categories: physical capacity, ecological capacity, facility capacity, and social capacity.

Human recreational impacts on the river's resource are immensely important. Every recreational use of the river produces some level of impact on the river. The recreational use becomes significant when any adverse impacts created outweigh any recreational benefit gained.

The ultimate physical limit of capacity is the amount of space available for people and their defined recreational needs. In the case of the Myakka River, it might include the number of recreational uses that could physically occur on the river segments at any one time with enough spacing between them to allow for a minimum level of user safety. The ultimate carrying capacity under such conditions would be far more than the current use levels on the river.

Currently, there is no segment of the river on which the physical capacity has been attained. Ecological carrying capacity of the river is probably also above current use levels, although certain areas exhibit impacts from use. There are problems with the agitation of sediment, the destruction of grass beds, and the possibility of injuries to manatees by motorboat use.

To facilitate recreational use of the river, public access and facilities are required. The limited access to the northern segment of the Myakka River currently imposes a limited facility carrying capacity. When use of these facilities are maximized, the facility carrying capacity of these facilities has been attained. Access and facility capacity are probably the most flexible of the categories since they may exact the smallest initial cost and may be the most acceptable solutions in the general public view.

Facility capacity in the state park is partially measured in terms of the size of the parking area at the State Park boat ramp. This capacity is exceeded on many weekend days during the year, particularly in the spring. Facility capacity could be increased by the construction of additional parking areas. The southern segment of the river has many private facilities that can generally accommodate peak demands.

Probably the most subjective capacity perspective is social capacity. Social capacity involves the issue of visitation level in an area before the recreational experience is significantly degraded. Social carrying capacity is complex due to many different recreational uses available on the river. A single canoeist's impact on social carrying capacity is quite different from that of tourists on a 70-passenger tour boat.

The most significant variable affecting recreational carrying capacity on the Myakka River is probably social capacity. In establishing a recreational carrying capacity for the river, the management program recognizes that there is no widely shared preference regarding experience types by recreational users of the river. The management program should, therefore, accommodate a wide range of recreational uses and preferences without promoting overcrowding, safety problems or degradation of natural resources.

5.4.2 Derivation of Recreational Carrying Capacity

Two basic patterns of recreational use presently occur on the Myakka River. The first is recreational use which provides the solitude associated with the unique natural attributes of the river. The second is recreational use more socially oriented in nature. These patterns reflect preferences for two distinct types of recreational experiences. The first type is a wilderness experience, typified by quiet, slow movement affording the opportunity to appreciate the river's vegetation and wildlife. Types of activities associated with this type of use are small groups of canoeists, fishermen, and nature observers. Such activities generally occur on the northern river segment and selected areas of the southern segment of the river distant from development. The participants who prefer this type of experience may tolerate some visual or auditory contact with other people but only on a limited basis. Generally, the morning hours are preferred for such activities, since this is usually the time of least human activity and greatest wildlife activity on the river.

The second type of experience is less of a wilderness-oriented, resource-based activity than it is a people-oriented experience. Such activities include large groups of canoeists, pleasure boaters, and swimmers. Generally,

such uses occur on the southern segment of the river where access, adequate width and depth of the river, and private recreational facilities are available. An anomoly to these experiences is the tour boat operating on the Upper Myakka Lake which accommodates groups of people trying to obtain the first type of wilderness-oriented, resource-based experience in a social atmosphere.

Additional criteria have been used to derive the recreational carrying capacity for the Myakka River. These include interviews with facility operators along the river, an informational survey, guidelines for resource-based outdoor recreation activities, and the estimated 1990 outdoor recreation demand-supply ratios for Manatee and Sarasota Counties.

Based on information at hand, it has been determined that the segments of the river will have different recreational carrying capacities. Upper Myakka Lake will contain a recreational carrying capacity based on current recreational facilities available. Boat ingress should be limited to the boat ramp on the lake and access along the lakeshore should be discouraged. The segment which occurs from Upper Myakka Lake downstream to Border Road will have a carrying capacity based on wilderness-oriented, resource-based activity and experience. The majority of this area is within the boundaries of the Myakka River State Park or adjacent to the Carlton Reserve and based on activities originating at the park or from downstream private launch facilities.

Presently, the state park does not limit the number of users of the boat ramp. The actual number of parking spaces available at the boat ramp is 79; however, users frequently park in nondesignated areas around the ramp when the parking spaces are full. Parking, ingress, and egress at nondesignated access points along the park road and State Road 72 should be restricted.

A determination of the recreational carrying capacity for the segment of the river from Border Road to U.S. Highway 41 is also based on physical restrictions. The river is not appreciably wider than upstream segments and contains numerous meanders and bluffs that restrict visibility. Erosion is also a greater problem in this river segment due to the presence of steep river banks and meanders which cause greater wakes due to boat turning

movements. Currently, there is no public access located in this area. There are several private access facilities including Snook Haven, Ramblers Rest Resort, and Becky's Bait. These private facilities promote various recreational activities. The recreational carrying capacity of the Myakka River from Border Road to U.S. Highway 41 should be set by the existing private facilities which provide access to the river. In the extreme southern area of the river there are several residential communities and extensive private access to the river. Limiting the recreational carrying capacity for this area of the river should also be based on existing access for recreational use. Additional facilities for access to the Myakka River should be discouraged by the various river management agencies. The natural sill north of U.S. Highway 41 will act as a physical constraint for certain boats to access upper reaches of the Myakka River.

Because of the limited duration of research conducted during the development of the Myakka Wild and Scenic River Management Plan, there is a need to establish a more accurate recreational carrying capacity for the wild and scenic segment of the Myakka River. Therefore, after adoption of the plan a monitoring of recreational use will be conducted by DNR on the Myakka River. The Department will closely monitor impacts resulting from the levels of use. Carrying capacities will be reviewed on at least an annual basis, and adjustments will be made, as needed, after consideration of known resource impacts, increases in use, user preferences, river conditions, and other factors.

5.4.3 Scheduling and Enforcement

After adoption of the plan, DNR and other appropriate agencies, with input from interested groups and individuals, will develop and implement a system for monitoring use of the river and the determination and enforcement of recreational carrying capacity. This system would be jointly implemented by the Department and other appropriate agencies in accordance with formal interagency agreements. It shall not be the DNR's policy to deny public recreational use on the river, except as noted under certain actions in the plan.

6.0 PLAN IMPLEMENTATION

In preceding chapters, this plan has sought to identify the outstanding economic, scenic, recreational, geologic, fish and wildlife, historic, cultural or ecological features that combine to make the Myakka River an area of unique natural resource values. The plan has also sought to set forth a program of principles, objectives, and specific actions to be undertaken to ensure that these resource values are permanently preserved and enhanced for the citizens of the State of Florida both present and future.

The permanent management and administration of the river involves a complex interaction of local, regional, state and federal interests that require balancing and coordination of purpose. By working together, both public and private interests can be achieved through the implementation of the actions of this plan.

6.1 MANAGEMENT COORDINATION

Management of the Myakka Wild and Scenic River segment will be accomplished through the cooperative actions of many local, regional, state, and federal agencies having vested interests in the river. An important function of the river management program will be to coordinate the management activities of the various involved agencies.

The Council was established in part to ensure effective interagency and intergovernmental coordination of management for the river. The Council is represented by a broad spectrum of local, regional, and state agencies; agricultural interests; environmental organizations; public entities; and others recognized by the Legislature and Department as having an interest in matters that affect the administration and management of the river (see Appendix E). Historically, proper coordination, particularly between agencies and other members of the Council, has been lacking.

The purpose of the Council is to function as a collective organization. Council members are appointed because they represent larger interests and the public at large. During the critical period of initial plan implementation, the Council should strive to coordinate in the management of the river area in a collective fashion. The Council has the responsibility and authority to

review and make recommendations on all proposals for amendments or modifications to Section 258.501, Florida Statutes, and to this management plan, as well as on other matters that may be brought before the Council by DNR, any local government, or any member of the Council. The Council shall render its nonbinding advisory opinion to DNR, Southwest Florida Water Management District, Sarasota County, the City of North Port, and other affected agencies.

The Council will play a key role in ensuring that the objectives of the plan are realized by identifying and resolving coordination problems and enhancing communication between all interests in the river area. The Council may formally review problems associated with the plan and provide recommendations to the appropriate decisionmaking or management agencies. The Council may also review and may provide advisory recommendations on any permits required by Section 258.501, Florida Statutes. However, the Council's review may not impede the timely processing of those permits.

Monitoring the implementation of the plan is also an important activity. Due to the number of affected agencies and the size and complexity of the Council, issues and problems, and recommended actions, an independent review by the Council of implementation efforts is suggested to accurately monitor and determine implementation progress. This review should be conducted on an annual basis.

6.2 PLAN REVIEW AND AMENDMENT

The Myakka Wild and Scenic River Management Plan will be reviewed and, if necessary, revised periodically, at least at 5-year intervals, to ensure that the objectives and actions of the management program remain relevant to achieving the plan's preservation and enhancement principles. All regular (5-year) reviews of the plan will be conducted by DNR with the assistance of the Council.

Any revision or modification of the approved management plan will be accomplished through essentially the same process used to adopt the original plan. Amendments to the plan may be proposed at any time by DNR or the Council. The Council may, at its discretion, appoint a subcommittee or other

appropriate work group to further analyze the proposed revision before making its final recommendations. The analysis of the Council will identify or predict: 1) any potential adverse affect on any resource value of the river area which may result as a direct or indirect consequence of the proposed plan amendment; and 2) any other matters the Council finds desirable. The Council will meet to make its recommendations to DNR. All amendments to the plan must be approved by DNR.

6.3 AREAS FOR LEGISLATIVE CONSIDERATION

The final section of this plan summarizes the major actions that are recommended to be taken to implement the findings of the plan. Most of the actions are the responsibility of DNR. Many local, regional, state, and federal agencies, as well as private interests, however, will play vital roles in the overall execution of the management program (see Appendix D).

Specific actions for special consideration include the following:

- Adopt a rule to establish standards for regulating activities in the river area (Action 1.1)
- Amend Section 258.501, Florida Statutes, to: 1) establish the wild and scenic protection zone, 2) require local governments to amend their comprehensive plans as may be necessary to be in conformance with, or more stringent than, this plan and management guidelines and criteria promulgated by DNR with assistance from DCA, and 3) require local governments to adopt any necessary ordinances and regulations to carry out the purposes of this plan and DNR's guidelines and criteria (Action 1.2).
- Recommend legislative amendments of the Native Flora Of Florida Act, Chapter 581, Florida Statutes (Action 1.12).
- Revise Manatee County's Mining and Reclamation Ordinance No. 81-22 to include language similar to that of the Myakka River watershed for the Manatee River watershed (Action 2.3).
- Amend Chapter 17-3, FAC, to designate the entire Myakka River as an Outstanding Florida Water (Action 2.7).
- Prohibit mining of resources in the river area (Action 2.12).
- Petition applicable management agencies to conduct a master watershed study (Action 2.13).

- Implement a manatee management plan (Action 3.5).
- Develop and implement land use design standards for development within the wild and scenic protection zone (Action 4.6).
- Enact by rule a slow/minimum wake speed limit zone for the Myakka River from the Sarasota/Manatee County line to the Sarasota/Charlotte County line (Action 7.2).
- Enact a nuisance noise ordinance to minimize noise impacts on the Myakka River, if warranted (Action 7.3).
- Establish idle-speed/no-wake zones in designated areas of Myakka River (Action 7.5).

In addition, the legislature needs to provide adequate funding for the studies identified in Section 5.0, as well as for an increase in DNR staff to implement the various actions. It is projected that a minimum staffing to implement various actions of this plan will require two park officers for enforcement; two environmental specialists (I and II position levels) for permitting, coordination, and reviews; and a park ranger for resource management activities. Operating capital outlay and expenses will also be necessary for computer supplies, site development, utilities, fuel and lubricants, travel, a computer and printer, two boats and motors, miscellaneous law enforcement equipment, a modular home, two radios, and other expenses and outlays.

While the actions set forth in Section 5.0 represents the plan's major recommendations, it should not be viewed as a comprehensive listing of all the activities that will be taken to implement the plan. Rather, it should be viewed as indicative of the types of actions that will be needed to ensure that the river's special attributes are permanently preserved and enhanced. Some of the actions represent ongoing activities of the various agencies. Additional actions may be identified as implementation of the plan progresses. Where possible, estimates of funding required to complete these activities and a projected completion date for each has been included in the plan. The implementation of these actions is governed by applicable law and the availability of the funds. All agencies are expected to assume responsibility for implementing those recommended actions relevant to their functional areas of responsibility.

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GLOSSARY

Activity--Any project and such other human action within the river area which is regulated or permitted by the Department of Natural Resources.

Aesthetic Values--Scenic characteristics or amenities of the river in its essentially natural state or condition, and the maintenance thereof.

Benthic Communities--Any sovereignty submerged land where any of the following associations of indigenous interdependent plants and animals occur: grass beds, algal beds, sponge beds, octocoral patches or beds, hard coral patches or reefs, and tidal swamps, including mangroves, identified in any reports submitted pursuant to Section 18-21.004(2)(c), FAC. Communities is intended to reflect identifiable assemblages of organisms as opposed to scattered or single individuals.

Best Possible Technology--The most advanced technology which provides the maximum protection possible for the public health, safety, and welfare, and which minimizes to the greatest degree possible any adverse impacts of mining on the watershed. Best possible technology may include, but is not limited to: innovative reclamation techniques; augmentation of public water supplies that could be adversely affected by mining activities; construction of secondary containment structures or other measures to ensure against catastrophic failure of primary containment structures; below-grade slime ponds; elimination of mine site rock dryers; and zero point discharge; provided, however, such requirements shall not be required if the applicant demonstrates they are technologically infeasible. In ascertaining the best possible technology, economic disadvantages shall only be considered relevant when analyzed in relation to other applicants conducting mining activities in the watershed.

Channel--A trench, the bottom of which is normally covered entirely by water, with the upper edges of its sides normally below water.

Conservation--The wise use of native habitats other than those required to be preserved. Conservation areas often consist of native habitat that has been set aside to fulfill open space requirements.

Coordinating Council--The council created by Subsection 258.501(6), Florida Statutes, namely the Myakka River Management Coordinating Council.

Department--The Department of Natural Resources.

Discharge--To allow or cause water to flow. (Applicant's Handbook, Management and Storage of Surface Waters, SJRWMD, 1988.)

Division--The Division of Recreation and Parks of the Department of Natural Resources.

Dock--A fixed or floating structure, including moorings, used for the purpose of berthing buoyant vessels.

Dredge and Fill--Any construction activity that results in the excavation or fill of wetlands and surface waters.

Easement--A non-possessory interest in sovereignty lands created by a grant or agreement which confers upon the applicant the limited right, liberty, and privilege to use said lands for a specific purpose and for a specific time.

Enhancement--The restoration of an altered aquatic, upland, or wetland habitat to its original native condition.

Executive Board--The Governor and Cabinet sitting as the head of the Department of Natural Resources.

Exotic Species--Refers to any undesirable organism that is not native or indigenous in the area where it occurs (e.g., Brazilian pepper, Australian pine, hydrilla, water hyacinth, punk tree, muskovy duck, fire ants, and armadillo).

Hammock--Those broad-leafed forests that range from very dry (xeric) to seasonally flooded (mesic-hydric) conditions. Hammocks are probably the most confusing and variable of plant associations in Florida and are often confused with true forested wetlands or hardwood swamps. The two main differences between hammock and hardwood swamp are hydroperiod and dominant vegetation. Hammocks, as opposed to swamps, are sometimes inundated, but not of a sufficient duration to support a dominance of aquatic trees. Hammocks along the Myakka River are typically dominated by mesic trees, such as live oak, laurel oak, and cabbage palm.

Hardwood Swamp--Those wooded areas that are inundated by surface or ground water with a frequency sufficient to support and under normal circumstances do support a prevalence of aquatic trees and other life requiring saturated or seasonally saturated soil conditions for growth and reproduction. The most common hardwood swamp along the Myakka River is either single species or mixed associations of deciduous hardwood trees such as popash, red maple, black tupelo, water locust, and Florida elm.

K-selected Species--A term applied to describe certain characteristics of organisms' life cycles. In general, a K-selected species has slower development, delayed reproduction, larger body size, a lifespan greater than one year, lives in more constant and predictable environments, and has a fairly constant population size at or near the carrying capacity of the environment.

Landing--A place for the coming to shore or of the going or putting ashore.

Maintenance--Remedial work of a nature as may affect the safety of any dam, impoundment, reservoir, or appurtenant work or works, but excludes routine custodial maintenance [Section 373.403(8), Florida Statutes].

Major New Infrastructure Facility--Such facilities which would have the effect of stimulating or encouraging growth.

Mean High Water--The average height of the high tides over a 19-year period. For shorter periods of observation, "mean high water" means the average height

of the high waters after corrections are applied to eliminate known variations and to reduce the result to the equivalent of a mean 19-year value.

Native Habitats--Those areas of Sarasota County described in the Sarasota County Habitat Study, and/or generally located on the Sarasota County Habitat Map with the exceptions of the Intensive Agriculture and Developed Features Habitat.

Nuisance Species--Refers to any biologically undesirable organism that is native or naturalized in the area where it occurs (e.g., cattail).

Pier--A structure built extending over the water and supported by pillars or piles; used as a landing place.

Preservation--The perpetual maintenance of habitats in their existing (or restored) native condition.

Public Interest--Demonstrable environmental, social, and economic benefits which would accrue to the public at large as a result of a proposed action, and which would clearly exceed all demonstrable environmental, social, and economic costs of the proposed action. In determining the public interest in a request for use, sale, lease, or transfer of interest in sovereignty lands or severance of materials from sovereignty lands, the board shall consider the ultimate project and purpose to be served by said use, sale, lease, or transfer of lands or materials.

Public Necessity--Those services provided by persons regulated by the Public Service Commission, or which are provided by rural cooperatives, municipalities, or other governmental agencies, including electricity, telephone, public water and wastewater, and structures necessary for the provision of these services.

Public Utilities--Those services, provided by persons regulated by the Public Service Commission, or which are provided by rural cooperatives, municipalities, or other governmental agencies, including electricity,

telephone, public water and wastewater services, and structures necessary for the provision of these services.

Resource Value--Any one or more of the specific economic, scenic, recreational, geologic, fish and wildlife, historic, cultural, or ecological features associated with the river area as determined by the coordinating council.

Resource Management Agreement--A contractual agreement between the Board and one or more parties which does not create an interest in real property, but merely authorizes conduct of certain management activities on lands held by the Board.

Riparian Rights--The legal rights regarding a waterway which belong to one who owns land bordering upon it.

River Area--That corridor of land beneath and surrounding the Myakka River from river mile 7.5 to river mile 41.5, together with a corridor extending from the center of the river to the maximum upland extent of wetlands vegetation.

River Corridor--A broad, continuous linear connection of land and water that includes but may extend beyond the wetland extent of the designated river area. For the purpose of this plan, the river corridor roughly extends for one geographic section (5,000 feet) in width on each side of the Myakka River from river mile 7.5 to river mile 41.5.

River Mile--A distance of one-statutory mile along the river course begining from the mouth of the river to the river's headwaters.

Shall--Often used to denote an obligation or direction to do some act. As used in statutes, contracts and the like, this word is generally imperative or mandatory.

Shore Protection Structures--A type of coastal construction designed to minimize the rate of erosion. Coastal construction includes any work or

activity which is likely to have a material physical effect on existing coastal conditions or natural shore processes.

Should--Ordinarily implying duty or obligation but with implications of uncertainty. In this plan, should is used as a suggestion to regulatory agencies or private interests to implement an action.

Spoil--Materials dredged from sovereignty lands which are redeposited or discarded by any means, onto either sovereignty lands or uplands.

Unimpacted Areas--Portions of the river area which have no road, transmission lines, utility, or other man-made intrusions crossing the river.

Water-dependent Activity--An activity which can only be conducted on, in, over, or adjacent to, water areas because the activity requires direct access to the water body or sovereignty lands for transportation, recreation, energy production or transmission, or source of water and where the use of the water, submerged or sovereignty lands is an integral part of the activity.

Watershed--The hydrological basin of the Myakka River that covers approximately 550 square miles in Sarasota, Manatee, Hardee and DeSoto Counties.

Wetland--Those lowland areas that are inundated by surface or ground water with a frequency sufficient to support and under normal circumstances do support a prevalence of aquatic vegetation and other life requiring saturated or seasonally saturated soil conditions for growth and reproduction.

Wild and Scenic Protection Zone--A proposed upland buffer that extends 220 feet on each side of the Wild and Scenic segment of the Myakka River (i.e., from river mile 7.5 to river mile 41.5) measured from the landward edge of the river area.

Will--Often used to denote an obligation or direction to do some act. As used in statutes, contracts and the like, this word is generally imperative or mandatory.

APPENDIX A--MYAKKA RIVER WILD AND SCENIC DESIGNATION AND PRESERVATION ACT

PART IV

WILD AND SCENIC RIVERS

[1]258.501 Myakka River; wild and scenic segment.—

(1) SHORT TITLE.—This act may be cited as the "Myakka River Wild and Scenic Designation and Preservation Act."

(2) LEGISLATIVE DECLARATION.—The Legislature finds and declares that a certain segment of the Myakka River in Manatee, Sarasota, and Charlotte Counties possesses outstandingly remarkable ecological, fish and wildlife, and recreational values which are unique in the State of Florida. These values give significance to the river as one which should be permanently preserved and enhanced for the citizens of the State of Florida, both present and future. The permanent management and administration of the river involves a complex interaction of state, regional, and local interests which require balancing and coordination of purpose. It is the intention of the Legislature to provide for the permanent preservation of the designated segment of the Myakka River by way of development of a plan for permanent administration by agencies of state and local government which will ensure the protection necessary but retain that degree of flexibility, responsiveness, and expertise which will accommodate all of the diverse interests involved in a manner best calculated to be in the public interest.

(3) DEFINITIONS.—As used in this act:

(a) "Activity" means the doing of any act or the failing to do any act, whether by a natural person or a corporation.

(b) "Coordinating council" means the council created by subsection (6).

(c) "Department" means the Department of Natural Resources.

(d) "Division" means the Division of Recreation and Parks of the Department of Natural Resources.

(e) "Executive board" means the Governor and Cabinet sitting as the head of the Department of Natural Resources.

(f) "Resource value" means any one or more of the specific economic, scenic, recreational, geologic, fish and wildlife, historic, cultural, or ecological features associated with the river area as determined by the coordinating council.

(g) "River area" means that corridor of land beneath and surrounding the Myakka River from river mile 7.5 to river mile 41.5, together with a corridor extending from the center of the river to the maximum upland extent of wetlands vegetation.

(4) DESIGNATION OF WILD AND SCENIC RIVER.—The corridor of land surrounding and beneath the Myakka River between river mile 7.5 and river mile 41.5 is hereby designated as a Florida wild and scenic river for the purposes of this act and is subject to all of the provisions of this act. Such designated portion is more particularly described as that portion of the Myakka River located between State Road 780 in Sarasota County and the Sarasota-Charlotte County line.

(5) DEVELOPMENT OF MANAGEMENT PLAN.—

(a) The department and the coordinating council shall jointly develop a proposed management plan for the designated segment of the Myakka River, subject to and consistent with the provisions of this act.

(b) The development of the proposed management plan shall be by public hearing and shall include participation by all appropriate state agencies and by all appropriate or interested local governments and private organizations.

(c) The proposed management plan shall include provision for:

1. Permanent protection and enhancement of the ecological, fish and wildlife, and recreational values within the river area, primary emphasis being given to protecting agricultural, aesthetic, scenic, historic, archaeologic, and scientific features.

2. Continuation of land uses and developments on private lands within the river area which are in existence on January 1, 1986.

3. Periodic studies to determine the quantity and mixture of recreation and other public uses which can be permitted without adverse impact on the resource values of the river area.

4. Regulation, control, and distribution of public access where necessary to protect and enhance the resource values of the river area.

5. Consideration of need for basic facilities to absorb user impact on the river area, including necessary toilet or refuse containers, but, if found to be necessary, located in order to minimize their intrusive impact.

6. Restriction of motorized travel by land vehicle or boat where necessary to protect the resource values in the river area.

7. Agricultural and forestry practices similar in nature to those presently in the river area on January 1, 1986.

8. Resource management practices for the protection, conservation, rehabilitation, or enhancement of river area resource values.

9. Monitoring of existing water quality.

10. Continuance of existing drainage and water management practices, unless such existing practices will adversely affect, degrade or diminish existing water quality or existing resource values in the river area, and allowance of new water resource management practices which will not have an adverse impact on resource values in the river area.

11. Review and regulation of all activities conducted or proposed to be conducted within the river area which will or may have an adverse impact on any of the resource values in the river area as provided in this act.

