

Chapter 5.

Maintenance Schedule For Structural Controls

Table 5: Stormwater Treatment Ponds — Dry Retention.

STRUCTURAL CONTROL	FREQUENCY OF INSPECTION	FREQUENCY OF MAINTENANCE	ACTIVITIES REQUIRED
Stormwater Treatment Ponds (Dry Retention)	Semi-Annually		- Inspect facility for signs of prolonged wetness and damage to structures including diversion devices and inflow and outflow structures and pipes. - Note any critically eroded areas on banks and pond bottom. - Schedule for stabilization. - Undercutting at the point of discharge and signs of piping in the vicinity of the control structure or inlets, flumes, diversion structures or pipes should be noted and scheduled for immediate repair. - Dead or dying grass on the pond bottom are indications of potential clogging and reduced infiltration capacity. When observed the facility should be checked to insure that it percolates completely within 2-3 days following storms. Scrapping, discing or otherwise aerating pond bottom may be required to restore the infiltration capacity of the soil. - Note any signs of excessive petroleum hydrocarbon contamination and handle appropriately (2).
		As needed	- Mowing and litter and debris removal. - Stabilization of eroded banks. - Repair undercut or eroded areas at inflow and diversion structures or conveyances. - Nutrient and pesticide use management (1). - Dethatch pond bottom and remove thatching. Dispose via composting and land application. As an alternative, remove grass clippings following mowing.
		Annually	Disc or otherwise aerate pond bottom.
		5 Year Revolving Schedule	- Scrape pond bottom and remove sediment with proper sediment disposal. Restore original cross-section and infiltration rate (2,3). - Seed or sod to restore ground cover.

Footnotes: (1) See Chapter 2, pages 34-37. (2) See Chapter 2, pages 32 & 40. (3) See Chapter 2, Pages 30-37.

Table 5: Stormwater Treatment Ponds — Dry Detention with Sand Filter System.

STRUCTURAL CONTROL	FREQUENCY OF INSPECTION	FREQUENCY OF MAINTENANCE	ACTIVITIES REQUIRED
Stormwater Treatment Ponds (Dry Detention with Sand Filter System)	Semi-Annually		• Inspect facility for evidence of damage and short circuiting of the filter. Close attention should be given to the filter box, bed, trench or mound and appurtenant works. Signs of piping (erosion of filter sand) into underdrain pipes or holes next to junction box and/or discharge control structures or exposure of coarse aggregate or geotextile surrounding the underdrain pipe should be noted and scheduled for immediate repair. • Note any critically eroded areas on banks, pond bottom, or filter. Schedule for stabilization. • Any undercutting at the point of discharge and erosion in the vicinity of inflow pipes, flumes and diversion structures should be noted and scheduled for immediate repair. • Dead or dying grass on the pond bottom and/or standing water following 3 days or more of dry weather are indicative of filter "blinding". When observed the facility should be scheduled for major maintenance. Standing water may need to be pumped from the facility or be otherwise drained to effect restoration of the filter. The owner or owner's representative should contact FDEP or the appropriate WMD to advise the permitting authority of the need to perform the drawdown. • Note signs of excessive petroleum contamination and handle appropriately (2). • If so equipped check "clean out" ports at the end of each underdrain and the junction box or underdrain outlet for evidence of blockage. (i.e. standing water in underdrain lateral accompanied by little or not outflow.) • Schedule cleaning of underdrain pipes via mechanical means or high pressure water jet as appropriate. Also inspect for damage to caps from mowing accidents or any breaks in seals to prevent short circuiting of the filter.
		Semi-annually or as needed	• Minor corrective maintenance of filtration components should be scheduled any time drawdown does not occur within 48 hours after a storm. This activity usually involves simple light discing raking or aeration of sod cover or the surface of the filter. Confined unit "vault or box" type systems may be backflushed (i.e. fluidized) if these capabilities are available.

Dry Detention with Sand Filter System continued on page 101.

(continued) Table 5: Stormwater Treatment Ponds — Dry Detention with Sand Filter System.

