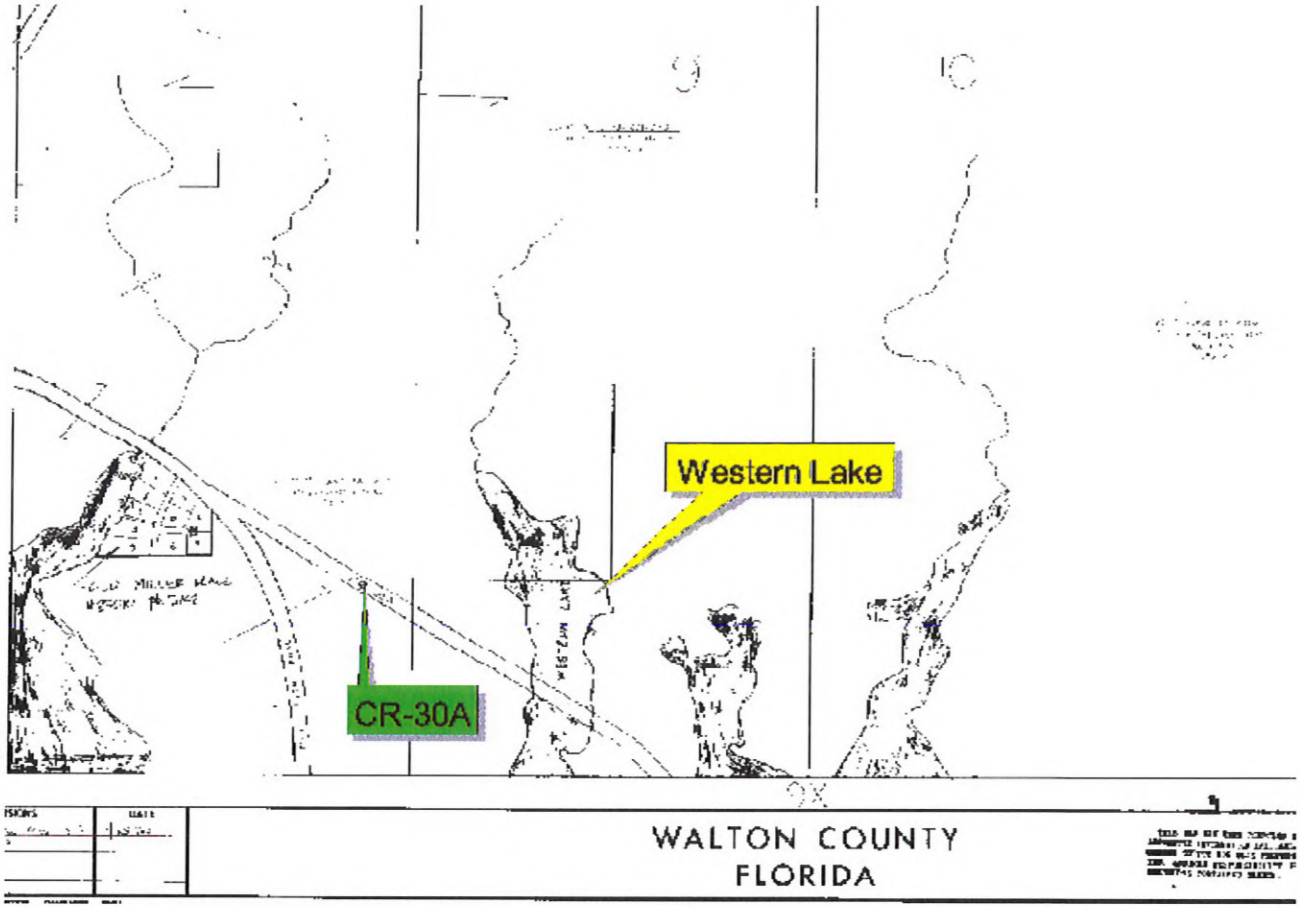
Big Redfish Lake
Little Redfish Lake
GULF OF MEXICO


