



# Managing Beaver Ponds

## Working With Wildlife

Number 23

Once nearly eliminated in North Carolina, beavers have returned to most of the state's watersheds through 50 years of restocking. Beavers are unique in their ability to modify the environment for their own needs by constructing sturdy dams of sticks, leaves, and mud.

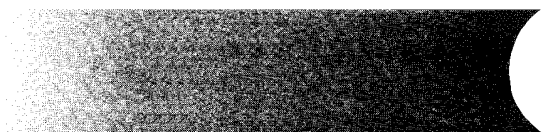
Although beavers are negatively viewed in some situations due to the flooding and girdling of trees, their presence may ultimately be beneficial. This publication reviews benefits of beavers and methods to manage and enhance beaver ponds.

**Beaver Ponds Old and New**  
Beavers typically construct a series of dams to raise water levels to access food sources safely by swimming instead of walking. Most beavers depend on their ponds as places to meet all living, food, and protection needs. Beaver ponds range in size from less than one acre to well over 100 acres, depending on the topography of the bottomland and the availability of food sources. Beavers will use and expand a pond area until the food supplies are exhausted, usually up to 10 years or more.

After abandoning a pond site, beavers move into other areas and establish new living sites, leaving the old pond to silt in and eventually return to its original forested state. Beaver ponds provide a wide array of benefits:

Beaver Pond Benefits	
<b>Active Ponds</b>	
Improve downstream water quality	
Provide watering holes for agricultural and wildlife needs	
Supply important breeding areas for amphibians and fish	
Provide diverse wetland habitats	
Furnish feeding, brood rearing and resting areas for waterfowl	
Encourage many reptile, bat, amphibian, fish and bird species	
<b>Abandoned Ponds</b>	
Furnish snags for cavity-nesters and insectivores	
Fallen logs supply cover for reptiles and amphibians	
Provide essential edges and forest openings	
Supply diverse moist-soil habitats within bottomland forests	
Create productive bottomland forests	
Provide foraging and nesting areas for bats, songbirds, owls, and hawks	

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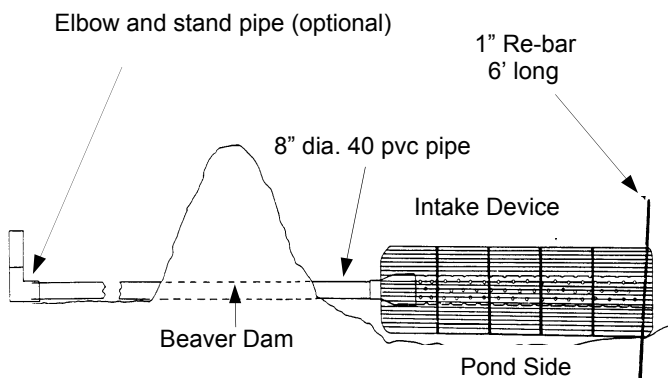


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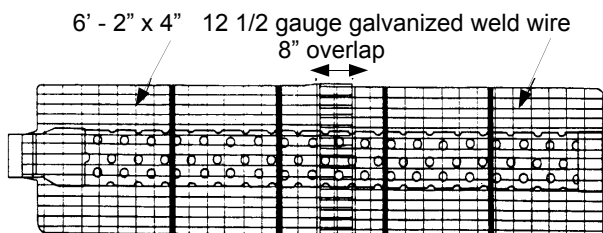
## Enhancing Beaver Ponds

Enhance beaver pond benefits by using a drainage system to manage the level of the pond. Inexpensive, effective drainage systems can be built using logs, PVC, or aluminum irrigation pipe. The Clemson Beaver Pond Leveler can be made with PVC pipe, mesh wire, and an elbow joint. The Clemson Leveler is effective because its intake device is positioned beneath the water and is caged to ensure drainage even if blocked by debris or dam materials. The addition of an elbow and stand pipe allows for easy water level manipulation.

