

Chapter 8

Environment



ENVIRONMENT

Wetlands

Downtown Tavares contains two minor wetland areas- the first area is located between SR 19 (Duncan Drive) and Sinclair Avenue; the second wetland area is part of the greenway located east of St. Clair Abrams Avenue, in the vicinity of its intersection with US 441. The City's WPA district has provisions for the limited filling of wetlands upon approval of appropriate state, regional and or federal agencies with jurisdiction over wetlands. Upon approval of the appropriate agencies, the City's Wetland Preservation Area (WPA) zoning district provides for the automatic rezoning of the affected property to the previous zoning designation. The Plan recommends preserving the designated wetland areas in the Downtown redevelopment area, and working with property owners to develop additional recreational resources for area residents.

Water Quality

Lake Dora and Lake Eustis suffer from eutrophication caused by the nutrients from the muck farms on Lake Apopka which is upstream from these lakes. The St. Johns River Water Management District has initiated a program that is designed to clean up the water in Lake Apopka. The water management district has created new wetlands in place of muck farms along Lake Apopka. When the water in Lake Apopka is cleaned up higher quality water will flow through the Apopka Canal that flows into Lake Dora and then into Lake Eustis. As the Downtown witnesses an increase in density and use of waterfront amenities, the City should continue to collaborate with regional agencies to pursue actions that are designed to improve the lake's water quality. These actions may include habitat restoration, shoreline stabilization, continued clean-up activities, and developing stormwater discharge and pollutant load reduction goals.

The management and treatment of stormwater is as one of the primary concerns regarding Lake Dora's water quality. The stormwater collection system in the redevelopment area consists of the street system upon which the stormwater flows to catch basins and then into a water body or wetland. Most of the stormwater flows directly into water bodies. As the development program matures and the Downtown area witnesses more urban growth, the percentage of impervious surface within the area is expected to increase, which in turn will lead to storm water runoff issues. During the focus group meetings, several participants expressed concern over existing practices for controlling stormwater runoff on individual sites. The participants recommended initiating discussions with the St. Johns Water Management District to establish an area-wide stormwater permit for the entire Downtown and use it as an incentive to attract private investment Downtown, while at the same time addressing environmental concerns with excess runoff into Lake Dora.

Seaplane Basin and Railroad Impacts

The proposed seaplane base on Wootton Park is located in the heart of Downtown, and is anticipated to be a valuable asset to the City's tourism market and the overall economy. The City is currently working with the Florida Department of Transportation and the Federal Aviation Administration to obtain licenses for the operation of this facility. The City should continue working with existing property owners and appropriate agencies to determine policies that need to be addressed in the Comprehensive Plan and the Land Development Regulations concerning noise and safety aspects of seaplane base operations including land uses, heights, and noise compatibility. Other transportation systems such as the railroad and commuter rail may also have an impact on adjoining uses. Some noise reduction strategies that may need to be incorporated in the future include interior building design such as greater insulation and appropriate setback requirements to mitigate sound levels generation from these systems.



Lake Dora Waterfront: Existing Conditions

Leadership in Energy and Environmental Design (LEED)



Diagram of a green building. The highlights of this particular green building design include (from left to right, top to bottom): Large clerestory windows to admit daylight; photovoltaic roofing to generate electricity; solar roof panels to generate electricity; interior wood beams from sustainably harvested forests; exterior landscaping to shelter the building from wind; low-emission interior paints; shade generating outdoor trellises; rapidly-renewable floorings; interior furnishings created from recycled materials; locally sourced masonry materials; and geothermal underground heat pumps to heat water.
Source: Massachusetts Audubon Society