CR-30A
Alligator
Lake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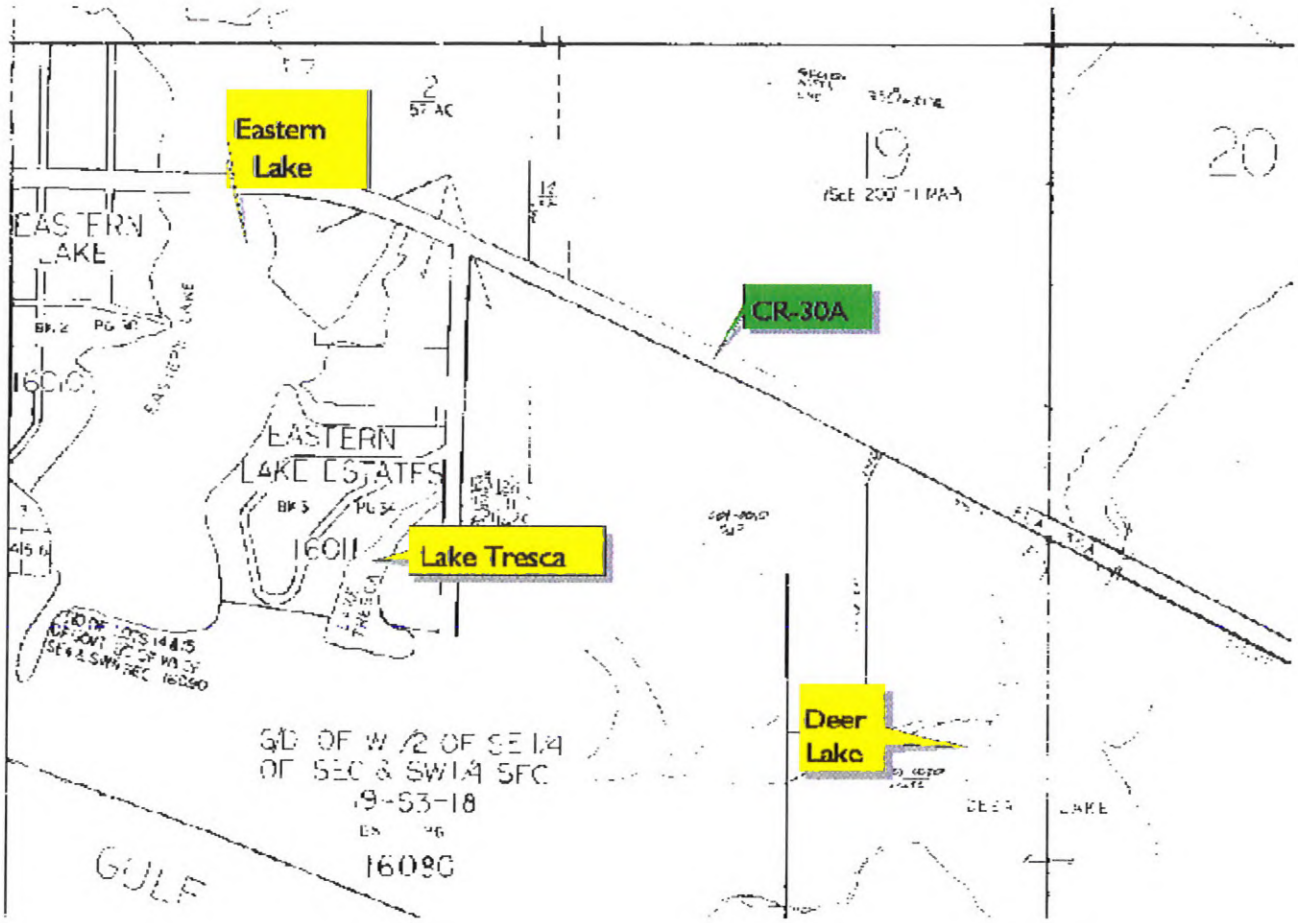
FLORIDA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Lake Tresca
