

## **APPENDIX B**

### **BACKGROUND INFORMATION REGARDING DENSITY REDUCTION/GROUNDWATER RESOURCE (DR/GR) AREA LEE COUNTY, FLORIDA**

## APPENDIX B

### **Background Information Regarding Density Reduction / Groundwater Resource (DR/GR) Area Lee County, Florida**

#### **Introduction**

The information summarized below is taken primarily from the following documents:

1. Origins and History of DR/GR;
2. Lee County Comprehensive Plan (Lee Plan) 2005 Update; and
3. Lee Master Mitigation Plan (LMMP).

The selected portions of these documents are intended to provide background information relating to the Lee County land use category referred to as Density Reduction / Groundwater Resource (DR/GR) lands (in particular those DR/GR lands located in the southeast portion of Lee County). The information describes the designation of DR/GR lands as a Lee County Planning Community and presents the permitted uses of the lands. It outlines the required review process by Lee County staff and commissioners when a party (1) applies to change land use type within designated DR/GR areas, or (2) applies for a permit for a permissible use within the DR/GR, like resource extraction.

Note: The sentences or paragraphs of each Lee County planning document that contain guidance or requirements with direct relevance to DR/GR lands and resources within those lands are highlighted in yellow in the sections below. Non-highlighted text surrounding the key quotes is provided for context.

#### **Origins and History of DR/GR Density Reduction / Groundwater Resource**

<b>History of DR/GR – Selected Portions Describing Basis for Designation</b>		
<b>Item</b>	<b>Ref</b>	<b>Information</b>
1	DCA	DCA recommended that Lee County prevent incompatible land use in known aquifer recharge areas
2	Lee Plan 3-89, Sect A	Established a 1990 deadline for creating ordinances to protect Groundwater Resources and Groundwater Recharge
3	Lee Plan, revis 8-90	Mentions DR/GR in context of DCA concern for density reduction and Dept of Natural Resources concern for groundwater resource protection. This new land use category was to be regarded as both limiting development and protecting a natural resource.
4	Lee Plan 1990, Sect A	Contains policy 1.4.3 regarding Density Reduction / Groundwater Resource land use category.

# The Lee Plan 2005 Codification – As Amended through December 2005

Lee Plan – Selected Information Relating to Management of DR/GR Lands		
Item	Page	Information
1	I-1	The growth patterns of the county will continue to be dictated by a Future Land Use map that will not change dramatically during the time frame of this plan. With the exception of Cape Coral and Lehigh Acres, the county's urban areas will be essentially built out by 2020 (pending, in some cases, redevelopment). The county will attempt to maintain the clear distinction between urban and rural areas that characterizes this plan. Its success will depend on two things: the continuing viability of agricultural uses and the amount of publicly-owned land in outlying areas.
2	I-1	The county will protect its natural resource base in order to maintain a high quality of life for its residents and visitors. This will be accomplished through an aggressive public land acquisition program and by maintaining and enforcing cost-effective land use and environmental regulations that supplement, where necessary, federal, state, and regional regulatory programs.
3	I-1	The Lee Plan's land use accommodation is based on an aggregation of allocations for 22 Planning Communities. These communities have been designed to capture the unique character of each of these areas of the county. Within each community, smaller neighborhood communities may exist; however, due to their geographic size, a planning community could not be created based on its boundaries. These communities and their anticipated evolutions are as follows: (Amended by Ordinance No. 99-15)  [NOTE: Southeast Lee County, which contains the DR/GR lands is one of these Planning Communities; see below. Review of other Planning Communities such as Bonita and Estero will be considered to be beyond the scope of the current review project.]
4	I-9	Southeast Lee County - As the name implies, this Community is located in the southeast area of Lee County. South of SR 82, north of Bonita Beach Road, east of I-75 (excluding areas in the San Carlos Park/Island Park/Estero Corkscrew Road and Gateway/Southwest Florida International Airport Communities) and west of the county line. With the exception of a few Public Facilities, the entire community is designated as Density Reduction/Groundwater Resource, Conservation Lands (both upland and wetlands), and Wetlands on the Future Land Use Map. This "community" consists of mining operations, agricultural uses, and very large lot residential home sites. The one exception is the Citrus Park Community. This community will not change in character by the year 2020 and will continue to have a population of approximately 2000 residents. (Added by Ordinance No. 99-15)
5	II-2	<b>GOAL 1: FUTURE LAND USE MAP.</b> To maintain and enforce a Future Land Use Map showing the proposed distribution, location, and extent of future land uses by type, density, and intensity in order to protect natural and man-made resources, provide essential services in a cost-effective manner, and discourage urban sprawl. (Amended by Ordinance No. 94-30)

		<p><b>[NOTE: DR/GR lands form part of the Non-Urban Areas identified on the Lee County Future Land Use Map and treated under Objective 1.4 of the Lee Plan; see description below.]</b></p>
6	II-13	<p><b>POLICY 1.4.5:</b> The Density Reduction/Groundwater Resource (DR/GR) areas include upland areas that provide substantial recharge to aquifers most suitable for future wellfield development. These areas also are the most favorable locations for physical withdrawal of water from those aquifers. Only minimal public facilities exist or are programmed. Land uses in these areas must be compatible with maintaining surface and groundwater levels at their historic levels. Permitted land uses include agriculture, natural resource extraction and related facilities, conservation uses, publicly-owned gun range facilities, private recreation facilities, and residential uses at a maximum density of one dwelling unit per ten acres (1 du/10 acres). Individual residential parcels may contain up to two acres of Wetlands without losing the right to have a dwelling unit, provided that no alterations are made to those wetland areas.</p> <p>Private Recreational Facilities may be permitted in accordance with the site locational requirements and design standards, as further defined in Goal 16. No Private recreational facilities may occur within the DR/GR land use category without a rezoning to an appropriate planned development zoning category, and compliance with the Private Recreation Facilities performance standards, contained in Goal 16 of the Lee Plan. (Amended by Ordinance No. 91-19, 94-30, 99-16, 02-02)</p> <p><b>[NOTE: Little or no mention is made of maintaining or preserving ecological resources in DR/GR lands.]</b></p>
7	II-21	<p><b>OBJECTIVE 2.4: FUTURE LAND USE MAP AMENDMENTS.</b> Regularly examine the Future Land Use Map in light of new information and changed conditions, and make necessary modifications.</p> <p><b>POLICY 2.4.1:</b> The county will accept applications from private landowners or non-profit community organizations to modify the boundaries as shown on the Future Land Use Map. Procedures, fees, and timetables for this procedure will be adopted by administrative code. (Amended by Ordinance No. 94-30)</p> <p><b>POLICY 2.4.2:</b> All proposed changes to the Future Land Use Map in critical areas for future potable water supply (Bonita Springs as described in Policy 1.7.10; Lehigh Acres as described in Policy 54.1.9; and all land in the Density Reduction/ Groundwater Resource land use category) will be subject to a special review by the staff of Lee County. This review will analyze the proposed land uses to determine the short-term and long-term availability of irrigation and domestic water sources, and will assess whether the proposed land uses would cause any significant impact on present or future water resources. If the Board of County Commissioners wishes to approve any such changes to the Future Land Use Map, it must make a formal finding that no significant impacts on present or future water resources will result from the change. (Amended by Ordinance No. 92-47, 94-30, 00-22, 02-02)</p> <p><b>POLICY 2.4.3:</b> Future Land Use Map Amendments to the existing DR/GR areas south of SR 82 east of I-75, excluding areas designated by the Port Authority as needed for airport expansion, which increase the current allowable density or intensity of land use will be discouraged by the county. It</p>

		<p>is Lee County's policy not to approve further urban designations there for the same reasons that supported its 1990 decision to establish this category. In addition to satisfying the requirements in 163 Part II Florida Statutes, Rule 9J-5 of the Florida Administrative Code, the Strategic Regional Policy Plan, the State Comprehensive Plan, and all of the criteria in the Lee Plan, applicants seeking such an amendment must:</p> <ol style="list-style-type: none"> <li>1. analyze the proposed allowable land uses to determine the availability of irrigation and domestic water sources; and,</li> <li>2. identify potential irrigation and domestic water sources, consistent with the Regional Water Supply Plan. Since regional water suppliers cannot obtain permits consistent with the planning time frame of the Lee Plan, water sources do not have to be currently permitted and available, but they must be reasonably capable of being permitted; and,</li> <li>3. present data and analysis that the proposed land uses will not cause any significant harm to present and future public water resources; and,</li> <li>4. supply data and analysis specifically addressing the urban sprawl criteria listed in Rule 9J-</li> </ol> <p>5.006(5) (g), (h), (i) and (j), FAC. During the transmittal and adoption process, the Board of County Commissioners must review the application for all these analytical requirements and make a finding that the amendment complies with all of them. (Added by Ordinance No. 97-05)</p> <p><b>POLICY 2.4.4:</b> Lee Plan amendment applications to expand the Lee Plan's employment centers, which include light industrial, commercial retail and office land uses, will be evaluated by the Board of County Commissioners in light of the locations and cumulative totals already designated for such uses, including the 1994 addition of 1,400 acres to the Tradeport category just south of the Southwest Florida International Airport. (Added by Ordinance No. 97-05, Amended by Ordinance No. 00-22, 04-16)</p>
8	II-37	<p><b>GOAL 10: NATURAL RESOURCE EXTRACTION.</b></p> <p>To protect areas containing identified natural resources from incompatible urban development, while insuring that natural resource extraction operations minimize or eliminate adverse effects on surrounding land use and natural resources. (Amended by Ordinance No. 02-02)</p> <p><b>OBJECTIVE 10.1:</b> Designate through the rezoning process sufficient lands suitable for providing fill material, limerock, and other natural resource extraction materials to meet the county's needs and to export to other communities, while providing adequate protection for the county's natural resources. (Amended by Ordinance No. 94-30, 02-02)</p> <p><b>POLICY 10.1.1:</b> Natural resource extraction operations intending to withdraw groundwater for any purpose must provide a monitoring system to measure groundwater impacts. (Amended by Ordinance No. 02-02)</p> <p><b>POLICY 10.1.2:</b> Applications for natural resource extraction permits for new or expanding areas must include an environmental assessment. The assessment will include (but not be limited to) consideration of air emissions, impact on environmental and natural resources, effect on nearby land uses, degradation of water quality, depletion of water quantity, drainage, fire and safety, noise, odor, visual impacts, transportation including access roads, sewage disposal, and solid waste disposal. (Amended by Ordinance No. 00-22, 02-02)</p> <p><b>POLICY 10.1.3:</b> Applications for natural resource extraction permits for new</p>

		<p>or expanding sites must include a reclamation plan which provides assurance of implementation. Reclamation plans in or near important groundwater resource areas must be designed to minimize the possibility of contamination of the groundwater during mining and after completion of the reclamation. (Amended by Ordinance No. 00-22, 02-02)</p> <p><b>POLICY 10.1.4:</b> Natural resource extraction activities (and industrial uses which are ancillary to natural resource extraction) may be permitted in areas indicated on the Future Land Use Map as Rural, Open Lands, and Density Reduction/Groundwater Resources, provided they have adequate fire protection, transportation facilities, wastewater treatment and water supply, and provided further that they have no significant adverse effects such as dust and noise on surrounding land uses and natural resources. In order to reduce transport costs and minimize wear on the county's roadways, the extraction and transport of fill material may also be permitted as an interim use in the Future Urban Areas provided that the above requirements are met; however, special restrictions may also be applied to protect other land uses. These determinations will be made during the rezoning process. (Amended by Ordinance No. 94-30, 00-22, 02-02)</p> <p><b>POLICY 10.1.5:</b> Lee County will support efforts by government, community leaders, and the extractive industry owners and businesses to seek incentives that will help to facilitate the connection of natural resource extraction borrow lake excavations into a system of interconnected lakes and flowways that will enhance wildlife habitat values, provide for human recreation, educational and other appropriate uses, and/or strengthen community environmental benefits. (Amended by Ordinance No. 99-15, 02-02)</p> <p><b>OBJECTIVE 10.2:</b> Determine and maintain a balance between the County's petroleum resources and the health, safety and welfare of the residents of its Future Urban Areas. (Added by Ordinance No. 98-09)</p> <p><b>POLICY 10.2.1:</b> By 2000, the county will conduct a study to determine the appropriateness of oil exploration, drilling, or production. The study will address the issues of the compatibility of oil-related activities with the environment and urban uses. This study will include recommendations regarding the appropriateness of such activities within Lee County as well as guidelines under which such activities should be regulated under the Lee County Land Development Code. (Added by Ordinance No. 98-09, Amended by Ordinance No. 00-22)</p>
9	II-49	<p><b>GOAL 16: PRIVATE RECREATIONAL FACILITIES IN THE DR/GR.</b></p> <p>To ensure that the development of Private Recreational Facilities in the DR/GR areas is compatible with the intent of this Future Land Use category, including recharge to aquifers, development of future wellfields and the reduction of density. (Added by Ordinance No. 99-16)</p> <p><b>OBJECTIVE 16.1:</b> To ensure that Private Recreation Facilities are located in the most appropriate areas within the DR/GR future land use category. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.1.1:</b> The Private Recreation Facilities Overlay Map, Map 4, shows those locations that are appropriate for the development of Private Recreation Facilities in the DR/GR area. The areas depicted on Map 4 are consistent with the application of the following locational criteria:</p> <ol style="list-style-type: none"> <li>1. Located outside of those areas designated for public acquisition through the</li> </ol>

