

# So You Now Have the Old Home Place

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**— CHAPTER 1 —**

# Planning/What Do You Want?

A well-planned road system helps a family manage and enjoy their property.



A barn or shed is essential for storing equipment.

PHOTO BY JAMES L. CUMMINS

You have inherited all or part of your family's old home place, or maybe you have purchased a piece of property and are not sure what to do to make it your little piece of "heaven on earth." Wildlife Mississippi is providing this web-based handbook to assist landowners in doing just that. We will start with planning and determining what you might want, then we will focus on a new topic. They will include: 1) thinning and forest management; 2) roads, trails, fire lanes and bridges; 3) food plots and open areas; 4) farm ponds and small lakes; 5) the cabin; 6) landscaping, barns, sheds and shooting areas; 7) wildlife management; and 8) economics of the old home place.

I will base these articles on realistic experiences. My father inherited 70 acres, or the "Cummins Place," that has been in the family since 1910 and is located in Webster County. My mother inherited 140 acres that has been in her family since 1833. I have been working on these properties for the past 18 years.

Now, let's discuss your situation. To start, you may be asking yourself, where do I go from here? What are my goals for the land? Do I want a place to hunt, fish or view wildlife? A get-away from it all? Or a permanent place to live? Do I need to produce some income from the property? These are some of the first questions that need to be answered before a plan can be developed.

Most people think they would like large tracts of land until costs are considered. Be realistic as there will be annual taxes and maintenance costs from now on. If you have inherited land, now would be a good time to consider whether or not you will need to sell some of the land to make your dream a reality.

For the purpose of this series of articles, we will examine some of the possible goals and objectives related to landownership. So, how do you determine what your goals and objectives might be?

One of the first things you need to do is determine your personal inclinations. It is very important that this is done before starting any land management programs. When your goals include fish and wildlife, it is important to recognize several points:

1. Goals and objectives should be realistic;
2. Goals and objectives should be measurable; and
3. Other land-use objectives should be preserved.

Goals and objectives should be realistic and set at attainable levels. You should assess your situation in regards to available time, available equipment, the size of the area under consideration and the amount of resources available for the project. The potential of fish and wildlife resources and habitat already

existing on the property should also be taken into account in the initial stages of planning. For instance, in the red clay hills of Tishomingo County you should not expect to harvest deer with the same antler quality as those around the Big Black River in Madison County. Conversely, smallmouth bass do not exist in the Big Black River but they do in Bear Creek.

Goals and objectives should be measurable. Without measurable progress, you are not able to make necessary changes to your management plans. When goals and objectives are not measurable, it hampers your ability to determine the success or failure of implementing management practices.

Other land-use objectives should be preserved. More often than not, you have multiple objectives in mind for your land. Whether these goals include grazing, timber harvesting or agricultural production, it is important that you keep these objectives in mind when developing your fish and wildlife management plan. It is vital that land-use objectives are properly prioritized to determine where fish and wildlife management can feasibly be incorporated into the overall scheme of things.

Once all goals and objectives are established, it is important to then take an inventory of the property. A thorough evaluation of the land's fish and wildlife potential is essential to implementing

habitat improvements or configurations. A detailed ground-level inventory and a top-view (satellite or topographical map view) inventory should be conducted.

Food, water and cover are the three essential ingredients of good fish and wildlife habitat. Therefore, an all-inclusive inventory should be taken to determine the availability of these items.

First, evaluate the vegetation on the property. Note the amount and distribution of grass, shrubs, crops and trees. The types of vegetation found on your land will help determine the types of animals that can survive on the land. Nature's food cycle begins with plants. Plant-eating animals – deer, rabbits, insects, etc. – convert plant energy to protein and fats. Meat-eating animals – owls, hawks, bobcats, insect-eating birds, predatory insects, etc. – then feed on the plant-eating animals. Therefore, this food cycle would collapse without plants.

Next, water sources should be noted. Water requirements vary among the different species of fish and wildlife. Bobwhite quail need surface water only during long, extremely-dry periods whereas salamanders need a fish-free pond for spawning. Also, some animals require water for hydration. For these reasons and more, water should be considered a top priority in implementing a fish and wildlife plan.

Cover is another essential element to a successful management plan. Both natural and artificial covers provide protection, roosting, nesting, resting and foraging areas. Natural cover is effectively managed by pruning, thinning, clearing and planting. Artificial cover includes nesting boxes, birdhouses, brush piles, rock piles, log piles and other similar structures.

While ground-level inventories are exhaustive and all-inclusive, top-view inventories begin by obtaining a drawing, map or aerial photo of the land. As it is usually helpful to divide the property into fish and wildlife habitats, the top-view inventory will aide in the layout of the different management compartments.

The five main types of habitat are grassland (including pasture), woodland, cropland, idle areas and water areas, including streams, rivers, lakes and ponds. It is also helpful to include cardinal directions, approximate size of land-use areas and a distance scale on your top-view map.

After completing the inventory, a management plan can be developed that will not only increase the quantity and quality of species on your property, but will also increase the overall productivity and value of your property.

Now that you've done your inventory, improving your habitat will involve adding and removing vegetation. Fish and wildlife management depends on plant management. This is evident in the fact that you can change the supply of plants to attract different species of fish and wildlife. If one of the goals is to attract rabbit or other ground feeders then plants can be added to provide their food supply. If another goal is to attract deer, then planting trees and shrubs or simply controlling the growth of existing plants should be implemented. The plan should incorporate an all-season variety of seeds, berries and plants. In this case, a soil map can help find the best locations for planting. Incidentally, this map will also indicate the most suitable sites for pond construction.

So, you've determined your goals and objectives for the land and how to prepare for and maintain the land in order to attract fish and wildlife. Now it's time to decide where you fit into the plan.

Next in the planning process, you will need to determine if you want to construct a pond or small lake on the property. If so, site selection is very important. The Natural Resources Conservation Service can assist you in site selection, soil suitability and design. The service is free and I highly recommend you use them.

Topography must first be considered when planning for a pond. You may also want to locate a pond in view of your cabin. A good location is where you can construct the dam across a narrow section of a deep valley that will flood a large area with sufficient depth. Try to avoid an area where the stream flows year round as this will cause management problems for the pond or small lake. An adequate water supply is also needed. Surface runoff is the most common source of water. A good rule of thumb is to have at least 5 acres of drainage area for each acre of impounded water.

Soil should also be considered. Soil with at least 20 percent clay is necessary to hold water. Too much sand could result in a pond that doesn't hold water.

Food plots and grassy areas are also an important component and need to be considered when planning your property. Food plots should be located on fertile soil with good drainage. They should not be located on highly-erodible soil. Also, do not locate them near a public road or where they can be seen from a utility line as this will increase the likelihood of poaching. The size of

Farm ponds can provide many hours of enjoyment.



The author enjoys collecting and restoring farm equipment owned and used by his predecessors like the molasses mill and hay rake pictured here.



PHOTO BY JAMES L. JENNINGS

the plot can vary, but it needs to be at least 1 acre in order to receive adequate sunlight. Plots should be scattered over the property. For example, it is better to have 10 plots that are 2 acres each than to have one 20-acre plot. You may also want to locate a food plot in view of your cabin.

If your forest inventory and your objectives dictate that some timber needs to be thinned, you will want to work with your forester to determine the location of the logging roads so that they will also serve as roads/trails for you to access and enjoy your property. Loading decks can be located so they can be made into food plots or open areas after the harvesting operation.

I installed fire lanes around the inside of the perimeter of our property, which is needed for controlled burns and also for hunting. We have two creeks that run year-round and we constructed bridges over them so that we can cross with a small tractor. Foot bridges were constructed where fire lanes intersected the creeks.

Many people desire an area for kids to practice shooting or for one to sight in a rifle. For this, the primary factor for a shooting site is safety. Choose an area that is relatively flat. The surface of the ground should have a rise in elevation at the end of the shooting lane to serve as a back stop or dirt can be mounded up at the end. When planning, make certain there are no homes, public roads or other safety concerns in the line of sight.

Many writers, such as Russell Annabel, Anne LaBastille, Robert Service and Jack London have fostered

the romantic appeal of a small, simple cabin nestled in a remote hideaway. Henry David Thoreau lived and worked in his one-room cabin on Walden Pond. *Outdoor Life* field editor, Charlie Elliott, had a cabin in Beech Bottoms. The list goes on and on but the point is that there are not many people who love the outdoors that do not dream of one day owning "a cabin in the woods."

Deciding on the perfect location for your cabin in the woods can be an exciting adventure, or a horrible nightmare. It is the single most important step in building a cabin because the best cabin ever built, on a wrong site, can be nothing but burdensome and expensive.

As you contemplate your cabin site, write down a description of what you visualize as the setting of your cabin. Take your time and write a detailed description that includes location of the sun and shade during different times of the day, surroundings, desired climate, size and style of cabin and recreational interests you hope to pursue. Once you have a picture in your mind's eye of your cabin and its surroundings, you can begin surveying the land in order to find the ideal place.

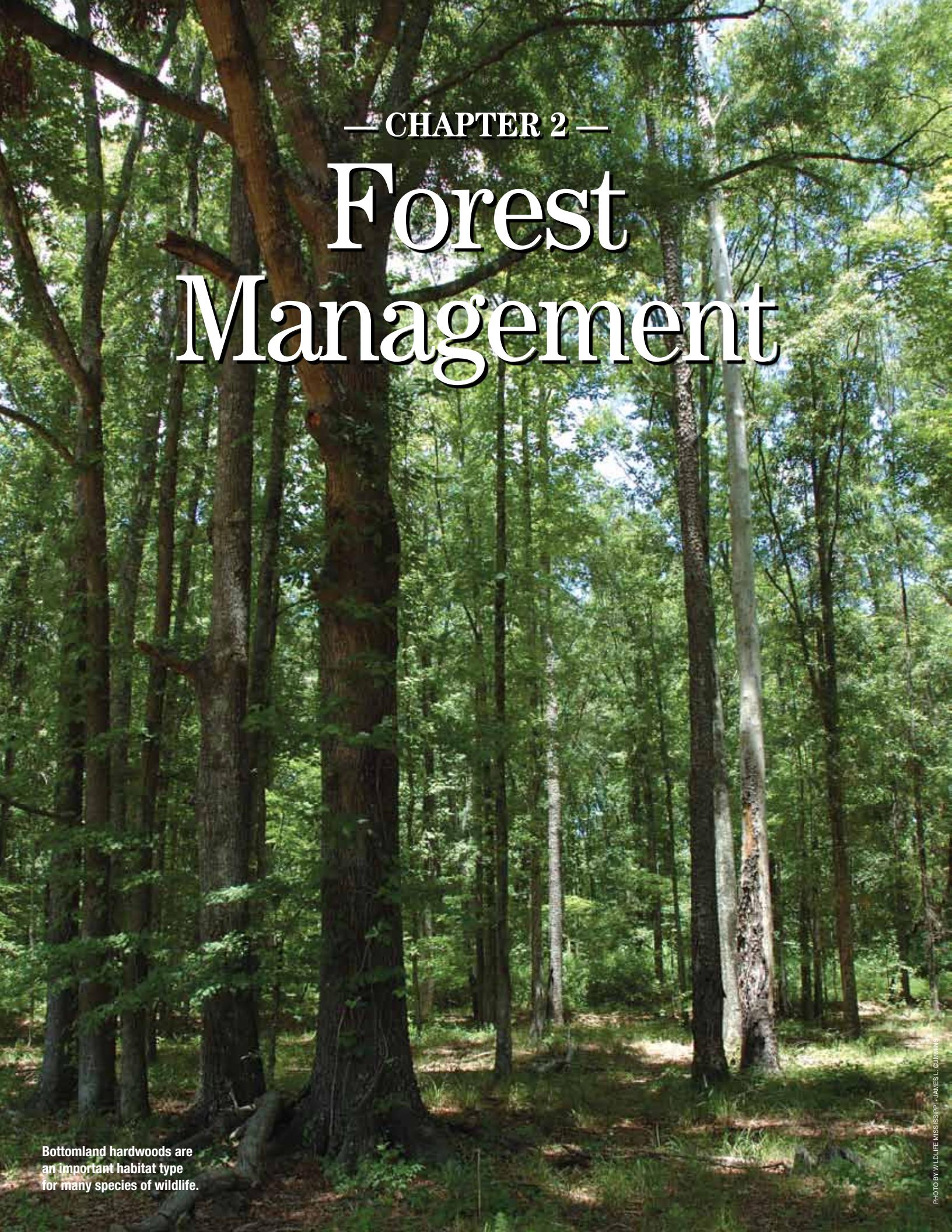
While walking the property, try to pick out the best cabin site and stake off the approximate blueprint of the size cabin you would like to build. If there is already an old home site on the property, consider why the site was chosen and whether or not it fits your ideal, as this could save you the trouble of walking off the whole property. If necessary, move the stakes around to

find the position that best suits you. You will then need to figure out how you will get a water supply, as well as the availability of any utilities you want run to your cabin.

