

# The Delta Steward

A Quarterly Publication of DELTA F.A.R.M.

Summer 2008

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## Water Quality Improving in the Delta

After a report from the EPA identified more miles of polluted waters in Mississippi than in any other state in the country, the Mississippi Department of Environmental Quality (MDEQ) began to develop a strategy to address the problem. The strategy became known as the "Basin Management Approach." The methodology allowed MDEQ to focus all fiscal and technical resources in one of five different areas per year on a continuous-five year rotation. The Delta region was included in what MDEQ coined as the Yazoo Basin.

MDEQ developed an advisory group in each of the five basins to plan and prioritize future efforts. The Yazoo Basin Team consisted of natural resource professionals who were familiar with the region and local water quality concerns. Over the course of a year, the Yazoo Basin Team, lead by MDEQ, had laid a foundation by which MDEQ could empower local citizens and groups to address water quality issues at the local level.

When the Basin Management Approach was unveiled at MDEQ in 1999, Richard Ingram was appointed to serve as the Yazoo River Basin Coordinator. "MDEQ realized that local citizens and groups, in partnership with state and federal resource agencies, could solve local problems much more efficiently than we could by ourselves. Our ultimate strategy simply combines the expertise of local, state and federal resource professionals and the interests of local stakeholders to address concerns in their own backyards." Richard now serves as the Chief of the Basin Management Branch at MDEQ.

After the Yazoo River Basin Team developed its priorities in the region, local groups began to develop comprehensive watershed plans. Each plan identifies water quality concerns within a priority watershed and identifies

strategies for addressing the identified concerns. MDEQ often assisted with the process and helped identify potential funding sources.

Since the Basin Management Approach began nearly 10 years ago, MDEQ has facilitated the development and implementation of many projects that have and will address water quality concerns in the Delta region. And while MDEQ deserves abundant credit, credit must also be given to local citizens and regional organizations who have taken the opportunity to be proactive in addressing water quality concerns in the Delta.

### *Yazoo Basin Watersheds Affected by the Basin Management Approach*

*Ascalmore/Tillatoba Creek*

*Bear Creek*

*Bee Lake*

*Buntyn Creek*

*Can-Mussacuna Creek*

*Coldwater River*

*Deer Creek*

*Hickahala Creek*

*Indian Bayou*

*Lake Washington*

*Moon Lake*

*Porters Bayou*

*Steele Bayou*

*Sunflower River*

*Tippah River*

*Wolf & Broad Lake*

*(continued)*

**This Issue  
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### ***Participating Organizations and Agencies***

*Mississippi Soil and Water Conservation Commission*  
*USDA Natural Resources Conservation Service*  
*Mississippi Farm Bureau Federation Delta Council*  
*U.S. Geological Survey*  
*Lake Washington Homeowners Association*  
*Washington County Board of Supervisors*  
*Entergy*  
*Deer Creek Watershed Association*  
*YMD Joint Water Management District*  
*FTN Associates*  
*Deer Creek Landowners Association*  
*Mississippi Department of Environmental Quality*  
*Mississippi State Department of Health*

*Mississippi Department of Wildlife, Fisheries and Parks*  
*Mississippi Department of Agriculture and Commerce*  
*U.S. Fish and Wildlife Service*  
*Ducks Unlimited*  
*U. S. Environmental Protection Agency*  
*Mississippi State University*  
*The Nature Conservancy*  
*City of Tchula*  
*U. S. Army Corps of Engineers*  
*Delta F.A.R.M.*  
*Delta Wildlife*

### ***Common BMPs Used to Address Water Quality in the Delta***

*Sediment Retention Structure*  
*Riparian Forest Buffer*  
*Grass Filter Strips*  
*Wetland Restoration*  
*Bank Stabilization*

## **MDEQ Launches enHance Program**

The Mississippi Department of Environmental Quality (MDEQ) today launched enHance, a voluntary stewardship program that will recognize committed environmental leaders who accomplish goals beyond their legal requirements. enHance is open to facilities, cities, counties, and other entities who are interested in the program, and applicants can choose from three tiers: Associate, Steward, and or Leader. "We are very excited about this new program that will reward members for their leadership in protecting Mississippi's environment. Many companies have achieved standards beyond their permit requirements, and we believe those facilities should be recognized as good corporate neighbors," said Trudy Fisher, MDEQ Executive Director. "In addition, successful participation in this program will result in the reduction of waste and the conservation of resources leading to long term economic benefits and continuous environmental enhancement."

