

# LAKES, WETLANDS & WILDLIFE INFORMATION & SERVICES



**ALLSTATE RESOURCE MANAGEMENT, INC.**

*Promoting public awareness of Florida's precious natural resources*  
**[www.allstatemanagement.com](http://www.allstatemanagement.com)**



## TABLE OF CONTENTS

|                                    |        |
|------------------------------------|--------|
| Lake & Waterway Management         | page 1 |
| Wetland Management & Monitoring    | page 2 |
| Managing Stormwater Systems        | page 3 |
| Erosion Control                    | page 4 |
| Fisheries Management & Stocking    | page 5 |
| Native Plants & Installation       | page 6 |
| Water Quality Testing & Monitoring | page 7 |
| Fountains & Aeration Systems       | page 8 |
| Community Outreach & Education     | page 9 |



golden canna



arrowhead



buttonbush



blue flag iris



Aquatic plants are a natural part of Florida's ecosystem. When left uncontrolled, undesirable growth can become unsightly, interfere with surface water management, fishing and other water related activities. Excessive growth in lakes can lower dissolved oxygen, impede water flow, harm aquatic wildlife and disrupt boat traffic. Most algae and aquatic plant problems that occur in Florida are caused by high nutrient levels, warm water temperatures and the abundance of non-native and invasive weed species. The fertilization of lawns and seasonal rains also induce algae growth.

**ALLSTATE RESOURCE MANAGEMENT** specializes in keeping lakes, ponds and waterways in proper condition throughout the year. Our water management programs are designed to solve existing problems and prevent unsightly weed and algae growth without disturbing fish, wildlife or desirable plant species. Our staff biologists and water managers are licensed by the Florida Department of Agriculture and Consumer Services and are skilled at addressing issues of environmental concern.

The purpose of lake and waterway management is to protect natural habitat while controlling algae and undesirable aquatic weed growth. ALLSTATE RESOURCE MANAGEMENT performs basic water quality testing, monitors beneficial aquatic plants and observes fish and wildlife during each site visit.

Our management program helps waterways to maintain their natural balance and gives property managers and lakeside residents a complete overview of the sensitive ecosystem under their care. Service contracts usually include twelve treatments per year scheduled approximately thirty days apart. Additional necessary visits are performed at no extra cost. While aquatic plants are a natural part of a lake's ecosystem, exotic and invasive growth can be controlled with scheduled maintenance visits. A lake's natural beauty can be restored and maintained by our professional staff.

### LAKE & WATERWAY MANAGEMENT PROGRAM PARAMETERS:

- Monthly testing of waters used for swimming, boating, fishing and irrigation
- Fish and wildlife monitoring
- Control and maintenance of algae
- Control and maintenance of undesirable aquatic weeds
- Scheduled inspections to reduce the potential of unwanted aquatic weed infestations
- Control and maintenance of grasses growing in the water to the shoreline's edge
- Monitoring and maintenance of native aquatic plants left for aesthetic value and the benefit of wildlife populations
- Optional stocking of lakes with desirable sportfish species such as Largemouth Bass, Bream and Channel Catfish
- Research for the introduction of weed-eating Triploid Grass Carp to assist in biological plant control and Mosquitofish for assistance with mosquito control
- Trash and debris removal where specified
- Wetland area maintenance where specified
- Professional reporting for property management administration



## WETLAND MANAGEMENT

Desirable wetland plant species are important components of a balanced aquatic ecosystem. They provide sanctuary for wildlife, nesting areas for waterfowl, stabilize shorelines, improve water quality and clarity through filtration.

The aesthetic value of waterways and the quality of the habitat they provide for local wildlife can be enhanced by planting and maintaining sanctuary areas containing beneficial wetland plants.

**ALLSTATE RESOURCE MANAGEMENT** offers a variety of beneficial plants to enhance biodiversity as well as provides planning, planting and maintenance services.



After a site has been prepared and the groundwork completed, our specialists introduce native vegetation according to the needs of the ecosystem. Project estimates depend on species, size, quantity, diversity and spacing of plants.

Proper site preparation and immediate preventative maintenance in the early stages after planting will save future maintenance and restoration costs. Although a well-planted aquascape will help to ensure initial success, scheduled maintenance is needed for sustained coverage and survival of the plants. Weather, water level fluctuations, turbidity and other variables can impair the ongoing benefits of planted areas. Our biologists visit sites regularly to monitor plantings and perform preventative maintenance.