	<p>Florida Conservation and Recreational Land Program (C.A.R.L.), the Corkscrew Regional Ecosystem Water Trust (C.R.E.W.), the South Florida Water Management District's Save Our Rivers Program, and the County's 2020 Conservation Program;</p> <ul style="list-style-type: none"> <li>2. Located in areas characterized as predominantly impacted with agricultural, mining or other permitted uses;</li> <li>3. Located outside of areas depicted as 100 Year Flood Plains, as illustrated on Map 9 of the Lee Plan, as amended through June of 1998;</li> <li>4. Located to minimize impact on "Hot Spots of Biological Resources and Rare Species Occurrence Records," from the Florida Game and Freshwater Fish Commission's, "Closing the Gaps in Florida Wildlife Habitat Conservation System" published in 1994;</li> <li>5. Located in areas characterized by large lot single or limited ownership patterns; and,</li> <li>6. Located in areas with direct access to existing roadways. (Added by Ordinance No. 99-16)</li> </ul> <p><b>POLICY 16.1.2:</b> Private Recreational Facilities within the DR/GR land use category will only be allowed, subject to the other requirements of this Goal, in the areas depicted on Map 4, Private Recreational Facilities Overlay Map. (Added by Ordinance No. 99-16)</p> <p><b>OBJECTIVE 16.2: GROWTH MANAGEMENT.</b> Development of Private Recreation Facilities in the DR/GR areas must be consistent with the growth management principles and practices as provided in the following policies. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.2.1: PRIVATE RECREATION FACILITY PLANNED DEVELOPMENT.</b> By the end of December, 2000, Lee County will amend the Lee County Land Development Code (LDC) to include provisions for a new Private Recreation Facilities Planned Development zoning category. All Private Recreational Facilities proposed within the Density Reduction Groundwater Resource land use category must be reviewed as a Development of County Impact, Private Recreation Facilities Planned Development. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.2.2:</b> Approved Private Recreation Facilities Planned Developments will automatically expire, reverting to the original zoning category, if a Lee County Development Order is not obtained within five (5) years of zoning approval. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.2.3: RESIDENTIAL USES PRECLUDED.</b> Residential uses, other than a single bonafide caretaker's residence or a resident manager's unit, are not permitted in conjunction with a Private Recreational Facility Planned Development. Residential density associated with land zoned as Private Recreational Facility will be extinguished and cannot be transferred, clustered or otherwise assigned to any property. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.2.4:</b> Further, the approval of Private Recreational Facilities on any property within the DR/GR will not be considered as justification for approving an amendment to the Future Land Use Map series which would increase residential density in the DR/GR areas. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.2.5:</b> The boundaries of the Private Recreational Facility Planned Development may not be designed to allow out-parcels or enclaves of residential units to be integrated into the golf course perimeter. (Added by</p>
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	<p>Ordinance No. 99-16)</p> <p><b>POLICY 16.2.6:</b> Private Recreational Facilities must have adequate fire protection, transportation facilities, wastewater treatment and water supply, and provided further that they have no adverse effects such as dust, noise, lighting, or odor on surrounding land uses and natural resources. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.2.7:</b> Private Recreational Facilities within the DR/GR may only be located in the areas depicted on the Private Recreational Facilities Map, Map 4. (Added by Ordinance No. 99- 16)</p> <p><b>POLICY 16.2.8:</b> Applications for Private Recreational Facility development will be reviewed and evaluated as to their impacts on, and will not negatively affect, any adjacent, existing agricultural, mining or conservation activities. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.2.9:</b> Applications for Private Recreational Facility development will be reviewed and evaluated as to their impacts on, and must be compatible with any adjacent publicly owned lands. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.2.10:</b> During the 2010 comprehensive plan Evaluation and Appraisal Report process the County will conduct a comprehensive evaluation of the impacts of Private Recreation Facilities on surface and groundwater quality and quantity. Recommendations from this evaluation will then be incorporated into the Lee Plan. (Added by Ordinance No. 99-16)</p> <p><b>OBJECTIVE 16.3: GENERAL DEVELOPMENT REGULATIONS.</b> The protection of water quality, quantity, natural resources, and compatibility will be addressed by additional development controls that regulate the permitted uses, parcel size, density, intensity and design of Private Recreational Facilities. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.3.1:</b> Private Recreational Facilities will submit a Master Concept Plan at the time of Planned Development submittal that identifies the general location of proposed uses and structures, play fields and golf course routings. Minor adjustments to this Master Concept Plan may be made administratively at the discretion of the Director. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.3.2:</b> Applications for Private Recreational Facilities must include an environmental assessment during the zoning approval process. The assessment must include, at a minimum, an analysis of the environment, historical and natural resources and a protected species survey as required by chapter 10 of the LDC. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.3.3:</b> In addition to an environmental assessment, the applicant must demonstrate compatibility with nearby land uses (by addressing such things as noise, odor, lighting and visual impacts), and the adequate provision of drainage, fire and safety, transportation, sewage disposal and solid waste disposal. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.3.4:</b> The development will incorporate an Integrated Pest Management program for any managed recreational areas. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.3.5:</b> Where buildings or impervious development is located within twenty-five feet of the property boundary, a buffer 15 feet wide, with 5 trees per 100 linear feet, and a solid double row hedge must be provided, unless a more restrictive buffer is required during the Planned Development Review. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.3.6:</b> No illumination may be used which creates glare on adjacent properties. All exterior lighting will be designed with downward</p>
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	<p>deflectors to eliminate skyward glare. Parking areas, walkways and paths and maintenance areas may be illuminated for security purposes, provided that light poles do not exceed twelve feet in height. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.3.7:</b> Native and xeriscape vegetation will be encouraged, such that:</p> <ol style="list-style-type: none"> <li>1. 100% of all required trees and 75% of all additional trees must be native.</li> <li>2. 80% of all required shrubs and 50% of all additional shrubs must be native.</li> <li>3. A minimum of 70% of all trees and shrubs must be xeriscape varieties.</li> <li>4. The native and xeriscape requirements do not apply to turf areas.</li> <li>5. No plant species included in the Florida Exotic Pest Plant Council, 1999 List of Florida's Most Invasive Species, will be planted. (Added by Ordinance No. 99-16)</li> </ol> <p><b>POLICY 16.3.8:</b> The following site requirements, regulating lot size, setbacks and open space must be equaled or exceeded:</p> <ol style="list-style-type: none"> <li>1. Uses, other than golf courses, permitted under this subdivision must have a minimum lot size of ten acres.</li> <li>2. <b>Building Setbacks.</b> <ol style="list-style-type: none"> <li>a. Fifty (50) feet from an existing right-of-way line or easement.</li> <li>b. Seventy-five (75) feet from any private property line under separate ownership and used for residential dwellings.</li> <li>c. Fifty (50) feet from any adjacent agricultural or mining operation.</li> <li>d. Greater setbacks may be required during the Public Hearing process to address unique site conditions.</li> </ol> </li> <li>3. <b>Setbacks for accessory buildings or structures.</b> All setbacks for accessory buildings or structures must be shown on the Master Concept Plan required as part of the Planned Development application. No maintenance area or outdoor storage area, irrigation pump or delivery area may be located less than 500 feet from any existing or future residential use, as measured from the edge of the above-listed area to the property line of the residential use. For purposes of this policy, any property that is 10 acres or less in size and is zoned to permit dwelling units will be considered a future residential property. Properties larger than 10 acres may be considered future residential based on the property's size, the ownership pattern of properties in the surrounding area, and the use, zoning and size of surrounding properties. To allow flexibility, the general area of any accessory buildings, structures and maintenance areas must be shown on the site plan with the appropriate setbacks as noted in this subsection listed as criteria for the final placement of these buildings, structures or facilities.</li> </ol> <p>In addition to the other standards outlined in this policy, any maintenance area or outdoor storage area, irrigation pump or delivery area must meet one of the following standards:</p> <ol style="list-style-type: none"> <li>a) be located 500 feet or more from any property line abutting an existing or planned public right-of-way; or</li> <li>b) provide visual screening around such facilities, that provides complete opacity, so that the facilities are not visible from any public right-of-way; or</li> <li>c) be located within a structure that meets or exceeds the current Lee County architectural standards for commercial structures.</li> </ol> <p>4. <b>Open Space.</b> A minimum of 85% open space must be provided. However, natural and manmade bodies of water may contribute 100% to achieving the minimum requirements. To the extent possible, pervious paving and parking</p>
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	<p>areas, and buildings elevated above ground level will exceed the 85% open space requirement.</p> <p><b>5. Security.</b> All entrances to Private Recreational Facilities must be restricted from public access during non-use hours. (Added by Ordinance No. 99-16, Amended by Ordinance No. 02-04)</p> <p><b>POLICY 16.3.9:</b> Density/Intensity Limitations proposed uses are subject to the following limitations:</p> <p>Clubhouse/Administrative Area: 20,000 SF/18 hole golf course.</p> <p>Golf Course Restrooms: Not to exceed two structures per 18-hole golf course, limited to 150 square feet per structure.</p> <p>Maintenance Area: Not to exceed 25,000 SF of enclosed or semi-enclosed building area, on a maximum of 5 acres of land per 18 hole golf course.</p> <p>Horse Stable: 40,000 SF of Stable Building/10 acres.</p> <p>Camping Restrooms: 1 toilet per four (4) camp units, clustered in structures not to exceed 500 square feet per structure. 1 shower per 4 toilets.</p> <p>Camping Area Office: 1,000 SF per campground.</p> <p>(Added by Ordinance No. 99-16, Amended by Ordinance No. 02-02)</p>
	<p><b>OBJECTIVE 16.4: WATER QUALITY, QUANTITY, AND SURFACE WATER RESOURCES.</b> Private Recreational Facilities must be located, designed and operated in such a way that they will not degrade the ambient surface or groundwater quality. These facilities must be located, designed and operated in such a way that they will not adversely impact the County's existing and future water supply. The location, design and operation of Private Recreational Facilities must maintain or improve the storage and distribution of surface water resources. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.4.1:</b> All applications and documentation for the planned development rezoning process must be submitted to the Lee County Division of Natural Resources for their formal review and comment. The Division of Natural Resources Director must make a formal finding that the proposed uses will not have negative impacts on present and future water quality and quantity, and will review and approve modeling submitted to support the Planned Development.</p> <p>Applicant modeling efforts must be evaluated and approved by the Lee County Division of Natural Resources and the Lee County Utilities Division. Issues of well locations, easements and wastewater re-use must be evaluated and approved by the Lee County Division of Natural Resources and the Lee County Utilities Division during the Planned Development process. Formal agreements addressing these issues will be entered into prior to the issuance of a Development Order. Co-location of recreational and public facilities is encouraged. (Added by Ordinance No. 99-16, Amended by Ordinance No.03-04).</p> <p><b>POLICY 16.4.2:</b> Applications for Private Recreational Facilities in or near existing and proposed wellfields must be designed to minimize the possibility of contamination of the groundwater during construction and operation.</p> <p>(Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.4.3:</b> Private Recreational Facilities must provide a monitoring program to measure impacts to surface and groundwater quality and quantity (see Objective 16.7). (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.4.4:</b> As part of a rezoning request for a Private Recreational Facility in the DR/GR area, a pre-development groundwater and surface water</p>

	<p>analysis must be conducted and submitted to the County. This analysis is intended to establish baseline data for groundwater and surface water monitoring for the project area. The analysis must be designed to identify those nutrients and chemicals which are anticipated to be associated with the project. Prior to the applicant commencing this baseline study, the methodology of the study must be submitted for review, comment, and approval by the County. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.4.5:</b> Any “Private Recreational Facility” located in any wellfield protection zone must meet the requirements/criteria for protection zone 1, unless updated modeling is provided by the applicant and is approved by Lee County Division of Natural Resources and the Lee County Utilities Division. (Added by Ordinance No. 99-16, Amended by Ordinance No. 03-04)</p> <p><b>POLICY 16.4.6:</b> The surface water management system design must incorporate natural flowway corridors, cypress heads, natural lakes, and restore impacted natural flowway corridors.</p> <ol style="list-style-type: none"> <li>1. Stormwater run-off must be pre-treated through an acceptable recreated natural system or dry retention and water retention system, prior to discharging the run-off into existing lake or wetland (any aquatic) systems. Included within these systems must be an average 50 foot wide vegetative setback measured from the edge of managed turf to the wetland jurisdictional wetland line or top of bank of natural water bodies.</li> <li>2. The development must maintain the function and integrity of local and regional flowways. Flowways are precluded from being primary surface water treatment areas. Applications for Private Recreational Facilities must demonstrate adequate hydraulic capacity without increasing flood levels. Private Recreational Facilities must participate in the implementation of the Lee County Surface Water Management Plan as well as the South Florida Water Management District’s South Lee County Watershed Plan.</li> <li>3. The Historic Flowway Aerial Map depicts the general flowway paths that exist in the DR/GR area. The lines shown on this map are not regulatory but show the general boundaries of the main conveyances. During the rezoning process, conceptual surface water management plans must be submitted and approved. Prior to the issuance of a Development Order, proposed Private Recreation Facilities will provide detailed hydrologic and hydraulic analysis demonstrating the limits of flow for various storm events and the developed sites ability to convey these flows. Where an existing flowway is not well defined or discontinuous, flexibility will be given to allow different alignments within a site. (Added by Ordinance No. 99-16)</li> </ol> <p><b>POLICY 16.4.7:</b> Any Private Recreational Facilities proposed within the DR/GR land use category must cooperate with Lee County and SFWMD in implementing an overall surface water management plan as outlined in Objective 60.2 and 117.1. Compliance with these Policies must be demonstrated during Development Order approval. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.4.8:</b> If a proposed Private Recreation Facilities falls within an area identified as an anticipated drawdown zone for existing or future public well development, the project must utilize an alternative water supply such as reuse or withdrawal from a different non-competing aquifer or show that adequate supply is available in excess of that being used for planned public water supply development. (Added by Ordinance No. 99-16)</p> <p><b>OBJECTIVE 16.5: WILDLIFE.</b> The location, design and operation of</p>
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	<p>Private Recreational Facilities will incorporate preservation and/or management activities that restrict the unnecessary loss of wildlife habitat or impact on protected species, species of special concern, threatened or endangered species. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.5.1:</b> The development will not have an adverse impact on any existing, viable onsite occupied wildlife habitat for protected species, species of special concern, threatened or endangered species. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.5.2:</b> All proposed fencing must be designed to permit wide-ranging animals to traverse the site. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.5.3:</b> Through the development review process, Private Recreation Facilities will be designed and operated to conserve critical habitat of protected species. This will be accomplished through regulation, incentives and public acquisition. (Added by Ordinance No. 99-16)</p> <p><b>OBJECTIVE 16.6: NATURAL RESOURCES.</b> Private Recreational Facilities must be located, designed and operated to minimize environmental impacts, and where appropriate, protect, enhance and manage natural resources such as flowways, waterways, wetlands, natural water bodies, and indigenous uplands. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.6.1:</b> All retained onsite natural areas, must be perpetually managed by the owner(s), or their assignees, with accepted Best Management Practices. The type of management techniques will be determined by the specific plant community. A natural area land management plan must be submitted to the Lee County Division of Planning prior to the approval of a final local development order. Management techniques addressed in the plan must include, but not be limited to the following:</p> <ul style="list-style-type: none"> <li>• Exotic pest plant control;</li> <li>• Removal of any trash and debris;</li> <li>• Restoration of appropriate hydrology;</li> <li>• Prescribed fire;</li> <li>• Native plant restoration, where appropriate;</li> <li>• Discussion of flora and fauna;</li> <li>• Enhancement of wildlife habitat; and,</li> <li>• Retention of dead trees and snags.</li> </ul> <p>(Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.6.2:</b> The development will minimize adverse effects on wetlands and riparian areas; and will result in no net reduction in functional wetland acreage as identified by the South Florida Water Management District Wetland Rapid Assessment Procedure (WRAP). (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.6.3:</b> Private Recreational Facilities must be designed to preserve a minimum of 50% of on-site, indigenous native upland habitat. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.6.4:</b> The development will incorporate energy and resource conservation devices, such as low flow water fixtures, and natural skylights. (Added by Ordinance No. 99-16)</p> <p><b>OBJECTIVE 16.7: MONITORING AND ENFORCEMENT.</b> In order to ensure that Private Recreational Facilities do not degrade the ambient condition of water quality, water quantity, vegetation and wildlife, an ongoing monitoring program must be established by the developer. (Added by Ordinance No. 99-16)</p>
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	<p><b>POLICY 16.7.1:</b> Annual surface water and groundwater monitoring must continue in perpetuity. The monitoring requirements will be established utilizing those nutrients and chemicals that are anticipated to be associated with the proposed project that were identified by the pre-development groundwater and surface water analysis required by Policy 16.4.4. This surface and groundwater monitoring is to be conducted, at a minimum, on a quarterly basis by a qualified third party. This monitoring data must be submitted to the County as soon as it is available. A summary report of this monitoring effort must be provided annually to Lee County Division of Natural Resources for their review. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.7.2:</b> If surface and/or groundwater monitoring shows degradation of water quality the County will notify the property owner that a plan, to correct the identified problem(s), must be submitted. The property owner must submit a plan of action within 30 days after receipt of written notice from the County. The plan must identify actions that will correct the problem(s) within the shortest possible time frame. This plan will be reviewed and must be found to be acceptable by the County. If the plan is not submitted as required, or is found to be unacceptable by the County, the County will require that all activities on the property cease until a plan is submitted and approved. The approved plan must be implemented by the property owner. If the County determines that the approved plan is not being implemented properly, the County can require that all activities on the property cease until the property owner comes back into compliance. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.7.3:</b> The approved Private Recreational Facility must submit an annual monitoring report for a period of five (5) years, addressing the interaction between the use and environment. This report must provide a discussion and documentation on the following activities:</p> <ol style="list-style-type: none"> <li>1. Construction Monitoring – the applicant will submit annual reports detailing construction activities, permitting, compliance with Audubon International Signature Standards and percent complete.</li> <li>2. Land Management Activities – including those used on the golf course, as well as natural and preserve areas.</li> <li>3. Wildlife Monitoring – the applicant will provide a discussion of wildlife, wildlife activity, and wildlife management activities.</li> <li>4. Irrigation Monitoring – the applicant will provide a summary of the monthly irrigation withdrawal and irrigation sources.</li> <li>5. Mitigation/Vegetation Monitoring – the applicant will provide status reports on the viability of any mitigation and/or landscaping conducted on site.</li> <li>6. Integrated Pest Management Monitoring – the applicant will provide a discussion on the pest management techniques, and any pest problems that have occurred on the project. Should adverse impacts in any of the above areas be identified, enforcement and mitigation will be provided through the appropriate regulatory agency and enforcement procedures. These procedures will be spelled out during the development order process. If, after five years, no significant adverse impacts are determined, the reporting on these subjects may be terminated. (Added by Ordinance No. 99-16)</li> </ol> <p><b>OBJECTIVE 16.8: GOLF COURSE PERFORMANCE STANDARDS.</b> The location, design and operation of golf courses located within Private Recreational Facilities will minimize their impacts on natural resources, and</p>
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	<p>incorporate Best Management Practices. A maximum of ten (10) 18-hole golf courses, for a total of 180 golf holes, will be permitted in the next 10 years. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.8.1:</b> Natural waterways located on the site of a proposed golf course must be left in a natural, unaltered condition. Channelization will not be performed. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.8.2:</b> An applicant must demonstrate, prior to the issuance of a local development order, that a golf course is designed to minimize adverse effects to waters and riparian areas through the use of such practices as integrated pest management, adequate stormwater management facilities, vegetated buffers, reduced fertilizer use, etc. The facility must have an adequate water quality management plan, such as a stormwater management facility constructed in uplands to ensure that the recreational facility results in no substantial adverse effect to water quality. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.8.3:</b> If a waterway crossing is necessary, then it must be designed to minimize the removal of trees and other shading vegetation. Any crossings of existing natural flowways and water bodies must be bridged. Created or restored flowways and water bodies may be crossed by bridges or culverts or a combination as approved by Lee County and the South Florida Water Management District. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.8.4:</b> Waterway crossings by cart paths will be constructed of permeable material, no wider than 8-feet, and placed on pilings from edge of floodplain to edge of floodplain. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.8.5:</b> A new lake or pond should not be located within an existing natural waterway. Upland ponds must not expose stream channels to an increase in either the rate or duration of floodwater, unless required by the South Florida Water Management District for regional water management objectives. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.8.6:</b> For golf course developments, all fairways, greens, and tees must be elevated above the 25 year flood level, and all greens must utilize underdrains. The effluent from these underdrains must be pre-treated prior to discharge into the balance of the project's water management system. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.8.7:</b> Where a golf course is proposed, it must comply with the Best Management Practices for Golf Course Maintenance Departments, prepared by the Florida Department of Environmental Protection, May 1995. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.8.8:</b> The owners will employ management strategies in and around any golf course to address the potential for pesticide/chemical pollution of the groundwater and surface water receiving areas. The owners will comply with the goals of the Audubon International Signature Program for Golf Courses. The management practices include:</p> <ol style="list-style-type: none"> <li>1. The use of slow release fertilizers and/or carefully managed fertilizer applications.</li> <li>2. The practice of integrated pest management when seeking to control various pests, such as weeds, insects, and nematodes. The application of pesticides will involve only the purposeful and minimal application of pesticides, aimed only at identified targeted species. The regular widespread application of broad-spectrum pesticides is not acceptable. The management program will minimize, to the extent possible, the use of pesticides, and will</li> </ol>
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	<p>include the use of the USDA-SCS Soil Pesticide Interaction Guide to select pesticides for uses that have a minimum potential for leaching or loss due to runoff depending on site specific soil conditions. Application of pesticides within 100 feet of any CREW, or other adjacent public preserve lands, is prohibited.</p> <p>3. The coordination of the application of pesticides with the irrigation practices (the timing and application rates of irrigation water) to reduce runoff and the leaching of any applied pesticides and nutrients.</p> <p>4. The utilization of a golf course manager who is licensed by the State to use restricted pesticides and who will perform the required management functions. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.8.9:</b> Irrigation systems must utilize computerized irrigation based on weather station information, moisture sensing systems to determine existing soil moisture, evapotranspiration rates, and zone control, to ensure water conservation. For Private Recreation Facilities located outside of the depicted Wellfield Protection zones, re-use water, where available, will be utilized for irrigation. Re-use water within Wellfield Protection zones must be in compliance with the Wellfield Protection Ordinance. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.8.10:</b> Golf courses must be designed, constructed, managed and certified in accordance with the Audubon International Signature Program. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.8.11:</b> It is the landowner(s) responsibility to notify the County within ten (10) working days if the status of certification from Audubon changes from being in full compliance. Failure to do so could result in penalties up to and including revocation of golf course use if it is deemed that the violation(s) are a possible threat to the environment. If the golf course loses its certification from Audubon, then the property owner must submit a plan of action acceptable to the County that will achieve re-certification in the shortest possible time. The plan must be submitted within 30 days after receipt of written notice from the County. If the plan is not submitted as required, then all activity on the property must cease until a plan is submitted and approved. An approved plan must be implemented in good faith by the property owner. If the County determines that the plan is not being implemented properly, then all activity on the property must cease until the property owner comes back into full compliance. (Added by Ordinance No. 99-16)</p> <p><b>POLICY 16.8.12: GOLF SITE REQUIREMENTS.</b></p> <ol style="list-style-type: none"> <li>1. The minimum number of golf holes is 18. The minimum size for an 18 hole golf course is 150 acres. In no instance may the golf course impacts exceed 150 acres per 18 holes. Allowable uses within the impact area are greens, tees, fairways, clubhouses, maintenance facilities, cart and pedestrian pathways, parking areas, i.e. all associated support uses.</li> <li>2. Two hundred (200) acres of indigenous vegetation preserve is required for every 18 holes. The indigenous vegetation preserve requirement may be provided on-site or off-site. On-site preserves must be a minimum of 1 acre in size; minimum 75 feet wide with an average 100-foot width. Indigenous vegetation preserved on site may utilize a two to one (2:1) credit on a sliding scale based on minimum acreage and width criteria to be included in the Land Development Code. However, the indigenous vegetation preserve requirement must be met with a minimum of one hundred (100) actual indigenous acres</li> </ol>
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		<p>onsite. Indigenous vegetation preservation requirements must be met outside of the 150-acre golf course impact area.</p> <p>3. All off-site indigenous vegetation preserves must be located within the DR/GR areas. Unless located within or adjacent to existing or designated public acquisition areas, the minimum parcel size is fifty (50) indigenous acres.</p> <p>4. The off-site indigenous vegetation preserves must include a management plan that is approved as part of the Planned Development rezoning. This management plan must include invasive exotic vegetation removal with perpetual management. This does not preclude the transfer of the property to a public entity as long as perpetual maintenance is guaranteed.</p> <p>5. Additional golf development must be in increments of 9 golf holes. For every additional 9 golf holes, the site area must be increased by 75 acres. Additional golf course impacts are limited to 75 acres per nine holes. The on-site or off-site indigenous preserve area must be increased by 100 acres for each nine holes and is subject to the restrictions above. (Added by Ordinance No. 99-16, Amended by Ordinance No. 02-02)</p>
10	IV-10	<p><b>GOAL 60: COORDINATED SURFACE WATER MANAGEMENT AND LAND USE PLANNING ON A WATERSHED BASIS.</b> To protect or improve the quality of receiving waters and surrounding natural areas and the functions of natural groundwater aquifer recharge areas while also providing flood protection for existing and future development.</p> <p><b>OBJECTIVE 60.1: COUNTY-WIDE PROGRAM.</b> Lee County will continue its efforts in developing a surface water management program that is multi-objective in scope and is geographically based on basin boundaries. (Amended by Ordinance No. 94-30, 00-22)</p> <p><b>POLICY 60.1.1:</b> The detailed Surface Water Management Master Plan that was initiated in 1989 to identify the existing watershed basin boundaries within Lee County, to evaluate the storm capacity and establish design criteria, and to determine costs for surface water management within each basin to meet applicable design storm standards will be completed by 2005.(Amended by Ordinance No. 98-09)</p> <p><b>POLICY 60.1.2:</b> Develop surface water management systems in such a manner as to protect or enhance the groundwater table as a possible source of potable water.</p> <p><b>POLICY 60.1.3:</b> Incorporate, utilize, and where practicable restore natural surface water flow-ways and associated habitats.</p> <p><b>POLICY 60.1.4:</b> The county will examine steps necessary to restore principal flow-way systems, if feasible, to assure the continued environmental function, value, and use of natural surface water flow-ways and associated wetland systems. (Amended by Ordinance No. 00-22)</p> <p><b>POLICY 60.1.5:</b> Additional public hearings on Lee Plan amendments will be held to incorporate each phase of the Surface Water Management Master Plan. These amendments will specifically address:</p> <ul style="list-style-type: none"> <li>(a) incorporating the additions to the database into the Lee Plan;</li> <li>(b) modifying the interim level-of-service standards; and</li> <li>(c) modifying the Future Land Use, Community Facilities and Services, and Capital Improvements elements as necessary to incorporate the study's initial findings. (Amended by Ordinance No. 94-30)</li> </ul>

