

Pond Management Plan Workbook



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Pond Management Plan Workbook

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Introduction

What is a Pond Management Plan?

Your stormwater pond is essentially a water treatment facility and it provides many benefits for your community's watershed including increasing water quality, preventing pollution, decreasing flooding, and providing essential wildlife habitat among other things. A pond management plan will make sure that your pond is working at peak performance to ensure functionally and supreme benefits. With a plan for the future maintenance of your pond, you and your pond group will avoid spending time and money on quick fixes that may degrade water quality and increase overall pollutants. **It is the responsibility of the pond group to write the pond management plan.** The plan includes goals for the future, helps you measure your progress in achieving those goals, and ultimately helps you make more-informed decisions about your pond.

What should my pond look like?

There are certain elements of your pond you *cannot change*: the shape, the depth, the surroundings, the underlying soils, the water sources (both groundwater and neighborhood stormwater runoff), and the original purpose for building the pond. You *can change* the neighborhood's attitude towards the pond, the type of maintenance it receives, the quality of the neighborhood stormwater runoff that enters the pond, the quality of the water as it leaves the pond, the types of plants that grow in and around the pond, and the kinds of wildlife that are attracted to the pond. Your pond can become a neighborhood asset, a place to play with the kids, to teach them about Florida's natural world, and watch the birds. It can have clean clear water, cypress trees, oak trees, iris blooming in the spring, and summer-blooming pickerelweed lining the water's edge.

This Pond Management Plan Workbook is modeled after the Florida [LAKEWATCH](#) program's fifteen-step process to helping their volunteers build a lake management plan. Ponds are typically smaller, with fewer recreational and development issues, so we have shortened this process to **six main steps**.

What is the Adopt-A-Pond program?

The Adopt-A-Pond program partners with citizens to increase the functionality of their stormwater ponds to achieve benefits such as; improved water quality, habitat restoration, drainage improvement, flood protection, and increased environmental stewardship. Participants in the Adopt-A-Pond program will work together to improve their communities by designing, implementing, and maintaining a 5-year plan for their stormwater ponds. Activities can include invasive plant removal, native plantings, pond cleanup events, and neighborhood outreach and education. Funding for this program comes from Pinellas County's [Surface Water Assessment](#). You do not have to be a participant in the Adopt-A-Pond program to benefit from this workbook.





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Overview: The Six Steps To Building Your Pond Management Plan

- 1. Form a group** made up of the people living in your pond's drainage basin. It is important to include people who live away from the pond, but in the basin.
- 2. List the problems** you are having with your pond. Problems could include nuisance vegetation, clogged storm drains, eroding banks, litter, pet droppings, algae blooms, compost piles, etc.
- 3. Collect information** about your pond and the drainage basin especially deed restrictions and/or homeowner's rules that apply to the pond and current maintenance procedures (carp, herbicide, plant removal, trash pickup, etc.).
- 4. List possible solutions** to the problems you have listed. Solutions could include plantings, nuisance plant removal, storm drain marking, neighborhood educational meeting, renting a dumpster for a neighborhood pond clean-up, fertilizer-free zones, or door hangers with pollution prevention instructions.
- 5. Write a management plan** with all of the information that you collected. Your management plan can include these sections:
 - Section A. pond background information and description
 - Section B. pond group members
 - Section C. aquatic weed control
 - Section D. algae control
 - Section E. fish & wildlife
 - Section F. water quality monitoring
 - Section G. drainage structure maintenance
 - Section H. pond group workdays and reports
 - Section I. stormwater pollution prevention program
 - Section J. pond group goals & vision for the future
- 6. Implement your plan** by assigning activities to members of your group. Set dates for achieving your goals and know where to turn if/when you need help.



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STEP 1: Form Your Pond Group

Use the table below to list the people in your neighborhood who are willing to help you draft and implement your pond management plan. You may need to ask people more than once to join your efforts, as some people may not want to join until they see you have made some progress.

NAME	ADDRESS	PHONE & EMAIL
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		
17.		
18.		



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STEP 2: List the Problems

Spending your first few group meetings will be discussing the problems you are having with your pond. It will be important to listen to people who have made an attempt to manage the pond before. Learn the history of your community's pond management efforts and use the past to inform your future decisions.

PROBLEM	DESCRIPTION
nuisance vegetation	
clogged storm drains	
eroding banks	
litter	
pet droppings	
algae blooms	
feeding wildlife	



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STEP 3: Collect Information

Use the below table as a guideline for what information to collect. If you are participating in the Adopt-A-Pond program, County staff will provide some of this information to you.