Sound principles of weed control should prevail in a wetland management program. Preventative maintenance is the most effective means of saving money and helps to retain the value of the site. The most common ways presently utilized for the care of aquascaped areas, mitigated wetlands and traditional upland preserves are manual removal and spot spraying with selective products. It is important that products used in the water and wetland areas are approved for use by appropriate government agencies.

Ongoing care works to facilitate the optimum health of plantings, but also prevents the potentially expensive removal and restoration costs that may result if initial plantings are not maintained. As State and local regulations usually require certain levels of plant coverage and survival rates, continued maintenance helps to ensure compliance and avoid expenses associated with repeated plantings, or costly fines.

The investment for maintenance varies and depends on condition, surrounding seed sources and other site-specific variables. Casual trash removal in mitigation sites is a standard parameter of our maintenance programs.



## FLOOD MANAGEMENT IS A SHARED RESPONSIBILITY AND EVERYONE CAN MAKE A DIFFERENCE!

Homeowner Associations, property managers and residents play a vital role in managing the drainage systems in their area. By being familiar with the components in communities, residents and managers can become active in helping to prevent flooding and pooling water. Drainage systems in your neighborhood should be inspected regularly, checking to see if trash, dead vegetation and sediments are being removed. Keeping records for property management and jurisdictional agencies is important in preventing potential problems.

Counties and local water control districts now require licensing and renewal of the proper permits for the operation and maintenance of surface water management systems. This benefits landowners by helping to prevent flooding and maintaining water quality. Stormwater systems consist of combinations of the following components: lakes, canals, retention basins, swales, drainage structures, and stormwater pumping stations. Routine maintenance and certification of proper function as designed ensures that the system operates efficiently. It should be noted that in many regions, failure to renew licenses may result in fines and the requirement of a costly recertification.



### Proper operation of a stormwater drainage system includes the following items:

- All catch basin grates, stormwater manhole covers and outfalls are to be free and clear of all obstructions.
- All catch basins are to be substantially free of mud, debris, silt and pollutants.
- There are to be no areas of sunken pavement that are likely to be the result of a drainage system failure.
- There are to be no deteriorated headwalls or broken grates.
- The weirs and internal baffles must be in place and in proper working condition.
- Swales and retention/detention areas must not have been modified.
- The system must be certified that it has not been modified or expanded.

A final inspection by a certified engineer usually includes, but is not limited to, a visual inspection of all outfalls, grates, stormwater manhole covers, weirs, baffles, manholes, and catch basins. The inspection of underground culvert pipes is normally required only if the engineer concludes that there is evidence of need. With proper budgeting, managers will be able to put necessary maintenance costs for drainage systems into an affordable posture for their clients.

**ALLSTATE RESOURCE MANAGEMENT'S** Stormwater Program Packages include inspections to determine the need for care or repair, cleaning, repairs, reports for compliance, certification by a licensed engineer, recordkeeping and account database management.



## CAUSES OF EROSION



Erosion control is the practice of preventing or controlling wind or water from deteriorating shorelines. This usually involves the creation of some sort of physical barrier, such as vegetation or rock, to absorb some of the energy of the wind or water that is causing the erosion.

Loss of property contributes to lower property values. Not only is erosion an eyesore, but it can also be a serious safety and liability concern.

Each site is unique as to the degree of erosion and the site conditions. There is no one size fits all answer for erosion restoration. We will help you to find the right solution to your specific and individual problems and concerns.

### What Causes Erosion?

- Wind
- Hidden Structural Damage
- Water
- Armored Catfish

### Armored Catfish

Armored catfish spawn in cavities that they create by burrowing into water banks. It creates sinkholes that may be visually undetected, which can prove dangerous when unsuspecting homeowners walk along the banks.



## METHODS FOR STABILIZATION OF SLOPE EROSION

### Shoreline Plantings

Help to stabilize shorelines, improve water quality and aesthetics

- Natural ecological solution
- Filters out pollutants before runoff enters lake
- No heavy equipment required
- A preventative measure / not a solution for severe erosion
- Requires ongoing maintenance

### Shore Restore

Environmentally-friendly and permanent solution to shore erosion

- Increases waterway capacity
- Accepts plants and sod
- Halts erosion and stabilizes shorelines

### Rock Revetment

Specific use for tidal and flowing water

- Requires heavy equipment access to the site
- Needs staging area
- Lay the geotextile fabric
- Install the rock
- Longevity and stability
- Best solution for tidal areas

