4 CONSERVATION ELEMENT

The Conservation Element is intended to provide a framework for the ongoing monitoring, management and use of the County's natural resources. This element addresses the environment and its goals, objectives and policies as they relate to the preservation, management and enhancement of the natural environment in Lake County. Because of the holistic nature of the natural environment, it is necessary for this element to have strong interrelationships with other elements in the Comprehensive Plan, most notably Future Land Use, Recreation and Open Space, Intergovernmental Coordination and Transportation.

The Future Land Use Element is dependent upon the Conservation Element to provide information and guidelines regarding the suitability of lands for development, particularly those lands containing or influencing significant or sensitive natural resources. In addition, this element shall support and strengthen the recommendations for Land Development Regulations.

The Recreation and Open Space Element is dependent upon the Conservation Element to provide guidelines for the establishment of open space corridors, to assist in the nature education programs, to encourage compatible land uses adjacent to managed natural areas, and in giving indications of which environmentally sensitive areas are suitable for acquisition and development for recreational and open space purposes.

The Intergovernmental Coordination Element establishes policy for cooperation between various governmental entities having jurisdiction in Lake County. The Conservation Element incorporates the policies and regulations of these entities to ensure the coordination of effort among all levels of government in Lake County.

The Transportation Element is dependent upon the Conservation Element to identify areas where roadways may be constructed so as to minimize impacts upon significant natural resources and to maintain acceptable air quality standards for citizens. It is also necessary to recognize the relationship between transportation and conservation in order to effectively implement the policies of the Wekiva Parkway and Protection Act.

This Element provides goals, objectives and policies relating to natural resources by four broad categories: Air, Water, Land and Environmental Systems. The conservation goal provides a vision of what the County seeks to accomplish during the planning time frame. Chapter 9J-5 F.A.C. defines a goal as "the long-term end toward which programs or activities are ultimately directed." Objectives serve to identify strategic opportunities which will enable the County to move toward the vision projected by the goal. Chapter 9J-5 F.A.C. defines an objective as "a specific, measurable, intermediate end that is achievable and marks progress toward a goal." Policies are action-oriented statements, the means towards an end that, when implemented, will support or fulfill the stated objective. Chapter 9J-5 F.A.C. defines policy as "the way which programs and activities are conducted to achieve an identified goal."

GOAL 1.0 CONSERVATION – PRESERVATION OF NATURAL RESOURCES

The County shall strive to preserve, properly manage and, where possible, enhance the quantity, quality and function of its natural resources and natural environment for existing and future generations. These goals should include, but not be limited to, the following natural resources: air, groundwater, lakes and surface waters, springs and springsheds, soils, minerals, wetlands, native vegetation and wildlife habitats, floodplains, endangered and threatened species of special concern, open spaces, ecological landscapes, karst features, aquifer recharge areas, and historical and archaeological resources.

GOAL 2.0 CONSERVATION – AIR QUALITY[1]

OBJECTIVE 2.1 AIR QUALITY

The County shall implement State and Federal guidelines to improve and protect air quality and ensure that the County meet or exceed all applicable air quality standards.

Policy 2.1.1 Assess Air Quality

The County shall require compliance with state and federal ambient air requirements through the air quality programs established by federal, state, regional and local agencies in the County.

Policy 2.1.2 Reduce Point-source Air Pollution Emissions

The County shall facilitate reduction in total air emissions by all current sources listed for the County on the FDEP ARMS or its successor by supporting the enforcement of applicable federal, state, regional and local regulations.

The County shall require facilities found to be chronically non-compliant with these standards to utilize the best available control technologies prior to re-issuance of their operating permits. The County will follow up on complaints and the appropriate state and federal agencies will be notified.

The County will adopt LDRs to require that development proposals which emit air pollutants model potential air pollution impacts. The LDRs will require stringent air pollution review on any air polluting facilities and require a safe buffer distance from nearby uses, including but not limited to schools, hospitals, or residential neighborhoods.

The County shall cooperate with the State in the monitoring of hazardous materials users and hazardous waste generators. The County will provide support to the State in their effort to ensure that contamination of the air by volatile pollutants released in the clean up, use, or disposal of hazardous materials shall not exceed levels that may cause significant harm to human health or the environment. This policy shall be incorporated within the hazardous materials management program under the Lake County Department of Environmental Services.

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1. [1] Air Quality topics numbered CON 1.1 through CON 1.9 correspond to Objective 7-10 and Policies 7-10.1 through 7-10.09 in the 2002 Lake County Comprehensive Plan. Objectives CON 2 Noise Pollution and CON 3 correspond to Policies 7-10.10 and 7-10.11, respectively, in the 2002 Lake County Comprehensive Plan.

The County will follow up on complaints and the appropriate state and federal agencies will be notified.

Policy 2.1.3 Combat Fugitive Particle Emissions from Land Use Practices

LDRs shall ensure and require compliance with State BMPs regarding fugitive dust emissions caused by mining, inappropriate land use management practices, and development activities such as highway construction, road maintenance, and building construction. Mining activities shall be in conformance with the County mining ordinance.

Policy 2.1.4 Encourage Alternative Modes of Transportation

In order to reduce vehicular emissions, the County shall encourage programs that improve automotive traffic flow and shall encourage the use/development of private/public mass transit, multiple ridership in automobiles, telecommuting and the development and safe use of bikeways.

Policy 2.1.5 Reduce Vehicular Pollutant Emission Levels

The County shall reduce or stabilize vehicular emission levels by requiring an air quality impact analyses be performed on all significant traffic-generating development proposals. Projects which are predicted to violate air quality standards shall be required to pursue the implementation of traffic mitigation techniques to achieve compliance standards as a condition for approval in all development orders.

Policy 2.1.6 Establish Airshed Protection Zones

The County shall establish an airshed protection plan for the urbanized areas and major transportation corridors of the County. This plan shall include urban forestry components and open space conservation guidelines. Airshed protection zones will have open space guidelines incorporated within the County's future land use element. New developments will be reviewed for consistency with landscape requirements for tree preservation or planting, as determined from the project's landscape site plan.

Policy 2.1.7 Indoor Air Quality Education Program

The County shall establish an education program regarding potential indoor air problems.

GOAL 3.0 CON - WATER

OBJECTIVE 3.1 GROUNDWATER

The County, in coordination with federal, state, regional and local agencies, shall protect the quantity and quality of groundwater resources, recharge areas, and prevent excessive groundwater draw-down caused by withdrawal for consumptive uses.

Policy 3.1.1 Develop Comprehensive Surface and Groundwater Basin Management Plans

The County shall cooperate with the appropriate agencies in developing and implementing comprehensive surface water and groundwater basin management plans. These plans shall

assess the impacts of existing and anticipated future pollution sources on the quality of surface waters and ground water, and shall develop strategies to abate those impacts.

Policy 3.1.2 Participate in Long Range Water Conservation Planning

The County shall participate in the development of long-range water conservation plans that are created as part of the water supply planning process of the water management districts. The County shall participate in working groups and advisory groups on supply planning, minimum flows and levels, TMDLs including the Florida Water Quality Monitoring Council and other water quality monitoring. The County shall facilitate input from stakeholder groups.

Policy 3.1.3 Plan for Safe Withdrawal Rates of Water

The County, as a participant in the Water Alliance under interlocal agreement, shall continue to work with the water management districts on water supply plans that provide for water supply needs and the basis for emergency conservation measures in the event of drought conditions or water shortages, while encouraging and participating in efforts to comply with federal state regional and local standards and rules for protection of ground water and ground water dependent natural resources.

Policy 3.1.4 Conserve Potable Water Supplies

The County shall implement plans and procedures to conserve its potable water supplies to the maximum extent practicable through the implementation of water conservation techniques, programs, and cooperative arrangements with local water utilities. Such techniques, methods, and programs may include, but are not limited to:

- Requiring installation of water conserving plumbing fixtures in new and renovated buildings which are, at minimum, consistent with the requirements of the federal, state, regional and local agencies;
- Promoting water reuse and/or reclamation, where appropriate, for landscape, golf courses and farm irrigation, industrial use and other appropriate applications;
- Supporting the implementation of leak detection programs by the owners/operators of public water supply systems in order to discover and curtail wasteful losses of potable water from public water supply water delivery networks;
- A cooperative plugging program for uncapped artesian wells with SJRWMD and SWFWMD, and the local DOH;
- Encouraging the implementation of water and sewer revenue mechanisms which encourage the economical/conservational use of potable water supplies;
- Implementation of irrigation policies and practices according to federal, state, regional and local agency guidelines;
- Prescribe water wise "Florida-Friendly Landscaping" guidelines for all County facilities and new development; and
- Distribute educational materials, which describe sources of water consumption and opportunities for conservation, to the general public.

- Require the installation of dual-water lines and meters in all new developments served by a central water system to distribute reuse water even if reuse water is not yet available.

Policy 3.1.5 Adopt a Water Conservation Ordinance

The County shall adopt within the LDRs provisions for water conservation which further implement the water conservation plans and programs of the federal, state, regional and local agencies. The County shall also establish incentives to conserve water.

Policy 3.1.6 Monitor Consumptive Use Permitting

The County shall track the consumptive use permitting activities of the SJRWMD and the SWFWMD. The County shall evaluate the CUPs issued by the WMDs for potential surface water and groundwater impacts and compliance with LDRs. The County shall take appropriate land use regulatory actions to assist the federal, state, regional and local agencies in ensuring an adequate water supply for existing and future needs, including the protection of water dependent natural resources.

Policy 3.1.7 Ensure Supply of Safe Potable Water

The County shall review regulatory data and information related to the supply of safe potable water to its residents. The County shall coordinate and cooperate with the federal, state, regional and Water Management Districts on countywide ground water monitoring especially in those areas of existing, suspected or the potential for ground water contamination.

Policy 3.1.8 Emergency Water Shortage Plan

Lake County shall cooperate with the SJRWMD and SWFWMD in the enforcement of provisions of the Water Management District's emergency water shortage plans.

Policy 3.1.9 Impact of Land Use on Groundwater

Lake County shall prohibit land uses which are known to pose a severe threat to the availability of groundwater resources or whose practices are known to pose a severe threat to the quality of groundwater. Land use planning and development approvals shall reflect the limitations and vulnerability of groundwater supplies, including groundwater basin inventories conducted by the water management districts.