Other considerations and decisions to be made include answering the following questions: How much land preparation needs to be done? Is the ground satisfactory for footings? Are the views what I was expecting? If there is no existing logging road, access road or driveway into the site, how much will it cost to construct one? Is there adequate drainage around the site? How secure is my site? Do I want to include a barn and/or a shed nearby? What about an area for a few horses? These are the kind of questions you should ask yourself as you decide on the location of your cabin.

Start a journal, if you haven't already, when work has begun on improving the land and as you decide on the location of your cabin. This journal can be used to track your progress, including when, where and how the clearing, planting, building and other improvements are developing. This record will assist in future plans and help avoid mistakes such as planting plants in an area that is prone to weeds. Taking photos will help to determine, and track, habitat changes. Before and after photos help to ensure that goals are being achieved. They are also a great source of encouragement as you face the challenges that sometimes come with accomplishment.

In the next chapter, we will discuss forest management.



—CHAPTER 2—

# Forest Management

Bottomland hardwoods are an important habitat type for many species of wildlife.

In the previous chapter, we discussed planning and developing goals and objectives for your land. We discussed conducting a resource inventory and dividing your property into management compartments. We looked at different things to take into account when deciding proper placement for the cabin site as well as ponds and food plots. Now we will delve into the different aspects of thinning and forest management.

By doing a good job restoring, enhancing and/or managing the lands and waters on your property, the fish and wildlife found on your property will be assured of having a good environment to enjoy whether your property is simply used for an occasional get-away or a permanent residence.

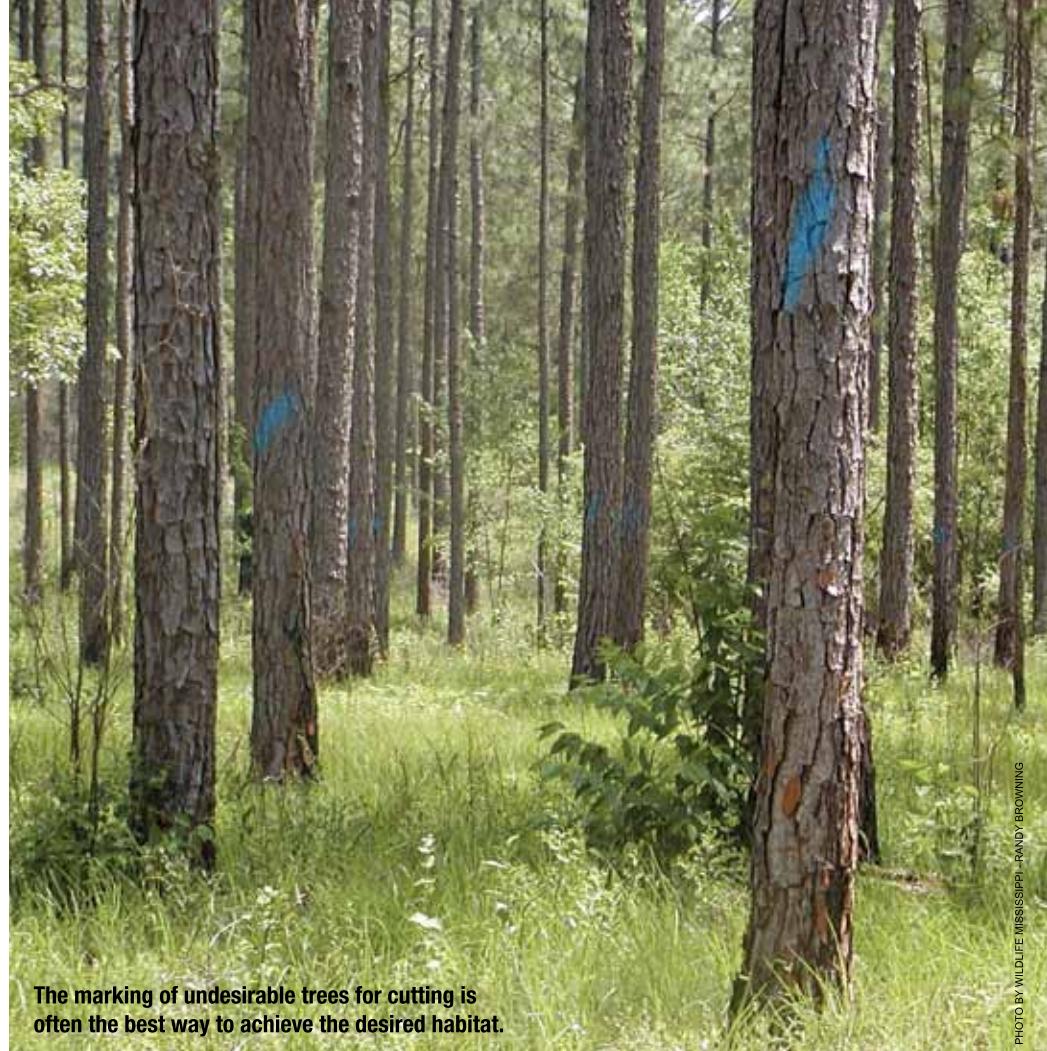
Timber companies have known for years what private landowners have only recently discovered – managing forest lands can be financially and personally rewarding. This management is even more rewarding when it is on your home place.

## GOALS AND OBJECTIVES

Determining what you want from your property's forests is decision number one. Do you want to focus on deer, turkey, squirrel, quail, waterfowl, timber production or a little bit of everything? My interest is the latter, with less emphasis on quail. I love to quail hunt, but our property is just not conducive to good quail habitat. My parents need a supplemental source of income, so managing for the wildlife I prefer, while keeping my mother happy, was obviously a priority. Your goals can be as specific or generalized as you like, but it is important to keep your goals attainable and appropriate for your landscape.

## FOREST INVENTORY

First, you need to find out what types, as well as the amounts, of forests exist on your land. Like any inventory, a forest inventory involves taking an account of what exactly you have, and how much of it. Forest inventories, often called "timber cruises," are usually done to determine the fair market value when buying or selling the land and/or timber. It is also important to perform timber cruises on inherited or gifted forest lands to determine the basis value. This can drastically reduce taxes paid on timber harvest income in the



The marking of undesirable trees for cutting is often the best way to achieve the desired habitat.

future. An accurate timber inventory is also a very valuable tool when developing land-management strategies.

Timber-cruise methods have a wide range of intensity and detail. The simplest and most intensive method would be a 100 percent tally, where every tree was measured. This method of inventory would be reserved for smaller tracts (<5 acres) due to cost. The most common inventories involve measuring a percentage of the trees that will properly represent the forest as a whole. These involve a variety of sampling methods that forest mensuration (measurement) experts and statisticians have spent centuries perfecting. Basically, all of these methods involve measuring diameters, heights and stocking (trees/acre) to obtain volume and value estimates in some form or fashion.

As there are several potential complexities in determining forest inventories (i.e. accounting for sloping terrain and actual property boundaries), it is highly recommended that forest inventories be done by forestry professionals to achieve accurate

estimates that can create a common language usable by all professionals in the field ranging from wildlife managers to real estate agents.

Managed forests not only yield large amounts of wood products but they also provide high-quality habitat for many species of wildlife. Therefore, forest management and wildlife management should always be considered together. It is important to obtain an accurate forest inventory to know where you stand and how to approach your goals and objectives.

## PLANNING

Once you have decided what you already have and want to manage for, a forester can help you with the development of a management plan. A written management plan is the roadmap to achieving your goals, and every forest landowner should have one. A good plan should cover at least 10 to 15 years and be re-evaluated every couple of years to make sure everything is on track and goals haven't changed.

Many plans start with generalizations, such as: "I want to harvest some timber

in 15 years to help put my kids through college." Or "I want trophy whitetail hunting, and I want my timber harvests to pay for the management costs." Then you and a professional can work towards the specifics like planting rates, harvest dates and live weights!

Perhaps the most overlooked part of forest management is harvest planning. Too often, this step is overlooked by inexperienced landowners. Only after the timber harvesting has begun, or worse, is completed, do they realize that certain wildlife, aesthetic or logistic provisions should have been considered. Good management plans should include enough details to cover important issues such as:

- **Economics** – Is the harvest unit large enough to be economically feasible? What products are available for harvest? Do the financial returns meet the landowner's goals and objectives?
- **Regeneration** – How will the stand be regenerated? Will it be planted or will you rely on natural regeneration? Should the stand be burned prior to harvest to facilitate site preparation? How long will it be before regeneration occurs?

## EFFECTS OF FOREST MANAGEMENT ON WILDLIFE

Finally, what about wildlife? There are pleroras of timber-harvesting details that can have dramatic influence on wildlife habitat. Is the size and shape of the harvest area conducive for use by wildlife? Are travel corridors provided? What provisions have been made to

protect mast-producing trees? Is there a good diversity of different-aged stands to benefit a variety of species of wildlife? This next section will address some of those details that landowners should keep in mind.

Once you've decided to implement a management plan, the practices you use can be as intensive as you want or can afford. The simplest forest types involve single-aged stands of a single species, such as in loblolly pine plantations. The more complex plans can involve a variety of different forest types in uneven-aged stands that require different forms of management. A diverse forest habitat can provide the necessary habitat for a larger variety of species by combining timber types, age classes and stand conditions in one area.

The wildlife value of a clearing or forest stand is affected by size and shape. For instance, white-tailed deer mainly use the outer 100 yards of a young stand because concealment has not yet developed enough for them to feel secure in the stand interior. Smaller, odd-shaped stands create a much higher percentage of edge-area that is usable by deer during early years of stand development. However, it might be much more economical to harvest a 200-acre block, than 10 separate 20-acre patches.

Characteristics of the stand interior are also important. Varied features add diversity within a forest stand and should be planned at the time of site preparation. Features such as slash piles, windrows, snags, thickets, abandoned house sites and groups of live mast trees are all beneficial to wildlife.

When developing a wildlife-management program, it is also important to look closely at adjoining properties and to consider their influences. This consideration is a key element of forest stewardship, especially when managing small ownerships. Allowing an adjoining stand to reach a different developmental stage, before harvesting your area, results in a multifarious habitat effect. The resulting diversity would ensure three things:

1. Wildlife requiring two or more different stages can find them within a reasonable travel distance.
2. Wildlife that need only a single stage can find at least one suitable area in the forest block.
3. There is always a progression from recently-harvested cleared areas, to young stands, to older ones within the forest tract.

Protecting areas around streams is also highly beneficial to soil and water quality and wildlife. Unfortunately, some of the most valuable timber grows on highly-productive stream fronts and surrounding areas. Many benefits result from establishing streamside management zones (SMZs) where timber harvesting is limited. The hardwood or mixed pine/hardwood types, usually found in a SMZ, provide food and cover that are important to many species of wildlife in an area that is often fundamental to their survival. The optimum SMZ width for most wildlife is hard to determine. Very narrow zones (around 30 ft.) are used by some songbirds but are insufficient for most game species and result in



Skidder trails often form the basis for a road/trail system.



Loading decks often form the basis for food plots or grassy areas.

PHOTO BY WILDLIFE MISSISSIPPI / JAMES L. CUMMINS



PHOTO BY WILDLIFE MISSISSIPPI RANDY BROWNING

Trails, roads and loading decks can be planted to food plots.

more wind-damaged trees. Wider zones are better for preventing erosion on steeper slopes and more sensitive soils, and providing wildlife habitat. Again, though, there is the tradeoff of limiting the harvest of highly-valuable timber. In Mississippi, Best Management Practices set by the Mississippi Forestry Commission provide recommendations for the least ecological damage from timber harvesting. Prior to a timber harvest, it is imperative to clearly mark the boundaries of SMZs to prevent timber-harvest encroachment.

A good practice that benefits wildlife involves leaving thin strips of standing timber after the harvest for wildlife corridors. The main purpose of corridors are to provide for ease of wildlife movement across areas that are at first too open, as occurs with a new cut area, or later become too dense, such as sapling stands. These travel lanes often contain food and cover not available nearby, while the corridor borders create quality edge habitat.

A corridor is needed most in larger clear cuts (200 acres or more) that do not contain an SMZ or when used to connect two similar types of habitats that have been separated by a clear cut. Wildlife that benefit most from corridors are wild turkeys, deer and, if enough hardwoods are present, squirrels. Habitat is also enhanced for quail and songbirds. Whenever possible, the corridor should be managed with the same practices as the similar stands it connects.

The width of a corridor is important for the same reasons given for SMZs. A total width of 300 to 400 feet will ensure an interior zone that can be kept open for most wildlife. This dimension is also adequate for timber-management considerations later, when the adjoining stand has developed to the point that the corridor is no longer needed. Timber in the corridor may be cut when any adjacent stands are thinned. When the corridor timber is harvested, a new corridor can be made from adjoining stands. This moveable corridor approach has proven successful in maintaining flocks of wild turkeys.

