# FLORIDA LAND STEWARD

A Quarterly Newsletter for Florida Landowners and Resource Professionals

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# THORIDAY STENIER

# IN THIS ISSUE

# UF IFAS UNIVERSITY of FLORIDA











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# **University of Florida Researchers Find Changes in Forest Management Could Increase Water Yields**

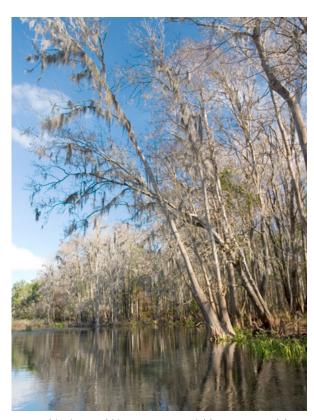
By Robert Wells and Chris Demers, University of Florida

Despite a relatively wet 2015, water supply remains a critical long-term issue in the Sunshine State. University of Florida researchers have found that reducing plant material, or biomass, in forests could significantly increase water supplied to streams, lakes and aquifers.

Researchers with the University of Florida Institute of Food and Agricultural Sciences made the finding by creating computer models that analyzed the effects of reduced forest biomass on regional hydrological supplies. In one 4,000-acre tract in Central Florida, the model predicted that thinning a densely planted pine forest could supply an additional 400,000 to 1.6 million gallons of water per day to the regional water supply.

According to the Florida Department of Environmental Protection's Annual Status Report on Regional Water Supply Planning, water use in the St. Johns Water Management District, where this study occurred, was about 1.3 billion gallons a day in 2010.

Dr. Matthew Cohen, study co-author and an Associate Professor in the UF/IFAS School of Forest Resources and Conservation, said between 70 and 100 percent of rain that falls on



Forest thinning could increase water yields to streams, lakes and aquifers. Photo by Tyler Jones.

Florida's forests returns to the atmosphere through evapotranspiration instead of flowing to wetlands, lakes or aquifers. Evapotranspiration is the release of water into the atmosphere through plant leaves.

By adjusting the evapotranspiration rate even slightly, for example by reducing the number of trees in the simulated forest or by introducing prescribed fire to control small shrubs and underbrush, large water yields become apparent, Cohen said.

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University of Florida Researchers Find Changes in Forest Management Could Increase Water Yields....continued from previous page

"Because there are so many people out there who would like to see more water available, if forest landowners could be paid some kind of easement compensation, known as payments for ecosystem services, then they might be willing to adopt a new management strategy that would make water available," he said. Dr. Daniel McLaughlin, the study's lead author and Assistant Professor in the Department of Forest Resources and Environmental Conservation at Virginia Tech University, said forestry is already one of the most water-conserving ways land can be used for profit. "We're just looking for opportunities to yield even more water off those lands." he said.

The results of the study were published in the Journal of the American Water Resources Association. The study was funded by Rayonier Corporation, a forest products

company. Dr. David A. Kaplan, an assistant professor in UF's Engineering School of Sustainable Infrastructure and Environment. is also a co-author.

This project is currently in the next phase: a 4-year field study to quantify water yield in response to typical forest restoration management practices, including prescribed fire. We will be following this study and report the results in a future issue of the Florida Land Steward.

### Sources

### **Dr. Matthew Cohen**

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### Dr. Daniel McLaughlin

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University of Florida researchers have published a new study that says reducing plant material, or biomass, in forests could significantly increase water supplied to streams, lakes and aquifers. Shown here, from left, are study authors David A. Kaplan and Daniel McLaughlin at UF's Austin Cary Forest, a teaching and research forest northeast of Gainesville. Photo by Tyler Jones.

# Florida's 2015 Best Management Practice Implementation Survey: Confirmation of a Job Well Done

By Roy Lima, Watershed Forester, Florida Forest Service

Florida's Silviculture Best Management Practices (BMP) Program is directed primarily at preventing nonpoint source pollution associated with forestry operations. The program was initiated through the development of the state's first Silviculture Best Management Practice Manual in 1979. The Florida Forest Service (FFS) is responsible for the development, implementation and monitoring of Silviculture Best Management Practices throughout the state.

