

NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD

MOLE DRAIN

(ft)
Code 482



DEFINITION

An underground conduit constructed by pulling a bullet-shaped cylinder through the soil.

PURPOSE

To establish a system of subsurface earthen channels for removal of trapped surface and subsurface water.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies where the use of buried drains is physically or economically impractical to complete the drainage required. Mole drains may be used in fields with highly cohesive or fibrous soils that are free of stones, gravel, or sand lenses if the area served is small and if an outlet is available or can be constructed to provide continuously free outfall from the drains. They may also be used as a supplement to other drains.

CRITERIA

Planned work shall comply with all Federal, State, and local laws, rules, and regulations.

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).

Size. The minimum diameter of a mole drain shall be 4-inches. A 6-inch diameter mole will usually create a hole approximately 4 ½ inches in diameter.

Location, grade, and length. The location, grade, length of line, depth, spacing and size of drains, and the outlet protection for such drains shall meet requirements of NRCS National Engineering Handbook, Part 624, Drainage, or the Florida NRCS Drainage Guide.

Outlet. Outlets must have sufficient depth and capacity to provide continuous free outfall.

CONSIDERATIONS

When planning this practice, consider the effects:

- on runoff, infiltration, deep percolation, and potential ground water recharge,
- on existing wetland hydrology,

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

- of increased drainage waters on downstream baseflow,
- of an increase in dissolved substances that may be discharged to streams,
- on reduction in the yields of sediment or sediment-attached substances,
- on downstream water quality, water use, and water temperature.

PLANS AND SPECIFICATIONS

Plans and specifications for installing mole drains shall be in keeping with this standard and shall describe the requirements for proper installation of the practice to achieve its intended purpose. As a minimum the plans and specifications shall include:

- Sketch showing mole drain location, length and spacing.
- Details of outlet structure(s).

OPERATION AND MAINTENANCE

Operation and maintenance shall consist of periodic checks to determine that the outlet is open and free flowing.

REFERENCES

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
NRCS National Engineering Handbook,
Part 624, Drainage