Beyond maintaining age-class distribution, conservative stand size and developing edge, there is still potential to improve habitat conditions. Before this can be done, the landowner must be familiar with existing forest features used by different wildlife, including deer and wild turkeys. This information can be accumulated by keeping a field map to mark animal sightings made personally, by hunters or others using the land for various reasons.

Quite often, special habitats include hardwood bottoms, permanent forest openings, old house sites and wetlands. After identifying such areas and mapping them, the next step is to make sure they remain linked together to allow animal movement from one area to the next. This can be accomplished during pre-harvest planning by taking advantage of stream courses, steep or excessively-

erodible sites and swamp margins. Consideration should also be given to providing passageways to important habitats on neighboring properties.

## OVERVIEW

We have now gone over a few of the issues a landowner might come across when deciding what to do with their forests. We have tried to show how proper management and planning can provide landowners with multiple-use forests that can provide the most benefit based on their objectives. Sometimes the questions "What does this practice do to wildlife?" and "How can I better manage for wildlife?" are hard to answer. Confusion comes because every species has unique requirements and each one is affected differently by any change in the forest. Each species of animal must be considered individually if we are to understand the influence of forestry practices and outline ways of improving conditions for both. With proper planning, landowners and managers can integrate wildlife and timber-management practices that will enable them to meet multiple objectives on a single piece of land. Economics, regeneration and wildlife must all be considered to assure that the land will continue to produce timber and wildlife that future generations can profit from as well as enjoy.

In the next chapter, we will discuss roads, trails, fire lanes and bridges.

**— CHAPTER 3 —**

# **Roads, Trails, Fire Lanes and Bridges**

**Roads are major access routes  
through one's property.**



PHOTO BY WILDLIFE MISSISSIPPI - JAMES L. CUMMINS

In the previous chapter, we discussed forest management. In this one, we will discuss roads, trails, fire lanes and bridges.

A good access system is an essential component of land management and necessary for your property. It provides a means to get to your cabin and, if the tract is large enough, to other parts of your property. However, high costs, erosion, degradation of water quality and destruction of fish and wildlife habitat can result from poor location, construction and maintenance. Today, there are regulations specific to building small, private roads in forested and agricultural areas.

## ROADS

Historically, road systems have been one of the major sources of sediment from forestry and agricultural related activities. Proper planning can reduce skidding distances for logging and eliminate unnecessary road construction. To protect water quality, a road system should be designed to minimize the amount of sediment entering stream channels. Use of broad-based dips, water bars, filter strips and other sediment control techniques can significantly lower the amount of erosion which might otherwise occur.

When planning for the road system on your property, it is important for the design to meet long-range objectives rather than simply access individual

sites. Numerous, separate road projects will negatively impact the environment more than one, well-designed road system. Carefully consider all of your access needs before progressing to the construction of roadways. If you need help with planning, your local Natural Resources Conservation Service (NRCS) agent or Mississippi Forestry Commission county forester can walk your property with you to help you site roads and suggest good, road system maintenance practices.

Roads are the major access routes into and around your property. They may lead to your cabin, barn and/or pond or lake. They are typically gravel and are wide enough to accommodate a jeep or truck. Trails, which can also double as fire lanes, are somewhat smaller in size and are used to maintain boundary lines, access food plots and generally move around the property. The surface consists of dirt as they are unimproved.

Road development provides several important benefits for the landowner. For most people, they make it much easier to enjoy the property by improving access through it – whether on foot, horseback, bicycle or all-terrain vehicle. A well-marked road system will also improve the marketability of your land should you ever decide to sell.

The design of your roads and trails depends on the type of use or uses you intend it for, the characteristics of the property and the features or points of

interest that you want to incorporate. Well-designed roads and trails take advantage of natural drainage features, follow benches on hillsides, pitch around rocks and trees and show very little evidence of the work that went into them. The best roads and trails “fit” into the natural landscape.

The layout should be done by flagging the general course and then double-checking the location to make sure it's correct. Plastic flags or flagging tape used by surveyors work well and are inexpensive, highly visible and easily placed and removed. If possible, the desired location of the roads and trails should be checked periodically throughout the year to make sure all environmental factors have been considered – especially drainage.

The best time for the layout of the road and trail system is during spring or fall: drainage problems will be more recognizable and terrain features more visible. Unless a swampy area is something you specifically want to incorporate as a point of interest, the trails should avoid wet areas. This will help to avoid the extra work needed to build a passable, dry surface as well as future maintenance problems to prevent erosion.

Do not attempt to run roads directly up a slope. Steep slopes require careful location to avoid as much erosion as possible. Traversing the slope at a diagonal will help avoid erosion and make the road much easier to travel.

## TRAILS AND FIRE LANES

Once your main road system has been designed, next, you should think about trails and fire lanes. I designed our trails and fire lanes around the boundary of our property for food plots and for skidder trails for timber removal. Fire lanes are basically a strip of fire-resistant vegetation, nonflammable material, bare ground or a combination that slows or stops the spread of fire from controlled burns or wildfire.

Trail width and height are important factors in layout and construction. The width should be determined by the terrain and the purpose of the road or trail. Foot paths usually have a minimum tread width of about 4 feet. Trails for horses and recreational vehicles should be a minimum of 8 to 10 feet wide. Additional width should be provided for curves and erosion control devices when necessary. It is also important to remember that height clearance is important when constructing trails for horses and recreational vehicles.

While width and height are important to take into account, proper drainage is an essential component in road and trail design. A road or trail can be quickly destroyed by erosion if water is not diverted from the surface. Proper grading of the road surface is vital for

water runoff. Where additional measures are necessary, broad-based dips, water bars or culverts may be incorporated.

When designing and constructing trails and fire lanes, keep in mind that maintenance will be essential. They tend to "grow in" over time since brush and tree limbs will tend to fill sunlit openings along the trail. To minimize the need for future maintenance, avoid creating openings during construction. Try to locate trails and fire lanes where there already is a well-developed forest canopy overhead.

When clearing for trails, brush and saplings along the edges of the trail should be cut at ground level to eliminate hazardous stumps and stubble. All stumps in the trail should be removed, as well as dead and dangerous trees along the trail corridor. Overhead limbs should be cut high enough to avoid interference.

To effectively create trails and fire lanes, it is best to use a bulldozer. Fire lanes should be located to minimize the potential for wildfire spread to the primary residence and other structures you wish to protect. If winds are predictable, fire lanes should be located perpendicular to the wind and on the windward side of the area to be protected. Fire lanes should be tied into existing barriers such as roads,

cultivated fields, pastures and utility right-of-ways, when possible. However, fire lanes should not be directly tied into lakes, streams, ponds or swamps as this is a threat to water quality.

Trails and fire lanes should be at least 10 feet wide. Prior to conducting a controlled burn, they can be disked to expose fresh soil. They need to be bush-hogged to maintain grasses less than 3 inches in height year-round. You should also periodically inspect all trails and fire lanes for woody materials such as dead limbs or blown-down trees and remove them.

On flat terrain, ditches are needed on both sides of the trail and fire lane and should be diverted at every opportunity. The maximum grade of trails and fire lanes should not exceed 10 percent and water bars should be installed to minimize erosion. Percent of slope will determine spacing and dimensions of water bars. Typically, water bars are 12 to 18 inches high and installed at a 30 degree angle down slope so water is diverted into forested areas.

Permanent fire lanes should be maintained by disking or with grass cover to further stabilize soil movement. Fertilizing and seeding with species with dense, deep root systems can further stabilize fire lanes. Consider using legumes, small grains, rye grass

Bridges should be constructed over streams for ease of access to all areas of your property.

A photograph showing a wooden boardwalk bridge made of horizontal planks. It spans a narrow stream or creek bed. The surrounding area is a dense forest with tall trees and green undergrowth. Sunlight filters through the canopy, creating bright highlights on the bridge and the water. The bridge appears weathered and rustic.

or other native grasses. Lime and fertilizer should be applied periodically, and reseeding should be done as necessary. You should also remove all burnable materials on your permanent fire lane at the start of fire seasons.

Vertical separation should be maintained between fuel layers on both sides of the trail and fire lane to remove “ladder” fuels, making sure that lower layers of flammable vegetation do not connect to upper layers so that a fire could not “step up and over” the fire lane. Also, thin the overstory stand sufficiently to reduce the tree canopy and the potential of a crown fire over the fire lane. You should also ensure the control of invasive species such as cogongrass, privet and kudzu.

A well-designed trail and fire lane system also provides the landowner with more options for future management practices such as allowing easy access to timber stands for hunting and other recreational activities, providing access for timber harvest operations and creating transition zones between habitat types.

One advantage of trails and fire lanes often overlooked by landowners is their use as wildlife openings. Trails and fire lanes offer the landowner an easy way to increase wildlife food sources with minimal effort and low cost. Plantings should be evenly distributed across an entire tract of land to ensure access by wildlife. Landowners should strive to put 5 percent of total forest land into openings to benefit wildlife. This is not always possible; however, by utilizing trails and fire lanes as wildlife openings, landowners can increase the percentage of openings on their land.

## BRIDGES

Mississippi has a significant number of streams that, in many instances, can restrict access into or across one's property. Therefore, crossings of waterways should have culverts, low water crossings or bridges designed to support the traffic that will be crossing them. Bridges that span the waterway or low water crossings will provide the least hydraulic and environmental impact to the waterway.

Bridge design must consider stream bank materials and profiles, flooding as well as construction materials. For example, a foot bridge will require different materials than one used for a small tractor to prepare food plots or one used in the main road that may need to support a dump truck hauling a load of gravel.

For foot bridges and bridges used by ATVs and small tractors crossing a narrow stream, utility poles may be used. Bridges spanning a greater distance, and needed for heavier loads, will need to be designed to support such. If in doubt of what you need to support a certain weight, contact a civil engineer.

Bridge railing is normally necessary on access crossings for the safety of the users. The style and height of the railing should be considered based on flooding. For example, with a bridge that will be submerged during a periodic flood, railings should be kept to a minimum to reduce the potential of catching flood debris.

Whether you are constructing a road, trail or a stream crossing, always be sure to comply with applicable federal, state and local laws, regulations and ordinances during the installation, operation and maintenance of them.

In the next chapter, we will discuss food plots and open areas.

*From a symbol  
of freedom to  
a sign of hope.*

American bald eagles once soared across the skies of our country in great numbers, inspiring awe with their power and grace. However, in the 1960s their numbers plummeted to fewer than 1,000 pairs. Our national symbol was threatened.

Due to the efforts of citizens and private landowners, in recent years this majestic bird's population has reached great heights again and has recovered back to healthy numbers throughout Mississippi and across our great Nation. And as the bald eagle has become secure in its place in our environment, our pride in helping bring it back has soared too.

Part of our mission here at Wildlife Mississippi is to help native species like the bald eagle survive and thrive. And we would love for you to join us. Let's make our state a better place to live and work, for our children, grandchildren and for our beloved fish and wildlife. To find out more, give us a call or visit us online at [www.wildlifemiss.org](http://www.wildlifemiss.org).



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— CHAPTER 4 —

# Food Plots and Open Areas

Grazing  
areas  
provide  
cover  
for  
wildlife.



Planting native grasses in open areas is popular.

PHOTO BY WILDLIFE MISSISSIPPI - JAMES L. CUMMINS

In the previous chapter, we discussed roads, trails, fire lanes and bridges. In this one, we will discuss food plots and open areas.

The first step when considering food plots and open areas is planning. When choosing sites on your land to develop these, start by looking at overhead maps of your property and marking locations that seem ideal. Keep in mind that you need to look for areas with lots of sunlight. Once you have marked a few prime locations, visit those areas. Typically, look for small open areas with dense cover nearby that is easily accessible by foot or ATV.

## FOOD PLOTS

Food plots are an effective method of providing food sources for game birds, rabbits, raccoons, deer, turkey and other species. Food plots are planted with corn, millet, wheat, rye, grains, sunflowers, legumes and other plants with high nutritional value for wildlife.

It is best to provide food for wildlife year-round by planting both cool- and warm-season food plots. You should attempt to plant your cool- and warm-season food plots in different sections. This will help to avoid removing

available food in preparation to plant the next season's food plot. Also, be sure to plant a mixture of different plants in each food plot every season. These mixed plantings reduce the risk of losing entire food plots to poor weather, diseases and insect pests. They also provide a diverse food source and, as different plant species grow at different rates within a season, ensure that new plant species are available to replace those that have died out. Diverse food plots also attract a wider variety of insects, which are important to certain wildlife such as turkey and quail – particularly when they are rearing their young.

Every property is different so the job of food plot design is definitely not a "cookie-cutter" situation. Breaking it down to its most basic elements, you must weigh your goals, read potential reactions of wildlife and design a plan for each food plot.