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EASTERN LAKE
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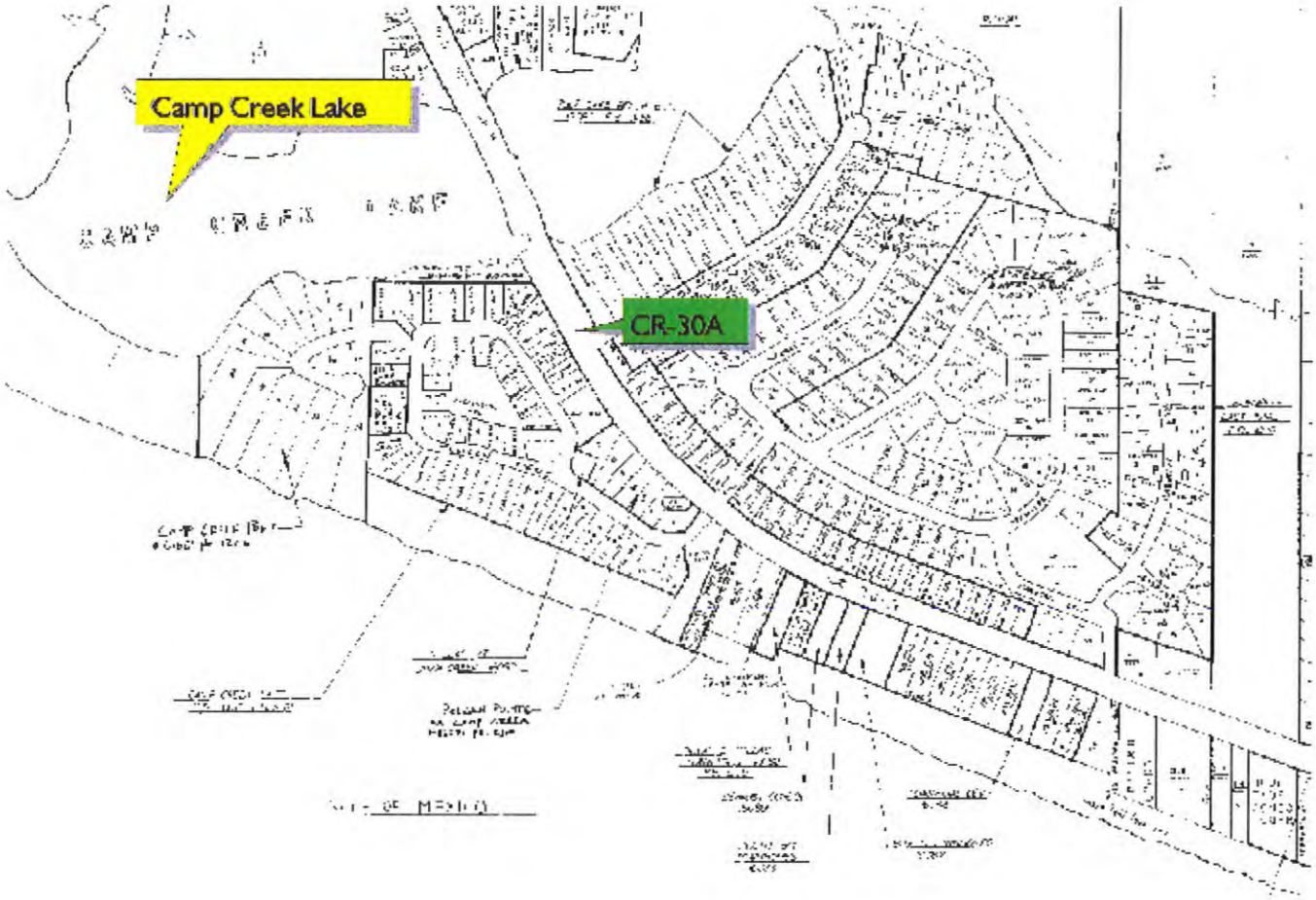