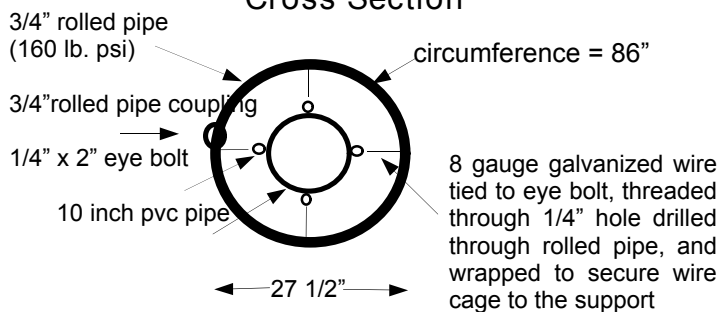
### The Clemson Pond Leveler



#### Intake Device



#### Cross Section



## Beaver Pond Management

- ◆ Break the dam on the downhill side of the existing channel in the form of a narrow, deep "V". The initial flow of water through the dam will help clear excess dam materials. Place the drain pipe deep into the break so that at least 10' of pipe extends into the upstream area. The final level of the pond will be determined by the height of the downstream end of the pipe, or the stand pipe position height.
- ◆ Drive a metal stake into the end of the cage to secure it. The 10" drain pipe is perforated with 2" holes prior to being encircled by galvanized weldwire fencing.
- ◆ Install more than one drain per dam on larger ponds or to accommodate for high water events.
- ◆ Check beaver pond drains at least once a month to insure that the desired water levels are maintained. Always leave at least 1/3 to 1/2 of the pond area undrained during drawdown, as overdraining may cause the beavers to seek new areas.
- ◆ Drain ponds to a level of 1 to 2 feet annually to promote natural emergent vegetation and productive moist-soil areas.
- ◆ Create "greentree reservoirs" for waterfowl by drawing beaver ponds down during the growing season from March to September; remove drains and allow water to stand from November through February when the trees are dormant to provide feeding and resting areas for wintering ducks.

## Habitat Enhancement Tips

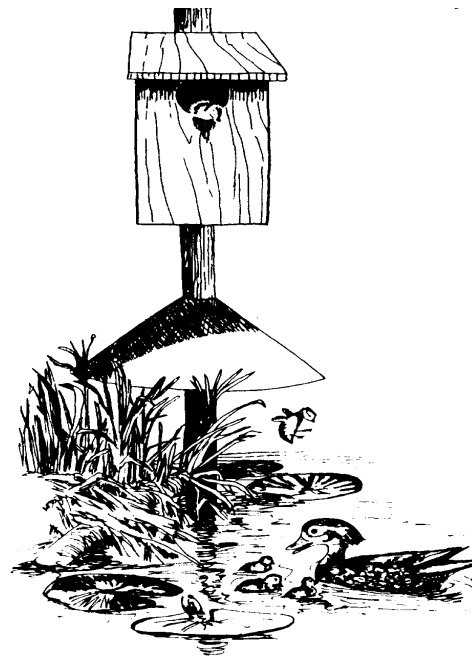
- ◆ Introduce beneficial aquatic plants such as duckweed and watermeal to new or refilled beaver ponds.
- ◆ Broadcast Japanese millet in moist areas at a rate of 25 pounds per acre beginning in late June or July. Plant by July 15 in the mountains and as late as August 14 in the coastal plain. Remove the pond drain 45-50 days after seeding to allow the pond to refill and flood the mature millet for waterfowl. Fertilizer is usually unnecessary for the first 2 years.
- ◆ Install wood duck boxes, with predator guards, to supply and improve nesting and brooding-rearing habitat in beaver ponds. Delay pond drawdowns until after July 1 in ponds with nesting wood ducks.

See WWW # 17 for details on erecting wood duck boxes and WWW # 21 for ways to encourage bats in beaver pond habitats.



## Beaver Pond Wildlife

Active Ponds	Abandoned Ponds
Waterfowl	Small mammals
Amphibians	Deer
Reptiles	Bears
Bats	Turkeys
Wetland bird species	Grouse
Furbearers (otters, raccoons, beavers, etc.)	Cavity nesters



Beaver ponds make excellent wood duck habitat.

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Cost share assistance may be available through the Stewardship Incentive Program for these practices. See your Wildlife Biologist, Forester, or Extension Agent for more information about the Forest Stewardship Program.

References:

“Clemson Beaver Pond Leveler” : Clemson University, Department of Aquaculture, Fisheries, and Wildlife, AFW Leaflet #1, Dec. 1991.

Beavers. Bromley, P. and others. Wildlife Damage Management, N.C.Cooperative Extension Service. AG 472-4, Oct. 1994.

Other Wildlife Notes Available:

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|-------------------------------|---|
| No. 1 - Endangered Species    | No. 14 - Snags and Downed Logs          |
| No. 2 - Eastern Gray Squirrel | No. 15 - Managing Edges for Wildlife    |
| No. 3 - White-tailed Deer     | No. 16 - Building Songbird Boxes        |
| No. 4 - Songbirds             | No. 17 - Woodland Wildlife Nest Boxes   |
| No. 5 - Wild Turkey           | No. 18 - Low Cost Habitat Improvements  |
| No. 6 - Wood Duck             | No. 19 - Pools for Amphibians           |
| No. 7 - Cottontail Rabbit     | No. 20 - Hummingbirds and Butterflies   |
| No. 8 - Bobwhite Quail        | No. 21 - Bats                           |
| No. 9 - Ruffed Grouse         | No. 22 - Owls                           |
| No. 10 - Black Bear           | No. 23 - Managing Beaver Ponds          |
| No. 11 - Raccoon              | No. 24 - Herbaceous Plants for Wildlife |
| No. 12 - Mourning Dove        | No. 25 - SIP Wildlife Opportunities     |
| No. 13 - Wildlife Terms       |   |



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