

## DRAFT DOCUMENT

### Environmental Management:

Environmental Management makes a point of recycling, whether at public events such as cleanups or festivals, or in the office. Environmental Management uses recycled post content paper for printing and copying. The division uses recycled printer cartridges which are returned to the manufacturer to be re-filled, and recycles batteries and cell phones. The division uses rechargeable batteries and reuses office supplies (wherever possible) before recycling them.

Environmental Management takes every opportunity to promote the environment and increase public awareness about the impacts of our actions. The division provides advice to the public about environmental issues, wildlife, and plants on a daily basis.

The division was the pilot project for the use of hybrid vehicles in the county and currently runs six hybrid vehicles.

**Environmental Learning Center** – Although construction on the Center is not due to begin until mid 2008, programs have begun. The Center's programs highlight the importance of the environment within Volusia County. The programs promote and encourage exploration of the County's ecosystems and promote stewardship of our natural resources. The Center aims to foster community involvement in the conservation of wildlife and the habitat that we share. To that aim, green building elements will be incorporated into the facility and green building practices will be promoted by the Center.

### **Volusia County Manatee Protection Plan**

- **Monofilament Recycling Program** -Volusia County Environmental Management implements a successful recycling program that focuses on removing used monofilament fishing line from the environment. Discarded fishing line accounts for many tragic wildlife deaths due to entanglement. Fishing line discarded in our waterways also fouls boat propellers, and is a serious litter problem, especially around boat ramps and fishing areas. Even line that makes its way to the landfill creates hazards for wildlife, unless it is cut into small pieces. Recycled monofilament line is made into tackle boxes and artificial fish habitats.
- **Manatee Watch** - The Manatee Watch program utilizes volunteers who are trained by Environmental Management staff to document manatee sightings, photograph manatees, and sketch manatee scarring patterns. Volunteers provide information, including the condition, behavior, and location of the manatee(s) that is sighted. The information collected provides a better understanding of how manatees are utilizing Volusia County waterways.
- **Bilge Socks** – Bilge socks which are distributed through a grant funded program help to keep Volusia's waterways cleaner. The bilge sock is a long fabric tube, filled with absorbent material which, when placed in the bilge compartment of a boat soaks up gas and oil. These fuels are usually discharged into the marine environment through bilge pumping, fueling, and accidental spills. The bilge sock being distributed is also landfillable.
- **Clean Marina Program** –Marinas and boaters may not be aware of the environmental laws, rules, and jurisdictions that might apply to them. The Clean Marina Program tries to address environmental and operational problems before they happen. This helps to avoid a potentially damaging and costly cleanup. The **goal** of program is Clean Marina Designation which, lets boaters know that the designated Clean Marina businesses adhere to – or exceed program criteria, including *Marina Environmental Measures* or

MEMs. MEMs are simple, innovative solutions to day-to-day marina operations that protect the environment.

**Sea turtle Habitat Conservation Program (HCP)** - Volusia County is dedicated to the protection of sea turtles and the habitat we share. For years, the County has actively protected coastal wildlife by implementing our Sea Turtle Habitat Conservation Plan (HCP). The County is proud of its efforts to protect coastal wildlife and has put forth more time, effort and energy into protecting sea turtles than most other counties throughout the state. The County's Environmental Management sea turtle protection, rescue, and educational measures have been incorporated into all aspects of our beach management programs, from law enforcement activities to trash collection.

- **Sea turtle nest protection-** HCP staff participates with local non-profit groups to collect nesting information and GPS' all nests within the county to ensure protection efforts are made for them throughout the season including removing obstacles nightly, do lighting inspections at nest locations, and remark nest locations in the event of vandalism or washouts.
- **Beachfront lighting** – To help protect sea turtles from bright lights, which can disorient them, Volusia County has developed a Beach Lighting Management Plan and is working with our ocean front property owners to reduce lighting problems along our beaches.
- **Sea turtle Washback Watchers volunteer program** – This program utilizes trained volunteers who work under a permit to find and rescue young sea turtles that wash ashore due to heavy winds and surf each Aug- Nov.
- **Piping Plover and shorebird monitoring** - The Piping Plover, *Charadrius melodus*, is listed as the top species of Highly Imperiled Global Concern in the 2004 U.S. Shorebird Conservation Plan. Volusia County's own Ponce Inlet is a wintering home to these precious birds. The United States Fish and Wildlife Service designated the shores around Smyrna Dunes Park as Critical Wintering habitat. Environmental Management carries out piping plover monitoring during the bird's wintering season which runs from Aug- May of each year.
- **Adopt-a-beach volunteer program-** One mile of beach is adopted by individuals, families and organizations. They are committed to doing 4 annual beach clean-ups in their adopted mile. In exchange they get recognition with a sign placed in their honor within their mile of beach. They are an integral part of keeping Volusia beaches debris free!