GULF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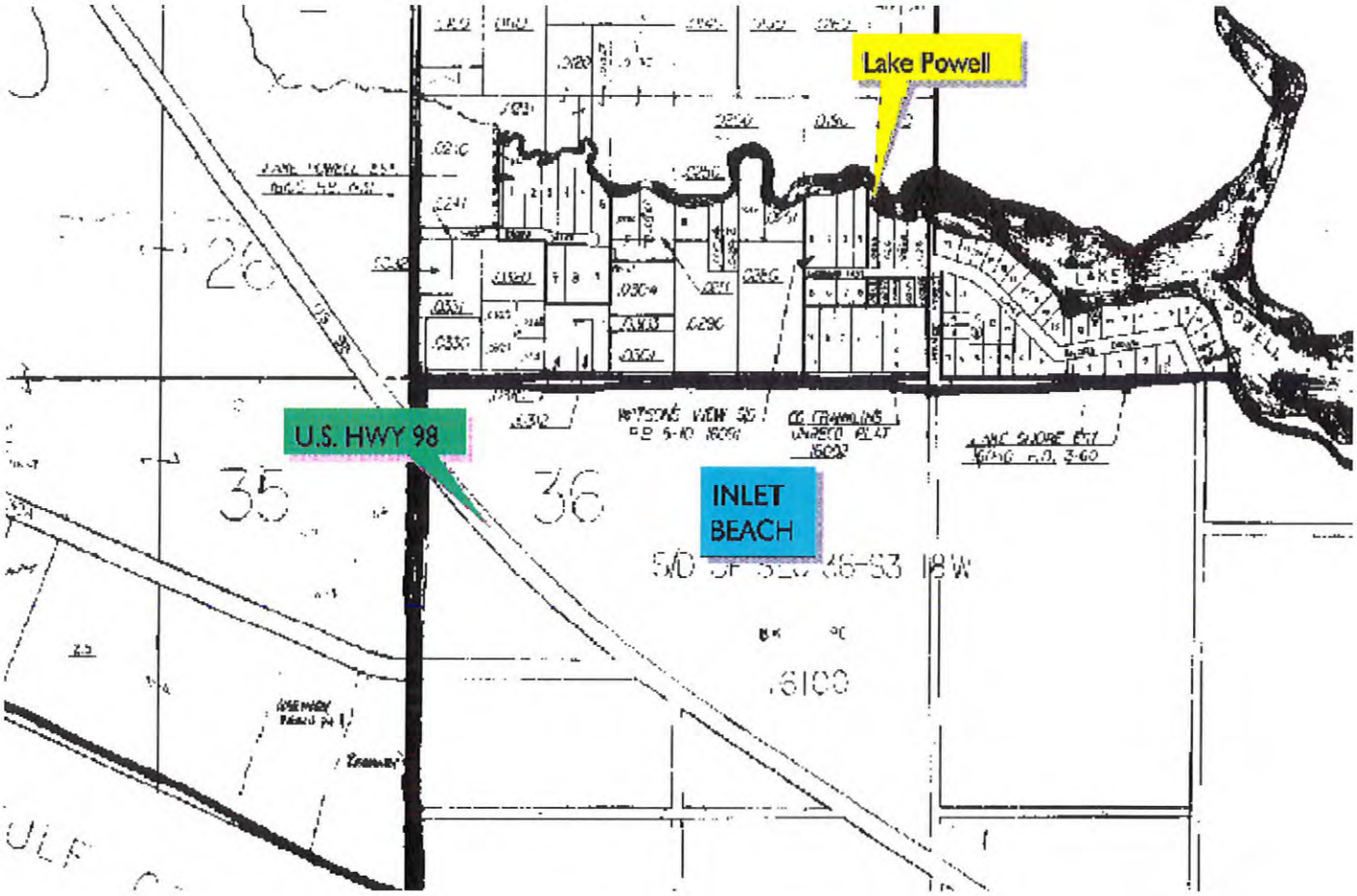
Lake Powell
U.S. HWY 98
INLET BEACH
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26