enHance is a complimentary initiative to the U.S. Environmental Protection Agency's (EPA) Performance Track. EPA and MDEQ have signed a

Memorandum of Agreement sharing a commitment to recognize and reward environmental leadership in the protection of air, water, and land. Applications will be available beginning July 14, 2008 on the MDEQ website at [www.deq.state.ms.us/MDEQ.nsf/page/OPC\\_enhance?OpenDocument](http://www.deq.state.ms.us/MDEQ.nsf/page/OPC_enhance?OpenDocument), and the deadline for submissions for the first round of applicants is September 30, 2008.



# The Mississippi Waste Pesticide Disposal Program

Mississippians use more than 44 million pounds of pesticides each year. Many of these pesticides go unused throughout the season, resulting in stockpiling. Over time, these stored, excess pesticides become unusable for various reasons, such as label registration cancellations and suspensions or sedimentation and coagulation of active and inert ingredients. These unusable products are classified as waste pesticides.

In the past, pesticide products were marketed in metal containers which rusted and leaked after years of storage. In recent years, metal containers have been replaced with plastic ones, but they too have a leaking problem due to the brittle nature of the plastic as it ages. These container problems, along with inadequate storage, can lead to water quality, environmental, and health concerns. Since they cannot legally be used or disposed of through conventional means such as landfilling, a need for adequate disposal arose.

For these reasons, the Bureau of Plant Industry (BPI) began a pilot program for agricultural waste pesticide disposal in 1994. This program was conducted in conjunction with the Mississippi State University Extension Service, the Mississippi Department of Environmental Quality, Mississippi Farm Bureau, Delta Council, and other agricultural agencies, groups, and organizations. Funding was made available by the Mississippi Legislature from pesticide manufacturer registration fees collected through BPI.

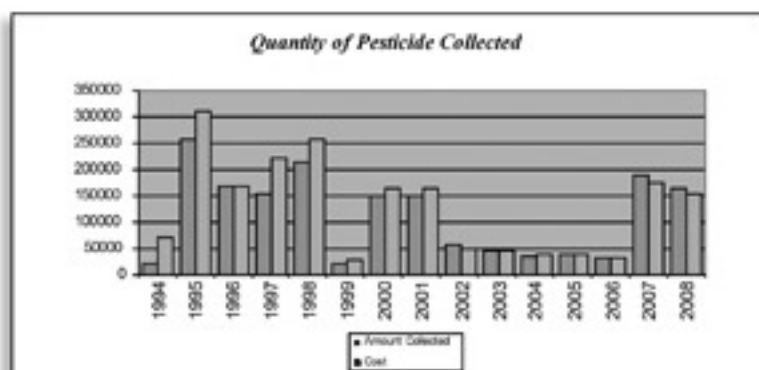
The program continued to operate through June of 1998 as a service for farmers to dispose of waste pesticides and as a means to reduce the environmental

risks associated with waste pesticide storage. The Mississippi Legislature did not reauthorize the continuation of the waste pesticide program after 1998. However, BPI has continued the program by securing special funding from outside agencies such as the Tennessee Valley Authority and the Environmental Protection Agency.

Since its inception, the program has collected and disposed of more than 1.5 million pounds of waste pesticides at an approximate total contract cost of \$ 1.8 million. There have been 5 agricultural waste disposal events in 2007 and 2008 alone, which have accounted for over 388,000 lbs of the 1.5 million total. Disposal opportunities have been held in Bolivar, Holmes, Leflore, Tunica, and Yazoo counties in 2007 and 2008, along with many others located in the delta, northeast, and southeast regions of Mississippi in previous years. This program has directly reduced Mississippi's environmental and health risks associated with improper waste pesticide storage and containment.

The success of the program demonstrates the importance of cooperation in reaching a common goal. The program has continued to be successful through effective coordination and promotional efforts and local farm support group involvement. Offering convenient collection sites and a voluntary and free service to participants has also enabled the program to continue to grow.