**POLICY 60.1.6:** Lee County will maintain in its land development regulations requirements that proper storm water management systems be installed when land is being redeveloped. Appropriate exemptions will be provided to this requirement for individual residential structures and for historic districts. The regulations may also provide modified storm water management standards for publicly sponsored projects within community redevelopment areas (as defined by Chapter 163, Part III, Florida Statutes). However, this policy will not be interpreted so as to waive any concurrency level-of-service standards. (Amended by Ordinance No. 94-30, 00-22)

**OBJECTIVE 60.2: BASIN PROGRAM.** Promote water management permitting on a basin-wide basis, as opposed to the current individual-site approach used by Lee County and the South Florida Water Management District, through pilot or demonstration programs in two or more basins by 1996. (Amended by Ordinance No. 94-30)

**POLICY 60.2.1:** The Surface Water Management Master Plan will identify those basins (or sub-basins) which may be most suitable for basin-wide surface water management, based on:

- natural flow ways and drainage patterns;
- existing development patterns;
- land ownership patterns; and
- development potential based on the Future Land Use element of this plan.

(Amended by Ordinance No. 00-22)

**POLICY 60.2.2:** Taxing/benefit districts or other financing mechanisms established pursuant to Goal 3 of this plan will include an examination of the potential for basin-wide surface water management within the designated area. (Amended by Ordinance No. 00-22)

**POLICY 60.2.3:** The County will utilize the Water Conservation Utility to implement the provision and maintenance of collection and disposal systems for storm water and the regulation of groundwater. By the end of 1996, the county will establish a dedicated funding source for the effective operation of the Storm water Management Utility. (Amended by Ordinance No. 94-30, 00-22)

**OBJECTIVE 60.3: LEVEL-OF-SERVICE STANDARDS.** Revise by 1996 the surface water management level-of-service standards for basins and sub-basins identified in the Surface Water Management Master Plan. These future service standards can only be finalized upon the completion of the basin studies and will be based upon providing a defined level of flood protection, balanced with the protection of natural flow ways and associated wetland systems. (Amended by Ordinance No. 94-30)

**POLICY 60.3.1:** The following surface water management standards are adopted as minimum acceptable levels of service for unincorporated Lee County (see Policy 95.1.3).

A. Existing Infrastructure/Interim Standard

The existing surface water management system in the unincorporated areas of the county will be sufficient to prevent the flooding of designated evacuation routes (see Map 15) from the 25-year, 3-day storm event (rainfall) for more than 24 hours.

B. Six Mile Cypress Watershed (see Map 18)

The level-of-service standard for the Six Mile Cypress Watershed will be that public infrastructure remains adequate such that floor slabs for all new private

and public structures which are constructed a minimum of one (1) foot above the 100-year, 3-day storm event flood plain level for Six Mile Cypress Watershed will be safe from flooding from a 100-year, 3-day storm event (rainfall). The 100-year level and watershed boundaries are as established in Volume IV of the Six Mile Cypress Watershed Plan. The following additional standards are hereby established as desired future level-of-service standards, to be achieved by September 30, 1994:

1. The Six Mile Cypress Slough and its major tributaries as identified in the Six Mile Cypress Watershed Plan (February 1990) must accommodate the associated discharge from the 25 year, 3-day storm event (rainfall). [Ref: Six Mile Cypress Watershed Plan (February 1990) -Volume II, Pages 10-5.]
2. Water quality will be improved in accordance with EPA's NPDES and Rule 17-40 F.A.C. criteria for storm water discharges.

C. Other Watersheds (see Map 18):  
Gator Slough, Yellow Fever Creek, Yellow Fever Creek-East Branch, Powell Creek, Billy Creek, Whiskey Creek, Deep Lagoon, Cow Creek, Hendry Creek, Ten Mile Canal, and Imperial River Watersheds.  
The level-of-service standard for the above watersheds will be that all arterial roads at their crossing of the trunk conveyances, as referenced in the Lee County Surface Water Management Master Plan, will be free of flooding from the 25-year, 3-day storm event (rainfall). This standard will not apply to Chiquita Boulevard because it is located within the City of Cape Coral.  
The following additional standards are hereby established as desired future level-of-service standards to be achieved by September 30, 1994:

1. Floor slabs for all new private and public structures which are constructed a minimum of one (1) foot above the 100-year, 3-day storm event flood plain level will be safe from flooding from a 100-year, 3-day storm event (rainfall).
2. Water quality will be improved in accordance with EPA's NPDES and Rule 17-40 F.A.C. criteria for storm water discharges.

D. Regulation of Private and Public Development  
Surface water management systems in new private and public developments (excluding widening of existing roads) must be designed to SFWMD standards (to detain or retain excess storm water to match the predevelopment discharge rate for the 25-year, 3-day storm event [rainfall]). Storm water discharges from development must meet relevant water quality and surface water management standards as set forth in Chapters 17-3, 17-40, and 17-302, and rule 40E-4, F.A.C. New developments must be designed to avoid increased flooding of surrounding areas. Development must be designed to minimize increases of discharge to public water management infrastructure (or to evapotranspiration) that exceed historic rates, to approximate the natural surface water systems in terms of rate, hydroperiod, basin and quality, and to eliminate the disruption of wetlands and flow-ways, whose preservation is deemed in the public interest.  
(Amended by Ordinance No. 92-35, 94-29, 00-22)

**POLICY 60.3.2:** The county will continue to maintain and update annually the CIP to provide for the needs of the surface water management program.  
(Amended by Ordinance No. 94-30)

**POLICY 60.3.3:** The revised levels of service required to guide future investments in surface water management facilities will be based on the recommendations of the Surface Water Management Master Plan, as updated, and procedures will be established to keep current the levels of service,