**Marine Mammal Stranding Team** - Marine mammal strandings are common along the Florida coast and occur when live animals beach themselves or dead animals wash up on shore. Many of the reasons why live animals beach themselves are unknown. When a stranding occurs in Volusia County, a team of volunteers, the Volusia County Stranding Network, working under Hubbs-Sea World Research Institute are notified to assess the situation. Stranded animals may be alive or dead. The data collected from a stranded animal can help researchers determine if there are environmental causes that may be creating problems for marine life or humans, or whether the stranding was a natural occurrence. This data may help to determine the cause of death, along with expanding our knowledge of cetacean physiology, including feeding and reproductive habits.

**Shoreline Restoration Programs** – Environmental Management carries out estuarine restoration which includes the removal of Brazilian pepper, planting mangroves and shoreline grasses. Brazilian pepper is an exotic invasive (it does not naturally occur in Florida) that grows

and spreads rapidly threatening our native ecosystems. The plant grows into dense areas that are not suitable for wildlife. Mangroves grow along our estuarine shoreline, they provide important habitat for many coastal species, filter sediments from the water and protect the shoreline from erosion. Shoreline restoration reduces erosion and creates habitat for crabs, juvenile fish, birds, and many other animals.

**Cleanups** – Environmental Management manages a number of environmental cleanups in Volusia County. These cleanups include the coastal cleanup, the Halifax-Indian River, the St John's River cleanups and the DeLeon Springs Cleanup. Volunteers are recruited to spend a morning removing trash which degrades ecosystems and creates hazardous conditions for wildlife.

**Dune plantings** – Environmental Management facilitates dune plantings on Volusia County beaches. A variety of coastal dune plants (including sea oats, bitter panic grass, dune sunflower, and rail road vine, all of which are native to the Florida dune environment) are used in the plantings. The plants help to stabilize the dune system and provide habitat for beach dwelling animals from shorebirds to gopher tortoises and sea turtles.

## **WATER CONSERVATION**

- **Non-point source pollution awareness** - Storm water that drains into the watershed is a pollution source that is sometimes overlooked. Environmental Management initiated a grant funded curb marking program that alerts the public to the effects of non-point source watershed pollution. The curb markers read "Let only rain down the storm drain" Storm drain marking is a proven method of increasing community awareness about non-point source pollution.
- **Pollution Control** - The Pollution Control Activity encompasses several programs and the Environmental Emergency Response Team (EERT). The purpose of Pollution Control is to protect our water resources. This is accomplished by surface water quality and quantity monitoring, ensuring the proper disposal of solid waste, waste water, hazardous waste, and educational programs to encourage water conservation.
- **Environmental Health Laboratory** – The surface water system in Volusia County host a wide variety of both recreational and commercial events. This precious commodity is subjected to many influencing factors which potentially carry negative results to the health of our aquatic systems such as lakes, rivers, and lagoons. The Environmental Health Laboratory provides water testing services to the public. Laboratory staff also manages the County's surface water program which conducts surveys of the Halifax River, St. John's River, and the Mosquito Lagoon water basins. This water quality monitoring program is called for in the County of Volusia Growth and Resource Management to judge the continuing health of these systems. Data generated by the program is reported to the U.S.E.P.A. national water quality database and used by state, local and federal agencies as well as individuals. Over 70 stations are monitored each month for sixteen parameters to follow and pinpoint pollution sources. The laboratory also tests water in Blue, DeLeon, Gemini, and Green Springs.
- **Hazardous waste program** – This program identifies hazardous waste generators (businesses or individuals) within the County. Hazardous waste includes explosives, poison, corrosive, and flammable materials. The program notifies generators of their responsibilities under federal, state, and local laws regarding hazardous waste storage and disposal. On site visits and technical support help to ensure the waste is stored and disposed of in the correct manner, and to reduce the impact of these waste to our environment,

The program also regulates industrial waste from facilities such as laundries, power generator sites, car washes, and concrete batch plants among others. Industrial waste from these facilities includes mixtures of non-hazardous solids or liquids with water. Although this waste is considered non-hazardous, it can still reduce water quality to the point that it cannot be discharged to sewer systems or surface waters without being treated.

