

Staff Directory

Keith Andreu, Aquatic Technician
 William Colon, Aquaculture Technician
 Jason Cull, Aquatic Field Supervisor
 Jeremy Ford, Aquatic Technician
 T. Wayne Gale, Executive Director
 Ernesto Lasso de la Vega, Water Quality Laboratory Manager
 Kenneth Sonne, Aquatic Technician
 Linda Walstrum, Administrative Assistant
 Kevin Watts, Deputy Director

Top Ten Plant Species Treated In 2016 (acres treated)

1. Spatterdock 292
2. Torpedograss 65
3. Cattail 52
4. Water Lettuce 49
5. Muskgrass 28
6. Water Hyacinth 25
7. Southern Naiad 22
8. Illinois Pondweed 15
9. Spike Rush 15
10. Alligatorweed 14



Spatterdock



Cattail



Water Lettuce



Water Hyacinth



WETPLAN meeting

Public Outreach

The LCHCD Pond Watch (PW) program continues to provide guidance on management of stormwater ponds to citizens who live near waterbodies. Recommendations are based on water quality analysis performed on a monthly basis in the District Water Quality Laboratory. This outreach program has provided evidence to support the Lee County Fertilizer Ordinance of 2008 in a scientific publication (Florida Scientist 79:125-131) Analysis of Nutrients and Chlorophyll Relative to the 2008 Fertilizer Ordinance in Lee County, Florida authored by Dr. Lasso de la Vega and Jim Ryan P.E. a volunteer PW.

The District has joined a collaborative effort of local private and government partners with the educational initiative Watershed Education and Training Ponds, Lakes and Neighborhoods (WETPLAN). The objective of this initiative is to educate the public, including Home Owner Associations, about the function of stormwater ponds and to answer concerns about their management.

The Water Quality Laboratory has expanded its sampling of the Caloosahatchee River to include the locks at Ortona and Moore Haven. These new sites complete the assessment of nutrients and chlorophyll for the freshwater portion of the river, between the Franklin Locks and Lake Okeechobee. The data collected from the River will be available on the Water Atlas Website (www.CHNEP.wateratlas.usf.edu) for easy access by other organizations interested in the information. The concern of the District is to determine point sources of which contribute to the presence and stimulation of toxic microscopic blue-green algae (*Microcystis* sp.). These blooms were prominent events in 2016 that occurred in the Caloosahatchee River, Lake Okeechobee, and the St. Lucie River.

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Lee County Hyacinth Control District

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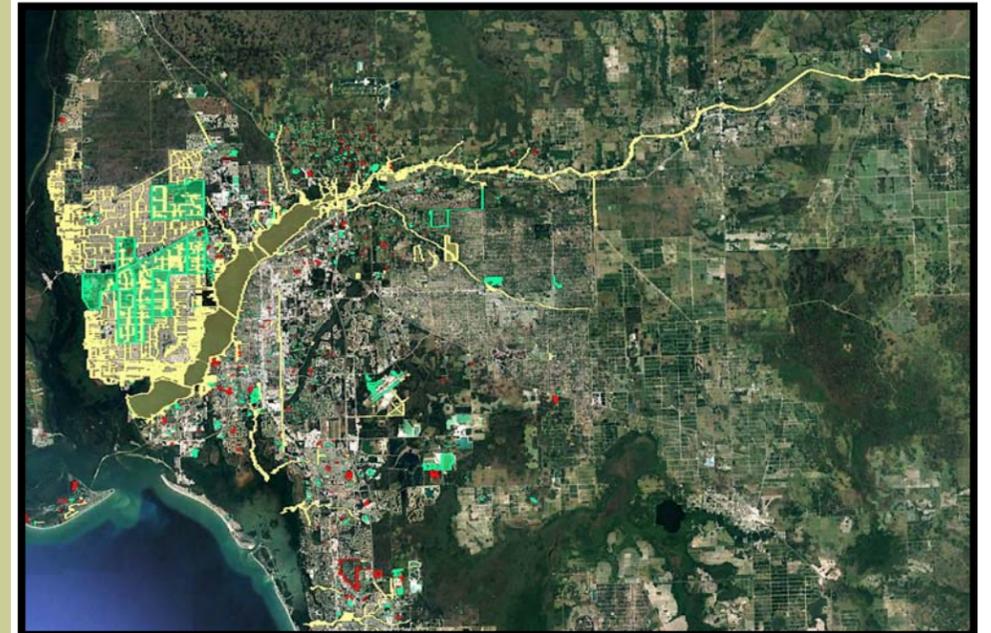
T. Wayne Gale

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Lee County Hyacinth Control
 District
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 Lehigh Acres, FL 33971

Phone: 239-694-2174

WWW.LCHCD.ORG



The Lee County Hyacinth Control District was formed by an act of the Florida Legislature on June 12, 1961.