STRUCTURAL CONTROL	FREQUENCY OF INSPECTION	FREQUENCY OF MAINTENANCE	ACTIVITIES REQUIRED
		18 months or as needed to maintain 72 hours drawdown capacity	- Major maintenance of filtration components is required any time that nuisance conditions (standing water) persists for more than 3 days following storms. This activity involves removal and replacement of ballast gravel and geotextile covers when used. Any sod cover or the top 2-3 inches of sand must be removed in cases involving vegetated or open sand filter beds. All discolored, sediment contaminated sand must be removed and replaced with clean sand of a type equivalent to the original grade. - Sediment and contaminated sand must be disposed of properly. (2,3) - Seed or sod to restore any dead or severely damaged ground cover. - At select locations, excavate down to and check underdrain pipe for clogging of the orifices, slots and/or fabric sock surrounding the pipe if used. Clean or otherwise replace pipe as needed to restore drainage capacity.
		Annually or as needed to maintain 72 hours drawdown limit (Confined Unit or Box Type Filter)	- Major maintenance of filtration components associated with "confined unit" type filters is usually more frequent than with other filtration devices. The activities required are facilitated however by the unit's compact nature. Complete removal and replacement of geotextile, filter sand, and the ballast stone or gravel when used is normally required. - Restore damaged ground cover on the pond bottom. - Fabric wrapped underdrain pipe should be closely inspected and replaced if clogged. Perforated or slotted pipe should be checked for damage or restricted openings. Replace or clean underdrains as needed to restore drainage capacity.
		As needed	- Mowing and removal of grass clipping. - Litter and debris removal from banks. - Stabilization of eroded banks. - Repair undercut and eroded areas in the vicinity of the discharge point or other structures such as inlet flumes, inflow pipes and energy dissipaters. - Nutrient and pesticide use management (1).
		Bi-monthly	Litter and debris removal from control structure and screens and remove sediment buildup at inflows.

Footnotes: (1) See Chapter 2, pages 34-37. (2) See Chapter 2, pages 32 & 40. (3) See Chapter 2, Pages 30-37.

Table 5: Stormwater Treatment Ponds — Wet Detention Facility.

STRUCTURAL CONTROL	FREQUENCY OF INSPECTION	FREQUENCY OF MAINTENANCE	ACTIVITIES REQUIRED
Stormwater Treatment Ponds (Wet Detention Facility)	Annual		- Inspect facility for damage. Close attention should be given to the control structure and the point of discharge (POD). - Undercutting at the POD and evidence of piping (erosion of soil into pipe junctions) and/or erosion in the vicinity of inflow pipes, the outlet control structure, or flumes should be noted and scheduled for immediate repair. - Note signs of excessive total petroleum hydrocarbon contamination and handle appropriately (2). - Monitor sediment accumulations and remove when 3 of storage volume is filled (3). - Check for apparent signs of hypereutrophic conditions and note areas which require invasive aquatic plant control. - Bleeder devices such as orifices as well as weirs, stand pipes, box drop inlets, grates, and screens should clean, free of debris and ready for service. - All control gates should be checked for operational capacity by briefly opening and closing valve. - Forebays/sediment sumps should be monitored for sediment accumulation. The "Cleanout Level" should be calculated for each facility and the sump should be scheduled for sediment removal based on the limit established for the facility and the sediment accumulation rate.
	Semi-annually		- Detention facilities that include constructed wetlands (littoral shelf) components should be monitored carefully to avoid invasive aquatic plant problems. Schedule removal of invasive species or chemical control when necessary to prevent excessive competition with beneficial or desired plants (1). - Note those areas within the littoral zone where the spread or overcrowding of beneficial plants necessitates management and harvesting.
		As needed	- Repair and stabilize undercut and eroded areas near structures and banks. - Stabilize eroded banks. - Mowing side slopes w/litter and debris removal from banks. - Nutrient and pesticide use management (1).
		Monthly	Clean and remove debris from orifices, weirs, stand pipes, drop inlets and screens.

Wet Detention Facility continued on page 103.

(continued) Table 5: Stormwater Treatment Ponds — Wet Detention Facility.