## SOIL TESTING

Once you have chosen a few potential sites for your food plots, it is vital that you have the soil tested. With the prices of specialty seeds and fertilizer, and the amount of time it

takes to prepare the ground and plant a food plot, it is critical to measure the pH of the soil. If the pH of the soil is incorrect then the food plot will be sparse or completely barren. So, before you even break ground or throw your first seed, test your soil.

There are several different ways to determine pH in your food plot. One way is to use a food plot tester. These give you a reading that you can take to your local farm supply store or county agricultural agent to help determine the amount of lime and fertilizer your plot needs.

## SIZE, SHAPE AND DISTRIBUTION

So, how many and what size food plots do you need? If you have limited available acreage for plots, as I did, then you should be precise in your goals – what is most important to you: Attraction? Nutrition? Antler growth? Most people with extremely limited acreage tend to devote all they have to "hunting-time attraction."

However, if you have plenty of ground so that you can seed enough acreage to do it all, then most of what a plot is used for is your choice. By what you plant, how you design the plot and how

you treat the area, you direct the action.

Two of the most significant determinants will be topography and budget. Are you in a heavily-wooded area or does it resemble an agricultural setting? Do you have natural open areas or will you have to manufacture open areas? In an agricultural area, it is very easy to find open areas to plant. In heavily-wooded areas, it can be close to impossible without the use of heavy machinery.

You should also carefully consider the shape of your food plots. Rectangular plots have the advantage of keeping distance-to-cover relatively short, while size can be increased as needed with added length. Rectangular plots also have far more edge than square or circular plots of similar size.

Because wildlife diversity and abundance is usually greater at edges, the more edge you have, the more individual species you are likely to see. In most cases, food plots should be distributed across the property to make them available to as many animals as possible and lessen foraging pressure on any one plot. Well-distributed food plots will also fall within more habitat ranges and therefore benefit more species. Generally, 1- to 5-acre food plots should comprise approximately 1 to 5 percent of your land area.

## FERTILIZATION AND LIMING

Once you have broken-up the soil, it is time to apply lime based on the results of the aforementioned soil testing. Lime recommendations are

based on several factors, the most important being the pH of your soil. The pH scale is from 1 to 14. Soil for food plots that is neutral has a pH value of 7.0. When the pH level is below 7.0, the soil is said to be acidic; above 7.0 and the soil is considered to be alkaline. Having a high or low pH will affect your food plot plants' ability to absorb nutrients needed for growth from the soil. Food plot pH levels can be adjusted by applying lime to the soil.

The length of time that it takes for lime to neutralize soil acidity depends on the type of lime used. Liming materials differ widely due to variations in the percentage of calcium and/or magnesium and impurities (silt, clay, etc.) contained in the limestone. If your pH is very high or very low, then you may be advised to add thousands of pounds of lime for your food plot. Although this would be the ideal, it can be very expensive. If your budget will not allow for this expense, then it may be best to plant food plot crops that are better suited for your plots' pH level.

Now, you have broken ground and applied lime; you are ready to apply fertilizer. Many seed companies give specific recommendations, in the form of numbers, for the amount and type of fertilizer to use with their seed. But what do those numbers mean? 10-20-10 or 10-10-10 or 18-46-0 represent the percentage by weight of the three major nutrients required for healthy plant growth. These numbers are always represented in the same order: nitrogen, phosphorous, potassium (N-P-K). Most

seed companies have the fertilizer recommendations printed directly on the label, such as: 10-10-10 at 300 lbs. per acre. This means you need to apply 300 lbs. of fertilizer to your plot that contains 10 percent nitrogen, 10 percent phosphorous and 10 percent potassium.

When fertilizers and lime are applied to a food plot, many chemical reactions take place instantly as well as over the course of several months. These chemical reactions will determine how well the lime and fertilizers are used by the plants growing in your food plot.

## OPEN AREAS

Many wildlife species benefit from open spaces. These open areas provide a variety of foods and cover types that may not occur on forested sites, such as: grasses, herbaceous plants, various insects, small mammals, berries, nesting habitat and sites for territorial displays and predator watching.

Properly planned open areas not only provide important wildlife habitat, but can also add to the aesthetic value of your property, serve as firebreaks and increase access throughout your property. Openings may be located along roads, right-of-ways and fence lines and in strips between different-aged forest plantations. You can plan to scatter several irregular small openings throughout your land or leave entire old fallow fields unplanted.

Various low-cost operations encourage the establishment and maintenance of herb and grass cover in these open areas. You can disk to break-

Wildlife Mississippi's Wildlife Habitat Seed Program provides winter wheat for food plots.

# Things to Consider When Choosing Food Plot Seed:

What type of game are you trying to attract to your food plot? Do you want to attract deer, turkey, quail or some other species?

What is the goal of your food plot? Different types of forage are utilized by game animals at different times throughout the year. It is important to understand how and when deer and other game animals will be visiting your food plot.

What will your soil allow you to grow? Some food plot plants grow better in slightly acidic soil while others grow better in alkaline soil. If you are not able to lime and fertilize, consider plants that will thrive in what is available.

What is already readily available? If your food plot is surrounded by lots of corn and soybeans, planting more of the same will not attract wildlife to your property. However, if you are in an area void of corn and soybeans, then planting these may be your best choice.

What is your geographical region? Planting seed varieties that are not meant for Southern states is not wise. Use plants that have been proven to grow in your area. It is usually helpful to consult an agricultural expert before purchasing your seed.

What time of year are you planning to put in your food plots? Some seeds need to be planted in the spring while others need to be planted in the fall.

Will you replant your food plots every year or do you want a plot that will last a few years? Some food plot seeds are annuals and some seeds are perennials. Consider how often you want to replant your plots when selecting seed.



Shooting houses are a common sight in open areas and food plots.

up compact soils and, where grass cover is missing, you can seed clover or grass. Mow regularly to prevent the intrusion of shrubs and trees. Also, mow different areas at different times of the year to encourage a wider variety of plants and available mast. You should also disk established ground covers periodically to enhance species and mast diversity. To avoid the disturbance of ground-nesting species, such as turkey and quail, and to promote the growth of important foods such as partridge pea, ragweed and beggar weed, you should mow and disk during the winter months.

Landowners planning to create and maintain forest openings for wildlife may be eligible to receive cost-share funding for these operations under the Wildlife Habitat Incentives Program, a program conceptualized by Wildlife Mississippi and written into law by

U.S. Senator Thad Cochran. Wildlife plantings also fulfill requirements for enrollment in the Conservation Reserve Program. Contact your local U.S. Department of Agriculture Natural Resources Conservation Service office for more information about these programs.

## NATIVE GRASSES

Native grasses are being used more and more in return to the naturalized plantings now being favored throughout the country. Native grasses are the various regional and national grasses that were original to your particular area of the country. Many areas of the United States are being "reclaimed" using native grass and seed plantings.

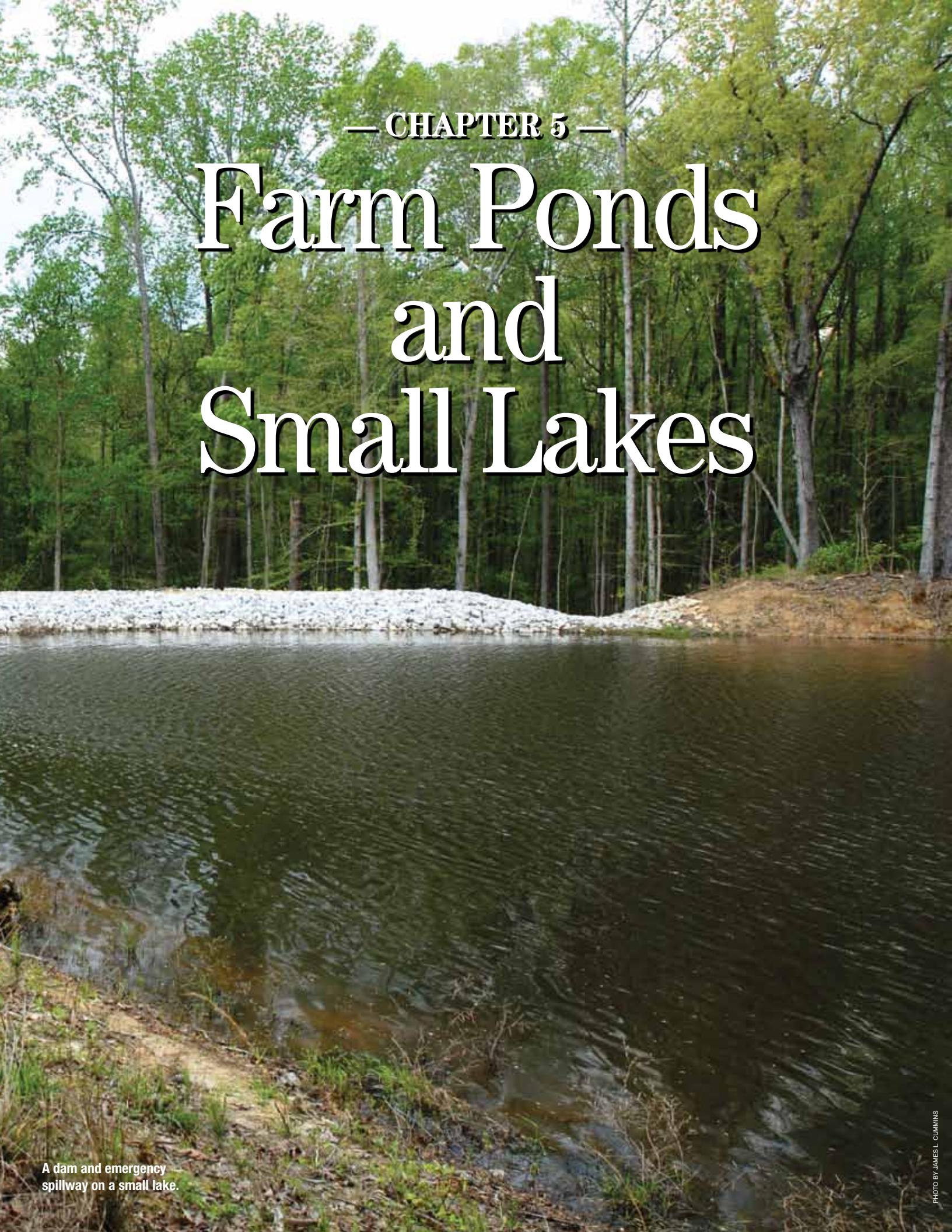
Though there are many reasons why native grasses are a good choice for planting, an important aspect of native grass planting is the fact that

native grass species have evolved and developed resistances to many of the problems that newer grass varieties have not successfully been bred to handle. These native grasses are regional in regards to climate, a soil's acidity or alkalinity, insect damage, diseases and symbiotic coexistence with other plants in the surrounding area. Native vegetation is the logical planting to use in areas where plants or grass cannot or will not be maintained by high fertilization, soil additives, watering and insecticides. Fungicides are generally not needed because of the adaptability of the natives to fight funguses in some manner, or be wiped out. This makes native grasses an ecologically-friendly choice as well.

In the next chapter, we will discuss farm ponds and small lakes.

— CHAPTER 5 —

# Farm Ponds and Small Lakes



A dam and emergency  
spillway on a small lake.

In the previous chapter, we discussed food plots and open areas. In this one, we will discuss my favorite – farm ponds and small lakes.

## PLANNING

Whether there is an existing pond on your land or you want to construct one yourself, the most important decision to make concerns the purpose of the pond. A pond can serve many purposes, such as fishing, swimming, fire protection, wildlife habitat or irrigation. The purpose of the pond will influence the design of it.

When designing a farm pond or small lake for fishing, you should take into consideration the species and size of fish you would like to catch. Some pond owners prefer bream fishing and will manage their pond to produce a crop of large bream. Others prefer a good, all-around fishery of largemouth bass, bluegill, redear and channel catfish. However, successful management will typically depend on concentrating on one management objective at a time.

Before you select your pond site, consider the topography, water supply and soil type. If the location of the land permits, consider more than one site. Study each one to select the most practical, attractive and economical site. Be sure to consider potential problems, such as the potential to attract trespassers, past land uses and runoff from adjoining agricultural areas.

Deciding what size pond you want will also influence site selection which is extremely important, especially if you are constructing your own pond. If you are unsure of proper placement, the Natural Resources Conservation Service (NRCS) can help with site selection as well as soil suitability, engineering surveys and design. They can also help with estimating the cost of earthwork and help check on the work during construction.

## TOPOGRAPHY

First and foremost: Consider topography. Topography directly affects building costs and management. A good site is usually where you can build a dam across a narrow section of a steep valley and where the slope of the valley floor lets you flood a large area. In the Delta, these idyllic situations are hard to come by but with proper planning, can be manufactured to some degree. However, avoid large areas of shallow water because these areas tend to

encourage the growth of undesirable aquatic plants. Also, avoid locations with constantly flowing creeks or streams, as these flush the pond and make it difficult to manage water chemistry.