	<p>remaining capacity of existing facilities, and demand for new facilities.</p> <p><b>POLICY 60.3.4:</b> Water management projects will be evaluated and ranked according to the priorities adopted into this plan. Major emphasis will be given to improving existing drainage facilities in and around future urban areas as shown on the Future Land Use Map, and to enhancing or restoring environmental quality. (Amended by Ordinance No. 00-22)</p> <p><b>POLICY 60.3.5:</b> By 1996, complete the preliminary design of storm water management systems for each basin identified in the Surface Water Management Master Plan and develop a capital facility improvement schedule. (Amended by Ordinance No. 94-30)</p> <p><b>OBJECTIVE 60.4: CRITICAL AREAS.</b> The Six Mile Cypress Basin (as defined in Chapter 10 of the Land Development Code) and the Density Reduction/Groundwater Resource land use category are both identified as "critical areas for surface water management." The county will maintain existing regulations to protect the unique environmental and water resource values of these areas. (Amended by Ordinance No. 94-30, 00-22)</p> <p><b>POLICY 60.4.1:</b> The county will maintain provisions in Chapter 10 of the Land Development Code that reduce or eliminate the exemptions allowable in the Six Mile Cypress Basin. (Amended by Ordinance No. 94-30, 00-22)</p> <p><b>POLICY 60.4.2:</b> The county will maintain the elimination of the exemptions in its development regulations for agricultural uses and small subdivisions within the "critical areas for surface water management" and will continue to subject these uses to an appropriate review process. (Amended by Ordinance No. 94-30, 00-22)</p> <p><b>OBJECTIVE 60.5: INCORPORATION OF GREEN INFRASTRUCTURE INTO THE SURFACE WATER MANAGEMENT SYSTEM.</b> The long-term benefits of incorporating green infrastructure as part of the surface water management system include improved water quality, improved air quality, improved water recharge/infiltration, water storage, wildlife habitat, recreational opportunities, and visual relief within the urban environment. (Added by Ordinance No. 03-06).</p> <p><b>POLICY 60.5.1:</b> The County encourages new developments to design their surface water management systems to incorporate best management practices including, but not limited to, filtration marshes, grassed swales planted with native vegetation, retention/detention lakes with enlarged littoral zones, preserved or restored wetlands, and meandering flow-ways. (Added by Ordinance No. 03-06)</p> <p><b>POLICY 60.5.2:</b> The County encourages new developments to design their surface water management system to incorporate existing wetland systems. (Added by Ordinance No. 03-06)</p> <p><b>POLICY 60.5.3:</b> The County encourages the preservation of existing natural flow-ways and the restoration of historic natural flow-ways. (Added by Ordinance No. 03-06)</p> <p><b>POLICY 60.5.4:</b> The County will continue to identify and map flow-ways as part of the Lee County Surface Water Management Plan. The Plan provides a general depiction of watersheds and their trunk and major tributaries and has been expanded to some degree in the DRGR area. As new information is assembled, the Plan will be updated for public use. Due to its magnitude and need for site specific information, not all flow-ways will be shown. (Added by Ordinance No. 03-06)</p>
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		<b>POLICY 60.5.5:</b> The County will continue to coordinate the review of flowways with the other regulatory agencies and assist in the development of incentives and /or credits for implementation of regional surface water management systems that address flood protection, water quality/ environmental enhancement and water conservation. (Added by Ordinance No. 03-06)
11	VII-5	<p><b>GOAL 107: RESOURCE PROTECTION.</b> To manage the county's wetland and upland ecosystems so as to maintain and enhance native habitats, floral and faunal species diversity, water quality, and natural surface water characteristics.</p> <p><b>OBJECTIVE 107.1: RESOURCE MANAGEMENT PLAN.</b> The county will continue to implement a resource management program that ensures the long-term protection and enhancement of the natural upland and wetland habitats through the retention of interconnected, functioning, and maintainable hydroecological systems where the remaining wetlands and uplands function as a productive unit resembling the original landscape. (Amended by Ordinance No. 94-30, 00-22)</p> <p><b>POLICY 107.1.1:</b> County agencies implementing the natural resources management program will be responsible for the following:</p> <ol style="list-style-type: none"> <li>1. Identifying upland and wetland habitats/systems most suitable for protection, enhancement, reclamation, and conservation.</li> <li>2. Recommending standards to the Board of County Commissioners for Board approval for development and conservation that will protect and integrate wetlands (as defined in Objective 114.1) and significant areas of Rare and Unique upland habitats (as defined in Objective 104.1).</li> <li>3. Preparing standards for wetland and rare and unique upland mitigation.</li> <li>4. Conducting a sensitive lands acquisition program, which will consist of the following elements (see also Policy 107.2.8): <ul style="list-style-type: none"> <li>a. A comprehensive inventory of environmentally sensitive lands will be maintained and expanded as new data becomes available.</li> <li>b. Environmentally sensitive lands will include wetlands (as defined in Objective 114.1); important plant communities (as identified by Objective 107.2); critical habitat for listed wildlife species (see also Objective 107.8 and Policies 107.4.1, 107.4.2, 107.10.4, and 107.11.2); environmentally sensitive coastal planning areas (as defined in Policy 113.1.5); natural waterways; important water resources (as defined in Policy 117.1.1); storm and flood hazard areas; and Rare and Unique uplands (as defined in Objective 104.1).</li> <li>c. Beginning in 1997, the county will adopt and implement a program to acquire and manage lands critical to water supply, flood protection, wildlife habitat, and passive recreation. The program will be funded by an ad valorem tax of up to 0.50 (1/2) mil annually for a period not to exceed seven years. A fifteen member advisory group to be called the Conservation Lands Acquisition and Stewardship Advisory Committee (CLASAC) will develop and implement the program. Ten percent of the funds will be used to manage the lands acquired.</li> <li>d. The county will take full advantage of opportunities to cooperatively acquire and manage sensitive lands and to leverage other funding sources by working with state land acquisition and land management agencies such as the Florida Communities Trust and the Florida Game and Fresh Water Fish Commission and by participating in state land acquisition programs such as</li> </ul> </li> </ol>

	<p>the Save Our Rivers program and the Conservation and Recreational Lands program.</p> <p>e. The county (or other appropriate agency) will prepare a management plan for each acquired site for the long term maintenance and enhancement of its health and environmental integrity. The management plan will address any necessary people management (e.g., fences and signage to prevent incompatible uses such as off road vehicle use and hunting); surface water management and restoration; ecosystems restoration; litter control; fire management; invasive exotic plant and animal control; and, where appropriate, compatible recreational use facilities. The plan will also address how maintenance will be funded.</p> <p>f. The county will encourage the establishment of and provide assistance to community based land trusts, whose purpose is the preservation and protection of Lee County's natural resources.</p> <p>5. Maintaining a central clearinghouse for all environmental studies and recommendations by both public and private organizations.</p> <p>6. Compiling, maintaining and regularly updating county mapping of vegetation communities; listed species habitat and sitings; and water resources including watersheds, floodplains, wetlands, aquifers, and surface water features.</p> <p>7. Preparing recommendations for maintaining or restoring the desired seasonal base flows and water quality after reviewing monitoring data.</p> <p>8. Coordinating in the preparation of plans with the municipalities, South Florida Water Management District, and Southwest Florida Water Management District to better control flows of freshwater and reduce pollutant discharges into the Lee County coastal waters.</p> <p>9. Providing an annual progress report to the county commission on the resource management program. The report should address the adequacy of the program and land use regulations to protect and enhance these natural systems.</p> <p>10. Providing an annual report to the County Commission on the status of wetlands and rare and unique uplands by 1996. (Amended by Ordinance No. 94-30, 98-09, 00-22)</p> <p><b>OBJECTIVE 107.2: PLANT COMMUNITIES.</b> Lee County will maintain and routinely update an inventory of natural plant communities and will protect at various suitable locations remnant tracts of all important and representative natural plant communities occurring within Lee County. (Amended by Ordinance No. 94-30)</p> <p><b>POLICY 107.2.1:</b> Coordinate with state and regional agencies to exchange updated natural resources information. (Amended by Ordinance No. 94-30)</p> <p><b>POLICY 107.2.2:</b> Continue to provide regulations and incentives to prevent incompatible development in and around environmentally sensitive lands (as defined in Policy 107.1.1.4.b.). (Amended by Ordinance No. 94-30)</p> <p><b>POLICY 107.2.3:</b> Prevent water management and development projects from altering or disrupting the natural function of significant natural systems.</p> <p><b>POLICY 107.2.4:</b> Encourage the protection of viable tracts of sensitive or high-quality natural plant communities within developments.</p> <p><b>POLICY 107.2.5:</b> Maintain regulations to control the clearing of natural vegetation, including tree removal and clearing of understory, prior to the development of property or its conversion to agricultural uses. (Amended by Ordinance No. 94-30)</p>
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	<p><b>POLICY 107.2.6:</b> Avoid needless destruction of upland vegetation communities including coastal and interior hammocks through consideration during the site plan review process of alternative layouts of permitted uses.</p> <p><b>POLICY 107.2.7:</b> Require inventories and assessments of the impacts of development in environmentally sensitive lands. (Amended by Ordinance No. 94-30)</p> <p><b>POLICY 107.2.8:</b> Promote the long-term maintenance of natural systems through such instruments as conservation easements, transfer of development rights, restrictive zoning, and public acquisition. (Amended by Ordinance No. 94-30)</p> <p><b>POLICY 107.2.9:</b> Maintain regulations, incentives, and programs for preserving and planting native plant species and for controlling invasive exotic plants, particularly within environmentally sensitive areas. (Amended by Ordinance No. 94-30)</p> <p><b>POLICY 107.2.10:</b> Development adjacent to aquatic and other nature preserves, wildlife refuges, and recreation areas must protect the natural character and public benefit of these areas including, but not limited to, scenic values for the benefit of future generations. (Amended by Ordinance No. 00-22)</p> <p><b>POLICY 107.2.11:</b> Prohibit the planting of invasive exotic plants in landscaping requirements for land development projects. Prohibited invasive exotic plant species will be specified in the Land Development Code. (Amended by Ordinance No. 94-30, 00-22)</p> <p><b>POLICY 107.2.12:</b> To ensure that adequate protection of mangroves is maintained, the county will re-evaluate and amend, if necessary, its mangrove protection regulations whenever state mangrove protection regulations are revised. The county will oppose any efforts of other agencies to reduce or eliminate regulations relating to the protection of mangroves and other wetland areas. (Amended by Ordinance No. 93-25, 94-30, 00-22)</p> <p><b>OBJECTIVE 107.3: WILDLIFE.</b> Maintain and enhance the fish and wildlife diversity and distribution within Lee County for the benefit of a balanced ecological system. (Amended by Ordinance No. 94-30)</p> <p><b>POLICY 107.3.1:</b> Encourage upland preservation in and around preserved wetlands to provide habitat diversity, enhance edge effect, and promote wildlife conservation.</p> <p><b>POLICY 107.3.2:</b> Participate with the Southwest Florida Regional Planning Council and the Florida Game and Fresh Water Fish Commission in the development of a regional plan that identifies and protects areas utilized by wildlife, including panthers and bears so as to promote the continued viability and diversity of regional species. (Amended by Ordinance No. 92-48)</p> <p><b>OBJECTIVE 107.4: ENDANGERED AND THREATENED SPECIES IN GENERAL.</b> Lee</p> <p>County will continue to protect habitats of endangered and threatened species and species of special concern in order to maintain or enhance existing population numbers and distributions of listed species.</p> <p><b>POLICY 107.4.1:</b> Identify, inventory, and protect flora and fauna indicated as endangered, threatened, or species of special concern in the "Official Lists of Endangered and Potentially Endangered Fauna and Flora of Florida," Florida Game and Freshwater Fish Commission, as periodically updated. Lee County's Protected Species regulations will be enforced to protect habitat of those listed species found in Lee County that are vulnerable to development.</p>
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	<p>There will be a funding commitment of one full-time environmental planner to enforce this ordinance through the zoning and development review process. (Amended by Ordinance No. 92-48, 94-30, 00-22)</p> <p><b>POLICY 107.4.2:</b> Conserve critical habitat of rare and endangered plant and animal species through development review, regulation, incentives, and acquisition.</p> <p><b>POLICY 107.4.3:</b> Require detailed inventories and assessments of the impacts of development where it threatens habitat of endangered and threatened species and species of special concern.</p> <p><b>POLICY 107.4.4:</b> Restrict the use of protected plant and wildlife species habitat to that which is compatible with the requirements of endangered and threatened species and species of special concern. New developments must protect remnants of viable habitats when listed vegetative and wildlife species inhabit a tract slated for development, except where equivalent mitigation is provided. (Amended by Ordinance No. 94-30, 00-22)</p> <p><b>OBJECTIVE 107.5: LOGGERHEAD SEA TURTLES.</b> Continue the sea turtle protection program to minimize the disorientation of sea turtles along the Gulf beaches. (Amended by Ordinance No. 94- 30)</p> <p><b>POLICY 107.5.1:</b> The sea turtle protection program includes at least the following activities:</p> <ol style="list-style-type: none"> <li>1. Distribute a guide for homeowners and builders which explains the detrimental effects of night-time beachfront lighting on hatchling sea turtles.</li> <li>2. Continue to examine public light sources (streetlights, security lights, beach access lights, etc.) and prepare a plan to minimize the amount of harmful light from such sources onto the beach during the nesting season.</li> <li>3. Continue to conduct an educational program to persuade residents to reduce lighting levels on the beach and to publicize other hazards to turtles from activities of people, pets, and vehicles.</li> <li>4. Continue to provide and enforce sea turtle regulations to prevent inappropriate lighting along beaches during the nesting season. (Amended by Ordinance No. 94-30)</li> </ol> <p><b>OBJECTIVE 107.6: SOUTHERN BALD EAGLES.</b> The county will continue to monitor Southern bald eagle nesting activity and offer incentives to conserve buffer areas around Southern bald eagle nests. (Amended by Ordinance No. 98-09)</p> <p><b>POLICY 107.6.1:</b> Maintain a policy of negotiations with owners of land surrounding eagle nests to provide an optimal management plan for land subject to imminent development.</p> <p><b>POLICY 107.6.2:</b> The county Eagle Technical Advisory Committee will continue to conduct nest monitoring through the nesting season for all known eagle nests in Lee County. Information from these assessments will be used to modify, as needed, the adopted nest guidelines and to adopt guidelines for new eagle nests documented in Lee County. (Amended by Ordinance No. 94-30, 98-09, 00-22)</p> <p><b>POLICY 107.6.3:</b> The Committee will continue to inform land owners and the general public of proper practices to minimize disturbances to eagle nests. (Amended by Ordinance No. 94-30, 98-09)</p> <p><b>OBJECTIVE 107.7: WEST INDIAN MANATEES.</b> Minimize injuries and mortality of manatees to maintain the existing population by encouraging the adoption by the state of Florida and local governments of regulations to protect the West Indian Manatee in the Caloosahatchee and elsewhere in Lee</p>
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	<p>County. By 1998, manatee protection plans will be prepared for other waters of Lee County also frequented by manatees. (Amended by Ordinance No. 94-30, 98-09)</p> <p><b>POLICY 107.7.1:</b> Characterize and map important manatee habitats; identify and evaluate potential threats to important habitats; and consider management agreements to protect such habitats.</p> <p><b>POLICY 107.7.2:</b> Identify areas of greatest actual or potential boat/barge mortality and/or injury by 1998, and re-evaluate existing slow or idle speed zones. (Amended by Ordinance No. 94-30, 98-09)</p> <p><b>POLICY 107.7.3:</b> Inform and educate the public through sign posting, lectures, and regulations about manatee protection.</p> <p><b>POLICY 107.7.4:</b> Educational materials regarding manatees should be disseminated to boaters and warning signs placed in areas where both manatees and humans congregate.</p> <p><b>POLICY 107.7.5:</b> Construction and expansion of multi-slip docking facilities and boat ramps will be encouraged in locations where there is quick access to deep, open waters where the associated increase in boat traffic will be outside areas of high manatee concentration. (Amended by Ordinance No. 00-22)</p> <p><b>POLICY 107.7.6:</b> State, local, and private interests will work in cooperation to develop and implement area-specific manatee protection plans. (Amended by Ordinance No. 00-22)</p> <p><b>POLICY 107.7.7:</b> The county will continue to provide a permanent funding source to assist in the enforcement of vessel regulations for manatee protection. (Amended by Ordinance No. 94-30, 00-22)</p> <p><b>OBJECTIVE 107.8: GOPHER TORTOISES.</b> The county will <b>protect</b> gopher tortoises through the enforcement of the protected species regulations and by operating and maintaining, in coordination with the Florida Game and Fresh Water Fish Commission, the Hickey Creek Mitigation Park. (Amended by Ordinance No. 94-30)</p> <p><b>POLICY 107.8.1:</b> The county's policy is to protect gopher tortoise burrows wherever they are found. However, if unavoidable conflicts make on-site protection infeasible, then off-site mitigation may be provided in accordance with Florida Game and Fresh Water Fish Commission requirements. (Amended by Ordinance No. 94-30)</p> <p><b>OBJECTIVE 107.9: RED-COCKADED WOODPECKER.</b> County staff will coordinate with the Florida Game and Fresh Water Fish Commission to determine on a case-by-case basis the appropriate mitigation for the <b>protection of the red-cockaded woodpecker's habitat.</b> Mitigation may include onsite preservation, on-site mitigation, off-site mitigation, and associated habitat management. (Amended by Ordinance No. 94-30)</p> <p><b>POLICY 107.9.1:</b> County staff will note and document other possible red-cockaded woodpecker sites during routine site inspections.</p> <p><b>OBJECTIVE 107.10: WOODSTORK.</b> Lee County will maintain regulatory measures to <b>protect the wood stork's feeding and roosting areas and habitat.</b> (Amended by Ordinance No. 94-30, 00-22)</p> <p><b>POLICY 107.10.1:</b> County protected species regulations will continue to include wood storks as a Lee County Listed Species, requiring surveys for and protection of wood stork habitat. The county will continue to maintain an inventory of documented feeding, roosting, and rooking areas for the wood stork to ensure that surveys submitted through the Protected Species Ordinance include such areas. (Amended by Ordinance No. 94-30, 00-22)</p>
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	<p><b>POLICY 107.10.2:</b> The county will continue to require management plans for existing wood stork feeding, roosting, and rooking areas to utilize "Habitat Management Guidelines for the Wood Stork in the Southeast Region" (U.S Fish and Wildlife Service, 1990). (Amended by Ordinance No. 94-30, 00-22)</p> <p><b>POLICY 107.10.3:</b> The county will encourage the creation of wood stork feeding areas in mandatory littoral shelf design, construction, and planting. (Amended by Ordinance No. 94-30, 00-22)</p> <p><b>POLICY 107.10.4:</b> By 1995, the county will identify wood stork flight patterns from roosting and rooking areas to feeding areas within the county. By 2000, evaluate the impact of existing tall structures on wood storks within significant flight areas and consider adoption of regulations if it is deemed appropriate. Include significant wood stork roosting, rooking, and feeding areas in the inventory of environmentally sensitive lands for potential acquisition (see Policy 107.1.1.4). (Amended by Ordinance No. 94-30, 00-22)</p> <p><b>POLICY 107.10.5:</b> The county will continue to permit communication towers in excess of 100 feet only by special exception. The impacts of such towers on woodstorks must be considered in the review of these applications. (Added by Ordinance No. 94-30, Amended by Ordinance No. 00-22)</p> <p><b>OBJECTIVE 107.11: FLORIDA PANTHER AND BLACK BEAR.</b>            County staff will develop measures to protect the Florida panther and black bear through greenbelt and acquisition strategies. (Amended by Ordinance No. 92-48, 00-22)</p> <p><b>POLICY 107.11.1:</b> Lee County will maintain and update data on sitings and habitat for the black bear and Florida panther. (Amended by Ordinance No. 94-30)</p> <p><b>POLICY 107.11.2:</b> Encourage state land acquisition programs to include known panther and black bear corridors. The corridor boundaries will include wetlands, upland buffers, and nearby vegetative communities which are particularly beneficial to the Florida panther and black bear (such as high palmetto and oak hammocks). (Amended by Ordinance No. 94-30, 00-22)</p> <p><b>POLICY 107.11.3:</b> Lee County will inform Collier and Charlotte counties as to Lee County corridor acquisition projects to encourage a regional approach to corridor acquisition. (Amended by Ordinance No. 00-22)</p> <p><b>POLICY 107.11.4:</b> The county will continue to protect and expand upon the Corkscrew Regional Ecosystem Watershed Greenway, a regionally significant greenway with priority panther habitat, through continued participation in land acquisition programs and land management activities and through buffer and open space requirements of the Land Development Code. (Amended by Ordinance No. 98-09)</p> <p><b>POLICY 107.11.5:</b> The county will continue to include the Florida panther and black bear in the protected species management section of Chapter 10 of the Land Development Code. (Amended by Ordinance No. 94-30, 00-22)</p> <p><b>POLICY 107.11.6:</b> In any vegetation restoration projects conducted by Lee County for land acquired due to its environmental sensitivity (such as the Six Mile Cypress Strand and the Flint Pen Strand), plant lists will include species that provide forage for the prey of the Florida panther and forage for the black bear. (Amended by Ordinance No. 00-22)</p> <p><b>OBJECTIVE 107.12: MARINE PRODUCTIVITY.</b> Lee County will</p>
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		<p>support maintenance and improvement of marine fisheries productivity, and promote the conservation of fishery resources through the protection and restoration of finfish and shellfish habitat. (Amended by Ordinance No. 00-22)</p> <p><b>POLICY 107.12.1:</b> Assist in creating and renourishing artificial reefs in coordination with the Florida Department of Environmental Protection and other appropriate organizations. (Amended by Ordinance No. 94-30)</p> <p><b>POLICY 107.12.2:</b> Support state and federal fisheries management programs that protect and enhance the long-term biological and economic productivity of coastal and estuarine waters and their sources for commercial and sport fisheries.</p> <p><b>POLICY 107.12.3:</b> Unmarked channels or passages that have been used to traverse shallow inshore waters may be marked to reduce injury to marine seagrass beds if appropriate (subject to obtaining necessary permit approvals).</p>
12	VII-12	<p><b>GOAL 108: ESTUARINE WATER QUALITY.</b> To manage estuarine ecosystems so as to maintain or improve water quality and wildlife diversity; to reduce or maintain current pollution loading and system imbalances in order to conserve estuarine productivity; and to provide the best use of estuarine areas. (Amended by Ordinance No. 94-30)</p> <p><b>OBJECTIVE 108.1:</b> Establish baseline conditions in all estuarine systems, including pollutant and freshwater loadings by 2000, and maintain an ongoing water quality monitoring program. Maintain communication with other local, state, and federal estuarine water quality studies to ensure that the latest data and recommendations are available. (Amended by Ordinance No. 94-30)</p> <p><b>POLICY 108.1.1:</b> The Lee County Division of Natural Resources Management (or its successor) will monitor estuarine water quality and be responsible for:</p> <ol style="list-style-type: none"> <li>1. Setting up and operating a network of water quality sampling sites to fill in gaps in the state sampling program, especially in Estero Bay.</li> <li>2. Maintaining liaison with other local, state, and federal agencies engaged in water quality monitoring, and reviewing their data, conclusions, and recommendations.</li> <li>3. Developing a system for reporting on water quality conditions and trends on a regular basis.</li> <li>4. Recommending actions that are intended to maintain or improve water quality in the estuaries to meet the Department of Environmental Protection's criteria for the appropriate class water body and preserve the "approved for shellfish harvesting" classification where applicable, while attempting to return viable "closed" (due to water quality) shellfishing areas to an "approved" status. (Amended by Ordinance No. 94-30, 00-22)</li> </ol> <p><b>POLICY 108.1.2:</b> Development affecting coastal and estuarine water resources must maintain or enhance the biological and economic productivity of these resources. (Amended by Ordinance No. 00-22)</p> <p><b>POLICY 108.1.3:</b> The county will cooperate with the South Florida Water Management District, local utilities, and other appropriate agencies for monitoring and review of freshwater discharge affecting estuarine areas, in order to maintain the biological and chemical balances necessary for optimum productivity. (Amended by Ordinance No. 00-22)</p> <p><b>POLICY 108.1.4:</b> The county will cooperate with the Florida Marine Patrol, U.S. Coast Guard, U.S. Army Corps of Engineers, and the Florida Department</p>