Policy 3.1.10 Conformance with State Requirements

Lake County shall ensure that all land use planning and development approval decisions are consistent with state agency rules and permits, and shall require compliance with all state agency rules and permits relative to the protection of groundwater.

Policy 3.1.11 Identify Aquifer Protection Zones / Conservation Measures

The County shall identify critical areas and land uses within the County that may impact the County's ground water resources. In consultation with state and federal resource management agencies, the County shall establish aquifer protection zones. LDRs shall be established to protect these areas from a reduction of the volume of recharge, to minimize the impact of development on the quality of surface and ground waters, to sustain the rate flow from springs and reduce the vulnerability of ground water from contamination,

Consistent with the intent of this policy:

- The County shall require for the proposed rezoning or development of a parcel within protected recharge areas, most effective recharge areas, areas more vulnerable to contamination and/or springsheds that a site specific hydrogeologic and geotechnical report be submitted to determine the hydrogeologic character of a site. This report shall be prepared by a qualified Professional Geologist and/or Engineer shall identify all surface and sub-surface features that could be potential pathways for contamination of the aquifer. At a minimum, this report shall address waste water disposal, recharge, water supply, potential locations of stormwater management facilities. Borings shall be performed at potential locations of waste water disposal areas and stormwater management facilities. These borings shall be sufficiently deep to characterize the subsurface and confining unit. The overburden material shall be characterized (grain size, percent organic matter) to determine its permeability, filtering capacity and ability to bind pollutants. Size threshold requirements for the hydrogeologic survey shall be established in the LDRs and based on the size of the project.
- The information contained in the hydrogeologic survey shall establish setbacks, the use of karst features, buffers, open space and other best practices to minimize development impacts. Site stormwater and effluent disposal systems will only be allowed in locations with the greatest depth of overburden and the least potential for contaminants entering the aquifer.
- Require the capability for the onsite retention of and infiltration into Type A soils of the first three (3) inches of runoff from directly connected impervious areas that shall be designed and based on the storm events and durations established within the Stormwater Management Element Goals, Objectives and Policies.
- Impervious surface ratios shall be calculated and be site specific for development projects and shall be based upon a recommendations of the site-specific hydrogeological report.
- Net retention and infiltration of pre-development recharge to the aquifer (system) must be maintained as determined from calculations presented in the site-specific hydrogeological and geotechnical reports.
- The County shall, through its LDRs, prohibit large quantity hazardous waste generators (> 1000 kg per month) in designated areas and aquifer protection zones.

Policy 3.1.12 Groundwater Recharge

The County shall protect groundwater recharge areas through land use strategies including but not limited to reduction of land use densities in critical areas, mandatory open space, protection of pervious surface areas, drought-tolerant landscaping, and the use of reclaimed water for irrigation. An aquifer recharge overlay shall be developed that sets standards to protect the infiltration functions of protected and most effective aquifer recharge areas.

Policy 3.1.13 Areas More Vulnerable to Contamination/Conservation Measures

Through the LDRs and land use strategies, including but not limited to a reduction of land use density and intensity and restrictions on land use, the County shall protect areas where the Floridan aquifer is more vulnerable to contamination.

Policy 3.1.14 Restrict Landscape Irrigation

In order to conserve supplies of potable water, the County shall discourage the use of potable water for landscape irrigation and require the use of Florida-Friendly Landscaping to the greatest extent practicable. Native or drought-resistant plants include, but are not limited to, those in *A Guide to Florida-Friendly Landscaping - Florida Yards and Neighborhoods Handbook*, the Florida Native Plant Society's *Native Plants for Landscaping in Florida*, or comparable guidelines prepared by FloridaYards.org, FDAC, FFWCC, FDEP, RPC, or the water management districts. These planting guidelines shall be incorporated within the County LDRs.

Policy 3.1.15 Landscaping at County Facilities

By January 2009, the County shall establish guidelines for managing existing and future land and landscapes at County facilities using the educational guidelines contained in the *A Guide to Florida-Friendly Landscaping - Florida Yards and Neighborhoods Handbook*, University of Florida Extension's Florida Yards and Neighborhoods Program, Environmental Landscape Management (ELM) principles and BMPs. Such guidelines shall include practices that are designed to reduce nitrate infiltration and pollutants into ground and surface waters.

Policy 3.1.16 Protect Aquifers from Saline Ground Water

The County, through restrictions on density, intensity and the Future Land Use Map, shall protect areas and aquifers identified by the USGS and Water Management Districts where the movement of saline ground water into a fresh water aquifer has occurred or is likely to occur. The County shall cooperate with the federal, state, regional and local agencies in determining the safety of the siting of wells, especially in areas located along the Wekiva and St. Johns Rivers where saline ground water may be present. Lake County shall prohibit placement of wells or well fields in locations that have the potential to degrade or contaminate water supplies from saline ground water and shall cooperate with the Water Management Districts in determining the safety of the siting of any wells requiring a consumptive use permit within areas known to be experiencing or vulnerable to saline ground water.

Policy 3.1.17 Protect Recharge Areas/Conservation Measures

Through land use strategies including but not limited to a reduction of land use density and intensity, the County shall protect the rate and volume of recharge in protected recharge areas.

Policy 3.1.18 Springsheds /Conservation Measures

Through land use strategies including but not limited to a reduction of land use density and intensity within springsheds the County shall protect the water quality and discharge volume from springs.

Policy 3.1.19 Monitor Ground Water Impacts

The County shall monitor and evaluate the use of septic systems, water reuse systems, and public water supplies within aquifer protection zones to determine impacts on groundwater quality and quantity and, if appropriate, recommend the adoption and development of additional regulations governing their use.

Policy 3.1.20 Regulate and Monitor Septic Tanks

The County shall develop and implement guidelines and standards in the LDRs to regulate the location and use of septic tank systems in accordance with the Sewer Sub-Element. If approved for use by the County, septic tanks and drain fields shall be located away from the most environmentally-sensitive portions of the site, including wetlands, floodplains, and karst features. Except for existing platted lots, the County shall not approve the use of septic systems for new development in excess of one unit per net buildable acre.

The County, in cooperation with the local DOH, shall work toward the development of an inspection, maintenance and repair program for all septic tanks within the County.

Policy 3.1.21 Meet Non-Potable Water Use Demand

The County shall coordinate with federal, state, regional and local agencies to implement programs and policies that require that non-potable water use demands be met using water of the lowest quality supply, which is both available and acceptable for the intended application. The County shall require that water reuse or reclamation be used wherever economically and ecologically feasible to reduce groundwater or surface water withdrawals for applications which do not require potable water. Educational materials shall be distributed to residents on private water systems informing them of alternatives.

Policy 3.1.22 Use of Drainage Wells

The County shall discourage the practice of draining or injecting stormwater, wastewater, or surface water into the aquifer through drainage or injection wells. The County shall require the plugging and abandonment pursuant to water management district rules of existing unpermitted drainage and injection wells situated within the County.

Policy 3.1.23 Protection of Sinkholes and Surface Water Basins with Internal Drainage

The County with the assistance of other federal, state, regional and local agencies shall identify karst features using the Florida Aquifer Vulnerability Assessment (FAVA), Wekiva Aquifer Vulnerability (WAVA) and other professionally acceptable methodologies. Within areas containing sensitive karst features, the County shall at a minimum require storm water treatment to protect the Floridan Aquifer from contamination consistent with guidelines contained in the document *Protecting Florida's Springs—Land Use Strategies and Best Management Practices* by the Florida Departments of Community Affairs and Environmental Protection dated November 2002. Land uses within these basins shall be tightly regulated so as to restrict activities with the potential to cause adverse impacts on the quality of water in the Floridan Aquifer. The use of karst features having an aquifer connection for stormwater or wastewater disposal shall be prohibited.

Policy 3.1.24 Comply with Wastewater Treatment and Reuse

The County shall require that the disposal of effluents from all wastewater treatment plants comply with Federal, State, WMD and local regulations. A remedial action and enforcement plan, which encourages non-caustic treatment methods, shall be implemented through the LDRs. The County shall cooperate with municipal and private utilities in preparing a grey water treatment and reuse program and shall address the needs of this program within the Comprehensive Plan and Land Development Regulations.

Policy 3.1.25 Program for Establishment of Public Wellfields

The County shall participate with federal, state, regional and local agencies in the mapping and identification of areas within the county and/or zones within the Floridan Aquifer where ground water quality is good, the potential for groundwater contamination is low, sinkhole potential is slight and where potential negative impacts to spring flow, groundwater volume, and wetlands are low. Once these areas are determined, the County will encourage the use of these areas for regional and sub-regional water supplies to implement measures to protect these areas for future well field use.

Policy 3.1.26 Adopt Well field Overlay Zones

The County shall update the well field protection program and siting criteria contained in the LDRs. A map of all well fields and protected wellheads shall be maintained to ensure that incompatible uses are not permitted within the setbacks from protected wells or well fields. The County shall pursue the establishment of interlocal agreements to ensure the protection of well-fields and well-field protection zones.

Policy 3.1.27 Investigation of Aquifer Storage and Recovery Technologies

The County shall support research and evaluation projects that evaluate the use of aquifer storage and recovery (ASR) technologies and practices. The County shall cooperate with federal, state, regional and local agencies in ASR research and development projects.

OBJECTIVE 3.2 SURFACE WATER

The County shall evaluate and identify sources of surface water pollution within the County and coordinate the development and implementation of pollution abatement methods and programs with local governments, State, and Federal agencies.

Policy 3.2.1 Assessment Procedure

The County shall identify water bodies including lakes, rivers, streams, springs and spring runs, and develop and maintain levels of sampling that will describe existing conditions that will be essential to monitor short and long term changes. The County shall partner with and use the expertise of the USGS, FDEP, and the water management districts to accomplish these investigations. The design, parameters, and protocols including the need for more intense sampling shall be evaluated on a periodic basis to insure that high quality information is acquired.

Policy 3.2.2 Water Quality Improvement

The County shall implement a program to identify and improve surface water quality associated with stormwater runoff within receiving waters that are below established standards.