STRUCTURAL CONTROL	FREQUENCY OF INSPECTION	FREQUENCY OF MAINTENANCE	ACTIVITIES REQUIRED
		Annually or as needed	• Aquatic plant management and harvesting. Manage constructed wetland components to prevent overcrowding of beneficial plants and to maintain adequate open water area for aesthetics, light penetration and oxygenation. It is also important to avoid excessive cover for insect (mosquito) larvae which enhances production and inhibits predation. Not more than a 50 percent reduction in open water area is recommended prior to mechanical harvesting and reduction of macrophytes cover to its original level (i.e. 30-35 percent in most instances). • Constructed wetland management (regular selective harvesting) to encourage sites for active growth and enhanced pollutant assimilation is recommended.
		5 year revolving schedule or as needed	• Removal of sediment from forebays or sediment sumps and dispose of properly (2,3). Sediment "cleanout level" should not be higher than 1 foot below the invert elevation of the bay or sump nor should the storage volume be reduced by more than 60 percent of original design, (i.e. Cleanout Level = .2 in/acre drainage area remaining storage volume in most cases.)
		10-15 years or as needed to maintain adequate storage volume and treatment	• Monitor sediment accumulations and remove when storage volume is filled or when hypereutrophic conditions become apparent. Sediment must be disposed of or used properly (2)(3).

Footnotes: (1) See Chapter 2, pages 34-37. (2) See Chapter 2, pages 32 & 40. (3) See Chapter 2, Pages 30-37.

Table 5: Stormwater Treatment Ponds — Wet Detention with Sand Filtration.

STRUCTURAL CONTROL	FREQUENCY OF INSPECTION	FREQUENCY OF MAINTENANCE	ACTIVITIES REQUIRED
Stormwater Treatment Ponds (Wet Detention with Sand Filtration)	Annually		• Inspect filtration component in accordance with type of system as per "Dry Detention with Sand Filter" guidelines. • Inspect detention pond component as described in "Wet Detention" guidelines. • Close attention should be given to the filtration component particularly evidence of short circuiting associated with piping in the vicinity of underdrain junctions and the control structure.
		As needed	• Maintain bank filter bed, trench, or box as described in Dry Detention with Sand Filter guidelines to maintain 72 hour drawdown limit. • Flood control components (weirs, risers, drop boxes and discharge pipes) should be clean and ready for service. • Mowing banks and grass clipping removal. • Litter and debris removal from banks. • Stabilization of eroded banks and repair of undercutting or piping in the vicinity of inlets, outlet control structure and point of discharge. • Nutrient and pesticide use management (1).
		Monthly	• Litter and debris removal from control structure and screens.
		Annually	• Invasive aquatic plant control (1).
		10-15 years revolving schedule or as needed.	• Sediment removal with proper sediment disposal to ensure that the depth of sediments does not exceed that of the design cross-sectional area of the pond (2,3).

Footnotes: (1) See Chapter 2, pages 34-37. (2) See Chapter 2, pages 32 & 40. (3) See Chapter 2, Pages 30-37.

Table 5: Exfiltration Trench.

STRUCTURAL CONTROL	FREQUENCY OF INSPECTION	FREQUENCY OF MAINTENANCE	ACTIVITIES REQUIRED
Exfiltration Trench	Semi-Annually		• Monitor facility for sediment accumulation in the pipe (when used) and storage volume recovery (i.e. drawdown, capacity). Observation wells and inspection ports should be checked following 3 days minimum dry weather. Failure to percolate stored runoff to the design treatment volume level within 72 hours indicates blinding of soil in the trench walls and/or clogging of geotextile liner with fine solids. Reductions in storage volume due to sediment in the distribution pipe also reduces efficiency. Minor maintenance measures can restore exfiltration rates to acceptable levels short term. Major maintenance (total rehabilitation) is required to remove accumulated sediment in most cases or to restore recovery rate when minor measures are no longer effective or can not be performed due to design configuration. • Inspect appurtenances such as sedimentation and oil and grit separation chambers of catch basin as well as diversion devices and over flow weirs when used. Diversion facilities and over flow weirs should be free of debris and ready for service. Sedimentation and oil/grit separators should be scheduled for cleaning when sediment depth approaches cleanout level. Cleanout levels should be established not less than 1 foot below the control elevation of the chamber.
		As needed	• Remove sediment from sediment/oil and grease chamber of catch basin inlets and dispose of properly (2,3). • Remove debris from the outfall or "smart box" (diversion device) in the case of off-line facilities.
		5 years or as needed to prolong service.	• When bypass capability is available minor maintenance measures such as extended dry periods may be used to provide short term recovery of exfiltration rate. • Remove accumulated sediment from facilities constructed with manholes or other appurtenant structures to facilitate cleanout. Sediment should be disposed of properly (2,3). This process normally involves facilities with large pipes. Cleanout may be performed by suction hose and tank truck and/or by high pressure jet washing.
		10-15 years or as needed.	• Total rehabilitation of trench to maintain storage capacity within 2/3 of the design treatment volume and 72 hour exfiltration rate limit. Excavate and remove perforated or slotted pipe, surrounding coarse aggregate envelop (bedding) and geotextile fabric (wrap). In most cases renovation will require replacement with new material of equivalent grade and quality. Trench walls should be excavated to expose clean soil. Sediment contaminated soil, coarse aggregate and filter cloth should be disposed of properly (2,3).

