

Algae Control Project Becomes Case Study for ACSP Certification

By Jonathan Charpinsky

ACSP CASE STUDY

Project Title:	No. 9 Pond Algae Removal
Property Name:	Card Sound Golf Club
Location:	Key Largo, Florida
Project Coordinator:	Jonathan Charpinsky, Assistant Superintendent
Phone Number:	305-367-3088
Type of Course:	Private Golf Club

Project Description: Give an overview of the project. Why did you choose it? What were the conditions like before and after implementing the project?

The ponds at Card Sound Golf Club are saltwater and fluctuate with the ocean tides. The



No. 9 pond at Card Sound G. C. after implementing algae control project using biocontrol technology. Photo courtesy of Audubon International.

pond on No. 9 always had a large amount of algae throughout the entire pond and it looked terrible. Dephosphate water clarifiers and bacterial concentrates were applied to the pond on a monthly basis and it was very expensive. They seemed to have very little effect on the algae and we needed a better, cheaper way to handle this situation.

My superintendent heard of a BioAmp machine from ECO Bionics that produced trillions of bacterial cells on a daily basis. We decided to rent a machine and install it on the pond bank and have the bacteria drain into the pond every day. Since installing the BioAmp, there has been a large decline in the amount of algae (a very small amount is still present). The pond is much cleaner and we

are not spending as much money on removing algae.

Goals: Please list your goals for the project.

Remove algae in pond located on No. 9.

Reduce cost of maintenance for No. 9 pond.

Implementation and Maintenance: What specific steps did you take to implement it? What kind of ongoing maintenance will it require?

Rented machine from ECO Bionics.

Installed it on the bank of the pond (out of the way of play).

Hooked up electricity and a fresh water source to machine.

Hooked up a drain for the bacteria that goes into the pond.

Filled it with food for the microorganisms to develop.

Turned it on.

Checked machine every 7-10 days for alarms or lack of food.

Fill machine once every month with food.

Results: Describe the results you achieved. What are the environmental benefits? Please be as specific as possible about any tangible results.

Far less algae is currently present in the pond and it doesn't seem to come back as it did when we were not using the BioAmp machine.

Considerably less money is being spent on controlling the algae. Less labor is used for algae removal. All we do now is check the machine for alarms or food.

We are not putting any chemicals into the pond anymore; we are only using natural bacteria.

Golfer/Employee Response: How did golfers respond to this project? How did you communicate your actions?

The maintenance staff and the pro shop have received many compliments on how good the pond looks without all the algae. The Board of Directors is made up of all golfers at the club, and they have told other members about this project by word of mouth. Also, members have asked the maintenance staff and pro shop about what the machine was near the pond and they were told it was a bacteria manufacturer to remove algae.

Perspective and Recommendations: What, if anything, would you do differently if you were to do this project again? What would you recommend

to others implementing this project?

I would not have changed anything with this project due to the results we have achieved. My recommendation to others is to give this a try instead of using chemicals to clear up an algae problem. This is obviously better for the environment, less costly, and almost no maintenance is needed after installing the machine.

Economic Costs and Benefits: How much did it cost to implement this project?

Lease of machine: \$537.50/month

Installation of machine: \$810.00

Total: \$1347.50

Average cost in our old methods: \$2000.00/month

Monthly maintenance and feeding now: \$537.50

Average Savings: \$1462.50/month

Jonathan Charpinsky, is assistant superintendent, Card Sound Golf Club

Florida Sustainable Communities Summit Explores Resource Efficiency in the Built Environment

By Jean Mackay

Audubon International and the University of Florida's Program for Resource Efficient Communities co-hosted the Florida Sustainable Communities Summit at Walt Disney World Feb. 8 During the Golf Industry Show in Orlando. The event brought together a variety of stakeholders — including more than 100 municipal planners, developers, architects, builders, natural resource managers, and representatives from regulatory agencies, universities, and conservation organizations — to strengthen efforts to foster sustainable development in Florida.

The day-long summit provided opportunities to discuss critical issues associated with sustainable community siting, design, development, and management. Four panel discussions also showcased a number of success stories, including golf courses that are helping to meet community conservation and development goals.

"Florida's explosive growth is putting pressure not only on the environment, but on community services, such as transportation, schools, and affordable housing," says Kevin Fletcher, Audubon International director of programs and administration. "The summit gave us the opportunity to network with each other and explore ways to build upon successful efforts to build better in Florida."