Contact Zack Chesser at (662) 325-1269 for additional information regarding waste pesticide disposal.



# GreenTrees Offers Greater Economic Returns for Wildlife Habitat



Delta landowners can now simultaneously enroll acres into a CRP tree establishment program and GreenTrees, a private forest and wildlife restoration program, to receive incentive payments and incomes from both programs. This opportunity will provide anyone looking to quickly create diverse wildlife habitats with additional financial assistance and multiple incomes.

GreenTrees ([www.green-trees.com](http://www.green-trees.com)), created by C2I, LLC of Virginia ([www.c2invest.net](http://www.c2invest.net)), uses a tree practice of 302 cottonwoods inter-planted among 302 mixed hard mast hardwoods, for a total of 604 trees per acre. This tree planting has been accepted by the State FSA offices of Arkansas and Mississippi as an acceptable tree establishment choice for their various CRP-hardwood practices, such as CP 31 (Bottomland Timberland), CP 22 (Riparian Forest Buffers), CP 23 (Wetland Restoration) and, in Arkansas, their latest practice, CP 38, also known as State Acres for Wildlife Enhancement (SAFE). Therefore, if a landowner's acres qualify for both CRP and GreenTrees, the landowner can use cost-share assistance for planting the 604 trees per acre, receive the annual soil rental rates, and receive the other financial and wildlife benefits from GreenTrees.

The combined incentives and income opportunities can offer immediate results. For example, an Arkansas landowner who has enrolled acres into both the CRP-SAFE and GreenTrees can expect a net income in the very first year of at least \$300 per acre *after* all expenses of getting the trees established.

## Energy Crop

GreenTrees prescribes to a long-term managed forest practice, allowing a number of select harvests throughout the lease term. Landowners receive 100% of all income from available hardwood harvests and shorter-term cottonwood harvests, beginning as early as year 10. If the landowner wants additional harvest income from the cottonwoods, further harvesting can take place in years 17 and 25. The emergence of new biomass markets should make this fast-growing, high quality timber a very valuable resource, more so than traditional pulp and timber markets. The demand for this biomass supply is already

so strong that C2I is working at offering the landowner at enrollment a forward contract for the first cottonwood harvest in year 10.

The cottonwoods also serve as a nurse crop for the slower growing hard mast hardwoods and to increase the vegetative structure important to wildlife and birds. As the cottonwoods are harvested, the release of sunlight helps promote a straighter, healthier hardwood, not only providing ecological and silvicultural benefits, but also increasing the commercial value of the hard mast hardwoods. With cottonwoods able to grow 7 to 10 feet per year, a landowner can, as one put it, "lean a deer stand against a new cottonwood a lot sooner than a new oak."

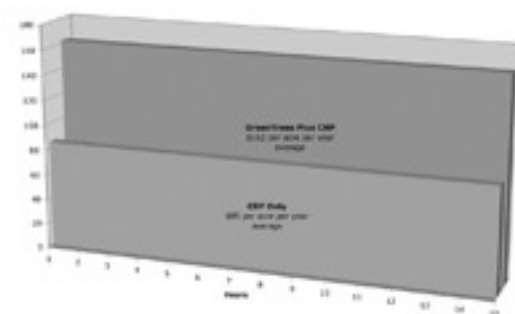


## Appreciating Value

Landowners own the land, the trees and maintain full land use rights so long as they do not permanently damage the trees. The faster creation of diverse wildlife habitats, a denser, higher number of valuable trees, cash payments to help pay for the tree-planting, annual government payments, future biomass and carbon incomes, and a managed tree forest practice can all add up to providing landowners multiple income opportunities while increasing the commercial value of the landowner's property. Good land stewardship can provide sound financial upside.

The chart on the following page shows the additional economic value GreenTrees could add on top of CRP

enrollment. In this example, a Mississippi landowner, qualified for CP 22, also qualifies and enrolls in GreenTrees.



Landowners can enroll clear acres - marginal land, pastures or cultivated acres - into GreenTrees separately or in conjunction with their CRP-qualified acres. For more information about GreenTrees enrollment, contact Blaine Lanier at 662-560-7362 or Page Gravely at 866-623-8733, extension 8950.