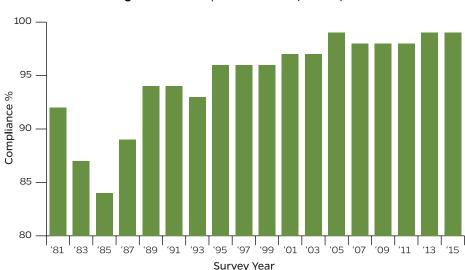
Since 1981, the FFS has monitored BMPs by conducting biennial compliance surveys on both public and private silviculture operations. Implementation levels in surveys over the years illustrate the Florida forestry community's strong

commitment to protect the state's natural water resources (Fig. 1). Consequently, data from these

surveys have done much to promote good forest management in Florida.

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Figure 1. BMP Implementation by Survey Year



Florida's 2015 Best Management Practice Implementation Survey: Confirmation of a Job Well Done....continued from previous page

### **Procedure**

As with past surveys, the sample size for the 2015 survey was determined by the extent of forestry activities reported in the U.S. Forest Service's Inventory Bulletin, "Forest Statistics for Florida." The number of survey sites assigned to a county was directly proportional to timber removal reported for that county.

Sites are selected at random by Florida Forest Service BMP foresters from fixed-wing aircraft that fly established flight patterns over each county. To qualify as a candidate for the survey, forestry operations on the site must have been conducted adjacent to surface water-bodies or near/within forested wetlands within the last two years.

Once all sites within a county have been selected, the BMP foresters confirm their locations and contact the landowners to solicit their participation in the survey. Of the 204 sites originally selected for the 2015 survey, 181 met the selection criteria. Land clearing operations intended for development or other non-forestry land uses are not included in the survey.

The process of evaluating each site involved inspecting as much of the treated acreage as possible and completing the survey field questionnaire. The questionnaire consists of "Yes/No" questions directly related to BMP categories. The BMP foresters evaluate only those activities for which physical evidence of their occurrence existed

on the site. They make no assumptions about future activities.

Implementation was evaluated and scored at three levels for each site: (1) Individual practices, expressed simply as a "yes" or "no" answer; (2) Categories of practices, expressed as a percentage of practices within the category found in compliance over total applicable practices within the category; and (3) Overall site compliance, expressed as a percentage of practices found in compliance with total BMPs applicable to the site.

### Results

Of the 181 sites evaluated, 114 belonged to non-industrial private landowners, 53 were found on

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The 2015 Best Management Practice Compliance Survey indicated a continuing high level of compliance with Silviculture BMPs in Florida, which is a tribute to the quality of forest landowners, operators and professional foresters that make up the state's forestry community. Photo by Tyler Jones.

Florida's 2015 Best Management Practice Implementation Survey: Confirmation of a Job Well Done....continued from previous page

industrial land and 14 occurred on public forestlands (Fig. 2). This distribution follows a trend since the 1989 survey indicating that forestry activities continue to remain frequent on private non-industrial (PNIF) timberland. This is, no doubt, encouraged by improved market conditions for forest products in the Southeast. In addition, there has been a 45% decrease in the number of sites found on public lands since 2011.

For 2015, the highest overall compliance level among ownerships was on public lands at 100% compliance, with industrial and non-industrial lands following close at 99.7% and 99.2%, respectively.

The overall compliance for all individual sites ranged from 85% to 100% with an average of 99.3%, a slight increase from 98.9% in 2013. The average compliance for the 34 year period since 1981 is 95%. For the 2015 Survey, no site scored below 80% in overall BMP implementation. Ninety percent of the sites scored 100% implementation for applicable BMPs, an increase of 2% from the 2013 survey.

Eighty-nine percent of all water resource features reported in the survey were streams. Forty-eight percent were perennial streams and forty-one percent intermittent. These streams were evaluated for Special Management Zone (SMZ) compliance on 104 sites in the 2015 Survey. For perennial streams, the survey reported 35.4 total stream miles meeting Primary Zone requirements. Forest industry lands accounted for 7.9 miles, and PNIF and Public Lands accounted for 24.9 and 2.6 miles, respectively (Fig. 3). The total area reported as being under Primary Zone management for 2015 was 417 acres. Sixtyeight percent of all SMZs evaluated were on small, first order streams. The average implementation rate for all three SMZ components increased

