

Forestry Best Management Practices for Water and Wildlife in Florida: What's in It for Me?

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ABSTRACT (ENGLISH)

The goal of these BMPs is to avoid or minimize impacts to streams, wetlands, and listed species and reduce pollutant loads to state waters. Because they are known to be effective, if the BMPs are implemented as intended, the forester enjoys a presumption of compliance with state regulations governing listed species and a presumption of compliance with water quality standards, with protection for inadvertent violations. While the CWA makes it unlawful to discharge a pollutant from a "point source" without a permit, nonpoint sources of pollution like agricultural and forestry activities are addressed through resource management planning and voluntary incentive-based programs. Because nonpoint source pollution causes approximately 60 percent of water quality impairments, Congress amended the CWA in 1987 to establish the Nonpoint Source Pollution Management Program under section 319. Code r. 5I-6.003. Because of these presumptions (as well as the periodic updating of the QBMP Manual), implementation of these QBMPs on forest lands in Florida has been steadily increasing since enactment, and foresters are discovering the economic benefits of enrolling in the QBMPs outweigh the costs. According to research done by Forisk Consulting, LLC, a research consultancy that analyzes forest supplies, wood demand, and timber pricing, 97 percent of all the pulpwood harvested in the Southeast goes to Sustainable Forestry Initiative (SFI)-certified or Forest Stewardship Council (FSC)certified pulp mills.

FULL TEXT

Consumer interest in sustainable business practices is growing across the United States, and the forest industry is no exception. But at what cost to the forester? Addressing environmental issues on timberlands can be challenging. The best approach may be a cooperative approach that engages the industry, the public, and environmental interest groups, rather than command-and-control regulatory mandates. Such is the case with the protection of wildlife and water quality in Florida's forests.

This article examines how Florida has approached the protection of its working forests through the implementation of forestry best management practices (BMPs). A BMP is a method or technique found to be the most effective yet practical means of achieving a specified objective (such as minimizing environmental impacts) while optimizing the use of business resources. WebFinance, Inc., Best Management Practice (BMP) Definition, BusinessDictionary.com, [www. businessdictionary.com/definition/best-management-practiceBMP.html](http://www.businessdictionary.com/definition/best-management-practiceBMP.html) (last visited Nov. 27, 2018). Florida has nearly 17 million acres of working forests, including approximately 4.4 million acres of public lands. With the cooperation of stakeholders across the spectrum of forest products companies, environmental interest groups, local governments, and the public, as well as the multiagency efforts of the Florida Department of Agriculture and Consumer Services (DACS), the Florida Fish and Wildlife Conservation Commission (FWC), and the Florida Department of Environmental Protection (DEP), the state of Florida has developed voluntary and quasivoluntary forestry BMPs that address customary silviculture activities like harvesting, planting, drainage, and the construction and maintenance of roads. The goal of these BMPs is to avoid or minimize impacts to streams, wetlands, and listed species and reduce pollutant loads to state waters. Because they are known to be effective, if the BMPs are implemented as intended, the forester enjoys a presumption of compliance with state

regulations governing listed species and a presumption of compliance with water quality standards, with protection for inadvertent violations. While forestry BMPs to protect water quality have been around since the late 1970s and now enjoy nearly 100 percent enrollment, forestry BMPs protecting imperiled or listed wildlife are more recent but are gaining in acceptance every year. In fact, the market itself is making both types of BMPs more mandatory than voluntary.

Water Quality Best Management Practices (QBMPs): An Old(er) Story

In 1972, Congress passed the Clean Water Act (CWA) "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. 1251 et seq. (2012). While the CWA makes it unlawful to discharge a pollutant from a "point source" without a permit, nonpoint sources of pollution like agricultural and forestry activities are addressed through resource management planning and voluntary incentive-based programs. Because nonpoint source pollution causes approximately 60 percent of water quality impairments, Congress amended the CWA in 1987 to establish the Nonpoint Source Pollution Management Program under section 319. 33 U.S.C. 1329 (2012). This program provides grants to states and tribes to implement measures to control nonpoint source pollution.

It was recognized early on that traditional pollution control methods are not appropriate or effective to control the type of nonpoint source pollution that may come from timber harvest or other forestry practices, given the large land areas over which such activities can be dispersed. Most states have now developed water quality BMPs (QBMPs) to help implement the CWA, and these QBMPs often contain proactive measures that can be implemented on forest lands to conserve water and reduce impacts to water quality due to common forestry practices.