(d) To the extent not inconsistent with this act, the proposed management plan may also include any other provisions deemed by the department to be necessary or advisable for the permanent protection of the river as a component of the Florida Wild and Scenic Rivers System.

(6) MANAGEMENT COORDINATING COUNCIL.—

(a) Upon designation, the department shall create a permanent council to provide interagency and intergovernmental coordination in the management of the river. The coordinating council shall be composed of one representative appointed from each of the following: the Department of Environmental Regulation, the Department of Transportation, the Game and Fresh Water Fish Commission, the Department of Community Affairs, the Division of Forestry of the Department of Agriculture and Consumer Services, the Division of Archives, History and Records Management of the Department of State, the Tampa Bay Regional Planning Council, the Southwest Florida Water Management District, the Southwest Florida Regional Planning Council, Manatee County, Sarasota County, Charlotte County, the City of Sarasota, the City of North Port, agricultural interests, environmental organizations, and any others deemed advisable by the department.

(b) The coordinating council shall review and make recommendations on all proposals for amendments or modifications to this act and to the permanent management plan, as well as on other matters which may be brought before the council by the department, any local government, or any member of the council, and shall render its nonbinding advisory opinion to the Southwest Florida Water Management District, the department, and affected local governments.

(c) The council may adopt bylaws to provide for election of such officers as it deems necessary, removal of officers for just cause, meetings, quorum, procedures, and other such matters as its members may deem advisable in the conduct of its business. Such bylaws shall be approved by the department.

(d) Such professional staff as the coordinating council may require shall be provided by the department.

(7) PRESERVATION OF EXISTING GOVERNMENTAL AUTHORITY.—Nothing contained in this act shall operate to divest any agency, water management district, municipality, county, or special district of any authority or jurisdiction in existence on January 1, 1986.

(8) RULEMAKING AUTHORITY.—

(a) The department is authorized to adopt rules to regulate activities within the river area which have adverse impact on resource values as adopted by the coordinating council within the river area, subject to ratification by the executive board.

(b) The department shall coordinate all activities related to rule adoption and enforcement with the regulatory and management programs of other agencies in order to avoid to the maximum extent possible any conflicts or duplication arising therefrom.

(9) PERMITTING AUTHORITY.—

(a) No person or entity shall conduct any activity within the river area which will or may have an adverse impact on any resource value in the river area without first having received a permit from the department.

(b) A permit may be granted only after a finding by the department that the activity for which a permit has been requested will not have an adverse impact on resource values in the river area.

(c) The department may adopt an application fee schedule providing for payment of reasonable fees to defray the cost of processing applications.

(10) PERMITTED ACTIVITIES.—Nothing in this act shall be construed to prohibit or regulate any activity taking place outside the river area for which necessary permits and licenses are obtained as required by other provisions of federal, state, or local law.

(11) PROHIBITED ACTIVITY.—Airboats are prohibited from operating in the river area north of U.S. Highway 41 (State Road 45).

(12) ENFORCEMENT.—Officers of the department shall have full authority to enforce any rule adopted by the department under this act with the same police powers given them by law to enforce the rules of state parks and the rules pertaining to saltwater areas under the jurisdiction of the Florida Marine Patrol.

(13) PENALTIES.—Violation of this act or of any rule adopted under this act constitutes a misdemeanor of the second degree, punishable as provided in s. 775.082 or s. 775.083. Continuing violation after notice constitutes a separate violation for each day so continued.

History.—ss. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, ch. 85-353

[1]Note.—Effective January 1, 1986.

APPENDIX B--DESCRIPTION OF PLANT COMMUNITIES ALONG THE MYAKKA RIVER

UPLANDS

PINE FLATWOODS/PINE PRAIRIE (SOUTH FLORIDA FLATWOODS, MESIC FLATWOODS, PINE SAVANNAHS, PINE BARRENS)

Slash pine flatwoods occur throughout south and central Florida, with northern limits on a west-east line from Levy County to St. Johns County. Pine flatwoods covers more land area than any other in South Florida and is the predominant plant community found within Sarasota County.

Pine flatwoods are characterized by a nearly flat topography with relatively poorly-drained soils. Generally, an organic or clay hardpan is situated a few feet beneath the soil layer. During the rainy season, pine flatwoods may have water on or near the soil surface. Scattered slash pine in the canopy and a dense saw palmetto shrub layer characterize the pineland. Other shrubs within the saw palmetto layer include gallberry, gopher apple, wax myrtle, tarflower, dwarf huckleberry, shiny blueberry and fetterbush. Herbaceous plants that may be commonly found within the flatwoods include chalky bluesteam, false foxglove, indiangrass, dichanthelium grass, blackroot, blue-eyed grass, and wiregrass. Other minor types of pine flatwoods occur along the Myakka River which include woodlands with other tree species or combinations of other tree species with slash pine within the canopy (e.g., slash pine-oak woodlands, longleaf pine and slash pine-cabbage palm). The longleaf pine occurs within small stands scattered within the more well-drained flatwood sites. Longleaf pine is in the southernmost limit of its range within Sarasota County.

Next to man, fire and water are the most common contributing factors to the successional status of pine flatwoods. Pine flatwoods are a subclimax community that rely on fire to control the invasion of hardwoods and promote the natural regeneration of pines. However, if crown fires were to occur after a long period of fire exclusion, pine trees and seedlings could be destroyed and the flatwoods would then be converted to a dry prairie condition. Water can also cause shifts in plant species composition from a mesic to a hydric condition in a relatively short period of time. However, man has caused the greatest changes to this community through the suppression and misuse of fire, the alteration of drainage patterns, and agricultural conversion practices. Since flatwoods are good cellulose and forage producers, natural flatwoods have been logged for timber and converted to

rangeland and improved pasture for cattle, pine plantation for commercial wood production, vegetable and citrus groves, and urban development has also occurred in this community.

SCRUBBY FLATWOODS/OAK SCRUB (XERIC OAK, XERIC FLATWOODS, DRY FLATWOODS)

Scrubby flatwoods/oak scrub, a rather rare habitat type in Sarasota County, is a xeric community type that possesses an evergreen shrubby understory situated upon well-drained, deep white sandy soils on high ground. Scrubby flatwoods typically contain widely scattered slash or longleaf pine in the overstory. However, when characterized by an association of scrub oaks interspersed with areas of barren white sand without a pine canopy, the community is considered to be an oak scrub. Understory shrubs include sand live oak and myrtle oak, rusty lyonia, Chapman's oak, gopher apple and saw palmetto. Herbaceous plants and vines within the xeric association include wiregrass, goldenrod, deer moss, greenbriar, and pinweeds. Small areas of scrubby flatwoods and oak scrub occurs at only a few locations along the Myakka River. This xeric association occurs along the edges of pine flatwoods at slightly elevated terrain upon relict sandbars and dunes. The scrubby flatwoods and oak scrub, to maintain a scrub-like condition, require fire at widely-spaced intervals.

HAMMOCKS (SHADY HAMMOCKS)

In the State of Florida the term "hammock" refers to any hardwood or broad-leafed evergreen forest which is not inundated or saturated for a sufficient period of time during the year to support the dominant growth of aquatic vegetation. Hammocks occur on well-drained to wet, highly organic soils. Vegetation composition within hammocks varies depending upon the type of soils, hydroperiod and location. The primary hammock associations found along the Myakka River include xeric and mesic-hydric hammocks which border both sides of the Myakka River to form a natural, forested corridor. Coastal hammocks are smaller associations that occur sporadically as "islands" within wetlands and/or larger hammock areas of the Myakka River.

Xeric Hammock (Upland Hammock, Live Oak-Cabbage Palm Hammock)

Xeric hammocks are dry forests that occur on well-drained soils in slightly elevated areas, and contain saw palmetto within the understory and live oaks in the canopy layer. In addition to live oak, xeric hammock may also contain laurel oak and cabbage palm in the canopy. On occasion cabbage palm may become dominant on moister, highly organic soils. Depending upon the openness of the canopy layer, the shrub and herb strata may be dense to sparse. Additional common shrubs that occur in xeric hammocks include beautyberry and wax myrtle. Herbaceous plants and vines in xeric hammock include Caesar's weed, poison ivy, grape and yellow jessamine.

Mesic-Hydric Hammock (Wetland-Fringing Hammock, Wetland Hardwood Hammock, Prairie Hammock, Wet Hammock)

Mesic-hydric hammock occurs on rich, organic soils of intermediate moisture content to wet, poorly-drained soils contiguous to the surface waters or wetlands of the Myakka River. Due to the intergradation and subsequent difficult differentiation between hydric and mesic hammock along the Myakka River, the two associations were combined into one descriptor.

Mesic-hydric hammock typically contains laurel oak, cabbage palm, water oak, red maple, swampbay, sweetbay, and Florida elm within the upper and lower canopy layers. This hammock generally has a well-developed canopy layer and, therefore, the understory and ground layers are rather depauperate. Common herbaceous, vining and shrubby plants found within mesic-hydric hammock include wax myrtle, saw palmetto, lizard's tail, saw-toothed fern, wild coffee, greenbriar, poison ivy, Virginia creeper, pepper vine, and grape. The oak canopy blankets the lower strata and, thereby, regulates the microclimate of the system, keeping the interior moist, shady and cool. The natural air conditioning and aesthetics provided by spreading stately oaks of the hammock offered desirable homesites and were extensively used for this purpose by the early settlers. The limbs of the mature oaks and the boots of cabbage palms also provide a haven for epiphytic and parasitic vegetation. Epiphytes, such as resurrection fern, butterfly orchid, and air plants, are the most conspicuous floral components visible along the Myakka River.

The hydroperiod of mesic-hydric hammocks is typically 2 months out of the year. Due to saturated soils and a sparse herb layer, mesic-hydric hammocks rarely burn. However, if the hydrological regime is altered, the species composition of this hammock community could be affected.

Being situated between uplands and wetlands/surface waters, mesic-hydric hammock provides valuable functions including flood attenuation, filtration of stormwaters, and erosion control. This hammock type is becoming extremely rare in Sarasota County due to development.

Coastal Hammock Palm/Oak Hammock, Tropical Hammock, Prairie Hammock, Shell Middens, Shell Mounds, Indian Mounds)

These small hammocks typically occur as "islands" within wetlands or other larger hammocks of the Myakka River corridor. Coastal hammock is typically dominated by cabbage palm and live oak in the overstory. Other plant species associated with coastal hammock include stoppers, wax myrtle, wild coffee, water oak, marlberry, Florida coontie, poison ivy, orchids, and serpent fern. Coastal hammocks occur on slightly elevated areas and are often associated with indian shell mounds. Coastal hammock typically is dominated by cabbage palm and live oaks, but live oak is replaced by southern red cedar on the tidal reaches of the Myakka River near Deer Prairie Slough. Coastal hammock has a unique position as a botanical depository for rare tropical plants.

DRY PRAIRIE (PALM SAVANNAH, PALMETTO PRAIRIE, PALMETTO AND HERBACEOUS RANGELAND, GRASSY DRY PRAIRIE)

Dry prairie is characterized as treeless plains that generally resemble pine flatwood communities, except for the lack of pines in the overstory. Typically, dry prairie is dominated by a dense assemblage of mesophytic grasses (indian grass, love grass, broomsedge, wiregrass), herbs (blazing star, rabbit tobacco, marsh pink, goldenrod, milkwort), and low shrubs (saw palmetto, paw paw, fetterbush, gallberry, staggerbush, dwarf blueberry).

Dry prairie is often contiguous to wet prairie and pine flatwoods. Fire is important in the maintenance of the prairie condition. Large areas of this vegetation type have been converted to vegetable farms, citrus groves,

improved pasture, urban development, or conserved as natural rangeland with land management.

AGRICULTURAL AREAS/DEVELOPED LANDS

Agricultural areas and developed lands include all of the vegetated or landscaped areas of land along the Myakka River where the original vegetation has been significantly altered or disturbed. Intensive agricultural areas include improved pastures, cropland, citrus groves, and pine plantation. Nonintensive agricultural uses such as cattle rangeland, where the vegetation is maintained in a somewhat natural state through proper fire management, are included in the upland category as pine flatwoods/pine prairie, scrubby flatwoods/oak scrub and dry prairie.

Intensive agriculture and developments eliminate, or significantly alter, the natural upland and wetland plant communities along the Myakka River. These activities are the major sources of poor water quality within the Myakka River through erosion of sediments and contributions of excess nutrients and other pollutants.

WETLANDS

FRESHWATER WETLANDS

Freshwater wetlands filter and improve storm waters, provide flood storage, and control the erosion of shorelines. Freshwater wetlands are low-lying, wet associations that are vegetated with either aquatic trees (swamp) or herbs (marsh). Both wooded and herbaceous wetlands occur along the Myakka River from river mile 7.5 to the vicinity of Snook Haven.

Freshwater Wooded Wetlands

A freshwater wooded wetland can be characterized as any low-lying system that has water above or just below the ground surface for a sufficient period of time during the year to support the dominant growth of aquatic woody vegetation. This category of freshwater wetlands includes several major wooded swamp types. The differences that separate the swamp community types includes species composition, variance in seasonal and/or permanent inundation, hydrologic connection (contiguous or isolated) and ecology. The freshwater wooded wetlands along the Myakka River consist of mixed hardwood swamps, swamp thickets and bay swamp. It is of interest to note that there

are no natural cypress swamps within the Myakka River. Although there are some cypress stands within Myakka River State Park, these associations were artificially created through the planting of cypress trees within existing freshwater marshes.

Mixed Hardwood Swamp (Mixed Swamp, Basin Swamp, Freshwater Swamp, Hardwood Swamp)--Mixed hardwood swamp occurs within the Myakka River and along the associated floodplain reaches. Dominant trees that comprise fresh-water swamp include, blackgum, popash, water locust, red maple and sweetbay. Buttonbush, wax myrtle, Virginia willow, dahoon holly, and willow are common in the understory. Typical herbaceous components of the mixed hardwood swamp include lizard's tail, smartweed, royal fern, and false nettle. The degree of canopy closure and seasonal water levels typically dictate the species cover and density at the understory and ground levels. The periodic water level fluctuations associated within the Myakka River are important to the integrity of the mixed hardwood swamp. Mixed hardwood swamps are valuable by filtering and improving water quality and providing flood storage and recharge.

Swamp Thickets (Heads, Shrub Swamp)--Swamp thickets are dense stands of aquatic shrubs or small trees that occupy standing water or periodically flooded sites. Swamp thickets that may be found along the Myakka River are dominated by almost pure monocultures of the following three aquatic woody species: popash, willow and buttonbush. These associations occur within the open areas of the Lower and Upper Myakka Lakes and along transitional zones between wetlands and uplands. Typically, these thickets represent a secondary successional seral stage of marshes or wet prairie that have not been burned or experienced a reduction in water levels.

Bay Swamp (Gum Swamp, Bay, Bay Gall, Bayhead, Bay Swamp)--Bay swamp occurs on acidic, highly organic soils which are often seasonally flooded. Typically, bay swamp has shallower standing water and shorter periods of inundation than the other swamp systems. A linear area of bay swamp occurs just above the northwest edge of the Upper Myakka Lake. Bay swamp is dominated by loblolly bay, swamp bay, and sweet bay. The understory layers of bay swamp are typically open and commonly contain sphagnum moss, dahoon holly, fetterbush, Virginia willow, bamboo-briar, poison ivy, cinnamon fern, chain fern, grape, net-vein chain fern and lizard's tail.

Freshwater Herbaceous Wetlands (Depression Marsh, Wet Weather Pond, Flatwoods Pond, Ephemeral Pond, Grass Pond, Wet Prairie, Pineland Depression, Swale, Slough, Prairie Pond)

A freshwater herbaceous wetland can be characterized as any low-lying system that has water above or just below the ground surface for a sufficient period of time during the year to support the dominant growth of aquatic emergent, floating-leaved and free floating vegetation.

Based upon a number of factors such as size, location, drainage characteristics and species composition, this category of freshwater wetlands includes several wetland types (both contiguous and isolated). However, in an effort to provide a concise account of freshwater herbaceous wetlands along the Myakka River, only two types are recognized: freshwater marsh and wet prairie.

Freshwater Marsh--Freshwater marsh can be characterized as seasonally inundated shallow, round or elliptical depressions within terrestrial habitats (typically pine flatwoods) to more elongate, broad irregular-shaped formations that occur along the shoreline of (i.e., littoral zones) or as sloughs to the Myakka River. The inland marshes are further characterized by concentric zones of emergent vegetation with floating-leaved and/or floating plants at the center. The center may contain permanent to semi-permanent standing water and depending upon the size of the system may be devoid of vegetation and resemble a pond or small lake. These marshes commonly support the following species: St. John's wort, pickerelweed, arrowhead, sedges, maidencane, and net-vein chain fern. The large marshes along the shallow, littoral shoreline

reaches or as sloughs (drainageways) of the Myakka River tend to be mixed assemblages of species including maidencane, smartweed, water paspalum, cattail, bulrush, and pickerelweed. Shortened hydroperiods within freshwater marshes will permit the invasion of mesic and exotic vegetation, while longer hydroperiods will transform marsh into surface waters. Fire is a necessary component of freshwater marsh maintenance; however, an uncontrolled fire during a long period of drought could violate the underlying muck layers.

Wet Prairie--Large to small wetland associations of shallow water areas primarily within pine flatwoods and dry prairie that are dominated by grasses and St. John's wort are called wet prairie. Wet prairies differ from freshwater marsh by the occurrence of sandy soils with thin organic layers rather than the deep mucks/peats and plants associated with "true" marshes. Wet prairies provide similar functions and values as freshwater marshes.

BRACKISH-SALTWATER WETLANDS (ESTUARINE EDGES)

Tidal wetlands are brackish to salt water wetlands that occur along low energy coastlines and estuaries. Tidal wetlands along the Myakka River begin just south of Snook Haven in the form of tidal marshes and continue as mangrove islands and tidal marshes past the Sarasota/Charlotte County line.

Brackish-Saltwater Marsh (Black Needlerush Marsh)

Brackish-saltwater marsh is the dominant plant community of the tidal portion of the river. Brackish-saltwater marsh along the Myakka River is characterized as small littoral zones along the incised tidal reaches to large expanses of open wetlands situated along the broad lower tidal floodplain. The dominant species of the tidal marsh is black needlerush although other minor species do occur such as cattail, bulrush, and leather ferns. Sawgrass also occurs within tidal marsh along the Myakka River. Although this species is typically common in fresh to brackish water marshes, it only occurs within a small area of the Myakka River in the vicinity of Deer Prairie Slough. The detrital production and contribution of tidal marsh to the marine food web is substantial. Development along the shoreline edges of the Myakka River and drainage alterations through the construction of seawalls, rip rap, and ditches may adversely affect this valuable wetland system.

Mangrove Swamp (Mangrove Islands, Mangles, Mangroves)

Mangrove swamps or islands are found at the lower reaches of the Myakka River, starting at a point just above Deer Prairie Creek. Red mangrove was the dominant mangrove species on the shorelines of the islands, while black and white mangroves occupied higher elevations.

Mangrove swamps provide many ecological benefits to man, including buffering storm tides and winds, shoreline stabilization, and vegetative filtration and assimilation of pollutants or nutrients within stormwater runoff.

Mangrove swamps also provide an extremely valuable function in the production of detritus to the estuarine food web and as habitat for a variety of species. Destruction of mangroves via filling, dredging and ditching has contributed to the deterioration of South Florida's aquatic resources.

SUBMERGED AQUATIC VEGETATION

Submerged aquatic vegetation (SAV) in the upper river is largely dominated by the exotic, hydrilla (Hydrilla verticillata). This submerged plant is considered a nuisance and has spread throughout Florida. It has created a large problem within Upper and Lower Myakka Lakes, and attempts at its control include the application of herbicides. Hydrilla infestation is evident in the Myakka River to below Downs Dam. The growth of hydrilla gradually decreases downriver from the dam. SAV within the lower river in general is not common although it is locally abundant along shallow water edges and shoals. The distribution of SAV is potentially determined by salinity, currents, light penetration and sediment type. Species of SAV which have been observed in the lower Myakka River include Cuban shoal grass (Halodule wrightii), widgeon grass (Ruppia maritima), tape grass (Vallisneria neotropicalis), dwarf arrowhead (Sagittaria subulata), Nitella sp., coontail (Ceratophyllum demersum), and spike rush (Eleocharis baldwinii). Cuban shoal grass and widgeon grass occur in the widest range of salinities (<1 ppt to 25 ppt).

Tape grass is found from less than 1 ppt to about 3 ppt, and the remaining species are generally found at salinities of less than 1 ppt. The SAV of the Myakka River are most commonly found on shoal areas (Mote Marine Laboratory, 1986).

APPENDIX C--LISTS OF WILDLIFE SPECIES KNOWN TO OCCUR AND WHICH MAY OCCUR ALONG THE MYAKKA RIVER

Table C-1. Vertebrate Wildlife Species Known to or Which Potentially Occur in the Myakka River Corridor

Common Name	Scientific Name	Vegetative Communities[1]												
		MR	MhH	CH	PF/ XH	PP	DP	SF	FW	MS	TM	AA	DL	
Snakes (Order Squamata)														
Green Water Snake	Nerodia cyclopion floridana	X	X	X	-	-	-	-	X	X	X	-	-	
Florida Water Snake	Nerodia fasciata pictiventris	X	X	X	-	-	-	-	X	X	X	-	-	
Striped Crayfish Snake	Liodytes regina alleni	X	X	X	-	-	-	-	X	X	X	-	-	
Black Crayfish Snake	Seminatrix pygaea	X	X	X	-	-	-	-	X	X	X	-	-	
Eastern Garter Snake	Thamnophis sirtalis sirtalis	X	X	X	-	-	-	-	X	X	X	X	X	
Peninsula Ribbon Snake	Thamnophis sauritus sackeni	X	X	X	-	-	-	-	X	X	X	X	X	
Southern Hognose Snake	Heterodon simus	-	-	-	X	X	X	X	-	-	-	-	-	
Eastern Hognose Snake	Heterodon platyrhinos	-	-	-	X	X	X	X	-	-	-	-	-	
Southern Ringneck Snake	Diadophis punctatus punctatus	X	X	X	-	X	-	-	X	X	X	-	-	
Pinewoods Snake	Rhadinaea flavilata	-	X	X	X	X	X	X	X	-	-	-	-	
Mud Snake	Farancia abacura	X	-	-	-	-	-	-	X	X	X	-	-	
Southern Black Racer	Coluber constrictor priapus	-	X	X	X	X	X	X	X	X	X	X	X	
Eastern Coachwhip	Masticophis flagellum flagellum	-	X	X	X	X	X	X	X	X	X	X	X	
Rough Green Snake	Opheodrys aestivus	X	X	X	X	X	-	-	X	X	X	-	-	
Eastern Indigo Snake	Drymarchon corais couperi	X	X	X	X	X	X	X	X	X	X	X	X	
Corn Snake	Elaphe guttata guttata	-	X	X	X	X	X	X	X	-	-	X	X	
Yellow Rat Snake	Elaphe obsoleta	X	X	X	X	X	X	X	X	X	X	X	X	
Eastern Kingsnake	Lampropeltis getulus	X	X	X	X	X	X	X	X	X	X	X	X	
Scarlet Kingsnake	Lampropeltis triangulum ekaosiudes	-	X	X	X	X	-	X	-	-	-	-	-	
Scarlet Snake	Cemophora coccinea	-	-	-	X	X	X	X	-	-	-	-	X	
Florida Cottonmouth	Agkistrodon piscivorus conanti	X	X	X	-	-	-	-	X	X	X	-	-	
Dusky Pygmy Rattlesnake	Sistrurus miliarius barbouri	X	X	X	X	X	X	X	X	X	X	X	X	
Eastern Diamondback Rattlesnake	Crotalus adamanteus	-	-	-	X	X	X	X	-	-	-	-	-	
Eastern Coral Snake	Micrurus fulvius fulvius	X	X	X	X	X	X	X	X	X	X	X	X	
Florida Brown Snake	Storeria dekayi victa	X	X	X	X	X	X	X	X	X	X	X	X	
Brown Water Snake	Nerodia taxispilota	X	X	X	-	-	-	-	X	X	X	-	-	
Florida Pine Snake	Pituophis melanoleucus mugitus	-	-	-	X	X	X	X	-	-	-	X	-	
Peninsula Crowned Snake	Tantilla relicta relicta	-	-	-	X	X	X	X	-	-	-	X	-	

Table C-1. Vertebrate Wildlife Species Known to or Which Potentially Occur in the Myakka River Corridor