### Rip Rap

Specific use for steep bank areas and headwalls

- Longevity
- Some water districts do not allow rip rap installation

### Geotube Method

Stacking tubes to achieve slope / backfilling with sand

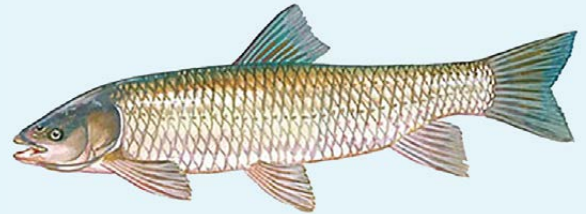
- Sediment removed from bottom
- No heavy equipment required
- Warranty

A lake is a living ecosystem in which all components are interrelated. Establishing and maintaining a sustainable fish population is a major goal in environmental resource management. A diverse fish population not only indicates the overall health of a lake but has many other benefits as well. A balanced fishery can assist the natural biological processes of an aquatic system and improve water quality and aesthetics. Sustaining populations of grass carp and mosquitofish can help control infestations of undesirable aquatic weeds and mosquitos. Additionally, species such as largemouth bass and bluegill provide excellent sportfishing opportunities.

**ALLSTATE RESOURCE MANAGEMENT** provides fish stocking services throughout Florida and is licensed to handle native and certain exotic fish species by the Florida Fish and Wildlife Conservation Commission. Below is a list of fish available for delivery.

### TRIPLOID GRASS CARP

Grass carp are a weed-eating fish species commonly used as biological control agents for submersed aquatic vegetation. The triploid variant of this species is genetically altered so as not to have reproductive capabilities. The stocking of triploid grass carp is often recommended for assistance in aquatic vegetation control. The addition of these work fish can supplement lake management programs. The Florida Fish & Wildlife Conservation Commission (FWC) regulates the stocking of these fish by issuing permits for qualified waterway systems. Please call our office to obtain a free application and quote.



### LARGEMOUTH BASS

The largemouth bass is the most popular freshwater gamefish in the United States. This bass reaches up to 20 pounds and is usually olive green in color with brown mottling. The largemouth bass is found all over Florida, and throughout the southern part of the United States.

### BLUEGILL

The bluegill, also known as bream, is one of the most common fish found in South Florida's waters. Reaching up to 10 inches in size, the bluegill have an oval-like appearance and a striped pattern that runs vertically beneath its dorsal fin.



### CHANNEL CATFISH

Channel catfish help to balance a lake's ecosystem by spending a majority of their time scavenging lake bottoms. Catfish are easily recognizable by their "whiskers" and elongated bodies. They can reach weights over 25 pounds.

### MOSQUITOFISH

The mosquitofish, a member of the minnow family, is a beneficial native species that can eat its body weight in mosquito and aquatic midge larvae every day. Mosquitofish are often utilized in areas where West Nile Virus, malaria and yellow fever are prevalent.

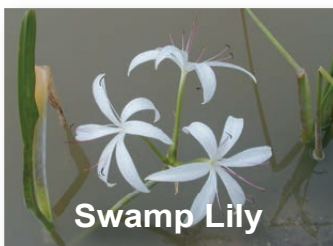




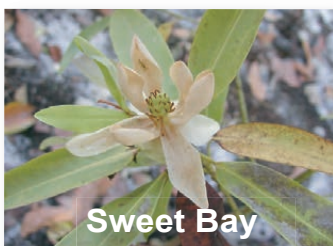
Pickerelweed



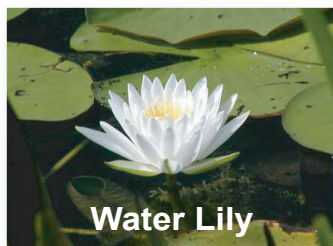
Arrowhead



Swamp Lily



Sweet Bay



Water Lily



Firebush

## NATIVE PLANTS

Creating sanctuary areas by introducing native plant species helps to restore the natural beauty of lakes and preserve areas. Desirable plants are important components of balanced ecosystems. They provide food supply and nesting areas for wildlife. Aquatic plants stabilize shorelines, improve water quality and induce greater clarity through filtration.

**ALLSTATE RESOURCE MANAGEMENT** is licensed by the Department of Environmental Protection to transplant a variety of approved native plant species. Our biologists select appropriate flora for specific locations by matching the plants with the existing ecology of the chosen area. We guarantee that all plants installed by our specially-trained staff will be disease-free and of the highest quality. Survival is ensured according to the terms of our warranty.