Florida's silviculture QBMPs were first developed by the Florida Forest Service (FFS) in 1979 to aid in compliance with the CWA and originally addressed forest management activities, primarily intensive pine management, near streams and lakes. In 1991, a 22-member Technical Advisory Committee (TAC) began a process to review and revise those QBMPs "to reflect the scientific, social and economic changes that have taken place since the original BMP development." Fla. Dep't of Agric. & Consumer Servs. (DACS), Silviculture Best Management Practices (rev. 2008) at 1, available at https://freshfromflorida.s3.amazonaws.com/Media%2FFiles%2FFloridaForest-Service-Files%2Fsilvicultural_bmp_manual.pdf. The resultant QBMP Manual has been periodically updated since then, most recently in 2008. DACS formally adopted its Silvicultural QBMP Manual by reference in its rules for the first time in 2004. Fla. Admin. Code Ann. r. 5I-6 (2018). The manual addresses multiple common forestry practices such as timber harvest, road construction and maintenance, stream crossings and forest wetlands protection, site preparation, planting, pesticide and fertilizer use, fire management, and streamside/special management zones (SMZs).

A key component of the QBMPs is the establishment of streamside management zones or SMZs. These zones act like a natural sediment barrier to prevent runoff, much like what a silt screen does on construction projects. The width of the SMZ is determined by the size of the stream and whether it is intermittent or perennial. The vegetative buffer width is also dependent on the soil type adjacent to the stream as well as the slope of the land. As an example, soils with a higher amount of more erodible clays and steeper slopes require wider buffers; sandier, less erodible soils with flatter topographies require narrower buffers. Additional protections are afforded to Outstanding Florida Waters (OFWs) and other high priority waterbodies. The SMZs have Primary and Secondary Zones, with different activities prohibited in different zones. The Primary Zone applies to perennial streams and lakes, sinkholes with perennial water, priority waterbodies, and in some cases wetlands. Within it, clearcut harvesting is generally prohibited, except under special conditions. Clearcutting is always prohibited within specified distances of perennial and other high priority waters. Within the Primary Zone, very large or very old trees, especially snags and cavity trees, should be protected if possible. The Secondary Zone applies to intermittent waters and may be an "add on" to extend the Primary Zone for priority waters. Unlike the Primary Zone, this zone has no timber harvesting limitations, only operating restrictions, such as a prohibition on mechanical site preparation or plowing of fire lines.

So why comply? First, enrollment in and implementation of the QBMPs provides a presumption of compliance with state water quality standards and provides an affirmative release from liability for monetary damages caused by water pollution that could otherwise potentially be recovered. Fla. Stat. 376.307(5) (2018); Fla. Admin. Code Ann. r. 5I-6.003 (2018). Second, in areas where a Basin Management Action Plan (BMAP) has been established, the QBMPs are only nominally voluntary. Under section 303(d) of the CWA, states are required to identify waterbodies that are not meeting water quality standards and develop Total Maximum Daily Loads (TMDLs) for them. 33 U.S.C. 1313(d). A TMDL is the total load of a pollutant the water body can assimilate and allocates the load to point sources (the wasteload allocation) and nonpoint sources (the load allocation). Under Florida law, a BMAP is required for waterbodies for which TMDLs have been developed and that BMAP is the "blueprint" for restoring impaired waters by reducing pollutant loadings to meet the TMDL. The BMAP can take the form of reduced wasteload allocations, reduced load allocations, or a combination of strategies.

A nonpoint source discharger included in a BMAP can demonstrate compliance with the pollutant load reductions established in that BMAP by either (1) implementing the QBMPs or (2) conducting detailed water quality monitoring demonstrating compliance. Enrolling in and implementing the QBMPs provide a presumption of compliance with the load reductions in a BMAP and protect the land owner from enforcement proceedings by the state environmental protection agency for either surface or groundwater contamination, as to the pollutants addressed by the QBMPs. Fla. Stat. 403.067(7) (2018); Fla. Admin. Code r. 5I-6.003. Quite simply, the QBMPs work. Because of these presumptions (as well as the periodic updating of the QBMP Manual), implementation of these QBMPs on forest lands in Florida has been steadily increasing since enactment, and foresters are discovering the economic benefits of enrolling in the QBMPs outweigh the costs. The state's average overall QBMP compliance rate for 2017 was 99.6 percent. This was up slightly from the 2015 survey's impressive 99.3 percent. QBMP compliance surveys, done every other year, show that implementation of the QBMPs has consistently risen since 1989, when compliance was approximately 94 percent. DACS, *Silviculture Best Management Practices 2017 Implementation Survey Report*, fig. 6 (2018) available at www.freshfromflorida.com/content/download/78966/2320474/SPMP_2017_ImplementationSurveyReport.pdf. It is worth noting that Florida also has adopted similar QBMPs for different segments of the agriculture industry. There are currently BMP manuals addressing nine different agricultural sectors, with two more manuals planned or under development. See DACS, *Agriculture Best Management Practices*, www.freshfromflorida.com/Business-Services/Water/AgriculturalBest-Management-Practices (last visited Nov. 27, 2018).