Footnotes: (1) See Chapter 2, pages 34-37. (2) See Chapter 2, pages 32 & 40. (3) See Chapter 2, Pages 30-37.

Table 5: Grass Swales (Dry).

STRUCTURAL CONTROL	FREQUENCY OF INSPECTION	FREQUENCY OF MAINTENANCE	ACTIVITIES REQUIRED
Grass Swales (Dry)	Semi-Annually		- Inspect swales for signs of prolonged wetness and damage to structures including diversion devices, inflow pipes, driveway culverts, and swale blocks. - Note any critically eroded areas on banks and front or back slope and swale bottom. - Schedule for stabilization. - Undercutting at the point of discharge and paved flumes or pipes and culverts should be noted and scheduled for immediate repair. - Dead or dying grass and saturation of the swale bottom are indications of potential clogging and reduced infiltration capacity. When observed the facility should be checked to insure that it percolates completely within 3 days following storms to comply with state regulations. Scraping, discing or otherwise aerating the bottom may be required to restore the infiltration capacity of the soil. For best performance swales should percolate within one day following storms. - Note any signs of excessive petroleum hydrocarbon contamination and handle appropriately (2).
		As needed	- Mowing and litter and debris removal. - Stabilization of eroded side slopes and bottom. - Repair undercut or eroded areas at culverts, flumes, or swale blocks. - Nutrient and pesticide use management (1). - Dethatch swale bottom and remove thatching. Dispose via composting and land application. As an alternative, remove grass clippings following mowing.
		Annually	Disc or otherwise aerate swale bottom.
		5 Year Revolving Schedule	- Scrape swale bottom and remove sediment with proper sediment disposal. Restore original cross-section and infiltration rate (2,3). - Seed or sod to restore ground cover. - Violation of water quality standards for turbidity will often result following initial construction as well as during major maintenance and restoration activities, unless water can be temporarily diverted while seeding and subsequent germination take place. In lieu of diversion it is advisable to stabilize both the swale bottom and side slopes as quickly as possible by resodding and staking all areas disturbed during swale clean out and restoration operations. Use of netting or geotextile matting in conjunction with seeding operations have also been shown to reduce the potential for erosion and subsequent turbidity problems from roadside swale maintenance.

Footnotes: (1) See Chapter 2, pages 34-37. (2) See Chapter 2, pages 32 & 40. (3) See Chapter 2, Pages 30-37.