## WHAT IS MITIGATION?

Many wonder about the purpose of wetland or terrestrial plantings within their communities. Recreated natural or "mitigation" areas are an integral part of many urban developments in South Florida.

When developers build communities, they often include lakes as a way to collect and retain stormwater. Waterway systems help to alleviate flooding, create a source of water for irrigation and add aesthetic appeal. However, created lakes disrupt the structure and function of existing native ecosystems.

In addition to enhancing the quality of the surrounding ecosystem, preserves and wetlands act as natural sponges, helping to reduce flooding and filtering water that feeds into the drinking water supply. Plantings around lake perimeters filter fertilizer runoff from surrounding lawns and landscaping that would normally induce the growth of algae and aquatic weeds. Wooded preserves offer privacy buffers and reduce noise from nearby roads. Furthermore, wildlife species drawn to these created areas act as natural predators for pest species such as insects and rodents.

Problems can arise if attention is not given to the care of natural areas. Various government agencies may require a builder to set aside a certain amount of space for the re-creation of a natural area, called "mitigation." Mitigation zones help to ease the impact on lands being developed. Plants introduced in these areas are species native to Florida.

A site plan or layout in which the mitigation is to be planted must be approved by the appropriate jurisdictional agency. The area must then be maintained to predetermined standards and monitored to ensure compliance with regulations.

Maintenance of mitigation sites goes far beyond typical landscaping and groundskeeping. Preserves are meant to mimic natural Florida ecosystems, and in order to maintain them, a constant effort must be made to inhibit the introduction and growth of invasive and exotic plants. Many of these unwanted species have been introduced from other countries and lack the natural controls found in their place of origin. This allows these plants to spread at a faster rate than common weeds. The terrain found in mitigation areas frequently does not allow for the use of regular landscaping equipment, making maintenance more challenging and time-consuming. The density and overall health of the beneficial plants is also crucial. Trimming, pruning, mulching, or removing these plants is not allowed, which makes it more difficult to prevent invasive plants from growing amongst the native flora. If the mitigation areas are to be successful, maintenance crews must be specially-trained, meticulous, patient, and attentive to detail.

Well-maintained mitigation areas can become a showpiece for a development. Although often misunderstood, these natural areas are vital and beneficial components of residential communities throughout South Florida.

## WE CAN CREATE A DETAILED WATER QUALITY PROGRAM FOR YOUR PROPERTY

**ALLSTATE RESOURCE MANAGEMENT'S** water quality monitoring program helps to monitor, document and track changes in important variables in community lakes over a period of time.

Dissolved oxygen, clarity, pH and temperature are standard components of our regular lake management programs. The expanded water quality monitoring program includes water sampling four (4) times a year, monitoring reports, interpretation of test results and a compiled annual history of lake parameters. One-time water tests are available.

### Some of the important parameters tested are:

#### **Total Nitrogen & Phosphorous**

Nitrogen and phosphorous are two key nutrients in a lake's productivity and diversity. Both are necessary for aquatic plants and algae to grow; in turn, these aquatic flora provide lakes with oxygen. Insufficient levels of nitrogen and phosphorous can cause a decline in plant, and eventually animal populations. Too much nitrogen and phosphorous can cause algae blooms and excessive aquatic weed growth.

#### **Fecal and Total Coliform**

Coliforms are nonpathogenic bacteria used as indicators of the presence of potentially dangerous substances. High levels of these bacteria can signal the presence or inflow of contaminants such as sewage and animal waste. It is extremely important to monitor coliform counts if a lake is used for swimming or fishing (with intent to consume the catch).



#### **Dissolved Oxygen**

Dissolved oxygen is necessary to sustain any kind of fish or aquatic animal population. The level of oxygen in the water directly relates to the population size that a lake can handle. Insufficient dissolved oxygen levels are the most frequent cause of fish kills.

#### **pH**

In simple terms, the pH of a lake measures the acidity of the water. The pH of a lake can determine how fast certain nutrients and natural substances will cycle through it. The pH level greatly influences the biology of a lake. Water that becomes too acidic, or not acidic enough, has drastic effects on both plant and animal populations.

#### **Clarity**

Water clarity, beyond being an aesthetic factor, is also an indicator of excessive plankton and free floating algae. Such excessive levels can unbalance a lake's water quality parameters and lead to problems with nutrient levels and plant growth.