INFO NEEDED	LOCATION/SOURCE	ASSIGNED TO:
Aerial photograph	Adopt-A-Pond staff or internet resources like Google Maps	
Names and addresses of everyone in the drainage basin	Neighbors and homeowners association	
Locations of drainage structures, pipes, under drains, connections and plans	Adopt-A-Pond staff or County/City Utilities	
Pond ownership, easements, recorded plats	Adopt-A-Pond staff or stormwater pond design records (County, City, SWFWMD)	
Deed restrictions and/or homeowner's rules	Homeowners Association	
Current maintenance: carp yes / no herbicide yes / no plant removal yes / no	Neighbors, pond owners and homeowners association	
Other:		
Other:		



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STEP 4: List Possible Solutions

Now that you have discussed problems and gathered information about your pond, start to think of some possible solutions. Think of goals for each problem area and then about the steps to achieve each goal. You may need to do more research to know what solutions are available. Use the helpful links in the Additional Resources section at the end of this document for extra support.

PROBLEM	SOLUTION	RESOURCE
nuisance vegetation		
clogged storm drains		
eroding banks		
litter		
pet droppings		
algae blooms		
feeding wildlife		



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STEP 5: Write Your Management Plan

Section A. Pond Background Information and Description

*(This step contains **10 sections**, including tables and checklists to help you write your pond management plan. Use the information tables to make new contacts and learn more about your pond. Review the sample tables, and then fill in the blank tables where appropriate.)*

How does your pond affect your neighborhood?

How do neighbors use the pond or view the pond?

Could a well-managed pond improve your neighborhood?

Other observations and comments:



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Section B. Pond Group Organization

Your pond group could be the start of a better community. Remember, not everyone is going to join in from the beginning; some people will wait until they see that you have made some progress before they want to participate. See if children want to participate even if their parents do not want to help directly. Children take pride in being pond group members and like taking on responsibilities. They might even influence parents!

Ask your group to consider these organizational needs:

Meetings	i.e., monthly / bi-monthly / quarterly
Committees	i.e., one for each section of the plan
Work Days	i.e., bi-monthly year 1, quarterly year 2
Pond Dues	i.e., \$10 with help, or \$20 without help (paid quarterly)
Governmental liaison	could be shared by two group members

Section C. Aquatic Weed Control

Aquatic weed control will probably be the most challenging goal your group will face. Consider these tips:

1. Identify, and remove *only nuisance plants*.
For aquatic plant reference materials, visit the [Center for Aquatic and Invasive Plants](#) or the [Florida Exotic Pest Plant Council](#).
2. Your pond probably has three or four nuisance plants to tackle; identify them.
Examples: Brazilian pepper, cattails, primrose willow, hydrilla
3. Minimize chemical maintenance. Can you be chemical free?
4. Use a combination of several weed control strategies, such as:
 - o group work days to pull out nuisance plants
 - o limited and selective herbicide applications
 - o triploid grass carp to eat nuisance submerged plants
 - o establish stands of native plants to out-compete nuisance plants
5. Find weed removal tools that make pond workdays easier
Examples: grabbers, gloves, loppers, heavy-duty trash bags
6. Have plan for disposing of pond debris.



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Section D. Algae Control

The most effective algae control is pollution prevention and includes reducing nutrient loads (from fertilizer) to your pond. At one point, excess nitrogen and phosphorous polluted over 70% of Pinellas County waters. Excess nutrients contribute to harmful [algae blooms](#) that turn the water a green or rust colored and lower oxygen levels potentially leading to [fish kills](#). Removing and treating these nutrients costs taxpayers millions of dollars each year. Fertilizer and landscape debris are sources of nutrients that can be controlled with your help. Follow the steps below to reduce fertilizer and control algae in your pond. *An ounce of prevention is worth a ton of cure!*

1. Follow all of the [Best Management Practices](#) found in the [Fertilizer Ordinance](#).
2. Establish fertilizer-free zones around the pond, along the street, and around storm drains; this will reduce direct runoff of fertilizer granules into the pond.
3. Plant shade trees along the pond; shade can reduce algae growth. Important: do not plant trees over pipes or near drainage structures.
4. Plant Florida native aquatic plants in and around your pond; they will beautify your pond, provide food and shelter for wildlife, and will help reduce algae growth. They will also improve overall water quality in your pond. Check out the [Florida-Friendly Landscaping Program](#) for other tips!





