

THE MOIST-SOIL MANAGER

Vol. 1 No. 4

A Publication of the Mississippi River Trust

Farm Bill Continues Wetlands Reserve Program

The Wetlands Reserve Program (WRP) was created by the 1990 Farm Bill in order to restore and protect wetlands. Administered by the U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS), the program is delivered in cooperation with many partners from the public and private sectors. The program focuses on degraded or converted wetlands, primarily cropland, that has a high probability

of successful restoration. The WRP allows 10-year agreements as well as 30-year and permanent easements. The major focus of the program is on wetland-dependent wildlife, threatened and endangered species and the conservation of migratory birds. It mainly benefits wading birds, shorebirds and waterfowl.

Since its inception, the WRP has become one of the most successful and largest wetland restoration programs in our nation. The majority of nearly 2 million acres of wetlands and their adjacent uplands have been restored under the protection of 30-year or perpetual easements. The 2007 Farm Bill increased that cap to 3,041,200 acres.

Some members of Congress desired to limit the use of the WRP by private hunting clubs and, to do so, several changes were added in the 2007 Farm Bill. Some of these changes include limits on non-easement, restoration cost-share agreements to a maximum of \$50,000 per year; a requirement that those getting more than \$500,000 must take their payments in installments of 5 to 30 years (with some waivers by the USDA allowed); and a stipulation that landowners must own their land for at least 7 years before being eligible for the program. These changes have many consequences that could reduce the effectiveness of the program in the Lower Mississippi River Valley.

With increasingly rapid agricultural land values, turnover rates in land have become high. The \$50,000 per year restoration cost-share limit will only allow the funding of small projects. Also, requiring that the larger projects costing more than \$500,000 have payments taken in installments could be discouraging to landowners since the installments do not make allowances for inflation. The option of taking wet, unproductive areas of land out of production and restoring them has also been taken away from a



PHOTO BY WILD EXPOSURES - MICHAEL KELLY

The black-bellied whistling duck is being seen more frequently on Wetlands Reserve Program tracts of the Lower Mississippi River Valley.



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For complete articles and more information regarding moist-soil management techniques and topics please visit www.wildlifemiss.org or www.mississippirivertrust.org.

The Mississippi River Trust, a charitable, 501(c)(3) organization, works only with private, willing landowners to find ways to preserve the Mississippi River watershed's rich history, prairies, red clay hills, bottomlands and bayous, coastal savannas, longleaf pine forests and scenic rivers and streams.

“Rolling Back the Clock” for Waterfowl Management

No, as much as we’d sometimes like them to, we’ve not yet found a way to make the hands on the clock turn backward. Or have we? When it comes to your waterfowl impoundments, proper moist-soil management *can* actually roll back the clock where the vegetation community is concerned.

Plant communities are not a static resource. They are continually changing over time. An upland plant community, absent of any artificial influences, will generally proceed from grasses and forbs to a shrub-sapling forest, then to a pole forest, and will eventually become a mature forest. This natural progression of plant community replacement in a particular area over time is called *ecological succession*. Your favorite duck hole has no special immunity to this process. Barring any unnatural forces, the plant composition found there will change over time as well. This change will involve a progression from annual plants to perennial plants. The problem is that many puddle ducks are grainivores and prefer seed-producing annuals.

So how do we roll back the clock? We do so by the use of “artificial influences” and “unnatural forces” mentioned in the statements above. These will be some of your most valuable tools, and will have a tremendous impact on the proper management of your waterfowl impoundments.

To paraphrase Aldo Leopold, a great conservationist in the early 1900s, the most influential “tools” in the changing of a landscape include, “The axe, the cow, the match and the plow.” Axes and cows are generally frowned upon in the context of the Wetlands Reserve Program (WRP), and guidelines for the use of prescribed burning (again, a valuable

tool on many WRP tracts) vary from state to state. As such, we’ll focus on the role of the final item on Leopold’s list as part of a proper moist-soil management plan.

Aside from hydroperiod (the depth, duration and timing of flooding), the plow or disk is probably the most useful tool in the management of moist-soil areas. One of the main goals in managing native vegetation for the benefit of waterfowl is to maintain plant communities in early successional stages. The soil disturbance created by disking helps to achieve this, while also allowing optimal seed production by annual grasses and sedges and a reduced presence of problem plants.