Wildlife Best Management Practices (WBMPs): A New Paradigm

In 2010, the FWC revised its wildlife rules to incorporate provisions that make it illegal to take a state-listed imperiled species without a permit during the course of otherwise lawful activities, such as forest management activities, including take caused by modification of species habitat. A take is defined to include not only death or injury, but also "significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering." Fla. Admin. Code Ann. r. 68A-27.001 (2011). Thereafter, in 2013, the Florida Legislature authorized the DACS to work collaboratively with the FWC to develop and adopt Wildlife BMPs (WBMPs) into the DACS and FWC rules as a voluntary alternative to incidental take permitting. Fla. Stat. 570.94 (2013); Fla. Admin. Code Ann. r. 5I-8 (2018). In 2013, the forestry TAC that helped develop the QBMPs began a process to develop WBMPs using the existing Silviculture BMP Manual as a model document. Florida's WBMPs were developed in 2014-2015 to help landowners address management activities where there might be state-listed species. DACS, *Florida Forestry Wildlife Best Management Practices for State Imperiled Species* (rev. 2014), available at https://freshfromflorida.s3.amazonaws.com/Media%2FFiles%2FFlorida-Forest-Service-Files%2FFlorida_Forestry_Wildlife_Best_Management_Practices_For_State_Imperiled_Species_Manual.pdf.

Each major land use (forestry, agriculture, cattle, etc.) developed similar WBMPs that are tailored to the specific land use. See DACS, *Agriculture Best Management Practices*, supra. Florida's WBMPs were basically "born" from the QBMP process. Some of the same people and organizations that developed the QBMPs 30 years before

collaborated to "write the book" on WBMPs, for both the forest and agricultural sectors. The focus of the WBMPs is on practices that reduce the likelihood of death or injury to a species (such as avoiding known burrows or nests) and reduce the possibility that habitat modification would significantly impair essential species behaviors like nesting, denning, or breeding.

For forestry lands, a total of 16 species were determined to interact with forestry-related management activities. Those species were taken, one by one, and analyzed to determine how they might be impacted by all anticipated management activities. Most of the possible impacts had to do with the modification of habitat. The essential behaviors of each species were considered relative to the conditions of the forested habitats, and management activities were adjusted to ensure those essential behaviors would not be impaired. Species Action Plans previously developed by the FWC for each species were consulted in determining the best approach for the identified species.

Of the 16 species, 10 are aquatic species. It was determined that the best protection was provided to those species by maintaining an SMZ along both sides of the stream, the same SMZ included in the QBMPs noted above. The logic was that, if you protect the habitat (i.e., the waterbody itself) and adjacent land and (by means of the SMZ) improve water quality going into that waterbody, you protect the species. Thus, WBMPs for those 10 aquatic species simply require strict adherence to the QBMPs and streamside buffers. DACS, Florida Forestry Wildlife Best Management Practices for State Imperiled Species, FDACS01869 (rev. 2014).

The upland species proved to be more challenging. As an example, species like the gopher tortoise use fairly unique soil profiles, and their needs change during certain times of the year. The gopher tortoise burrows extensively into the ground for its shelter. Additionally, over 300 other species, some rare or federally listed, like the eastern indigo snake, have been found to be associated with the burrows these tortoises excavate for their homes. The WBMPs for the tortoise protect the burrow and the burrow "apron" where eggs are often laid, as a means of protecting the animals themselves. They also limit equipment use in certain times of the year when small hatchlings, which are difficult to see, may be out and about.

The burrowing owl is another unique upland species covered by WBMPs. This owl makes its home in an excavated ground burrow. As you can imagine, a species this unique has some pretty specific habitat requirements. Because the key habitat of the owl is its burrow, that is the structure that needs protection. As dissimilar as the owl is to the gopher tortoise, it is interesting that the same WBMP used for the tortoise is applied to the burrowing owl, and it works. Importantly, the WBMP applies only to known nests or burrows, and surveys are not required in order to implement the WBMPs. That has been a component of their success.