Policy 3.2.3 Surface Water Quality Restoration

The County shall continue to participate in surface water restoration programs in cooperation and coordination with the state for programs such as, but not limited to, SJRWMD's SWIM plans for Lake Apopka and the Upper Ocklawaha River Basin Stormwater Management Systems

Policy 3.2.4 Stormwater Management Systems

Stormwater management systems shall employ the most cost-effective pollutant control techniques available that are consistent with sound environmental management, and which provide the greatest efficiency in stormwater runoff pollutant removal.

Policy 3.2.5 Stormwater Management Requirements

The County shall require that all new developments utilize stormwater management systems that are designed to meet the adopted level of service as found within the Stormwater Sub-element Goals, Objectives and Policies for the specified design storm.

Policy 3.2.6 Surface Water Quality and Land Use Guidelines

The County shall continue to promote land use decisions which limit the density of lakefront and stream shoreline development. Maximum densities and shoreline buffers shall be established in the FLUE & LDRs based on the provision of centralized water and wastewater facilities. Where the provision of centralized services are required, densities shall conform to that which is compatible with the protection of shoreline values and the surrounding area.

Policy 3.2.7 Lakeshore Protection

To protect lakefront and wetland areas from the encroachment of development, the County shall implement the following shoreline protection standards, incorporated within the Land Development Regulations:

- The County shall establish a minimum setback of 50 feet from the ordinary high water line or as far landward as possible based on the depth of the lot, except for water-dependent development such as docks.
- The County shall require a 100 foot setback, or a setback as far landward as possible based on the depth of the lot, from the ordinary high water line of lakes and wetlands for the installation of septic tanks and drain fields in addition to the requirements of Chapter 10D-6, F.A.C.
- The County shall require compliance with FDEP regulations in Chapters 16C-20 and 18-20, F.A.C., regarding removal of shoreline vegetation. In addition, the County shall extend the provisions of Chapter 16C-20, F.A.C., so as to make the provisions applicable to all waters of the County. Provided, however, the extension of this policy shall be implemented in a manner so as to not unreasonably infringe upon the common law or statutory riparian rights of the upland riparian property owners.
- The County shall prohibit the disposal of yard and other wastes along the shoreline and in wetlands.
- In order to protect the quality and quantity of surface water and provide habitat for semi-aquatic or water-dependent terrestrial species of wildlife, upland buffer zones shall be established for vegetation occurring within the 100 year floodplain.

Policy 3.2.8 Vegetated and Functional Littoral Zone

The County shall require establishment of a vegetated and functional littoral zone as part of any new surface water management system that consists of or is adjacent to lakes and wet detention areas greater than 0.5 acres in size.

Policy 3.2.9 Mosquito and Aquatic Plant Control Guidelines

The chemical control of aquatic plants, mosquitoes, animal pests, or undesirable fish shall be performed in a manner that will minimize the degradation of ecological functions and surface water quality. The employment of biological and mechanical pest and/or aquatic weed control management practices shall be applied, as appropriate within environmentally sensitive areas, including OFWs.

Policy 3.2.10 Wastewater Treatment Plant Effluent Discharge

The County shall prohibit the discharge of wastewater treatment plant effluent and reuse water into the surface waters of the County.

Policy 3.2.11 Waterless Toilets and Grey Water Systems

In cooperation with the local DOH office, the County shall encourage the use of waterless toilets and the use of home-based grey water systems in accordance with state regulations.

Policy 3.2.12 Other Point Source Pollution Discharges

The County shall continue to follow and enforce its rules relating to all pollution sources. The County shall require all point source discharges to recycle and/or treat wastewaters and pollutants onsite in conformance with State and Federal rules and regulations. The County shall continue to have its rules codified in the County Code of Ordinances and shall be made part of the County LDRs.

Policy 3.2.13 First Flush Diversion for Stormwater Management Systems

The County shall, through the Land Development Regulations, require that new or redesigned stormwater management systems that use wetlands or wet detention systems direct the first flush of stormwater to separate detention or retention facilities.

Policy 3.2.14 Best Management Practices

The County shall participate in initiatives that support water conservation, water reuse and BMPs to minimize the impact of agricultural, horticultural, silvicultural, construction, and landscape practices to surface water quantity and quality, wetland and floodplain areas.

Policy 3.2.15 Comply with Existing Ordinances

In addition to the Water Conservation and Sensitive Lands Plan, all activities permitted within designated wetland and flood prone areas, including agriculture, silviculture, and landscape practices shall, at a minimum, comply with the County's Wetland, Flood and plant Ordinances to ensure the protection and function of these resource areas.

Policy 3.2.16 Evaluate BMPs

The evaluation of BMPs shall be coordinated with federal, state, regional and local agencies. The evaluation shall include a review and incorporation of applicable BMPs established by the agencies identified above as well as by public-private partnerships such as Clean Marina and programs created by non-profit organizations such as Audubon International.

Policy 3.2.17 BMPs for the Control of Erosion and Sedimentation

BMPs for the control of soil erosion and sedimentation shall be employed for all road construction, development and agricultural activities in order to protect natural water bodies, watercourses and wetlands from siltation. BMPs shall also be employed, as necessary, to protect the function of stormwater management systems (e.g., exfiltration systems) from excess sediment loads. Erosion and sediment control BMPs include those of the NRCS, FDOT, FDEP, FDACS, and IFAS or other agencies.

IMPLEMENTATION MECHANISMS

Require the LDRs to incorporate the BMPs for the following activities: urban land uses, construction, agriculture, silviculture, urban stormwater design, onsite wastewater disposal, hydrologic modification, and activities in forested wetlands.

Cooperate with FDACS, the Lake County Extension and NRCS Offices to develop conservation management plans and incentives for agricultural operations.

Policy 3.2.18 Marina and Boating Guidelines

Marinas which service boats with on-board sewage facilities shall be required to provide sewage pump out and treatment facilities and to provide for appropriate effluent disposal methods.

Policy 3.2.19 Protect Waters and Watersheds

The County shall participate in programs at the local, regional, state, and federal levels to afford protection and management of land in watersheds and in water areas given special protection status by law, rule or ordinance. These areas shall include but not be limited to the GSACSC, WRPA, WSA, the Wekiva-Ocala Greenway, the Wekiva River and its tributaries, the Ocklawaha River, the St. Johns River, OFWs, and OLWs. All proposed development activities within the 100-year floodplain shall be required, prior to approval, to demonstrate that water quality and floodplain functions and values shall not be adversely affected.

Policy 3.2.20 Outstanding Lake Water Program.

The County shall implement an OLW program that will identify those water bodies that possess exceptional water quality and/or habitat for aquatic, terrestrial, and avian wildlife, including designated species habitat, or possess strong hydrogeological logical connection with the Floridan Aquifer. Water quality standards, nutrient loading capacities, and use criteria shall be established for these OLWs to ensure their conservation. These water bodies will be regulated to prohibit further degradation of the environment; consideration will be given to noise levels, light levels, water quality, and significant adverse impacts. Lake County shall amend the Comprehensive Plan and LDRs as appropriate to identify OLWs and implement policies for their protection.

Policy 3.2.21 Map Outstanding Florida Waters

The Wekiva River, its tributaries, and waters designated as “Outstanding Florida Waters” or “Outstanding Lake Waters” shall be included on maps and GIS coverages prepared for use in regulatory decisions by the County.

OBJECTIVE 3.3 SPRINGSHEDS

The County shall protect and restore, to the maximum extent possible, sensitive areas within and adjacent to all springsheds, including springs, seeps, recharge areas, sinkholes, caves, and other karst features. The following policies shall apply within springsheds, including but not limited to those in the Wekiva Study Area.

Policy 3.3.1 Identification and Protection of Springshed Resources

The County, in cooperation with federal, state, regional and local agencies, shall use the Floridan Aquifer Vulnerability Assessment, the Wekiva Aquifer Vulnerability Assessment, ground water models and other tools as appropriate, to identify and map springs and springsheds, and to designate Springshed Protection Zones (SPZs) to protect the springshed and spring systems resources and designate appropriate land uses in these zones.

In and around critical springshed resources and sensitive springshed area, low density and intensity land uses will be designated, including conservation lands, silviculture, parks and recreation areas, and pastures.

Primary Springshed Protection Zones: Preferred land uses will be rural low density or low intensity uses including preservation, conservation, recreation and open space. In addition, long-crop rotation silviculture and unimproved rangeland uses are appropriate within the primary zone.

Secondary Springshed Protection Zones: Preferred land uses will be rural transitional density or low intensity uses including conservation, recreation and open space, silviculture, and rangeland.

Policy 3.3.2 Avoid Inappropriate Uses in Springshed Protection Zones

Within the primary and secondary protection zones, avoid mining, industrial and heavy commercial land uses, golf courses, and urban uses with extensive impervious surfaces. Agriculture shall implement BMPs to protect primary and secondary protection zones.

Policy 3.3.3 Acquire Land in Springshed Protection Zones

The County shall seek to protect primary springshed protection zones through the acquisition of land for conservation or through the purchase of easements in these areas. Karst features with the potential to impact ground and surface water quality shall be given priority consideration for acquisition by the County.

Policy 3.3.4 Development Practices in Springsheds.

In addition to providing for consistency with all provisions of the Future Land Use Element, new development and the expansion of existing development within springsheds shall be required to employ Low Impact Development (LID) and Best Management Practices identified in the DEP/DCA Publication "Protecting Florida's Springs—Land Use Planning Strategies and Best Management Practices." Existing development shall be required to employ Low Impact Development practices and BMPs, to the greatest extent possible. Land Development Regulations shall be adopted to specify the required practices.

Policy 3.3.5 Open Space and Buffers within Springsheds.

The County shall require a minimum percentage of dedicated open space for new development within identified springsheds, including the Wekiva Study Area (WSA),All new development projects in designated springshed protection zones will provide at least 50 percent dedicated open space consistent with the Future Land Use Element. Development will be clustered on the least sensitive portion of the development site and will establish undisturbed buffer areas of at least 100 feet, adapted from those developed for the Wekiva, Econlockhatchee, and Suwannee Rivers, for protection of karst features with an aquifer connection and to minimize stormwater impacts. Setback standards established within the Future Land Use Element shall apply within the Wekiva Study Area.

Policy 3.3.6 Protect Springsheds and Karst Features Through Purchase

The County may use revenues and monies that may become available to match or leverage funds for private or public acquisition programs including but not limited to the Florida Forever Program, the Florida Community Trust, and the Lake County Land Acquisition Program and any other existing or newly implemented program to acquire fee simple ownership or less than fee ownership through conservation easements. Karst features directly impacting or showing the potential to impact ground and surface water quality should be considered for acquisition by the County with priority given to those areas where acquisition would protect the health and welfare of the citizens and environment.