By supplementing lake management programs with advanced water quality testing, property managers and residents will be able to better understand the overall health and condition of the lakes in their neighborhoods.

The data provided by enhanced analysis can help to protect homeowners and associations from certain liability issues. Furthermore, these measurements help aquatic biologists to more efficiently deal with existing problems and to employ site-specific best management practices to help resolve problems.

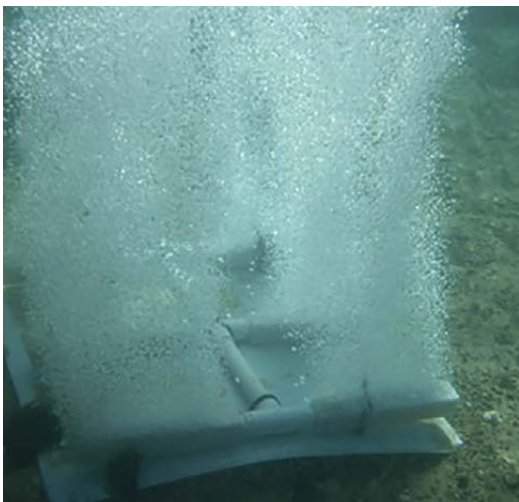
Sufficient and appropriate information is crucial if property managers and residents are to make important decisions concerning waterway management. An advanced water quality monitoring program is a useful tool and can make the task of lake maintenance more successful.



## FLOATING FOUNTAIN WATER DISPLAYS

Decorative floating fountains enhance the natural beauty of waterways while assisting nature with numerous biological benefits. Fountains improve aquatic ecosystems by increasing dissolved oxygen levels. Oxygen acts to suppress undesirable bacteria and is necessary to sustain fish populations. Fountains aid in the circulation and destratification of stagnant water. They also help to reduce many types of algae problems.

**ALLSTATE RESOURCE MANAGEMENT** installs fountain aerators with a variety of beautiful displays and exciting lighting options. In addition, we offer service contracts which provide regularly scheduled visits for cleaning and preventative maintenance. Our professional staff is trained to perform repair services when necessary.



## AERATORS

Aeration systems provide one of the best methods of improving your lake or pond. The simple bubbling of air to the surface adds life-giving oxygen to the water and creates vital circulation. The results are healthier fish, reduced algae growth, fewer dissolved toxic gasses, less odor and the elimination of stagnant water.

**ALLSTATE RESOURCE MANAGEMENT** fabricates, installs and services custom aeration systems.



## ALLSTATE RESOURCE MANAGEMENT IS DEDICATED TO COMMUNITY SUPPORT

We regularly sponsor youth fishing and environmental education events, take leadership roles in professional societies, support research efforts and encourage our employees to volunteer. We strongly believe in the value of public-private partnerships in order to maximize resources and achieve community-wide goals.

### RESEARCH/ENVIRONMENTAL EDUCATION

Youth Environmental Alliance  
 Sea Grant  
 Broward Environmental Education Council  
 University of Florida LakeWatch  
 Broward Soil & Water Conservation District  
 4H Clubs

### PROFESSIONAL SOCIETIES

Florida Aquatic Plant Management Society  
 South Florida Aquatic Plant Management Society  
 Florida Lake Management Society  
 Florida Exotic Pest Plant Council  
 International Society of Arboriculture  
 American Fisheries Society  
 Florida Farm Bureau  
 International Erosion Control Association

### VOLUNTEER PROGRAMS

University of Florida's Fishing For Success  
 Florida Fish & Wildlife Conservation Commission's  
 Family Fishing Days



# WHY ALLSTATE RESOURCE MANAGEMENT?

## LICENSED & INSURED

## DIVERSE

Offers a full array of services, including fish stocking, water testing, weed and algae control, wetland planting and maintenance, erosion, fountains and aeration systems, flying insect control, and stormwater services.

## COMMUNICATIVE

Detailed timely reporting, email and fax services.

## RESPONSIVE

Immediate service when needed due to local concentration of professional staff.

## PREPARED

Specialized equipment for mechanical harvesting and the application of granular and liquid applications.

## RECOGNIZED

Company and staff known throughout the industry as leaders by local and State agencies.



Phone: (800) 270-6558    Fax: (954) 382-9770  
[www.allstatemanagement.com](http://www.allstatemanagement.com)  
[info@allstatemanagement.com](mailto:info@allstatemanagement.com)