



Forestry, Wildlife & Fisheries Update Newsletter

Department of Forestry, Wildlife and Fisheries
George Hopper, Department Head

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Website: <http://fwf.ag.utk.edu>

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Notes From the Web *Samuel Jackson, Web Coordinator, (865) 974-2946*

Often times, there are many opportunities for landowners that are not well publicized and thus may go unnoticed by some. There are many of these natural resource programs available to landowners from the Natural Resources Conservation Service (NRCS), whose website we highlight this month. You can find it at <http://www.nrcs.usda.gov/>.

Rather than just giving an overview of the website, this month's column will focus on one of the NCRS programs, the Wetland Reserve Program (WRP). It can be found by clicking "Programs" and selecting "Wetland Reserve Program." The program is designed to protect wetlands and wildlife habitat by giving landowners financial and technical assistance to restore and protect these wetlands. Eligible land includes damaged or drained wetlands and various other associated land types.

Land protection is done through easements of varying lengths. When a landowner enters into an easement in this program, he or she is basically selling the development rights to the land designated for the WRP to the United States for the period of time stated in the contract. The landowner retains full ownership, the right to control access to the land, to hunt, fish, and conduct other undeveloped recreation. Landowners can also sell or lease WRP lands and are responsible for all property taxes. The only limitation is that they cannot develop the land or alter its current state for a given period of time.

Applications to participate in the program are taken at any time. You can apply through the local NRCS office in your area. The local office will help you determine if you are eligible for the program and, if so, designate areas for protection. You can find your local office on the NRCS website. More information about the Wetland Reserve Program can be found at <http://www.nrcs.usda.gov/programs/wrp/>, including fact sheets and questions and answers.

The NRCS offers a wide range of conservation programs to landowners. Visit their website to learn more!

Calendar of Events

- May 25-26** Stream Restoration Workshop
Oak Ridge
- May 27** Humphreys Co. Forestry Association
Organizational Mtg.
- June 7-11** State 4-H Wildlife Conference
Greenville
- June 9-10** K/T SAF Summer Meeting, Jackson
- June 17** State 4-H Forestry and Wildlife
Judging
- June 19** S. E. Ag. Expo, Greenville
- June 20-25** Teacher's Conservation Workshop
U.T.- Knoxville
- June 29** Lincoln Co. Forestry Association
Organizational Mtg.
- July 11-16** Teacher's Conservation Workshop
Lambuth University, Jackson

"Mark Your Calendar"

Oct. 22 - 23
40th Anniversary Celebration
Dept. of Forestry, Wildlife & Fisheries

(See article on page 3)

Faculty

- Wayne Clatterbuck** *Forest Silviculture*
Craig Harper *Wildlife Management*
Thomas Hill *Fisheries Management*
George Hopper *Natural Resources*
Samuel Jackson *Forest Management*
David Mercker *Forest Management*
Larry Tankersley *Forest Management*

Management Calendar for May

Wildlife

Plant native warm-season grasses and associated forbs

- kill existing sod before planting, then burn
- use pre-emergence herbicides
- plant seed **no deeper** than ¼ inch
- be patient!

Plant firebreaks and other disced strips not left for natural vegetation

- iron-clay cowpeas, re-seeding soybeans, milo, and various millets provide forage and seed for a variety of wildlife species

Plant warm-season food plots

- see *Planting Chart for Wildlife Food Plots in Tennessee*, SP 550-A, for planting recommendations

Bushhog and spray perennial forage food plots for weed control if necessary

Collect soil test samples from plots to be planted this fall and lime now as needed

Leave young wildlife alone

- let nature takes it's course; you'll do more harm than good by trying to save "orphans"

Establish salt/mineral licks for white-tailed deer

- best if offered in a metal-lined trough that can be cleaned occasionally with bleach/water solution

Fisheries

Control marginal weeds and filamentous algae. See the following publications

- **Aquatic Weed Management Control Methods**, SP375-C;
- **Aquatic Weed Management - Herbicides**, SP375-D;
- **Algae in Farm Ponds**, PB1095; and
- **Calculating Treatments for Ponds and Tanks**, SP374-R.