Common Name	Scientific Name	Vegetative Communities[1]											
		MR	MhH	CH	PF/XH	PP	DP	SF	FW	MS	TM	AA	DL
REPTILES													
Crocodilians (Order Crocodylia)													
American Alligator	Alligator mississippienis	X	X	X	-	-	-	-	X	X	X	-	-
Turtles (Order Testudines)													
Snapping Turtle	Chelydra serpentina	X	-	-	-	-	-	-	X	X	X	-	-
Florida Mud Turtle	Kinosternon subrubrum	X	-	-	-	-	-	-	X	X	X	-	-
Florida Box Turtle	Terrapene carolina bauri	-	X	X	X	X	X	X	-	-	-	X	X
Chicken Turtle	Deirocheyls reticularia	X	X	X	X	-	-	-	X	X	X	-	-
Gopher Tortoise	Gopherus polyphemus	-	-	-	X	X	X	X	-	-	-	X	-
Florida Softshell	Trionyx ferox	X	-	-	-	-	-	-	X	X	X	-	-
Striped Mud Turtle	Kinsternon bauri palmarum	X	-	-	-	-	-	-	X	X	X	-	-
Peninsula Cooter	Chrysemys floridana peninsularis	X	-	-	-	-	-	-	X	X	X	-	-
Florida Redbelly Turtle	Chrysemys nelsoni	X	-	-	-	-	-	-	X	X	X	-	-
Atlantic Loggerhead	Caretta caretta caretta	X	-	-	-	-	-	-	-	-	-	-	-
Atlantic Green Turtle	Chelonia mydas mydas	X	-	-	-	-	-	-	-	-	-	-	-
Atlantic Hawksbill	Eretmochelys imbricata	X	-	-	-	-	-	-	-	-	-	-	-
Atlantic Ridley	Lepidochelys kempii	X	-	-	-	-	-	-	-	-	-	-	-
Atlantic Leatherback	Dermochelys coriacea coriacea	X	-	-	-	-	-	-	-	-	-	-	-
Diamonback Terrapin	Malaclemys terrapin	X	-	-	-	-	-	-	-	-	-	-	-
Lizards (Order Squamata)													
Green Anole	Anolis carolinensis carolinesis	-	X	X	X	X	X	X	-	-	-	X	X
Brown Anole	Anolis sagrei	-	X	X	X	X	X	X	-	-	-	X	X
Six-lined Racerunner	Cnemidophorus sexlineatus sexlineatus	-	X	X	X	X	X	X	-	-	-	X	X
Ground Skink	Scincella lateralis	-	X	X	X	X	X	X	-	-	-	X	X
Southeastern Five-lined Skink	Eumeces inexpectatus	-	X	X	X	X	X	X	-	-	-	X	X
Eastern Glass Lizard	Ophisaurus ventralis	-	X	X	X	X	X	X	-	-	-	X	X
Slender Glass Lizard	Ophisaurus attenuatus	-	-	-	X	X	X	X	-	-	-	-	-
Island Glass Lizard	Ophisaurus compressus	-	-	X	X	X	X	X	-	-	-	-	-
Peninsula Mole Skink	Eumeces egregius onocrepis	-	-	-	-	X	X	X	X	-	-	-	-

Table C-1. Vertebrate Wildlife Species Known to or Which Potentially Occur in the Myakka River Corridor

Common Name	Scientific Name	Vegetative Communities[1]											
		MR	MhH	CH	PF/XH	PP	DP	SF	FW	MS	TM	AA	DL
Snakes (Order Squamata)													
Green Water Snake	Nerodia cyclopion floridana	X	X	X	-	-	-	-	X	X	X	-	-
Florida Water Snake	Nerodia fasciata pictiventris	X	X	X	-	-	-	-	X	X	X	-	-
Striped Crayfish Snake	Liodytes regina alleni	X	X	X	-	-	-	-	X	X	X	-	-
Black Crayfish Snake	Seminatrix pygaea	X	X	X	-	-	-	-	X	X	X	-	-
Eastern Garter Snake	Thamnophis sirtalis sirtalis	X	X	X	-	-	-	-	X	X	X	X	X
Peninsula Ribbon Snake	Thamnophis sauritus sackeni	X	X	X	-	-	-	-	X	X	X	X	X
Southern Hognose Snake	Heterodon simus	-	-	-	X	X	X	X	-	-	-	-	-
Eastern Hognose Snake	Heterodon platyrhinos	-	-	-	X	X	X	X	-	-	-	-	-
Southern Ringneck Snake	Diadophis punctatus punctatus	X	X	X	-	X	-	-	X	X	X	-	-
Pinewoods Snake	Rhadinaea flavilata	-	X	X	X	X	X	X	X	-	-	-	-
Mud Snake	Farancia abacura	X	-	-	-	-	-	-	X	X	X	-	-
Southern Black Racer	Coluber constrictor priapus	-	X	X	X	X	X	X	X	X	X	X	X
Eastern Coachwhip	Masticophis flagellum flagellum	-	X	X	X	X	X	X	X	X	X	X	X
Rough Green Snake	Opheodrys aestivus	X	X	X	X	X	-	-	X	X	X	-	-
Eastern Indigo Snake	Drymarchon corais couperi	X	X	X	X	X	X	X	X	X	X	X	X
Corn Snake	Elaphe guttata guttata	-	X	X	X	X	X	X	X	-	-	X	X
Yellow Rat Snake	Elaphe obsoleta	X	X	X	X	X	X	X	X	X	X	X	X
Eastern Kingsnake	Lampropeltis getulus	X	X	X	X	X	X	X	X	X	X	X	X
Scarlet Kingsnake	Lampropeltis triangulum ekaosiudes	-	X	X	X	X	-	X	-	-	-	-	-
Scarlet Snake	Cemophora coccinea	-	-	-	X	X	X	X	-	-	-	-	X
Florida Cottonmouth	Agkistrodon piscivorus conanti	X	X	X	-	-	-	-	X	X	X	-	-
Dusky Pygmy Rattlesnake	Sistrurus miliarius barbouri	X	X	X	X	X	X	X	X	X	X	X	X
Eastern Diamondback Rattlesnake	Crotalus adamanteus	-	-	-	X	X	X	X	-	-	-	-	-
Eastern Coral Snake	Micrurus fulvius fulvius	X	X	X	X	X	X	X	X	X	X	X	X
Florida Brown Snake	Storeria dekayi victa	X	X	X	X	X	X	X	X	X	X	X	X
Brown Water Snake	Nerodia taxispilota	X	X	X	-	-	-	-	X	X	X	-	-
Florida Pine Snake	Pituophis melanoleucus mugitus	-	-	-	X	X	X	X	-	-	-	X	-
Peninsula Crowned Snake	Tantilla relicta relicta	-	-	-	X	X	X	X	-	-	-	X	-

Table C-1. Vertebrate Wildlife Species Known to or Which Potentially Occur in the Myakka River Corridor

Common Name	Scientific Name	Vegetative Communities[1]											
		MR	MhH	CH	PF/XH	PP	DP	SF	FW	MS	TM	AA	DL
Salamanders (Order Caudata)													
Two-toed Amphiuma	Amphiuma means	X	-	-	-	-	-	-	X	X	X	-	-
Greater Siren	Siren lacertina	X	-	-	-	-	-	-	X	X	X	-	-
Everglades Dwarf Siren	Pseudobranchus striatus	X	-	-	-	-	-	-	X	X	X	-	-
Peninsula Newt	Notophthalmus viridescens piaropicola	X	-	-	-	-	-	-	X	X	X	-	-
Dwarf Salamander	Eurycea quadridigitata	X	X	X	X	-	-	-	X	X	X	-	-
Slimy Salamander	Plethodon glutinosus glutinosus	X	X	X	-	-	-	-	X	X	X	-	-
Narrow-striped Dwarf Siren	Pseudobranchus striatus axanthus	X	-	-	-	-	-	-	X	X	X	-	-
Eastern Lesser Siren	Siren intermedia intermedia	X	-	-	-	-	-	-	X	X	X	-	-
Toads and Frogs (Order Anura)													
Southern Toad	Bufo terrestris	-	X	X	X	X	X	X	-	-	-	-	-
Oak Toad	Bufo quercicus	-	X	X	X	X	X	X	-	-	-	-	-
Florida Cricket Frog	Acris gryllus dorsalis	X	-	-	-	-	-	-	X	X	X	-	-
Green Treefrog	Hyla cinerea	-	X	X	X	-	-	-	X	X	X	-	-
Barking Treefrog	Hyla gratiosa	-	X	X	X	-	-	-	X	X	X	-	-
Pinewoods Treefrog	Hyla femoralis	-	X	X	X	X	-	-	X	X	-	-	-
Squirrel Treefrog	Hyla squirella	-	X	X	X	-	-	-	X	X	X	-	-
Little Grass Frog	Limnaoedus ocularis	-	X	X	X	-	-	-	X	X	X	-	-
Florida Chorus Frog	Pseudacris nigrata verrucosa	-	X	X	-	-	-	-	X	X	X	-	-
Eastern Narrow Mouth Toad	Gastrophryne carolinensis	-	X	X	X	-	-	-	-	-	-	-	-
Pig Frog	Rana grylio	X	-	-	-	-	-	-	X	X	X	-	-
Eastern Spadefoot	Scaphiopus holbrooki	-	X	X	X	X	X	X	X	-	-	X	X
Southern Leopard Frog	Rana utricularia	X	X	X	-	-	-	-	X	X	X	-	-
Florida Gopher Frog	Rana areolata aesopus	-	-	-	X	X	X	X	-	-	-	X	-
Bull Frog	Rana catesbeiana	X	X	X	-	-	-	-	X	X	X	-	-
Mammals (Class Mammalia)													
Virginia Opossum	Didelphis virginia	X	X	X	X	X	X	X	X	X	X	X	X
Evening Bat	Nycticeius humeralis	-	X	X	X	X	-	-	-	-	-	-	-
Marsh Rabbit	Sylvilagus palustris	X	X	X	X	-	-	-	X	X	X	-	-
Gray Squirrel	Sciurus carolinensis	X	X	X	X	X	-	X	X	-	-	X	X

Table C-1. Vertebrate Wildlife Species Known to or Which Potentially Occur in the Myakka River Corridor

Common Name	Scientific Name	Vegetative Communities[1]												
		MR	MhH	CH	PF/ XH	PP	DP	SF	FW	MS	TM	AA	DL	
Southern Flying Squirrel	Glaucomys volans	X	X	X	X	X	-	X	X	-	-	-	-	
Eastern Harvest Mouse	Reithrodontomys humulis	X	-	-	-	-	X	-	X	-	X	X	X	
Cotton Rat	Sigmodon hispidus	X	-	-	-	-	X	-	X	-	X	X	X	
Raccoon	Procyon lotor	X	X	X	X	X	X	X	X	X	X	X	X	
Florida Water Rat	Neofiber alleni	X	-	-	-	-	-	-	X	X	X	-	-	
Eastern Spotted Skunk	Spilogale putorius	X	X	X	X	-	X	-	X	X	X	X	X	
River Otter	Lutra canadensis	X	X	X	X	-	-	-	-	-	-	-	-	
Bobcat	Lynx rufus	X	X	X	X	X	-	X	X	X	-	-	-	
White-tailed Deer	Odocoileus virginianus	X	X	X	X	X	X	X	X	X	X	X	X	
Eastern Mole	Scalopus aquaticus	-	-	-	X	X	X	X	-	-	-	X	X	
Nine-banded Armadillo	Dasypus novemcinctus	X	X	X	X	X	X	X	X	X	X	X	X	
Eastern Cottontail	Syvilagus floridanus	X	X	X	X	X	X	X	X	X	X	X	X	
Fox Squirrel	Sciurus niger	X	X	X	X	X	-	X	-	-	-	-	-	
Rice Rat	Oryzomys palustris	X	-	-	-	-	-	-	X	X	X	X	X	
Cotton Mouse	Peromyscus gossypinus	X	X	X	X	X	X	X	X	X	X	X	X	
Gray Fox	Urocyon cinereoargenteus	X	X	X	X	X	X	X	X	-	-	-	-	
House Mouse	Mus musculus	X	-	-	-	-	X	-	-	-	-	X	X	
Long-tailed Weasel	Mustela frenata	X	X	X	-	-	-	-	X	X	X	-	-	
Striped Skunk	Mephitis mephitis	X	X	X	X	X	X	X	X	X	X	X	X	
Florida Panther	Felis concolor coryi	X	X	X	X	X	-	X	X	-	-	-	-	
Feral Hog	Sus scrofa	X	X	X	X	X	X	X	X	X	X	X	-	
Southeastern Shrew	Sorex longirostris	X	X	X	X	X	X	X	X	-	-	X	X	
Red Fox	Vulpes fulva	X	X	X	X	X	X	X	X	-	-	X	X	
Least Shrew	Cryptotis parva	-	-	-	-	-	X	X	X	-	-	X	X	
Shorttail Shrew	Blarina brevicavda	-	X	X	X	X	X	X	X	-	-	X	X	
Big Brown Bat	Eptesicus fuscus	-	X	X	X	X	-	-	X	-	-	X	X	
Seminole Bat	Lasiurus seminolus	-	X	X	X	X	-	-	X	-	-	X	X	
Eastern Yellow Bat	Lasiurus intermedius	-	X	X	X	X	-	-	X	-	-	X	X	
Eastern Big-eared Bat	Plecotus rafinesquei	-	-	-	-	-	-	-	-	-	-	-	X	
Mexican Freetail Bat	Tadarida brasiliensis	-	-	-	-	-	-	-	-	-	-	-	-	
Florida Black Bear	Ursus americanus	X	X	X	X	X	X	-	-	X	-	X	-	
Mink	Mustela vison	X	X	X	X	-	-	-	X	-	-	-	X	
Southeastern Pocket Gopher	Geomys pinetis	-	-	-	-	X	X	-	-	-	-	X	X	

Table C-1. Vertebrate Wildlife Species Known to or Which Potentially Occur in the Myakka River Corridor

Common Name	Scientific Name	Vegetative Communities[1]											
		MR	MhH	CH	PF/ XH	PP	DP	SF	FW	MS	TM	AA	DL
Eastern Woodrat	Neotoma floridana	X	X	X	-	-	-	-	X	X	-	-	-
Eastern Cottontail	Sylvilagus floridanus	X	X	X	X	X	X	X	X	-	-	X	X
Manatee	Trichechus manatus	X	-	-	-	-	-	-	-	-	-	-	-
BIRDS													
Loons (Family Gaviidae)													
Common Loon	Gavia immer	X	-	-	-	-	-	-	X	X	X	-	-
Grebes (Family Podicipedidae)													
Horned Grebe	Podiceps auritus	X	-	-	-	-	-	-	X	X	X	-	-
Pied-billed Grebe	Podilymbus podiceps	X	-	-	-	-	-	-	X	X	X	-	-
Pelicans (Family Pelecanidae)													
American White Pelican	Pelecanus erythrorhynchos	X	-	-	-	-	-	-	X	X	X	-	-
Brown Pelican	Pelecanus occidentalis	X	-	-	-	-	-	-	X	X	X	-	-
Cormorant (Family Phalacrocoracidae)													
Double-crested Cormorant	Phalacrocorax auritus	X	-	-	-	-	-	-	X	X	X	-	-
Darters (Family Anhingidae)													
Anhinga	Anhinga anhinga	X	-	-	-	-	-	-	X	X	X	-	-
Frigatebird (Family Fregatidae)													
Magnificent Frigatebird	Fregata magnificens	X	-	-	-	-	-	-	-	X	X	-	-
Herons and Bitterns (Family Ardeidae)													
Great Blue Heron (White Morph)	Ardea herodias	X	X	X	-	-	-	-	X	X	X	-	-
Great Blue Heron	Ardea herodias	X	X	X	-	-	-	-	X	X	X	-	-
Green-backed Heron	Butorides striatus	X	X	X	-	-	-	-	X	X	X	-	-
Little Blue Heron	Egretta caerulea	X	X	X	-	-	-	-	X	X	X	-	-
Cattle Egret	Bubulcus ibis	X	X	X	-	-	-	-	X	X	X	X	X
Reddish Egret	Egretta rufescens	X	X	X	-	-	-	-	X	X	X	-	-

Table C-1. Vertebrate Wildlife Species Known to or Which Potentially Occur in the Myakka River Corridor

Common Name	Scientific Name	Vegetative Communities[1]											
		MR	MhH	CH	PF/ XH	PP	DP	SF	FW	MS	TM	AA	DL
Great Egret	Casmerodius albus	X	X	X	-	-	-	-	X	X	X	-	-
Snowy Egret	Egretta thula	X	X	X	-	-	-	-	X	X	X	-	-
Tri-colored Heron	Egretta tricolor	X	X	X	-	-	-	-	X	X	X	-	-
Black-Crowned Night Heron	Nycticorax nycticorax	X	X	X	-	-	-	-	X	X	X	-	-
Yellow-Crowned Night Heron	Nycticorax violaceus	X	X	X	-	-	-	-	X	X	X	-	-
Least Bittern	Ixobrychus exilis	X	X	X	-	-	-	-	X	X	X	-	-
American Bittern	Botaurus lentiginosus	X	X	X	-	-	-	-	X	X	X	-	-
Vultures (Family Cathartidae)													
Turkey Vulture	Cathartes aura	X	X	X	X	X	X	X	X	X	X	X	X
Black Vulture	Coragyps atratus	X	X	X	X	X	X	X	X	X	X	X	X
Hawks, Eagles and Kites (Family Accipitridae)													
Snail Kite	Rostrhamus sociabilis	X	-	-	-	-	-	-	X	X	X	-	-
Sharp-shinned Hawk	Accipiter striatus	X	X	X	X	X	X	X	X	-	-	-	-
Cooper's Hawk	Accipiter cooperii	X	X	X	X	X	X	X	X	-	-	-	-
Red-tailed Hawk	Buteo jamaicensis	X	X	X	X	X	X	X	X	X	X	X	X
Red-shouldered Hawk	Buteo lineatus	X	X	X	X	X	X	X	X	X	X	X	X
Broad-winged Hawk	Buteo platypterus	X	X	X	X	X	X	X	X	X	-	X	X
Short-tailed Hawk	Buteo brachyurus	X	X	X	X	X	X	X	X	X	X	-	-
Golden Eagle	Aquila chrysaetos	X	-	-	-	-	X	-	-	-	X	-	-
Bald Eagle	Haliaeetus leucocephalus	X	-	-	-	X	-	-	X	X	X	-	-
Northern Harrier	Circus cyaneus	X	-	-	-	-	-	-	X	-	X	-	-
Swallow-tailed Kite	Elanoides forficatus	X	X	X	X	X	-	-	X	-	-	-	-
Turkeys (Family Meleagrididae)													
Wild Turkey	Meleagris gallopavo	X	X	X	X	X	X	X	X	-	-	-	-
Limpkin (Family Aramidae)													
Limpkin	Aramus guarauna	X	X	X	-	-	-	-	X	X	X	-	-
Cranes (Family Gruidae)													
Sandhill Crane	Grus canadensis	X	-	-	-	-	X	-	X	-	X	X	X

Table C-1. Vertebrate Wildlife Species Known to or Which Potentially Occur in the Myakka River Corridor

Common Name	Scientific Name	Vegetative Communities[1]											
		MR	MhH	CH	PF/ XH	PP	DP	SF	FW	MS	TM	AA	DL
Plovers (Family Charadriidae)													
Semipalmated Plover	*Charadrius semipalmatus*	X	-	-	-	-	-	-	X	-	X	-	-
Killdeer	*Charadrius vociferus*	X	-	-	-	-	-	-	X	-	X	X	X
Black-bellied Plover	*Pluvialis squatarola*	X	-	-	-	-	-	-	X	-	X	-	-
Ruddy Turnstone	*Arenaria interpres*	X	-	-	-	-	-	-	-	X	X	-	-
Piping Plover	*Charadrius melodus*	X	-	-	-	-	-	-	-	X	X	-	-
Snowy Plover	*Charadrius alexandrinus*	X	-	-	-	-	-	-	-	X	X	-	-
Wilson's Plover	*Charadrius wilsonia*	X	-	-	-	-	-	-	-	X	X	-	-
Snipes and Sandpipers (Family Scolopacidae)													
American Woodcock	*Scolopax minor*	X	X	X	-	-	-	-	X	-	X	-	-
Common Snipe	*Gallinago gallinago*	X	-	-	-	-	-	-	X	-	X	-	-
Upland Sandpiper	*Bartramia longicauda*	-	-	-	-	-	X	-	-	-	X	X	X
Spotted Sandpiper	*Actitis macularia*	X	-	-	-	-	-	-	X	-	X	-	-
Solitary Sandpiper	*Tringa solitaria*	X	X	X	-	-	-	-	X	X	X	-	-
Willet	*Catoptrophorus semipalmatus*	X	-	-	-	-	-	-	X	X	X	-	-
Greater Yellowlegs	*Tringa melanoleuca*	X	X	X	-	-	-	-	X	X	X	-	-
Lesser Yellowlegs	*Tringa flavipes*	X	X	X	-	-	-	-	X	X	X	-	-
White-rumped Sandpiper	*Calidris fuscicollis*	X	-	-	-	-	X	-	X	-	X	-	-
Least Sandpiper	*Calidris minutilla*	X	-	-	-	-	X	-	X	-	X	-	-
Dunlin	*Calidris alpina*	X	-	-	-	-	-	-	-	-	X	-	-
Short-billed Dowitcher	*Limnodromus griseus*	X	-	-	-	-	-	-	X	X	X	-	-
Stilt Sandpiper	*Calidris himantopus*	X	-	-	-	-	-	-	X	-	X	-	-
Semipalmated Sandpiper	*Calidris pusilla*	X	-	-	-	-	-	-	X	-	X	-	-
Western Sandpiper	*Calidris mauri*	X	-	-	-	-	-	-	X	-	X	-	-
Red Knot	*Calidris canutus*	X	-	-	-	-	-	-	-	X	X	-	-
Marbled Godwit	*Limosa fedoa*	X	-	-	-	-	X	-	X	X	X	-	-
Long-billed Curlew	*Numenius americanus*	X	-	-	-	-	X	-	X	X	X	X	-
Whimbrel	*Numenius phaeopus*	X	-	-	-	-	X	-	X	X	X	-	-
Sanderling	*Calidris alba*	X	-	-	-	-	-	-	-	-	X	-	-
Storks (Family Ciconiidae)													
Woodstork	*Mycteria americana*	X	-	-	-	-	-	-	X	X	X	-	-

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Common Name	Scientific Name	Vegetative Communities[1]												
		MR	MhH	CH	PF/ XH	PP	DP	SF	FW	MS	TM	AA	DL	
Ibises and Spoonbills (Family Threskiornithidae)														
Glossy Ibis	Plegadis falcinellus	X	-	X	-	-	-	-	X	X	X	-	-	
White Ibis	Eudocimus albus	X	-	X	-	-	-	-	X	X	X	-	-	
Scarlet Ibis	Eudocimus ruber	X	-	X	-	-	-	-	X	X	X	-	-	
Roseate Spoonbill	Ajaia ajaja	X	-	X	-	-	-	-	X	X	X	-	-	
Ducks and Geese (Family Anatidae)														
Canada Goose	Branta canadensis	X	-	-	-	-	-	-	X	-	-	-	-	
Snow Goose	Chen caerulescens	X	-	-	-	-	-	-	X	-	-	-	-	
White fronted Goose	Anser albifrons	X	-	-	-	-	-	-	X	-	-	-	-	
Fulvous Whistling Duck	Dendrocygna bicolor	X	-	-	-	-	-	-	X	-	-	-	-	
Mallard	Anas platyrhynchos	X	X	X	-	-	-	-	X	X	X	X	-	
American Black Duck	Anas rubripes	X	-	-	-	-	-	-	X	X	X	-	-	
Mottled Duck	Anas fulvigula	X	-	-	-	-	-	-	X	X	X	-	-	
Gadwall	Anas strepera	X	-	-	-	-	-	-	X	X	X	-	-	
Eurasian Wigeon	Anas penelope	X	-	-	-	-	-	-	X	X	X	-	-	
American Wigeon	Anas americana	X	-	-	-	-	-	-	X	X	X	-	-	
Pintail	Anas acuta	X	-	-	-	-	-	-	X	X	X	-	-	
Eurasian Green-Winged Teal	Anas crecca	X	-	-	-	-	-	-	X	X	X	-	-	
American Green-Winged Teal	Anas crecca	X	-	-	-	-	-	-	X	X	X	-	-	
Bluewinged Teal	Anas discors	X	-	-	-	-	-	-	X	X	X	-	-	
Cinnamon Teal	Anas cyanoptera	X	-	-	-	-	-	-	X	X	X	-	-	
Northern Shoveler	Anas clypeata	X	-	-	-	-	-	-	X	X	X	-	-	
Wood Duck	Aix sponsa	X	X	X	-	-	-	-	X	X	-	-	-	
Redhead	Aytha americana	X	-	-	-	-	-	-	X	X	X	-	-	
Ring-necked Duck	Aythya collaris	X	-	-	-	-	-	-	X	X	X	-	-	
Canvasback	Aythya valisineria	X	-	-	-	-	-	-	X	X	X	-	-	
Lesser Scaup	Aythya affinis	X	-	-	-	-	-	-	X	X	X	-	-	
Bufflehead	Bucephala albeola	X	-	-	-	-	-	-	X	X	X	-	-	
Ruddy Duck	Oxyura jamaicensis	X	-	-	-	-	-	-	X	X	X	-	-	
Hooded Merganser	Lophodytes cucullatus	X	-	-	-	-	-	-	X	X	X	-	-	
Common Merganser	Mergus merganser	X	-	-	-	-	-	-	X	X	X	-	-	
Red-Breasted Merganser	Mergus serrator	X	-	-	-	-	-	-	X	X	X	-	-	