Policy 3.3.7 Create Open Areas within Springsheds

The County may identify other approaches to create open areas within the springsheds such as connecting existing dedicated open space areas, trails, pedestrian pathways and, where appropriate, utility corridors to form a greenway system.

Policy 3.3.8 Water Quality Monitoring Within Springsheds

The County shall continue its springs sampling program on a quarterly basis. Regular spring flow measurements shall also be included as a part of this monitoring program. This program shall also provide for periodic sampling and testing of the surface and ground water quality within springsheds and springshed protection zones. Monitoring programs shall be coordinated with sampling and testing programs of the USGS, Florida Department of Environmental Protection, the Water Management Districts and other federal, state, regional and local agencies. Funding sources shall be sought to enhance the local program.

Policy 3.3.9 Environmental Education

The County shall establish environmental programs to educate the public and community leaders about the relevance to their community and region of the springs, springsheds, springshed protection, ground water, aquifers, water pollution and karst features, and the vital hydrological system of which they are a part. The County shall formulate a media campaign to enhance the environmental literacy of the public and community leaders with respect to water resources, natural values and threats facing local springs and springsheds.

The County shall coordinate with local colleges, the school board and individual schools to develop environmental education programs for school-aged children regarding springsheds, water bodies, watersheds and ground water. The educational tools of the Lake County Water Resource Atlas shall be included in these programs.

Policy 3.3.10 Coordinate with Local Communities

Lake County shall coordinate with local communities to develop environmental education programs regarding springsheds, water bodies, watersheds and ground water. The educational tools of the Lake County Water Resource Atlas shall be included in these programs.

Policy 3.3.11 Require Use of BMPs for Agricultural and Silvicultural Practices

Within springsheds, the County shall require silviculture activities and to use best management practices that are compatible with the need to protect springsheds and conserve water resources. The County shall require compliance with best management practices outlined in "Silviculture and Agriculture Best Management Practices Manuals" (Florida Department of Agriculture and Consumer Services), and "Protecting Florida's Springs—Land Use Planning Strategies and Best Management Practices (DEP/DCA)". The County shall encourage long-crop rotation silviculture and unimproved pasture within the primary zone and minimum tillage farming elsewhere within the springshed.

The County shall work with federal, state, regional, and local agencies, and existing agricultural extension programs to educate, encourage and assist farmers and the agricultural industry within springsheds to use best management practices that minimize use of water, fertilizers, herbicides and pesticides and that reduce erosion.

Policy 3.3.12 Encourage Residential and Commercial use of BMPs

The County shall encourage residential and commercial land owners within springsheds to use BMPs, including Florida-Friendly landscaping practices and guidelines provided by the Florida Yard and Neighbors program to reduce the use of water, fertilizer, herbicides, and pesticides.

Policy 3.3.13 Encourage Use of Florida-Friendly Landscaping

The County shall encourage the use and application of Florida-Friendly Landscaping and Florida-Friendly Yard practices to improve water quality and reduce the consumptive use of water. The County shall evaluate and adopt Florida-Friendly Landscaping regulations which, at a minimum, set standards for the use of native and drought tolerant species, removal of exotic plants, vegetative clearing and efficient irrigation to maximize conservation of water resources. The evaluation process shall consider the existing arbor and landscaping requirements of the LDRs requirements.

Policy 3.3.14 Regulate Land Use Activities

Within 12 months of the effective date of the Comprehensive Plan the County shall adopt Land Development Regulations that regulate land use activities that have potential to adversely impact springsheds. The County shall direct inappropriate land uses away from karst areas with an aquifer connection, springshed protection zones, protected recharge areas and most effective recharge areas. Inappropriate land uses include intense animal operations, mining, landfills, industrial uses with potential to contaminate the aquifer, heavy commercial, golf courses, uses with extensive impervious surfaces, and uses involving hazardous chemicals or materials. The County shall require the use of best management practices and performance standards to maximize open space, limit impervious surfaces and turf grass areas, promote protection of natural vegetation, promote the use of pervious parking areas, and treat stormwater to protect water quality.

Policy 3.3.15 Require Appropriate Stormwater Management Systems

The County shall require the construction of site-appropriate stormwater management systems to minimize leaching or discharge of nutrients and to ensure that post-development recharge rates equal pre-development recharge rates within protected recharge areas and most effective recharge areas. Impervious surface ratios shall be calculated based upon a recommendation of the site-specific hydrogeological report. Net retention and infiltration of pre-development recharge to the aquifer system must be maintained as determined from calculations presented in the site-specific hydrogeological and geotechnical reports. The County shall require compliance with all evaluation and design requirements specified within the Public Facilities Element and LDRs for the Wekiva Study Area.

Policy 3.3.16 Require Open Space and Buffers within Springsheds

The County shall require a minimum percentage of dedicated open space for new development within identified springsheds, including the Wekiva Study Area (WSA) consistent with the Future Land Use Element. Clustering techniques shall be used to create open space for aquifer recharge and protection of karst features. Development will be clustered on the least sensitive portion of the development site and will establish undisturbed buffer areas of at least 100 feet from karst features with an aquifer connection. Setback and buffer standards established within the Future Land Use Element shall apply within the Wekiva Study Area.

Policy 3.3.17 Guide Development Away from Areas of Aquifer Vulnerability and Springshed Protection Zones

The County shall guide development away from areas of aquifer vulnerability and springshed protection zones identified by FAVA, WAVA or other acceptable methodology approved by the County. A variety of approaches may be used including designation of land use type and density restrictions, buffer requirements, land acquisition and conservation easements.

Policy 3.3.18 Identify Karst Features within Proposals for New Development

Karst features shall be accurately identified within development proposals. The County shall require strategies for protecting these features during construction and after development, which promote the following:

- Inclusion of karst features into pervious open space areas;
- Use of landscape design principles to incorporate karst features as aesthetic elements;

- Pretreatment of stormwater runoff, in accordance with applicable federal, state, regional and local regulations, prior to discharge to karst features, and prohibition of stormwater discharge to karst features determined to have an aquifer connection;
- Prohibition of discharge of wastewater effluent to karst features; and
- Perimeter buffering around features to maintain natural function, edge vegetation, and structural protection.

Policy 3.3.19 Establish a Water Quality Protection Strategy for Springsheds

The County shall adopt design criteria for stormwater management practices that:

- Minimize the leaching or discharge of nutrients and pollutants;
- Use karst area requirements similar to those required by the SJRWMD;
- Provide funding for the Florida Yards and Neighborhoods program to educate the public about proper lawn and landscaped area fertilization and irrigation;
- Incorporate the principles of the Florida Yards and Neighborhoods Program into local landscaping ordinances;
- Require frequent and active street sweeping;
- Adopt water conservation programs;
- Educate the public about the proper operation and maintenance of septic tanks;
- Implement a local septic management program to assure that these systems are regularly inspected, pumped out, and brought up to current standards whenever a parcel is sold; and
- Promote a local stewardship "adopt a spring" type program and other incentive and volunteer springshed awareness and protection programs.

Policy 3.3.20 Golf Courses within Springsheds

The County shall require that all golf course siting, design, construction, management, and monitoring practices within springsheds, including within the WSA, implement golf course practices described in the "Protecting Florida's Springs Manual-Land Use Planning Strategies and BMPs" (FDCA and FDEP). In addition, the County shall implement Land Development Regulations to further govern the development and management of golf courses within springsheds and aquifer protection zones.

Policy 3.3.21 Landscaping within the WSA

Within the Wekiva Study Area, the County shall require that all development implement BMPs described by the principles and practices of the Florida Yards and Neighborhoods Program established by the University of Florida. New development within the WSA shall be designed to limit turf grasses and landscaping requiring regular irrigation to no more than 50% of all pervious surface areas, including residential lots. Drought tolerant vegetation shall be required and appropriate native vegetation encouraged. The County shall adopt LDRs as required to implement these provisions, utilizing "Guidelines for Model Ordinance Language for Protection of Water Quality and Quantity Using Florida Friendly Lawns and Landscapes" (FDEP).

Policy 3.3.22 Landscape and Lawn Care Education

The County shall establish an education program for homeowners and landscape and lawn-care professionals regarding responsible practices that limit water use, fertilizers and pesticides such as those produced by the Water Management Districts.. This program shall be applicable county-wide and specifically for the WSA.

Policy 3.3.23 Wastewater Treatment Systems within Environmentally Sensitive Areas

The County shall support and require compliance with all federal, state, regional and local agency regulations relating to the location and operation of central wastewater treatment facilities, including advanced standards for Advanced Wastewater Treatment (AWT) facilities within springsheds and the WSA adopted pursuant to FDEP rule. The County shall coordinate with the Florida Department of Health, and other regulatory agencies having jurisdiction, regarding the development and implementation of rules and regulations relating to septic systems and onsite sewage treatment and disposal systems that may be required within environmentally-sensitive areas, such as springsheds and the WSA. The County shall cooperate and work with the DOH toward the establishment of a mandatory pump-out program for septic system within the WSA, similar to the five-year pump out program utilized within the GSACSC.

Policy 3.3.24 Incorporate Best Management Practices

Within 12 months of the effective date of the Comprehensive Plan, the County shall adopt LDRs for springshed protection and incorporate BMPs contained in the document "Protecting Florida's Springs Manual-Land Use Planning Strategies and BMPs" (FDCA and FDEP). These LDRs shall include but not be limited to standards for the use of native and drought tolerant species, clearing of vegetation, landscaping and arbor requirements, agriculture and silviculture practices, aquifer recharge, use of septic systems, creation of open space and efficient irrigation to maximize conservation of water.

OBJECTIVE 3.4 FLOODPLAINS

The County shall protect the 100-year floodplain areas so that natural hydrological functions are maintained to the greatest extent practical.