The summit was held at Walt Disney World's Osprey Ridge and Eagle Pines Golf Courses, who generously donated meeting space.

Photographs of wildlife and natural areas on the golf courses taken by superintendent Bob Karnes graced the walls and provided the perfect backdrop for the meeting. All five of Disney's golf courses are Certified Audubon Cooperative Sanctuaries. The event was generously sponsored by WCI Communities, Inc. and Harmony Homes (Birchwood Acres, LLC), with additional support from the Bonita Bay Group and The Old Collier Golf Club.

For more information or to request summit proceedings, contact Jean Mackay at Audubon International at jmackay@audubonintl.org.

Background on Florida's Growth

From 1990-2000 Florida's population grew by 23.5 percent with an increase of three million people. Approximately 6,000 people move to Florida each week. Now number four in population among the 50 states, Florida is poised to pass New York for the number-three spot by 2024, behind only California and Texas.

Residential construction is a primary driver of Florida's economy. Over the last decade, approximately 100,000 new single-family, detached



Tim Hiers, CGCS (fourth from right) representing Collier Enterprises sits on the sponsor's summary panel with representatives from Harmony, Fla., The Bonita Bay Group, WCI Communities and Walt Disney Corporation. At the podium is Ron Dodson, President and CEO of Audubon International. Photo by Jean McKay

homes have been built each year in Florida.

Most of Florida's larger new residential developments are master planned communities that begin with basic land-use planning activities and end with homes constructed on finished lots. In addition, these communities frequently involve the design and construction of major amenities, such as golf courses and other shared open spaces.

Issues including declining water supplies, increasing energy demands, traffic congestion,

overcrowded schools, and the loss of natural areas are intimately tied to Florida's growth.

Such pressing concerns make Florida an excellent target for introducing sustainability as an integrated approach to addressing the state's environmental, economic, and social needs.

(Sources: U.S. Census Bureau, 2000 Census; State of Florida.com, Florida Quick Facts, 2-1-05; University of Florida, Program for Resource Efficient Communities, 2005)

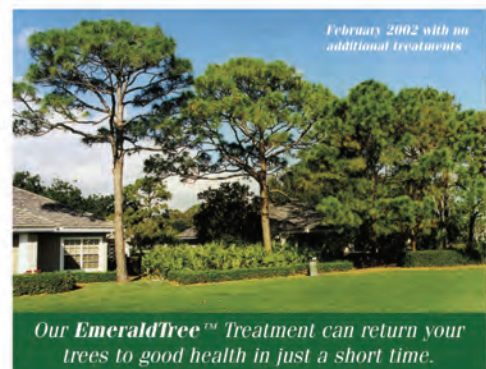
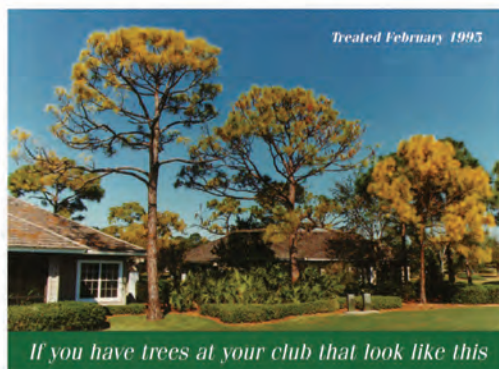
Florida Mottled Duck Population at Risk from Domestic Mallards:

Good intentions can lead to extinction of native sub species

By Kim Jamerson

If it walks like a duck and quacks like a duck, then it must be a duck. That may be a catchy phrase, but it doesn't represent the diversity that exists in nature. In fact, this adage is giving Florida Fish and Wildlife Conservation Commission (FWC)

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ACSP Member Update

We have a long way to go to register 50 percent of our golf courses in the Audubon Cooperative Sanctuary Program, but the list is growing. Congratulations to these courses working on certification and new member courses for their commitment to documenting and practicing positive environmental practices:

Pelican's Nest Golf Club, Naples
 Ritz Carlton GC, Jupiter
 Tiburon Golf Club, Naples
 TPC at Eagle Trace, Coral Springs
 TPC of Tampa Bay, Lutz
 Victoria Hills Golf Club, DeLand
 World Woods GC, Brooksville