Table C-1. Vertebrate Wildlife Species Known to or Which Potentially Occur in the Myakka River Corridor

Common Name	Scientific Name	Vegetative Communities[1]											
		MR	MhH	CH	PF/ XH	PP	DP	SF	FW	MS	TM	AA	DL
Muscovy Duck	Cairina moschata	X	-	-	-	-	-	-	X	X	X	-	X
Osprey (Family Pandionidae)													
Osprey	Pandion haliaetus	X	X	X	-	-	-	-	X	X	X	-	-
Caracaras and Falcons (Family Falconidae)													
Crested Caracara	Polyborus plancus	X	-	-	-	-	X	-	-	-	-	X	X
Peregrine Falcon	Falco peregrinus	X	-	-	-	-	X	-	X	-	X	X	X
Merlin	Falco columbarius	X	X	X	X	X	X	X	X	-	X	X	X
American Kestrel	Falco sparverius	X	X	X	X	X	X	X	X	-	X	X	X
Quails (Family Phasianidae)													
Northern Bobwhite	Colinus virginianus	X	X	-	X	X	X	X	-	-	-	X	X
Rails, Gallinules and Coots (Family Rallidae)													
American Coot	Fulica americana	X	-	-	-	-	-	-	X	X	X	-	-
King Rail	Rallus elegans	-	-	-	-	-	-	-	X	X	X	-	-
Virginia Rail	Rallus limicola	-	-	-	-	-	-	-	X	X	X	-	-
Sora	Porzana carolina	-	-	-	-	-	-	-	X	X	X	-	-
Purple Gallinule	Porphyrula martinica	X	-	-	-	-	-	-	X	X	X	-	-
Common Moorhen	Gallinula chloropus	X	-	-	-	-	-	-	X	X	X	-	-
Clapper Rail	Rallus longirostris	X	-	-	-	-	-	-	-	X	X	-	-
Yellow Rail	Coturnicops noveboracensis	X	-	-	-	-	-	-	X	X	-	-	-
Doves (Family Columbidae)													
Mourning Dove	Zenaida macroura	X	X	X	X	X	X	X	X	-	-	X	X
Rock Dove	Columba livia	X	X	X	X	X	X	X	X	-	-	X	X
Common Ground Dove	Columbina passerina	X	X	X	X	X	X	X	X	-	-	X	X
Cuckoos and Anis (Family Cuculidae)													
Yellow-billed Cuckoo	Coccyzus americanus	X	X	X	X	X	-	X	X	-	-	X	X
Black-billed Cuckoo	Coccyzus erythropthalmus	X	X	X	X	X	-	X	X	-	-	X	X
Smooth-billed Ani	Crotophaga ani	X	X	X	X	X	-	X	X	-	-	X	X
Mangrove Cuckoo	Coccyzus minor	X	X	X	X	X	-	X	X	-	-	X	X

Table C-1. Vertebrate Wildlife Species Known to or Which Potentially Occur in the Myakka River Corridor

Common Name	Scientific Name	Vegetative Communities[1]											
		MR	MhH	CH	PF/ XH	PP	DP	SF	FW	MS	TM	AA	DL
Oystercatchers (Family Haematopodidae)													
American Oystercatcher		X	-	-	-	-	-	-	-	X	X	-	-
Avocets and Stilts (Family Recurvirostridae)													
American Avocet	Recurvirostra americana	X	-	-	-	-	-	-	X	X	X	-	-
Black-necked Stilt	Himantopus mexicanus	X	-	-	-	-	-	-	X	X	X	-	-
Gulls and Terns (Family Laridae)													
Herring Gull	Larus argentatus	X	-	-	-	-	-	-	X	X	X	X	X
Ring-billed gull	Larus delawarensis	X	-	-	-	-	-	-	X	X	X	X	X
Laughing Gull	Larus atricilla	X	-	-	-	-	-	-	X	X	X	X	X
Bonaparte's Gull	Larus philadelphia	X	-	-	-	-	-	-	X	X	X	X	X
Black Skimmer	Rynchops niger	X	-	-	-	-	-	-	X	X	X	X	X
Gull-billed Tern	Sterna nilotica	X	-	-	-	-	-	-	X	X	X	X	X
Sandwich Tern	Sterna sandricensis	X	-	-	-	-	-	-	-	-	-	-	-
Royal Tern	Sterna maxima	X	-	-	-	-	-	-	-	-	-	-	-
Caspian Tern	Sterna caspia	X	-	-	-	-	-	-	-	-	-	-	-
Little Tern	Sterna albifrons	X	-	-	-	-	-	-	-	-	-	-	-
Common Tern	Sterna hirundo	X	-	-	-	-	-	-	-	-	-	-	-
Forster's Tern	Sterna forsteri	X	-	-	-	-	-	-	X	-	X	-	-
Black Tern	Chlidonias niger	X	-	-	-	-	-	-	X	-	-	-	-
Kingfishers (Family Alcedinidae)													
Belted Kingfisher	Megaceryle alcyon	X	X	X	-	-	-	-	X	X	X	-	-
Flycatchers (Family Tyrannidae)													
Eastern Kingbird	Tyrannus tyrannus	X	X	X	X	X	-	X	X	X	-	X	X
Great Crested Flycatcher	Myiarchus crinitus	X	X	X	X	X	-	X	X	X	-	X	X
Gray Kingbird	Tyrannus dominicensis	X	X	X	X	X	-	X	X	X	-	X	X
Eastern Phoebe	Sayornis phoebe	X	X	X	X	X	-	X	X	X	-	X	X
Acadian Flycatcher	Empidonax virescens	X	X	X	X	X	-	X	X	X	-	X	X
Eastern Wood Pewee	Contopus virens	X	X	X	X	X	-	X	X	X	-	X	X
Olive-Sided Flycatcher	Contopus borealis	X	X	X	X	X	-	X	X	X	-	X	X
Western Kingbird	Tyrannus verticalis	X	X	X	X	X	X	X	X	-	-	X	X

Table C-1. Vertebrate Wildlife Species Known to or Which Potentially Occur in the Myakka River Corridor

Common Name	Scientific Name	Vegetative Communities[1]											
		MR	MhH	CH	PF/ XH	PP	DP	SF	FW	MS	TM	AA	DL
Jays and Crows (Family Corvidae)													
Blue Jay	Cyanocitta cristata	X	X	X	X	X	X	X	X	-	-	X	X
Scrub Jay	Aphelocoma coerulescens	-	-	-	-	-	-	X	-	-	-	-	-
American Crow	Corvus brachrhynchos	X	X	X	X	X	X	X	X	-	X	X	X
Fish Crow	Corvus ossifragus	X	X	X	X	X	X	X	X	-	X	X	X
Titmice (Family Paridae)													
Tufted Titmouse	Parus bicolor	X	X	X	X	X	X	X	X	-	-	X	X
Wrens (Family Troglodytidae)													
House Wren	Troglodytes aedon	X	X	X	X	X	X	X	X	-	-	X	X
Winter Wren	Troglodytes troglodytes	X	X	X	X	X	X	X	X	-	-	-	-
Carolina Wren	Thryothorus ludovicianus	X	X	X	X	X	X	X	X	-	-	X	X
Marsh Wren	Cistothorus palustris	X	X	X	-	-	-	-	X	X	-	-	-
Sedge Wren	Cistothorus platensis	X	-	-	-	-	X	-	X	-	-	X	X
Owls (Family Tytonidae)													
Screech Owl	Otus asio	X	X	X	X	X	-	-	X	-	-	X	X
Great Horned Owl	Bubo virginianus	X	X	X	X	X	X	X	X	-	-	X	X
Burrowing Owl	Athene cunicularia	-	-	-	-	-	X	-	-	-	-	X	-
Barred Owl	Strix varia	X	X	X	X	X	-	X	X	-	-	-	X
Short-Eared Owl	Asio flammeus	X	-	-	-	-	X	-	X	-	-	X	-
Common Barn Owl	Tyto alba	X	X	X	X	X	-	X	X	-	-	X	X
Goatsuckers (Family Caprimulgidae)													
Chuck-will's-widow	Caprimulgus carolinensis	X	X	X	X	X	-	-	X	-	-	X	X
Whip-poor-will	Caprimulgus vociferus	X	X	X	X	X	-	-	X	-	-	-	X
Common Nighthawk	Chordeiles minor	X	-	-	-	X	X	-	-	-	-	X	X
Swift (Family Apodidae)													
Chimney Swift	Chaetura pelagica	X	X	X	-	-	-	-	X	-	X	X	X
Hummingbird (Family Trochilidae)													
Ruby-throated Hummingbird	Archilochus colubris	X	X	X	X	X	X	X	X	-	-	X	X

Table C-1. Vertebrate Wildlife Species Known to or Which Potentially Occur in the Myakka River Corridor

Common Name	Scientific Name	Vegetative Communities[1]											
		MR	MhH	CH	PF/ XH	PP	DP	SF	FW	MS	TM	AA	DL
Woodpeckers (Family Picidae)													
Northern Flicker	Colaptes auratus	X	X	X	X	X	X	X	X	-	-	X	X
Pileated Woodpecker	Dryocopus pileatus	X	X	X	X	X	-	-	X	-	-	-	X
Red-bellied Woodpecker	Melanerpes carolinus	X	X	X	X	X	-	X	X	-	-	X	X
Red-headed Woodpecker	Melanerpes erythrocephalus	X	X	X	X	X	-	-	X	-	-	X	X
Yellow-bellied Sapsucker	Sphyrapicus varius	X	X	X	X	X	-	-	X	-	-	X	X
Hairy Woodpecker	Picoides villosus	X	X	X	X	X	-	-	X	-	-	X	X
Downy Woodpecker	Picoides pubescens	X	X	X	X	X	-	-	X	-	-	X	X
Red-cockaded Woodpecker	Piciodes borealis	X	-	-	-	X	-	-	-	-	-	-	-
Swallows (Family Hirundinidae)													
Tree Swallow	Tachycineta bicolor	X	X	X	-	-	-	-	X	X	X	X	X
Bank Swallow	Riparia riparia	X	X	X	-	-	-	-	X	X	X	X	X
Northern Rough-winged Swallow	Stelgidopteryx serripennis	X	X	X	-	-	-	-	X	X	X	X	X
Barn Swallow	Hirundo rustica	X	X	X	-	-	-	-	X	X	X	X	X
Purple Martin	Progne subis	X	X	X	-	-	-	-	X	X	X	X	X
Nuthatches (Family Sittidae)													
White-breasted Nuthatch	Sitta carolinesis	X	X	X	X	X	-	-	X	-	-	X	X
Brown-headed Nuthatch	Sitta pusilla	-	-	-	-	X	-	-	-	-	-	-	-
Thrashers (Family Mimidae)													
Northern Mockingbird	Mimus polyglottos	X	X	X	X	X	X	X	X	-	-	X	X
Gray Catbird	Dumetella carolinensis	X	X	X	X	X	X	X	X	-	-	X	X
Brown Thrasher	Toxostoma rufum	X	X	X	X	X	X	X	X	-	-	X	X
Thrushes (Family Turdidae)													
Gray-cheeked Thrush	Catharus minimus	X	X	X	X	X	-	X	X	-	-	X	X
American Robin	Turdus migratorius	X	X	X	X	X	X	X	X	-	-	X	X
Hermit Thrush	Catharus guttatus	X	X	X	X	X	-	X	X	-	-	X	X
Swainson's Thrush	Catharus ustulatus	X	X	X	X	X	-	X	X	-	-	X	X
Veery	Catharus fuscesens	X	X	X	X	-	-	-	X	-	-	-	X
Eastern Bluebird	Sialia sialis	X	X	X	X	X	X	X	X	-	-	X	X

Table C-1. Vertebrate Wildlife Species Known to or Which Potentially Occur in the Myakka River Corridor

Common Name	Scientific Name	Vegetative Communities[1]											
		MR	MhH	CH	PF/ XH	PP	DP	SF	FW	MS	TM	AA	DL
Kinglets and Gnatcatchers (Family Sylviidae)													
Blue-gray Gnatcatcher	*Polioptila caerulea*	X	X	X	X	X	-	X	X	-	-	X	X
Ruby-crowned Kinglet	*Regulus calendula*	X	X	X	X	X	-	X	X	-	-	X	X
Pipits (Family Motacillidae)													
Water Pipit	*Anthus spinoletta*	X	X	X	-	-	X	-	-	-	-	X	X
Waxwings (Family Bombycillidae)													
Cedar Waxwing	*Bombycilla cedrorum*	X	X	X	X	X	-	-	X	-	-	X	X
Shrikers (Family Laniidae)													
Loggerhead Shrike	*Lanius ludovicianus*	X	X	X	X	X	X	X	X	-	-	X	X
Starlings (Family Sturnidae)													
European Starling	*Sturnus vulgaris*	-	-	-	-	-	-	-	-	-	-	X	X
Vireos (Family Vireonidae)													
White-eyed Vireo	*Vireo griseus*	X	X	X	X	X	X	X	X	-	-	X	X
Yellow-throated Vireo	*Vireo flavifrons*	X	X	X	X	-	-	-	X	-	-	-	X
Solitary Vireo	*Vireo solitarius*	X	X	X	X	X	-	-	X	-	-	-	X
Red-eyed Vireo	*Vireo olivaceus*	X	X	X	X	X	-	-	X	-	-	X	X
Black-whiskered Vireo	*Vireo altiloquus*	X	X	X	-	-	-	-	-	X	-	-	
Wood Warblers (Family Parulidae)													
Black-and-white Warbler	*Mniotilta varia*	X	X	X	X	X	-	-	X	-	-	X	X
Prothonotary Warbler	*Protonotaria citrea*	X	X	X	-	-	-	-	X	-	-	-	-
Worm-eating Warbler	*Helmitheros vermivorus*	X	X	X	X	X	X	X	-	-	-	X	X
Tennessee Warbler	*Vermivora peregrine*	X	X	X	X	-	-	-	X	-	-	X	X
Orange-crowned Warbler	*Vermivora celata*	X	X	X	X	X	X	X	X	-	-	X	X
Northern Parula	*Parula americana*	X	X	X	X	-	-	-	X	-	-	-	X
Yellow Warbler	*Dendroica oetechia*	X	X	X	X	-	-	-	X	-	-	-	X
Magnolia Warbler	*Dendroica magnolia*	-	-	-	-	X	-	-	-	-	-	X	-

Table C-1. Vertebrate Wildlife Species Known to or Which Potentially Occur in the Myakka River Corridor

Common Name	Scientific Name	Vegetative Communities[1]											
		MR	MhH	CH	PF/ XH	PP	DP	SF	FW	MS	TM	AA	DL
Cape May Warbler	Dendroica tigrina	X	X	X	X	X	-	-	X	-	-	X	X
Black-throated Blue Warbler	Dendroica caerulescens	X	X	X	X	X	-	X	X	-	-	X	X
Yellow-rumped Warbler	Dendroica coronata	X	X	X	X	X	-	X	X	-	-	X	X
Black-throated Green Warbler	Dendroica virens	-	-	-	-	X	-	-	-	-	-	X	X
Blackburnian Warbler	Dendroica fusca	X	X	X	X	X	-	X	X	-	-	X	X
Kirtland's Warbler	Dendroica kirtlandii	X	X	X	X	X	X	X	X	-	-	X	X
Orange-crowned Warbler	Vermivora celata	X	X	X	X	X	X	X	X	-	-	X	X
Yellow-throated Warbler	Dendroica dominica	X	X	X	X	X	-	X	X	-	-	X	X
Bay-breasted Warbler	Dendroica castanea	X	X	X	X	X	-	X	X	-	-	X	X
Blackpoll Warbler	Dendroica striata	X	X	X	X	X	-	X	X	-	-	X	X
Pine Warbler	Dendroica pinus	-	-	-	-	X	-	-	-	-	-	X	X
Prairie Warbler	Dendroica discolor	-	-	-	-	X	X	X	-	-	-	X	X
Palm Warbler	Dendroica palmarum	X	X	X	X	X	X	X	X	-	-	X	X
Ovenbird	Seiurus aurocapillus	X	X	X	X	-	-	-	X	-	-	-	X
Northern Waterthrush	Seiurus noveboracensis	X	X	X	-	-	-	-	X	-	-	-	-
Louisiana Waterthrush	Seiurus motacilla	X	X	X	-	-	-	-	X	-	-	-	-
Kentucky Warbler	Oporornis formosus	X	X	X	X	X	-	X	X	-	-	X	X
Common Yellowthroat	Geothlypis trichas	X	X	X	-	-	-	-	X	-	-	-	-
Connecticut Warbler	Oporornis agilis Oporornis	X	X	X	X	-	-	-	X	-	-	-	X
Hooded Warbler	Wilsonia citrina	X	X	X	X	X	-	-	X	-	-	X	X
American Redstart	Setophaga ruticilla	X	X	X	X	-	-	-	X	-	-	-	X
Grosbeaks, Sparrows, Buntings (Family Fringillidae)													
Northern Cardinal	Cardinalis cardinalis	X	X	X	X	X	-	-	X	-	-	X	X
Rose-breasted Grosbeak	Pheucticus ludovicianus	X	X	X	X	-	-	-	X	-	-	X	X
Indigo Bunting	Passerina cyanea	X	X	X	X	X	X	X	X	-	-	X	X
Painted Bunting	Passerina ciris	X	X	X	X	X	X	X	X	-	-	X	X
Dickcissel	Spiza americana	-	-	-	-	-	X	-	-	-	-	X	X
American Goldfinch	Carduelis tristis	X	X	X	X	-	-	X	X	-	-	X	X
Rufous-sided Towhee	Pipilo erythrophthalmus	X	X	X	X	X	-	X	X	-	-	X	X
Grasshopper Sparrow	Ammodramus savannarum	-	-	-	-	-	X	-	-	-	-	X	-

Table C-1. Vertebrate Wildlife Species Known to or Which Potentially Occur in the Myakka River Corridor

Common Name	Scientific Name	Vegetative Communities[1]											
		MR	MhH	CH	PF/ XH	PP	DP	SF	FW	MS	TM	AA	DL
Vesper Sparrow	Pooecetes gramineus	-	-	-	-	-	X	-	-	-	-	X	X
Lark Sparrow	Chondestes grammacus	X	X	X	X	X	X	X	X	-	-	X	X
Bachman's Sparrow	Aimophila aestivalis	X	X	X	X	X	X	X	X	-	-	X	X
Chipping Sparrow	Spizella passerina	X	X	X	X	X	-	X	X	-	-	X	X
Fox Sparrow	Passerella iliaca	X	X	X	X	X	-	X	X	-	-	X	X
Lincoln's Sparrow	Melospiza lincolnii	-	-	-	-	-	X	X	-	-	-	X	X
Swamp Sparrow	Melospiza georgiana	X	X	X	-	-	-	-	X	-	-	-	-
Song Sparrow	Melospiza melodia	-	-	-	-	-	X	-	X	-	-	X	X
Purple Finch	Carpodacus purpureus	X	X	X	X	X	-	X	X	-	-	X	X
Northern Junco	Junco hyemalis	X	X	X	X	X	X	X	X	-	-	X	X
White-throated Sparrow	Zonotrichia albicallis	X	X	X	X	X	X	X	X	-	-	X	X
Savannah Sparrow	Passerculus sandwichensis	X	-	-	-	-	X	X	X	-	-	X	X
Sharp-tailed Sparrow	Ammospiza caudacuta	X	-	-	-	-	-	-	X	-	-	-	-
Weaver Finches (Family Ploceidae)													
House Sparrow	Passer domesticus	-	-	-	-	-	-	-	-	-	-	X	X
Meadowlarks, Blackbirds, Orioles (Family Icteridae)													
Bobolink	Dolichonyx oryzivorus	-	-	-	-	X	X	-	X	X	-	X	X
Eastern Meadowlark	Sturnella magna	-	-	-	-	-	X	-	-	-	-	X	X
Red-winged Blackbird	Agelaius phoeniceus	X	X	X	-	-	-	-	X	X	-	-	-
Northern Oriole	Icterus galbula	X	X	X	X	-	-	-	X	-	-	X	X
Rusty Blackbird	Euphagus carolinus	X	X	X	-	-	-	-	X	-	-	-	-
Boat-tailed Grackle	Quiscalus major	X	X	X	-	-	-	-	-	X	X	-	-
Common Grackle	Quiscalus quiscula	X	X	X	-	-	-	-	X	X	X	-	-
Brown Headed Cowbird	Molothrus ater	X	X	X	-	-	X	-	-	-	-	X	X

Table C-1. Vertebrate Wildlife Species Known to or Which Potentially Occur in the Myakka River Corridor

Common Name	Scientific Name	Vegetative Communities[1]											
		MR	MhH	CH	XH	PF/PP	DP	SF	FW	MS	TM	AA	DL
Tanagers (Family Thraupidae)													
Summer Tanager	Piranga rubra	X	X	X	X	-	-	-	X	-	-	-	X

NOTES:

1 - MR = Myakka River; MhH = Mesic-hydric Hammock; CH = Coastal Hammock; XH - Xeric Hammock; PF/PP = Pine Flatwoods/Pine Prairies; DP = Dry Prairies; SF = Scrubby Flatwoods/Oak Scrub; FW = Freshwater Wetlands; MS = Mangrove Swamps; TM = Brackish-Saltwater Tidal Marsh; AA = Agricultural Areas; DL - Developed Lands

Source: Hunter Services, Inc. 1989

Table C-2. Listed Wildlife Species Known to or Which Potentially Occur in the Myakka River Corridor

Common Name	Scientific Name	Designated Status[1]			
		FGFWFC[2]	USFWS[3]	CITES[4]	FCREPA[5]
Amphibians and Reptiles					
American Alligator	*Alligator mississippiensis*	SSC	T(S/A)	II	SSC
Atlantic Loggerhead Turtle	*Caretta caretta caretta*	T	T	I	T
Atlantic Green Turtle	*Chelonia mydas mydas*	E	E	I	E
Leatherback Turtle	*Dermochelys coriacea*	E	E	I	R
Eastern Indigo Snake	*Drymarchon corais couperi*	T	T	---	SSC
Atlantic Hawksbill Turtle	*Eretmochelys imbricata imbricata*	E	E	I	E
Gopher Tortoise	*Gopherus polyphemus*	SSC	UR2	---	T
Florida Pine Snake	*Pituophis melanoleucus mugitus*	SSC	UR2	---	---
Florida Gopher Frog	*Rana areolata aesopus*	SSC	UR2	---	T
Kemp's Atlantic Ridley	*Lepidochelys kempii*	E	E	I	E
Mammals					
Big Brown Bat	*Eptesicus fuscus*	---	---	---	R
Florida Panther	*Felis concolor coryi*	E	E	I	E
River Otter	*Lutra canadensis*	---	---	II	---
Bobcat	*Lynx rufus*			II	---
Florida Long-tailed Weasel	*Mustela frenata peninsulae*	---	UR2	---	R
Round-tailed Muskrat	*Neofiber alleni*	---	UR2	---	SSC
Florida Mouse	*Peromyscus floridanus*	SSC	UR2	---	T
West Indian Manatee	*Trichechus manatus latirostris*	E	E	I	T
Florida Black Bear	*Ursus americanus floridanus*	T	UR2	---	T
Florida Mink	*Mustela vison lutensis*	---	UR2	---	---

Table C-2. Listed Wildlife Species Known to or Which Potentially Occur in the Myakka River Corridor
(Continued, Page 2 of 4)