- **Solid waste** – This program enforces County ordinances and State laws regulating the establishment and operation of solid waste management facilities. Site inspections assist the operator and prevent minor problems from developing into violations. In addition to monitoring permitted facilities, staff also investigates complaints of illegal disposal of solid waste, the majority being construction and demolition debris.
- **Domestic waste** – This program is responsible for enforcing County ordinances and State rules governing the treatment and disposal of domestic wastewater. If not properly treated and stabilized, domestic wastewater can pose a serious health hazard, create a nuisance situation and degrade both the County's natural resources and the residents' quality of life.

**Environmental Permitting** - Environmental Permitting is responsible for the administration and enforcement of the county's tree protection and wetland protection ordinances. Permitting staff provide on-site inspection and review for a variety of environmental resources including trees, wetlands and wetland buffers, threatened and endangered species, and the review of residential projects within the Class II overlay zone along the Indian River Lagoon for compliance with storm water and natural vegetation requirements.

- **Protected Species Permitting** – The County's permitting process requires additional documentation for any protected species found on properties permitted by the county. The county works with the homeowners and the governing agency for the species (Federal or State) to ensure that species issues are addressed. Scrub-jay, gopher tortoise, and eagle nest occurrences are specifically mapped and monitored by the permitting activity.
- **Tree removal** - Volusia County Council believes that it is in the best interests of the public health, safety and welfare to protect and preserve trees and enhance tree cover in Volusia County. To accomplish this, removal of trees is regulated through a Tree Preservation Ordinance. This ordinance identifies which circumstances require the issuance of a tree removal permit, outlines the requirements for obtaining a permit which includes the protection of existing trees on site and any replanting requirements.
- **Wetlands** - The protection and preservation of natural habitat is becoming increasingly critical. Development activities constantly and unavoidably threaten or destroy habitat. The loss of habitat will ultimately impact the quality of life in Volusia County. The overall goal of the Volusia County Wetland Ordinance is "no net loss of wetland function or acreage." Wetlands provide vital functions in the hydrologic cycle and ecological systems. Flooding accents the role of wetlands which provide for the storage and velocity reduction of flood water. The more wetlands are altered, the more flood damage to property will increase. Volusia County, led by Environmental Management, has a strong desire and commitment to protect its wetlands by regulating activities that may alter them, and their upland buffers. The county emphasizes avoidance and minimization of wetland impacts and works with homeowners and developers to protect wetlands on their properties.
- **Habitat Planting guidelines** – Environmental Management provides Volusia County residents with tree replacement and habitat planting guidelines which contain Florida native plants for specific habitat types. Native plants are adapted to the Florida environment and provide habitat for native wildlife.

- **Indian River Lagoon Overlay** – Environmental Management works to protect and improve the water quality of the Indian River Lagoon by regulating on site storage of stormwater, and ensuring that at least 35% of the natural vegetation on a property is preserved (or replanted if disturbed).

**Petroleum Storage Systems** - More than 90% of the water that Floridians drink is groundwater from the Floridian Aquifer. Groundwater also supplies most of the surface flow in streams and maintains wetland and lake levels. One gallon of gasoline has the potential to contaminate a million gallons of groundwater. Through a Florida Department of Environmental Protection (FDEP) contract Volusia County manages two state funded SUPER Act programs the Compliance Inspection Program and the Petroleum Cleanup Program. The contract with Volusia County means that the programs can be managed at the local level.

- **Petroleum Cleanup** – Over time petroleum storage tanks are exposed to several different elements that can cause them to corrode and leak, which in turn will contaminate our groundwater. The program cleans up impacts of any leaking storage tanks through the removal and treatment of petroleum contamination in soils and groundwater. Staff members supervise the cleanup process from discovery and assessment through the end of cleanup efforts.
- **Compliance** - The Compliance Inspection Program is responsible for educating owners and operators of petroleum storage facilities to minimize the potential for discharges. All currently registered facilities are inspected annually in Volusia County, ensuring that the facilities are utilizing appropriate pollution prevention equipment and are adhering to correct tank management practices in accordance with the FDEP rules and guidelines.