

Excavated Pond Development

Alabama Guide Sheet No. AL 378A



Definition

Excavated ponds are sometimes referred to as a “pit” or “dugout.” This type pond is excavated below the existing ground level to store shallow ground water, and in some cases, a small amount of surface runoff. These ponds are most often used to provide a water source for livestock.

Construction

General

Always follow the plans and construction specifications closely when building an excavated pond.

Permits

Excavated ponds are often located in seep heads, wet areas, or on small drainage areas. Federal wetland programs such as Section 404 of the Clean Water Act and Swampbuster provisions of the Food Security Act may apply to private landowners who construct excavated ponds in areas considered wetlands. Pond sites that contain wetlands may require a permit from the U.S. Army Corps of Engineers. Additional planning assistance may be necessary from the USDA Natural Resources Conservation Service (NRCS).

Site Selection

The potential site should be evaluated during the driest time of year to determine the depth to the ground water. Evaluation is usually accomplished with a soil auger or post-hole diggers. Once the ground water level is established, the excavation depth can be determined. Where site conditions will permit, the minimum water depth of the pond should be six feet.

Excavation

Excavated ponds are usually dug with either a bulldozer, dragline, or a large backhoe-type excavator. The soil type will determine the side slopes which should never be steeper than 1 (horizontal) to 1 (vertical). Excavated spoil should be spread around the pond on a continuous slope away from the pond and at locations that will not block surface water from entering the pond.

Watering Ramp

Where the pond is to be used for direct watering of livestock, a watering ramp should be provided. The ramp should extend to the low water elevation on a slope no steeper than 3 (horizontal) to 1 (vertical). Flatter slopes are preferred. The surface of the ramp should withstand constant animal traffic. This may require the surface to be covered with geotextile and gravel according to NRCS Conservation Practice Standard, Code 561 – Heavy Use Area Protection.

Spillway

Excavated ponds that will have runoff water entering the pond, or that have spring flow, will need a pipe and an emergency spillway installed to ensure the water is safely controlled.

Vegetation

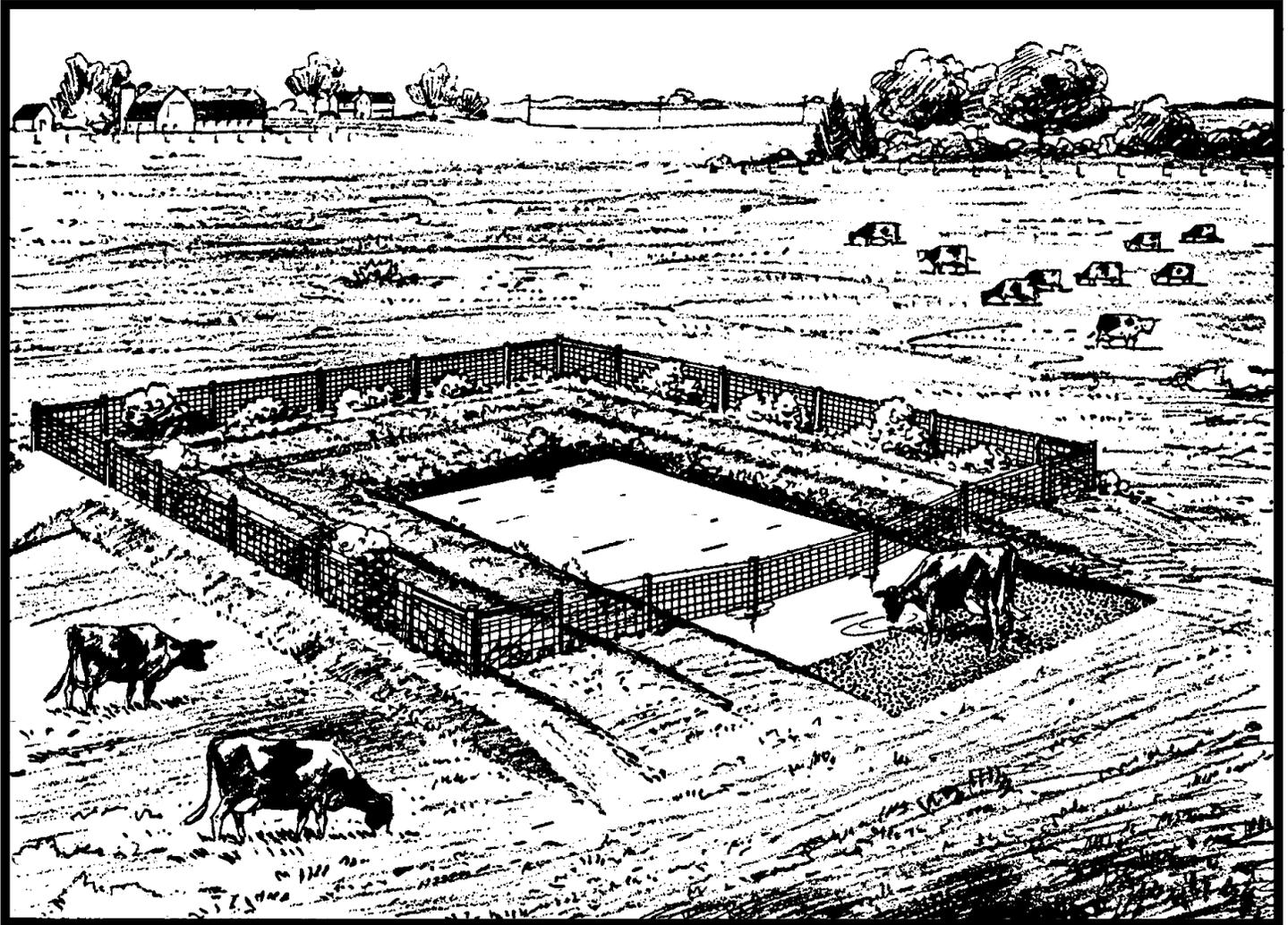
Plant grass around the pond and on the spoil areas according to the vegetation plan. Provide a good seedbed, fertilizer, lime, seed, and mulch on all the areas being vegetated, according to NRCS Conservation Practice Standard, Code 342 – Critical Area Planting.

Operation and Maintenance

Livestock should not be allowed free access to the pond for loafing and wading. The animals will quickly pollute the water intended for their use. It is always best to restrict the pond with fencing and allow the livestock access to the water only at the ramp location.

References

NRCS Alabama Conservation Practice Standard
Code 378 - Pond
Code 561 - Heavy Use Area Protection
Code 342 - Critical Area Planting
Alabama NRCS Guide Sheet
AL 561A - Watering Ramp



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