Common Name	Scientific Name	Designated Status[1] FGFWFC[2]	USFWS[3]	CITES[4]	FCREPA[5]
Birds					
Bachman's Sparrow	Aimophila aestivalis	---	UR2	---	---
Roseate Spoonbill	Ajaia ajaja	SSC	---	---	R
Florida Scrub Jay	Aphelocoma coerulescens coerulescens	T	T	---	T
Limpkin	Aramus guarauna	SSC	---	---	SSC
Golden Eagle	Aquila chrysaetos	---	---	II	---
Florida Burrowing Owl	Athene cunicularia floridana	SSC	---	---	SSC
Southeastern Piping Plover	Charadrius melodus	T	T	---	SSC
Snowy Plover	Charadrius alexandrinus tenuirostris	T	UR2	---	E
Northern Harrier	Circus cyaneus	---	---	II	---
Mangrove Cuckoo	Coccyzus minor	---	---	---	R
Kirtland's Warbler	Dendroica kirtlandii	E	E	---	E
Little Blue Heron	Egretta caerulea	SSC	---	---	SSC
Reddish Egret	Egretta rufescens	SSC	UR2	---	R
Snowy Egret	Egretta thula	SSC	---	---	SSC
Tricolored Heron	Egretta tricolor	SSC	---	---	SSC
Louisiana Waterthrush	Seiurus motacilla	---	---	---	R
American Redstart	Setophaga ruticilla	---	---	---	R
Florida Great White Heron	Ardea herodias occidentalis	---	---	---	SSC
Great Egret	Casmerodius albus	---	---	---	SSC
Black-crowned Night Heron	Nycticorax nycticorax	---	---	---	SSC
Yellow-crowned Night Heron	Nyctanassa violacea	---	---	---	SSC
Eastern Least Bittern	Ixobrychus exilis exilis	---	---	---	SSC
Glossy Ibis	Plegadis falcinellus	---	---	---	SSC
White Ibis	Eudocimus Albus	---	---	---	SSC
Cooper's Hawk	Accipiter cooperii	---	---	---	SSC
American Avocet	Recurvirostra americana	---	---	---	SSC

Table C-2. Listed Wildlife Species Known to or Which Potentially Occur in the Myakka River Corridor
(Continued, Page 3 of 4)

Common Name	Scientific Name	Designated Status[1]			
		FGFWFC[2]	USFWS[3]	CITES[4]	FCREPA[5]
Royal Tern	Sterna maxima	---	---	---	SSC
Sandwich Tern	Sterna sandricensis	---	---	---	SSC
Caspian Tern	Sterna caspia	---	---	---	SSC
Blade Skimmer	Rynchops niger	---	---	---	SSC
Southern Hairy Woodpecker	Picoides villosus audubonii	---	---	---	SSC
White-breasted Nuthatch	Sitta carolinensis	---	---	---	SSC
Worm-eating Warbler	Helmitheros vermivorus	---	---	---	SSC
Florida Prairie Warbler	Dendroica discolor paludicola	---	---	---	SSC
Everglades Kite	Rostrhamus sociabilis plumbeus	E	E	---	E
Swallow-tailed Kite	Elanoides forficatus	---	UR2	---	E
Merlin	Falco columbarius	---	---	II	SU
Arctic Peregrine Falcon	Falco peregrinus tundrius	E	T	I	---
Southeastern American Kestrel	Falco sparverius paulus	T	UR2	II	T
Florida Sandhill Crane	Grus canadensis pratensis	T	---	II	T
American Oystercatcher	Haematopus palliatus	SSC	---	---	T
Southern Bald Eagle	Haliaeetus leucocephalus leucocephalus	T	E	I	T
Wood Stork	Mycteria americana	E	E	---	E
Osprey	Pandion haliaetus	---	---	II	T
Eastern Brown Pelican	Pelecanus occidentalis carolinensis	SSC	---	---	T
Red-cockaded Woodpecker	Picoides borealis	T	E	---	E
Audubon's Crested Caracara	Polyborus plancus audubonii	T	T	---	T
Least Tern	Sterna antillarum	T	---	---	T
Roseate Tern	Sterna dougallii dougallii	T	T	---	T
Bachman's Warbler	Vermivora bachmanii	E	E	---	E
Rothchild's Magnificent Frigate-Bird	Fregata magnificens rothschildi	---	---	---	T

Table C-2. Listed Wildlife Species Known to or Which Potentially Occur in the Myakka River Corridor
(Continued, Page 4 of 4)

Common Name	Scientific Name	Designated Status[1]			
		FGFWFC[2]	USFWS[3]	CITES[4]	FCREPA[5]
White-tailed Kite	Elanus caeruleus majusculus				R
Short-tailed Hawk	Buteo brachyurus	---	---	---	R
Black-whiskered Vireo	Vireo altiloquus	---	---	---	R
Florida Clapper Rail	Rallus longirostris scottii	---	---	---	SU
Black Rail	Laterallus jamaisensis	---	---	---	SU

NOTES:

1: E = Endangered
T = Threatened
T(S/A) = Threatened Due to Similarity of Appearance
SSC = Species of Special Concern
I = Appendix I Species
II = Appendix II Species
UR2 = Under Review for Listing, but Substantial Evidence of biological vulnerability and/or threat is lacking

2: Florida Game and Fresh Water Fish Commission (list published in Section 39-27.003-005, FAC)

3: United States Fish and Wildlife Service (list published in List of Endangered and Threatened Wildlife and Plants, 50 CFR 17.11-12)

4: Convention on International Trade in Endangered Species of Wild Fauna and Floras

5: Florida Committee on Rare and Endangered Plants and Animals

Sources: Hunter Services, Inc. 1989; FGFWFC, 1988; FCREPA, 1978

Table C-3. Breeding Status of Bird Species Potentially Inhabiting the Myakka River Corridor

Common Name (Family)	Scientific Name	Months Present[1]	Abundance[2]	Breeding Season	Nesting Habitat[3]
Loons (Gaviidae)					
Common Loon	Gavia immer	10-5+	R-U	-	-
Grebes (Podicipedidae)					
Horned Grebe	Podiceps auritus	10-6	R-FC	-	-
Pied-billed Grebe	Podilymbus podiceps	R	U-A	3-12	E, P, L
Pelicans (Pelecanidae)					
American White Pelican	Pelecanus erythrorhynchos	ALL	O-A	-	-
Brown Pelican	Pelecanus occidentalis	R	O-A	1-12	O, M
Cormorant (Phalacrocoracidae)					
Double-crested Cormorant	Phalacrocorax auritus	R	C-A	1-12	O, M, L
Darters (Anhingidae)					
Anhinga	Anhinga anhinga	R	U-A	12-8	O, E, L, S
Frigatebird (Fregatidae)					
Magnificent Frigatebird	Fregata magnificens	R	O-A	3-8	M
Herons and Bitterns (Ardeidae)					
Great Blue Heron (White Morph)	Ardea herodias	R	U-A	12-8	O, M, E, L, S
Great Blue Heron	Ardea herodias	R	U-A	12-8	O, M, E, L, S
Green-backed Heron	Butorides striatus	R	FC-C	3-7	O, M, E, L, S

Table C-3. Breeding Status of Bird Species Potentially Inhabiting the Myakka River Corridor (Continued, Page 2 of 16)

Common Name (Family)	Scientific Name	Months Present[1]	Abundance[2]	Breeding Season	Nesting Habitat[3]
Little Blue Heron	Egretta caerulea	R	FC-A	3-8	O, M, E, L, S
Cattle Egret	Bubulcus ibis	R	A	3-8	O, M, E, L, S
Reddish Egret	Egretta rufescens	R	O-FC	3-8	O, M
Great Egret	Casmerodius albus	R	FC-A	1-6	O, M, E, L, S
Snowy Egret	Egretta thula	R	FC-A	3-8	O, M, E, L, S
Tri-colored Heron	Egretta tricolor	R	U-A	3-8	O, M, E, L, S
Black-crowned Night Heron	Nycticorax nycticorax	R	O-C	12-7	O, M, E, L, S
Yellow-crowned Night Heron	Nycticorax violaceus	R	O-C	3-7	O, M, E, L, S
Least Bittern	Ixobychus exilus	R	O-FC	3-8	E, L
American Bittern	Botaurus lentiginosus	8-5+	O-R	4-7	E, L
Vultures (Cathartidae)					
Turkey Vulture	Cathartes aura	R	C-A	3-7	P, U, H, P, I
Black Vulture	Coragyps atratus	R	O-C	3-7	P, U, H, P, I
Hawks, Eagles and Kites (Accipitridae)					
Snail Kite	Rostrhamus sociabilis	R	O-R	11-6	E, L
Sharp-shinned Hawk	Accipiter striatus	9-5+	R-C	?	U
Cooper's Hawk	Accipiter cooperii	9-5+	O-R	4-7	U, H, PL, S, s
Red-tailed Hawk	Buteo jamaicensis	R	O-FC	2-6	U, H, PL
Red-shouldered Hawk	Buteo lineatus	R	U-C	1-5	TH, E, P, L, S, H, PL
Broad-winged Hawk	Buteo platypterus	9-5+	O-C	3-6	S, U, H
Short-tailed Hawk	Buteo brachyurus	R	O-R	3-6	H, TH, U, H, S

Table C-3. Breeding Status of Bird Species Potentially Inhabiting the Myakka River Corridor (Continued, Page 3 of 16)

Common Name (Family)	Scientific Name	Months Present[1]	Abundance[2]	Breeding Season	Nesting Habitat[3]
Golden Eagle	Aquila chrysaetos	11-3	O	-	-
Bald Eagle	Haliaeetus leucocephalus	R	O-U	11-6	O, M, U, PL
Northern Harrier	Circus cyaneus	8-5+	R-FC	4-7	E, P, L
Swallow-tailed Kite	Elanoides forficatus	2-9	O-FC	3-7	M, TH, S, U,H, PL, C
Turkeys (Meleagrididae)					
Wild Turkey	Meleagris gallopavo	R	O-FC	2-6	P, U, H, PL
Limpkin (Aramidae)					
Limpkin	Aramus guarauna	R	O-FC	12-6	E, L, S
Cranes (Gruidae)					
Sandhill Crane	Grus canadensis	R	R-FC	1-6	E, P, F
Plovers (Charadriidae)					
Semipalmated Plover	Charadrius semipalmatus	7-6	R-A	-	-
Killdeer	Charadrius vociferus	R	R-C	3-7	E, P, L, F, C, T
Black-bellied Plover	Pluvialis squatarola	R	U-A	-	-
Ruddy Turnstone	Arenaria interpres	7-5	O-U	-	-
Piping Plover	Charadrius melodus	7-5	O-U	-	-
Snowy Plover	Charadrius alexandrinus	R	R-U	3-7	O
Wilson's Plover	Charadrius wilsonia	R	R-C	4-7	O-T

Table C-3. Breeding Status of Bird Species Potentially Inhabiting the Nyakka River Corridor (Continued, Page 4 of 16)

Common Name (Family)	Scientific Name	Months Present[1]	Abundance[2]	Breeding Season	Nesting Habitat[3]
Snipes and Sandpipers (Scolopacidae)					
American Woodcock	Scolopax minor	10-3+	O-R	2-6	S, H
Common Snipe	Gallinago gallinago	9-5+	O-C	-	-
Upland Sandpiper	Bartramia longicauda	3-5,7-10	O-U	-	-
Spotted Sandpiper	Actitis macularia	7-6	U-FC	-	-
Solitary Sandpiper	Tringa solitaria	3-5+,7-11+	O-U	-	-
Willet	Catoptrophorus semipalmatus	R	O-A	4-7	O, S m
Greater Yellowlegs	Tringa melanoleuca	7-6	U-FC	-	-
Lesser Yellowlegs	Tringa flavipes	7-5+	U-A	-	-
White-rumped Sandpiper	Calidris fuscicollis	4-6,8-11	R-U	-	-
Least Sandpiper	Calidris minutilla	7-5+	O-A	-	-
Dunlin	Calidris alpina	8-6+	R-A	-	-
Short-billed Dowitcher	Limnodromus griseus	R	U-A	-	-
Stilt Sandpiper	Calidris himantopus	7-5+	O-A	-	-
Semipalmated Sandpiper	Calidris pusilla	4-6,7-10+	U-A	-	-
Western Sandpiper	Calidris mauri	R?	U-A	-	-
Red Knot	Calidris canutus	R	FC-C	-	-
Marbled Godwit	Limosa fedoa	7-5	O-C	-	-
Long-billed Curlew	Numenius americanus	7-6	O-R	-	-
Whimbrel	Numenius phaeopus	7-5	O-U	-	-
Sanderling	Calidris alba	R	FC-C	-	-
Storks (Ciconiidae)					
Woodstork	Mycteria americana	R	O-A	12-7	O, M, L, S

Table C-3. Breeding Status of Bird Species Potentially Inhabiting the Hyakka River Corridor (Continued, Page 5 of 16)

Common Name (Family)	Scientific Name	Months Present[1]	Abundance[2]	Breeding Season	Nesting Habitat[3]
Ibises and Spoonbills (Threskiornithidae)					
Glossy Ibis	Plegadis falcinellus	R	O-A	3-8	E, L
White Ibis	Eudocimus albus	R	FC-A	3-8	O, M, E, L, S
Scarlet Ibis	Eudocimus ruber	R	O	-	-
Roseate Spoonbill	Ajaia ajaja	R	O-C	12-7	O, M
Ducks and Geese (Anatidae)					
Canada Goose	Branta canadensis	10-4+	O	4-7	L
Snow Goose	Chen caerulescens	11-4	O	-	-
White Fronted Goose	Anser albifrons	10-3	O	-	-
Fulvous Whistling Duck	Dendrocygna bicolor	R	O-A	5-9	E, L
Mallard	Anas platyrhynchos	10-4	O-U	3-6	L, T
American Black Duck	Anas rubripes	11-4	O-U	-	-
Mottled Duck	Anas fulvigula	R	R-C	2-9	Sm, E, P, L
Gadwall	Anas strepera	10-3	O-U	-	-
Eurasian Wigeon	Anas penelope	12-3	O	-	-
American Wigeon	Anas americana	9-6	U-A	-	-
Pintail	Anas acuta	9-5	O-A	-	-
Eurasian Green-winged Teal	Anas crecca	10-4	O-A	-	-
American Green-winged Teal	Anas crecca	10-4	O-A	-	-
Blue-winged Teal	Anas discors	8-6+	U-A	3-6	E, L
Cinnamon Teal	Anas cyanoptera	10-4	O	-	-
Northern Shoveler	Anas clypeata	9-6+	O-FC	-	-
Wood Duck	Aix sponsa	R	O-U	2-6	E, L, S, T

Table C-3. Breeding Status of Bird Species Potentially Inhabiting the Myakka River Corridor (Continued, Page 6 of 16)

Common Name (Family)	Scientific Name	Months Present[1]	Abundance[2]	Breeding Season	Nesting Habitat[3]
Redhead	Aytha americana	11-4	O-U	-	-
Ring-necked Duck	Aythya collaris	10-5+	O-A	5-7	L
Canvasback	Aythya valisineria	11-5	O-C	-	-
Lesser Scaup	Aythya affinis	10-5+	R-A	5-7	L
Bufflehead	Bucephala albeola	11-4	O-R	-	-
Ruddy Duck	Oxyura jamaicensis	ALL	O-C	5-7	L
Hooded Merganser	Lophodytes cucullatus	10-4	O-U	-	L
Common Merganser	Mergus merganser	1-3	O	-	-
Red-breasted Merganser	Mergus serrator	10-6	R-A	-	-
Muscovy Duck	Cairina moschata	ALL	C	1-12	L, T
Osprey (Pandionidae)					
Osprey	Pandion haliaetus	R	R-FC	1-12	O. L
Caracaras and Falcons (Falconidae)					
Crested Caracara	Polyborus plancus	R	O-U	12-6	P, H, F
Peregrine Falcon	Falco peregrinus	9-5	O-U	-	-
Merlin	Falco columbarius	9-5	R-U	-	-
American Kestrel	Falco sparverius	R	U-FC	3-6	P, U, H, PL, T
Quails (Phasianidae)					
Northern Bobwhite	Colinus virginianus	R	R-A	2-7	P, U, H, W, PL
Rails, Gallinules and Coots (Rallidae)					
American Coot	Fulica americana	R	FC-A	3-8	E, L
King Rail	Rallus elegans	R	O-U	2-7	Sm, E, L

Table C-3. Breeding Status of Bird Species Potentially Inhabiting the Myakka River Corridor (Continued, Page 7 of 16)

Common Name . (Family)	Scientific Name	Months Present[1]	Abundance[2]	Breeding Season	Nesting Habitat[3]
Virginia Rail	Rallus limicola	10-4	O	-	-
Sora	Porzana carolina	8-5+	O-U	-	-
Purple Gallinule	Porphyrula martinica	R	O-FC	4-8	E, L
Common Moorhen	Gallinula chloropus	R	O-A	3-7	E, L
Clapper Rail	Rallus longirostris	R	R-FC	3-7	M, SM
Yellow Rail	Coturnicops noveboracensis	11-5	O	-	-
Doves (Columbidae)					
Mourning Dove	Zenaida macroura	R	R-A	1-12	V, H, PL, W, F, C, T
Rock Dove	Columba livia	R	O-A	1-12	C, T
Common Ground Dove	Columbina passerina	R	FC-A	2-10	V, W,PL, Ss, F, C, T
Cuckoos and Anis (Cuculidae)					
Yellow-billed Cuckoo	Coccyzus americanus	3-11+	U-FC	5-8	TH, S, U, H
Black-billed Cuckoo	Coccyzus erythropthalmus	4-5+,8-11	O	-	-
Smooth-billed Ani	Crotophaga ani	R	O-C	3-9	E, L, W, F, C, T
Mangrove Cuckoo	Coccyzus minor	R	O-U	4-8	M, TH
Oystercatchers (Haematopodidae)					
American Oystercatcher	Haematopus palliatus	R	O-U	3-7	O

Table C-3. Breeding Status of Bird Species Potentially Inhabiting the Myakka River Corridor (Continued, Page 8 of 16)

Common Name (Family)	Scientific Name	Months Present[1]	Abundance[2]	Breeding Season	Nesting Habitat[3]
Avocets and Stilts (Recurvirostridae)					
American Avocet	Recurvirostra americana	7-6	U-C	-	-
Black-necked Stilt	Himantopus mexicanus	3-11+	R-A	-	-
Gulls and Terns (Laridae)					
Herring Gull	Larus argentatus	R	O-A	-	-
Ring-billed gull	Larus delawarensis	R	U-A	-	-
Laughing Gull	Larus atricilla	R	O-A	5-8	O, Sm
Bonaparte's Gull	Larus philadelphia	10-4+	O-FC	-	-
Black Skimmer	Rynchops niger	R	R-A	5-9	O, L, T
Gull-billed Tern	Sterna nilotica	3-10+	O-FC	5-8	O, Sm, E, L
Sandwich Tern	Sterna sandricensis	R	O-C	5-8	O
Royal Tern	Sterna maxima	R	FC-A	4-8	O, T
Caspian Tern	Sterna caspia	R	O-FC	4-8	O
Little Tern	Sterna albifrons	3-10+	O-A	4-8	O, T
Common Tern	Sterna hirundo	4-10+	O-U	5-8	O
Forster's Tern	Sterna forsteri	7-5+	R-FC	-	-
Black Tern	Chlidonias niger	4-10+	O-A	-	-
Kingfisher (Alcedinidae)					
Belted Kingfisher	Megaceryle alcyon	R	FC-C	-	-
Flycatchers (Tyrannidae)					
Eastern Kingbird	Tyrannus tyrannus	3-10+	FC-A	5-8	P, PL, T
Great Crested Flycatcher	Myiarchus crinitus	R	U-FC	4-8	TH,S,U,H,W,PL, Ss, T

Table C-3. Breeding Status of Bird Species Potentially Inhabiting the Hyakka River Corridor (Continued, Page 9 of 16)

Common Name (Family)	Scientific Name	Months Present[1]	Abundance[2]	Breeding Season	Nesting Habitat[3]
Gray Kingbird	Tyrannus dominicensis	3-11+	O-A	5-8	M, TH, H, T
Eastern Phoebe	Sayornis phoebe	9-4+	O-FC	-	-
Acadian Flycatcher	Empidonax virescens	8-10+	O-R	5-8	S, U, H, W
Eastern Wood Pewee	Contopus virens	3-5,8-11+	O-U	4-7	U, W, PL
Olive-sided Flycatcher	Contopus borealis	3-5,9-10	O	-	-
Western Kingbird	Tyrannus verticalis	9-5+	O-U	-	-
Jays and Crows (Corvidae)					
Blue Jay	Cyanocitta cristata	R	O-A	3-8	S, U, H, PL, C, T
Scrub Jay	Aphelocoma coerulescens	R (LOCAL)	O-C	3-6	Ss
American Crow	Corvus brachrhynchos	R	O-C	1-5	P, S, U, H, PL, C, T
Fish Crow	Corvus ossifragus	R	O-A	3-6	O,M,P,L,U,H,PL, C, T
Titmice Paridae)					
Tufted Titmouse	Parus bicolor	R	O-FC	3-7	S, U, H, PL, Ss, T
Wrens (Troglodytidae)					
House Wren	Troglodytes aedon	9-5+	O-FC	-	-
Winter Wren	Troglodytes troglodytes	10-3	O	-	-
Carolina Wren	Thryothorus ludovicianus	R	U-C	3-8	TH,S,U,H,W,PL,Ss.C.,T
Marsh Wren	Cistothorus palustris	10-5	O-A	4-7	Sm
Sedge Wren	Cistothorus platensis	10-5+	O-R	-	-

Table C-3. Breeding Status of Bird Species Potentially Inhabiting the Myakka River Corridor (Continued, Page 10 of 16)

Common Name (Family)	Scientific Name	Months Present[1]	Abundance[2]	Breeding Season	Nesting Habitat[3]
Owls (Tytonidae)					
Screech Owl	Otus asio	R	O-FC	3-6	TH,S, U, H, W, PL, T
Great Horned Owl	Bubo virginianus	R	O-R	11-4	U, H, PL, T
Burrowing Owl	Athene cunicularia	R	O-U	3-6	P, F, C, T
Barred Owl	Strix varia	R	O-U	12-4	TH, S, H
Short-eared Owl	Asio flammeus	11-3+	O	-	-
Common Barn Owl	Tyto alba	R	O-U	1-12	P, H , F, C, T
Goatsuckers (Caprimulgidae)					
Chuck-will's-widow	Caprimulgus carolinensis	R	R-U	3-7	TH, P, U, H, PL
Whip-poor-will	Caprimulgus vociferus	9-4+	OOR	-	-
Common Nighthawk	Chordeiles minor	3-11+	FC-A	4-8	P, PL, F, C, T
Swift (Apodidae)					
Chimney Swift	Chaetura pelagica	3-11	O-FC	4-7	S, U, PL, T
Hummingbird (Trachilidae)					
Ruby-throated Hummingbird	Archilochus colubris	R	O-U	4-7	U, W, C, T
Woodpeckers (Picidae)					
Northern Flicker	Colaptes auratus	R	U-FC	3-7	S,U,H,W, PL, F, C, T
Pileated Woodpecker	Dryocopus pileatus	R	O-FC	2-7	S, U, H , W, PL, T
Red-bellied Woodpecker	Melanerpes carolinus	R	FC-C	3-7	TH,S, U, H, W, PL, T

Table C-3. Breeding Status of Bird Species Potentially Inhabiting the Myakka River Corridor (Continued, Page 11 of 16)

Common Name (Family)	Scientific Name	Months Present[1]	Abundance[2]	Breeding Season	Nesting Habitat[3]
Red-headed Woodpecker	Melanerpes erythrocephalus	R	O-FC	4-9	U, H, PL, T
Yellow-bellied Sapsucker	Sphyrapicus varius	10-5	R-U	-	---
Hairy Woodpecker	Picoides villosus	R	O-R	3-7	S, U, H, PL
Downy Woodpecker	Picoides pubescens	R	R-U	4-7	S, U, H, W, PL, T
Red-cockaded Woodpecker	Piciodes borealis	R	U-R	4-7	PL
Swallow (Hirundinidae)					
Tree Swallow	Tachycineta bicolor	7-6	U-A	---	---
Bank Swallow	Riparia riparia	3-6,7-9+	R-C	---	---
Northern Rough-winged Swallow	Stelgidopteryx serripennis	3-11+	O-A	5-8	L, T
Barn Swallow	Hirundo rustica	3-6,7-11+	C-A	5-8	L
Purple Martin	Progne subis	1-11+	U-C	5-8	PL, C, T
Nuthatches (Sittidae)					
White-breasted Nuthatch	Sitta carolinesis	X	-	3-7	U, PL
Brown-headed Nuthatch	Sitta pusilla	R	O-U	2-7	PL
Thrashers (Turdidae)					
Northern Mockingbird	Mimus polyglottos	R	C-A	3-8	TH,P,U,H,W,PL,Ss,F,C,T
Gray Catbird	Dumetella carolinensis	9-5+	U-C	4-7	U, W, T
Brown Thrasher	Toxostoma rufum	R	R-FC	3-7	U, H, W, C, T

Table C-3. Breeding Status of Bird Species Potentially Inhabiting the Myakka River Corridor (Continued, Page 12 of 16)