U.S. FISH AND WILDLIFE SERVICE
DIVISION OF ENDANGERED SPECIES

SPECIES ACCOUNTS

Source: *Endangered and Threatened Species of the Southeastern United States (The Red Book)* FWS Region 4 — As of 2/91

CHOCTAWATCHEE BEACH MOUSE

Peromyscus polionotus allophrys

FAMILY: Muridae

STATUS: Endangered, *Federal Register*, June 6, 1985

DESCRIPTION: The Choctawhatchee beach mouse has a small body, haired tail, relatively large ears, and protuberant eyes. Head and body length is 2.7 to 3.5 inches; tail length is 1.7 to 2.5 inches. The upper parts are colored orange-brown to yellow-brown, the underparts are white, and the tail has a variable dorsal stripe. A nocturnal herbivore, this beach mouse probably feeds primarily on the seeds of sea oats and bunch-grass. Arthropods are eaten seasonally in spring and summer. To date, no studies on life history or ecology have been conducted on this species.

REPRODUCTION AND DEVELOPMENT: A population of Choctawatchee beach mice is capable of producing a maximum of six generations per year. Actual reproduction rates are probably less. Breeding may occur at any time, but reaches its peak during fall and winter. Litter size may range from two to seven. Beach mice are monogamous and remain in the same home range until the death of either mate. Their average lifespan is 180 days. Females reach sexual maturity at 6 weeks of age.

RANGE AND POPULATION LEVEL: Historically known from Okaloosa, Walton and Bay Counties, Florida, the Choctawhatchee beach mouse was originally found along the Gulf on mature coastal dunes between Choctawhatchee and St. Andrew Bays. Its current distribution is apparently limited to two areas: (1) approximately 4.9 miles of beach from around Morrison Lake eastward to Stalworth Lake (Topsail Hill area, Walton County), and (2) Shell Island at St. Andrews Bay in Bay County. In 1979, the species' total population was conservatively estimated at 515, consisting of 357 beach mice on Shell Island, and 158 mice in the Topsail Hill area. In addition to that estimate, in 1987-88, thirty Choctawhatchee Beach Mice were reestablished on Grayton Beach State Recreation Area. Surveys indicate that these mice are reproducing.

HABITAT: The habitat is restricted to the mature coastal barrier sand dunes along the Gulf. The depth of the habitat extending inland may vary depending on the configuration of the sand dune system and the vegetation present. There are commonly several rows of dunes paralleling the shoreline and within these rows there are generally three types of micro-habitat. The frontal dunes are sparsely vegetated with widely scattered coarse grasses including sea oats (*Uniola paniculata*); bunch grass (*Andropogon maritimus*); and beach grass (*Panicum amarum* and *P. repens*); and with seaside rosemary (*Ceratiola ericoides*); beach morning glory (*Ipomoea stolonifera*); and a railroad vine (*I. pes-caprae*). Frontal dune grasses also appear as a lesser component on the higher rear dunes.

The interdunal areas contain sedges (*Cyperus* sp.); rushes (*Juncus scirpoides*); and salt-grass (*Distichlis spicata*).

The dunes farther inland from the Gulf support growths of slash pine (*Pinus elliotti*); sand pine (*P. clausa*); and scrubby shrubs and oaks, including yaupon (*Ilex vomitoria*), marsh elder (*Iva* sp.), scrub oak (*Quercus myrtifolia*), and sand-live oak (*Q. virginiana* var. *maritima*).

