

Looming Beneath the Waterline

Not since the last big marina development boom in the 1950s have so many marina owners looked for ways to improve and upgrade their facilities. And redevelopment isn't stopping at the docks—marina owners are focusing their attention on upland facilities as well. But tearing down old facilities and starting over with new and better materials isn't the only way to ensure long-term viability of waterfront facilities. Marina owners need to pay attention to baseline issues that may come back to haunt them, like dredging and water quality.

Here are some of the challenges marina owners face and ways to address them:

Issue: Disposing dredged materials

According to Robert Semmes, water resources engineer with ATM's Gainesville office, marinas are typically required to obtain a renewed dredging permit every five or 10 years, and as rules change or science develops, the permitting process changes as well. "If a marina can't satisfy the regulatory agency, then it won't get a permit—that's the bottom line," Semmes says. "Most marina owners usually don't have problem with dredging itself, but they face significant hurdles when it comes to disposal." The Marine Protection, Research, and Sanctuaries Act (MPRSA) prohibits the transportation of dredge material where it can "unreasonably degrade or endanger" human health, welfare, or the marine environment.

In a recent ATM survey, more than one-third of marina owners say they're overdue for dredging, and nearly one-quarter say they'll need to dredge within the next two to four years. "A lot of marinas from North Carolina through Northern Florida have high siltation rates where there's more sedimentation," says Semmes. "They have to perform regular maintenance dredging every three to five years—it's not a one-shot deal where you can build a facility and you're done. Every few years, it comes back to the issue of where to put dredged material."

Marina owners face significant challenges in dumping dredged material since a lot of developers failed to put aside and/or perpetually secure upland disposal space during initial construction. Options like placing material in marshes are no longer available. Common waterway disposal sites are frequently encumbered with federal easements and are unavailable to marina owners. It's also expensive to evaluate potentially contaminated sediment and transport it to areas where it won't adversely affect an ecosystem.

Advice:

- **Consider the alternatives.** Marina owners have numerous options for disposal—consider neighboring upland locations, confined disposal sites, landfills, and ocean and inland water dumping. In some regions, disposal areas owned by the Corps of Engineers have become available for recreational marina use. A report from the U.S. Environmental Protection Agency (EPA) and the Corps of Engineers "Evaluating Environmental Effects of Dredged Material Management Alternatives" present options for testing different disposal locations. And refer to the Corps' guide on long-term management planning in geographically defined local areas, as well as EPA's "Greenbook" to help evaluate dredged material for dumping. A similar manual is in the works for disposal operation options in inland waters.
- **Get creative.** Certain dredged material can be used beneficially rather than treated as waste. The material can be used to bolster levees and dikes, create and restore tidal marshes and managed wetlands, serve as nourishment material on beaches, and cover and seal sanitary landfills. Some can also be used as fill for construction projects.

Issue: Maintaining water quality

Granted, upland facilities can be a major contributing factor in declining water quality. And since marinas are at the end of the receiving stream, they get more than their share of the blame. But even though factors like stormwater runoff, urban runoff, and animal and human waste adversely affect downstream waters, marina owners shouldn't ignore their responsibility in maintaining superior water quality in and around their facilities.

According to Deena Wells, community affairs coordinator for the Florida Department of Environmental Protection (DEP) Northeast District Office, water quality can be compromised by numerous factors, and expanding marina facilities can lead to stress on surrounding waters.

"Fuel spills, sewage, grey water, and stormwater runoff can cause quite a problem," Wells says. "It depletes the waterways of oxygen, and the bacteria cause a variety of health-related issues. Marinas produce a lot of waste, and anything that's discharged into the water can present a big problem."



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Offices

2770 NW 43rd Street
Suite B
Gainesville, FL 32606
(352) 375-8700
(352) 375-0995 Fax

PO Box 20336
Charleston, SC 29413
(843) 884-8750
(843) 884-8935 Fax

2315 Beach Boulevard
Suite 203
Jacksonville, FL 32250
(904) 249-8009
(904) 249-8007 Fax

400 S. Australian Avenue
Suite 855
West Palm Beach, FL 33401
(561) 659-0041
(561) 659-3733 Fax

6001 Chatham Center Drive
Suite 150
Savannah, GA 31405
(912) 238-3002
(912) 238-0882 Fax

PO Box 24156
Hilton Head Island, SC 29925
(843) 837-9525
(843) 837-9526 Fax

201 North Front Street
Suite 508
Wilmington, NC 28401
(910) 762-0800
(910) 762-6250 Fax

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EPA's new National Pollutant Discharge Elimination System (NPDES) regulations also complicate marina owners' efforts to ensure water quality. Under these rules, industrial facilities—including marinas—must reduce contaminated stormwater runoff into surrounding waterways.