In order to minimize the impacts of stormwater runoff on Lake Dora and to build upon the City's initiatives to promote sustainable transportation modes in the Downtown Redevelopment Area, the Plan recommends that new construction actively employs construction methods that are considered "green" or "sustainable". Numerous definitions and guidelines exist in an effort to define what sustainable development is and how it is applied. This Plan recommends taking advantage of the LEED for Neighborhood Development, a program produced in collaboration by the US Green Building Council (USGBC), the Congress for New Urbanism (CNU), and the Natural Resource Defense Council. The LEED-ND is an evaluation system which integrates the principles of smart growth, urbanism and green building into the first national system for neighborhood design and urban development. The City of Tavares will be one of the pioneering communities in the Central Florida and the State to establish a LEED-ND certification for the Downtown Redevelopment Area. Currently, LEED-ND is in the pilot phase and includes several projects across the country. It is important to understand that LEED-certification can not be secured through planning and proposals alone. Instead, the LEED certification system requires implementation and a thorough evaluation. The intent of this Plan is to inform the City leaders and the community about the LEED-rating certification and initiate discussions with interested developers, such as Tavares Station that would also qualify as a brownfield redevelopment, to seek this certification both as a marketing tool and to further the community's vision to create a sustainable Downtown district.

(Refer Appendix E for LEED-ND Project Checklist)

In general definition, sustainable design emphasizes development and construction practices that minimize impacts on the environment. For the purposes of this master plan, this minimization may either occur by: reducing the consumption of materials and energy required in construction or development, and/or designing the site in a manner that promotes user habits that reduce consumption of resources or energy. The Plan encourages an agenda of highly sustainable design in order to create a pedestrian-focused environment that can serve as a model of green design for other public-space developments.

The policy of green design is evident in all aspects of the planning process in the Redevelopment Plan, including: shoreline restoration strategies; compact urban development patterns; and emphasis on pedestrian and non-motorized activities.

Minimization strategy: Maintaining the riparian buffer along the lake's shoreline.

Reducing the proportion of hard surfacing in any given area reduces the area that may contribute to stormwater runoff, thereby lessening the need for runoff treatment and limiting direct flows into receiving bodies of water, and can reduce the amount of solar energy trapped in hard materials like stone, concrete, and brick. This will ultimately result in limiting the concentration of heat energy that can result in human discomfort. More significantly, an average of 90% of the riparian zone (the area between the mean high water line and the upland zone, or high ground) will be undeveloped and/or naturally restored. A non-development buffer between the high water line and nearest human development activity of approximately 25 to 50 feet should be maintained for over 75% of the total waterfront length along public-owned lands. Reasons for maintaining a riparian buffer include natural runoff control, wildlife habitat, natural shoreline reinforcement, and aesthetics.

Minimization strategy: Reducing the consumption of materials and energy required in construction or development.

Locally sourced, recycled, reused, and low-impact materials are strongly encouraged in the construction of new trails, boardwalks, parking areas, buildings, furnishings, and other site infrastructure. On the public lands, the total amount of new construction will be low, but each new building or feature can be a showcase for advanced green building techniques and advertised as such in the Tav-Lee Trail development. Additionally, green buildings often provide a lower operation and maintenance cost over the course of their lifespan.

For guidance, the LEED-NC rating system for new construction created by the U.S. Green Building Council serves as an excellent resource for developers and contractors of new buildings. The LEED (Leadership in Energy and Environmental Design) rating system provides a checklist of design and construction actions that, when undertaken, contribute points towards "green" certification. The more points that are accumulated, the higher the "green" certification level the building can receive. As a marketing tool, LEED certification is considered to have growing value, and almost any type of building project can pursue a LEED certification.

Minimization strategy: Designing the site in a manner that promotes user habits that reduce consumption of resources or energy.

This strategy is less concrete or quantifiable than the others because it relies on eliciting certain user habits in order to be considered effective. The arrangement of physical features in public spaces, including trails, parks, boardwalks, piers, public structures, etc., is planned to encourage outdoor activity that focuses on interaction with nature and the use of recreational devices that do not pollute or consume energy during operation. The waterfront amenities and trail should be designed with an overall goal to increase awareness of the value of the Lake Dora shoreline with interactive displays, informational signage, and the dynamic appeal of natural habitats and ecosystems.