		<p>of Environmental Regulation in the enforcement of pollution control standards for marinas, marine dumping, and illegal discharges from water craft. (Amended by Ordinance No. 00-22)</p> <p><b>POLICY 108.1.5:</b> Installation of shoreside pumpout stations at marinas that serve live-aboards will be required to provide adequate facilities for subsequent transfer and treatment of boat sewage. The county will consider expanding this requirement to all marinas where central sewer service is available. (Amended by Ordinance No. 00-22)</p> <p><b>POLICY 108.1.6:</b> Lee County encourages the on-going efforts by the SFWMD in establishing a Caloosahatchee Water Management Plan for the Caloosahatchee River that recognizes public, environmental and agricultural uses of the river through participation in the Southwest Florida Feasibility Study, Lower East Coast and Lower West Coast Regional Water Supply Plans, Caloosahatchee Study, Minimum Flows and Levels, and the development of maximum flows and discretionary release protocols for Lake Okeechobee. (Added by Ordinance No. 02-02)</p> <p><b>OBJECTIVE 108.2: WATERSHED MANAGEMENT PLANS.</b> By 1996, establish procedures for reviewing all new upland development in terms of its impacts on estuarine systems. Prepare estuarine watershed management plans which maximize stormwater retention and treatment, with priority to the Estero Bay watershed. (Amended by Ordinance No. 94-30)</p> <p><b>POLICY 108.2.1:</b> The county's estuarine watershed management agency will be responsible for:</p> <ol style="list-style-type: none"> <li>1. Preparing management plans for estuarine watersheds, with priority to the watershed of Estero Bay, a critical estuary undergoing development impacts.</li> <li>2. Recommending modifications to the Sanibel causeway in order to improve estuarine water quality.</li> <li>3. Reviewing the feasibility of changing canal patterns and retrofitting existing stormwater collection systems in order to reduce the impact of freshwater on estuaries.</li> <li>4. Assessing the adequacy of disaster preparedness plans for coastal oil storage facilities. (Amended by Ordinance No. 94-30, 00-22)</li> </ol> <p><b>POLICY 108.2.2:</b> The County will review the Comprehensive Conservation and Management Plan for the Greater Charlotte Harbor Watershed by the year 2002 in order to identify key action plans, objectives and policies that relate to Pine Island Sound, Matlacha Pass, the Estero Bay, the tidal Caloosahatchee and attendant watersheds. The review will assess County upland and coastal development management practices and public land acquisition programs as they related to the findings and recommendations of the Charlotte Harbor Plan. Particular emphasis will be placed on evaluating the effectiveness and improvement of County watershed programs as they relate to watershed conservation and public land acquisition programs, watershed management needs prioritization and water quality monitoring. (Added by Ordinance No. 02-02)</p>
13	VII-19	<p><b>GOAL 114: WETLANDS.</b> To maintain and enforce a regulatory program for development in wetlands that is cost-effective, complements federal and state permitting processes, and protects the fragile ecological characteristics of wetland systems. (Amended by Ordinance No. 94-30)</p> <p><b>OBJECTIVE 114.1:</b> The natural functions of wetlands and wetland systems will be protected and conserved through the enforcement of the county's</p>

	<p>wetland protection regulations and the goals, objectives, and policies in this plan. "Wetlands" include all of those lands, whether shown on the Future Land Use Map or not, that are identified as wetlands in accordance with F.S. 373.019(17) through the use of the unified state delineation methodology described in FAC Chapter 17-340, as ratified and amended by F.S. 373.4211. (Amended by Ordinance No. 94-30, 00-22)</p> <p><b>POLICY 114.1.1:</b> Development in wetlands is limited to very low density residential uses and uses of a recreational, open space, or conservation nature that are compatible with wetland functions. The maximum density in the Wetlands category is one unit per 20 acres, except that one single family residence will be permitted on lots meeting the standards in Chapter XIII of this plan, and except that owners of wetlands adjacent to Intensive Development, Central Urban, Urban Community, Suburban, and Outlying Suburban areas may transfer densities to developable contiguous uplands under common ownership in accordance with Footnotes 9b and 9c of Table 1(a), Summary of Residential Densities. (Amended by Ordinance No. 94-30, 00-22)</p> <p><b>POLICY 114.1.2:</b> The county's wetlands protection regulations will be amended by 1995 to be consistent with the following:</p> <ol style="list-style-type: none"> <li>1. In accordance with F.S. 163.3184(6)(c), the county will not undertake an independent review of the impacts to wetlands resulting from development in wetlands that is specifically authorized by a DEP or SFWMD dredge and fill permit or exemption.</li> <li>2. No development in wetlands regulated by the State of Florida will be permitted by Lee County without the appropriate state agency permit or authorization.</li> <li>3. Lee County will incorporate the terms and conditions of state permits into county permits and will prosecute violations of state regulations and permit conditions through its code enforcement procedures.</li> <li>4. Every reasonable effort will be required to avoid or minimize adverse impacts on wetlands through the clustering of development and other site planning techniques. On- or off-site mitigation will only be permitted in accordance with applicable state standards.</li> <li>5. Mitigation banks and the issuance and use of mitigation bank credits will be permitted to the extent authorized by applicable state agencies. (Amended by Ordinance No. 94-30, 00-22)</li> </ol> <p><b>POLICY 114.1.3:</b> The Future Land Use Map shows the approximate boundaries of wetlands in Lee County. The map will be updated by 2000 based on the definitions in this plan and new information. If the Future Land Use Map is incorrect due to a clear factual error, or if an exact boundary determination is desired, an administrative process is set out in Chapter XIII of this plan to establish the precise boundary of the wetland. (Amended by Ordinance No. 94-30)</p> <p><b>POLICY 114.1.4:</b> By the end of 2006, Lee County will amend the Lee County Land Development Code to establish a sufficient setback requirement for the placement of fill adjacent to existing mangroves or require development designs that address the interface of fill areas with existing mangroves to eliminate impacts from fill sloughing or washing into mangrove areas. Techniques to accomplish this include, but are not limited to: setbacks; stabilized slopes; retaining walls; and, rip rap revetments. (Added by Ordinance No. 05-19)</p>
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14	VII-21	<p><b>GOAL 117: WATER RESOURCES.</b> To conserve, manage, and protect the natural hydrologic system of Lee County to insure continued water resource availability. (Amended by Ordinance No. 94-30)</p> <p><b>OBJECTIVE 117.1: WATER SUPPLIES.</b> Insure water supplies of sufficient quantity and quality to meet the present and projected demands of all consumers and the environment, based on the capacity of the natural systems.</p> <p><b>POLICY 117.1.1:</b> Natural water system features which are essential for retention, detention, purification, runoff, recharge, and maintenance of stream flows and groundwater levels shall be identified, protected, and managed.</p> <p><b>POLICY 117.1.2:</b> The county will recognize and encourage water and wastewater management, provided that such management does not exceed the natural assimilative capacity of the environment or applicable health standards. Appropriate water and wastewater management includes, but is not limited to, aquifer recharge, dual water systems, use of low volume irrigation systems, use of water-conserving vegetation, and other conservation and recycling techniques. (Amended by Ordinance No. 94-30, 00-22)</p> <p><b>POLICY 117.1.3:</b> Freshwater resources will be managed in order to maintain adequate freshwater supplies during dry periods and to conserve water. (Amended by Ordinance No. 00- 22)</p> <p><b>POLICY 117.1.4:</b> Development designs must provide for maintaining surface water flows, groundwater levels, and lake levels at or above existing conditions. (Amended by Ordinance No. 00-22)</p> <p><b>POLICY 117.1.5:</b> The county will cooperate with the United States Geological Survey, South Florida Water Management District, and state agencies to develop an area-wide water resources plan emphasizing planning and management of water resources on the basis of drainage basins; and addressing the needs of the existing and potential built environment, natural hydrologic system requirements, and freshwater flow impacts on estuarine systems. (Amended by Ordinance No. 00-22)</p> <p><b>POLICY 117.1.6:</b> The county will continue to support a monitoring program of existing baseline conditions of water resources. (Amended by Ordinance No. 00-22)</p> <p><b>POLICY 117.1.7:</b> The county will cooperate fully with emergency water conservation measures of the South Florida Water Management District. (Amended by Ordinance No. 00-22)</p> <p><b>POLICY 117.1.8:</b> The county will support the acquisition and protection of the Flint Pen Strand as a major water retention and aquifer recharge area. (See also Policy 107.11.4.) (Amended by Ordinance No. 94-30, 00-22)</p> <p><b>OBJECTIVE 117.2: XERISCAPE LANDSCAPE.</b> The county will continue to promote xeriscape landscaping techniques. (Amended by Ordinance No. 94-30, 00-22)</p> <p><b>POLICY 117.2.1:</b> The county will continue to encourage xeriscape landscaping techniques for new development in the Land Development Code. (Amended by Ordinance No. 94-30, 00-22)</p> <p><b>POLICY 117.2.2:</b> The county will provide education on water conservation through creative landscaping, and promote the conservation and use of native plant species through xeriscape landscaping techniques. (Amended by Ordinance No. 94-30, 00-22)</p> <p><b>POLICY 117.2.3:</b> The county will establish local guidelines that will assist in</p>
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	efforts to reduce landscape irrigation water use to the lowest and most efficient, practical level. (Amended by Ordinance No. 00-22)
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# Lee Master Mitigation Plan (LMMP) – DRAFT August 9, 2004

LMMP – Selected Sections Related to Resource Preservation		
Item	Page	Information
1	2	<p>The Lee County Master Mitigation Plan (Mitigation Plan) is an investment strategy for economic stability. With tourism and retirement as the major components of the County's economic base, ensuring that there are a diversity of open space features, quality outdoor experiences, and healthy air and water quality makes tremendous economic sense. The Mitigation Plan has three main purposes:</p> <ol style="list-style-type: none"> <li>1. to provide a master strategy by which critical environmental features continue to be preserved,</li> <li>2. to provide “safe harbor” approaches for mitigation projects that are required for the infrastructure needed to accommodate growth, which in turn will enable the budgeting process to be reliable, and</li> <li>3. to restore degraded resources that are important for the health, safety, and welfare of the public.</li> </ol> <p>The Mitigation Plan will, once adopted, be a component of the implementation of the Lee County Comprehensive Plan. Implementation includes incorporation into the Administrative Code, capital budget direction, and land development code reform.</p>
2	4	<p>While it is impossible to describe the future face of the County with any degree of certainty or precision, the Lee County Comprehensive Plan has identified themes that will be of great importance as Lee County approaches the planning horizon. These themes include:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> The growth patterns of the County will continue to be dictated by a Future Land Use map that will not change dramatically during the time frame of the Comprehensive Plan. With the exception of Cape Coral and Lehigh Acres, the County's urban areas will essentially be built out by 2020 (pending, in some cases, redevelopment). The County will attempt to maintain the clear distinction between urban and rural areas that characterizes this plan. Its success will depend on two things: the continuing viability of agricultural uses and the amount of publicly owned land in outlying areas.</li> <li><input type="checkbox"/> The County will protect its natural resource base in order to maintain a high quality of life for its residents and visitors. This will be accomplished through an aggressive public land acquisition program and by maintaining and enforcing cost-effective land use and environmental regulations that supplement, where necessary, Federal, State, and regional regulatory programs.</li> </ul>