Policy 3.4.1 Protect Floodplains

The County shall establish Land Development Regulations pertaining to floodplains that accomplish the following:

- Restrict uses which are dangerous to health, safety, and property, and minimize public and private losses due to flood conditions;
- Prohibit land filling and grade changes where such activity will cause erosion or inhibit flood waters;
- Require development to comply with the requirements and rules of the National Flood Insurance Program and Florida DOH; and
- Require all subdivisions and site plans to maintain pre-development run off characteristics, provide compensating storage, comply with wetland regulations, and dedicate post-

development flood prone and wetland areas to the County, state agency or other appropriate conservation entity as a conservation easement.

Policy 3.4.2 Floodplain Management Program

The County shall develop a strict floodplain management program designed maintain natural hydrologic functions, preserve wetlands and other natural floodplain features. The County shall cooperate with the SJRWMD and the SWFWMD to identify significant floodplains for restoration.

Policy 3.4.3 Flood Information Updates

The County using best available technology shall update flood maps in areas not mapped by FEMA and cooperate with all agencies to keep flood information up to date, evaluate the flood-handling capacities of natural drainage systems and develop flood prevention management guidelines.

Policy 3.4.4 Preserve Flood Storage Capacity

The County shall amend the Lake County Floodplain Ordinance and LDR as necessary to prohibit new development from causing a net loss of flood storage capacity.

Policy 3.4.5 Protect Natural Fluctuation of Surface Waters

The County shall require that the natural hydrological character of surface waters be maintained, and promote protection and restoration of natural water systems in lieu of structural alternatives and modified systems. Natural surface water flows, including sheet flow, shall be maintained. Surface water shall be allowed to fluctuate on a seasonal basis. The County shall cooperate with federal, state, regional and local agencies to develop a natural lake level fluctuation plan for lakes currently regulated by water control structures, as feasible.

Policy 3.4.6 Protect Floodplain Vegetation

In order to protect the quality and quantity of surface waters and provide habitat for semi-aquatic or water-dependent terrestrial species of wildlife, Lake County shall establish Land Development Regulations for buffer zones within the floodplain of wetlands and riverine systems consistent with federal and state agencies. Lake County shall require buffer zones of a least 25 feet for vegetation occurring within the 100-year floodplain of riverine systems, or as required by federal and state agencies, whichever is more stringent. In order to assist in providing for viable wildlife corridors, Lake County shall require the protection of 100-year floodplains that connect significant isolated wetlands and environmentally sensitive areas identified by state and federal agencies through Land Development Regulations.

Policy 3.4.7 Permitted Use of Floodplains

The 100 year floodplain as designated by FEMA, the County or other federal, state, regional or local agencies may be utilized for storage of floodwater, passive recreation, conservation, and water dependent activities. Development, unless otherwise provided for in this policy, shall not encroach into the 100 year floodplain with exception of:

- Recreation facilities limited to the following: boardwalks, hiking/horseback trails, picnic areas, and primitive camp sites in designated recreation areas. Recreational facility structures may be permitted within floodplain areas that do not require cleared open

areas greater than 10,000 square feet and that do not contain a permanent structure exceeding 1,000 square feet.

- Conservation facilities limited to the following: stormwater management facilities designed to protect the natural surface water flow regime and hydroperiod and groundwater quality or quantity; fire lanes and fire towers; wildlife monitoring stations and facilities designed to protect nesting, feeding, or habitat areas for designated species, or to support the propagation of other game and non-game species; facilities designed to protect an archaeological or historical site; facilities designed to retard or eliminate soil erosion problems; and facilities designed to eradicate exotic vegetation.

In the event that development is proposed within the 100 year floodplain the following shall apply:

- Compensating storage shall be required;
- The natural hydrological character and flow regime of surface waters shall be maintained;
- Natural surface water flows, particularly, sheet flows, shall be maintained;
- Surface water quality and quantity shall be maintained; and
- Floor elevations shall be raised eighteen inches (18) above the 100 year flood elevation.

OBJECTIVE 3.5 WETLANDS

The County shall protect wetlands and the functions provided by wetlands. These functions may vary depending upon the type, location, and classification. The County shall continue to adopt regulations that protect and conserve wetlands, including criteria for identifying the significance of wetlands.

Policy 3.5.1 Wetland Mapping

Lake County shall work with federal, state, regional and local agencies to maintain accurate wetland maps and GIS layer information using the best available data and technology. The actual extent of wetlands on a parcel of land proposed for development shall be determined by a site-specific delineation, subject to confirmation by the County and/or other appropriate agencies.

Policy 3.5.2 Establish Wetland Classification System

Consistent with the Future Land Use Element, Lake County shall work with federal, state and local agencies to establish a classification system and criteria for assessing the significance of wetlands based on factors including but not limited to size, location, vegetation, and functional integrity. Once this activity is complete, the County shall update this Comprehensive Plan and the Land Development Regulations as appropriate to include policies protective of wetlands based on this classification system.

Policy 3.5.3 Protection of Wetlands

The County shall implement policies and LDRs to protect and preserve wetlands and other environmentally sensitive areas for natural water management and hydrologic functions; for use by aquatic and wetland dependent wildlife; as habitat for endangered, threatened or species

of special concern; and for passive recreation. Within the WRPA, WSA, Wekiva-Ocala Area and GSACSC, wetland impacts, including the placing or depositing of fill within wetlands, shall be prohibited except as necessary to provide for legal ingress or egress to developable upland areas. In such circumstances, enhancements shall be required to maintain wetland connectivity and natural flow regimes.

Policy 3.5.4 Encourage Protection of Isolated and Ephemeral Wetlands

The County shall implement policies and LDRs to protect and preserve isolated and ephemeral wetlands, and the unique functions such wetlands provide, such as habitat for upland amphibians that require a wet environment for part of their life cycle.

Policy 3.5.5 Require Conservation Easements/Dedications

The County shall require conservation easements to an appropriate management agency or recognized mitigation bank as a tool for preserving floodplains, flood prone areas, springsheds, wetlands and other ecologically significant communities to the extent allowed by law.

Policy 3.5.6 Enforce Wetland Regulations

The County shall continue to enforce and apply all special federal, state, regional and local regulations that relate to protection of wetlands and their functions.

Policy 3.5.7 Assign Future Land Use Designations

The County shall assign Future Land Use Designations contained within this plan as appropriate to direct incompatible uses such as higher densities and intensities of development away from wetlands. Special planning techniques and overlay districts shall also be used to cluster development away from wetlands.

Policy 3.5.8 Wetland Survey and Delineation

The County shall require that a wetland survey and delineation be conducted by a certified biologist, and submitted to the County as part of site plan review. This wetland survey and delineation may be performed either by the applicant or subject to verification by the County and agency with exercising jurisdiction. For developments consisting of twenty (20) acres or more, the applicant shall prepare a study which evaluates the quality and integrity of existing wetland systems and establish areas for wetland preservation and/or restoration.

Policy 3.5.9 Wetland Requirements for Site Plans

The County shall require site plans for all proposed development, which shall include the following information pertaining to wetlands:

- Identification of the location and extent of wetlands on the property to be developed. Wetland delineations shall be determined or verified in the field by agencies exercising jurisdiction. This cost shall be the responsibility of the applicant;

- Assurances that the normal flow regime and quality of the historic hydroperiod will be maintained after development;

- Demonstration that development proposed on site shall be clustered away from wetland areas;

- Use of appropriate upland buffers, consistent with the policies of this Comprehensive Plan; and

- Provision for residential development credit applied to the upland portion of the site, at a rate not to exceed one (1) dwelling unit per five (5) acres of wetland.

Policy 3.5.10 Minimize the use and impact to wetlands.

Except for water dependent activities and access, there shall be no dredge or fill activities in wetlands. In those instances where dredge or fill activities are authorized, the applicant must demonstrate that (a) there is no other reasonable, practical or economical alternative, (b) without the dredge or fill activity the property owner will be deprived of all reasonable uses of the property, and (c) the developer can adequately mitigate for the dredge or fill activity.

Development shall be directed away from the wetlands and conducted in a manner to protect the vegetation, habitat and the water storage, water quantity, water quality, and recharge functions of the wetlands.

Policy 3.5.11 Wetland Dedication

To the extent practicable, wetlands within a project shall be dedicated to the County, conservation agency, or non-profit conservation entity, or shall be placed in a conservation easement that shall run in favor of, and be enforceable by a homeowners' association, conservation agency, or the County, at its option. In determining whether it is practical to convey a conservation easement to a homeowners' association or other entity, the County shall take into account the following factors: (1) the number of lots in the subdivision; (2) the size of the subdivision; (3) the size of the wetlands; and (4) the location of the wetlands. The conservation easement shall require that wetlands be maintained in perpetuity in their natural and unaltered state. To the extent practicable, wetlands shall not be included as part of any platted lot, other than a lot platted as a common area, which shall be dedicated for reservation or passive recreational use.

Policy 3.5.12 Establish Minimum Buffer Requirements

Upland buffers adjacent to wetlands provide habitat for wetland dependent species, and assist in minimizing the deleterious effects of development adjacent to the wetland. The County shall require that all developments provide natural upland buffers adjacent to wetlands. These buffers shall be of such size to ensure that the quality and quantity of surface waters and the habitat for aquatic and wetland-dependent species of wildlife are not adversely affected by the proposed development. Buffers shall be determined to start landward from the wetland jurisdictional line as determined in the field by the permitting agency. The following minimum buffer requirements shall apply to isolated wetlands, non-isolated wetlands and rivers and streams:

Table CON 2 – Wetland Minimum Buffer Requirements

WETLAND SYSTEM	MINIMUM

isolated	**15 feet**
non-isolated	**25 feet**
rivers and streams	**50 feet**

In situations where more extensive buffering is necessary, the County may alternatively allow for the use of a variable natural upland buffer adjacent to wetlands. The purpose of a variable buffer is to provide additional protection to areas that are considered more environmentally sensitive than others, provided that the aggregate buffer area is not less than that required pursuant to the previous standard. Buffers shall be determined to start landward from the wetland jurisdictional line as determined in the field by the permitting agency. The following standards shall apply to variable buffers:

Table CON 3 – Variable Wetland Buffer Requirements

WETLAND SYSTEM	MINIMUM	AVERAGE
isolated	**10 feet**	**25 feet**
non-isolated	**15 feet**	**50 feet**
rivers and streams	**35 feet**	**100 feet**

Uses allowed in buffers are limited to: fishing piers, docks, walkways, passive recreation activities, and limited stormwater facilities. Buffers without native vegetation shall be re-vegetated with indigenous habitat to protect the quality of the adjacent isolated wetland, wetland system, river or stream. A buffer of native upland edge vegetation shall be provided or preserved on new development sites.