Figure 2. Survey Sites by Ownership

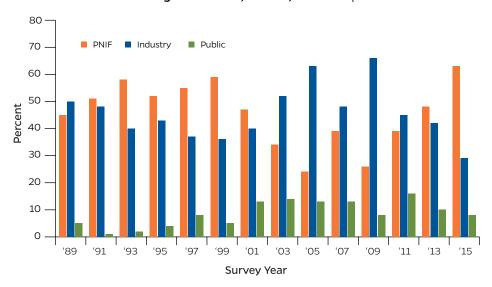
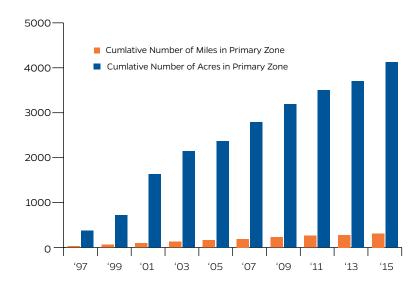


Figure 3. Primary Zone Miles and Acres by Survey Year



to 99% in 2015. No significant risks to water quality were reported.

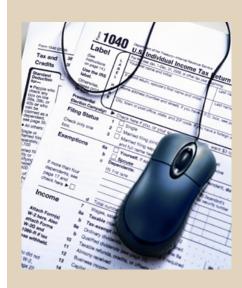
In conclusion, the 2015 BMP Compliance Survey indicated a continuing high level of compliance with Silviculture BMPs in Florida, which is a tribute to the quality of forest landowners, operators and professional foresters that make up the state's forestry community. The Florida Forest Service salutes Florida's forestry community for their efforts

and once again commends them on a job well done.

Question or comments about this article can be directed to

**Roy Lima,** Watershed Forester, Florida Forest Service, (850) 681-5942, Roy.Lima@freshfromflorida.com

# **Tax Tips for Forest Landowners for the 2015 Tax Year Available Online**



Federal income tax laws can influence a private woodland owner's financial decisions about land management. Yet, special favorable tax provisions on timber that are intended to encourage private forest management and stewardship are commonly unknown. To help woodland owners in filing their 2015 tax returns, this

publication, by Dr. Linda Wang, USDA Forest Service National Timber Tax Specialist, explains the federal income tax laws on timber. The information is not legal or accounting advice. It is current as of January 2016. This publication is available at http://www.timbertax.org

# **Recording and Materials from the December 10 Forest Health Update Workshop Available**

Insects and diseases are natural components of the forest. Some of these insects and diseases can become pests when they inhibit tree regeneration and growth on a large scale. In addition to native pests. invasive exotic pests are a growing challenge, with new species being introduced every year. This workshop provides an update on current forest health issues and priorities across Florida with emphasis on proactive management and available assistance. Recorded presentations, materials and related links are all here: http://sfrc.ufl.edu/ extension/florida forestry information/events\_calendar/ forest\_health\_update.html



# **Get Email Updates!**

Don't miss out on upcoming events and news! Send an email to cdemers@ufl.edu to be added to the Stewardship listserv. Updates are sent every week or two.

# TIMBER PRICE UPDATE

The timber pricing information below is useful for observing trends over time, but does not reflect current conditions at a particular location. Landowners considering a timber sale are advised to solicit the services of a consulting forester to obtain current local market conditions.

Average stumpage prices for the three major products in Florida, as reported in the  $\mathbf{4}^{\text{th}}$  Quarter 2015 Timber Mart-South report were:

### **Florida Stumpage Prices**

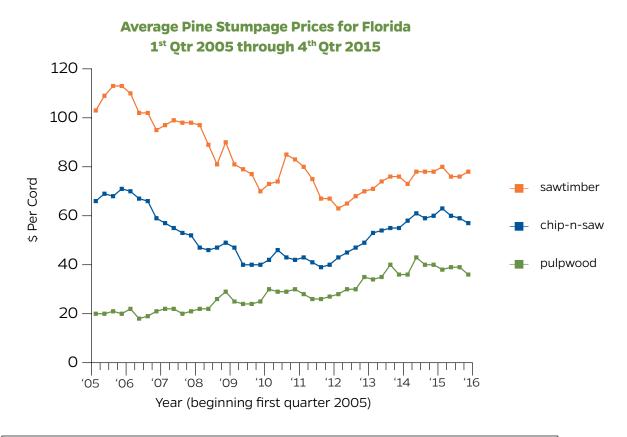
**Pine pulpwood:** \$36/cord (\$13/ton), ↓ from 3<sup>rd</sup> Qtr. 2015

**Pine C-N-S:** \$57/cord (\$21/ton),  $\downarrow$  slightly

Pine sawtimber: \$78/cord (\$29/ton), ↑

# **Trend Report**

Average stumpage prices for the region remained steady overall. Average pine sawtimber prices were up in Florida. Otherwise, and despite continued wet weather in the fourth quarter, stumpage prices remained at or below third quarter levels for most products. Also, despite the decrease from last quarter, Florida's average pulpwood price was the highest in the Southern region this quarter. Noteworthy news this quarter is the approximately 560,000 acres of north Florida forest land that was for sale by Foley Timber and Land Company will remain in timber company hands. The land was purchased by Four Rivers Land and Timber Company.