		<p>Offsetting the impacts of infrastructure projects that are necessary to accommodate the ongoing growth of the County is of paramount importance. To be successful in preserving the natural resources of Lee County, we must devise a better way of projecting the impacts of growth and utilize a decision-making process that effectively allows growth to occur without sacrificing the natural systems upon which our economy and quality of life depend. The Mitigation Plan is being developed to facilitate planning and budgeting for projects that will restore and protect natural resources of significant importance and foster the continued growth that has been forecast in the County.</p>
3	5	<p>While all public works projects are designed to avoid negative impacts to natural resources, there are times when impacts cannot be avoided. Such impacts, even when minimized, must be mitigated for, and such mitigation cannot always effectively occur on the site of the project. Lee County is proposing the Mitigation Plan to provide consistency and a cumulative accountability for the primary and secondary impacts of its public works program. In addition, the County proposes to pursue restoration and preservation opportunities for water pollution, fire hazards, wildlife and natural habitats as mitigation requirements are addressed through synergistic planning, budgeting and operational efforts.</p> <p>A team of representatives of public and private entities developed the Mitigation Plan in 2003 and 2004. Members of the team identified private and publicly owned parcels that could be candidate projects for preservation, restoration, or mitigation activities. These parcels were assessed in a preliminary manner and deemed potentially suitable for such activities. A map series has been created to facilitate the initiation of more detailed analysis. The Mitigation Plan is not intended to provide an in-depth analysis of potential projects. The maps will serve as a starting point for efforts to select appropriate preservation, restoration, or mitigation sites.</p>
4	6	<p>Those natural resources that can be depicted through mapping are provided in <i>Map Series One</i> of Appendix A. These resources are the ones commonly identified as materially contributing to the County's economy and sense of being. These are also the resources subject to State or Federal oversight through various permitting processes.</p>
5	8	<p>The County is the supreme land use authority for the areas under its jurisdiction, as is each City. The County's authority lies in the balance of interests and policies that comprise the governance needed for the public health, safety, and welfare. However, there are overriding Federal and State laws guiding how lands may be developed, or further developed,</p>

		also based upon public health, safety and welfare. These laws typically involve issuance of one or more permits.
6	10	<p>D. Local: There are three types of entities involved with County development. They are the Board of County Commissioners, in its general and enterprise capacities; the five cities of Bonita Springs, Cape Coral, Fort Myers, Fort Myers Beach, and Sanibel; and independent special districts, with the School Board being the most far reaching. All have capital capacities, and the County and cities have regulatory components.</p> <p>Lee County Board of County Commissioners (BoCC): The BoCC, the sponsor of the mitigation plan, has the most diverse set of responsibilities and authorities. The BoCC has certain Countywide duties, certain municipal scale duties for the unincorporated area, and certain enterprise duties; all three types of duties involve capital expenditures for infrastructure and the need to obtain permits. Two major departments implement these efforts.</p>
7	15	<p><i>Part V: Mitigation, Restoration and Preservation Opportunities</i></p> <p>Lee County's baseline for preservation and existing mitigation and restoration efforts consists largely of public lands that have tripled in acreage in the last 20 years. This baseline involves a large percentage of its coastal and bay shorelines and related wetlands; the Six Mile Cypress Slough Preserve; the Corkscrew Regional Ecosystem Trust lands; and a smaller host of public and private protection and mitigation lands. A baseline map is included in <i>Appendix A</i>.</p> <p>To address past problems and future needs, as well as continuing to pursue preservation goals, there are multiple efforts underway in Lee County and all of Southwest Florida. These have contributed greatly to the development of the Mitigation Plan and are summarized in <i>Appendix C</i>. While each major study and management program has its own goals and methodologies, for the purposes of this effort, key issues identified in Lee County by these efforts, general Federal and State environmental permitting laws, and the County's own Comprehensive Plan can be organized into three major categories: hydrology, water quality, and habitat/wildlife.</p> <p><i>Hydrology: Wetlands and Freshwater Bodies</i></p> <p>Wetlands cover approximately 22% of Lee County's land surface. They provide essential ecological functions including filtration and assimilation of runoff, groundwater recharge, sediment stabilization, the tempering of flood peak discharges to rivers and lakes, the subsequent slow release of these stored floodwaters during the dry season, and habitat for wildlife. Destruction of wetlands in the County is recognized as a contributing factor in declining environmental quality. Wetlands in Lee County are depicted in <i>Appendix A</i>.</p>

The freshwater resources of Lee County are subjected to intense management, primarily for flood control purposes. A system of weirs, levees and canals dots the landscape and moves water quickly from land surfaces and the groundwater table into ponds, lakes, streams, rivers and bays. This rapid conveyance of water has proved to be a double edged sword in Lee County – while it helps to protect the population from flooding (usually), it does not allow for adequate filtering of pollutants through natural processes, nor does it promote storage of water for utilization in the dry months of the year. In addition, in some parts of the County, the manipulation of flows has led to lower levels of aquifer recharge, harmful discharges of fresh water into our coastal waters, and, when flows are withheld, harmful salinity levels in estuarine systems. Freshwater resources are depicted in Appendix A.

#### *Water Quality and Non-Point Source Pollution*

While there are areas in Lee County where waters are not impaired, non-point source pollution, primarily stormwater runoff, has contributed significantly to the impairment of many surface waters in Lee County. Segments of all of the major tributaries to Estero Bay are listed as “impaired” by the DEP, meaning that they do not meet their designated beneficial uses. We anticipate that water body segments in the Caloosahatchee Basin will be designated as “impaired” when the DEP verifies its list for that area. Nutrients, dissolved oxygen, fecal coliform, and copper are the most common suspected pollutants in the water bodies. Impaired and potentially impaired waters are depicted in Appendix A.

Only the Surficial and Intermediate Aquifer Systems are used for domestic groundwater supply in Lee County. The Surficial Aquifer System is susceptible to anthropogenic contamination because of its proximity to the land surface. Lack of confinement, high recharge, and relatively high permeability and a high water table all increase the potential for contamination. Concerns exist about yield and recharge of the Intermediate Aquifer since it recharges from above and below, and the conditions of both recharge areas have been changing due to demand impacts upon them. The lower aquifer (various components of the Floridan Aquifer) has mineralized. It is a source of raw water for the desalination systems of Cape Coral and Sanibel, and the Lee County Utility Department also has wells within the lower aquifer.

*Habitat/Wildlife:* First agriculture, and then urbanization, displaced native species as a normal component of settlement. With the change in the County’s economic base and the implementation by Federal, State, County and city government of laws to protect species from becoming extinct, earlier views of land and resource management have changed.

Lee County is doing its part to protect natural resources, and proposes to do more. Initial efforts include the Southern Bald Eagle Management Plan and various habitat protection and restoration efforts including species survey requirements that go beyond State requirements, species management plan requirements, native indigenous preservation requirements, the Conservation 20/20 program and incorporation of green infrastructure into the surface water management system. However, habitat and listed species management goes beyond any local effort.

While the U.S. Fish and Wildlife Service has identified fifteen species of plants and animals in Lee County that are Federally listed as endangered, there are many more species whose populations are being monitored through Federal, State, regional and local efforts due to concerns that they may be in decline.

Habitat destruction and fragmentation have contributed to the loss of diversity and the decline in population of many native species in Lee County in both upland and wetland areas. The introduction of invasive non-native species has also contributed to the decline in native species as the exotics compete for available resources.

The report, *Closing the Gaps in Florida's Wildlife Habitat Conservation System*, published in 1994 by the Florida Game and Fresh Water Fish Commission, identifies Strategic Habitat Conservation Areas that should be conserved in order to maintain components of the State's biological diversity. By means of a computerized Geographic Information System, distribution maps depicting selected species of wildlife, threatened species of plants, and rare plant communities have been created. The maps in *Closing the Gaps*, when used in conjunction with maps in the Environmental Impact Statement on Southwest Florida growth, and others provided by State and Federal agencies, provide valuable information that can be used to identify and prioritize habitat needs in Lee County. Examples of these maps are included in Appendix A.

In response to a call for a systematic approach to manage resources for protection and restoration, and to capitalize upon mitigation efforts associated with the permitting needs of public infrastructure, a multi-agency task team convened in December of 2003 at the Southwest Florida Regional Planning Council at the request of the BoCC. The task team is identified in Appendix I.

Members of the task team identified private and publicly owned parcels that could be candidate projects for preservation, restoration, or mitigation programs. The aggregate of these parcels is depicted in Appendix A. A description of each parcels' suitability for public preservation, restoration, or mitigation efforts, along with a coarse estimate of the costs for the described efforts are provided as a one-time snapshot in Appendix B.

The listing also includes existing private and public mitigation, restoration, and some preservation projects. Use of existing lands and programs may meet short term permitting needs. The continued use of

		<p>private and public partnerships for adding lands to meet mitigation and restoration needs is expected to be a major component of the implementation of the Mitigation Plan. This baseline map and series of descriptions are presented for agency review as the vehicle for the physical expression of the Mitigation Plan's implementation. Public parcels depicted on the map commonly have deficiencies that need remediation. Private parcels depicted on the map are not required by the mitigation planning process to be mitigation sites. Appearance on the map does, however, reflect current environmental conditions of the land that are notable at the mapping scale. Their inclusion for mapping purposes demonstrates the systematic review of Lee County restoration needs and mitigation and preservation opportunities.</p> <p>The projects identified as candidates for preservation, restoration or mitigation through the Mitigation Plan are summarized in <i>Table Three</i> below. Most projects address more than one issue and many include some acreage that does not have to be acquired or restored, thus the figures in the table do not add up across rows or down columns.</p>
8	25	<p><i>Part VII: Review and Updating of the Mitigation Plan Annual Update</i></p> <p>The Mitigation Plan has been designed to be reviewed and updated on an annual basis. It will continually evolve and be influenced by the development of new or improved management techniques; increased coordination with other regional programs and conservation organizations; and changes in Federal, State and local regulations. As preparations for the new CIP begin each year, Lee County and its partners in both the public and private sectors should gather to assess the accomplishments that have resulted from implementation of the Mitigation Plan. The basis for this discussion will be a report that tracks the cumulative progress of acquisition and restoration activities undertaken to offset for the impacts of growth each year. Lee County and its partners will also assess the status of other efforts aimed at the restoration and protection of natural resources in the region (the Comprehensive Everglades Restoration Plan, Total Maximum Daily Loads Program, etc.) to determine how they affect and can be incorporated into the Mitigation Plan. Finally, the County will use existing monitoring programs, along with any necessary amendments, to establish progress in achieving overall restoration goals.</p> <p><i>Monitoring for Water Quality and Hydrology</i></p> <p>County Monitoring programs currently encompass water quality and hydrology. The lead County agency for monitoring is the Division of Natural Resources. Within the County as a whole, water quality monitoring stations are maintained by Lee County, the SFWMD, DEP, the City of Cape Coral, and a number of private entities. These stations monitor for a number of water quality indicators. Current monitoring stations are depicted in <i>Appendix A</i>. Common water quality indicators for nutrients, clarity, salinity, and so forth are identified in <i>Table Nine</i>. Data</p>

		<p>from these stations will be used to assess success in water quality programs, and to guide changes in mitigation and restoration activities on an annual basis. <i>Table Nine: Common Water Quality Indicators</i> County Monitoring Programs for hydrology include canal and streamflow and groundwater/aquifer levels. Hydrologic flow and water level monitoring are provided by a number of entities, including Lee County itself, the SFWMD, the United States Geologic Survey, and a variety of public utilities and private water users. These stations commonly document stormwater discharge and flow of water bodies to ensure that flow levels are not exceeded. Current stage recording stations are depicted in <i>Appendix A</i>. They also document changes in groundwater levels and, to a certain degree, their change in mineralization. By monitoring these stations and conducting an annual assessment, Lee County will evaluate whether the goals of maintaining and improving groundwater storage and stabilization and recovery from saltwater intrusion are being met. A comparable level of analysis will come from the review of fire hazard areas, a side effect of drainage efforts that are too successful.</p> <p><i>Priority Review</i></p> <p>Restoration and protection priorities should be evaluated and affirmed or revised. Each map that is a part of the Mitigation Plan should be updated to reflect changes that occur over time in Lee County, and the map series should be expanded to include pertinent data from all permitting agencies and be placed in an accessible location on-line to maximize its usefulness to scientists, planners, reviewers and resource managers.</p> <p>From the review process, the Mitigation Plan databases can be updated, cooperative agreements can be affirmed and/or renegotiated and the planning and implementation processes can continue to advance. Lee County may either facilitate the annual review and update of the Mitigation Plan or contract with a consulting firm or agency such as the Southwest Florida Regional Planning Council for this work. Updates to maps may be performed in a similar manner.</p>
9	27	<p><i>Part VIII: Structure for Implementing the Plan</i></p> <p>Implementation of the Plan requires several steps which are proposed herein:</p> <p>A. Lee Plan Implementation</p> <p>Amend the Lee Plan, with <i>Lee County Department of Community Development</i> as the Lead Agency. (2005) The Lee Plan is Lee County's policy blue print for guiding development and redevelopment. Various elements of the Lee Plan will need to be amended to state that the Mitigation Plan is the County's environmental quality investment plan that will guild its expenditures for hydrology, water quality, and habitat. The Mitigation Plan itself will then become a supporting document to the Lee Plan. This approach follows the MPO model. The Lee Plan should explicitly identify in the Intergovernmental Coordination Element the</p>

		<p>other public agencies discussed below as partners. The Mitigation Plan should be stated in the Lee Plan to be a guide for the following County agencies and programs:</p> <p><i>Department of Transportation.</i> Pre-identify suitable sites for offsite mitigation.</p> <p><i>Division of Natural Resources:</i> Pre-identify suitable sites to initiate water quality and hydrology remediation, and mitigation for stormwater, navigation, and beach projects.</p> <p><i>Department of Utilities:</i> In conjunction with the Groundwater Resources assessment to be completed late 2004, (which will subsequently be used to update the Mitigation Plan), sites will be identified for hydrology mitigation for any projects with groundwater impacts.</p> <p><i>Department of Parks and Recreation:</i> Preliminary identification of candidate sites to link with the open space trails, greenways, and blueways master strategy being developed (and subsequently amended into the Lee Plan.) Identification of sites suitable for exotics removal, wherein it is a permit concern. Identification of watersheds for soils management evaluation priority.</p> <p><i>Division of County Lands:</i> Preliminary identification of candidate sites for preservation under Conservation 20/20, which would only be furthered if owners are willing sellers. Preliminary identification of candidate sites for the other County agencies' mitigation and remediation needs.</p> <p><i>Division of Animal Services:</i> Should a County role be required, identification of sites for exotic animal control.</p> <p><i>Airport Authority:</i> Preliminary identification of candidate sites for offsite remediation or mitigation.</p> <p><b>B. Mitigation Banks and Bank Designation</b></p> <p>Agencies in their permit programs have accepted mitigation banks. These are locations that have been assessed to achieve a certain "volume" of incremental benefit if restored. There is no requirement that properties be restored to natural conditions under existing uses (nor should there be, barring a public health, safety or welfare finding). Consequently, mitigated "banks" have been established to meet a market demand for lands that want to change uses and lose "grandfather" protection since the public health, safety and welfare declaration has been made for air, land and water resources for new uses. Many of these banks are privately owned and operated. Others are publicly owned, established in part for a bank purpose.</p> <p>The Lee County BoCC will identify and annually update those public and private "banks" in Lee County. The "banks" identified are those considered qualified to meet some part of Lee County's mitigation credit needs. Current mitigation "banks" in public and private management are depicted in <i>Appendix A</i>.</p>
10	App	<i>Appendix A</i>