Common Name (Family)	Scientific Name	Months Present[1]	Abundance[2]	Breeding Season	Nesting Habitat[3]
Thrushes (Turdidae)					
Gray-cheeked Thrust	Catharus minimus	4-5+	O-FC	---	---
American Robin	Turdus migratorius	10-5+	R-A	4-8	U, T
Hermit Thrush	Catharus guttatus	10-4	O-R	---	---
Swainson's Thrush	Catharus ustulatus	4-5,9-11+	O-FC	---	---
Veery	Catharus fuscesens	4-5,9-10	O-FC	---	---
Eastern Bluebird	Sialia sialis	R	R-FC	3-6	W, PL, Ss, F
Kinglets and Gnatcatchers (Sylviidae)					
Blue-gray Gnatcatcher	Polioptila caerulea	R	O-FC	3-8	S, Y, H , W, PL
Ruby-crowned Kinglet	Regulus calendula	9-4	O-FC	---	---
Pipits (Motacillidae)					
Water Pipit	Anthus spinoletta	10-5	O-FC	---	---
Waxwings (Bombycillidae)					
Cedar Waxwing	Bombycilla cedrorum	10-6+	O-FC	---	---
Shrikes (Laniidae)					
Loggerhead Shrike	Lanius ludovicianus	R	FC-A	2-6	P,U,W,PL,Ss,F,C,T
Starlings (Sturnidae)					
European Starling	Sturnus vulgaris	R	U-C	1-12	F, C, T

Table C-3. Breeding Status of Bird Species Potentially Inhabiting the Myakka River Corridor (Continued, Page 13 of 16)

Common Name (Family)	Scientific Name	Months Present[1]	Abundance[2]	Breeding Season	Nesting Habitat[3]
Vireos (Vireonidae)					
White-eyed Vireo	Vireo griseus	R	FC-C	3-7	M,TH,S,U,H,W,PL,Ss,C,T
Yellow-throated Vireo	Vireo flavifrons	8-5	O-R	4-7	S, U, PL, Ss
Solitary Vireo	Vireo solitarius	10-4+	O-U	---	---
Red-eyed Vireo	Vireo olivaceus	3-11	R-FC	4-7	S, U, H, T
Black-whiskered Vireo	Vireo altiloquus	3-10	R-A	4-7	M, TH, T
Wood Warblers (Parulidae)					
Black-and-white Warbler	Mniotilta varia	7-5+	U-FC	---	---
Prothonotary Warbler	Protonotaria citrea	3-5+,7-10+	O-U	---	---
Worm-eating Warbler	Helmitheros vermivorus	3-5,8-10+	O-R	---	---
Tennessee Warbler	Vermivora peregrine	3-5+,9-11+	R-FC	---	---
Orange-crowned Warbler	Vermivora celata	9-5+	O-U	---	---
Northern Parula	Parula americana	R	FC-C	---	---
Yellow Warbler	Dendroica oetechia	3-11+	R-U	---	---
Grosbeaks, Sparrows, Buntings (Fringillidae)					
Northern Cardinal	Cardinalis cardinalis	R	C-A	3-8	TH,S,U,H,W,PL,Ss,F,C,T
Rose-breasted Grosbeak	Pheucticus ludovicianus	3-5+	O-FC	---	---
Indigo Bunting	Passerina cyanea	9-5+	U-C	5-8	W, F, C
Painted Bunting	Passerina ciris	9-5+	O-FC	5-8	H, W, F, C
Dickcissel	Spiza americana	10-5+	O-R	---	---
American Goldfinch	Carduelis tristis	10-4	FC-C	---	---

Table C-3. Breeding Status of Bird Species Potentially Inhabiting the Myakka River Corridor (Continued, Page 14 of 16)

Common Name (Family)	Scientific Name	Months Present[1]	Abundance[2]	Breeding Season	Nesting Habitat[3]
Rufous-sided Towhee	Pipilo erythrophthalmus	R	C-A	3-9	U,H,W,PL,Ss,F,C,T
Grasshopper Sparrow	Ammodramus savannarum	10-5+	O-R	4-7	P, F
Vesper Sparrow	Pooecetes gramineus	11-3	O-R	---	---
Lark Sparrow	Chondestes grammacus	8-4	O	---	---
Bachman's Sparrow	Aimophila aestivalis	R	U-FC	4-8	PL
Chipping Sparrow	Spizella passerina	10-5+	O-U	4-7	PL
Fox Sparrow	Passerella iliaca	12-2	O	---	---
Lincoln's Sparrow	Melospiza lincolnii	10-5	O	---	---
Swamp Sparrow	Melospiza georgiana	10-5	O-U	---	---
Song Sparrow	Melospiza melodia	11-4	O-R	---	---
Purple Finch	Carpodacus purpureus	12-1	O	---	---
Northern Junco	Junco hyemalis	10-4	O-U	---	---
White-throated Sparrow	Zonotrichia albicallis	10-4+	O	---	---
Savannah Sparrow	Passerculus sandwichensis	10-5	U-FC	---	---
Sharp-tailed Sparrow	Ammospiza caudacuta	10-5	O-U	---	---
Weaver Finches (Ploceidae)					
House Sparrow	Passer domesticus	R	FC-A	1-12	C, T
Wood Warblers (Parulidae)					
Magnolia Warbler	Dendroica magnolia	4-5+, 9-11+	O-FC	---	---
Cape May Warbler	Dendroica tigrina	8-6+	O-C	---	---
Black-throated Blue Warbler	Dendroica caerulescens	8-5+	U-C	---	---
Yellow-rumped Warbler	Dendroica coronata	10-5+	U-A	---	---

Table C-3. Breeding Status of Bird Species Potentially Inhabiting the Hyakka River Corridor (Continued, Page 15 of 16)

Common Name (Family)	Scientific Name	Months Present[1]	Abundance[2]	Breeding Season	Nesting Habitat[3]
Black-throated Green Warbler	Dendroica virens	9-5	C-R	---	---
Blackburnian Warbler	Dendroica fusca	3-5,9-11+	O-U	---	---
Kirtland's Warbler	Dendroica kirtlandii	4, 8-11	O	---	---
Orange-crowned Warbler	Vermivora celata	9-5+	O-U	---	---
Yellow-throated Warbler	Dendroica dominica	7-5+	FCC	3-7	S, U, H, PL, T
Bay-breasted Warbler	Dendroica castanea	4-5+,9-11+	O-U	---	---
Blackpoll Warbler	Dendroica striata	4-6,9-11	FCC	---	---
Pine Warbler	Dendroica pinus	R	R-C	3-7	PL, T
Prairie Warbler	Dendroica discolor	R	FC-C	3-7	M, TH, U
Palm Warbler	Dendroica palmarum	9-5+	C-A	---	---
Ovenbird	Seiurus aurocapillus	8-6	U-FC	---	---
Northern Waterthrush	Seiurus noveboracensis	7-6	R	---	---
Louisiana Waterthrush	Seiurus motacilla	2-5,7-9+	O-U	3-7	L, S
Kentucky Warbler	Oporornis formosus	3-5,8-10+	O-R	3-7	L, S, W
Common Yellowthroat	Geothlypis trichas	R	FC-A	3-7	E,P,L,U,M,W,PL,F,C
Connecticut Warbler	Oporornis agilis	4-5,9-10	O-U	---	---
Hooded Warbler	Wilsonia citrina	3-5,7-11+	O-FC	---	---
American Redstart	Setophaga ruticilla	7-6	FC-A	---	---
Meadowlarks, Blackbirds, Orioles (Icteridae)					
Bobolink	Dolichonyx oryzivorus	4-6+,8-11+	C-A	---	---
Eastern Meadowlark	Sturnella magna	R	C-A	3-7	E, P, F, C
Red-winged Blackbird	Agelaius phoeniceus	R	A	3-7	M,Sm,E,P,L, F, C, T

Table C-3. Breeding Status of Bird Species Potentially Inhabiting the Myakka River Corridor (Continued, Page 16 of 16)

Common Name (Family)	Scientific Name	Months Present[1]	Abundance[2]	Breeding Season	Nesting Habitat[3]
Northern Oriole	Icterus galbula	9-5+	R-U	---	---
Rusty Blackbird	Euphagus carolinus	10-3	O-U	---	---
Boat-tailed Grackle	Quiscalus major	R	C-A	11-8	O, Sm, E, P, L, C, T
Common Grackle	Quiscalus quiscula	R	C-A	3-7	TH,P,L,S,U,H,PL,F,C,T
Brown Headed Cowbird	Molothrus ater	10-4+	O-A	4-7	W, PL, F, C, T
Tanagers (Thraupidae)					
Summer Tanager	Piranga rubra	3-10+	R-FC	---	---

NOTES:

1: 1-12 = January - December, R = Resident Year-round, + = some records have occurred outside these extremes

2: A = abundant
C = common
FC = fairly common
U = uncommon
R = rare
O = occasional, very rare or accidental

3: O = Ocean Beaches, Bays, and Estuaries
M = Mangroves
TH = Tropical Hardwoods
SM = Salt Marshes
E = Everglades and Freshwater Marshes
P = Prairies
L = Lakes, Ponds, Rockpits, Mines, Impoundments, and Canals
S = Swamps
U = Upland Forests
H = Hammocks
W = Woodland Edges & Thickets
PL = Pinelands
SS = Sand Scrub
F = Fields and Pastures
C = Cultivated Lands
T = Towns

Source: Hunter Services, Inc., 1989; Florida Breeding Bird Atlas, 1986; Checklist of Florida's Birds, 1985

APPENDIX D--MANAGEMENT AUTHORITIES AND DIRECTION

APPENDIX D

MANAGEMENT AUTHORITY AND DIRECTION

The number and variety of local, regional, state and federal agencies and non-governmental entities involved with the Myakka River reflect the broad scope of this management plan. The discussion of authorizing statutes, rules, and policies is organized according to the governmental bodies in which authority is vested, beginning with DNR, Sarasota County, and the City of North Port as the primary management agencies.

PRIMARY MANAGEMENT AGENCIES

The Department of Natural Resources is the lead agency responsible for implementing the management plan for the Myakka Wild and Scenic River. Sarasota County and the City of North Port also have a primary role in the management of land uses surrounding the Myakka River.

Department of Natural Resources

Executive authority for administration and management of the Myakka Wild and Scenic River ultimately lies with the Governor and Cabinet, serving as the Executive Board of the Department of Natural Resources. The DNR's basic authority for planning and implementing a plan for managing the Myakka River's resources is found in Section 258.501, Florida Statutes. This statute authorizes DNR (in conjunction with the Myakka River Management Coordinating Council) to develop and periodically amend a management plan, conduct necessary resource management activities, establish a carrying capacity for recreational use on the river, and adopt rules to regulate activities in the portion of the river designated wild and scenic.

Chapter 258, Florida Statutes, authorizes DNR's Division of Recreation and Parks (Division) to manage State-owned parks and recreation areas and to adopt rules for managing these areas. Section 258.037; Florida Statutes, declares that the policy of the Division is to acquire typical portions of the State's original environment (domain) for access by the general public, and to manage these areas so as to conserve the natural values which derive from them. In implementing this policy, the Division is authorized to cooperate with county governments in park and recreation matters (Section 258.041, Florida

Statutes), and to negotiate interagency agreements with water management districts to manage district lands reserved for recreational purposes (Section 258.004, Florida Statutes). Chapter 253, Florida Statutes, establishes the proprietary overview role of the Board of Trustees of the Internal Improvement Trust Fund in the management of sovereignty submerged lands.

Sarasota County

Chapters 125, 162, and 163, Florida Statutes, vest the County with authority to regulate use and development of private property within its jurisdiction, including property within and adjacent to the Myakka Wild and Scenic River. Specifically, Chapter 125 authorizes the County to adopt and enforce a comprehensive plan, zoning ordinances, and technical codes to regulate development for the public's health, safety and welfare. Chapter 162 authorizes the County to establish a code enforcement board to administer the zoning, subdivision, floodplain and other technical regulatory codes to control development and use of private property. Chapter 163 further clarifies and elaborates on the County's authority in the areas of comprehensive planning, zoning, technical codes and related matters.

Through the development of the county's comprehensive plan, APOXSEE, Sarasota County has already developed management guidelines for land surrounding the Myakka River.

City of North Port

Similar to Sarasota County, the City of North Port is authorized by applicable state laws to regulate the use and development of private lands for the public health, safety and welfare. A portion of the City of North Port is located within the southern portion of the Wild and Scenic segment of the Myakka River.

OTHER MANAGEMENT AGENCIES

The Southwest Florida Management District and the Game and Fresh Water Fish Commission are other agencies at the regional and state levels that will function in the direct management of the Wild and Scenic segment of the Myakka River.

Southwest Florida Water Management District

SWFWMD boundaries include most of West Central Florida in general, and specifically include the Myakka watershed in Sarasota, Manatee, Charlotte, Hardee and DeSoto Counties. The Florida Water Resources Act of 1972 (Chapter 373, Florida Statutes), is the basic source of SWFWMD's authority to acquire land and to regulate surface water and ground water management and water consumption. Specific authority for these activities is contained in Section 373, Parts II, III and IV. Section 373.59 creates the Water Management Lands Trust Fund, which is the source of funding for the Save Our Rivers Program, and authorizes SWFWMD to acquire through voluntary purchases property for a variety of management purposes, including the conservation and protection of water resources. SWFWMD is also responsible for aquatic weed control within Myakka River State Park.

Game and Fresh Water Fish Commission

Article IV, Section 9 of the Florida Constitution as well as Chapter 372, Florida Statutes, vest the FGFWFC with administrative, management and enforcement authority with respect to the State's freshwater fish and wildlife. Specific statutory sections which authorize GFWFC activities in the river include Subsection 372.02(2), Florida Statutes, (enforcement of freshwater fishing laws); Subsection 372.072(4)(a)(1), Florida Statutes, (research and management of freshwater/upland species); and Section 372.77, Florida Statutes, (implementation of wildlife restoration projects).

OTHER AGENCIES

Federal, state, regional and local agencies, as well as non-governmental entities will play an important role in the protection and management of the Myakka River area through regulation or monitoring of activities in the drainage basin.

Federal Agencies

Seven federal agencies are involved in activities affecting the management of the river. Authority for federal involvement is based on federal codes and statutes.

U.S. Fish and Wildlife Service--33 U.S. Code (USC) 134, Clean Water Act, authorizes FWS to participate in the review of U.S. Army Corps of Engineers' (COE) dredge and fill permit applications. The FWS's participation in this activity is based on its vested interest in the conservation of wetlands as wildlife habitat for federally protected species. In addition, the FWS is authorized to administer the Endangered Species Act of 1973 (16 USC 1531, as amended). This Act seeks to ensure the continued existence of endangered species by requiring federal agencies to consult with the FWS whenever an agency's actions may be detrimental to an identified species or its habitat.

U.S. Army Corps of Engineers--Section 10 of the Rivers and Harbors Act of 1899, (33 USC 403), authorizes COE to regulate dredging of obstructions and review proposals for channel construction and improvements in navigable waterways including the Myakka River. This Act, together with Section 404 of the Clean Waters Act of 1972 (33 USC 1344, as amended), addresses COE regulatory authority in the dredge and fill permitting process. COE's joint involvement with DER in the regulation of wetlands, allows COE to indirectly participate in the State's management of the Wild and Scenic River.

U.S. Geological Survey--The USGS was established by act on March 3, 1879 (43 USC 31). The USGS, under the Department of the Interior, has the responsibility to perform surveys, investigations, and research pertaining to topography, geology, and the mineral and water resources of the United States. USGS also publishes and disseminates data relative to these activities. In the past, USGS has conducted several studies on various resources in the Charlotte Harbor region. USGS is currently involved in a study of the Peace, Myakka and Caloosahatchee watersheds and Charlotte Harbor Estuarine System. Over the life of the project, this study is expected to supply much needed data on the existing conditions and evaluate the potential impact of future

development on the water resources of the Charlotte Harbor watershed. The study will include the chemical, biological, and water quality characteristics in these basins plus flow and circulation descriptions for the Charlotte Harbor area.

U.S. Soil Conservation Service--The Soil Conservation Service (SCS) was established under the authority of the Soil Conservation Act of 1935 (16 USC 590A-F) to carry out nationwide soil and water conservation, execute watershed protection and flood protection projects in coordination with other agencies, help local sponsors develop multicounty resource conservation efforts, conduct the nationwide soil survey, provide technical assistance to farmers and ranchers and other land users, and fulfill other related functions. The SCS operates as an agency within the U.S. Department of Agriculture. The SCS operates at the local level through conservation districts legally responsible under State law for soil and water conservation with district boundaries which are usually contiguous to county boundaries. SCS services include soil and land capability mapping of the conservation district, dissemination of information concerning soil usefulness for supporting certain crops or other agricultural applications (grazing), providing recommendations on conservation measures, providing technical assistance in the design and construction of water control structures, providing information on plant variety selections and seeding methods, and providing assistance on other technical problems that may arise in agricultural resource management, such as erosion prevention.

U.S. Environmental Protection Agency--Under the National Environmental Protection Act of 1969, the U.S. Environmental Protection Agency (EPA), in cooperation with State and local governments is the federal agency responsible for the control and abatement of environmental pollution. The six areas of pollution which the EPA regulates are air, water, solid waste, noise, radiation and toxic substances. DER is the state agency responsible for handling most of these programs on a state level in lieu of the federal program. Under Section 404, EPA also reviews COE dredge and fill permit applications in the regulation of migratory birds and endangered species under the Commerce Clause.

U.S. Coast Guard--The U.S. Coast Guard is the federal agency involved in boating safety, including search and rescue when necessary. The Coast Guard is also charged with the permitting of structures which affect navigation and boating safety. These structures include bridges, causeways, aerial utilities and other structures which may be in conflict with navigational uses. DNR will also review projects which the Coast Guard may be evaluating for permits.

National Marine Fisheries Services--The National Marine Fisheries Service (NMFS), under the U.S. Department of Commerce, is active in the Charlotte Harbor area in recording commercial fish landings. The NMFS also has enforcement officers in the Charlotte Harbor area checking for illegal fishery activities.

State Agencies

In addition to the DNR and GFWFC, seven other state agencies affect the river in less direct, but nonetheless important capacities. Authority for these agencies involvement is based on various chapters of the Florida Statutes.

Department of Environmental Regulation--Chapter 403, Florida Statutes, provides for the maintenance and enhancement of water quality and wetlands protection through programs administered by DER. Section 403.061, Florida Statutes, authorizes DER to perform a variety of functions with regard to Waters of the State. As far as protection of the Wild and Scenic River is concerned, the most important Departmental responsibilities involve the establishment of ambient water quality standards, water quality sampling, regulation of known sources of pollution, dredge and fill activities, and enforcement of rules pertaining to Outstanding Florida Waters. DER's administrative rules concerning ambient water quality standards and Outstanding Florida Waters are contained in Chapter 17-3 and 17-4, FAC, respectively. Chapter 84-79, Laws of Florida, the Warren S. Henderson Wetlands Protection Act of 1984, authorizes DER to establish rules concerning water quality criteria for wetlands to enable the State to more effectively regulate use of wetlands under DER jurisdiction.

Department of Community Affairs--The Department of Community Affairs' (DCA) requirements to ensure consideration of unique natural resources, such as the Myakka River in local and regional planning, are authorized by Chapters 380 and 163, Florida Statutes. Sections 380.045, 380.05, and 380.06, Florida Statutes, respectively authorize the DCA to establish resource planning and management committees, coordinate designation of Areas of Critical State Concern, and administer the review of Developments of Regional Impact (DRI). Section 163.3184, Florida Statutes, authorizes the DCA to review and approve local government comprehensive plans. DRI's are major developments that have impacts on a scale which is greater than a county level and requires a regional review from neighboring local governments and State agencies.

Department of State--Chapter 267, Florida Statutes, vests the Division of Historical Resources (DHR) with title to historical and archaeological resources and artifacts on State-owned lands. The statute provides the DHR with the authority to locate and arrange for the protection, preservation and restoration of historical and archaeological property of other governmental agencies.

Department of Agriculture and Consumer Services-Division of Forestry--Section 589.04, Florida Statutes, authorizes the Division of Forestry to assist governmental agencies in gathering information concerning forest management and in combating forest fires on government lands. Section 589.275, Florida Statutes, provides the Division with authority to assist State agencies "...to partially restore the original domain of Florida by planting native trees on state lands...".

Department of Transportation--Section 335.16, Florida Statutes, authorizes the Department of Transportation (DOT) to control access from State roads to public waters within highway rights-of-way. As provided by Chapter 14-41, FAC, it is the policy of the DOT to cooperate fully with other public agencies regarding maintenance of fishing and boating facilities at State Road system bridges.

Marine Fisheries Commission--The Marine Fisheries Commission (MFC) was established as a rulemaking authority pursuant to Section 370.027, Florida

Statutes. The seven members are appointed by the Governor and are delegated full rulemaking authority over issues relating to marine life (subject to approval by the Governor and Cabinet), with the exception of regulation of endangered species. Rulemaking may address the following areas: a) gear specifications, b) prohibited gear, c) bag limits, d) size limits, e) species that may not be sold, f) protected species, g) closed areas, h) quality control codes, i) season, and j) special considerations related to eggbearing females and oyster and clam relaying. The MFC is also instructed to make annual recommendations to the Governor and Cabinet regarding marine fisheries research priorities.

Health and Rehabilitative Services--Health and Rehabilitative Services (HRS) was created by Section 20.19, Florida Statutes. HRS is responsible for the development and enforcement programs of septic tank regulation and mosquito control. HRS also conducts water quality sampling within the Myakka River watershed.

Regional Agencies

In addition to SWFWMD, other regional agencies are also involved in various activities that may affect the Myakka River. Authority for regional agency involvement is based on State Statute.

Regional Planning Councils--Authority for activities of the Tampa Bay Regional Planning Council (TBRPC), the Central Florida Regional Planning Council (CFRPC), and SWFRPC as they relate to the river management plan is based on Sections 380.06 and 163.3164, Florida Statutes. The former provides for the regional planning councils to coordinate the review of DRI applications with affected governmental agencies. The latter mandates the councils to review and comment on the content of local comprehensive plans prior to their adoption by local governments. Subsection 258.501(6)(a), Florida Statutes, identifies the composition of the Myakka River Management Coordination Council, which includes TBRPC and SWFRPC.

Local Agencies

The North Port Water Control District exercises control over surface waters within a portion of the Myakka Wild and Scenic River segment. Other local

governments that regulate land development within the Myakka watershed include Manatee, Hardee, DeSoto and Charlotte Counties. These governments regulate land development activities that could potentially impact the river's resource values.

North Port Water Control District--The North Port Water Control District (NPWCD) is an independent public agency duly established in 1974 pursuant to the provisions of Chapter 298, Florida Statutes. This law provides for the creation of water control districts to provide drainage to lands owned by multiple owners. Water control districts are authorized to levy special taxes and to provide surface water management and control in areas not served by municipal or county agencies. The districts are also authorized to construct, maintain and operate canals, ditches, levees, dikes, pumping plants and other works and improvements. The activities of the drainage districts are subject to State regulation by DER and SWFWMD under authority of Section 403.061 and Chapter 373, Part IV, Florida Statutes. The NPWCD has approximately 35,000 acres of land within its regulatory boundaries, including portions of the Myakka River and watershed area. The NPWCD's objective is to contract, operate and maintain an integrated system of water control which will provide adequate drainage for developed areas, protect against flooding and conserve water for domestic supply and wildlife enhancement.

Nongovernmental Entities

This section identifies the numerous entities that have an interest in the Myakka River but are nongovernmental. They include, but are not limited to, environmental interest groups (e.g., Charlotte County Conservation Council, ECOSWF, Manasota 88, Audubon Society, Sierra Club), scientific organizations (e.g., Environmental Quality Laboratory, Mote Marine Laboratory), fishing and sports interest groups (e.g., Florida League of Anglers, Organized Fishermen of Florida, Florida Conservation Association), special interest groups (i.e., Manatee County Cattleman's Association, League of Women Voters), universities that may have research activities in the Myakka River (i.e., University of South Florida-New College, Florida State University, University of Florida), and other interest groups and individuals. The relationship of these entities to the Myakka Wild and Scenic River segment may include the coordination of activities, such as scientific research, environmental education, management

of rookeries or other natural areas, or numerous other possible activities. A river management process will depend on the continued support and help of these interest groups. The Myakka River Management Coordinating Council and DNR need to be active in communicating the river management process and activities to the various groups and consulting with them for their help in their areas of expertise.