Research has shown that properly managed moist-soil areas can produce in excess of 2,500 pounds of seed per acre. Even so, moist-soil areas are not the *only* objective of effective vegetation management. Areas of emergent marsh, shrub/scrub swamp, micro-topography/depressions, deep open water and seasonally flooded bottomland hardwoods are also valuable components of a wetland complex that is attractive and sustaining to waterfowl and other wetland birds. Where moist-soil areas *are* the focus, however, high productivity demands periodic soil disturbance to favor seed-producing annual plants over both herbaceous and woody perennials that will result through plant succession.

In impoundments where moist-soil management has begun within the last 5 to 7 years, research suggests that disking will be required once every 3 years to control woody growth and stimulate the seed production of annuals. After 5 to 7 years of continuous moist-soil management,

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however, soil condition and seed availability appear to change so that maintaining high productivity becomes easier. In addition, the frequency of needed disturbance often decreases, and units will generally see an increase in the presence of seed-producing *perennial* plants.

The photos on this page show two impoundments where moist-soil management was initiated in the summer of 2006. The conditions in each of these units were such that a decision was made to sacrifice the limited potential for seed production in the present growing season in an effort to control the prevailing stands of undesirable plants. The photos show how each of these areas looked at the time of the initial site visit in June and during a subsequent visit, following treatment, in August.

Unit "A" was dominated by water primrose and perennial smartweed, and also contained considerable amounts of buttonbush (just out of view in the pictures) and redvine. The principal species found in Unit "B" were perennial smartweed and sesbania. An excessive buttonbush component also existed in this unit. While sesbania, buttonbush and perennial smartweed can be valuable as cover for waterfowl and/or substrate for invertebrates in some of the other wetland habitat types, the goal for these units was to maximize the seed production of annual plants.



Hydrology Unit "B" on June 29, 2006



Unit "B" on August 18, 2006

With this objective in mind, plant succession was set back to an almost "clean slate" situation in both units by means of a very thorough disking in mid-August. The buttonbush in these units was reduced to a level acceptable to the landowner through bush-hogging (*it should be noted that buttonbush and the other problem plants mentioned here may, at some point, require herbicide treatment for effective control*).

The extent and/or degree of disking employed in these units are not representative of what is normally required in most moist-soil situations. Generally, a *light* disking (single pass) will provide the disturbance necessary to set back succession and promote the growth of desirable plants. Additionally, disking an entire unit is not always recommended or necessary. Often, this treatment is staggered within and between units to reduce immediate costs and labor requirements and to diversify available plant resources.

The *timing* of the disking in these units, however, was consistent with most moist-soil recommendations.

Disking earlier in the growing season would have increased the risk of making some undesirable plants "mad." Stands of plants which grow from tubers or rhizomes may be inadvertently bolstered when disks cut the rhizomes into smaller sections. Given sufficient time remaining in the growing season, these small sections may produce new shoots because of their internal energy reserves and the presence of stem-forming tissue. By disking no earlier than mid-August, this threat is considerably reduced.

So, we now have a pair of waterfowl impoundments which have been improved and prepared for moist-soil management. Does this mean that we can now just add water and step back while a waterfowl paradise springs forth? The answer is...absolutely not. The seeds of both desirable and undesirable plants are still in the "seed bank" and will remain viable for years. We must strive to provide conditions which encourage the growth and production of preferred plants. The management of these units will always require adequate monitoring and record-keeping, proper flooding and

de-watering regimes, possible herbicide applications and periodic disturbance through disking to achieve the goals we have established for moist-soil production.

Remember, we have not *stopped* the clock of plant succession; we have merely rolled it back by a few years.

This article was written by Brian Ballinger, wildlife/wetlands biologist, with the Mississippi River Trust.



Hydrology Unit "A" on June 29, 2006



Unit "A" on August 18, 2006

FEATURED SPECIES: *Canada Goose*

The Canada goose (*Branta Canadensis*) is an easily recognized species. The black head and long, black neck with white “chinstrap,” light tan to cream breast feathers, and brownish-black and white undertail distinguish the Canada goose from all others. They grow to a size of 30 to 43 inches long with a wingspan of 50 to 71 inches. Males, which can be very aggressive, generally weigh 7 to 14 pounds—an average of 2 pounds heavier than the female. Other than weight, the male and female are virtually identical. However, the honk of the female differs slightly from that of the male.

Like most geese, the Canada goose is migratory, with the wintering range being most of the United States. The transition into spring and autumn are signaled by the calls heard overhead coming from large groups of Canada geese flying in their familiar V-shaped or diagonally straight-lined formations. Many people look forward to the arrival of these birds and will sit outside for hours listening for their distinct honking.