To the extent that federal, state or regional requirements exceed the minimum wetland buffers established here, the County shall require compliance with the stricter standard. The County shall require compliance with all riparian and wetland buffer requirements for the Wekiva River System and other Outstanding Florida Waters.

Policy 3.5.13 Wetland Impacts and Mitigation

In the consideration of development proposals, the County shall prefer solutions that preserve or restore the natural structure and connectivity of wetlands and that minimize adverse impacts to wetlands, over development alternatives that result in the loss or degradation of wetland systems. The County shall, on a case by case basis, reserve the right to require the protection of wetlands on site and may deny a proposal to destroy or alter wetlands. If wetland mitigation is allowed, the County shall require compliance with all federal and state regulations. If wetlands are taken, mitigation shall be performed within the same drainage basin where the loss occurred in order to ensure no net loss of wetland functionality.

Policy 3.5.14 Wetland BMPs

Lake County shall adopt BMPs for wetlands based on the most current available publications. All agricultural and silvicultural activities within wetlands shall comply with applicable BMPs established by the agencies identified above as well as by public-private partnerships such as

Clean Marina and programs created by non-profit organizations such as Audubon International, including all criteria and setbacks for stream and wetland management zones.

Policy 3.5.15 Surface and Groundwater Withdrawal Impacts on Wetlands

Lake County shall coordinate with the water management districts to limit groundwater and surface water withdrawals which may cause adverse impacts upon natural water bodies, wetlands, and wetland-dependent ecosystems.

GOAL 4.0 CONSERVATION- LAND

OBJECTIVE 4.1 AREAS OF ECOLOGICAL SIGNIFICANCE

The County shall protect and conserve areas of ecological significance. The County shall continue to adopt regulations that protect and conserve these areas.

Policy 4.1.1 Green Swamp Area of Critical State Concern

The County shall preserve the integrity of the Green Swamp as an intact ecosystem of statewide significance by protecting its natural resources including but not limited to hydrologic regimes, wetland and upland communities, floodplain, ecologic connectivity, wildlife, and aquifer recharge.

Policy 4.1.2 Wekiva-Ocala Area

The County shall preserve the integrity of the Wekiva-Ocala Area consisting of the WRPA, WSA, and Wekiva-Ocala Protection Area as an intact ecosystem of statewide significance by protecting its natural resources including but not limited to its springs, springsheds, river system, karst features, wetland and upland communities, floodplain, ecological connectivity, and wildlife. This shall also include the Wekiva-Ocala Greenway that links the Ocala National Forest and lands within the Wekiva River Basin.

Policy 4.1.3 Emeralda Marsh Protection Area

Lake County shall preserve the environmental integrity of the Emeralda Marsh Protection Area., as an intact ecosystem with linkage to the Ocala National Forest by protecting its natural resources including but not limited to hydrologic regimes, wetland and upland communities, floodplain, ecologic connectivity, and wildlife. This area also includes the Emeralda Marsh that is designated as a National Natural Landmark and bird rookery.

Policy 4.1.4 Lake Apopka Restoration Area

Lake County shall preserve the environmental integrity of the Lake Apopka Restoration Area as an intact ecosystem and important bird rookery by protecting its natural resources including, but not limited to, hydrologic regimes, waters, wetlands, floodplain, and wildlife.

Policy 4.1.5 Lake Wales Ridge

Lake County shall establish a program to secure the protection of rare and native upland communities unique to the Lake Wales Ridge.

OBJECTIVE 4.2 HABITAT AND WILDLIFE PRESERVATION

Lake County shall conserve habitat and wildlife populations in order to maintain the health of natural ecosystems and maintain biodiversity. In addition, the county shall cooperate with federal, state, and local agencies to protect and maintain viable habitat for species designated as endangered, threatened, or species of special concern.

Policy 4.2.1 General Wildlife Habitat and Populations

Wildlife in existing natural areas such as surface waters and their perimeters, wetlands, floodplains, and native uplands shall be conserved and enhanced by management techniques which encourage the improvement of biological diversity and wildlife resources. Lake County, through implementation of this Plan and the LDRs, shall maintain species diversity and viable populations of non-listed wildlife species through the provision of open space and public conservation land.

Policy 4.2.2 Neighborhood Wildlife Management Programs

Wildlife habitat within developed areas shall be enhanced through a county neighborhood wildlife management program encouraging such techniques as urban forestry, scenic road preservation, wildflower planting, bird sanctuary areas, wildlife-friendly stormwater systems, and native landscaping.

Policy 4.2.3 Freshwater Habitat and Wildlife

The County shall seek and utilize management plans developed by FFWCC, LCWA, FDEP, and USFWS, and other relevant agencies in developing strategies for the protection and restoration of significant aquatic habitat and aquatic species, including but not limited to species listed as endangered, threatened, or species of special concern.

Policy 4.2.4 Native Vegetation, Habitat, and Wildlife within Development Projects

The County shall require that vegetative communities and wildlife habitats be protected from adverse effects associated with development. The Land Development Regulations shall include provisions to require that development preserve wetlands and portions of developable uplands containing designated species or rare upland habitats. The County shall evaluate its LDRs and code of ordinances (including arbor ordinance), and revise said ordinances and regulations as appropriate to ensure the protection of trees and native vegetation with a target of protecting 50% of trees onsite. As appropriate, a tree replacement ratio may be implemented based on type and caliper. Special consideration shall be given to rare upland habitats and designated species within Ecologically Significant Areas identified in Objective 4.1. Pursuant to this Comprehensive Plan and LDRs, the development review process shall determine the extent to which preservation of vegetative communities and wildlife habitats shall be protected and incorporated into protected open space on a development site.

Policy 4.2.5 Dedication of Environmental Lands within Development Projects

The County shall require that lands which are designated as open space for "preservation" or "conservation" as part of a development project be identified as such in a legal agreement which ensures their protection from future development or other uses that are inconsistent with conservation objectives.

Policy 4.2.6 Development Considerations adjacent to Conservation Areas

The County shall protect conservation area from degradation adjacent to development by conducting impact assessments during the development review process. The LDRs shall stipulate that development projects within an area of 1000 feet of a federal, state, or locally managed conservation area be evaluated for impacts including but not limited to hydrology, water quality, air quality, ambient noise, wildlife populations, natural ecosystems and aesthetics.

Policy 4.2.7 Florida Natural Areas Inventory

Land use planning, development approvals and assignments of priorities for environmental preservation/acquisition and protection programs shall require consideration of the Florida Natural Areas Inventory (FNAI) status of rare or endangered ecosystems.

Policy 4.2.8 Identification and Protection of Wildlife and Habitat Corridors

Lake County shall cooperate with federal, state and local agencies and conservation organizations to identify wildlife and habitat corridors that serve as biological connections between natural areas, and shall implement programs that protect the viability of these corridors. These programs shall include focused land acquisition initiatives, conservation easements, and appropriate regulatory measures.

Policy 4.2.9 Impact of Land Use on Wildlife and Habitat Corridors

The County shall regulate the use of land within or adjacent to wildlife and habitat corridors in a manner consistent with the continued function of those corridors. The County shall require that land use or development proposals demonstrate that wildlife and habitat corridors will not be adversely impacted by a proposed use or activity. In addition to requiring the preservation of corridors, the county shall regulate the density and intensity of adjacent uses, permitted activities, landscaping, lighting, and other factors that may contribute to the function or viability of identified corridors.

Policy 4.2.10 Riparian Habitat Protection Zones

The County shall require compliance with all statutory requirements and regulations pertaining to Riparian Habitat Protection Zones established by state or federal agencies.

Policy 4.2.11 Public Conservation Land Priority

Public conservation land acquisition programs shall consider conservation needs before recreation needs when lands that appear on lists or inventories of rare or endangered ecosystems are selected, to protect designated species and their habitats.

Policy 4.2.12 Identification of Conservation Programs

The County shall identify public and private conservation programs within the County's boundaries.

Policy 4.2.13 Identify and Protect Designated Species and Critical Habitat

The County shall cooperate with State and Federal agencies to determine the presence and habitat distribution of designated species. The County shall cooperate with these agencies to prevent further reductions in designated species populations.

Policy 4.2.14 Predevelopment Survey for Designated Species and Protection from Development

Activities that require the alteration or clearing of habitat of designated species shall be surveyed for occurrences of designated species by a qualified biologist prior to the issuance of a development permit. Development activities that have adverse effect upon a designated species shall require mitigation or shall not be permitted. Where viable habitat for designated species occurs on a site, a management plan protecting these species shall be submitted by the applicant. The management plan shall depict areas to be preserved and describe management activities to provide for viability of the species, utilizing management protocols and guidelines accepted by FFWCC. The plan must be approved by the County in consultation with FFWCC before development is authorized.

Policy 4.2.15 Clustering Development Away from Designated Species

All development proposals shall be compared to FNAI maps and data to determine if the area is known to contain designated species. If it is determined that designated plant or animal species are present on site, development shall be clustered away from those species and their habitat, according to guidelines established by FFWCC.

Policy 4.2.16 Mitigation for Designated Species

Mitigation for species, including relocations, shall be permitted in Lake County only if consistent with applicable State and Federal regulations. If species mitigation is permitted, the County shall require written proof that onsite or offsite mitigation activities have occurred or are scheduled prior to site development. The County reserves the right to perform compliance inspections.

Policy 4.2.17 Management of Private Lands

The County shall encourage proper management of natural communities and designated species on private lands.

Policy 4.2.18 Endangered Species Management Plans

Lake County shall cooperate with the appropriate agencies in identifying habitat ranges for designated species located within the County and shall assist in the preparation of management plans, including mitigation procedures, to ensure the survival of these species.

Policy 4.2.19 Intergovernmental Coordination

The County shall adopt agreements with local governments and State and Federal agencies as necessary, pertaining to the protection and enhancement of designated species. The County shall continue to coordinate with all public agencies listed in the Intergovernmental Coordination element as primary or secondary agencies, whether or not they have regulatory authority over the use of the land.