Resources, Reference, Resource Literature and Maps

Resources:

List of Contacts

Charlotte County

County Courthouse.....	941.743.1200
Cooperative Extension Service.....	941.639.6255
	www.gnv.ifas.ufl.edu/~charlotte
Natural Resources Conserv Service.....	941.995.5678
Our Town Charlotte.....	www.charlotte-florida.com

Citrus County

County Courthouse.....	352.637.9400
Cooperative Extension Service.....	352.726.2141
Natural Resources Conserv Services.....	352.521.4260
Soil & Water Conserv District.....	352.754.4035

Collier County

County Courthouse.....	941.774.8383
	www.gator.naples.net/govern/
Emergency Management.....	www.collierem.org/index.htm
Cooperative Extension Service.....	941.353.4244
	www.gator.naples.net/~kuh/cces.htm
Natural Resources Conserv Service.....	941.455.4100
Cape Coral.....	www.capecoral.net
Naples.....	www.naples.net/govern/city/index.htm

DeSoto County

County Courthouse.....	863.494.3766
Cooperative Extension Service.....	863.993.4846
Natural Resources Conserv Service.....	863.494.4040

Glades County

County Courthouse.....	941.946.0113
Cooperative Extension Service.....	941.946.0244
Natural Resources Conserv Service.....	941.674.4160

Hardee County

County Courthouse.....	863.773.6952
Cooperative Extension Service.....	863.773.2164
Natural Resources Conserv Service.....	863.773.9644

Hendry County

County Courthouse.....	941.675.5217
Cooperative Extension Service.....	941.674.4092
Natural Resources Conserv Service.....	941.674.4160

Hernando County

County Courthouse.....	352.754.4000
	www.co.hernando.fl.us/index.html
County Engineer's Office.....	352.754.4062
Public Works Department.....	352.754.4060
Emergency Management.....	352.754.4083
Cooperative Extension Service.....	352.754.4433
Natural Resources Conserv Service.....	352.796.9600
Soil & Water Conserv District.....	352.754.4035

Highlands County

County Courthouse.....	863.385.2581
Cooperative Extension Service.....	863.386.6540
Natural Resources Conserv Service.....	863.386.6545

Hillsborough County

County Courthouse.....	813.272.5750
	www.hillsboroughcounty.org
Public Works Department.....	813.272.5912
Engineering Division of PW.....	813.272.5912
	http://engineer.co.hillsborough.fl.us/engineer
Stormwater Management Section.....	813.272.7021
Cooperative Extension Service.....	813.744.5519
Natural Resources Conserv Service.....	813.759.6450
City of Tampa-Stormwater Mgmt.....	813.274.8588

Lake County

County Courthouse.....	352.343.9850
Cooperative Extension Service.....	352.343.4101
Natural Resources Conserv Service.....	352.343.2481

Lee County

County Courthouse.....	941.355.2227
	www.lee.fl.us
Public Works Department.....	941.479.8544
Environmental Sciences Division.....	941.479.8182
Public Resources Division.....	941.335.2260
Natural Resources Management.....	941.479.8580
Cooperative Extension Service.....	941.338.3232
Natural Resources Conserv Service.....	941.995.5678

Levy County

County Courthouse.....	352.486.5100
Cooperative Extension Service.....	352.486.5131
Natural Resources Conserv Service.....	352.486.2672

Manatee County

County Courthouse.....	941.748.4501
	www.co.manatee.fl.us
Cooperative Extension Service.....	941.722.4524
Natural Resources Conserv Service.....	941.722.6636

Marion County

County Courthouse.....	352.620.3307
Cooperative Extension Service.....	352.620.3440
Natural Resources Conserv Service.....	352.622.3971

Pasco County

County Courthouse.....	352.521.4111
Cooperative Extension Service.....	352.521.4288
Natural Resources Conserv Service.....	352.521.4260

Pinellas County

County Courthouse.....	727.464.3485
	www.co.pinellas.fl.us/bcc
Public Works Department.....	727.464.3251
Environmental Management.....	727.464.4761
Emergency Management.....	727.464.3800
Cooperative Extension Service.....	727.582.2100
	http://coop.co.pinellas.fl.us
Natural Resources Conserv Service.....	727.759.6450

Polk County

County Courthouse.....	863.534.6000
Cooperative Extension Service.....	863.533.0765
Natural Resources Conserv Service.....	863.533.7121

Sarasota County

County Courthouse.....	941.951.5000
Cooperative Extension Service.....	941.316.1000
Natural Resources Conserv Service.....	941.907.0011
North Port.....	www.northport-florida.com
Discover Venice.....	www.venice-florida.com

Sumter County

County Courthouse.....	352.793.0200
Cooperative Extension Service.....	352.793.2728
Natural Resources Conserv Services.....	352.343.2481