On land, the diet of the Canada goose consists mostly of a variety of grasses such as Bermuda grass, salt grass and wild barley. They also eat grains such as wheat, rice, beans and corn when available. In shallow water, the Canada goose feeds on aquatic plants and sifts through silt found at the bottom.

Found in flocks all during the year, except when nesting, Canada geese are highly social. Though the Canada goose has been hunted by humans for hundreds of years, they don't hide from human interaction. This has contributed to normally migratory flocks becoming residential, which has led to frustration for landowners because the geese tend to overgraze lawns and crops which can contribute to erosion. A build-up of their feces can cause reduced water quality by adding nitrogen, phosphorous and bacteria growth. The Canada goose can be especially annoying at golf courses as they tend to nest on the courses and this causes problems as they perceive humans to be a threat to their eggs.

Sometime during their second year,

Canada geese find a mate. Monogamous by nature, most pairs stay together all their lives. However, should one be killed, the other is apt to find a new mate. Males fight over females using their wings and bills. The winner then approaches the female with his head down and neck undulating while making hissing and honking noises. Mating then occurs in the spring, on the water.

Females choose the location for nesting—usually a site that is isolated, yet has good visibility—allowing them to see approaching danger. The nesting area will also have open water with low banks offering easy access to the water and its vegetation. This makes swamps, marshes, meadows, lakes, ponds and other such areas perfect choices for nesting sites. Nests are typically simple and quickly made. Moss, twigs, weeds, grasses and other such materials are used for building the nests. After collecting the materials and building the nest, the females will then round out a curve, or depression with their bodies. Sometimes if there is no vegetation, the nest will merely be a rounded depression in the ground shaped by their chest or feet. During the incubation period, the adults lose their flight feathers which are used to insulate the nest. The loss of these feathers also serves to keep the adults grounded until after their eggs hatch.

Clutch size ranges from 2 to 9 eggs, but generally averages five eggs. Incubation must occur immediately after the eggs are laid and this period lasts 23 to 30 days. The female turns the eggs regularly and the offspring hatch via an egg tooth on top of the beak. This can take up to 48 hours with the goslings cracking open the shells until they are completely free. The goslings are yellow with some greenish-gray colorings on top of their heads and backs. These colors fade as the goslings mature into their adult color pattern. They also have black or blue-gray bills and legs that become darker as they age.

Upon hatching, the goslings are capable of following their parents around and the family unit leaves the nest and begins to travel to feed and seek shelter.

The male's role is to defend the



PHOTO BY MISSISSIPPI RIVER TRUST - JAMES L. CUMMINS

territory, nest and eggs from intruders and predators. Egg predators include the red fox, Arctic fox, large gulls, American crows, common ravens and bears. However, both parents share in the responsibility of protecting the goslings; often violently chasing away any nearby creatures after giving off a hissing sound as a warning. Often, geese form groups of goslings and adults, known as crèches, in order to better protect their families.

It is not known how long the Canada goose lives, however, one was recorded to have lived 24 years in the wild and one in captivity was reported to have lived to 42 years of age.

This article was written by Bianca Bordelon, staff writer with the Mississippi River Trust.

Duck Loafing Platform

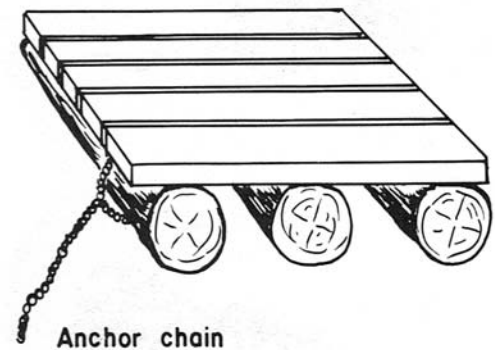
This platform will work very well along sheltered lakeshores and small ponds as a loafing and sunning site for wood ducks, mallards and blue-winged teal. These sites are important because they are relatively safe from predators. Strategically placed platforms can provide enjoyable viewing opportunities.

The floating platform requires three 4-foot lengths of 8" diameter utility poles. Lay the posts parallel in order to make a 4'x4' platform on top of the posts. Nail 4-foot lengths of 2"x6" boards perpendicular to the direction of the posts. Space the boards about 1" apart. In this structure, the use of treated lumber is acceptable.