The beach mice dig burrows mainly on the lee side of the primary dunes and in other secondary and interior dunes where the vegetation provides suitable cover. The mice may also use ghost crab (*Ocypoda quadratus*) burrows.

CRITICAL HABITAT: Areas of land, water, and airspace in Walton and Bay Counties with the following components

(Tallahassee Meridian): (1) those portions of T2S R21W E 5/8 Sec. 35, Sec. 36, T2S R20W S 1/4 Sec. 31, T3S R20W W 1/8 Sec. 4, N 1/2 Sec. 5, NE 1/4 Sec. 6, extending 152.5 meters (500 feet) inland from mean high tide line of the Gulf of Mexico; (2) those portions of T3S R19W W 1/2 Sec. 15 and Sec. 16 extending 152.5 meters (500 feet) inland from mean high tide line of the Gulf of Mexico; (3) those portions of the mainland part of the St. Andrews State Recreation Area in T4S R15W Sec. 21 and Sec. 22, extending 152.5 meters (500 feet) inland from the mean high tide line of the Gulf of Mexico; (4) those portions of Shell Island in T4S R15W Sec. 25-27 and Sec. 36, T4S R14W Sec. 31, T5S R14W Sec. 4-6, extending 152.5 meters (500 feet) inland from the mean high tide line of the Gulf of Mexico.

Within these areas the major constituent elements that are known to require special management considerations or protection are dunes and interdunal areas, and associated grasses and shrubs that provide food and cover.

REASONS FOR CURRENT STATUS: Destruction of Gulf coast sand dune ecosystems for commercial and residential development has destroyed about 60 percent of the original habitat. A 1979 survey (Humphrey and Barbour 1981) indicated that the beach mouse had been extirpated from 7 of 9 previously known habitat areas, although this loss was mitigated somewhat by the discovery of a new population on Shell Island. Results of this survey also suggested that the house mouse (*Mus musculus*), through competition for food and cover, may have displaced the beach mouse in the mainland portion of St. Andrews State Recreation Area (across the channel from Shell Island). Human dwellings in the vicinity of beach mouse habitat serve as points of introduction for house mice. Predation by feral house cats associated with residential development may also occur.

Tropical storms periodically devastate sand dune communities, dramatically altering or destroying habitat, drowning beach mice, and concentrating the mice on high scrub dunes where they are exposed to predators. Habitat loss and fragmentation from development increases the potential impact from this threat.

MANAGEMENT AND PROTECTION: The most effective conservation measure would be the preservation of the remaining privately-owned, mature, sand dune systems and the protection and enhancement of the publicly-owned sand dune systems at the Grayton Beach State Recreation Area, Walton County; at the St. Andrews State Recreation Area, Bay County, and at the portion of the Tyndall Air Force Base located on the eastern end of Shell Island, Bay County. On the publicly-owned lands, strict exclusion of off-road vehicles from the sand dunes would allow natural processes to maintain good beach mouse habitat. Strict control of pedestrian access across the dunes, by limiting pedestrians to elevated boardwalks, would also serve to protect the fragile dune vegetation. The planting of native dune vegetation would enhance ecological succession in severely eroded areas. Healthy, mature sand dunes have a better chance of withstanding the impacts of tropical storms, thus protecting beach mouse habitat, than do eroded dunes.

Associated with residential and commercial development are feral house cats, which may prey upon beach mice, and house mice which may compete with beach mice for food and cover. The control of feral house cats and house mice would be desirable and could be achieved through an aggressive public education program. The installation of animal-proof refuse containers and efficient refuse disposal systems might attract fewer potential mouse predators.

Recovery efforts for the Choctawhatchee beach mouse include a cooperative reestablishment study conducted in 1987 and 1988. Twenty pairs of mice were translocated from Shell Island to Grayton Beach State Recreation Area in Walton County. Surveys in May of 1989 indicate the reintroduced population is low, but persisting.