Florida's Wildlife and Water Quality BMPs are rare for forestry operations because they were developed by a very broad group of interested stakeholders, and these stakeholders continue to be involved in the process. This TAC includes state and federal agency staff, conservation groups, university researchers, attorneys, landowners, and environmental groups. Both the Water Quality and Wildlife BMPs were developed using the best available scientific information with the understanding that as science "evolved" the BMPs would evolve as well. The TAC meets every two years to discuss possible updates to both the Water Quality and Wildlife BMPs. This refinement process has been going on since 1991 for water quality BMPs.

To provide evidence of a landowner's intent to follow both water quality and wildlife BMPs, the owner must submit a notice of intent (NOI) to the appropriate state agency, either the state forestry agency or the wildlife agency. Landowners that want to sign up for voluntary WBMPs have the option to enroll on a species-by-species basis and on a tract-by-tract basis. They can opt out annually. If management activities are carried out on the subject tract(s) that are not "visibly observable," like herbicide or fertilizer application, records of those actions must be kept. Once an NOI is filed in the public records, those lands become eligible for compliance surveys by the state forestry and wildlife agencies. Compliance surveys are conducted by random aerial selection. A subset of the water quality-based survey sites is then randomly selected for wildlife BMP implementation. Because the Wildlife BMP program is relatively new, only one implementation survey has been conducted. That survey resulted in a 100 percent compliance rate for all 16 species over all 42 sites inspected. DACS, Forestry Wildlife Best Management Practices

Survey for State Imperiled Species 2017 Implementation Survey Report at 4 (2017).

Complying with the WBMPs avoids the need to obtain a permit for incidental take of any of the 16 state-species specified in the WBMP Manual. The WBMPs are intended to be practical, easily understood and implemented, and implemented at a landowner's discretion. Like the QBMPs, enrollment in and implementation of the WBMPs provides a presumption that the forester is in compliance with state rules governing listed species and protects against an enforcement action in the event of the accidental death or injury of a species covered by the WBMPs. This presumption is contained both in the fWc rules (Fla. Admin. Code Ann. r. 68A-27.007 (2018)) and in the FWC's Imperiled Species Management Plan (ISMP) and subsequent Species Conservation and Permitting Guidelines that are being adopted for each state-listed species. Fla. Fish & Wildlife Conservation Comm'n, Imperiled Species Management Plan 2016-2026 (2016), available at <http://myfwc.com/media/4133167/Floridas-Imperiled-Species-Management-Plan-2016-2026.pdf>.

However, the ISMP and subsequent permitting guidelines recognize a significant limitation to that presumption: the presumption of compliance applies to only the 16 species identified in the WBMPs. In that case, the protection afforded is something less than an affirmative presumption of compliance and more of a recognition that implementing certain practices is likely to avoid a take of a listed species. For example, compliance with the QBMP and the SMZ therein can be expected to provide adequate protection to any listed aquatic species, not just the aquatic species identified in the WBMPs. See, e.g., Fla. Fish & Wildlife Conservation Comm'n, Species Conservation Measures and Permitting Guidelines for the Saltmarsh Topminnow 4, available at <http://myfwc.com/media/4381194/SaltmarshTopminnowGuidelines-2018.pdf> ("[The WBMPs] for state-listed species does not include the saltmarsh topminnow. However, BMP practices relating to the SMZ's would be beneficial for this species.").

Wildlife BMPs have, as their primary focus, avoidance and minimization of state-listed species; they are not intended to implement species recovery plans, and they provide no affirmative protection against liability for a take of a species listed under the Endangered Species Act (ESA). However, compliance with the WBMPs can minimize the likelihood that a particular management activity will cause a take of a federally listed species. For example, avoiding a gopher tortoise burrow also avoids the eastern indigo snake that might be living in the burrow, and protection of water quality in an adjacent stream through use of an SMZ benefits both state-listed and federally listed fish.

Further, several state-listed species are also candidates for federal listing under the ESA. As private landowners voluntarily "sign up" for water quality and wildlife BMPs, it provides evidence to the U.S. Fish and Wildlife Service (USFWS) of species conservation on private land and can help avoid federal listing altogether. For example, the USFWS has published a finding that federal listing is "warranted but precluded" for the gopher tortoise in the eastern portion of its range, in part because the increased protection and conservation efforts on private lands in Florida has made listing the tortoise under the ESA a lower priority. 76 Fed. Reg. 45,130 (July 27, 2011). Private forestlands are a critical part of the effort to conserve at risk species because private land makes up 90 percent of the forestland in the southern United States.