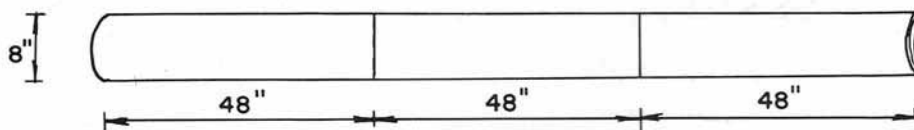
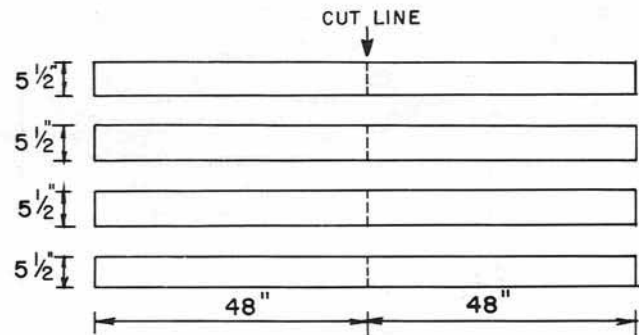
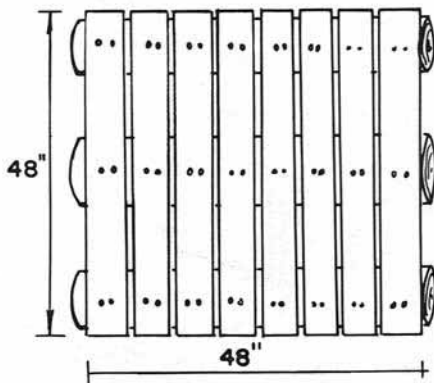
The platform should be placed in 2 to 4 feet of water. A length of welded link chain should be bolted around the posts on opposing corners of the platform. Each chain should be 3 feet longer than the depth of the water from the high water mark to the bottom. Each chain should be bolted to an 8"x8"x16" concrete foundation block. The double anchor blocks are dropped about 6 feet apart to prevent the platform from constantly pivoting with the wind.



PHOTO BY WILD EXPOSURES - MICHAEL KELLY



MATERIALS: One 8" diameter cedar or treated pine pole - 12' long
Four 2" x 6" x 8' boards



Plans from *Woodworking for Wildlife*
Compiled by the
Arkansas Game and Fish Commission
and
Arkansas Forestry Association

Featured Moist-soil Plant

In this issue, we'll take a look at sprangletop. Ranking high on most wetland manager's lists of desirable plants, this annual seed-producing grass offers significant benefits to visiting waterfowl. Hopefully, because of its appearance during the latter stages of the growing season, many of you are seeing this plant in your moist-soil areas at this time.



SPRANGLETOP (*Leptochloa filiformis* & *L. fascicularis*)

Sprangletops are annual grasses associated with moist to wet sites in moist-soil impoundments. They are early successional species that germinate late in the growing season. Best seed production occurs following summer drawdowns.



PLANT VALUE:

Sprangletop is a valuable source of seeds and provides cover for waterfowl. In addition, vegetative parts also serve as an invertebrate substrate. Seed production can exceed 1,500 lbs/acre in recently disturbed sites that are de-watered late in the growing season. Seed production is lower (300 lbs/acre) in areas that are de-watered early in the season. Regardless of the drawdown date, production gradually decreases in subsequent years following disturbance.

ENHANCEMENT:

Maintaining vegetation in early successional stages and lengthening the period soils are in a moist condition increases germination of sprangletop. High seed production always is associated with a summer drawdown or on drier sites in wet years or wet sites in dry years. Therefore, periodic mechanical disturbances (i.e., shallow disking) and irrigation treatments often can be used to enhance sprangletop occurrence and seed production.

For expanded information on sprangletop and other moist-soil plants, as well as additional coverage of management related topics, please go to www.mississippirivertrust.org.

This plant profile was provided by Natural Resources Conservation Service Wildlife Biologist Kevin Nelms.

HANDBOOKS AVAILABLE

In October of 2007, the Mississippi River Trust, in conjunction with the Natural Resources Conservation Service, published a second edition of the handbook, *Wetland Management for Waterfowl*. Landowners enrolled in the Wetlands Reserve Program were mailed a copy of this handbook. The handbook is free to anyone requesting a copy. However, \$5.00 per copy is required to cover postage and handling. Please contact the Mississippi River Trust at (662) 686-3375 to obtain your copy.