Advice:

- o **Stay on top of fuel systems.** Regularly review and update operations and maintenance manuals to make sure your marina's fuel systems are performing at full capacity. Monitor aboveground and underground storage tanks and conduct regular maintenance to prevent leakage. While newer marinas are required to draft an extensive operations and maintenance manual before they can get a permit, older facilities may not have the same level of self review.

To minimize the likelihood of fuel spills, integrate emergency shut-off devices in your fuel systems. "Regulating fuel systems in terms of water quality is a hot area where there's more aggressive inspection and review of existing fuel systems," says Mark Bolchoz, senior engineer with ATM's West Palm Beach office. "Marinas have been fined for inadequate fuel systems or improper safety checks." It's also a good idea to develop a comprehensive recovery plan to respond promptly in the event of a spill.

- o **Manage stormwater.** Marina planners often don't consider the effects of upland runoff on water quality. Proper treatment, retention, and detention can significantly lower the introduction of contaminants into the water. Identify potential areas for stormwater contamination, and implement drainage systems. EPA's guide, "Nation Management Measures to Control Nonpoint Source Pollution from Marinas and Recreation Boating," offers technical guidance

and references on implementing nonpoint source pollution management programs.

- o **Get "cleaned" up.** Clean marina programs help marinas minimize their environmental impact and ease into the regulations that have been passed since they were first permitted. Florida, South Carolina, North Carolina, Maryland, and Virginia are among the ten states that have implemented such programs. "Ultimately marina owners want to have an environmentally sensitive marina, but they're leery of dealing with the government when they've been in business for 20 years," says Bolchoz. "Clean marina programs are voluntary, but they help both the marinas and the regulatory agencies. It's a different tactic than citing them for violations and handing out fines."
- o **Cash in.** Seek advice—and money—from environmental organizations. For example, the Florida DEP and South Carolina OCRM provide grants through the USFWS to construct pump-out stations to prevent the discharge of sewage into waterways. And the Clean Marina Program provides comprehensive compliance assistance. "Through the Clean Marina Program, marinas in Florida are eligible for a \$1,500 grant to help protect habitats, manage hazardous waste, and control stormwater and wastewater," says Wells.

Most marina owners genuinely want to comply with environmental regulations—after all, who wants to deal with losing a permit, poor water quality in a recreational environment, paying fines, and fielding bad PR? No matter who the developers are—private entities, municipalities, or government organizations—no one can expect to roll over the regulatory hurdles. It takes more than just good intentions to manage dredging and water quality issues, and to keep them from damaging the long-term viability of waterfront facilities. ☉

Helpful web sites for regulatory information

Environmental Protection Agency's Office of Wetlands, Oceans, & Watersheds

www.epa.gov/owow/oceans/

This section of the EPA's web site offers information about marine pollution control programs, dredged materials management, and marine debris.

National Marine Manufacturer's Association (NMMA) Government Center

www.nmma.org/government/environmental

This site includes information about environmental and safety compliance, federal and state relations, and political action committees.

Clean Marina Programs

www.dep.state.fl.us/law/grants/CMP (Florida); <http://dcm2.enr.state.nc.us/Marinas/marinas.htm> (North Carolina); www.dnr.state.md.us/boating/cleanmarina (Maryland); www.deq.state.va.us/vacleanmarina (Virginia)

These sites offer information about the states' Clean Marina Programs, including news and steps to being designated a "clean marina."

Recreational Boating and Fishing Foundation (RBFF)

www.rbff.org

The RBFF site includes information about protecting, conserving, and restoring aquatic natural resources. It also provides information about fishing, boating, and conservation communities, state and federal fisheries, natural resources, and tourism agencies.