In addition, the Alabama Cooperative Wildlife Research Unit at Auburn University maintains a captive breeding facility for endangered beach mice.

Florida Statute Section 370.041 protects sea oats. The law generally prohibits the picking of sea oats, but provides no protection during land conversion activities.

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Briese, L. A., and M. H. Smith. 1973. Competition Between *Mus musculus* and *Peromyscus polionotus*. J. Mamm. 54:968-969.

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Meyers, J.M. 1983. Status, Microhabitat, and Management Recommendations for *Peromyscus polionotus* on Gulf Coast beaches. Rept. to U.S. Fish and Wildl. Serv., Atlanta. 29 pp.

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**U.S. Fish and Wildlife Service. 1987. Choctawhatchee Beach Mouse, Perdido Key Beach Mouse, and Alabama Beach Mouse Recovery Plan. U.S. Fish and Wildlife Service, Atlanta, Georgia. 45 pp.

For more information please contact:

U.S. Fish and Wildlife Service
3100 University Boulevard, South Suite 120
Jacksonville, Florida 32216

Telephone: 904/791-2580

Growth Management Department Material Evaluation Form

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Our mission at the Walton County Urban Development Department is to be the best County Planning/ Building Department in the Southeast. We strive to be recognized for our innovations, responsiveness, and community-oriented spirit.

Your feedback helps us do a better job. If you could please take a few minutes to fill out the following information for us, it will help us assess and improve our work.

* *

Material Critique: **Dune Lakes Advisory Board Manual**

Please rate the following elements of this material by checking the appropriate box:

	Too Little	Just Right	Too Much
Background Information			
Details			
Length of Manual			
Clarity of Materials			
Other, _____			

Suggestions for the material's format:_____

_____

Suggestions for future editions:_____

_____

Other comments, thoughts, ideas:_____

_____

Name (Optional):_____

Thanks for taking the time to help us.

Fax: 892-8162
Mail: Growth Management Department, P.O. Drawer 689, DeFuniak Springs, FL 32435
Call: Jack A. Arthur - Director: 892-8157
E-mail: artjack@co.walton.fl.us
Drop by and visit: 1st Floor of the NW County Annex
http://www.co.walton.fl.us

DUNE LAKE ADVISORY BOARD

[redacted]

PROPOSED MISSION STATEMENT

"To serve , protect and perpetuate the Coastal Dune Lakes of Walton County through mitigation of the effects of developments"

PROPOSED BOARD OBJECTIVES

ACTION

Identify all Coastal Dune Lakes.

Ascertain their health, condition, and pressure from development.

Develop an action plan for each lake. The plan should include a monitoring program for each lake that will continue on into the future.

Establish "neighborhood watch program" involvingmlocal residents in testing and protection.

Determine additio0nal scientific data needed.

EDUCATIONAL

Become educated as to origin, function, fragility, uniqueness, and value of the Coastal Dune Lakes to our ecosystem.

Collect and analyze existing scientific knowledge concerning the coastal dune lakes.

Identify all regulatory entities and existing regulations (county, state, federal).

Evaluate the existing assets in interested groups and regulatory entities to preserve and protect the lakes and coordinate their efforts.

Data collected should be archived and available to the public.

PERPETUAL PROTECTION

Develop a public awareness and educational program about the coastal dune lakes (example: Turtle Watch Program).

Develop a plan to educate existing abutting land owners and developers as to protection and preservation practices.

Re-comment to regulatory agencies additional protection and enforcement measures.

Coordinate with the formation of the storm water master plan to assure consideration of dune lakes and coordinate with water and sewer providers to encourage them to extend sewer to coastal dune lakes and basin.

FOR COPIES OF THIS MANUAL
Contact the
Growth Management Department
Walton County
Post Office Drawer 689
DeFuniak Springs, FL 32435
(850) 892-8157