## Update on Water Hyacinth Control Measures in Steele Bayou

Joint efforts between the Mississippi Levee Board and Delta Wildlife/Delta F.A.R.M are currently underway to address water hyacinth issues on Steele Bayou. Water hyacinth differs from other aquatic plants in several ways resulting in its invasive and damaging behavior. Hyacinth is a free floating aquatic plant, basically meaning it can grow anywhere regardless of water depth because its roots do not need to attach to a substrate. It is capable of incredible growth rates, populations can double in size within 12 days producing up to 400,000 pounds of biomass per acre. Hyacinth patches can completely block boat access and hinder or eliminate fishing and swimming. Although some aquatic plants are beneficial to fish as they provide food and escape cover for bait and game fish, water hyacinth tends to dominate an area depleting the water of dissolved oxygen which can result in fish kills. Hyacinth also shades out desirable submersed aquatic plants and overtakes native emergent aquatic plants resulting in lower quality habitat and reduced biodiversity.

Control of water hyacinth is being obtained through mechanical and chemical methods. Efforts began last summer and fall when herbicide was applied to water hyacinth between Highways 14 and 436. This effort was successful in reducing water hyacinth in many areas. However, the large mat at Hampton remained. This past spring, the Washington County Drainage District and MDOT provided a track hoe, dump trucks, and traffic control for the removal of this large mat of water

hyacinth. This particular mat ranged from 3 to 6 ft deep and weighed a minimum of 300,000 pounds. The mat acted as a filter, trapping sediment and debris flowing downstream in Steele Bayou basically forming a "floating island" allowing other aquatic and terrestrial weeds to grow in the middle of the channel. Serving not only as a source population for downstream spread, the mat was also a safety hazard to the Hwy 1 bridge itself by multiplying the force of flowing water, especially during high water events. As you can tell by the following photograph, boat travel is extremely difficult, even for an airboat. Follow up efforts are also underway to address the remaining patches of water hyacinth as identified by a recent aerial survey.



# Wolf and Broad Lake Project Update

Restoration activities in the Wolf & Broad Lake watershed have been in full swing throughout the summer and fall of 2008. Immediately following Mississippi Department of Environmental Quality's (MDEQ) approval of grant to improve water quality in the watershed, Delta F.A.R.M. and Delta Wildlife began coordinating restoration efforts with numerous agencies/organizations and private landowners. Ultimately, funding provided by MDEQ will be used to leverage approximately 1 million additional dollars in cash and in kind donations for the project. Survey, design, and installation of Best Management Practices on agricultural lands will be an ongoing effort over the next two to three years. To date, over 50 BMP's have been installed on private lands totaling approximately 25% of production agricultural land in the watershed. These BMP's include overfall pipes,

riser pipes, slotted pipes and various bank stabilization techniques on major drains coming into the lake. Other BMP's such as buffer strips and riparian wetland areas are scheduled to be implemented beginning next year.

Mississippi State University and Mississippi Department of Wildlife, Fisheries, and Parks are collecting water quality and fisheries data to document improvements in Wolf/Broad Lake throughout the duration of this project. As BMP's are installed, the amount of sediment entering the lake will be drastically reduced resulting in increased clarity of the water, higher levels of dissolved oxygen, and a reduction in nutrients such as nitrogen and phosphorous. Over a longer period of time, these water quality improvements are also likely to improve the quality of the fishery as well.



MSU graduate students and the Mississippi Department of Wildlife, Fisheries and Parks are monitoring crappie and other fish populations in Wolf and Broad Lake as a part of the project.



FARMERS ADVOCATING RESOURCE MANAGEMENT  
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## *Goals*

*Increase the overall environmental stewardship of producers in the Yazoo Basin.*

*Improve existing conservation practices through research and education.*

*Improve the overall environmental health of the Yazoo Basin.*

*Educate producers on production systems that provide both economic and environmental benefits.*

*Document the current voluntary conservation efforts being implemented and improvements over time.*

*Educate the consumer public on the efforts being made by producers in the Yazoo Basin to address environmental concerns.*

*Establish a recognized and respected environmental organization that will provide the producers of Northwest Mississippi with a voice when environmental issues and potential regulatory laws are being discussed at the State and National level.*

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