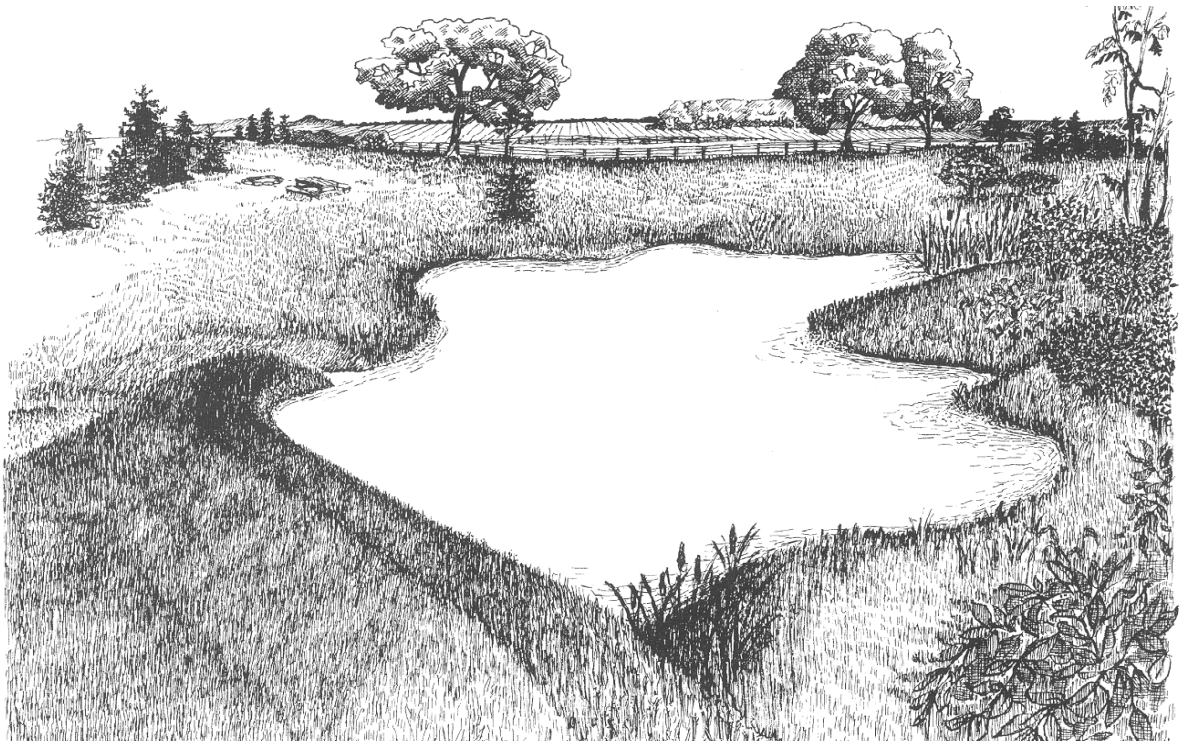
AQUAGUIDE

MISSOURI DEPARTMENT OF CONSERVATION

Care of a New Pond and its Watershed



Creating a really good pond depends not only on careful planning and good construction, but also on protecting the dam, spillway, diversion terraces, pond basin and watershed from erosion. Erosion and siltation shorten the life of a pond and result in muddy waters of poor quality for fish, other wildlife and livestock. For example, bass 28 months old in five experimental clear ponds weighed almost five times as much as bass of the same age in five muddy ponds.

WATERSHED CARE:

To keep the pond from filling with silt, it is best to have the watershed in good cover before dam building starts. Any drainage from roads should be diverted from the pond or caught in a sediment basin. Particularly after grading, roads are a dangerous source of silt and they can contribute to the ponds decline.

CARE OF THE DAM, SPILL WAY, DIVERSION TERRACES AND POND BASINS:

Immediately after the pond is built, the dam, spillway, basin and diversion terraces should be limed, fertilized, mulched and seeded with grasses or legumes. Get recommendations for fertilizing and seeding from the Extension Service in your county. If manure is available, use it in heavy applications along with the

fertilizer, but don't spread manure in the pond basin: it may stimulate growth of algae or "pond scum". Use only superphosphate and mulch in the pond basin.

Work the lime, manure and fertilizer into the surface of the soil by light discing and harrowing. Don't disc so deeply as to cause excessive loosening of the soil, as this will cause it to erode into the pond basin.

To reduce erosion and protect your seed you may use hay, straw or any type of mowed vegetation to mulch the raw soil. In the pond basin, scatter triple superphosphate over the mulch at the rate of 50 pounds per ton of mulch. Mulch should be about 5 inches deep. Mulch on the areas seeded with grass should not be more than 3 inches thick. This will ensure the grass seedlings can penetrate it.

Along with fertilizing and mulching, seed all the raw areas with a nurse crop of small grain. The following nurse crops are recommended: late summer or fall - rye or wheat, at the rate of 100 pounds per acre; spring or early summer - oats, at 65 pounds per acre; hot and dry: mid-summer - sudan grass, at 25 pounds per acre.

Let the nurse crop in the basin grow to no more than 6 inches in height before it is covered with water. If you have to mow it , let the clippings lie. As this covering of vegetation decays, it will release mild acids and nutrients. The acids help clear the water, and nutrients stimulate the growth of fish food organisms. Tall, heavy growths of the nurse crop, however, could lower oxygen levels by decomposition at a time when a new fish population is developing.

Before selecting the grass for the pond area, see your County Extension Agent. Since conditions vary widely over the state, different grasses should be used in different locations. Sow perennial grasses such as buffalo grass on the dam, spillway, diversion terraces and pond edges as you will want them permanently covered in growth.

SHORELINE SEEDING

Reduce bank erosion by planting wild millet, Japanese millet, or Korean Lespedeza in a strip along the shoreline. In addition to the basin seeding and mulching previously discussed, the following is recommended: If the pond is full, the seed should be sown down to the water's edge. If the pond is not full, sow it far enough down that a narrow margin of growth will be covered when the pond fills. These protective plants help considerably in keeping the water clear. All seeding and mulching should be done immediately after construction. A single rain may carry enough disturbed soil into the basin to reduce total depth a foot or more.

If the watershed and raw soil are well protected from erosion, the pond should clear up within a short time after it fills. If it fails to clear because of the nature of the soil, try using agricultural gypsum. The method is outlined in the Aquaguide "Clearing Muddy Ponds with Gypsum". Don't use gypsum until you're sure that erosion in the watershed and around the pond basin has been stopped.

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