Aerate your pond after chemical treatments. See the following publications

- **Pond Aeration** SP 375-O
- **Types and Uses of Aeration Equipment** SP 375-P.

Fertilize through the summer months

See articles in this Update

- **Control Watermeal in Farm Ponds**
- **Aquatic Weeds and Algae in Ponds**

40th Anniversary Celebration of the UT Forestry, Wildlife & Fisheries Department

Wayne K. Clatterbuck, Associate Professor, Forest Management and Silviculture

A celebration of the 40th Anniversary of the UT Department of Forestry, Wildlife & Fisheries will be on October 22 and 23, 2004 in Knoxville for all alumni, friends and families. The celebration and reunion will include a professional continuing education conference for natural resource managers on "Invasive Plants" on Friday, October 22; a cookout on Friday evening to reminisce with present and retired faculty, alumni, classmates and students; and a breakfast on Saturday morning with an overview of current FWF teaching, research and Extension programs, a tour of new facilities and buildings, and dreams for the future. You may attend all or any of these events.

More information will be forthcoming via mail and the FWF website (<http://fwf.ag.utk.edu>). Let us know if you are interested in attending by contacting us by phone, return mail or e-mail (fwf@utk.edu). Please let friends and classmates know about this exciting event!

This is also the date of the UT-Alabama football game. While we are unable to secure tickets for this game, this early notice may enable you to obtain tickets from other sources.

Come celebrate our 40th anniversary and enjoy the peak weekend for fall color in east Tennessee.

###

Control Watermeal In Farm Ponds

Thomas K. Hill, Professor, Fisheries Management

Many farm pond owners fertilize their ponds regularly during the warm months to ensure a dense phytoplankton bloom, the basis of a plenteous food supply for the fish. These ponds have a green appearance and an ideal visibility into the water of 16 - 18 inches. Emergent type aquatic weeds and filamentous algae cannot grow without sunlight, another benefit from fertilization.

There is another condition with farm ponds when the water takes on a bright green color that is not good. Watermeal is the culprit in such instances and can turn the entire surface of a pond into a deathtrap for the fish unless it is controlled right away.

Here's what happens. **As the pond water warms in the spring, watermeal appears on the surface of the water as tiny green, spherical fronds that are about 1.2 mm in diameter.** The source of the infestation is rarely obvious. It might be wind borne or transported by some animal. Fronds feel like tiny grains of sand when rubbed between the thumb and fingers. Since watermeal is very small and bright green in color, without the feeling test, it is often misidentified as pollen floating on ponds.

A member of the duckweed family, watermeal is the smallest flowering plant and is capable of reproducing by both seeds and buds. Flowers and fruits do occur but are rarely seen.

Watermeal reproduces rapidly and occurs in such abundance that it can completely dominate a pond within a few days. The surface of the water may be obscured. All of the nutrients in the pond that would usually be available for phytoplankton production are tied up in watermeal. Rake the watermeal away and the water underneath will be very clear.

It is not unusual for the watermeal to become so dense that oxygen exchange from the atmosphere to the pond water cannot take place. A fish kill may result as the dissolved oxygen under the watermeal is completely consumed by the fish and other organisms that are present.

Aeration of the pond can help avoid this problem.

What can be done about this noxious aquatic weed? The herbicide Sonar in the aqueous solution formulation is the recommended chemical treatment. Fluridone, the active ingredient in Sonar, interferes with the plants ability to make food by inhibiting carotenoid synthesis. Once this happens, the chlorophyll is exposed to photodegradation and is gradually destroyed so the watermeal dies.

A typical treatment may take 30 to 90 days to work. As an example, a still-water pond with one surface acre area and an average depth of four feet requires one quart of Sonar as treatment. Since this herbicide treatment has some residual effect, some workers have gotten good control results by **dividing the treatment quart into three equal amounts applied at 21 day intervals**. Dilute the Sonar with several gallons of water and spray it over the surface. There is not a waiting period either for fish consumption or for livestock water from a treated pond.

