

Information

Weir design and technical assistance:

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Information is also available on the water quality laboratory website at www.fwrc.msstate.edu/water. The water quality lab is an externally funded laboratory that conducts EPA approved nutrient analyses on freshwater samples and has the capability to conduct a number of sediment nutrient analysis. The water quality lab conducts research both in and out of the state of Mississippi on a variety of projects.

Department of Wildlife, Fisheries and Aquaculture
Forest and Wildlife Research Center
Mississippi Agricultural and Forestry Experiment Station
Mississippi State University

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WEIR
Construction



Purpose

Weirs, also known as check dams, are small dams used to collect water runoff from agricultural fields.

Weirs are often the size of a drainage ditch, with a 2-foot channel in the center for water drainage.

Weirs are concrete but can be moved to various locations in a drainage ditch. Weirs can provide numerous locations along the drainage ditch for nutrients to be absorbed and transformed.

Several weirs can be stair-stepped throughout the drainage ditch to provide maximum nutrient retention.

Wherever a weir is installed, water collects to form a miniature wetland, which not only retains nutrients but also may improve crop yields by adding moisture to the field.



Structure



Weirs are constructed from concrete



Weirs are constructed with male and female end pieces



Rebar allows for easy movement of weirs in the drainage ditch



Weirs have two components: 4 ft. end sections and 6 ft. channel sections.

Weirs can be designed to fit any size drainage.

Getting Started:

Measurement of the drainage way will provide initial weir construction dimensions. Installation is straight forward: calculate the slope of the drainage way, and then place weir(s) as needed along the slope to capture varying volumes of water.

Dig a channel perpendicular to the drainage to the appropriate depth. Place channel section central within the drain.



Slide end sections and or additional channel sections in place. A silicon spray will help sections slide and lock into place.



Ensure the sections are tightly locked. There will be some space between sections that will fill with sediment and rust over time.



Level end and channel sections



Backfill in front and behind weir.