	<p><b>A</b></p> <p><b>Map Series One</b></p> <p><b>Base System - Natural Hydrology</b></p> <p><i>Map 1A: Historic Flow Ways in DR/GR Areas &amp; Rivers/Streams Throughout Lee County</i></p> <p><i>Map 2A: 100 Year Flood Plain</i></p> <p><i>Map 3A: Soil Types</i></p> <p><i>Map 4A: Topography</i></p> <p><b>Base System - Current</b></p> <p><i>Map 5A: Wet Season Water Table</i></p> <p><i>Map 6A: Watersheds</i></p> <p><i>Map 7A: Wetlands</i></p> <p><i>Map 8A: Species Occurrence as Documented by the U.S. Fish and Wildlife Service</i></p> <p><i>Map 9A: Strategic Habitat Conservation Areas</i></p> <p><b>Base System - Impaired</b></p> <p><i>Map 10A: Impaired and Potentially Impaired Waters</i></p> <p><i>Map 11A: Fire Hazard Areas</i></p> <p><i>Map 12A: Biodiversity Hotspots</i></p> <p><b>Base System – Manmade/Existing Land Use (general boundaries of man altered system)</b></p> <p><i>Map 13A: Year 2000 Land Use</i></p> <p><i>Map 14A: Public Lands, Conservation Lands and Conservation Easements</i></p> <p><i>Map 15A: Transportation Network</i></p> <p><i>Map 16A: Utility Map</i></p> <p><i>Map 17A: Mitigation “Banks”</i></p> <p><b>Map Series Two</b></p> <p><b>Future</b></p> <p><i>Map 1B: Wetlands Buildout</i></p> <p><i>Map 2B: Water Storage Buildout</i></p> <p><i>Map 3B: Habitats Buildout</i></p> <p><i>Map 4B: Long Range Transportation Plan 2020 Needs Assessment Mitigation</i></p> <p><i>Map 5B: Proposed Mitigation/Restoration/Preservation Sites</i></p> <p><b>Map Series Three</b></p> <p><b>Capital Improvements Program</b></p> <p><i>Map 1C: Transportation</i></p> <p><i>Map 2C: Utilities</i></p> <p><i>Map 3C: Stormwater</i></p> <p><i>Map 4C: Parks and Recreation</i></p> <p><i>Map 5C: Long Range Transportation Plan 2020 Financially Feasible</i></p> <p><i>Map 6C: Lee County Monitor Wells</i></p> <p><i>Map 7C: Lee County Stage Recorders</i></p>
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		<p><b>Map Series Four</b></p> <p><b>Environmental Justice Considerations</b></p> <p><i>Map 1D: Minority percentage by Block Group</i></p> <p><i>Map 2D: Average Income by Census Tract</i></p> <p><i>Map 3D: Neighborhood Districts</i></p>
11	App C	<p><i>Appendix C: Contributory Agency and Regional Initiatives</i></p> <p><i>Comprehensive Everglades Restoration Plan (CERP)</i></p> <p>The CERP provides a framework and guide to restore, protect, and preserve the water resources of central and southern Florida. It covers 16 counties, including Lee, over an 18,000-square-mile area, and centers on an update of the Central &amp; Southern Florida (C&amp;SF) Project. The C&amp;SF Project provides water supply, flood protection, water management and other benefits to south Florida. For close to 50 years, the C&amp;SF Project has performed its authorized functions well. However, the project has had unintended adverse effects on the unique and diverse environment that constitutes south Florida ecosystems. The Water Resources Development Acts in 1992 and 1996 provided the U.S. Army Corps of Engineers with the authority to re-evaluate the performance and impacts of the C&amp;SF Project and to recommend improvements and or modifications to the project in order to restore the south Florida ecosystem and to provide for other water resource needs. The resulting CERP was designed to capture, store and redistribute fresh water previously lost to tide and to regulate the quality, quantity, timing and distribution of water flows. It was approved in the Water Resources Development Act of 2000 and includes more than 60 elements, will take more than 30 years to construct, and will cost an estimated \$7.8 billion. Development of the CERP was led by the U.S. Army Corps of Engineers and the South Florida Water Management District. Many other federal, state, tribal and local agencies were active partners in developing the CERP and that partnership will continue through its implementation. The major components of the CERP are:</p> <ul style="list-style-type: none"> <li>* Surface Water Storage Reservoirs</li> <li>* Water Preserve Areas</li> <li>* Improved Water Deliveries to the Estuaries</li> <li>* Underground Water Storage</li> <li>* Improved Water Deliveries to the Everglades</li> <li>* Treatment Wetlands</li> <li>* Removal of Barriers to Sheetflow</li> <li>* Reuse of Wastewater</li> <li>* Storage of Water in Existing Quarries</li> <li>* Pilot Projects</li> <li>* Additional Feasibility Studies</li> <li>* Improved Water Conservation</li> <li>* Management of Lake Okeechobee as an Ecological Resource</li> </ul>

Several CERP projects that do not fall within the boundaries of Lee County will nonetheless have a significant influence on the function of natural systems here. The C-43 Basin Storage Reservoir and Aquifer Storage and Recover (ASR), Caloosahatchee River (C-43) Basin Aquifer Storage and Recovery Pilot Project, and Environmental Water Supply Deliveries to the Caloosahatchee Estuary will all effect water resources and natural systems functions in Lee County.

*Southwest Florida Feasibility Study*

The Southwest Florida Feasibility Study (SFFS) is one of the additional Feasibility Studies included in the CERP. The SFFS Issues Paper is located in the Appendix. The SFFS has been undertaken because primary water quality and hydrologic data do not exist for much of the region. This lack of information, assessments and monitoring data is a fundamental gap and greatly hinders long-term resource management opportunities. The SFSS offers the opportunity to plan for proper infrastructure before or in conjunction with development. It will result in a plan for Southwest Florida that includes ecosystem and marine/estuary restoration and protection, environmental quality, flood protection, water supply and other water-related purposes. It will provide a framework to address the health of aquatic ecosystems; water flows; water supply; wildlife, biological diversity and natural habitat; the region's economic viability; and property rights. The study is also investigating non-structural alternatives and has been designed to maximize regional benefits through multi-purpose land use; ensure consistency with local planning initiatives; improve water quality; and protect Big Cypress National Preserve.

The ecological, hydrologic, and water quality modeling and assessment tools and the maps being developed through the SFFS will be useful in evaluating the impacts of projects proposed in the Master Mitigation Plan.

*Environmental Impact Statement (EIS) on Improving the Regulatory Process in Southwest Florida*

The EIS was undertaken in 1998 to improve the U.S. Army Corps of Engineers' reviews of permit applications in the region under Section 404 of the Clean Water Act. The Final EIS document, which was issued in 2000, disclosed the potential cumulative effects on a wide variety of issues as a result of five alternative predictions of future conditions. Each future depicts what the landscape may or may not look like in 20+- years as a result of many individual decisions by the Corps, landowners, Counties and others. The EIS also compares the cumulative environmental and other effects resulting from each future for a wide variety of issues. This enables the Corps staff to better understand the context of the individual project impacts within the whole cumulative impact. The Record of Decision for the EIS was issued in August of 2003.

		<p><i>Water Supply Plans</i></p> <p>The Lower West Coast Water Supply Plan (LWC Plan) is one of four long-term, comprehensive regional water supply plans that have been developed by the SFWMD. The 2000 LWC Plan includes all of Lee County. The expected growth of this will create additional water demands for potable and irrigation water. Agriculture (primarily citrus and sugarcane located outside of Lee County but still within the bounds of the LWC Plan) is projected to increase by ten percent to approximately 260,000 acres. Meeting water demands while addressing the water needs of the environment makes development of proactive water supply strategies imperative to the economic and environmental sustainability of the area. The SFWMD is responsible for water resource development to facilitate development of source options at the local level; while, local governments, water users, and water utilities are responsible for water supply development.</p> <p>The LWC Plan documents existing and future (2020) agricultural and urban water demands; develops strategies to meet these needs, while providing adequate water to support the needs of the environment; identifies specific geographical areas that have water resource problems that are critical or are anticipated to become critical by the year 2020 and identifies preventative measures, including water resource development projects, water supply development projects, and operational and regulatory strategies; establishes a framework around which future water use decisions in the planning region can take place; identifies areas where collection of resource data and technical studies are necessary; and, implements the plan recommendations through regulatory, research, planning, construction, operational, land management and acquisition actions.</p> <p>The LWC Plan is updated every five years, and is used by local governments, water users, and utilities to modify and update their local comprehensive plans, ordinances, and individual or utility plans. The Caloosahatchee Water Management Plan (CWMP), a separate but complementary planning effort to the LWC Plan, evaluated water supply in the northeastern portion of the LWC region in the Caloosahatchee River Basin. The CWMP determined the projected surface water needs of the Caloosahatchee River Basin and Estuary can be met based on recommended developments of water management and storage infrastructure that effectively captures and stores surface water flows in the Basin. The CWMP concluded that existing surface water supplies from the Caloosahatchee River are inadequate to meet existing as well as future demands, including the needs of the environment. The Caloosahatchee is heavily relied on for agricultural water supply and to a much lesser extent, potable water supply. Surface water availability is essentially a function of climate and storage; there are excess amounts during the wet summer months, and at times, insufficient supplies during</p>
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the dry winter months. This problem of timing is particularly illustrated by the impacts of freshwater discharges to the Caloosahatchee Estuary. Excessive discharges decrease the salinity of the estuary that contribute to the loss of estuarine productivity. Insufficient freshwater discharges increase the salinity to essentially saltwater impacting freshwater grasses. A minimum flow and level is being established for the Caloosahatchee River and Estuary.

*Total Maximum Daily Load (TMDL) Program*

Section 303(d) of the Clean Water Act (CWA) requires states to submit lists of surface waters that do not meet applicable water quality standards (impaired waters) after implementation of technology-based effluent limitations, and establish TMDLs for these waters on a prioritized schedule. TMDLs establish the maximum amount of a pollutant that a water body can assimilate without causing exceedances of water quality standards. As such, development of TMDLs is an important step toward restoring our waters to their designated uses. In order to achieve the water quality benefits intended by the CWA, it is critical that TMDLs, once developed, be implemented as soon as possible.

Chapter 99-223, Laws of Florida, sets forth the process by which the 303(d) list is refined through more detailed water quality assessments. It also establishes the means for adopting TMDLs, allocating pollutant loadings among contributing sources, and implementing pollution reduction strategies.

Implementation of TMDLs refers to any combination of regulatory, non-regulatory, or incentive based actions that attain the necessary reduction in pollutant loading. Non-regulatory or incentive-based actions may include development and implementation of Best Management Practices (BMPs), pollution prevention activities, and habitat preservation or restoration. Regulatory actions may include issuance or revision of wastewater, stormwater, or environmental resource permits to include permit conditions consistent with the TMDL. These permit conditions may be numeric effluent limitations or, for technology-based programs, requirements to use a combination of structural and non-structural BMPs needed to achieve the necessary pollutant load reduction.

The Florida Department of Environmental Protection (DEP) is charged with administering the TMDL program in our State. The DEP is taking a comprehensive approach to protecting water quality involving basin-wide assessments and the application of a full range of regulatory and non-regulatory strategies to reduce pollution. Two basins cover Lee County, the Everglades West Coast Basin and the Caloosahatchee Basin. All of the major tributaries to Estero Bay were found to be impaired during the first round of assessments, and efforts are now underway to address the impairments through a partnership of entities that includes private

		<p>developers, local governments, regulatory agencies, environmental organizations, citizens groups and others. The members of this partnership hope to reduce pollutant loading to acceptable levels through voluntary efforts so that regulatory action can be avoided. The water in the Caloosahatchee basin are now being assessed.</p> <p><i>Charlotte Harbor National Estuary Program (CHNEP)</i></p> <p>The CHNEP is a partnership of citizens, elected officials, resource managers and commercial and recreational resource users who are working to protect the greater Charlotte Harbor estuarine system by improving the water quality and ecological integrity of the 4,400 square mile watershed. The partnership works as an advocate for the estuarine system by building consensus that is based upon sound science.</p> <p>In 1995, Governor Lawton Chiles, on behalf of the State of Florida and in cooperation with the Southwest Florida Regional Planning Council, Mote Marine Laboratory and the Southwest Florida Water Management District Surface Water Improvement Management program, submitted an application to the U.S. Environmental Protection Agency (EPA) to designate the estuarine system around Charlotte Harbor as an “estuary of national significance.” The application was accepted, and the CHNEP was created.</p> <p>From 1996 through 2000, more than 200 individuals representing organizations interested in preserving the Charlotte Harbor estuarine system used a cooperative decision making process to identify resource management concerns. They developed a 20-year Comprehensive Conservation and Management Plan (CCMP) that identifies the priority issues within the CHNEP and the actions which need to be taken to address them. The acceptance of the CCMP by the State of Florida and the EPA in 2001 marked the beginning of action to protect and restore the estuary and its watershed. Action is underway to address the following priority issues:</p> <p><b>Hydrologic Alterations:</b> Adverse changes to amounts, locations, and timing of freshwater flows, the hydrologic function of floodplain systems, and natural river flows.</p> <p><b>Water Quality Degradation:</b> Including, but not limited to, pollution from agricultural and urban runoff, point source discharges, septic tank system loadings, atmospheric deposition, and groundwater.</p> <p><b>Fish and Wildlife Habitat Loss:</b> Degradation and elimination of headwater streams and other habitats caused by development, conversion of natural shorelines, cumulative impacts of docks and boats, invasion of exotic species, and cumulative and future impacts.</p>
12	App E – p. 3	Lastly, the Restudy (1999) also recognized that achieving WQ objectives will require efforts by a number of different agencies, some of which were potentially outside the scope of the Restudy; Section F.1 of

		<p>Appendix H states:</p> <p><i>"Implementation of the Comprehensive Plan consistent with the Implementation Plan (see Section 10) will lead to improved water quality throughout the study area. However, achieving water quality objectives for ecological restoration in all water bodies within the study area depends on actions outside the scope of the Restudy. To fully achieve ecological restoration pollution loads must be identified and quantified within each of the study area regions, and load reduction and concentration targets for pollutants of concern must be established. Concurrent with or prior to the proposed operation of proposed components of the Comprehensive Plan, water quality remediation programs for degraded and/or designated use-impaired water bodies must be implemented by the responsible agencies in order to fully achieve ecological restoration objectives."</i></p> <p>To this end, the Comprehensive Integrated Water Quality Feasibility Study (CIWQFS) was authorized and tasked with developing a comprehensive WQ plan that would integrate CERP projects with other federal, state and local government programs. One of the specific goals of that study is to establish pollutant load reduction targets in regions where such targets have not already been developed, including certain basins within the SWFFS area (for details, see the purpose statement for CIWQFS).</p>
13	p. 5	<p><b>PERFORMANCE MEASURES</b></p> <p>To assess the degree of success in meeting these objectives, the SWFFS WQ Sub-team has developed two sets of performance measures: 1) assessment measures and, 2) evaluation measures. Assessment performance measures are used to measure real responses as a basis for tracking how well the plan is meeting its goals. Evaluation performance measures are used to predict the performance of a given alternative.</p> <p>This document focuses on the rationale for selecting evaluation measures and provides the process for developing tiered WQ targets or goals to satisfy the stated objectives. Evaluation measures will be used in the comparison of alternatives and selection of the recommended plan. Because evaluation measures will be used to forecast future conditions, and in some instances hind-cast past conditions, the use of these measures will be constrained by the availability of modeling tools, including data (<b>this point cannot be over-emphasized</b>). The level of modeling for this effort will be determined at a future date, but may range from spreadsheet models to physically based dynamic models. In some cases, it may be necessary to rely on best professional judgment to qualitatively assess alternative performance relative to the criteria (see Uncertainty section).</p>

		<b>Parameters</b> Both sets of performance measures were developed through a process of public Sub-team meetings. In developing the list of parameters, the Sub-team considered both Tier 25 of the Recover Water Quality Team's draft comprehensive WQ monitoring plan (Table 1), and the Charlotte Harbor National Estuary Program (CHNEP) list of core analytes (Table 2). This information combined with technical comments from Sub-team members and results of previous assessments within the study boundary (FDEP 2002a and b; USACOE 2000) lead to the preliminary assessment measures presented in Table 3. The parameter list and performance measures are scientifically based and the result of applying research findings, literature information, and best professional judgment. The list is provisional pending completion of ongoing research and, more importantly, review of the preferred data set. It is the Sub-team's intent that both assessment and evaluation measures also consider atmospheric loading. In developing evaluation measures, preliminary emphasis was placed on trophic state variables (i.e., causal variables and response variables) to predict the degree of nutrient overenrichment in both the receiving waterbody and the "waters to be restored".  <b>[NOTE: The pages following page 5 in Appendix E contain tables listing the analytes and water quality indicators of interest.]</b>
14	p.11	Along similar lines, stressor and attribute-based performance measure NE12 (summarized in draft RECOVER-WQT documents) has the following restoration expectation: “ <i>limit [nutrient] loads so that estuaries support normal algal, seagrass, and benthic communities, and achieve TMDL targets in those estuaries classified as “verified impaired” per Florida’s Impaired Waters Rule, and/or restoration targets of degraded waters as developed by the Comprehensive Integrated Water Quality Feasibility Study, and/or Florida’s numerical nutrient standards for estuarine waters as they are promulgated.</i> ”  The SWFFS WQ Sub-team shares these expectations and recommends that reduction in annual loads of P and N be included as an evaluation measure. The IRL-South Feasibility Study based their load reduction targets on pollutant load reduction goals (PLRGs) developed under the Indian River Lagoon (IRL) Surface Water Improvement and Management Plan (SWIM). In the SWFFS area, Lower Charlotte Harbor may receive SWIM designation in the near-term. However, SWIM plans have not, as yet, been developed for any water body within the Study area, nor have total maximum daily loads (TMDLs) been established. FDEP is currently conducting a loading and abatement assessment for the C-43 basin. Load reduction targets may follow from that initiative. If those targets are deemed appropriate by the Sub-Team, a recommendation could be made for their adoption by the SWFFS. Another tool that could potentially be utilized in setting load reduction