There is not a native fish in Tennessee that consumes watermeal, but the **exotic blue tilapia (*Oreochromis aureus*)** is reported to eat it in large amounts. When **stocked at 15 lbs/A after the water warms in the spring and before a watermeal infestation becomes so bad**, these fish have **helped greatly** in controlling the weed. Stock 3-inch tilapia particularly where largemouth bass are already established. Tilapia of this size are sexually mature and will reproduce right away. More watermeal consumers will be available as the offspring grow. The tilapia cannot overwinter in Tennessee, but will die when the water temperature gets down to about 50F in the fall.

Sonar is quite expensive and tilapia may not be available everywhere, but if you experienced watermeal in your pond last summer, you should **consider your alternatives before spring**. It is very likely to recur. The combined treatment of Sonar and tilapia is more likely to be effective than either treatment alone. Reference to Sonar is made with the understanding that no discrimination of other products is intended and no endorsement by Extension is implied.

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TWRA is Leasing Fields for Dove Hunting

Craig A. Harper, Associate Professor, Wildlife Management

TWRA is now leasing dove fields from landowners for its Public Dove Field Program. Landowners can earn up to \$2,500 for preparing a dove field for public hunting. Fields will be available for a minimum of 3 priority hunt dates in September. TWRA leases three types of dove fields:

- spring-leased fields
- improved silage fields
- traditional fall-leased fields

Spring-leased fields are planted in grain (sunflowers, millet, wheat, etc.) and managed specifically for doves with no grain harvest. Landowners plant these fields and mows them before the season opens. Typical crops include sunflowers, white-proso millet, and wheat. The rate for spring-leased fields is \$100 per acre for a maximum field size of 25 acres. The maximum amount paid per field is \$2,500. **TWRA is signing up spring leases now.**

Improved silage fields are harvested silage fields with some grain left to provide additional food to attract doves. TWRA will lease harvested corn silage fields for \$40 per acre (up to \$1,600). The farmer also will be paid \$1,000 to leave 4 acres of grain standing in the field. The maximum paid per field is \$2,600. The farmer must cut or mow the standing corn 2 weeks prior to the opening day of dove season (as directed by the Regional Small Game Biologist). These fields will be signed up later this summer.

The traditional fall-leased field is a harvested grain or hayfield. The rate for these fields is \$40 per acre for a maximum field size of 40 acres. The maximum paid amount is \$1,600. These fields also will be contracted later this summer.

TWRA began its leased dove field program in the late 1980s and the program has been very successful in providing quality-hunting opportunities for hunters. For more on TWRA's Public Dove Field Program, contact:

Region I – Jackson	(800) 372-3928
Region II – Nashville	(800) 624-7406
Region III – Crossville	(800) 262-6704
Region IV – Morristown	(800) 332-0900

In addition to leased fields, many public dove fields are provided on wildlife management areas in each TWRA region. Mourning doves are one of the most widely distributed and abundant birds in North America. Mourning doves are hunted in 36 of the lower 48 states and more of these birds are harvested than all other migratory bird species combined. In Tennessee, about 111,110 hunters harvested more than 2 million mourning doves in 2003.

For more information contact: *Craig Harper at 865-974-7346*
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Managing Timber and Wildlife

Larry Tankersley, Extension Specialist, Forest Management

Forest management systems are available to provide a wide variety of wildlife habitats, while growing quality timber. Regardless of the size of your forest you can grow some good logs and provide valuable wildlife habitat in the meantime.

All forests are habitat. Not all habitat, however, is timber. Some stands of trees do not contain commercially viable “timber” but these stands are good habitat. Hollow trees are useful habitat. But aren't timber and can take up valuable space. While timber and wildlife are generally compatible trades are inevitable, sometimes you have to decide which use is most important.

It is important to remember that wildlife is a number of species. Timber management creates forests in varying stages of timber development from young regenerating forests to thinned well pruned timber. Often what we do benefits one group, while it displaces another. Species that will use a forest with a tall continuous canopy will have no use for the brushy conditions of a young forest. Visa versa, many species that use the brushy young forest will move on as the canopy moves higher. Many species can and do use both types of habitat and prefer to have both

types available within their “home range”. Horizontal diversity across the landscape, is important and typically requires that we consider the land use of our neighbors. We might consider developing a habitat type that is not readily available in our neighborhood. Let’s start with an inventory of our forest.