When building near a home site, unless you are planning to install a raised pond, the location of any underground obstacles, such as sewers or septic tanks, water or gas pipes and cables should be taken into consideration as well.

## WATER SUPPLY

Springs, wells or surface runoff can provide water for your pond. Water availability should be adequate and checked for potentially dangerous substances.

For ponds where surface runoff is the main source, the contributing drainage area should be large enough to maintain a suitable water level during dry periods. As a rule, in Mississippi, a pond should have at least 5 acres of drainage area for each acre of impounded water.

## SOIL

Soil suitability is another important factor in selecting a pond site. The soil should contain a layer of clay, or silty-clay material, that water will not seep through. Sandy clays are usually dependable, but the more clay in the soil, the better. At least 20 percent clay is necessary to hold water.

Take soil borings and have them analyzed to determine soil suitability. Many people have learned the hard way that skipping this step can lead to a leaky pond or one that will not hold

water. If you are not confident in this area, the NRCS can help with this as well.

Lime content is another important element. Checking for lime requirements, and adding lime, is much easier to do immediately after construction, but before filling begins. If you are unsure of the lime requirements for your area, your county extension agent can advise you on the proper way to collect soil samples for analysis. These samples can be sent to the state soil-testing lab and processed for a small fee.

## Other Considerations

### WHEN TO BUILD

Summer is usually the best time of year for pond construction because soil conditions allow for use of heavy equipment. Summer construction also makes the way for fall and winter rainfall to fill the pond naturally. However, a pond may be built at any time of the year.

### SIZE

Determine the size of your pond by assessing your needs and desires. Bigger is not always better. If good planning and proper management guidelines are followed, 1- to 3-acre ponds provide a lot of enjoyable activities. On the other hand, larger ponds and lakes can provide a greater range of uses such as water supply, limited irrigation and boating.

### DEPTH

In Mississippi, ponds should have an average depth of 5 to 6 feet and be no more than 12 feet deep. At least half of the pond should be a depth of 4 to 5



feet. This lets fish forage on the bottom, even in summer when oxygen levels are lower. About 20 percent of the pond should be at least 6 feet deep to provide winter refuge and summer refuge in extremely dry years. During the peak of summer heat, evaporation can reduce water levels at a rate of up to 0.5 inches per day, and ponds may lose 2 feet or more in water depth. It is also important that pond banks slope rapidly to 3 feet deep to minimize the risk of dangerous aquatic plants becoming established. Contrary to what many believe, deep ponds are not necessary for productive fisheries. Deeper water can lead to water quality problems, such as low dissolved oxygen, which can kill fish.

## DAMS

A dam is an artificial barrier constructed across a stream channel or drainage area to impound water. Most dams are constructed of earth. There are basic requirements in relation to the height and top width of the dam.

For most ponds and small lakes, dams should be at least 8 to 12 feet wide at the top, depending on the height of the dam. And from personal experience, dams with tops wider than the required top width are much easier to maintain. If you plan on using the dam as a roadway, the top width should be a minimum of 16 feet.

You should establish suitable perennial vegetation on the dam as soon as possible to prevent erosion, muddy water and maintenance problems. Non-native grasses such as Bermuda and Bahia are commonly planted because they establish a sod quickly and tolerate frequent mowing to just a few inches in height. A good, deep-rooted native grass (such as switchgrass) is an alternative that provides better wildlife habitat, requires less mowing and tolerates drought. If you choose to establish native grasses, be careful to mow them no shorter than 6 inches in height.

Do not let trees or shrubs take root on the dam because they tend

to weaken the dam and increase the likelihood of leaking or dam failure. However, if you are working with an existing dam that already has large trees or shrubs established, then removing them may weaken the dam.

## DRAIN AND OVERFLOW

Water flow and drainage is something that should be carefully considered for the overall health of your pond. An emergency spillway incorporated with a combination drain/overflow pipe are necessary for good pond management. To be able to completely drain your pond, the drain should be placed on the bottom. Water level control measures are vital to controlling weeds and managing fisheries.

The drain/overflow pipes, which can be made of steel, aluminum or polyvinyl chloride (PVC), are needed to encourage and promote normal water flow through the pond. Some materials are more durable and may be preferred for the long term, while others are more

Flags are often used to mark water levels.



suitable for short-term use. For instance, PVC pipe, though inexpensive and widely used, can break easily. Whichever material you choose, check to ensure it meets the standards for the specified use.

## PERMITS

Some local governments consider ponds to be "structures" and may require site reviews, permits, fees or fencing before and while construction takes place. Be sure to check with local planning and zoning officials to determine what may be required before you begin.

The State of Mississippi has several laws that apply to impounding water. Mississippi State Law (Section 51-3-39) requires that anyone proposing to build, modify or repair a dam must get written authorization from the Mississippi Department of Environmental Quality (MDEQ) before beginning construction. However, written authorization is not required if the dam is less than 8 feet high, impounds less than 25 acre-feet of water at the top of the dam or the dam does not impound a watercourse with a continuous flow of water (as long as failure of the dam would not threaten public safety downstream). A surface-water impoundment permit may be required, even if written authorization to build a dam is not required. The impoundment permit fee is \$10 and is good for 10 years. Penalties may be imposed for failure to file. For more information, go to [www.deq.state.ms.us](http://www.deq.state.ms.us) and click on the link titled Dam Safety.

If the construction is expected to disturb between 1 and 5 acres (construction of the dam and the area excavated for dirt used in the dam), then a small-construction permit may be required. If the construction is expected to exceed 5 acres, then a large-construction permit will be needed. If you would like more information on the need for construction permits, you will find this under the title Environmental Permits Division on the MDEQ website as well.

Another possible requirement will be a 404 permit obtained through the U.S. Army Corps of Engineers. To find your local district contact information, go to [www.usace.army.mil/Locations.aspx](http://www.usace.army.mil/Locations.aspx).

## FISH HABITAT

Ask any good angler where the best spots are to fish and they will tell you the best places to catch fish are around structures such as docks, the edges of weed beds and submerged stumps

and logs. Forage fish use structure for shelter and for feeding on organisms attached to the structure. All fish will use structure when seeking shaded, darkened areas on hot, sunny days.

In order to provide sufficient fish habitat, save some of the trees during construction so that you can cover 10 to 25 percent of the pond bottom for cover and forage. During construction, you may also want to consider placing gravel in your pond for spawning for bluegill. I prefer to use washed gravel approximately 0.5 inches in diameter, placed 4 inches thick at a depth of approximately 3 feet.

## STOCKING

The kind and number of fish you stock in your pond or small lake will directly affect its success as a fishery. Most waters are stocked with a combination of predator and prey species.

Ideally, fish stocking should be accomplished during either fall or spring, preferably when water temperatures are less than 68 degrees Fahrenheit. Stresses due to handling are reduced in cooler water. You should also check the temperature of the water used to haul the fish to your pond. The difference in temperature between your pond and the hauling tank should be no more than 5 degrees. A larger difference can "shock" the fish and contribute to disease and possible mortality.

You should research and determine the species you desire to stock. This will help you to avoid the pitfalls of stocking a species that will be of no benefit to you. Let's review several of the most common species.

## LARGEMOUTH BASS

The largemouth bass is the best predator for maintaining a healthy balance of fish. Stocking 50 2- to 4-inch fingerlings per acre is good for stocking new ponds. Largemouth bass reproduce well in ponds so restocking is not usually needed unless a large harvest has occurred in a short amount of time.

## BLUEGILL

Bluegill is the best prey species and provide an excellent source of food for largemouth bass. Prolific spawners, bluegill can quickly become stunted if enough bass are not present or the water becomes choked with vegetation. Stocking 500 1- to 3-inch fingerlings per acre is recommended for stocking new ponds.

## REDEAR SUNFISH

The redear sunfish provides an alternative or a supplement to bluegill. They tend to grow larger than bluegill and are effective predators of pond snails, hence the commonly used name – shellcracker. They also produce fewer young and are not likely to become stunted. Because of this lower reproduction rate, redear are not considered adequate to provide enough prey to maintain a healthy bass population; therefore, redear are usually stocked in combination with bluegill. If you choose this combination, use 350 bluegill and 150 1- to 3-inch redear per acre.

## CHANNEL CATFISH

Channel catfish grow very well in ponds and generally do not cause problems unless they are overstocked. They typically do not reproduce. New ponds can be stocked with 50 2- to 4-inch fingerlings per acre if you prefer a mixture of the other species discussed above or 150 per acre if stocked alone.

## BLACK AND WHITE CRAPPIE

Each year, many large crappie are caught in ponds, so it is understandable that pond owners want to stock them. However, both black and white crappie are very unpredictable in ponds. In the best of cases, stocked crappie grow well but reproduce poorly and will not cause the pond to become unbalanced. Unfortunately, the opposite is the more usual result. The reproduction rate of crappie is high and small crappie overpopulate. They then prey heavily on bluegills and bass and the populations of these desired species drastically decline. Therefore, stocking crappie is not recommended for water bodies less than 500 acres in size.

If you are unsure of your abilities to properly place and manage a pond or small lake on your land, help is always close by. Personnel from the NRCS, the Mississippi Department of Wildlife, Fisheries and Parks and your county extension service are available to provide the assistance you need. One of the best publications available is titled "Managing Mississippi Ponds and Small Lakes, A Landowner's Guide" and is available from the Mississippi State University Extension Service.

In the next chapter, we will discuss cabins.

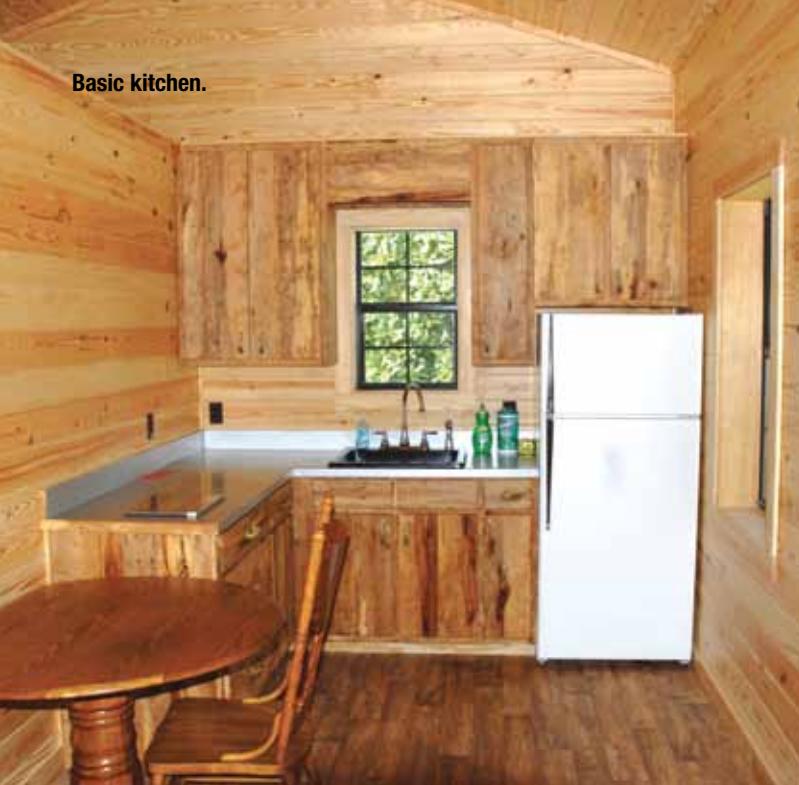
— CHAPTER 6 —

# The Cabin



Basic cabin.

**Basic kitchen.**



**Basic bed.**



PHOTOS BY JAMES L. CUMMINS

In the previous chapter, we discussed farm ponds and small lakes. In this one, we will discuss my second favorite topic – the cabin.

Many writers, such as Russell Annabel, Anne LaBastille, Robert Service and Jack London have fostered the romantic appeal of a small, simple cabin nestled in a remote hideaway. Henry David Thoreau lived and worked in his one-room cabin on Walden Pond. *Outdoor Life* field editor, Charlie Elliott, had a cabin in Beech Bottoms. The list goes on and on but the point is that there are not many people who love the outdoors that do not dream of one day owning “a cabin in the woods.”

Deciding on the perfect location for your cabin can be an exciting adventure or a nightmare. It is the single most important step in building a cabin because the best cabin ever built, on a wrong site, can be nothing but burdensome and expensive.

As you contemplate your cabin site, write down a description of what you visualize as the setting of your cabin. Take your time and write a detailed description that includes surroundings, desired climate, size and style of cabin and recreational interests you hope to pursue. Once you have a picture in your mind of your desired cabin and its surroundings, you can begin surveying the land in order to find the ideal location.

