



DRAINAGE WATER MANAGEMENT

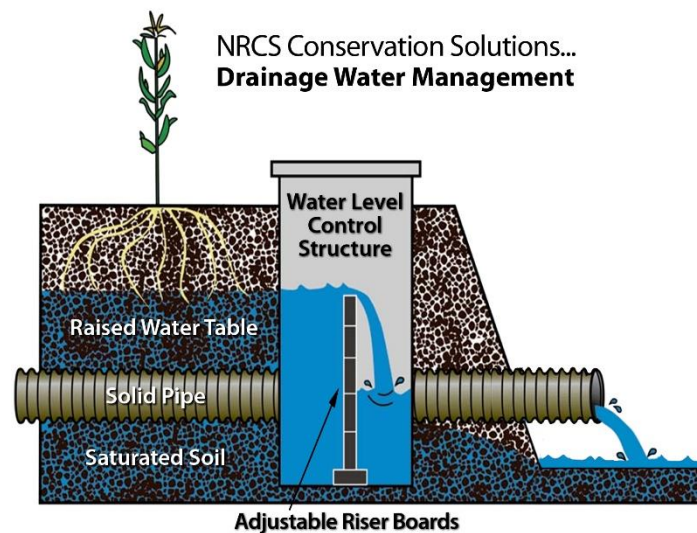
Practice Description:

Drainage water management (DWM) helps to control the amount and timing of water leaving agricultural fields through tile lines. DWM works by adding water control structures to existing tile networks to raise or lower the water table to a desired elevation depending on crop needs.

DWM works best on flat land, and according to the Iowa Nutrient Reduction Strategy, can reduce nitrate-nitrogen loss through tile lines by an average of 33%.

Practice Benefits:

- Manage soil moisture
- Decrease nutrient leaching
- Increase soil carbon (reduced oxidation of soil organic matter)
- Increase yield (estimated 50 to 70 bushels per acre of corn and 20 to 25 bushels per acre of soybeans)



Adjustable Riser Boards
Image courtesy of USDA NRCS.

Practice Economics:

- Estimated to cost \$40 to \$110 per acre (assuming land is flat enough for one structure to control 20 acres)
- Compatible with existing federal and state cost-share programs so farmers who implement DWM can recoup some of their costs



NRCS/SWCS Photo by Lynn Betts.

Other Resources:

- <https://www.flickr.com/photos/151012306@N08/albums/72157695593730612>: A step by step visual guide to drainage water management. These photos were taken on real farms across Iowa and are part of the Conservation Media Library.
- <https://vimeo.com/291575807>: A video about drainage water management in Iowa that is part of the Conservation Media Library.
- <https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/water/manage/>: General information from the USDA Natural Resources Conservation Service on DWM, including videos and information on cost share.
- <https://transformingdrainage.org/>: A storing house for DWM research from a collaborative research group across eight states.
- <https://www.iowalearningfarms.org/page/webinars>: On October 19, 2016 Iowa Learning Farms gave a webinar on controlled drainage from researchers Gary Sands, Tony Thompson, and Matt Helmers.
- <https://vimeo.com/101558889>: A video on conservation drainage created by the Leopold Center for Sustainable Agriculture at Iowa State University.

This project is part of the:



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The Conservation Media Library was supported by an Iowa NRCS funded Conservation Innovation Grant to the Soil and Water Conservation Society. To learn more about the Library and access other resources, go to www.swcs.org