Operations

Aquatic vegetation is managed by the application of EPA labeled herbicides, mechanical harvesting and the use of triploid grass carp. 2016 summaries are as follows:

Chemical Control

Service Requests 544
Acres Treated 623

The geographical jurisdiction of LCHCD includes all of Lee County, the Caloosahatchee River and its tributaries up to the border of Lake Okeechobee in Glades County (28,166 acres managed). The District defines public waters as any waterbody accessible by the general public, or owned as a public resource. Uses of the water may include, but are not limited to, navigation, recreation, fishing, flood control and water supply.

LCHCD continues to provide effective aquatic plant control measures with emphasis upon a functional and designed management plan. The beginning of each season brings in its own unique set of challenges for resource managers. Once again, spatterdock has topped our list for the most treated macrophyte species in 2016. This prolific native perennial is a very important component of water quality and wildlife habitat, but can present issues with flood control and navigation in public waterbodies. It forms very dense interwoven mats at the surface which make it difficult for access and recreational use. Formulating a sustainable approach has served the

District's long term strategy with regards to a balanced integrated plant management approach.

Another couple of notoriously difficult and problematic plants visible again this year were water hyacinth and water lettuce, aggressively spreading from one water source to another. Unfortunately, these aquatic plants not only pose a problem with essential functions associated with water movement, but are hosts for a rapaciously biting pre-nocturnal mosquito (*Mansonia*). One particular area of concern represented in the pictures below are of a local stormwater pond in San Carlos Park.



Lake Buttonwood initial application



Lake Buttonwood post-treatment

LCHCD's efforts continue to achieve optimum results from some of our recent projects. The harvester was back in action at Rutenberg Park assisting the Lee County Parks and Recreation Department with the removal of spatterdock. Dr. Ernesto Lasso de la Vega monitored water samples taken in conjunction with the mechanical vegetation removal to determine water quality impacts and nutrient analysis for the long term management of this public waterbody. The aquatic weed harvester is an effective tool with the process of nutrient removal. Its ability to collect a vegetative mass and the nutrients bound up with in the plant tissue can make an immediate impact on a stormwater pond or canal.



Spatterdock removal from Lakes Park filter marsh

Biological Control / Grass Carp

Acres Stocked 355
Grass Carp Stocked 692
Cumulative Acres Managed 2,284

The Districts biological program continues to successfully use triploid grass carp (*Ctenopharyngodon idella*) throughout Lee County's waters where permit restrictions are followed. Grass carp or white amur are native to East Asia, China, and Russia originating from the Amur River. Non-indigenous species such as grass carp are typically regulated for use, each State has different restrictions and only certified triploids are legal for stocking in Florida with the required permit issued from Florida Fish and Wildlife Conservation Commission.

LCHCD uses an integrated management approach, by the means of chemical, mechanical, and biological control of aquatic vegetation. One key component to proper management is establishing a program to

Spatterdock has exploded in the past 2 years and requires a unique balanced management approach from the District perspective with implementing a strategy that effectively maintains this species at acceptable levels. Nutrients are the point source for the expansive growth and this is emphasized with education and problem solving techniques incorporated in LCHCD's aquatic plant control plan. Residents are informed of our progress and are welcome to engage District staff on all aquatic measures which are effected in their waterbody. A recent project included the services of all LCHCD staff to help with monitoring and removal of spatterdock from the Lakes Park filter marsh this past December. The objective was to improve water quality by the means of reducing the overabundance of excessive plant growth. The preferred method was harvesting and our personnel did a fine job with clearing and collecting the vegetative material. The spreader channel that separates the park from communities to the East was designed to allow stormwater to flow South after moving through the filter marsh. By design, the nutrients would be sequestered and/or absorbed within the spatterdock, hence the physical removal of the plant would help with enhancing water quality standards.

incorporate submergent macrophyte monitoring and bathymetry data assessment. Implementing this tool and its use as a portable hydroacoustic echosounder, the District can effectively map a waterbody's substrate and measure the presence or absence of vegetation within the water column. Below is a graph, illustrating the plant density in a series of recorded transects of a Cape Coral waterway system managed with the use of triploid grass carp.

Monthly Service Calls by Year