Forest types are important. Are your woods mostly oaks and hickories or dominated by yellow-poplar? How much pine is on the place? Bottomland forests of sycamore and river birch or is it a cove with wide variety of species. Each of these have different values on the timber market and contribute different habitats.

Site quality is important. It constrains “productivity”. The energy collected by the vegetation determines our potential for timber volumes and habitat quality. Plant material will determine the type of habitat that we will have. A drier site will generally have less plant material, often fewer insects and spiders i.e. arthropods for birds and smaller mammals and less forage for deer or larger mammals.

Proximity to water general improves a site for timber production and habitat quality. Timber grows better with more water and wetter sites can support larger timber volumes. Many species of wildlife especially reptiles and amphibians require water for their life cycles, and beaver and ducks also require water. How much of your area would be considered a good site? How much is relatively dry?.

Stocking of trees is very important Is your forest well stocked or understocked? This is mostly a timber concern but it often tells us about our habitat as well. An understocked stand likely has good vertical structure, that is a mixture of trees and shrubs with various heights, and an active forest floor. The timber may be knotty. And older, often with the best trees removed at some point in the past. Many trees of modest size may be filling gaps created by a previous removal or wind or insect damage. Many stands have lost trees to drought recently.

Stocking is directly related to timber volume and value. Density control with thinning and/ timber stand improvement is extremely important in developing quality sawlogs. All tree species are not equally desirable in the eyes of the timber market. Tree value is also related to size. With larger diameters being more desirable. Tree grade is another extremely important characteristic of timber especially hardwood timber. Trees with few defects spaced widely are more valuable than those with lots of old dead branches and knots. These may enhance the tree from a wildlife stand point but the timber value is limited.

Age of the forest is another key factor in most management schemes. Age may indicate how long the land is tied up without a cash flow. Older forests respond differently to management activities, typically are slower growing and often more vulnerable to insects, diseases, and the weather. Depending on the history of the forest it may contain two or three different ages within the same stand. Older forests are often managed to prepare for the next generation of trees.

Succession, knowing how your land is changing and how it will respond to your actions, is important. Removing trees will affect the distribution of space and light. Timber stand improvement removes less desirable species of trees and allows volume to accumulate on better trees. Sunlight streaming to the forest floor often improves vertical strata, forest floor dynamics, forbs and grasses respond, as do certain insects spiders, and other are important organisms for good nutrient cycling, and food chain development.

Remember wildlife are out there year round. Habitat is important not just during hunting season. Water, food, and cover are important for every species! That’s what makes it exciting!

Timber management requires protecting and providing space for the best trees to grow. For more information contact your local forester.

Determining Which Trees to Cut or Leave

Wayne K. Clatterbuck, Associate Professor, Forest Management and Silviculture

Designating tree classes is an excellent method of determining harvesting priority. Established by John Putnam, with the USDA Forest Service in the 1950's, tree classes serve as the basis for planning harvest and improvement cutting as well as developing tree marking rules. The four tree classes are (1) preferred growing stock, (2) reserve growing stock, (3) cutting stock trees and (4) cull stock trees.

Preferred Growing Stock trees are the future crop trees that will be grown until the end of the rotation. These trees are in good condition, of desirable species, growing at an acceptable rate, in the dominant or co-dominant crown class, of good grade or with the potential to develop into a high quality tree and can be left indefinitely without the risk of dying. These are the best trees in the stand that are increasing in value quickly. Putnam calls these "leave trees."

Reserve Growing Stock trees are in good condition, but do not qualify for preferred growing stock. Generally, these trees are not growing as well as preferred growing stock and are of poorer grade or a lower grade without the potential to increase in grade. Reserve growing stock can be left for one or more cutting cycles with little risk to merchantability or survival. However, these trees are not the ones left for the final harvest. Putnam's designation for these trees is "storage trees."