APPENDIX E--EXCERPTS FROM CHAPTER 403, FLORIDA STATUTES AND CHAPTERS 17-3 AND 17-312 ON THE DETERMINATIONS OF THE LANDWARD EXTENT OF SURFACE WATERS OF THE STATE AND JURISDICTIONS FOR DREDGE AND FILL ACTIVITIES

(9)(a) The Legislature finds and declares that it is essential to preserve and maintain authorized water depth in the existing navigation channels, port harbors, turning basins, and harbor berths of this state in order to provide for the continued safe navigation of deepwater shipping commerce. The department shall recognize that maintenance of authorized channel depths is an ongoing, continuous, beneficial, and necessary activity; and it shall develop a regulatory process which shall enable the ports of this state to conduct such activities in an environmentally sound, expeditious, and efficient manner.

(b) The provisions of paragraph (a) apply only to the port waters, spoil disposal sites, port harbors, navigation channels, turning basins, and harbor berths used for deepwater commercial navigation in the ports of Jacksonville, Tampa, Port Everglades, Miami, Port Canaveral, Ft. Pierce, Palm Beach, Port Manatee, Port St. Joe, Panama City, St. Petersburg, and Pensacola.

(10) It is the policy of the state to ensure that the existing and potential drinking water resources of the state remain free from harmful quantities of contaminants. The department, as the state water quality protection agency, shall compile, correlate, and disseminate available information on any contaminant which endangers or may endanger existing or potential drinking water resources. It shall also coordinate its regulatory program with the regulatory programs of other agencies to assure adequate protection of the drinking water resources of the state.

History.—s. 3, ch. 67-436; s. 1, ch. 78-95; ss. 1, 5, ch. 81-229; s. 4, ch. 84-79; s. 46, ch. 84-338; s. 11, ch. 85-289; s. 1, ch. 85-277.

403.031 Definitions.—In construing this chapter, or rules and regulations adopted pursuant hereto, the following words, phrases, or terms, unless the context otherwise indicates, have the following meanings:

(1) "Contaminant" is any substance which is harmful to plant, animal, or human life.

(2) "Department" is the Department of Environmental Regulation.

(3) "Effluent limitations" means any restriction established by the department on quantities, rates, or concentrations of chemical, physical, biological, or other constituents which are discharged from sources into waters of the state.

(4) "Installation" is any structure, equipment, or facility, or appurtenances thereto, or operation which may emit air or water contaminants in quantities prohibited by rules of the department.

(5) "Person" means the state or any agency or institution thereof or any municipality, political subdivision, public or private corporation, individual, partnership, association, or other entity and includes any officer or governing or managing body of any municipality, political subdivision, or public or private corporation.

(6) "Plant" is any unit operation, complex, area, or multiple of unit operations that produce, process, or cause to be processed any materials, the processing of which can, or may, cause air or water pollution.

(7) "Pollution" is the presence in the outdoor atmosphere or waters of the state of any substances, contaminants, noise, or manmade or man-induced alteration of the chemical, physical, biological, or radiological integrity of air or water in quantities or at levels which are or may be potentially harmful or injurious to human health or welfare, animal or plant life, or property or which unreasonably interfere with the enjoyment of life or property, including outdoor recreation.

(8) "Sewerage system" means pipelines or conduits, pumping stations, and force mains and all other structures, devices, appurtenances, and facilities used for collecting or conducting wastes to an ultimate point for treatment or disposal.

(9) "Source" is any and all points of origin of the item defined in subsection (1), whether privately or publicly owned or operated.

(10) "Treatment works" and "disposal systems" mean any plant or other works used for the purpose of treating, stabilizing, or holding wastes.

(11) "Wastes" means sewage, industrial wastes, and all other liquid, gaseous, solid, radioactive, or other substances which may pollute or tend to pollute any waters of the state.

(12) "Waters" include, but are not limited to, rivers, lakes, streams, springs, impoundments, and all other waters or bodies of water, including fresh, brackish, saline, tidal, surface, or underground waters. Waters owned entirely by one person other than the state are included only in regard to possible discharge on other property or water. Underground waters include, but are not limited to, all underground waters passing through pores of rock or soils or flowing through in channels, whether manmade or natural. Solely for purposes of this chapter, waters of the state also include the area bounded by the following:

(a) Commence at the intersection of State Road (SRD) 5 (U.S. 1) and the county line dividing Dade and Monroe Counties, said point also being the mean high-water line of Florida Bay, located in section 4, township 60 south, range 39 east of the Tallahassee Meridian for the point of beginning. From said point of beginning, thence run northwesterly along said SRD 5 to an intersection with the north line of section 18, township 58 south, range 39 east; thence run westerly to a point marking the southeast corner of section 12, township 58 south, range 37 east, said point also lying on the east boundary of the Everglades National Park; thence run north along the east boundary of the aforementioned Everglades National Park to a point marking the northeast corner of section 1, township 58 south, range 37 east; thence run west along said park to a point marking the northwest corner of said section 1; thence run northerly along said park to a point marking the northwest corner of section 24, township 57 south, range 37 east; thence run westerly along the south lines of sections 14, 15, and 16 to the southwest corner of section 16; thence leaving the Everglades National Park boundary run northerly along the west line of section 16 to the northwest corner of section 16; thence east along the northerly line of section 16 to a point at the intersection of the east one-half and west one-half of section 9; thence northerly along the line separating the east one-half and the west one-half of sections 9, 4, 33, and 28; thence run easterly along the north line of section 28 to the northeast corner of section 28; thence run northerly along the west line of section 22 to the northwest corner of section 22;

thence easterly along the north line of section 22 to a point at the intersection of the east one-half and west one-half of section 15; thence run northerly along said line to the point of intersection with the north line of section 15; thence easterly along the north line of section 15 to the northeast corner of section 15; thence run northerly along the west lines of sections 11 and 2 to the northwest corner of section 2; thence run easterly along the north lines of sections 2 and 1 to the northeast corner of section 1, township 56 south, range 37 east; thence run north along the east line of section 36, township 55 south, range 37 east to the northeast corner of section 36; thence run west along the north line of section 36 to the northwest corner of section 36; thence run north along the west line of section 25 to the northwest corner of section 25; thence run west along the north line of section 26 to the northwest corner of section 26; thence run north along the west line of section 23 to the northwest corner of section 23; thence run easterly along the north line of section 23 to the northeast corner of section 23; thence run north along the west line of section 13 to the northwest corner of section 13; thence run east along the north line of section 13 to a point of intersection with the west line of the southeast one-quarter of section 12; thence run north along the west line of the southeast one-quarter of section 12 to the northwest corner of the southeast one-quarter of section 12; thence run east along the north line of the southeast one-quarter of section 12 to the point of intersection with the east line of section 12; thence run east along the south line of the northwest one-quarter of section 7 to the southeast corner of the northwest one-quarter of section 7; thence run north along the east line of the northwest one-quarter of section 7 to the point of intersection with the north line of section 7; thence run northerly along the west line of the southeast one-quarter of section 6 to the northwest corner of the southeast one-quarter of section 6; thence run east along the north lines of the southeast one-quarter of section 6 and the southwest one-quarter of section 5 to the northeast corner of the southwest one-quarter of section 5; thence run northerly along the east line of the northwest one-quarter of section 5 to the point of intersection with the north line of section 5; thence run northerly along the line dividing the east one-half and the west one-half of Lot 5 to a point intersecting the north line of Lot 5; thence run east along the north line of Lot 5 to the northeast corner of Lot 5, township 54½ south, range 38 east; thence run north along the west line of section 33, township 54 south, range 38 east to a point intersecting the northwest corner of the southwest one-quarter of section 33; thence run easterly along the north line of the southwest one-quarter of section 33 to the northeast corner of the southwest one-quarter of section 33; thence run north along the west line of the northeast one-quarter of section 33 to a point intersecting the north line of section 33; thence run easterly along the north line of section 33 to the northeast corner of section 33; thence run northerly along the west line of section 27 to a point intersecting the northwest corner of the southwest one-quarter of section 27; thence run easterly to the northeast corner of the southwest one-quarter of section 27; thence run northerly along the west line of the northeast one-quarter of section 27 to a point intersecting the north line of section 27; thence run west along the north line of section 27 to the northwest corner of section 27; thence run north along the west lines of sections 22 and 15 to the northwest corner of section 15; thence run easterly along the north lines of sections 15 and 14 to the point of intersection with the L-31N Levee, said intersection located near the southeast corner of section 11, township 54 south, range 38 east; thence run northerly along Levee L-31N crossing SRD 90 (U.S. 41 Tamiami Trail) to an intersection common to Levees L-31N, L-29, and L-30, said intersection located near the southeast corner of section 2, township 54 south, range 38 east; thence run northeasterly, northerly, and northeasterly along Levee L-30 to a point of intersection with the Dade/Broward Levee, said intersection located near the northeast corner of section 17, township 52 south, range 39 east; thence run due east to a point of intersection with SRD 27 (Krome Ave.); thence run northeasterly along SRD 27 to an intersection with SRD 25 (U.S. 27), said intersection located in section 3, township 52 south, range 39 east; thence run northerly along said SRD 25, entering into Broward County, to an intersection with SRD 84 at Andytown; thence run southeasterly along the aforementioned SRD 84 to an intersection with the southwesterly prolongation of Levee L-35A, said intersection being located in the northeast one-quarter of section 5, township 50 south, range 40 east; thence run northeasterly along Levee L-35A to an intersection of Levee L-36, said intersection located near the southeast corner of section 12, township 49 south, range 40 east; thence run northerly along Levee L-36, entering into Palm Beach County, to an intersection common to said Levees L-36, L-39, and L-40, said intersection located near the west quarter corner of section 19, township 47 south, range 41 east; thence run northeasterly, easterly, and northerly along Levee L-40, said Levee L-40 being the easterly boundary of the Loxahatchee National Wildlife Refuge, to an intersection with SRD 80 (U.S. 441), said intersection located near the southeast corner of section 32, township 43 south, range 40 east; thence run westerly along the aforementioned SRD 80 to a point marking the intersection of said road and the northeasterly prolongation of Levee L-7, said Levee L-7 being the westerly boundary of the Loxahatchee National Wildlife Refuge; thence run southwesterly and southerly along said Levee L-7 to an intersection common to Levees L-7, L-15 (Hillsborough Canal), and L-6; thence run southwesterly along Levee L-6 to an intersection common to Levee L-6, SRD 25 (U.S. 27), and Levee L-5, said intersection being located near the northwest corner of section 27, township 47 south, range 38 east; thence run westerly along the aforementioned Levee L-5 to a point intersecting the east line of range 36 east; thence run northerly along said range line to a point marking the northeast corner of section 1, township 47 south, range 36 east; thence run westerly along the north line of township 47 south, to an intersection with Levee L-23/24 (Miami Canal); thence run northwesterly along the Miami Canal Levee to a point intersecting the north line of section 22, township 46 south, range 35 east; thence run westerly to a point marking the northwest corner of section 21, township 46 south, range 35 east; thence run

southerly to the southwest corner of said section 21; thence run westerly to a point marking the northwest corner of section 30, township 46 south, range 35 east, said point also being on the line dividing Palm Beach and Hendry Counties; from said point, thence run southerly along said county line to a point marking the intersection of Broward, Hendry, and Collier Counties, said point also being the northeast corner of section 1, township 49 south, range 34 east; thence run westerly along the line dividing Hendry and Collier Counties and continuing along the prolongation thereof to a point marking the southwest corner of section 36, township 48 south, range 29 east; thence run southerly to a point marking the southwest corner of section 12, township 49 south, range 29 east; thence run westerly to a point marking the southwest corner of section 10, township 49 south, range 29 east; thence run southerly to a point marking the southwest corner of section 15, township 49 south, range 29 east; thence run westerly to a point marking the northwest corner of section 24, township 49 south, range 28 east, said point lying on the west boundary of the Big Cypress Area of Critical State Concern as described in Rule 27F-3, Florida Administrative Code; thence run southerly along said boundary crossing SRD 84 (Alligator Alley) to a point marking the southwest corner of section 24, township 50 south, range 28 east; thence leaving the aforementioned west boundary of the Big Cypress Area of Critical State Concern run easterly to a point marking the northeast corner of section 25, township 50 south, range 28 east; thence run southerly along the east line of range 28 east to a point lying approximately 0.15 miles south of the northeast corner of section 1, township 52 south, range 28 east; thence run southwesterly 2.4 miles more or less to an intersection with SRD 90 (U.S. 41 Tamiami Trail), said intersection lying 1.1 miles more or less west of the east line of range 28 east; thence run northwesterly and westerly along SRD 90 to an intersection with the west line of section 10, township 52 south, range 28 east; thence leaving SRD 90 run southerly to a point marking the southwest corner of section 15, township 52 south, range 28 east; thence run westerly crossing the Faka Union Canal 0.6 miles more or less to a point; thence run southerly and parallel to the Faka Union Canal to a point located on the mean high-water line of Faka Union Bay; thence run southeasterly along the mean high-water line of the various bays, rivers, inlets, and streams to the point of beginning.

(b) The area bounded by the line described in paragraph (a) generally includes those waters to be known as waters of the state. The landward extent of these waters shall be determined as provided in s. 403.817. Any waters which are outside the general boundary line described in paragraph (a) but which are contiguous thereto by virtue of the presence of a watercourse or as determined pursuant to s. 17-4.022, Florida Administrative Code, shall be a part of this water body. Any areas within the line described in paragraph (a) which are not within the jurisdiction of the department as determined pursuant to s. 17-4.022, Florida Administrative Code, shall be excluded therefrom. If the Florida Environmental Regulation Commission designates the waters within the boundaries an Outstanding Florida Water, waters outside the boundaries shall not be included as part of such designation unless a hearing is held pursuant to notice in each appropriate county and the boundaries of such lands are specifically considered and described for such designation.

History.—s. 4, ch. 67-436, ss. 26, 35, ch. 69-106; s. 1, ch. 71-36, s. 2, ch. 71-137, s. 153, ch. 71-377; s. 1, ch. 73-46; s. 112, ch. 73-333; ss. 1, 2, ch. 74-133, s. 1, ch. 77-174; s. 72, ch. 79-65; s. 13, ch. 84-79.

403.051 Meetings; hearings and procedure.—

(1) The department shall cause a transcript of the proceedings at all meetings to be made.

(2)(a) Any department planning, design, construction, modification, or operating standards, criteria, and requirements for treatment works, disposal systems, and sewerage systems for wastes from any source shall be promulgated as a rule or regulation.

(b) The department shall not withhold the issuance of a permit to consider matters not addressed by the permit application or to consider standards, criteria, and requirements not adopted as required by paragraph (a).

History.—s. 6, ch. 67-436; ss. 26, 35, ch. 69-106; s. 1, ch. 70-84; s. 2, ch. 71-137; s. 1, ch. 71-136; s. 154, ch. 71-377; s. 1, ch. 72-223; s. 1, ch. 74-308; s. 14, ch. 78-95; s. 58, ch. 83-218.

403.061 Department; powers and duties.—The department shall have the power and the duty to control and prohibit pollution of air and water in accordance with the law and rules and regulations adopted and promulgated by it and, for this purpose, to:

(1) Approve and promulgate current and long-range plans developed to provide for air and water quality control and pollution abatement.

(2) Hire only such employees as may be necessary to effectuate the responsibilities of the department.

(3) Utilize the facilities and personnel of other state agencies, including the Department of Health and Rehabilitative Services, and delegate to any such agency any duties and functions as the department may deem necessary to carry out the purposes of this act.

(4) Secure necessary scientific, technical, research, administrative, and operational services by interagency agreement, by contract, or otherwise. All state agencies, upon direction of the department, shall make these services and facilities available.

(5) Accept state appropriations and loans and grants from the Federal Government and from other sources, public or private, which loans and grants shall not be expended for other than the purposes of this act.

(6) Exercise general supervision of the administration and enforcement of the laws, rules, and regulations pertaining to air and water pollution.

(7) Adopt, modify, and repeal rules and regulations to carry out the intent and purposes of this act. Any rule or regulation adopted pursuant to this act shall be consistent with the provisions of federal law, if any, relating to control of emissions from motor vehicles, effluent limitations, pretreatment requirements, or standards of performance. Rules adopted pursuant to this act shall not require dischargers of waste into waters of the state to improve natural background conditions. Discharges from steam electric generating plants existing or licensed under this chapter on July 1, 1984, shall not be required to be treated to a greater extent than may be necessary to assure that the quality of nonthermal com-

ponents of discharges from nonrecirculated cooling water systems is as high as the quality of the makeup waters; that the quality of nonthermal components of discharges from recirculated cooling water systems is no lower than is allowed for blowdown from such systems; or that the quality of noncooling system discharges which receive makeup water from a receiving body of water which does not meet applicable department water quality standards is as high as the quality of the receiving body of water. The department may not adopt standards more stringent than federal regulations, except as provided in s. 403.804.

(8) Issue such orders as are necessary to effectuate the control of air and water pollution and enforce the same by all appropriate administrative and judicial proceedings.

(9) Adopt a comprehensive program for the prevention, control, and abatement of pollution of the air and waters of the state, and from time to time review and modify such program as necessary.

(10) Develop a comprehensive program for the prevention, abatement, and control of the pollution of the waters of the state. In order to effect this purpose, a grouping of the waters into classes may be made in accordance with the present and future most beneficial uses. Such classifications may from time to time be altered or modified. However, before any such classification is made, or any modification made thereto, public hearings shall be held by the department.

(11) Establish ambient air quality and water quality standards for the state as a whole or for any part thereof, and also standards for the abatement of excessive and unnecessary noise. The department is authorized to establish reasonable zones of mixing for discharges into waters.

(a) When a receiving body of water fails to meet a water quality standard for pollutants set forth in department rules, a steam-electric generating plant discharge of pollutants that is existing or licensed under this chapter on July 1, 1984, may nevertheless be granted a mixing zone, provided that:

1. The standard would not be met in the water body in the absence of the discharge;

2. The discharge is in compliance with all applicable technology-based effluent limitations;

3. The discharge does not cause a measurable increase in the degree of noncompliance with the standard at the boundary of the mixing zone; and

4. The discharge otherwise complies with the mixing zone provisions specified in department rules.

(b) No mixing zone for point source discharges shall be permitted in Outstanding Florida Waters except for:

1. Sources which have received permits from the department prior to April 1, 1982, or the date of designation, whichever is later;

2. Blowdown from new power plants certified pursuant to the Florida Electrical Power Plant Siting Act; and

3. Discharges of water necessary for water management purposes which have been approved by the governing board of a water management district and, if required by law, by the secretary.

Nothing in this act shall be construed to invalidate any existing department rule relating to mixing zones. The department shall cooperate with the Department of Highway Safety and Motor Vehicles in the development of regulations required by s. 316.272(1).

(12)(a) Cause field studies to be made and samples to be taken out of the air and from the waters of the state periodically and in a logical geographic manner so as to determine the levels of air quality of the air and water quality of the waters of the state.

(b) Determine the source of the pollution whenever a study is made or a sample collected which proves to be below the air or water quality standard set for air or water.

(13) Require persons engaged in operations which may result in pollution to file reports which may contain information relating to locations, size of outlet, height of outlet, rate and period of emission, and composition and concentration of effluent and such other information as the department shall prescribe to be filed relative to pollution.

(14) Establish a permit system whereby a permit may be required for the operation, construction, or expansion of any installation that may be a source of air or water pollution and provide for the issuance and revocation of such permits and for the posting of an appropriate bond to operate.

(a) Notwithstanding any other provision of this chapter, the Department of Environmental Regulation may authorize, by rule, the Department of Transportation to perform any activity requiring a permit from the Department of Environmental Regulation covered by this chapter, upon certification by the Department of Transportation that it will meet all requirements imposed by statute, rule, or standard for environmental control and protection as such statute, rule, or standard applies to a governmental program. To this end, the Department of Environmental Regulation may accept such certification of compliance for programs of the Department of Transportation, may conduct investigations for compliance, and, if a violation is found to exist, may take all necessary enforcement action pertaining thereto, including, but not limited to, the revocation of certification. The authorization shall be by rule of the Department of Environmental Regulation, shall be limited to the maintenance, repair, or replacement of existing structures, and shall be conditioned upon compliance by the Department of Transportation with specific guidelines or requirements which are set forth in the formal acceptance and deemed necessary by the Department of Environmental Regulation to assure future compliance with this chapter and applicable department rules. The failure of the Department of Transportation to comply with any provision of the written acceptance shall constitute grounds for its revocation by the Department of Environmental Regulation.

(b) The provisions of chapter 120 shall be accorded any person when substantial interests will be affected by an activity proposed to be conducted by the Department of Transportation pursuant to its certification and the acceptance of the Department of Environmental Regulation. If a proceeding is conducted pursuant to s. 120.57, the Department of Environmental Regulation may intervene as a party. Should a hearing officer of the

of projects, which have, either singly or cumulatively, a minimal adverse environmental effect. Such rules shall specify design or performance criteria which, if applied, would result in compliance with appropriate standards adopted by the commission. Except as provided for in subsection (2), any person complying with the requirements of a general permit may use the permit 30 days after giving notice to the department without any agency action by the department.

(2) The department may publish or by rule require the applicant to publish, or the applicant may elect to publish, in a newspaper of general circulation in the area affected, notice of application for a general permit. If published, such public notice of application shall be published within 14 days after the applicant notifies the department; and, within 21 days after publication of notice, any person whose substantial interests are affected may request a hearing in accordance with s. 120.57. The failure to request a hearing within 21 days after publication of notice constitutes a waiver of any right to a hearing under s. 120.57. If notice is published, no person shall begin work pursuant to a general permit until after the time for requesting a hearing has passed or until after a hearing is held and a decision is rendered.

(3) The department is authorized to delegate any of its general permit authority to the district offices of the department or to water management districts.

(4) Notwithstanding the procedures set forth in subsections (1) and (2), the department may specify by rule alternative notice procedures for certain activities which are of a routine and repetitive nature and which are an integral part of agricultural activities or silvicultural activities or are activities of another state agency.

History.—s. 9, ch. 80-66; s. 12, ch. 82-27; s. 7, ch. 84-79.

403.815 Public notice; waiver of hearings.—The department may publish or by rule require the applicant to publish, or the applicant may elect to publish, in a newspaper of general circulation in the area affected, notice of application for a permit submitted under this chapter or chapter 253. The notice of application shall be published within 14 days after the application is filed with the department. Notwithstanding any provision of s. 120.60, the department may publish or by rule require the applicant to publish, or the applicant may elect to publish, in a newspaper of general circulation in the area affected, notice of proposed agency action on any permit application submitted under this chapter or chapter 253. The department shall require the applicant for [1]a permit to construct or expand a solid waste facility to publish such notice. The notice of proposed agency action shall be published at least 14 days prior to final agency action. The 90-day time period specified in s. 120.60(2) shall be tolled by the request of the department for publication of notice of proposed agency action and shall resume 14 days after receipt by the department of proof of publication. However, if a petition is filed for a proceeding pursuant to s. 120.57, the time periods and tolling provisions of s. 120.60 shall apply. The cost of publication of notice under this section shall be paid by the applicant. The secretary may, by rule, specify the format and size of such notice. Within 14 days after publication of notice of proposed agency action, any person whose substantial interests are affected may request a hearing in accordance with s. 120.57. The failure to request a hearing within 14 days after publication of notice of proposed agency action constitutes a waiver of any right to a hearing on the application under s. 120.57.

History.—s. 10, ch. 80-66; s. 13, ch. 82-27; s. 44, ch. 84-338

[1]Note.—The words "a permit to" were substituted by the editors for the word "the."

403.816 Permits for maintenance dredging of deepwater ports.—

(1) The department shall establish a permit system under this chapter and chapter 253 which provides for the performance, for up to 25 years from the issuance of the original permit, of maintenance dredging of permitted navigation channels, port harbors, turning basins, and harbor berths. No charge shall be exacted by the state for material removed during such maintenance dredging by a public port authority except as provided in s. 403.813(1)(f).

(2) The provisions of s. 253.77 do not apply to a permit for maintenance dredging and spoil site approval when there is no change in the size or location of the spoil disposal site and when the applicant provides documentation to the department that the appropriate lease, easement, or consent of use for the project site issued pursuant to chapter 253 is recorded in the county where the project is located.

(3) The provisions of this section apply only to the port waters, spoil disposal sites, port harbors, navigation channels, turning basins, and harbor berths used for deepwater commercial navigation in the ports of Jacksonville, Tampa, Port Everglades, Miami, Port Canaveral, Ft. Pierce, Palm Beach, Port Manatee, Port St. Joe, Panama City, St. Petersburg, Port Bartow, Florida Power Corporation's Crystal River Canal, Boca Grande, Green Cove Springs, and Pensacola.

History.—ss. 3, 5, ch. 81-228; s. 8, ch. 84-79; s. 2, ch. 85-296.

403.8163 Sites for disposal of spoil from maintenance dredge operations; selection.—It is the intent of the Legislature that lands created by spoil or used as dredge spoil sites be given priority consideration as sites for disposal of spoil in maintenance dredge operations.

History.—s. 48, ch. 84-338.