		<p>targets, this time for Estero Bay, is the Estero Water Quality model (DHL Inc., under contract to Lee County). The Sub-team is presently reviewing other regional plans and studies for similar tools to establish load reduction targets (e.g., Estero Bay Watershed Assessment, Naples Bay Initiative, FDEP study in tidal Caloosahatchee during the 1970s, which included water quality based effluent limitations, WQBEL, etc.). Nevertheless, for the reasons discussed above, the Sub-team will request that the SWFFS area be given priority by the CIWQFS.</p>
15	App J – p. 1	<p><i>Appendix J: Addressing the Lee County Comprehensive Plan</i></p> <p>The Lee County Master Mitigation Plan is consistent with the following Goals and Objectives of the Lee County Comprehensive Plan. Implementation of the Lee County Master Mitigation Plan will foster progress toward these Goals and Objectives.</p> <p><b>FUTURE LAND USE ELEMENT</b></p> <p><b>GOAL 1: FUTURE LAND USE MAP.</b> To maintain and enforce a Future Land Use Map showing the proposed distribution, location, and extent of future land uses by type, density, and intensity in order to protect natural and man-made resources, provide essential services in a cost-effective manner, and discourage urban sprawl. (Amended by Ordinance No. 94-30)</p> <p><b>OBJECTIVE 1.4: NON-URBAN AREAS.</b> Designate on the Future Land Use Map categories for those areas not anticipated for urban development at this time.</p> <p><b>OBJECTIVE 1.5: WETLANDS.</b> Designate on the Future Land Use Map those lands that are identified as Wetlands in accordance with F.S. 373.019(17) through the use of the unified state delineation methodology described in FAC Chapter 17-340, as ratified and amended in F.S. 373.4211. (Amended by Ordinance No. 94-30)</p> <p><b>GOAL 2: GROWTH MANAGEMENT.</b> To provide for an economically feasible plan which coordinates the location and timing of new development with the provision of infrastructure by government agencies, private utilities, and other sources.</p> <p><b>OBJECTIVE 2.1: DEVELOPMENT LOCATION.</b> Contiguous and compact growth patterns will be promoted through the rezoning process to contain urban sprawl, minimize energy costs, conserve land, water, and natural resources, minimize the cost of services, prevent development patterns where large tracts of land are by-passed in favor of development more distant from services and existing communities. (Amended by Ordinance No. 94-30, 00-22)</p>

		<p><b>OBJECTIVE 2.3: PUBLIC PROVISION OF INFRASTRUCTURE.</b> The Capital Improvements Program will give the highest priority to the planning, programming, and construction of urban services and facilities in the existing developed areas where facilities are inadequate. Next priority will be given to service expansions in existing developed areas, followed by further expansion into other portions of the Future Urban Areas. Sufficient land will be identified and protected for utility facilities that will be necessary to support the proposed level of development. Other infrastructure planning priorities are contained in Policy 23.2.4 and Policy 70.1.1. (Amended by Ordinance No. 94-30, 00-22)</p> <p><b>OBJECTIVE 2.4: FUTURE LAND USE MAP AMENDMENTS.</b> Regularly examine the Future Land Use Map in light of new information and changed conditions, and make necessary modifications.</p> <p><b>GOAL 10: NATURAL RESOURCE EXTRACTION.</b> To protect areas containing identified natural resources from incompatible urban development, while insuring that natural resource extraction operations minimize or eliminate adverse effects on surrounding land use and natural resources. (Amended by Ordinance No. 02-02)</p>
16	p.2	<p><b>GOAL 16: PRIVATE RECREATIONAL FACILITIES IN THE DR/GR.</b> To ensure that the development of Private Recreational Facilities in the DR/GR areas is compatible with the intent of this Future Land Use category, including recharge to aquifers, development of future wellfields and the reduction of density. (Added by Ordinance No. 99-16)</p> <p><b>OBJECTIVE 16.1:</b> To ensure that Private Recreation Facilities are located in the most appropriate areas within the DR/GR future land use category. (Added by Ordinance No. 99-16)</p> <p><b>OBJECTIVE 16.2: GROWTH MANAGEMENT.</b> Development of Private Recreation Facilities in the DR/GR areas must be consistent with the growth management principles and practices as provided in the following policies. (Added by Ordinance No. 99-16)</p> <p><b>OBJECTIVE 16.3: GENERAL DEVELOPMENT REGULATIONS.</b> The protection of water quality, quantity, natural resources, and compatibility will be addressed by additional development controls that regulate the permitted uses, parcel size, density, intensity and design of Private Recreational Facilities. (Added by Ordinance No. 99-16)</p> <p><b>OBJECTIVE 16.4: WATER QUALITY, QUANTITY, AND SURFACE WATER RESOURCES.</b> Private Recreational Facilities must be located, designed and operated in such a way that they will not degrade the ambient surface or groundwater quality. These facilities must be located, designed and operated in such a way that they will not adversely impact</p>

		<p>the County's existing and future water supply. The location, design and operation of Private Recreational Facilities must maintain or improve the storage and distribution of surface water resources. (Added by Ordinance No. 99-16)</p> <p><b>OBJECTIVE 16.5: WILDLIFE.</b> The location, design and operation of Private Recreational Facilities will incorporate preservation and/or management activities that restrict the unnecessary loss of wildlife habitat or impact on protected species, species of special concern, threatened or endangered species. (Added by Ordinance No. 99-16)</p> <p><b>OBJECTIVE 16.6: NATURAL RESOURCES.</b> Private Recreational Facilities must be located, designed and operated to minimize environmental impacts, and where appropriate, protect, enhance and manage natural resources such as flowways, waterways, wetlands, natural water bodies, and indigenous uplands. (Added by Ordinance No. 99-16)</p> <p><b>OBJECTIVE 16.8: GOLF COURSE PERFORMANCE STANDARDS.</b> The location, design and operation of golf courses located within Private Recreational Facilities will minimize their impacts on natural resources, and incorporate Best Management Practices. A maximum of ten (10) 18-hole golf courses, for a total of 180 golf holes, will be permitted in the next 10 years. (Added by Ordinance No. 99-16)</p>
17	p.7	<p><b>PLANNING ON A WATERSHED BASIS.</b> To protect or improve the quality of receiving waters and surrounding natural areas and the functions of natural groundwater aquifer recharge areas while also providing flood protection for existing and future development.</p> <p><b>OBJECTIVE 40.1: COUNTY-WIDE PROGRAM.</b> Lee County will continue its efforts in developing a surface water management program that is multi-objective in scope and is geographically based on basin boundaries. (Amended by Ordinance No. 94-30, 00-22)</p> <p><b>OBJECTIVE 40.2: BASIN PROGRAM.</b> Promote water management permitting on a basin-wide basis, as opposed to the current individual-site approach used by Lee County and the South Florida Water Management District, through pilot or demonstration programs in two or more basins by 1996. (Amended by Ordinance No. 94-30)</p> <p><b>OBJECTIVE 40.3: LEVEL-OF-SERVICE STANDARDS.</b> Revise by 1996 the surface water management level-of-service standards for basins and sub-basins identified in the Surface Water Management Master Plan. These future service standards can only be finalized upon the completion of the basin studies and will be based upon providing a defined level of</p>

		<p>flood protection, balanced with the protection of natural flow ways and associated wetland systems. (Amended by Ordinance No. 94-30)</p> <p><b>OBJECTIVE 40.4: CRITICAL AREAS.</b> The Six Mile Cypress Basin (as defined in Chapter 10 of the Land Development Code) and the Density Reduction/ Groundwater Resource land use category are both identified as "critical areas for surface water management." The county will maintain existing regulations to protect the unique environmental and water resource values of these areas. (Amended by Ordinance No. 94-30, 00-22)</p> <p><b>OBJECTIVE 40.5: INCORPORATION OF GREEN INFRASTRUCTURE INTO THE SURFACE WATER MANAGEMENT SYSTEM.</b> The long-term benefits of incorporating green infrastructure as part of the surface water management system include improved water quality, improved air quality, improved water recharge/ infiltration, water storage, wildlife habitat, recreational opportunities, and visual relief within the urban environment. (Added by Ordinance No. 03-06).</p>
18	p. 8	<p><b>GOAL 43: GROUNDWATER.</b> To protect the county's groundwater supplies from those activities having the potential for depleting or degrading those supplies.</p> <p><b>OBJECTIVE 43.1: WELLFIELD PROTECTION.</b> The county will maintain a wellfield protection ordinance to provide regulations protecting the quality of water flowing into potable water wellfields. (Amended by Ordinance No. 94-30, 00-22)</p> <p><b>OBJECTIVE 43.2: POTABLE GROUNDWATER.</b> Base all future development and use of groundwater resources on determinations of the safe yield of the aquifer system(s) in order not to impair the native groundwater quality or create other environmental damage. Criteria for safe-yield determinations will be determined by the SFWMD, the agency charged with permitting these activities. (Amended by Ordinance No. 94-30, 00-22)</p> <p><b>OBJECTIVE 43.2: POTABLE GROUNDWATER.</b> Base all future development and use of groundwater resources on determinations of the safe yield of the aquifer system(s) in order not to impair the native groundwater quality or create other environmental damage. Criteria for safe-yield determinations will be determined by the SFWMD, the agency charged with permitting these activities. (Amended by Ordinance No. 94-30, 00-22)</p>
19	p. 10	<b>GOAL 77: RESOURCE PROTECTION.</b> To manage the county's

wetland and upland ecosystems so as to maintain and enhance native habitats, floral and faunal species diversity, water quality, and natural surface water characteristics.

**OBJECTIVE 77.1: RESOURCE MANAGEMENT PLAN.** The county will continue to implement a resource management program that ensures the long-term protection and enhancement of the natural upland and wetland habitats through the retention of interconnected, functioning, and maintainable hydroecological systems where the remaining wetlands and uplands function as a productive unit resembling the original landscape.

(Amended by Ordinance No. 94-30, 00-22)

**OBJECTIVE 77.2: PLANT COMMUNITIES.** Lee County will maintain and routinely update an inventory of natural plant communities and will protect at various suitable locations remnant tracts of all important and representative natural plant communities occurring within Lee County.

(Amended by Ordinance No. 94-30)

**OBJECTIVE 77.3: WILDLIFE.** Maintain and enhance the fish and wildlife diversity and distribution within Lee County for the benefit of a balanced ecological system. (Amended by Ordinance No. 94-30)

**OBJECTIVE 77.4: ENDANGERED AND THREATENED SPECIES IN GENERAL.** Lee County will continue to protect habitats of endangered and threatened species and species of special concern in order to maintain or enhance existing population numbers and distributions of listed species.

**OBJECTIVE 77.6: SOUTHERN BALD EAGLES.** The county will continue to monitor Southern bald eagle nesting activity and offer incentives to conserve buffer areas around Southern bald eagle nests.

(Amended by Ordinance No. 98- 09)

**OBJECTIVE 77.7: WEST INDIAN MANATEES.** Minimize injuries and mortality of manatees to maintain the existing population by encouraging the adoption by the state of Florida and local governments of regulations to protect the West Indian Manatee in the Caloosahatchee and elsewhere in Lee County. By 1998, manatee protection plans will be prepared for other waters of Lee County also frequented by manatees. (Amended by Ordinance No. 94-30, 98-09)

**OBJECTIVE 77.8: GOPHER TORTOISES.** The county will protect gopher tortoises through the enforcement of the protected species regulations and by operating and maintaining, in coordination with the Florida Game and Fresh Water Fish Commission, the Hickey Creek Mitigation Park. (Amended by Ordinance No. 94-30)

		<p><b>OBJECTIVE 77.9: RED-COCKADED WOODPECKER.</b> County staff will coordinate with the Florida Game and Fresh Water Fish Commission to determine on a case-by-case basis the appropriate mitigation for the protection of the redcockaded woodpecker's habitat. Mitigation may include on-site preservation, onsite mitigation, off-site mitigation, and associated habitat management. (Amended by Ordinance No. 94-30)</p> <p><b>OBJECTIVE 77.10: WOODSTORK.</b> Lee County will maintain regulatory measures to protect the wood stork's feeding and roosting areas and habitat. (Amended by Ordinance No. 94-30, 00-22)</p> <p><b>OBJECTIVE 77.11: FLORIDA PANTHER AND BLACK BEAR.</b> County staff will develop measures to protect the Florida panther and black bear through greenbelt and acquisition strategies. (Amended by Ordinance No. 92-48, 00-22)</p>
20	p. 11	<p><b>GOAL 78: ESTUARINE WATER QUALITY.</b> To manage estuarine ecosystems so as to maintain or improve water quality and wildlife diversity; to reduce or maintain current pollution loading and system imbalances in order to conserve estuarine productivity; and to provide the best use of estuarine areas. (Amended by Ordinance No. 94-30)</p> <p><b>OBJECTIVE 78.1:</b> Establish baseline conditions in all estuarine systems, including pollutant and freshwater loadings by 2000, and maintain an ongoing water quality monitoring program. Maintain communication with other local, state, and federal estuarine water quality studies to ensure that the latest data and recommendations are available. (Amended by Ordinance No. 94-30)</p> <p><b>OBJECTIVE 78.2: WATERSHED MANAGEMENT PLANS.</b> By 1996, establish procedures for reviewing all new upland development in terms of its impacts on estuarine systems. Prepare estuarine watershed management plans which maximize stormwater retention and treatment, with priority to the Estero Bay watershed. (Amended by Ordinance No. 94-30)</p>
21	p. 12	<p><b>GOAL 84: WETLANDS.</b> To maintain and enforce a regulatory program for development in wetlands that is cost-effective, complements federal and state permitting processes, and protects the fragile ecological characteristics of wetland systems. (Amended by Ordinance No. 94-30)</p> <p><b>OBJECTIVE 84.1:</b> The natural functions of wetlands and wetland systems will be protected and conserved through the enforcement of the county's wetland protection regulations and the goals, objectives, and</p>

		policies in this plan. "Wetlands" include all of those lands, whether shown on the Future Land Use Map or not, that are identified as wetlands in accordance with F.S. 373.019(17) through the use of the unified state delineation methodology described in FAC Chapter 17-340, as ratified and amended by F.S. 373.4211. (Amended by Ordinance No. 94-30, 00-22) Urban Community, Suburban, and Outlying Suburban areas may transfer densities to developable contiguous uplands under common ownership in accordance with Footnotes 9b and 9c of Table 1(a), Summary of Residential Densities. (Amended by Ordinance No. 94-30, 00-22)
22	p. 12	<p><b>GOAL 87: WATER RESOURCES.</b> To conserve, manage, and protect the natural hydrologic system of Lee County to insure continued water resource availability. (Amended by Ordinance No. 94-30)</p> <p><b>OBJECTIVE 87.1: WATER SUPPLIES.</b> Insure water supplies of sufficient quantity and quality to meet the present and projected demands of all consumers and the environment, based on the capacity of the natural systems.</p>
23	p. 13	<p><b>GOAL 91: FISHERIES MANAGEMENT.</b> To preserve the ecosystem that nourishes and shelters the commercial and sport fisheries in Lee County.</p> <p><b>OBJECTIVE 91.1:</b> The county will continue monitoring for estuarine water quality to monitor the health and population of recreationally and commercially important fish and shellfish that depend on the estuaries. (Amended by Ordinance No. 00-22)</p>