

STRUCTURE FOR WATER CONTROL

PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service – Practice Code 587



STRUCTURE FOR WATER CONTROL

A Structure for Water Control is placed in irrigation, drainage, or other water management systems to convey water, control the direction or rate of flow, or maintain water surface elevation.

PRACTICE INFORMATION

Structures for water control are used to control the stage, discharge, distribution, delivery, or direction of flow of water in open channels or water use areas. They are also used for water quality control, such as sediment reduction or temperature regulation, or for protection of fish and wildlife and other natural resources.

Water control structures are used as outlets on cranberry bogs and irrigation pits to manage the level of water for harvesting, winter flooding, trash removal, pest control or other purposes. When used to control the division of chemigation water, this practice will reduce the amount of suspended chemicals attached to organic material and soil particles entering surface waters. It allows for the

biological treatment of dissolved chemicals when water is detained in the system for the required holding period. Chemicals that remain in the system may be bound up in the soil organic matter; however, soils that are low in organic matter may have a tendency to allow for the leaching of dissolved chemicals into the ground water.

COMMON ASSOCIATED PRACTICES

The practice is commonly used in Conservation Management Systems with Dikes, Open Channels, Land Smoothing, Shallow Water Management for Wildlife, Wetland Wildlife Habitat Management, Wetland Enhancement, or Wetland Restoration.

Refer to the practice standard in the local Field Office Technical Guide and associated specifications and Job Sheets for further information.

The following page identifies the effects expected to occur when this practice is applied. These effects are subjective and somewhat dependent on variables such as climate, terrain, soil, etc. All appropriate local, State, Tribal, and Federal permits and approvals are the responsibility of the landowners and are presumed to have been obtained. Users are cautioned that these effects are estimates that may or may not apply to a specific site.

Structure for Water Control

10/8/2007

Structure for Water Control (587)

Initial setting: (1) Irrigated/chemigated wetland/bog (cropland) where control of water levels is needed; (2) areas where it is desirable to provide shallow water areas to be managed for wildlife; (3) areas that need water control to decrease runoff and increase infiltration; or (4) other areas that need control of water discharge, distribution, delivery, or direction of flow.



- Dike (356)
- Open Channel (582)
- Shallow Water Development and Management (646)
- Wetland Wildlife Habitat Management (644)
- Wetland Enhancement/Restoration (659/657)

1. Flume with a culvert

2. Flashboard riser with cover

D.1 (+) Cost of installation, operation and maintenance

D.2 (+) Water use efficiency

D.3 (+) Impounded water; ability to control release of water

D.4 (-) Fish passage

- Pest Management (595)
- Nutrient Management (590)

I.7 (+) Infiltration

I.10 (+) Hydroperiod

Fish Passage (396)

LEGEND

- Mitigating practice or activity
- Associated practice
- #. Created by practice
- D. Direct effect
- I. Indirect effect
- C. Cumulative effect
- Effect on Atlantic salmon

I.1 (+/-) Net return

I.4 (+) Crop vigor and production

I.9 (-) Contaminants, pathogens, sediments to receiving waters

C.2 (+/-) Quality of surface waters and aquatic habitats

I.11 (+/-) Wildlife habitat (species specific)

I.12 (+/-) Fisheries

I.5 (+) Potential income

I.8 (+) Groundwater recharge

I.9 (+) Contaminants, pathogens, sediments to receiving waters

I.2 (+) Water conservation

- Pest Management (595)
- Nutrient Management (590)

Pathway (+) increase; (-) decrease

C.1 (+/-) Income and income stability (Individuals & community)

I.3 (+) Water available for other uses

C.3 (+/-) Recreational opportunities

Note: Effects are qualified with a plus (+) or minus (-). These symbols indicate only an increase (+) or a decrease (-) in the effect upon the resource, not whether the effect is beneficial or adverse.

The diagram above identifies the effects expected to occur when this practice is applied according to NRCS practice standards and specifications. These effects are subjective and somewhat dependent on variables such as climate, terrain, soil, etc. All appropriate local, State, Tribal, and Federal permits and approvals are the responsibility of the landowners and are presumed to have been obtained. All income changes are partially dependent upon market fluctuations which are independent of the conservation practices. Users are cautioned that these effects are estimates that may or may not apply to a specific site.