Other Contacts

1000 Friends of Florida.....	904.922.6277
Center for Aquatic Plants.....	http://aquat1.ifas.ufl.edu
Dept of Environmental Protection.....	904.488.3601
	http://www.dep.state.fl.us
Dept of Ag & Consumer Services.....	904.488.6249
Farm Bureau.....	904.378.1321
Natural Resources Conservation Services....	352.338.9574 fax
Sarasota Bay National Estuary Program.....	941.359.5841
Stormwater News.....	www.stormwater.resources.com
S W F Water Mgmt District.....	1.800.423.1476
	http://www.swfwmd.state.fl.us
St. Johns River Water Mgmt District....	1.800.451.7106 or 904.329.4500
Suwannee River Water Mgmt District....	904.362.1001
Northwest FL Water Mgmt District.....	904.539.5999
Tampa Bay Estuary Program.....	813.893.2765
	www.tbep.org
U of F Soil & Water Conserv Services..	352.392.1951
U of F Inst of Food & Ag Sciences.....	http://gnv.ifas.ufl.edu
U of F IFAS Coop Extension Services....	http://gnv.ifas.ufl.edu/www/agator/html/ces.htm

Resource Literature

"The Adopt-A-Pond Notebook: Use it to learn more about your pond environment." A 3-ring binder with 5 chapters of information, including booklets and pamphlets from other agencies. Covers wildlife, plants, landscape maintenance, and pond maintenance. FREE.

Hillsborough County Stormwater
Management Section
Adopt-A-Pond Program
P.O. Box 1110
Tampa, FL 33601-1110
(813) 272-5912

"Lake Smarts: The First Lake Maintenance Handbook - A Do-It-Yourself Guide to Solving Lake Problems." By Steve McComas

This how-to manual contains field tested easy and affordable projects to help you clean up, improve and maintain the lakes and ponds in your community. \$18.95 plus shipping.

Terrene Institute
4 Herbert Street
Alexandria VA 22305
(703) 548-5473

"Florida yards and Neighborhoods Handbook: A guide to Environmentally Friendly Landscaping." By University of Florida Institute of Food and Agricultural Services. FREE when you complete a survey.

Your yard is the first line of defense for Florida's fragile environment. Tips on cost-saving, environmentally-friendly landscape practices help you reduce water, fertilizer and pesticide use. A helpful section for waterfront homeowners addresses shoreline management.

The Florida Yards and
Neighborhoods Program
5339 South SR. 579
Seffner, FL 33584-3334
(813) 744-5519

"Planting A Refuge for Wildlife: How to create a backyard habitat for Florida's birds and beasts." By Florida Fish and Wildlife Conservation Commission Nongame Wildlife Program, and the United States Department of Agriculture Soil Conservation Service. FREE.

In this booklet, you will find proven ways to encourage a broad cross-section of Florida Wildlife to visit and live around your home.

Nongame Wildlife Program
Florida Fish and Wildlife
Conservation Commission
620 South Meridian Street
Tallahassee, FL 32399-1600

"Florida Freshwater Plants: A Handbook of Common Aquatic Plants in Florida Lakes." By University of Florida Institute of Food and Agricultural Services. \$35.00. Catalogs 100+ species found in Florida lakes from Pensacola to Miami. Essential field guide information on each species is provided, including color photographs of every plant, complete botanical description, species' biology and notes of ecological interest, Florida map with locations.

C.M. Hinton
Publications Distribution Center
University of Florida
P.O. Box 11011
Gainesville, FL 32611-0011
1-800-226-1764

"Stormwater Management, A guide for Floridians." By Southwest Florida Water Management District. FREE.