Cutting Stock trees (Putnam's "cut trees") are those that must be cut during the next cutting cycle because they are in poor condition and will not survive for future cutting cycles. These trees are usually of an inferior species for the site or of poor form or grade that will not increase in value.

Cull Stock trees are incapable of meeting the desired product goals. Most of these trees are taking growing space that would be better suited for the more desirable trees. Cull trees can be recognized as two types: (1) sound cull trees that will never make sawlogs, but contain usable fiber and (2) unsound cull stock trees that do not contain merchantable fiber.

After designating the class of each tree, marking priority for trees to cut or leave is as follows:

- All *cutting stock* trees and *cull stock* trees are cut except in those instances where those trees may be providing visual or wildlife values.
- None of the *preferred growing stock* trees are cut except in special circumstances such as a species being universally killed by insects or disease, two preferred trees are growing side by side each affecting the growth of the other or unusual market prices or conditions.
- *Reserve growing* stock trees may be cut or left according to the intensity of the harvest to be made. Often, when cutting stock and cull stock trees only are offered for sale, they are not valuable enough to entice timber buyers. Thus the sale is sweetened somewhat with a few, more valuable reserve growing stock trees.

There is no one "right way" to mark timber. In some situations no reserve growing stock trees would be marked. In other situations most or perhaps all are marked. Intensity will depend on the objectives and desires of the landowner, the present condition of the stand and markets.

Because of the lack of markets in the past for poor grade material, most timber harvests only took the best trees and left the inferior trees. This "high-grading" has left a poor quality forest in

many areas with little potential for the remaining trees to increase in value. Now with markets for lower quality trees in most areas of Tennessee, the use of tree classes as a cutting priority allows one to provide the best growing conditions to those trees that will continue to increase in value: the fast-growing, desirable species, higher grade trees.

For more information contact: *Wayne Clatterbuck at 854-974-7346 or*
wclatterbuck@utk.edu

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2004 Pest Control Manual

Wayne K. Clatterbuck, Associate Professor, Forest Management and Silviculture

The 2004 Insect and Plant Disease Control Manual (PB 1690) is now available for purchase in a spiral bound version from the UT Publication and Supply office at a cost of \$40 each. The manual is also available on CD at a cost of \$15. An order form can be found on the web located at <http://eppserver.ag.utk.edu/redbook/pdf/redbookorderform.pdf> or credit card orders may be taken over the phone at (865) 974-7300.

Please let your clientele know that this updated information is available for free over the web located at <http://eppserver.ag.utk.edu/redbook/redbook.htm> or may be purchased.

The manual is divided into chapters based on the plants, crops or animals of interest. Trees, shrubs and flowers is just one chapter of the manual. Description of chemicals recommended and rates applied are given for each insect or disease problem. Although the manual is NOT an identification book of pest problems, it does give brief descriptions of symptoms associated with the insect or disease by species. You will find that it is an excellent reference manual and is easily accessed on the web. Check it out!

For more information contact: *Wayne Clatterbuck at 854-974-7346 or*
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###

Forest Certification Revisited

David Mercker, Extension Assistant, Forest Management

Forest certification is gaining world-wide acceptance. Certification is an attempt to identify forestland that is well-managed. Since not all countries and states have laws governing forestland management, and those that do are not consistent with each other, certification developed as a means of standardizing forest management and assuring that “claims” of well-managed forests were verifiable.

In the United States, several major certification systems (including American Tree Farm, Forest Stewardship Council and Sustainable Forestry Initiative) compete for recognition in the certification marketplace. To be verifiable, a certified forest must periodically be audited by an outside third-party. In some cases, there is a charge to the landowner for these audits, and in others, the cost is absorbed by forestry firms.

There are three parts to a forest certification program: 1) forest certification – the actual

evaluation of forestry procedures based on the accepted criteria, 2) chain-of-custody – a tracking system that documents and follows the wood product from the woods to the final product, and 3) ecolabel – a label that appears on the final product assuring consumers that the product is indeed certified.