It's important to recognize what the WBMPs are not intended to do. While they are intended to help avoid and minimize impacts to state-listed species, they are not intended for the recovery of any species. Further, the WBMPs do not cover land conversion; they are intended to address only active forest operations, not tree removal for purposes of development. DACS, Florida Forestry Wildlife Best Management Practices for State Imperiled Species 4 (rev. 2014).

Market's Role in BMP Acceptance

In addition to the regulatory presumption compliance with the BMPs afford, the market is beginning to dictate BMP implementation. According to research done by Forisk Consulting, LLC, a research consultancy that analyzes forest supplies, wood demand, and timber pricing, 97 percent of all the pulpwood harvested in the Southeast goes to Sustainable Forestry Initiative (SFI)-certified or Forest Stewardship Council (FSC)-certified pulp mills. Justin Tyson, Wood-using Mills and Forest Certification, Forisk Consulting, LLC (Feb 23, 2018),

<http://forisk.com/blog/2018/02/23/wood-using-mills-forestcertification/> (last visited Nov. 4, 2018). The SFI and FSC promote environmentally sound and sustainable timber practices and have developed standards for sustainable forest management that allow end users the choice of purchasing sustainable wood paper and packaging products. These include QBMP and WBMP implementation by loggers.

Through the efforts of the SFI and their State Implementation Committee (SIC), virtually all loggers have become "Master Logger" certified. Master Loggers receive a two-day training workshop in which QBMPs as well as WBMPs are featured prominently. The Master Loggers also are required to take annual continuing education classes that cover topics that range from transportation rules to invasive plants, aesthetics, water quality BMPs, threatened and endangered species, and wildlife BMPs. These annual recertification classes are excellent ways to be sure all Master Loggers are up to date on the latest changes to the BMPs that impact them the most. In order to deliver wood to an SFI- or FSC-certified mill facility, loggers must be Master Logger-trained and have a current certificate. This process ensures that even if wood is harvested from non-certified land, it will be BMP compliant because it was harvested by a Master Logger. This system is largely responsible for Florida's high BMP implementation rates. Although some refer to BMPs as "voluntary," the fact that most large mills require Master Logger certification makes them essentially mandatory in the real marketplace. With the continued conformance to QBMPs, high compliance rates (99.6 to 100 percent), and the advent of BMPs for wildlife, Florida will continue to see water quality and wildlife habitat protected in working forests statewide.

While it's still early days for the WBMPs, the data for the QBMPs indicates that implementation of forestry QBMPs is having a positive effect on Florida's waterways. Stream bio-assessment studies in areas where the QBMPs are being implemented reveal that "where the silviculture BMPs were properly applied . . . , water quality, aquatic habitat, and overall stream ecosystem health were protected." DACS, *Silviculture Best Management Practices 2017 Implementation Survey Report 2* (2018). And the 2017 survey in turn found a high degree of proper application of the QBMPs. Id. Because the QBMPs are protective of aquatic habitat when properly applied, the conclusion can be drawn that these measures, included in the WBMPs, also will be effective in protecting aquatic species.

Additionally, given that the WBMPs focus on the essential habitat needs of the 16 identified species, it is expected that the WBMPs likewise will be effective at reducing impacts to nonaquatic species.

In Florida, foresters and state agencies are working together to avoid and minimize impacts to water quality and wildlife as a result of timber operations, and enrollment and implementation of the BMPs have been increasing steadily as a result. See DACS, *Forestry Wildlife Best Management Practices Survey for State Imperiled Species 2017 Implementation Survey Report*; DACS, *Silviculture Best Management Practices 2017 Implementation Survey Report*. The BMPs are intended to be practical, cheap, and easy to use in order to encourage enrollment and implementation. While they don't provide perfect protection from liability, they do afford those that implement the recommended practices an added measure of security against liability for water quality pollution and accidental harm to state species. As such, they promote the protection of both water quality and wildlife within the state's working forests.

So, what's in it for me? The state of Florida is roughly 37.5 million acres in size, and working forests comprise approximately 45 percent of those acres. Implementation of the BMPs in Florida's forests represents a significant investment in Florida's future. Foresters have the incentive to provide protections to water quality and listed species by a proactive BMP development process they (along with environmental groups and local and state governments) had a hand in implementing, which ensures that the practices are both achievable and economical. Consumer interest in purchasing sustainable products is growing, meaning further incentive to continue implementing BMPs. Florida's BMP approach to timber lands results in a win-win for the forest industry and the environment.

DETAILS

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