While walking the property, try to pick out the best cabin site and stake off the approximate blueprint of the size cabin you would like to build. If there is already an old home site on the property, consider why the site was chosen and whether or not it fits your desires, as this could save you the trouble of walking off the whole property. Our ancestors were pretty smart and probably had a better idea of the ideal home site than we do. When staking, if necessary, move the stakes around to find the position that best suits you. Take into consideration the position of the sun during various times of the day and a north wind. You will then need to determine how you will get water, as well as the availability of any utilities you want run to your cabin.

Other considerations and decisions to be made include answering the following questions: How much land preparation needs to be done? Is the ground level satisfactory for footings? Are the views what you were expecting? If there is no existing access road or driveway into the site, how much will it cost to construct one? Is there adequate drainage around the site? How secure is your site? Are there trees that will be too close to the cabin and need to be removed before construction begins? These are the types of questions you should ask yourself as you decide on the location of your cabin.

Once you've decided on the location of your cabin, start a journal if you haven't already. This journal can be used to track your progress, including when, where and how the clearing, planting, building and other improvements are developing. This record will assist in future plans and help to avoid mistakes such as planting plants in an area that is prone to weeds. Taking photos will help to determine and track habitat changes. Before and after photos help to ensure that goals are being achieved. They are also a great source of encouragement as you face the challenges that sometimes come with accomplishment.

Next, decide the look you want. Do you want to make your structure out of logs, board and batten, reverse board and batten or another material? What about the roof? Do you want one made of metal, cedar shakes, composite shingles or something else? What style of cabin do you want? Will it be primitive with just one room, an Appalachian-style cabin, a family or club-sized cabin, a cabin with a loft or another style? What about a front or back porch, a wrap-around porch or a deck?

While there are thousands of plans on the market to choose from, take your time to determine what you want. More than likely, someone else has already designed something similar to what you



A more elaborate cabin with the amenities of home.

want. Set a budget...then add 25 percent to that number.

There are several options for a bathroom. On the primitive side, one can construct an outhouse or "privy" as my cousins in Scotland call it. If that is what you prefer, just keep it downwind from the cabin. A typical outhouse is about 5 feet square with a 4 foot square pit with wooden sides that are 5 feet deep. A translucent fiberglass roof will allow light to penetrate. If you prefer something less primitive, a waterless, composting toilet will work fine. Or, if you are like me, a traditional bathroom located inside the cabin with a sink, shower and toilet is preferred. However, getting water and utilities to some locations can be a major expense and this type of bathroom is not practical.

To keep the cabin warm, one may choose a fireplace or wood stove, gas or electric heat. To me, a fireplace or

wood stove is the preferred method because the crackle of burning pecan wood, and its smell, has a lot to do with the spirit of the cabin. Wood is certainly renewable, is cheaper and provides twice the warmth – that is, once when cutting, splitting and stacking and once when burning! As I began hunting big game in the upper regions of North America, I noticed there are very few fireplaces – only wood stoves. That is because fireplaces are not near as good as a wood stove for heating efficiency. At 40 degrees that is not that important; at minus 20 it is.

There are several options for lighting your cabin. If you can get electricity to your cabin, that is the best. I have hunted where there are wind turbines and a few solar panels. But this is Mississippi and unless you are near the Coast or on a reservoir in North Mississippi, wind is not the

preferred option and solar panels have their disadvantages too. A gas or diesel generator can be sufficient if it is not practical to get electricity to the cabin site. Propane lanterns can supplement the generator. A central propane gas system is also good and can be used for cooking, lighting and heating, and even refrigeration. Even though my cabin has electricity, I keep a few kerosene lamps handy as remote places, such as our family's cabin, aren't exactly on the high-priority list for restoring electricity after a storm.

Many people build cabins to get away and to catch up on some rest. So far, I haven't mastered the latter. When it comes to beds, they are typically some that are left over, cheap or the kids outgrew. If you need to save some money, don't do it here. Provide good beds so everyone will get a good night's sleep and your cabin experience will



PHOTOS BY JAMES L. CUMMINS

be much better and your marriage last much longer.

A cabin on a public water supply is easy. A remote cabin will require a bit more thought as to how to meet one's water needs. A drilled well is the most common option when obtaining water when a public water supply is not practical. However, drilled wells can be expensive. Water can be obtained from a stream, river or lake by using a water pump, but it will need to be treated. Water can also be hauled in or one can catch rainwater from the cabin's roof with a gutter system. However, hauling water will really teach water conservation!

As with most homes in the South, life revolves around the kitchen. Whether primitive or modern, one must be able to cook at the cabin. For a cabin complete with running water and electricity, setting up a kitchen is self explanatory. As with most

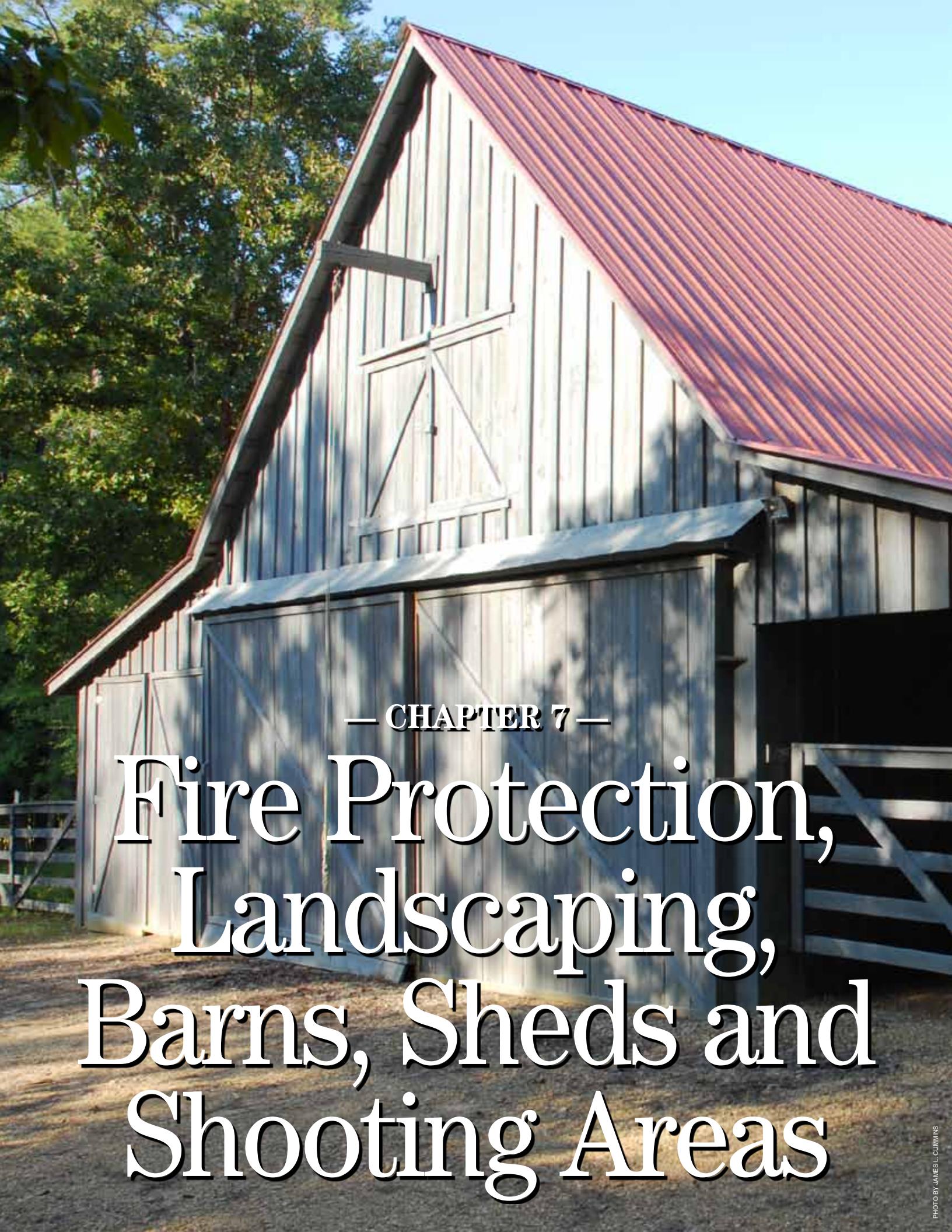
things, however, a more primitive one requires more thought. First, food must be kept cool. If you have a propane system described earlier, an efficient gas refrigerator can be used. If not, a series of coolers – one for milk, meat and other foods with a block of ice in it and another one for items used more frequently. Cooking at the cabin can still produce delicious food, even if it is primitive. Some of the best food I have had was game cooked on a wood stove at a cabin over 75 miles from the nearest road. One has several options for primitive cooking: a propane camp stove, a camp stove oven, a wood stove, fireplace cooking or a Dutch oven. I prefer a small gas stove, complete with all the amenities from home!

While seclusion is preferred, that attribute also increases the possibility of your cabin being vandalized. First, make sure your cabin is not visible from

a public road and the road going to it is gated and locked. Inform the sheriff of your cabin and ask him to keep an eye on it. The same goes for your neighbors. Never leave guns or valuables inside. Take them with you when you leave. Finally, obtain insurance on your cabin and its contents, especially if it is a more modern one. Many times you can add this to your homeowner's policy.

Finally, name your cabin. This can be a lot of fun. It should be one that suits your cabin's personality, and one that will be with you for years. My wife named our cabin "The Seventh Day," however, there has not been much resting while we have been there. Take your time and don't settle on the first name you come up with. When you get the right name, you will know it.

In the next chapter, we will discuss fire protection, landscaping, barns, sheds and shooting areas.



— CHAPTER 7 —

# Fire Protection, Landscaping, Barns, Sheds and Shooting Areas

**I**n the previous chapter, we discussed the cabin. In this one, we will discuss fire protection, landscaping, barns, sheds and shooting areas.

You've gotten your cabin built and set up; decorated and ready for occupancy. Now it's time to get the grounds ready. Some people will take a more "natural" approach to landscaping; as in, "whatever nature grows, will suffice." While this might seem like the best way to develop a natural, low-maintenance landscape that is not necessarily the case. While taking into account what nature has already provided, you should still plan your landscaping. Fire-wise landscaping and placement of outbuildings isn't just for those dwelling on remote Western hilltops or those areas prone to wildfires. According to the National Fire Protection Association, brush, grass and forest fires occur nearly everywhere in the United States. So, let's look at how your landscaping can help keep you safe, as well as look good.

## FIRE PROTECTION

Fires on lands heavily populated with trees, even on a small scale, present a special challenge to local fire departments. That is why it is vital that you be able to access and maintain an emergency water supply. This is especially true if you are in a remote location.

It is recommended that you keep, at a minimum, 100 feet of garden hose attached to a spigot (if your water comes from a well, you might also consider an emergency generator in case of power failure). Taking this precaution may be the key to saving your property should it be threatened with even a small fire.

Most homes that burn during wildfires are ignited by embers landing on the roof, in gutters and on adjoining surfaces such as decks and porches. So, your first plan of action should be to create a buffer zone around your cabin to reduce sources of fuel.

## LANDSCAPING

How one chooses to landscape is also important in fire protection. A good rule of thumb to follow is to keep the first 3 to 5 feet of area around your home free of all flammable materials and vegetation. This means refraining from planting plants, shrubs, trees and even grasses too close to your cabin. Also, do not use bark or other organic mulches in the immediate area surrounding your cabin. Typically, a neat perimeter of rock mulch or a rock garden around your cabin is the best thing to incorporate.

Maintenance is also extremely important. Be sure to clear leaves, pine needles and other flammable debris from roofs, gutters and eaves. Take the time to cut back any tree branches that overhang the roof of your cabin and clear debris from under any elevated surfaces attached to the cabin.

Beyond this immediate perimeter, you might consider adding hard



Roads can also serve as fire lanes.

PHOTO BY JAMES L. CUMMINS



surfaces such as driveways, gravel paths or rock patios and walkways. These features will add visual interest but serve a more important role in providing

a barrier between vegetation and your home in the event of a fire.

Some additional things to incorporate into your fire-safety planning would

include being diligent to take care of the first 100 feet surrounding your home by thinning out trees and shrubs (particularly evergreens); trim low branches so they are a minimum of 6 feet off the ground; mow the lawn regularly and quickly dispose of any clippings or other debris; and move woodpiles to a space at least 30 feet from your home.

Another important strategy would be to incorporate fire-resistant plants into your landscaping. Look for low-growing plants that have thick leaves, extensive root systems and the ability to withstand drought. Commonly used hostas and some roses are good choices, but your local nursery should be able to help you with an even wider variety that will suit your tastes and needs.

Good planning goes a long way in preventing wildfires. In a year such as the one we've had this year, looking over your landscape with a firefighter's eye, or better yet, asking one for suggestions, can offer significant advantages in the fight against fire.