Managers of public forestland are embracing certification as a means to add credibility to their land management. Industrial forest products firms often certify out of interest in gaining market share by advertising their commitment to sustainable land management. To the average private forest landowner, the benefits of certifying forestland may appear questionable. Some might seek certification to access professional forestry assistance that accompanies it, others for image and credibility in order to assuage environmental groups, and still others hope for market access and premiums on their forest products. However, to date there appears to be little evidence that most consumers are willing to pay a premium for certified wood products, and with the exception of a few niche markets, that is not expected to change.

Some certification systems are developing new approaches that will allow smaller privately owned forests to become certified with little or no cost and limited hassle. The American Tree Farm System, for example, offers group certification. Group certification allows many individual forest owners to band together under one umbrella organization and have their “group” certified as complying with Tree Farm standards. Normally the group will have a central manager, such as a consulting forester or a forest products firm. It is even possible for each of Tennessee’s 29 County Forestry Associations to attain group certification in this manner.

Some foresters frown on the concept of certification, stating that, “we are already doing a good job managing forestland and certification only further complicates the obvious.” Others view certification as a means to validate the already good practices, giving more credibility to the profession.

Certification, in one form or another, is likely here to stay. It is still unclear to what magnitude it will grow. Some speculate that it will become the way forward-thinking forestry is conducted in the future.

For more information contact: *David Mercker at 731-425-4703*
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###

Hardwood Tree Species Commonly Sold as Veneer (Part 5 in a series of 7)

David Mercker, Extension Assistant, Forest Management

Virtually all tree species can be manufactured into veneer, but only a few species are in sufficient demand to develop sustainable markets. Traditional hardwood face veneer markets include white oak and red oak, and black walnut. Recently, sugar maple and black cherry have increased in demand. Lower value core stock, used as underlayment for face veneer, includes primarily: yellow poplar, and sycamore. The following is a brief description of commonly veneered species.

White oak (*Quercus alba*, L.) - very plentiful, colors is white to pinkish, price range is medium to medium high, moderately easy to process, export demand typically stronger than domestic, is the most common tree used for veneer in Tennessee, species occasionally substituted include chinquapin, swamp chestnut oaks, swamp white and bur oaks.

Northern red oak (*Qiercis ribra*, L.) - very plentiful, color is pinkish to red (color is very sensitive to site quality and lighter color is preferred), price range is medium, moderately easy to process, substitute species include cherrybark, Shumard and Nuttall oaks.

Black walnut (*Juglans nigra*, L.) - limited availability, color varies from light brown to deep chocolate brown to a purplish-brown, moderately easy to process, price range is high, strong domestic and export demand, no domestic substitute species, if grown on moist sites, will develop a wide, light colored sap ring that lowers value.

Sugar maple (*Acer saccharum*, Marsh.) - very limited availability in the southeast, color varies from white to cream to light reddish-brown (lighter colors are preferred), price range is medium, difficult to process, best quality grows in northeastern states, bird peck often hinders maple veneer.

Black cherry (*Prunus serotina*, Ehrh.) - very limited availability, color is light reddish-brown, price range is medium to high, moderately easy to process, best quality grows in northeastern states, Southern grown cherry is often hindered by gum pockets.

Yellow poplar (*Liriodendron tulipifera*, L.) - very plentiful, color is pale yellow-green, price range is low, easy to process.

Sycamore (*Platanus occidentalis*, L.) - limited availability, color is light red-brown, price range is low, easy to process, inexpensive underlayment veneer.

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dcmercker@ext1.ag.utk.edu

###

Ten Benefits of Forestry

Jeff Ghannam, National Society of American Foresters

Forestry is bringing back forests. Until the 1920s, forests were often logged and abandoned. Now, across the country an average of 1.7 billion seedlings are planted annually. That translates into six seedlings planted for every tree harvested. In addition, billions of additional seedlings are regenerated naturally.

Forestry helps water quality. Foresters carefully manage areas called watersheds (areas where we collect our drinking water) and riparian zones (land bordering rivers, streams, and lakes). These are places where maintaining water quality is the primary concern for foresters. Forests actually help to clean water and get it ready for us to drink. The trees, the soil, and bacteria are all part of this process. Forest cover protects and nurtures the soils that are the key to water retention, filtering, and quality.