403.817 Legislative intent; determination of the natural landward extent of waters for regulatory purposes.—

(1) It is recognized that the levels of the waters of the state naturally rise and fall, depending upon tides and other hydrological, meteorological, and geological circumstances and features. The natural rise and fall of the waters is essential to good water quality, but often makes it difficult to determine the natural landward extent of the waters. Therefore, it is the intent of the Legislature that the Department of Environmental Regulation establish a method of making such determinations, based upon ecological factors which represent these fluctuations in water levels.

(2) In order to accomplish the legislative intent expressed in subsection (1), the department is authorized to establish by rule, pursuant to chapter 120, the method for determining the landward extent of the waters of

the state for regulatory purposes. Such extent shall be defined by species of plants or soils which are characteristic of those areas subject to regular and periodic inundation by the waters of the state. The application of plant indicators to any areas shall be by dominant species. However, no landowner shall suffer any property loss or gain because of vegetation changes due to mosquito control activities conducted upon his property, provided these activities are or have been undertaken as part of a governmental mosquito control program. To the extent that certain lands have come within department jurisdiction pursuant to this section or chapter 253 solely due to insect control activities, these lands shall not be subject to permitting requirements for the discharge of dredge or fill material.

(3) Amendments adopted after April 5, 1977, to the rules of the department adopted before April 5, 1977, relating to dredging and filling and which involve additions or deletions of the vegetation or soil indices or the addition or deletion of exemptions shall be submitted in bill form to the Speaker of the House of Representatives and to the President of the Senate for their consideration and referral to the appropriate committees. Such rule amendments shall become effective only upon approval by [1]act of the Legislature. However, whenever the Legislature amends any exemption relating to dredging and filling, the department may amend its rules to make them consistent with changes made by the Legislature.

(4) To the extent that any plant or soil indicators are enacted into law by the Legislature for the purpose of defining the landward extent of the waters of the state for regulatory purposes, the plant or soil indicators adopted by the department regarding areas covered by legislation shall be consistent with said legislation.

(5) The landward extent of waters as determined by the rules authorized by this section shall be for regulatory purposes only and shall have no significance with respect to sovereign ownership.

History.—ss. 1, 2, ch. 77-170; s. 5, ch. 78-68; s. 5, ch. 85-269; s. 2, ch. 85-334.

[1]Note.—Pursuant to s. 3, ch. 85-334, the Legislature ratified rules 17-4.04(9)(f), (h), and (r), Florida Administrative Code, as amended by the Environmental Regulation Commission on October 16, 1984.

403.8171 Ratification of Rule 17-4.022, Florida Administrative Code, with additions and deletions to the vegetation and soil indices and with limitations on the determination of landward extent of waters.—Pursuant to s. 403.817, the Legislature ratifies the rule adopted on January 25, 1984, by the Environmental Regulation Commission with the following changes:

(1)(a) In Rule 17-4.022(2), Florida Administrative Code, the following shall be removed: *Blechnum serrulatum*; *Carex leptalea*; *Carex stipata*; *Carya aquatica*; *Conocarpus erectus*; *Crataegus viridis*; *Cymodocea filiformis*; *Cyperus odoratus*; *Dichromena spp.*; *Dryopteris ludoviciana*; *Gleditsia aquatica*; *Gratiola ramosa*; *Hydrocotyle beaudettei*; *Hypericum fasciculatum*; *Illicium floridanum*; *Liriodendron tulipifera* in all counties south of Taylor, Lafayette, Suwannee, Columbia, Baker, and Duval; *Lycopus rubellus*; *Myrica inodora*; *Osmunda spp.*; *Panicum repens*; *Panicum virgatum*; *Pluchea spp.*; *Polygala cymosa*; *Populus deltoides*; *Rhexia*, all species except *R. alifanus*, *R. lutea*, *R. mariana*, *R. petiolata*, and *R. virginica*; *Sabatia bartramii*; *Sarracenia spp.*; *Schizachyrium rhizomatum*; *Sesuvium maritimum*; *Sesuvium portulacastrum*; *Spartina spp.*; *Thalassia testudinum*; and *Woodwardia spp.*

(b) In Rule 17-4.022(2), Florida Administrative Code, the following shall be added: *Muhlenbergia capillaris*; *Muhlenbergia schreberi*; *Osmunda regalis*; *Rhexia parviflora*; *Rhexia salicifolia*; and *Spartina*, all species except *S. bakerii*.

(2)(a) In Rule 17-4.022(3), Florida Administrative Code, the following shall be removed: *Acer spp.*; *Baccharis halimifolia*; *Carya glabra* in all counties west of Dixie, Gilchrist, and Columbia; *Cliftonia monophylla*; *Cyrilla racemiflora*; *Liriodendron tulipifera* in all counties north and west of and including Taylor, Lafayette, Suwannee, Columbia, Baker, and Duval; *Melaleuca quinquenervia*; *Muhlenbergia spp.*; *Rhexia alifanus*; *Rhexia lutea*; *Rhexia mariana*; *Rhexia petiolata*; *Rhexia virginica*; *Sabal palmetto*; *Schinus terebinthifolius*; and *Ulmus spp.*

(b) In Rule 17-4.022(3), Florida Administrative Code, the following shall be added: *Acer rubrum*; *Acer saccharinum*; *Acer negundo*; *Blechnum serrulatum*; *Carex leptalea*; *Carex stipata*; *Carya aquatica*; *Conocarpus erectus*; *Crataegus viridis*; *Cyperus odoratus*; *Dichromena spp.*; *Dryopteris ludoviciana*; *Gleditsia aquatica*; *Gratiola ramosa*; *Hypericum fasciculatum*; *Illicium floridanum*; *Liriodendron tulipifera*; *Lycopus rubellus*; *Myrica inodora*; *Osmunda cinnamomea*; *Panicum repens*; *Panicum virgatum*; *Pluchea spp.*; *Polygala cymosa*; *Populus deltoides*; *Rhexia*, all species except *R. parviflora* and *R. salicifolia*; *Sabatia bartramii*; *Sarracenia spp.*; *Schizachyrium rhizomatum*; *Sesuvium maritimum*; *Sesuvium portulacastrum*; *Spartina bakerii*; *Ulmus*, all species except *U. rubra*; and *Woodwardia spp.*

(3) In Rule 17-4.022(1)(d), Florida Administrative Code, the following sentences shall be added: "If both parties agree to use more than one stratum, the following methods for a combination of strata shall be used in a manner to ensure that sufficient representative data will be generated. The methods described in subparagraphs (c)1., 2., and 3. shall be used for the appropriate strata. The percentages obtained shall be added and the sum divided by the number of strata examined. The number generated by this procedure shall be substituted for areal extent in paragraph (a) or paragraph (b) above. When a combination of strata is used, the following shall be added to Rule 17-4.022(2), Florida Administrative Code: *Blechnum serrulatum*, *Carex leptalea*, *Carex stipata*, *Crataegus viridis*, *Osmunda spp.*, *Pluchea spp.*, and *Woodwardia spp.* Concurrently the following shall be added to Rule 17-4.022(3), Florida Administrative Code: *Axonopus furcatus*, *Flaveria spp.*, *Metopium toxiferum*, *Myrica cerifera*, *Sabal minor*, and *Sympolcos tinctoria*."

(4) *Cliftonia monophylla*, *Cyrilla racemiflora*, *Melaleuca quinquenervia*, *Sabal palmetto*, and *Schinus terebinthifolius* shall not be considered submerged, transitional, or upland species. In areas vegetated by any of these five species, the department shall determine the landward extent of waters using the remaining plant species or other indicators of regular and periodic inundation as provided in Rule 17-4.022(1), Florida Administrative Code.

(5) In all areas of the state, the landward extent of waters shall be demarcated by Rule 17-4.022, Florida Administrative Code; however, in no case shall the landward extent of such waters extend above the elevation of the 1-in-10-year recurring flood event or the area of land with standing or flowing water for more than 30 consecutive days per year calculated on an average annual basis, whichever is more landward. The extent of the flood line shall be developed by appropriate engineering techniques, and a description of the surveyed line shall be prepared and certified by a professional land surveyor registered in this state. The burden for determining the surveyed flood line shall be with the party wishing to use this alternative. Notwithstanding the above, for waters which are saline or brackish, or for rivers the major sources of flow of which are from springs, the landward extent of waters shall be demarcated solely by Rule 17-4.022, Florida Administrative Code. The provisions of this subsection shall not operate to reduce the landward extent of the jurisdiction of the department as such jurisdiction existed prior to January 24, 1984.

History.—s. 9, ch. 84-79.

PART VI

DRINKING WATER

403.850 Short title.—This act may be cited as the "Florida Safe Drinking Water Act."

History.—s. 1, ch. 77-337.

403.851 Declaration of policy; intent.—It is the policy of the state that the citizens of Florida shall be assured of the availability of safe drinking water. Recognizing that this policy encompasses both environmental and public health aspects, it is the intent of the Legislature to provide a water supply program operated jointly by the Department of Environmental Regulation, in a lead-agency role of primary responsibility for the program, and by the Department of Health and Rehabilitative Services and its units, including county health departments, in a supportive role with specific duties and responsibilities of its own. Without any relinquishment of Florida's sovereign powers and responsibilities to provide for the public health, public safety, and public welfare of the people of Florida, the Legislature intends:

(1) To give effect to Pub. L. No. 93-523 promulgated under the commerce clause of the United States Constitution, to the extent that interstate commerce is directly affected.

(2) To encourage cooperation between federal, state, and local agencies, not only in their enforcement role, but also in their service and assistance roles to city and county elected bodies.

(3) To provide for safe drinking water at all times throughout the state, with due regard for economic factors and efficiency in government.

History.—s. 2, ch. 77-337; s. 162, ch. 79-400.

403.852 Definitions.—As used in ss. 403.850-403.864:

(1) "Department" means the Department of Environmental Regulation, which is charged with the primary responsibility for the administration and implementation of the Florida Safe Drinking Water Act.

(2) "Public water system" means a community or noncommunity system for the provision to the public of piped water for human consumption, provided that such system has at least 15 service connections or regularly serves at least 25 individuals daily at least 60 days out of the year. The term includes:

(a) Any collection, treatment, storage, and distribution facility or facilities under control of the operator of such system and used primarily in connection with such system.

(b) Any collection or pretreatment storage facility or facilities not under control of the operator of such system but used primarily in connection with such system.

(3) "Community water system" means a public water system which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.

(4) "Noncommunity water system" means a public water system for provision to the public of piped water for human consumption, which serves at least 25 individuals daily at least 60 days out of the year, but which is not a community water system; except that a water system for a wilderness educational camp is a noncommunity water system.

(5) "Person" means an individual, public or private corporation, company, association, partnership, municipality, agency of the state, district, federal agency, or any other legal entity, or its legal representative, agent, or assigns.

(6) "Municipality" means a city, town, or other public body created by or pursuant to state law or an Indian tribal organization authorized by law.

(7) "Federal agency" means any department, agency, or instrumentality of the United States Government.

(8) "Supplier of water" means any person who owns or operates a public water system.

(9) "Contaminant" means any physical, chemical, biological, or radiological substance or matter in water.

(10) "Administrator" means the Administrator of the United States Environmental Protection Agency.

(11) "Federal act" means the Safe Drinking Water Act, Pub. L. No. 93-523.

(12) "Primary drinking water regulation" means a rule which:

(a) Applies to public water systems;

(b) Specifies contaminants which, in the judgment of the department, after consultation with the Department of Health and Rehabilitative Services, may have an adverse effect on the health of the public;

(c) Specifies for each such contaminant either:

1. A maximum contaminant level if, in the judgment of the department, it is economically and technologically feasible to ascertain the level of such contaminant in water in public water systems; or

2. Each treatment technique known to the department which leads to a reduction in the level of the contaminant sufficient to satisfy the requirements of s. 403.853 if, in the judgment of the department, it is not economically or technologically feasible to ascertain the level of such contaminant; and

(d) Contains criteria and procedures to assure a supply of drinking water which dependably complies with such maximum contaminant levels, including quality control and testing procedures to assure compliance with such levels and to ensure proper operation and maintenance of the system, and which contains requirements as to:

1. The minimum quality of water which may be taken into the system; and

2. Siting for new facilities for public water systems.

(13) "Secondary drinking water regulation" means a rule which:

(a) Applies to public water systems; and

(b) Specifies the maximum contaminant levels which, in the judgment of the department after public hearings, are requisite to protect the public welfare. Such regulation may apply to any contaminant in drinking water:

1. Which may adversely affect the odor or appearance of such water and consequently may cause a substantial number of the persons served by the public water system providing such water to discontinue its use; or

2. Which may otherwise adversely affect the public welfare.

Such regulations may vary according to geographic and other circumstances.

(14) "National primary drinking water regulations" means primary drinking water regulations promulgated by the administrator pursuant to the federal act.

(15) "National secondary drinking water regulations" means secondary drinking water regulations promulgated by the administrator pursuant to the federal act.

(16) "Sanitary survey" means an onsite review of the water source, facilities, equipment, operation, and maintenance of a public water system for the purpose of evaluating the adequacy of such source, facilities, equipment, operation, and maintenance for producing and distributing safe drinking water.

History.—s. 3, ch. 77-337; s. 1, ch. 82-80.

403.853 Drinking water standards.—

(1) The department shall adopt and enforce:

(a)1. State primary drinking water regulations that shall be no less stringent at any given time than the complete interim or revised national primary drinking water regulations in effect at such time; and

2. State secondary drinking water regulations patterned after the national secondary drinking water regulations.

(b) Primary and secondary drinking water regulations for noncommunity water systems, which shall be no more stringent than the corresponding national primary or secondary drinking water regulations in effect at such time.

(2) Subject to the exceptions authorized pursuant to s. 403.854, state primary drinking water regulations apply to each public water system in the state, except that such regulations do not apply to any public water system which meets all of the following criteria; namely, that the system:

(a) Consists of distribution and storage facilities only and does not have any collection or treatment facilities;

(b) Obtains all of its water from, but is not owned or operated by, a public water system to which such regulations apply;

(c) Does not sell water to any person; and

(d) Is not a carrier which conveys passengers in interstate commerce.

(3) The department shall adopt and implement adequate rules specifying procedures for the enforcement of state primary and secondary drinking water regulations, including monitoring and inspection procedures, that comply with regulations established by the administrator pursuant to the federal act.

(4) The department shall keep such records and make such reports, with respect to its activities under subsections (1) and (3), as may be required by regulations established by the administrator pursuant to the federal act. Such records and reports shall be available for public inspection.

(5) No state primary drinking water regulation may require the addition of any substance for preventive health care purposes unrelated to the contamination of drinking water.

(6) Upon the request of the owner or operator of a noncommunity water system serving businesses, other than restaurants or other public food service establishments, and using ground water as a source of supply, the department, or a local county health unit designated by the department, shall perform a sanitary survey of the facility. Upon receipt of satisfactory survey results according to department criteria, the department shall reduce the requirements of such owner or operator from monitoring and reporting on a quarterly basis to performing these functions on an annual basis. Any revised monitoring and reporting schedule approved by the department under this subsection shall apply until such time as a violation of applicable state or federal primary drinking water standards is determined by the system owner or operator, by the department, or by an agency

403.91 Short title.—Sections 403.91-403.929 shall be known and may be cited as the "Warren S. Henderson Wetlands Protection Act of 1984."
History.—s. 1, ch. 84-79.

403.911 Definitions of terms used in ss. 403.91-403.929.—As used in ss. 403.91-403.929:

(1) The term "department" means the Department of Environmental Regulation.

(2) The term "dredging" means excavation, by any means, in waters. It also means the excavation, or creation, of a water body which is, or is to be, connected to waters, directly or via an excavated water body or series of excavated water bodies.

(3) The term "estuary" means a semienclosed, naturally existing coastal body of water which has a free connection with the open sea and within which seawater is measurably diluted with fresh water derived from riverine systems.

(4) The term "filling" means the deposition, by any means, of materials in waters.

(5) The term "lagoon" means a naturally existing coastal zone depression which is below mean high water and which has permanent or ephemeral communications with the sea, but which is protected from the sea by some type of naturally existing barrier.

(6) The term "seawall" means a manmade wall or encroachment, except riprap, which is made to break the force of waves and to protect the shore from erosion.

(7) For purposes of dredge and fill permitting activities by the department, "wetlands" are defined as those areas within the jurisdiction of the department pursuant to s. 403.817.
History.—s. 1, ch. 84-79; s. 69, ch. 84-338.

403.912 Powers and duties of department in permitting of activities in wetlands.—

(1) Consistent with the powers, jurisdiction, and duties listed in s. 403.061, the department is authorized to adopt rules to carry out the provisions of ss. 403.91-403.929, including appropriate regulatory provisions governing activities in waters to their landward extent pursuant to s. 403.817. Such rules may include stricter permitting and enforcement provisions within Outstanding Florida Waters, aquatic preserves, areas of critical state concern, and areas subject to chapter 380 resource management plans adopted by rule by the Administration Commission, when the plans for an area include waters that are particularly identified as needing additional protection, which provisions are not inconsistent with the applicable rules adopted for the management of such areas by the department and the Governor and Cabinet.

(2) The department shall periodically review and reevaluate its application forms for permits for activities regulated by ss. 403.91-403.929 to ensure that such forms efficiently and effectively meet the needs of the department and of applicants for permits.
History.—s. 1, ch. 84-79.

403.913 Determination of jurisdiction over surface waters; criteria; when permits required.—

(1) No person shall dredge or fill in, on, or over surface waters without a permit from the department, unless exempted by statute or department rule.

(2) The landward extent of waters shall be determined as provided in s. 403.817, except that the department may exert its jurisdiction to the ordinary or mean high-water line of waters whenever the landward extent, if determined in accordance with Rule 17-4.022, Florida Administrative Code, occurs waterward of the ordinary or mean high-water line. The determinations made pursuant to this subsection shall be to establish the regulatory jurisdiction of the department and are not intended to be a delineation of the boundaries of lands for purposes of title.

(3) When the department determines its jurisdiction based on dominant vegetation, the permit applicant or person requesting the jurisdictional determination, at his option, may request that the department, in cooperation with the United States Department of Agriculture Soil Conservation Service, determine whether hydric soils at the site corroborate the finding of jurisdiction based on vegetation. A request by an applicant that a soils assessment be made pursuant to this section shall toll the 90-day time period provided in s. 403.0876 to approve or deny the permit; that time shall begin to run again upon receipt by the department of the information provided by the Soil Conservation Service. When the soils assessment indicates the presence of hydric soils in conjunction with dominant vegetation, the department shall be presumed to have jurisdiction. When the soils assessment indicates the absence of hydric soils, the department shall be presumed not to have jurisdiction.

(4) Within those areas of the state where a water management district has been delegated stormwater permitting by the department, no dredge or fill permit is required for the construction of, and dredging and filling in, irrigation or drainage ditches constructed in the uplands, including those connecting otherwise isolated areas owned entirely by one person and dominated by the plant indicator species adopted pursuant to s. 403.817. This exemption only applies to a ditch for which the point of connection to other waters of the state is no more than 35 square feet in total cross-sectional area and which normally has a water depth of no more than 3 feet. The total cross-sectional area at the point of connection to other waters of the state shall be maintained by the landowner so as not to exceed the design limitations of this exemption. This exemption does not authorize dredging in waters of the state other than in ditches as described in this subsection. All applicable permits except dredge and fill permits are required for discharges to these ditches or connected areas. This exemption does not apply to ditches in or connected to the waters described in s. 403.031(12)(a) and (b), Outstanding Florida Waters, Class I waters, or Class II waters.

(5) For the purposes of dredge and fill permitting, surface waters do not include intermittent streams or intermittent tributaries, unless there is a continuation of jurisdiction as determined pursuant to Rule 17-4.022, Florida Administrative Code. Standard hydrological methods shall be used to determine which streams constitute in-

termittent streams and intermittent tributaries. An intermittent stream or intermittent tributary means a stream that flows only at certain times of the year, flows in direct response to rainfall, and is normally an influent stream except when the groundwater table rises above the normal wet season level. Those portions of a stream or tributary which are intermittent and are located upstream of all nonintermittent portions of the stream or tributary are not subject to dredge and fill permitting.

(6) The expanded dredge and fill jurisdiction and permitting criteria granted to the department under ss. 403.91-403.929 do not apply to any development in which 30 percent or more of the lots in a subdivision approved for sale as homesites subsequent to January 1, 1970, pursuant to chapter 498 have been sold; to any residential development for which a development order pursuant to s. 380.06 has been issued or which is exempt pursuant to s. 498.025(2)(a) and (4)(a); or to any activity for which a dredge and fill permit has been issued by the department prior to October 1, 1984. A development or activity which meets any of these conditions shall continue to be regulated pursuant to the dredge and fill jurisdiction of the department as such jurisdiction existed prior to January 24, 1984. Dredge and fill permit applications relating to such developments and activities which meet the conditions previously described shall be reviewed by the department using the permit criteria which existed prior to January 24, 1984, for 12 months after the department adopts a rule implementing ss. 403.91-403.929. Dredge and fill permit applications filed 12 months after the department adopts its rules implementing ss. 403.91-403.929 are subject to the permit criteria established by this chapter. The developer of a development or a permitholder for an activity which meets any of the conditions previously described and who asserts that the development or activity is qualified under this provision shall notify the department of such assertion within 180 days of the publication of a notice by the department of the existence of this provision. The failure to timely notify the department serves as a waiver of the benefits conferred by this provision.

(7) As to other developments the lands of which were approved for sale pursuant to chapter 498 prior to October 1, 1984, the department shall give special consideration to an application for a dredge and fill permit when the lands subject to the permit application constitute a part of the contractual obligations of the applicant incurred pursuant to land sales contracts and when there has been a continuing, bona fide effort since the date of recording of the plat to fulfill the plan of development set forth in the plat and [2]required to be undertaken by the terms of such contractual obligations. The department must be notified of any development or activity as to which it is asserted that it is qualified for the special consideration within 180 days of the publication of a notice by the department of the existence of this provision. The failure to timely notify the department serves as a waiver of the benefits conferred by this provision.

(8) The expanded dredge and fill jurisdiction granted to the department under ss. 403.91-403.929 does not apply to any sand, limerock, or limestone mining activity which is currently operating in compliance with department rules or for which the department has previously determined that it has no jurisdiction in areas east of the Dade-Broward Levee or which holds a department permit on October 1, 1984. Such sand, limerock, or limestone mining activity shall continue to be regulated pursuant to the dredge and fill jurisdiction of the department as such jurisdiction existed prior to January 24, 1984, for a period of 10 years from October 1, 1984, provided such activity is continuous and carried out on land contiguous to mining operations which were in existence on or before October 1, 1984. Any lands acquired or leased subsequent to June 1, 1984, for such mining activity are not subject to the provisions of this subsection. Dredge and fill permit applications related to such activities shall be reviewed by the department using the existing permit criteria set forth in Rule 17-4, Florida Administrative Code, as of January 24, 1984, for 12 months after the department adopts a rule implementing ss. 403.91-403.929, at which time subsequently filed permit applications will be subject to the permit criteria of ss. 403.91-403.929. The department must be notified of any such mining activity as to which it is asserted that it is qualified under this provision within 180 days after the publication of a notice by the department of the existence of this provision. The failure to timely notify the department serves as a waiver of the benefits conferred by this provision. All such sand, limerock, or limestone mining activities are subject to jurisdiction under ss. 403.91-403.929 for any activities carried out after 10 years from October 1, 1984.

(9) The provisions of ss. 403.91-403.929 do not apply to any application which was complete prior to October 1, 1984, unless the applicant chooses to come under ss. 403.91-403.929.

History.—s. 1, ch. 84-79.

[1]Note.—The words "which streams constitute" were inserted by the editors.

[2]Note.—The words "required to be" were inserted by the editors.

403.914 Jurisdictional declaratory statements.—

(1) Before applying for a permit to dredge or fill, a property owner, an entity which has the power of eminent domain, or another person with a legal or equitable interest in property may petition the department for a declaratory statement of the dredge and fill jurisdiction of the department. The department shall, by rule, specify information which must be provided and may require authorization to enter upon the property. The department may require a fee of at least $250 and not more than $10,000 to cover the direct costs of acting upon the petition. The fee shall be based, by rule, upon the size and environmental complexity of the site for which the jurisdictional declaratory statement is sought.

(a) Within 30 days of the receipt of a petition for a jurisdictional declaratory statement, the department shall notify the applicant of any additional information which may be necessary. The department shall complete the assessment and issue notice of the proposed agency action within 60 days of receipt of a complete petition. The notice shall be published by the petitioner in the Florida Administrative Weekly. The provisions of ss. 120.57 and 120.59 are applicable to declaratory statements under this section. Any person whose substantial interests will be affected may petition for a hearing within 14 days of the publication of notice. If no peti-