Policy 4.2.20 Explore a Land Banking Program for Habitat Mitigation

Lake County, in cooperation with the Lake County Water Authority, and other state and regional regulatory and land use management agencies, shall investigate the feasibility of establishing an off-site "land banking" or land trust program as an option for the mitigation of the unavoidable loss of protected rare or endangered lands, natural upland communities, and

wetlands. The monies generated from this program shall be dedicated to the purchase of significant environmentally sensitive lands for preservation.

Policy 4.2.21 Wildlife Consideration within Development Projects

The County shall require the following methodology regarding the development of property potentially containing species designated as endangered, threatened, or species of special concern:

1. As a condition for development approval, the developer/applicant shall be required to complete a site survey of plants and animals including listed species, utilizing the most current wildlife methodology guidelines published by FFWCC and current information from FNAI.
2. Protection of listed species shall be accomplished either through onsite preservation or relocation within the designated area in accordance with a plan acceptable to, and permitted by FFWCC, U.S. Fish and Wildlife Service (USFWS), or other agency having jurisdiction. Incidental taking of listed species shall be prohibited unless the jurisdictional agency determines that a particular group of animals on the site can not benefit from either onsite preservation or relocation. Should such a determination be made, any incidental taking must be expressly and specifically approved by the County. To the extent possible, commensal species shall also be relocated with the designated species.
3. If a listed species is determined to exist on a site within Areas of Ecological Significance identified in Objective 4.1, the following shall apply in the given order of priority:
   a. The developer/applicant must accomplish development in such a fashion as to avoid the habitat of the listed species; or
   b. The developer/applicant must demonstrate to the County that it is not possible to avoid the habitat of said species with the approved use, and then relocate the species on site to an equally suitable area consistent with guidelines published by FFWCC; or
   c. The developer/applicant must demonstrate to the County via site analysis that development with the approved use can not be accomplished through onsite relocation and that a conservation benefit can be achieved for the species and natural community through off-site relocation. Relocation must take place within the Area of Ecological Significance preference given to properties adjacent or close to the donor site. To the extent possible, commensal species shall also be relocated with the designated species.
4. Whether the designated species is protected in place or relocated on or off site, the developer/applicant must assure that the habitat to be occupied by the species will continue to be compatible with survival of that species. The developer/applicant shall be required to dedicate associated habitat to the County, a conservation agency or conservation entity, or shall ensure that a conservation easement or similar legally binding instrument is established over the associated habitat on or off site. A site-specific management plan shall be required for the designated species and associated funding provided as necessary by the developer/applicant.

Policy 4.2.22 Removal of Invasive Exotic Vegetation

A list of invasive exotic vegetation shall be developed by Lake County based on the Florida Exotic Pest Plant Council recommendations. Removal of invasive exotic vegetation shall be

required as a condition of development based on the provisions in the LDRs and when property is acquired for conservation.

OBJECTIVE 4.3 CONSERVATION OF NATURAL UPLANDS

Lake County shall conserve natural uplands in cooperation with federal and state conservation agencies, and shall regulate the development of land to ensure the preservation of natural upland communities.

Policy 4.3.1 Inventory of Natural Upland Communities

The County shall cooperate with agencies and organizations, including but not limited to the LCWA, FFWCC, FNAI, and water management districts to map upland habitat.

Policy 4.3.2 Conservation of Natural Upland Plant Communities

The County shall regulate, and as appropriate, require restoration and preservation of natural upland communities through provisions of the LDRs. The following upland plant communities shall be protected from the impacts of development: pine flatwoods, longleaf pine/xeric oak, sand hill, sand pine, upland mixed coniferous hardwood, mesic flatwoods/dry prairie. This list includes sensitive natural habitats specifically identified by the Wekiva Parkway and Protection Act (longleaf pine, sand hill, sand pine, and xeric oak scrub.)

Policy 4.3.3 Site Survey and Protection of Natural Upland Plant Communities

The County shall require all development proposals of forty (40) acres, or greater, to inventory the type and extent of natural upland vegetative communities occurring on the development site. The survey shall be completed by a qualified biologist and also include a survey of plant and wildlife populations, and indicate the presence of any designated species. The species survey shall utilize a professionally accepted methodology approved by the County in consultation with the FFWCC or appropriate agency having jurisdiction.

In addition, the survey shall inventory corridors important for wildlife movement. If a protected upland plant community identified in the previous policy is identified on site, then those communities shall be preserved for up to 50% of the subject site. Within a clustered development natural upland communities shall be incorporated as common open space. Connectivity shall be maintained among protected upland areas to the greatest extent possible. The County shall have the authority to accept alternatives to onsite conservation that provide for the long-term protection and management of upland communities of equal or greater value elsewhere. Within the Wekiva Study Area, Wekiva River Protection Area and GSACSC development proposals greater than two (2) acres shall require an upland vegetative community inventory. The County shall maintain maps identifying natural resources within the WSA, including but not limited to natural upland communities. These maps are for reference purposes and not intended to substitute for professional site surveys and studies required pursuant to this Comprehensive Plan or the Land Development Regulations.

Policy 4.3.4 Reestablishment of Natural Upland Communities

The County shall seek public and private assistance in propagating natural upland vegetation, especially designated species, from nursery stock in order to reestablish natural upland communities within the county.

Policy 4.3.5 Funding for Conservation of Native Uplands

Lake County shall investigate the establishment of native upland impact fees. The County shall also investigate funding this program through the general fund or other alternatives. If established, this impact fee shall be payable to the County and shall be used by the County for acquisition of native habitat preserve areas.

Policy 4.3.6 Protection of Sensitive Natural Habitat within the WSA

The County shall protect sensitive natural habitat identified by the Wekiva Parkway and Protection Act within the WSA, including Longleaf Pine/Sandhill, Sand Pine, and Xeric Oak Scrub communities, through land acquisition and regulation.

4.3.6.1 Acquisition of Sensitive Natural Habitat

The County shall strive to protect sensitive natural habitat within the Wekiva Study Area (WSA) through land acquisition and the establishment of conservation easements. The County shall utilize funds from the Lake County Land Acquisition Program and partner with federal, state and local governments and agencies, and with non-profit conservation organizations, to the greatest extent possible.

4.3.6.2 Protection of Sensitive Natural Habitat with Development

For new development within the Wekiva Study Area (WSA), a site analysis shall be performed during the development review process to identify sensitive natural habitats. If any such habitat is determined to exist on site, proposed development shall be required to avoid and protect such areas where they exist as follows:

1. Design shall be accomplished to maintain sensitive natural habitat in functional, clustered and contiguous configurations that maximizes use by wildlife and maintains the long-term viability of natural communities. This includes linkages to habitat corridors and greenways where possible.

2. If the sensitive natural habitat identified on site is determined to be of minimal ecological value, the County may accept alternatives to onsite conservation that provide for the long-term protection and management of sensitive natural habitat of equal or greater value elsewhere within the WSA that is not otherwise protected. Such alternatives may include the off-site preservation of sensitive natural upland habitat through fee-simple purchase of conservation easement.

3. The LDRs shall establish criteria for determining which projects warrant the use of alternatives to onsite conservation. Criteria may include but are not limited to size, quality, connectivity, management opportunities, and adjacent uses.

4. Sensitive natural habitats protected onsite shall require a permanent conservation easement. Within a clustered development sensitive natural habitat shall be incorporated as common open space.

4.3.6.3 Management Plan for Sensitive Natural Habitat

Within the Wekiva Study Area (WSA), the County shall require the development and implementation of a management plan for any sensitive natural habitat occupying more than

two (2) acres that is to be protected on or off-site as a result of a development project. This management plan shall be prepared at the expense of the applicant by a qualified professional biologist and provide for the following:

- Removal of invasive vegetation, and replanting with native vegetation as necessary.
- Maintenance of biodiversity, with special emphasis on protection of listed plant and animal species.
- Removal of debris, articles, and structures not permitted by the management plan.
- Limit uses to passive recreation.
- Any additional measures determined necessary to protect and maintain the functions and values of the habitat area while ensuring protection from wildfire.

OBJECTIVE 4.4 SOIL CONSERVATION

Lake County shall support efforts and activities that conserve soils.

Policy 4.4.1 Support Natural Resources Conservation Service

The County shall support the Lake Soil Conservation District with its ongoing countywide program that provides soils evaluation for the Agricultural Extension Service, reviews of development plans, public facilities location, and wetlands identification.

Policy 4.4.2 Coordinate Land Use with Soil Data

The County shall use the most recent "Soil Survey of Lake County and Soil Supplement" as the source of soil interpretation information for countywide land use planning and development review and approval. Land use activities, including densities and intensities, shall be compatible to soil types whose properties are capable of supporting proposed structures, parking, ancillary uses, and facilities, while ensuring public health and safety and protection of the environment, including groundwater resources. The County shall adopt LDRs that stipulate and define performance standards for land use activities, including but not limited to septic systems, proposed to occur on soil types whose development potential is limited in some form or manner.

Policy 4.4.3 Best Management Practices

The County, in cooperation with IFAS, FDACS, and other relevant agencies, shall require adherence to BMPs for agriculture and silviculture operations to prevent soil erosion, and to protect the biological diversity and health of soils. BMPs shall be followed during construction to prevent soil erosion.

Policy 4.4.4 Slope and Land Use

Future Land Use and zoning shall be assigned with consideration to topography. The County shall prescribe land use development limitations for slopes to minimize the impacts of development. The County LDRs shall limit septic tanks on Astatula (AtF) and Lake (LaE) soil types where steep slopes are present. Conservation easements or dedication shall be required where steep slopes are located adjacent to surface waters to minimize erosion consistent with stream bank and lakeshore stabilization objectives. Steep or severe slopes shall be defined as having a gradient exceeding 10%. The alteration of slopes to reduce relief to gradients that

can accommodate development must be approved by the County prior to land preparation activity.

Limitations shall be placed on septic systems upslope of groundwater seepage slopes and shall not be permitted where the density is greater than one dwelling unit per acre.

OBJECTIVE 4.5 MINING AND BORROW PITS

The County shall regulate mining extraction activities for mineral commodities including sand, clay and rock to minimize adverse impacts to air quality, surface waters, groundwater, springsheds, wetlands, and other natural resources.

Policy 4.5.1 Evaluate Mining and Borrow Pit Operations

The County shall continue to evaluate and enforce its Land Development Regulations relative to mining and borrow pit operations, including criteria of submitted restoration, reclamation and/or mitigation plans.