Forestry offsets air pollution. Foresters nurture forests, which are sometimes called "the gills of the planet." One mature tree absorbs approximately 13 pounds of carbon dioxide a year. For every ton of wood a forest grows, it removes 1.47 tons of carbon dioxide and replaces it with 1.07 tons of oxygen.

Forestry helps reduce catastrophic wildfires. At the turn of the century, wildfires annually burned across 20 to 50 million acres of the country each year. Through education, prevention, and control, the amount of wildfires has been reduced to about two to five million acres a year—a reduction of 90%. By marking and removing excess fuels, such as underbrush and some trees, foresters can modify forests in order to make them more resilient to fire.

Forestry helps wildlife. Foresters employ a variety of management techniques to benefit wildlife, including numerous endangered species. For example, thinning and harvesting create conditions that stimulate the growth of food sources for wildlife. Openings created by harvesting provide habitat for deer and a variety of songbirds. Thinning can be used to accelerate growth and development of older trees that are favored by owls and other species. In order to enhance salmon habitat, foresters also carry out strategic tree plantings and monitor forest health along streams in order to keep the water cool and reduce sediments.

Forestry provides great places to recreate. Foresters manage forests that provide recreational benefits to communities. Forests are important areas for such recreationists as birdwatchers, hikers, nature photographers, horseback riders, skiers, snowmobilers, and campers. And because foresters put water values high on their list of priorities, the rivers and lakes in forested areas provide such recreational opportunities as fishing, canoeing, and rafting.

Forestry benefits urban environments. Urban foresters manage forests and trees to benefit communities in many ways. Forests in urban areas reduce stormwater run-offs, improve air quality, and reduce energy consumption. For example, three well-placed mature trees around a house can cut air-conditioning costs by 10-50 percent.

Forestry provides renewable and energy-efficient building products. Foresters manage some forests for timber and produce a renewable resource because trees can be replanted. Other building materials, such as steel, iron, and copper, can be reused and recycled but not replaced. Wood is a renewable resource which, in addition to being recyclable, can be produced anew for generations to come on sustainable managed forestlands. Recycling and processing wood products also requires much less energy than does the processing of many other non-renewable materials.

Forestry helps family forests stay intact. Foresters help family forestland owners, who own 54 percent of all the forests in the US, understand the benefits of managing their forests in an environmentally friendly manner. Better management of private forests means that those forests will remain healthy and productive. Many endangered species spent at least part of their time on private land, more than 80 percent of our nation's total precipitation falls first on private lands and 70 percent of eastern watersheds run through private lands.

Forestry is good for soils. Foresters and natural resource managers are dependent on forest soils for growing and managing forests and, to a large extent, forest soils are dependent on resource

professionals and managers. Foresters' success in growing forests and producing forest products is dependent on their ability to understand soil properties and to then match species with soils and to prescribe activities that not only promote forest growth but also enhance and protect soil productivity and prevent soil erosion.

###

Aquatic Weeds and Algae in Ponds

Thomas K. Hill, Professor, Fisheries Management

This is the time of year when marginal weeds and filamentous algae are at their worst in ponds. For the good of the fish population, they need to be controlled. Get specific identification before you decide on treatments. Many times your county agent can help you identify the problem weeds and make recommendations for treatments. In case the agent cannot decide, he can always contact a specialist. Refer to the following publications:

Aquatic Weed Management Control Methods, SP375-C;
Aquatic Weed Management - Herbicides, SP375-D;
Algae in Farm Ponds, PB1095; and
Calculating Treatments for Ponds and Tanks, SP374-R.

Check out the following website Southern Regional Aquaculture Center website at www.msstate.edu/dept/srac/fslist.htm

Be prepared to aerate your pond after chemical treatments, during the decay process a lot of oxygen will be used so aerate your ponds. See

Pond Aeration SP 375-O and
Types and Uses of Aeration Equipment SP 375-P.

Continue to fertilize ponds through the summer months to provide adequate food supply for fish that depend on natural food production. **However, do not fertilize a pond until the weeds and algae are under control.**

For more information contact: *Thomas K. Hill at (865) 974-7346*
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