Courses with certifications awarded

Bonita Bay: Island Course, Bonita Springs
 Bonita Bay: Creekside, Bonita Springs
 Bonita Bay: Marsh, Bonita Springs
 Broken Sound GC, Boca Raton
 Card Sound Golf Club, Key Largo
 Crown Colony Golf and Country Club, Ft. Myers
 Glades Country Club, Naples
 Grand Harbor Club, Vero Beach
 Gulf Harbour G&CC, Ft. Myers
 Harmony Golf Preserve, Harmony
 High Ridge Country Club, Ft. Lauderdale
 IGM - Sandridge Golf Club, Melbourne
 Ironwood GC, Gainesville
 John's Island Club West Course, Vero Beach
 Lakewood Ranch G&CC, Bradenton
 Links at Boynton Beach, Boynton Beach
 Meadowbrook GC, Gainesville
 Plantation at Leesburg, Leesburg
 Orchid Island Golf & Beach Club, Vero Beach
 Outdoor Resort, Kissimmee
 Palencia Golf Club, St. Augustine

Welcome to these new ACSP members

Bay Palms GC, MacDill AFB
 Bobby Jones G.C., Sarasota
 Bonaventure Country Club, Weston
 Breckenridge Golf and Tennis, Estero
 Club @ Renaissance, Ft. Myers
 Cove Cay Country Club, Clearwater
 Duran G.C., Melbourne
 Golden Bear Club at Keene's Point, Windermere
 Heron Creek G&CC, North Port
 Hideout Golf Club, Naples
 Isleworth G&CC, Windermere
 Northdale Golf & Tennis Club, Tampa
 Palm Beach Gardens GC, Palm Beach Gardens
 Palmetto Pines G.C., Cape Coral
 Plantation of Leesburg, Leesburg
 Poinciana Country Club, Lake Worth
 Shell Point Golf Club, Ft. Myers
 St. Stephens International, Tampa
 The Club Course, Broken Sound Club, Boca Raton
 The Hideaway, Ft. Myers
 Viera East Golf Course, Viera

biologists headaches when it comes to protecting a native subspecies found nowhere else in the world – the Florida mottled duck.

“People love ducks. They like seeing them in their lakes and ponds, and feeding them is often a form of family entertainment,” FWC biolo-

gist Diane Eggeman said. “The problem is that desire to have ducks around often leads people to buy and artificially stock our waterways with domestic mallards. That’s illegal and can have devastating effects on native wildlife.”

Eggeman says released domestic ducks



Male and female mottled ducks both look similar to female mallards, but have lighter colored heads and bills.

transmit diseases and compete with all wild ducks for food and habitat. Additionally, domestic mallards pose a specific risk to the Florida mottled duck — the threat of extinction through hybridization. Unlike wild mallards, which migrate north in the spring to breed, captive-reared mallards have become established as year-round residents that are

breeding here.

“These birds are closely related and similar in appearance to the mottled duck and are crossbreeding with that species. Left unchecked, the crossbreeding could completely swamp the mottled duck population to the point of extinction,” Eggeman said. “We might be left with only mallards and hybrids.”

Other communities around the world have experienced similar hybridization problems. In New Zealand, captive-reared mallards, which were released to provide hunting stock, have nearly wiped out local grey duck populations. Ninety-five percent of grey ducks in that country are now hybrids. The Hawaiian duck is thought to be completely hybridized on the island of Oahu and genetically intact only on the island of Kauai.

While the biological threats facing the Florida mottled duck may seem complex, the steps you can take to protect the subspecies are simple:

- Don't release any new mallards onto your golf course.
- Don't support mallards that already call your golf course home by feeding or sheltering them.
- Do spread the word about how releasing and sup-

porting domestic mallards threatens the Florida mottled duck.

The Florida mottled duck breeding population is relatively small, approximately 30,000-40,000 birds, and FWC biologists estimate that as many as 12 percent of those birds are hybrids. Eggeman says those are frightening numbers, but there is still hope.

“We have a real opportunity to save a valued part of our state's native wildlife,” Eggeman said. “The Florida mottled duck has lived here for thousands of years, and with the help and support of Florida residents we can conserve it well into the future.”

In recognition of the threats domestic mallards pose to the mottled duck, the FWC has established rules that make it illegal to release these birds and require permits to buy and sell them. Also, the agency has partnered with the U.S. Fish and Wildlife Service to allow removal of artificially introduced mallards by people with special permits.

You can learn more about the mottled duck and what you can do to help by visiting www.myfwc.com/duck or by calling the FWC's waterfowl offices at 850-488-5878 or 321-726-2862.

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