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Section E. Fish & Wildlife

Urban ponds and lakes provide much-needed habitat for Florida's wildlife. Your pond may be an important link in a local wildlife corridor, as animals move through the area. Your pond's needs may vary depending on which type of fish and wildlife you want in/around your pond. Visit the [Florida Fish and Wildlife Conservation Commission](#) for more information.

ANIMAL	RESOURCE	HABITAT NEEDS



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Section F. Water Quality Monitoring

Similar to the saying "you are what you eat", your pond is only as healthy as the water your neighborhood "feeds" it. Regular water testing will give your pond group an idea of water quality trends in your pond. It is normal for water quality to change from season to season. A record of monthly water quality will help you recognize seasonal changes in your pond and can help you establish quantitative goals for your pond's water quality. Visit the UF/IFAS [LAKEWATCH](#) website for Beginner's Guides to Water Management.

Water quality test kits can be purchased online or sometimes from a home-improvement store. Look for kits that test the pH, dissolved oxygen, biochemical oxygen demand (BOD), temperature, turbidity, nitrate, phosphate and coliform bacteria such as the [Earth Force Low Cost Water Monitoring Kit](#) from LaMotte.

Month/Year	pH	Dissolved oxygen	BOD	Temp.	Turbidity	Nitrate	Phosphate	Coliform bacteria



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Section G. Drainage Structure Maintenance

Working on and around drainage structures can be dangerous. If the local government owns these control structures, it is important not to work near/around them without prior approval and supervision. If your pond's control structures are not under government maintenance, ask them advise you on any drainage issues.

Our local government contacts for stormwater and drainage are:

Section H. Pond Group Work Days

No amount of planning in the world will do a bit of good if you cannot get together and *do something to make it happen*. On the other hand, if you try to move too quickly, you might wear out your helpers. It has probably taken several years for your pond to become a weedy mess; it might take several years to recover. In the meantime, plan some workdays and **have some fun!** For an example Adopt-A-Pond Workday Report, visit the [AAP website](#) and download a form.

Date: _____		Workday Report
Pond Group #: _____		
Pond Name/Location: _____		
Purpose and Summary:		

Volunteer Name	Email Address	Hours Worked



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Section I. Stormwater Pollution Prevention Program

Pollution prevention is one of the most important elements of your pond management plan. Your pond will be more successful if your neighborhood can implement some basic pollution prevention practices. Without pollution prevention, it is more difficult to protect or improve water quality.

ACTIVITY	RESOURCE	ASSIGNED TO:
Storm Drain Marking	Adopt-A-Pond	
Door Hangers	Adopt-A-Pond	
Initial Pond Walk	Adopt-A-Pond	
Pond Workdays and Reports	Your Pond Group	
Fertilizer-Free Zones	Pond Neighborhood	
Pond Plantings	Adopt-A-Pond or Lakes and Ponds Education Day	

Section J. Pond Group Goals & Vision for the Future

Take time to picture how you want your pond to look in the future. Include how people and animals will enjoy it, what it could look like, what the plants will look like, and what the water will look like. Think about how a cleaner and healthier neighborhood pond could affect water quality *outside* your neighborhood. Think about what the kids in your neighborhood will learn from taking responsibility for cleaner water. Ask the group to talk about what they would like to see. Your group’s vision can become your group’s goals for your pond.

1. How will the neighborhood use our pond?
2. What kinds of wildlife will use our pond?
3. What will the plants in and around the pond look like?
4. What will the water look like?
5. Will we have benches, fountains, or other amenities?



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STEP 6. Implement Your Plan

Congratulations!

Congratulations to you and your pond group for completing this workbook! If participating in the Adopt-A-Pond program, we can help you implement your plan by:

- ✓ Reviewing your Pond Management Plan
- ✓ Conducting a Pond Walk with you and your pond group
- ✓ Providing information and guidance
- ✓ Providing storm drain marking kits and other tools
- ✓ Determining your eligibility for clean-ups and planting materials from Adopt-A-Pond
- ✓ Providing references to other programs and experts
- ✓ Listening!! Contact the Adopt-A-Pond group and tell us what you need. We will try to help!

Additional Resources:

- [Florida Exotic Pest Plant Council \(FLEPPC\)](#)
 - [Florida Yards and Neighborhoods Handbook](#) by UF/IFAS
 - [Pinellas County Fertilizer and Landscape Information](#)
 - [Pinellas County Watershed Management homepage](#)
 - [Stormwater Systems in Your Neighborhood](#) published by the Southwest Florida Water Management District
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