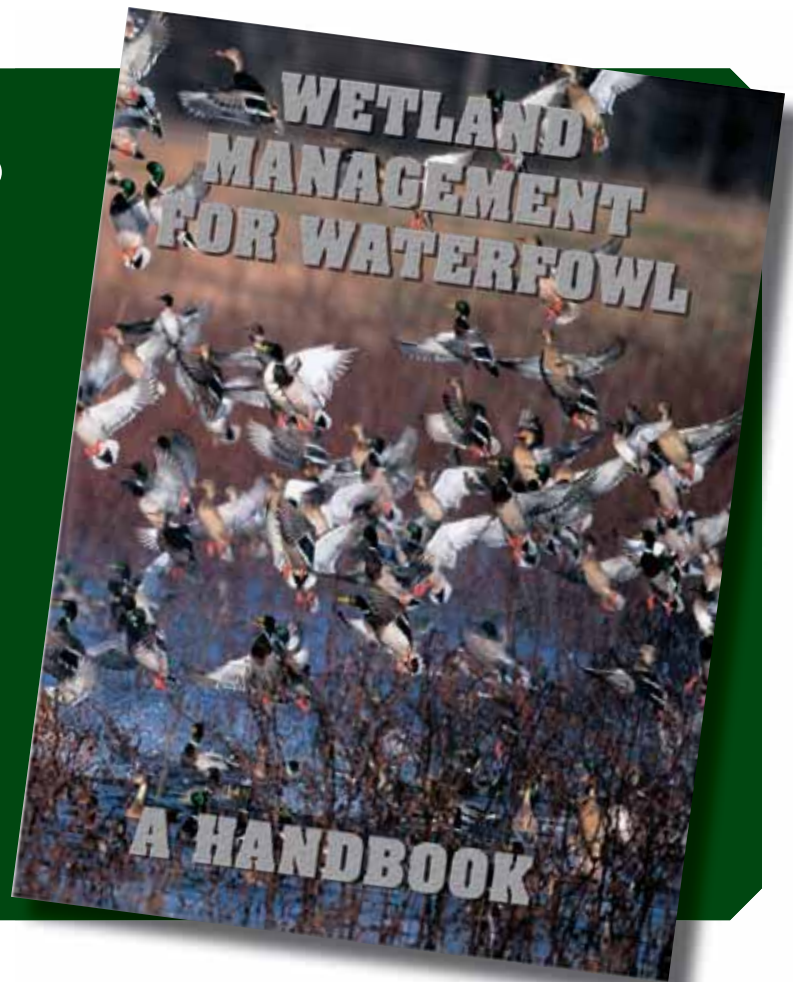


PHOTO BY WILD EXPOSURES - MICHAEL KELLY

Mallards are one of the prime beneficiaries of the Wetlands Reserve Program.

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large number of landowners due to the 7 year waiting period. This leaves taxpayers with the burden of paying for crop losses in areas where repeated losses occur.

The language regarding land appraisals of the WRP land has also been changed as enrollment has plummeted to almost zero in the Lower Mississippi River Valley. In 2006, the NRCS adopted a "Yellow Book" process in which using certified appraisers and a formal before-and-after process for transportation-related appraisals drew much criticism. Due to this process, offers in high land value states, such as Florida, increased tremendously while payment offers for easements in rural states, especially the Lower Mississippi River Valley, were reduced to a fraction of their former value. This caused nearly all the landowners in the Lower Mississippi River Valley to withdraw their applications for the program.

The new language has resulted in the caps for the following states: Arkansas (\$1,000), Louisiana (\$900) and Mississippi (\$900).

Even though new language in the 2007 Farm Bill will allow the NRCS to adjust to a better methodology, it does not require the agency to stop using the "Yellow Book" process. They can base the appraisal on fair market value or area-wide market surveys. The choice made by the NRCS will be a deciding factor in the rebuilding of the program. Other changes in the WRP include the prohibition of using the program on federal or state lands.

This article was written by James L. Cummins, president of the Mississippi River Trust.



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Future Newsletters

Future editions of this newsletter will only be available electronically. The current copy, as well as future editions, can be viewed at www.mississippirivertrust.org.

However, if you are a WRP landowner and would like to receive the newsletter via e-mail, please take a moment to fill out the form below and return it to Moist-soil Newsletter, Mississippi River Trust, P.O. Box 15, Stoneville, Mississippi, 38776.

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WRP Tract Name as Listed with NRCS (*i.e.*, *Club Quacker*, *Honker Haven Inc*, *Joe's Timber LLC*, *etc.*)

Tract Location (State) _____ (County/Parish) _____