Shooting benches can be built in open areas.

PHOTO BY JAMES L. CUMMINS



PHOTO BY JAMES L. CUMMINS

## BARNs, SHEDS

Taking into account all the activities and maintenance that will be done on large areas of land, it goes without saying that you will need other structures besides a cabin. The type of structures you will need depend on a number of things. Will you have livestock or horses? If so, you will need a barn sufficient for housing and caring for the animals. Will you do all of the land maintenance yourself? If you do, then a barn or shed will be needed to house and maintain your equipment. You will need to answer these questions before you begin construction on these structures. There are many barn and shed plans available on the internet and at your local building supply store. In planning construction, be sure and incorporate good security measures.

## SHOOTING AREAS

When planning shooting areas on your property be sure that all applicable local, state and federal laws have been

addressed. Make sure that any and all requirements are incorporated in the initial stages of planning to avoid any headaches later.

To me, a rifle range is a necessary part of my operation. In planning a rifle range there are a few general considerations. A range should be established only if enough distance and land area are available to allow for surface danger zones (SDZs). The site should be remote from other activities but easily accessible. SDZs should not extend across traveled roads, waterways, railroads or other potentially populated areas. To protect against unauthorized access, SDZs should be controlled while firearms are being discharged. Firing into upward sloping land and land with natural backstops of hills or other naturally occurring land structures is recommended. If that is not available, several dump truck loads of dirt can be used to construct a backstop. I prefer a range that I can shoot up to 300 yards.

You should also ask yourself how many shooters you would like to be able to accommodate at one time; what types of firearms and range of ammunition will be used; what types of targets will be used; and what is the general purpose for the range.

Some people prefer to have a skeet range on their property. When selecting a site for a skeet field, you should consider a tract that is relatively flat and well drained. The background should not be infringed upon by nearby buildings or other distractions. Factors such as future growth plans and accessibility to the area should also be considered. Take into account roadway access and any utility tie-ins when selecting your site. Also, make sure there are adequate safety zones down range. For best use of your skeet range, the skeet field should face northeast to allow the shooters the longest shooting times without the sun in their faces.

In the next chapter, we will discuss wildlife management.

— CHAPTER 8 —

# Wildlife Management



In the previous chapter, we discussed fire protection, landscaping, barns, sheds and shooting areas. In this one, we will discuss wildlife management.

The goal of wildlife management is to balance the needs of the wildlife you want to attract with your own needs and wants. Maybe you enjoy fishing, hunting or simply observing wildlife in its natural habitat. You need to know going in that it takes a lot of dedication to follow through with wildlife conservation plans, but the payoff is well worth the effort.

Successful plan implementation begins with a thorough evaluation of your land for its wildlife habitat potential. Let us look at a few aspects of inventorying your land. Once you have done this you can maximize the number and diversity of wildlife on your land which will in turn increase the desirability and value of your land. A good wildlife management plan will improve your chances of attaining wildlife, but remember that management plans should not be static. Effective management plans will allow for changes depending on plant responses to your practices, wildlife usage, economic influences, seed availability, weather patterns and other such factors.

Also, match your management plan to the species of wildlife you want to encourage. It is useful to target your habitat management toward specific species. In doing this, you will likely benefit several other species so keep that in mind as you plan, to have adequate habitat available. Conversely, some habitat practices may actually reduce or harm habitat for other species. For example, clearing trees to create openings for turkey will reduce habitat opportunities for woodpeckers and squirrels, so also be aware of potential habitat you may be sacrificing as you plan.

As you develop a plan, obtain a recent map or aerial photo of your land. Determine which areas already contain adequate habitat for your targeted species. Begin by marking different habitat types with different colored pens, or use a computer to do it. Each type of habitat will meet the needs of different species so they should be intertwined within the property. Note isolated areas of habitat as some species, such as quail and rabbits, require that habitats be closer together; whereas, other species, such as deer and turkey, can easily travel further distances to meet their needs.

Next, note any areas that can be improved upon. For instance, by letting fields or field borders lie fallow for songbirds, rabbit or quail, you are providing adequate habitat; however, this can be improved upon by adding brush piles for rabbits to maintain or increase their presence on your land. So look for areas where improvements or enhancements may be made.

No matter which types of species you target, there are three essential ingredients to good wildlife habitat: food, cover and water.

## FOOD

To assess the amount of food available on your land, look closely at the types and amount of vegetation you have. The trees, crops, brush and grass largely determine the types of wildlife that can thrive on your land. Plants are the basis for nature's food cycle, of which every animal is a part. Plant-eating animals such as deer, rabbit and insects convert plant energy to fat and proteins. Carnivores, such as hawks, bobcats, predatory insects and insect-eating birds, feed on



the plant eaters. So you can see how vital plants are.

Most species of wildlife need a variety of plants throughout the year and native plants are the most desirable. Managing for a diversity of native plants offers many advantages over non-natives. Native plants are best-suited to the rainfall, temperatures and soil conditions in the area. These plants are equipped to survive the stresses of extreme temperatures, drought, floods and even plant diseases present in the area.

Identifying native plants can be a task of its own. Talk to a local biologist or botanist to help identify any native plants you have growing on your property. They can also advise you on how to implement, encourage and care for native species.

## COVER

Both natural and artificial cover is essential to wildlife management. Cover provides nesting, roosting, resting, protection and foraging areas. Natural cover is managed through planting, pruning, thinning, clearing and burning. Artificial cover includes constructing bird houses, nesting boxes, brush piles, log and rock piles and other similar structures. Scattered covering is optimal for wildlife as most species will not settle in an area that is too far from escape cover.

A lack of cover can be very detrimental to wildlife management. However, with careful planning, the proper design and placement of cover can be effectively implemented and maintained.

Cover provides nesting, roosting, resting, protection and foraging areas.

## WATER

Our third essential ingredient to wildlife habitat is water. And with 68 inches per year of average rainfall, we Mississippians sometimes take it for granted. Inventory your land for water sources. Water is essential for obvious reasons but it can become the focal point of a wildlife plan because it is a limiting factor for some animals such as furbearers and fish.

The quality of water and habitats needs to be considered in relation to your property. Protecting water sources from sediments, pollution and invasive aquatic species is important for maintaining wildlife populations. Keep in mind that trees stabilize streambanks and protect water from sedimentation. A lack of shade will allow higher water temperatures which negatively affects aquatic food chains. By maintaining adequate vegetation along bodies of water, pesticides and herbicides are buffered from entering the water. They also provide habitat and travel corridors for wildlife.

So, you know what you need to be successful. How do you go about ensuring these things can be found on your land? If you are comfortable with your knowledge of wildlife and their management options, some find it helpful to keep a journal. Take note of which animals can already be found on your land and make a note of any other species you would like to attract. Take notes often and during all seasons of the year. The evidence of animals will change

with each season so this is important. Keep track of where you found the evidence – tracks, feces, etc. – for each species and what might be lacking in these areas.

However, if you are like most people and you want to maximize your management plan, but need guidance, several state wildlife agencies provide guidance about improving wildlife habitat on privately-owned land. Your local county extension office is a good resource. There are also a number of references and books available to assist with wildlife management. Assuredly, the internet has several options, but be careful to check for local sources. The website, [msucares.com](http://msucares.com), is an excellent internet resource.

With all of your hard work, wouldn't it be nice if there were some financial assistance available? In many cases, there is!

Congress passed the Fish and Wildlife Act of 1956, which gave the U.S. Fish and Wildlife Service (USFWS) broad statutory authority to enter into voluntary agreements with non-federal government entities, including private landowners, to restore and enhance habitat for federal trust fish and wildlife resources. In 1987, the USFWS began a voluntary partnership program with landowners interested in restoring wetlands and other important fish and wildlife habitats on their own lands. The Partners for Fish and Wildlife Program (Partners Program) provides financial and technical assistance to private landowners through voluntary cooperative agreements.

Clover is one of the preferred plantings of white-tailed deer.



PHOTO BY WILDLIFE MISSISSIPPI - RANDY BROWNING

The Partners Program's philosophy is to work proactively with private landowners for the mutual benefit of declining federal trust species and the interests of the landowners involved. Usually, a dollar-for-dollar cost-share is achieved by working with landowners and a host of nationally-based and local entities. Landowners sign an agreement to restore the habitat for the life of the agreement (at least 10 years) and otherwise retain full control of the land.

Also, Working Lands for Wildlife is a new partnership between the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) and the USFWS to combat the decline of seven specific wildlife species whose decline can be reversed. This in turn also benefits other species with similar habitat needs.

The Food, Conservation and Energy Act of 2008 reauthorized the Wildlife Habitat Incentives Program (WHIP), thanks to Senator Thad Cochran, its author, as a voluntary approach to improving wildlife habitat in our country. The NRCS administers the WHIP to provide both technical assistance and up to 75 percent cost-share assistance to establish and improve fish and wildlife habitat. Cost-share agreements between the NRCS and the participant generally last from 1 year after the last conservation practice is implemented but not more than 10 years from the date the agreement is signed.

Fire on the Forty is a joint program of the Mississippi Department of Wildlife, Fisheries and Parks (MDWFP), the USFWS and Wildlife Mississippi. This program reimburses landowners in selected counties in Mississippi up to 50 percent of the costs for implementing and performing a prescribed burn.

To learn more about these programs, contact your local office of the USFWS, the NRCS or the MDWFP.

In the last chapter, we will discuss economics.

## ATTENTION LANDOWNERS

**Would you like to improve  
wildlife habitat with  
conservation programs?**

**Would you like to know  
how these programs can  
financially benefit you?**

If you answered "yes" to the questions above and are a landowner, the Conservation Finance Center can help you make land management decisions based on sound economics.

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— CHAPTER 9 —

# Paying for It



Cropland can be leased and/or used to establish dove fields.



PHOTO BY WILDLIFE MISSISSIPPI - JAMES L. CUMMINS

In the previous chapter, we discussed wildlife management. In this one, we will discuss the options available to landowners to help pay for some of the improvements you may need or want.

You've established a plan for your home place and feel good about it. Even though you can't imagine being any happier with carrying on your family's tradition of owning a piece of property that has been in your family for generations, you still have to keep it up and, hopefully, make it a haven for fish and wildlife. However, the overall goal is to keep it in the family and manage it in a way that you enjoy it.

There are many ways to help one utilize land to generate funds from it. One can manage timber and harvest what you don't need or want; raise cattle or produce crops on parts of it; form a hunting/fishing club to help with funding management; lease it out for hunting/fishing; sell the carbon rights; place a conservation easement and utilize the tax deductions from such; or utilize the many cost-share programs of the Farm Bill conservation provisions, the U.S. Fish and Wildlife Service, the Mississippi Forestry Commission or the Mississippi Department of Wildlife, Fisheries and Parks to help pay for fish and wildlife habitat restoration and enhancement. Or, one can utilize several of the above options.

## MANAGING AND HARVESTING TIMBER/FIREWOOD

If you have an abundance of trees on your land, you can thin them out and make money at the same time. My parents have done this and taken advantage of specific market conditions. They have thinned upland pine when new housing starts were high and taken advantage of that market. They have thinned the sweetgum and other less desirable hardwood species when the hardwood market has been high, especially for specialty forest products like mats and crossties. Their thinnings have yielded at least \$150 per acre.

While you can broker a timber sale yourself, it is often wise to seek professional help so that you not only get the best price for your timber, but you will thin based on the type of forest stand you desire. On our land, we strive for a mix and manage for both revenue and wildlife. A good forest consultant who also has a background in wildlife can help you achieve this objective.

If you live close to an urban or suburban area in Mississippi, consider selling firewood. People will pay good money for good firewood. Ever notice what a few sticks of firewood sells for at your local quick stop? In some parts of the Southeast, this type of wood, which

many times is the debris left from a timber thin, are known as "fat-lighters" and one can get a premium price for them. You can also consider designating some trees specifically for firewood cuttings. Whether you do it yourself or advertise as "cut and haul," there is money to be made in firewood.

## FARMING

If your land consists of any agricultural acreage, which could be cropland or pasture land, you can generate cash and ensure that the land is properly managed if you lease your land to a good farmer. Currently, with the high commodity and cattle prices, one can generate a substantial amount of dollars from leasing for agricultural uses, whether that is row crops or for cattle production or hay. Crops, especially grain crops, also bring in doves, ducks and other wildlife which adds value if you are leasing hunting rights. Average pasture land in Mississippi is leased for \$50 to \$70 per acre per year and cropland is at least \$100 per acre per year.

## FORMING A HUNTING CLUB

More often than not, if you have more than several hundred acres, it is difficult for one person to manage, especially if you are trying to keep up

**The thinning of timber can generate additional income and improve habitat for a diversity of wildlife.**

a road and trail system, maintain food plots and deer stands/duck blinds and keep your deer herd thinned to the appropriate level. At this point it makes a lot of sense to get some additional help. This help can be in the form of a hunting club consisting of good members that need a place to hunt and fish and don't mind helping with the management of the land.

