

NATURAL RESOURCES CONSERVATION SERVICE  
CONSERVATION PRACTICE STANDARD

**SURFACE DRAINAGE, FIELD DITCH**

(Feet)  
Code 607



**DEFINITION**

A graded ditch for collecting excess water in a field.

**PURPOSE**

To collect or intercept:

- excess surface water, such as sheet flow, from natural and graded land surfaces or channel flow from furrows and convey it to an outlet;
- excess subsurface water and convey it to an outlet.

**CONDITIONS WHERE PRACTICE APPLIES**

Applicable sites have flat or nearly flat topography and have one or more of the following conditions:

1. Soils that are slowly permeable (low permeability) or that are shallow over barriers, such as rock or clay, which hold or prevent ready percolation of water to a deep stratum.
2. Surface depressions or barriers that trap rainfall.

3. Insufficient land slope for ready movement of runoff across the surface.
4. Excess runoff or seepage from uplands.
5. Require the reuse of irrigation tailwater.
6. Require control of the water table.
7. Adequate outlets available for disposal of drainage water by gravity flow or pumping.

**CRITERIA**

**General Criteria Applicable To All Purposes**

Impact to cultural resources, wetlands and Federal and state protected species shall be evaluated and avoided or minimized to the extent practicable during planning, design and implementation of this conservation practice in accordance with established National and Florida policy, General Manual (GM) Title 420-Part 401; Title 450-Part 401, Title 190-Parts 410.22 and 410.26, National Planning Procedures Handbook (NPPH) Florida Supplements to Parts 600.1 and 600.6, National Cultural Resources Procedures Handbook (NCRPH), National Food Security Act Manual (NFSAM), and the National Environmental Compliance Handbook (NECH).

All planned work shall comply with Federal, State, and local laws, rules and regulations.

Plan drainage field ditches as an integral part of a drainage system for the field and shall collect water and intercept water and convey it to an adequate outlet with continuity and without prolonged ponding. Design outlets to conform with Florida NRCS conservation practice standard Surface Drainage, Main or Lateral, Code 608.

**Investigations.** Make an adequate investigation on all sites.

Conservation practice standards are reviewed periodically and updated if needed. To obtain the current version of this standard, contact the Natural Resources Conservation Service.

**Location.** Establish ditches, insofar as topography and property boundaries permit, in straight or nearly straight courses. Random alignment may be used to follow depressions and isolated wet areas of irregular or undulating topography. Avoid excessive cuts and the creation.

On extensive areas of uniform topography, install field ditches as required for effective drainage.

**Design.** The size, depth, side slopes, cross sectional area, and spacing shall:

1. Be adequate to provide the required drainage for the site. The Florida NRCS Drainage Guide provides recommended depths and spacing for various crops and soils.
2. Permit free entry of water from adjacent land surfaces without causing excessive erosion.
3. Provide effective reuse of irrigation tailwater (if applicable).
4. Convey flow without causing excessive erosion.
5. Provide stable side slopes based on soil characteristics.
6. Permit crossing by field equipment if feasible.
7. Permit construction and maintenance with available equipment.

### CONSIDERATIONS

When planning this practice, the following items should be considered where applicable:

- Potential impacts on downstream flows or aquifers that would affect other water uses or users.
- Potential water quality impacts for soluble pollutants, sediments and sediment-attached pollutants.
- Potential for uncovering or redistributing toxic materials.
- Effects on wetlands or water-related wildlife habitats.
- Effects of water level control on soil water, downstream water temperature or salinity of soils.

- The need for riparian buffers, filter strips and fencing.
- Effects on water budget components, especially the relationships between runoff and infiltration.

### PLANS AND SPECIFICATIONS

Keep plans and specifications for constructing drainage field ditches with this standard and shall describe the requirements for properly installing the practice to achieve its intended purpose. As a minimum, the plans shall include:

- Location and spacing of field ditches.
- Typical cross section of field ditches, including spoil placement.
- Direction and grade of field ditches.
- Adequacy of outlet.

### OPERATION AND MAINTENANCE

Provide a site specific operation and maintenance plan to, and review with, the landowner(s) before the practice is installed.

The plan shall adequately guide the landowner(s) in the routine maintenance and operational needs of the ditch(es). The plan shall also include guidance on periodic inspections and post-storm inspections to detect and minimize damage to the ditch(es).

### REFERENCES

Florida NRCS Conservation Practice Standard,  
Surface Drainage, Main or Lateral, Code 608  
Florida NRCS Drainage Guide  
General Manual  
Title 420-Part 401  
Title 450-Part 401  
Title 190-Parts 410.22 and 410.26  
National Cultural Resources Handbook  
National Environmental Compliance Handbook  
National Food Security Act Manual  
National Planning Procedures Handbook  
Florida Supplements to Parts 600.1 and  
600.6