Resource Literature

(continued)

The following are available through University of Florida/Institute of Food and Agricultural Sciences by writing or calling:

IFAS Publications
P.O. Box 110011
Gainesville, FL 32611-0011
(352) 392-1764

Pesticide Training and Safety

"Aquatic Pest Control
Training Manual"
Item #SM3- 107 pgs. \$15.00

"Applying Pesticides Correctly:
A Guide For Pesticide Applicators"
Item #SM1- 240 pgs. \$7.00

Plant Identification

"Grasses, Sedges and Rushes of
Wetlands Identification Deck"
Item #SP 255- 84 species. \$12.00

"Aquatic and Wetland Plant
Identification Deck"
Item #SM 50- 67 plants. \$10.00

"Florida Wetland Plants –
An Identification Manual"
Pub. #244. \$35.00

"Identification and Biology of
Non-Native Plants in
Florida's Natural Areas"
Pub. #SP257. \$16.00

"Florida Freshwater Plants"
Pub. #189. \$35.00

"Aquatic Plant Management
in Lakes and Reservoirs"
Pub. #A1. \$25.00

"Control of Non-Native Plants
in Native Plants in Natural
Areas of Florida"
Pub. #SP242. \$2.00

"Living at The Lake"
Pub. #SP247. \$15.00

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Programs – Video Program
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aquatics managers, field personnel,
students, and interested public. 26-
55 minutes in length. \$15.00 ea.

Catalog #	Title
#VT-360	"Floating & Floating Leaved Plants"
#VT361	"Emerald Plants I"
#VT362	"Submersed Plants I"
#VT363	"Grasses, Sedges & Rushes I"
#VT369	"Emerald Plants II"
#VT370	"Submersed Plants II"
#VT371	"Grasses, Sedges & Rushes II"

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University of Florida, 1996, A Guide to Environmentally Friendly Landscaping: Florida Yards and Neighborhoods Handbook, Bulletin 295, Gainesville: University of Florida, Cooperative Extension Service, Institute of Food and Agricultural Sciences.

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Terrene Institute. 1996. A Watershed Approach to Urban Runoff: Handbook for Decision makers. Terrene Institute, 4-B Herbert Street, Alexandria, VA 22305.

Whipple, William, Jr. And Joseph V. Hunter. 1979. Petroleum Hydrocarbons in Urban Runoff, Water Resources Bulletin, American Water Resources Association Vol. 15(4): 1096-1105.

Maps:

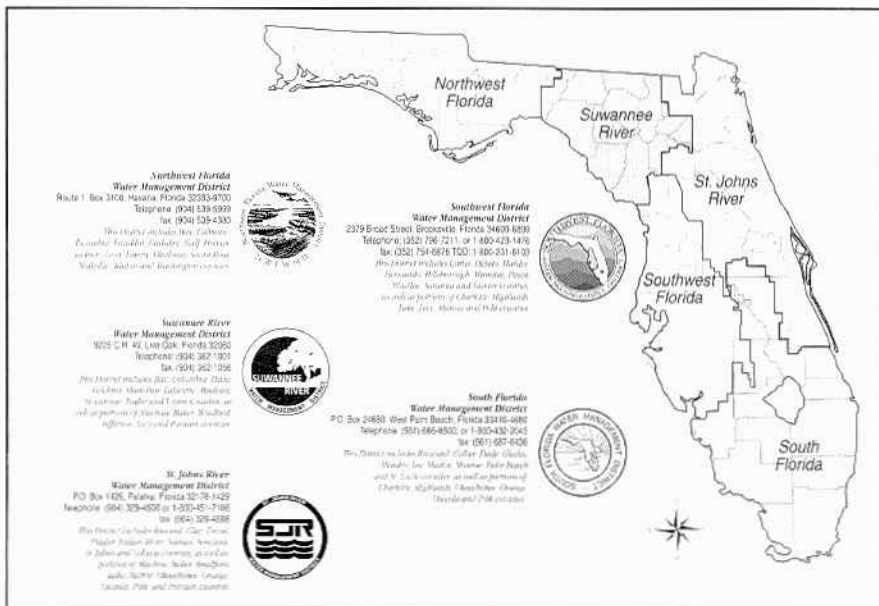
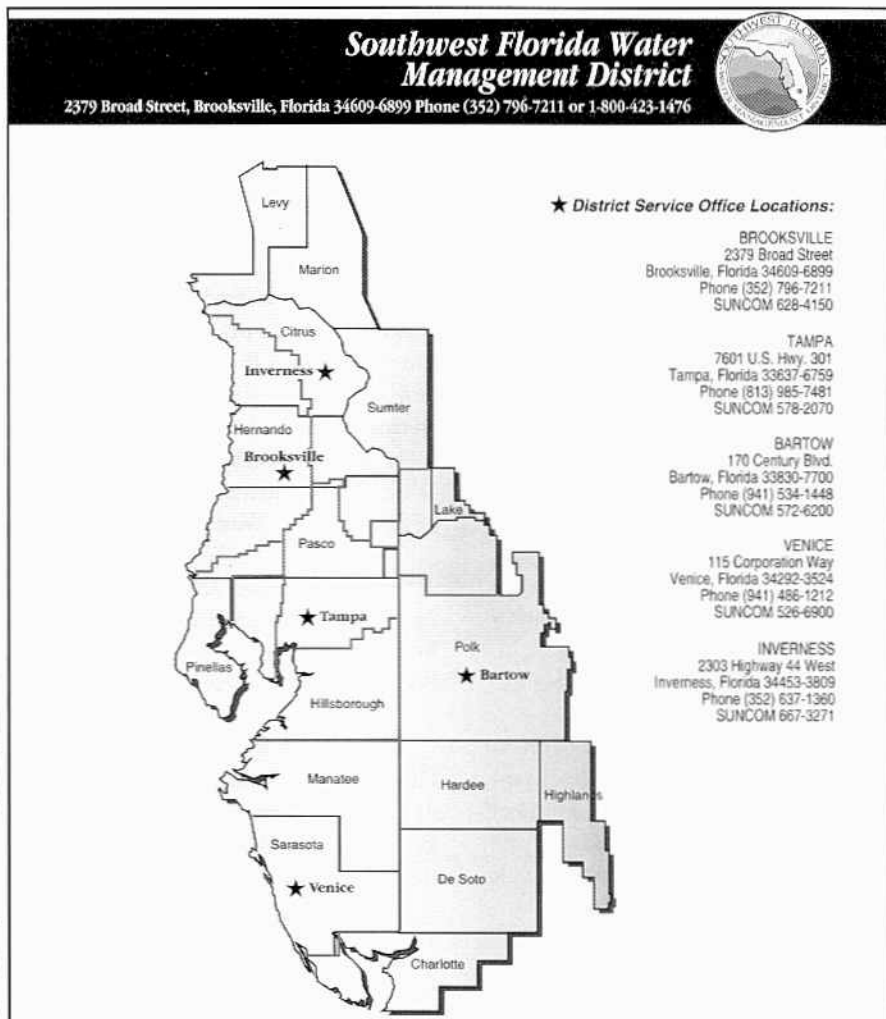
**Northwest Florida
Water Management
District**
Route 1, Box 3100
Havana, Florida
32333-9700
phone: (904) 539-5999
fax: (904) 539-4380

**Suwannee River
Water Management
District**
9225 C.R.49
Live Oak, Florida
32060
phone: (904) 362-1001
fax: (904) 362-1056

**St. Johns River
Water Management
District**
P.O. Box 1429
Palatka, Florida
32178-1429
phone: (904) 329-4500
or 1-800-451-7106
fax: (904) 329-4508

**Southwest Florida Water
Management District**
2379 Broad Street
Brooksville, Florida
34609-6899
phone: (352) 796-7211
or 1-800-423-1476
fax: (352) 754-6876
TDD: 1-800-231-6103

**South Florida Water
Management District**
P.O. Box 24680
West Palm Beach, Florida
33416-4680
phone: (561) 686-8800
or 1-800-432-2045
fax: (561) 687-6436





Stormwater Ponds

A Citizen's Guide to Their Purpose and Management

Stormwater management is necessary to protect Florida's unique natural ecosystems.

The purpose of this guide is to provide guidelines for effective pond management; to educate communities about the purposes and benefits of stormwater ponds.

It presents a practical approach to stormwater ponds and their care. It contains information on developing a neighborhood-based care program for stormwater ponds. The information contained in this guide will also aid stormwater pond maintenance companies in their provision of quality services to their customers.



SUBJECT

5518 Fore
like Drive

15' BUFFER

TRACT A