Policy 4.5.2 Coordination with State Reclamation Program

The County shall coordinate its permitting and regulation of mining and borrow pit operations with activities of the Bureau of Mine Reclamation of the Florida Department of Environmental Protection.

Policy 4.5.3 Prohibitions on Mining in Environmentally Sensitive Areas.

Mining in the environmentally sensitive areas of the County which cannot be restored shall be prohibited. Areas which fall into this category include the limestone deposits within the Green Swamp Wildlife Management Area and the Okahumpka Swamp and the phosphate deposits on the west side of Lake George. All new mining is prohibited within the WRPA, WSA, Wekiva-Ocala Protection Area and GSACSC. New phosphate and peat mining operations shall be prohibited in most effective recharge areas and protected recharge areas.

Policy 4.5.4 Mining in Aquifer Protection Zones

Within aquifer protection zones mining must be performed in a manner that would not negatively impact recharge or water quality. Prior to approval of mining in these areas, the County shall require the applicant to provide a hydrogeologic report as described under Objective 2 - Ground Water Protection. The information contained in the hydrogeologic survey shall establish site specific standards and best practices for the mine to minimize mining impacts that include, but are not limited to aquifer and springshed protection, depth of mining, setbacks, buffering, open space and wetland protection.

Policy 4.5.5 Mining Reclamation Plans

The County shall continue to require within its mining ordinance that no mining activities shall be permitted until the operator demonstrates a practical and environmentally sound reclamation plan, as required by the FDEP. The County shall encourage owners of existing mines presently exempted from reclamation requirements to carry out environmentally sound reclamation practices.

Policy 4.5.6 Preservation of Surface and Ground Water Resources at Mining, Excavation and Recontouring Sites

The County shall implement policies and land development regulations to minimize the effects of recontouring the land surface, resource excavation and mining on ground and surface waters.

Policy 4.5.7 Wetland Reclamation Procedures

The County shall establish provisions within the LDRs for appropriate standards for establishing or restoring the natural functions of mined areas, with respect to hydrology, vegetation, created wetlands and water bodies, and the control of exotic or noxious plant species. The County shall inventory improperly closed mining sites and develop a strategy for restoration of these areas.

OBJECTIVE 4.6 SILVICULTURE

The County shall require that silviculture activities be conducted in a manner compatible with the need to protect, conserve and appropriately use natural resources associated with karst features, wetlands and surface waters.

Policy 4.6.1 Follow BMPs for Silviculture

Lake County shall require that silviculture activities follow the best management practices contained in the publication titled "Silviculture Best Management Practices Manual" (FDACS) or its successor, and comply with requirements of federal, state, regional and local regulations.

Policy 4.6.2 Monitoring of Special Management Zones

The County shall require monitoring of special management zones, as established by the "Silviculture Best Management Practices Manual (FSACS), to ensure that such zones provide buffering between forestry operations and sinkholes or other karst features in order to reduce or eliminate non-point pollutants such as sediment, nutrients, logging debris, chemicals, and water temperature fluctuations and to protect natural in stream or near-stream habitat functions. In addition, the County shall require compliance with best management practices contained in the DEP/DCA publication "Protecting Florida Springs Manual-Best Management Practices."

GOAL 5.0 CONSERVATION - HUMAN SYSTEMS

OBJECTIVE 5.1 GREEN BUILDING

The County shall encourage the public and private-sector in the use of third-party sustainable building rating and certification systems, such as the Master Builder Association's BuiltGreen system and the U.S. Green Building Council's LEED system.

OBJECTIVE 5.2 ENERGY CONSERVATION

The County shall promote the use of renewable energy sources and energy conservation practices.

Policy 5.2.1 State and Federal Incentives

The County shall support incentives by the state and federal governments to promote energy efficiency and conservation and the use of solar and other clean alternative energy sources.

Policy 5.2.2 Coordinated Energy Conservation

The County shall coordinate with the municipalities to promote energy conservation and education.

Policy 5.2.3 Alternative Energy Sources

The County shall encourage the development of power generating facilities that use energy efficient technologies, use diverse fuel sources, and take advantage of clean energy resources.

Policy 5.2.4 Energy Programs

The County shall encourage participation in the following programs or their successors, as well as others that may apply:

- USEPA's Energy Star Buildings and Green Lights Program to increase energy efficiency through lighting upgrades in buildings.
- Rebuild America
- Building for the 21st Century
- Million Solar Roofs
- Energy Smart Schools
- National Industrial Competitiveness through Energy
- U.S. Department of Environmental Protection's Pollution Prevention (P2) Program.

Policy 5.2.5 Promote Energy Efficiency in Government

The County shall promote energy efficiency in government operations and facilities. "Green building" techniques shall be employed in the construction or renovation of government facilities, and consideration given to renewable energy demonstration projects such as solar collectors on schools or other government buildings. The County shall evaluate the transitioning of its fleet of government vehicles to hybrid technology.

Policy 5.2.6 Reduce Architectural Consumption of Energy

The County shall promote the reduction of architectural energy consumption by encouraging the incorporation of energy efficient site design techniques into all new developments. These guidelines shall include landscaping, green roofing, solar orientation and solar access provisions that promote the conservation of energy used for the thermal conditioning of buildings.

Policy 5.2.7 Promote Renewable Energy Resources

The County shall promote renewable energy applications by providing educational materials to the general public.

Policy 5.2.8 Promote Energy Consumption for Transportation

The County shall implement through the Future Land Use Element efficient urban developments that minimize transportation demand. The County shall identify and implement transportation strategies that will lead to reduced per capita consumption of non-renewable energies.

OBJECTIVE 5.3 NOISE POLLUTION

The County recognizes the potential for noise pollution from various commercial and domestic sources and shall establish maximum decibel levels allowable for noise emitting vehicles, devices, and activities.

Policy 5.3.1 Consider Noise Pollution in Land Use Decisions

The County shall consider the impacts of noise pollution in reviewing proposals for land use, zoning, or permitted activities.

Policy 5.3.2 Adopt Noise Ordinance and LDRs

The County shall adopt a noise ordinance and LDRs as appropriate to regulate the volume and duration of noise emitted from vehicles, devices, and activities.

OBJECTIVE 5.4 LIGHT POLLUTION

The County recognizes the potential for light pollution from various commercial and domestic sources and shall establish standards regarding the intensity, type, and position of light sources.

Policy 5.4.1 Consider Light Pollution in Land Use Decisions

The County shall consider the impact of light pollution in reviewing proposals for land use, zoning, or permitted activities.

Policy 5.4.2 Adopt Lighting Ordinance and LDRs

The County shall adopt an exterior lighting ordinance and LDRs as appropriate to regulate the intensity, duration, direction and the area of illumination produced from artificial sources within urban and rural residential areas. The lighting ordinance shall also protect dark skies, and shall be based on recommendations of the International Dark Sky Association and exemplified by the City of Casselberry Exterior Lighting Ordinance (May 2002).

OBJECTIVE 5.5 ENVIRONMENTAL LAND ACQUISITION AND MANAGEMENT

The County shall continue a program to acquire and manage environmentally sensitive lands.

Policy 5.5.1 Acquire Land for Conservation

The County shall utilize revenue bonds from the County Land Acquisition program and partner to the greatest extent possible with federal, state, and local agencies, as well as with private conservation entities as appropriate to acquire environmentally-sensitive land for permanent preservation.

Policy 5.5.2 Management of Conservation Lands

The County shall coordinate with federal, state, and local agencies regarding the management of public and private conservation land and shall consult with agencies regarding the potential impact of adjacent uses on the health and management of federal, state, and local conservation land and environmentally-sensitive lands. The County shall encourage best management practices associated with native habitats, such as controlled burning, and shall coordinate with the federal, state, and local agencies regarding management programs and policy.

Policy 5.5.3 Natural Area Networks

The County shall partner with federal, state and local agencies, and with private conservation entities as appropriate, to identify and protect environmentally-sensitive land, through acquisition or the purchase of conservation easements, in order to establish natural area networks or greenways. These networks or greenways are intended to link public and private conservation areas, preserve and restore habitat and wildlife corridors, maintain viable populations of listed species, maintain aquifer recharge capacity, protect air quality, and provide opportunities for passive recreation. In addition, the County shall adopt Land Development Regulations that establish criteria for creating functional networks of preserved lands and open space within and joining development projects that can be integrated into the countywide network. .

Policy 5.5.4 Delineate and Manage Critical Lands

The County shall develop a management plan for the protection of the greenway networks. The management plan will address natural resource and habitat protection, public access, recreation, and education consistent with protecting the greenway network. The County shall maintain a greenway land acquisition priority list.

Policy 5.5.5 Special Protection Areas

The County shall participate in programs at the local, regional, state, and federal levels to afford protection and management through acquisition and conservation easements within areas given special protection status. These land areas shall include but not be limited to the Green Swamp Area of Critical State Concern, the Lake Wales Ridge, the Emeralda Marsh, the Lake Apopka Restoration Area, the Wekiva-Ocala Greenway, Wekiva River Protection Area and the Wekiva Study Area.

OBJECTIVE 5.6 ECOLOGICAL RESOURCES PLAN

Policy 5.6.1 Investigate conducting an ecological resources plan

The County shall investigate the feasibility of conducting an ecological resources plan as part of an overall long-range planning effort to provide the County with an approach for sound and

sensitive urban and rural development that is interwoven with the community's goals for maintaining and enhancing the ecological and economic benefits of the natural environment.

OBJECTIVE 5.7 HISTORICAL AND ARCHAEOLOGICAL RESOURCES

The County recognizes the importance and value of protecting historical and archaeological resources.

Policy 5.7.1 Identify and Preserve Historical and Archaeological Resources

The County shall cooperate with the State and Federal agencies and local archaeological and historical groups to identify and preserve archaeological and historical resources within the county. Land Development Regulations shall take into consideration historic sites and properties to insure appropriate maintenance and preservation.

Policy 5.7.2 Prevent Destruction of Archaeological Resources

Development shall cease construction activities on a development site when unidentifiable artifacts are uncovered during either land preparation or construction. The developer shall notify the County of such potential discovery, and the County and/or the developer shall inform the Florida Department of State of such discovery. Construction shall not begin until the State has determined the archaeological significance of the discovery and restrictions that will be placed on development. Development may continue in areas that will not impact the discovery site.