Often times, a fee structure can be established so that the landowner is getting what would be the lease rate for hunting (which might range from \$5 per acre to almost \$20 per acre, depending on the quality of the hunting and the location) and use those funds for seed, fertilizer, diesel, the construction of shooting houses and blinds, paying property taxes, etc. Plus, what is probably more valuable is the help the members will provide to maintain the land.

## **LEASING HUNTING/FISHING RIGHTS**

If you don't like to hunt much and don't mind other people on your property, one can make additional dollars by allowing people to hunt on your land. The great thing about leasing hunting rights is that you are creating cash flow and maintaining your acreage at the same time.

There are other advantages to leasing your property, beside the increased revenue. Typically,

those obtaining a lease on property (lessees) will help protect the land from poaching, illegal trespassing and vandalism, which are primary concerns for many landowners. The lessees' presence is usually enough to deter poachers and trespassers, and extra eyes and ears on the property can keep you informed about what's going on. The same applies if you choose to establish a hunting club as described above.

Lessees can also help tremendously with habitat improvements and management of the property. Many landowners in Mississippi would consider managing their land for wildlife but cannot justify the expense. Money and time is needed to develop and properly manage land to obtain optimum wildlife populations – you can't just walk off and leave it. Often, sportsmen interested in leasing land will help by supplying the equipment, materials and labor in exchange for a reduced lease fee. They may even work for free to improve their hunting opportunities.

Some landowners (lessors) may shy away from leasing their land for fear of damage to the property, or liability issues. But these potential lessors should keep in mind that it is in the best interest of the lessees to be good stewards of the land, keep the property in good condition and improve wildlife where possible. Also, a proper

lease agreement can require lessees to purchase their own insurance and remove liability from the landowner.

## **SELLING CARBON RIGHTS**

Mississippi's landowners can play a major role in the climate change debate. As landowners, we can provide opportunities for companies in states like California, where there is a current regulatory mechanism in place, to control carbon emissions. Forests represent one of the greatest opportunities to affect climate change through the natural sequestration of carbon. As you may remember, trees absorb carbon dioxide and emit oxygen. This process can be enhanced if proper policies and procedures are established that encourage sound forest management, or hindered if not done in a strategic and consistent manner.

To date, carbon projects are not cost effective for small landowners. It usually takes about 1,000 or more acres for a carbon project to be economical. Depending on many factors, including the condition the land is in, the type of carbon project one is considering (Avoided Forest Conversion or Improved Forest Management) and the current or future price of a carbon offset, landowners can obtain anywhere from \$5 per acre to \$500 per acre as a one-time payment.



## PLACING A CONSERVATION EASEMENT

A conservation easement is a restriction a landowner voluntarily places on specified uses of his or her property to protect natural, productive or cultural features. A conservation easement is recorded as a written legal agreement between the landowner and the "holder" of the easement, which may be a non-profit conservation organization. In Mississippi, conservation easements are usually donated to non-profit conservation organizations, commonly known as land trusts. The best land trust in Mississippi is the Mississippi Land Trust ([www.misslandtrust.org](http://www.misslandtrust.org)).

Conservation easements are recognized for legal and tax purposes by the State of Mississippi (Uniform Conservation Easement Act) and the Internal Revenue Service (Internal Revenue Code, Section 170(h)).

Placing a conservation easement on your property can afford you annual tax deductions which have a cash value based on the tax bracket you are in. For example, the average tax deduction in Mississippi is approximately \$1,000 per acre. If you are in the 30 percent tax bracket, then the cash value of that deduction is \$300 (.30 X \$1,000). These funds can be put towards upkeep, maintenance and improvements. Landowners have the advantage in this situation and can negotiate the terms of the conservation easement with the land trust.

Through December 31, 2013, if the conservation easement meets Internal Revenue Service criteria, the landowner may deduct the full value of the conservation easement donation from his or her adjusted gross income up to 50 percent of the landowner's income for the year of the gift. If the donation exceeds this amount in the year of the donation, the balance of the donation may be deducted for up to 15 succeeding years, subject to the same 50 percent limitation. However, qualifying farmers and ranchers can deduct up to 100 percent of their income.

## UTILIZING CONSERVATION COST-SHARE PROGRAMS

There are many incentive programs for private landowners to protect, restore and enhance their property. Below, is a general overview of some of the more popular programs.

### *Wetlands Reserve Easement (WRE)*

The WRE is one of the landmark environmental steps in the 1990, 1996, 2002 and 2008 Farm Bills. It is a voluntary program administered by the Natural Resources Conservation Service (NRCS) that provides technical and financial assistance to private landowners and tribes to restore, protect and enhance wetlands and adjacent areas important to the ecological functions of these wetlands. In Mississippi, the program can pay up to \$1,900 per acre for an easement and, depending on the length of the easement, will pay either 75 percent or 100 percent of the restoration costs, which consists of restoring waterfowl and wetland habitat and planting bottomland hardwoods.

### *Conservation Reserve Program (CRP)*

The CRP, administered by the Farm Service Agency (FSA), is a voluntary program for landowners that was originally established by the 1985 Farm Bill primarily for retiring highly-erodible lands from agricultural production and establishing permanent covers. Through the CRP, participants receive annual rental payments and cost-share assistance to establish long-term, resource-conserving covers on eligible farmland. Annual rental payments are based on the agriculture rental value of the land. Cost-share assistance is available for up to 50 percent of the participant's costs in establishing approved conservation practices. There

are also incentive payments for specific practices. CRP contracts are for 10 to 15 years. Currently, the average CRP payment in Mississippi for new sign-ups is approximately \$100 per acre per year.

### *Wildlife Habitat Incentives Program (WHIP)*

The WHIP, also administered by the NRCS, encourages participants to develop and improve high-quality habitat that supports wildlife populations of national, state, tribal and local significance through financial and technical assistance. Cost-share up to 75 percent can be provided for establishing conservation practices to develop fish and wildlife habitat. Practices in these programs will help provide cover for wildlife, including the planting of trees, as well as nesting and brood-rearing habitat for species like turkey and quail. Aquatic habitats and water quality can be improved by establishing habitat adjacent to streams. Wildlife habitat can also be improved through these programs by creating small openings in forest stands. Another priority is to establish woody and/or grass corridors. On our family's farm, we have used the WHIP to improve our forest stand by killing sweet gum, conducting controlled burns, restoring native grasses and killing invasive species, specifically kudzu.

### *Partners for Fish and Wildlife Program*

Congress passed the Fish and Wildlife Act of 1956, which gave the U.S. Fish and Wildlife Service (USFWS)



**There are several programs that provide assistance in the restoration of native grasses.**

PHOTO BY WILDLIFE MISSISSIPPI

broad statutory authority to enter into voluntary agreements with non-Federal government entities, including private landowners, to restore and enhance habitat for federal trust fish and wildlife resources. In 1987, the USFWS began a voluntary partnership program with landowners interested in restoring wetlands and other important fish and wildlife habitats on their own lands. The Partners for Fish and Wildlife Program (Partners Program) provides financial and technical assistance to private landowners through voluntary cooperative agreements. The restoration of degraded wetlands, native grasslands, streams, riparian areas and other habitat to conditions as close to natural is emphasized through the program. The program's philosophy is to work proactively with private landowners for the mutual benefit of declining federal trust species and the interests of the landowners involved.

Usually, a dollar-for-dollar cost-share is achieved by working with landowners and a host of nationally-based and local entities (e.g., federal, state and local agencies, soil and water conservation districts and

private conservation organizations). Landowners sign an agreement to restore the habitat for the life of the agreement (at least 10 years) and otherwise retain full control of the land.

#### *Fire on the Forty*

Although prescribed fire is a very important tool for forest and wildlife management, many private landowners are reluctant to use fire due to cost and liability concerns associated with burning. As part of the "Fire on the Forty" initiative, which the Mississippi Department of Wildlife, Fisheries and Parks has taken a lead role in, landowners may be reimbursed on funded projects in selected focal counties for 50 percent of costs for implementing and conducting prescribed fire up to a maximum of \$12.50 per acre.

Focal counties include Prentiss, Monroe, Lowndes, and Noxubee in North Mississippi, and Amite, Pike,



Walthall, Marion, Lamar and Pearl River in South Mississippi.

Landowners must submit an application for entry into the program. All applications will be competitively ranked based on potential habitat benefits and will be selected for funding by the Mississippi Partners for Fish and Wildlife Program.

These programs are just a few of the many ways a landowner can utilize help to "pay for it."

This chapter concludes *So You Now Have the Old Home Place*. I hope you have enjoyed reading it as much as I have enjoyed writing it. Unlike many states, Mississippi has a "sense of place." We know our "kin" and where we came from. Family and family land are important. I hope you will use this series to make your home place a little better than when you took ownership of it. You must make sure your sons, daughters and relatives stay enthusiastic about the home place so that one day they will take care of it and enjoy it as much as you.

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—Donald C. Jackson, *Clarion Ledger*



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*A Handbook for Mississippi Landowners*

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## FISH AND WILDLIFE MANAGEMENT

A Handbook for Mississippi Landowners

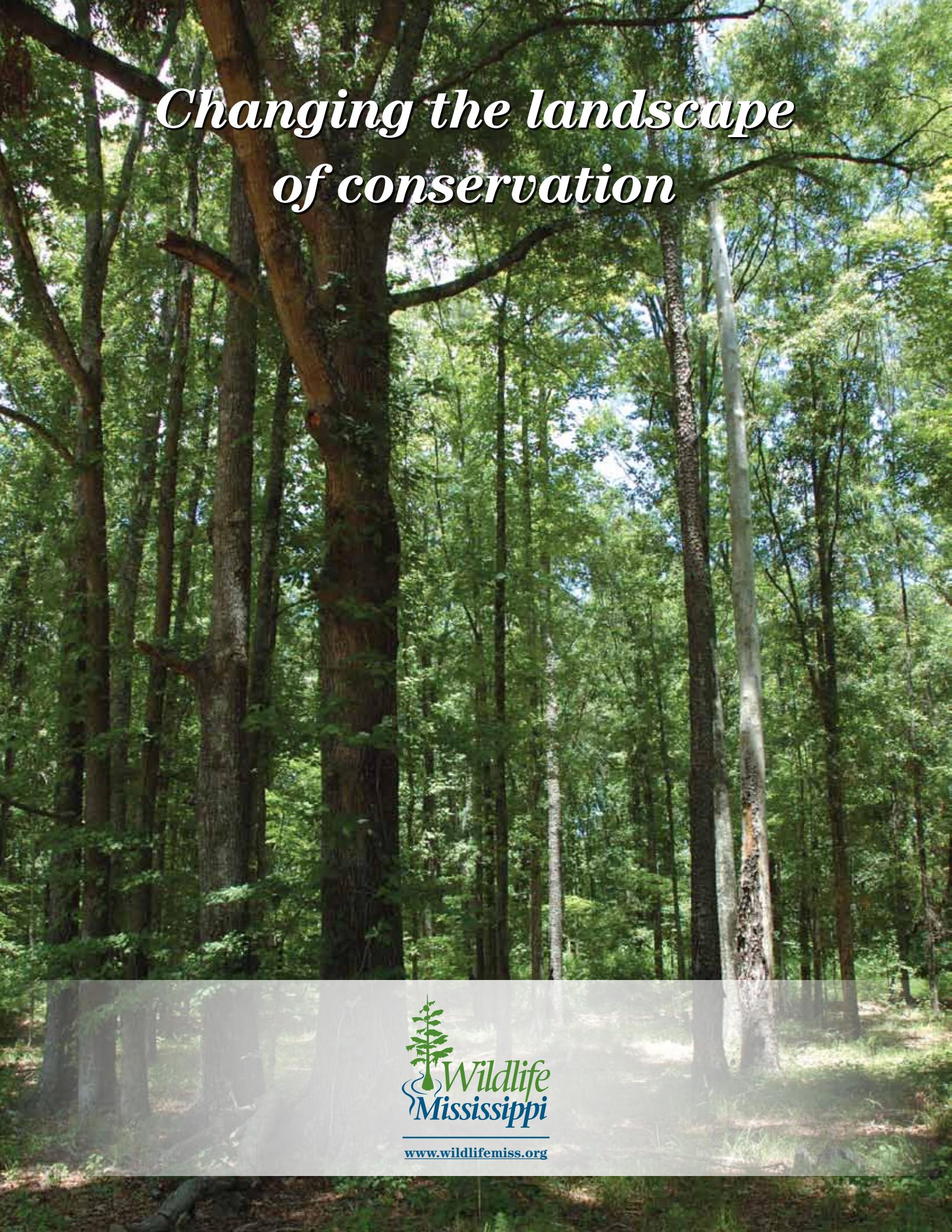


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