Timber Mart-South is compiled and produced at the Center for Forest Business, Warnell School of Forest Resources, University of Georgia, under contract with the Frank W. Norris Foundation, a non-profit corporation serving the forest products industry. See http://www.tmart-south.com/ for information on subscriptions.

# **CONGRATULATIONS**

# **CERTIFIED FOREST STEWARDS AND TREE FARMERS**

For more information about becoming a Certified Forest Steward or Tree Farmer, contact your Florida Forest Service County Forester, consultant or learn about it at:

http://www. freshfromflorida.com/ Divisions-Offices/ Florida-Forest-Service/ For-Landowners/ Programs/

or

http://www. floridaforest.org These landowners have a current Forest Stewardship and/or Tree Farm management plan for their property and have demonstrated excellent stewardship of their land resources.



Marcia and Billy Boothe with David Findley (L), Gadsden County



Lloyd and Bonnie Adams, Suwannee County



Jean Holbrook (R), Withlacoochee Gulf Preserve, with Greg Marshall, Levy County



Bob Jenkins with Cathy Hardin, Escambia County



Stephanie Bowin, Walton County



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Upcoming Stewardship, Small Farm and Other Events	
Date	Event, Location, Contact
Feb 17-19	Wildlife and Invasive Species Education, 8:30 am to 4:30 pm, UF/IFAS Extension Sumter County, 7620 SR 471, Ste 2, Bushnell, FL 33513. Details and registration at http://www.eventbrite.com/e/wildlife-invasive-species-education-wise-tickets-19135567999.
Feb 18-19	Gulf Coast Agritourism and Ecotourism Business Development Conference, 10 am to 5:30 pm on Feb. 18. and 8:30 am to 1 pm on Feb. 19 at 1 Energy Place, Gulf Power Building, Pensacola, FL.  Register online at https://www.eventbrite.com/e/2016-agritourism-ecotourism-business-development-conference-tickets-19956571643 or for more information contact Carrie Stevenson at (850) 475-5230.
Mar 4	Cover Crop Tour, 10 am -1 pm ET, USDA NRCS Brooksville Plant Material Center, 14119 Broad Street, Brooksville, FL. Learn how cover crops and no-till are improving soil health. Contact at (352) 796-9600, ext. 101.
Mar 17	Forest Stewardship/Tree Farm Tour at the Arnold Tract, Levy County, FL. 9 am to 2 pm ET. \$10 fee covers lunch and materials. Register online at https://fsp-tour031716.eventbrite.com/or contact Chris Demers, (352) 826-2375, cdemers@ufl.edu to register. More details to come.
April 5	Forest Stewardship/Tree Farm Tour at the Gould Tree Farm, Washington County, FL. 9 am to 2 pm CT. \$10 fee covers lunch and materials.  Register online at https://fsp-tour040516.eventbrite.com/ or call UF/IFAS Extension Washington County at (850) 638-6180 to register.
April 28	Forest Stewardship Workshop: Use Prescribed Fire Safely and Effectively, 8:30 am to 4 pm, Austin Cary Forest Learning Center. \$10 fee covers lunch and materials. Register online at https://fsp-workshop042816.eventbrite.com/, or reserve a space by contacting Chris Demers at (352) 846-2375, cdemers@ufl.edu.
May 18-19	44th Annual Spring Symposium: Advances in Southern Pine Silviculture, UF Austin Cary Forest Learning Center. Register online at https://www.eventbrite.com/e/44th-annual-spring-symposium-advances-in-southern-pine-silviculture-tickets-21231339508

# For many more events and information see: floridalandsteward.org

The Florida Land Steward Newsletter is a University of Florida/IFAS Extension Service, Florida Forest Service, Florida Fish & Wildlife Conservation Commission, USDA Natural Resources Conservation Service and Florida Tree Farm joint project:

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