

Name of Practice: AGRICULTURAL SINKHOLE PROTECTION
DCR Specifications for No. WQ-11

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's agricultural sinkhole protection best management practice that are applicable to all contracts entered into with respect to that practice.

A. Description and Purpose

This practice will provide a protection method to improve groundwater quality from surface contamination.

The purpose of this practice is to improve water quality by removing sources of pollution from sinkholes and providing an adequate buffer to trap and filter sediments and nutrients from surface flows that enter the groundwater through sinkholes.

B. Policies and Specifications

1. Cost-share and tax credits are authorized:
 - i. For measures to remove and properly dispose of all foreign materials and debris dumped in and around sinkholes.
 - ii. For associated structural and agronomic measures to provide adequate vegetation for filtering and sediment trapping of surface run off.
 - iii. For fencing in order to provide livestock exclusion and personal safety in these areas.
2. Consideration should be given to wildlife, any rare, threatened and/or endangered species (federal or state), and enhancing the appearance of the area when establishing the protective measures.
3. Site geology and hydrology must be considered in planning and installing component practices. Any openings such as swallets or cave entrances encountered with the installation of this practice will be documented and reported to The Department of Conservation and Recreation Division of Natural Heritage.
4. All debris (except biodegradable woody debris, rocks, and other mineral matter) removed from the sinkhole will be transported off site and disposed of in an environmentally safe manner. Should any hazardous material be anticipated or found during construction, local officials dealing with hazardous materials must be notified. Prevention methods, such as on site "over pack" drums, may be required if hazardous materials are known to exist at the site.

5. Once established, no additional debris or material can be placed within the sinkhole proper or within 50 feet of the drainage ways leading into the sinkhole. Deposition of any foreign material will violate the life span requirements of this standard.
6. All land disturbance activity will be adequately stabilized with appropriate vegetation as part of this cleanup effort. Appropriate vegetation will include, whenever possible, native grasses and shrubs.
7. Priority will be given to those sinkholes that:
 - i. Have direct livestock access or are connected to drainage ways with livestock access, in which case the sinkhole protection BMP should be installed in conjunction with fencing the livestock out of the drainage way.
 - ii. Are actively taking water by way of perennial streams, intermittent streams, or any other channeled flow.
 - iii. Are connected to external, non-channelized drainage ways (swales).
 - iv. Exhibit multiple characteristics cited in item C.8.
8. This practice is subject to NRCS Standard 500 Obstruction Removal, 342 Critical Area Planting, 362 Diversion, 382 Fence, 390 Riparian Herbaceous Buffer, 391 Riparian Forest Buffer, 393 Filter Strip, 472 Access Control, and 612 Tree and Shrub Establishment.
9. All practice components implemented must be maintained for a minimum of 10 years following the calendar year of certification of completion. The lifespan begins on Jan. 1 of the calendar year following the year of implementation. By accepting either a cost-share payment or a state tax credit for this practice the participant agrees to maintain all practice components for the specified lifespan. This practice is subject to spot check by the District throughout the lifespan of the practice and failure to maintain the practice may result in reimbursement of cost share and/or tax credits.

C. Rate(s)

1. A rate based on 75% of the cost of all eligible components to protect the sinkhole has been established. Cost-share may be from state funds or a combination of state and other sources.
2. A rate based on 75% of the cost for debris removal has been established not to exceed \$4,000 of Virginia Agricultural BMP Cost-Share funds. Cost-share may be from state funds or a combination of state and other sources.
3. As set forth by Virginia Code § 58.1-339.3 and §58.1-439.5, Virginia currently provides a tax credit for implementation of certain BMP practices. The current tax credit rate, which is subject to change in accordance with the Code of Virginia, is 25% of the total eligible cost not to exceed \$17,500.00.

4. If a participant receives cost-share, only the participant's eligible out-of-pocket share of the project cost is used to determine the tax credit.

D. Technical Responsibility

Technical and administrative responsibility is assigned to qualified technical DCR and District staff in consultation, where appropriate and based on the controlling standard, with DCR, Virginia Certified Nutrient Management Planner(s), NRCS, DOF, and VCE. Individuals certifying technical need and technical practice installation shall have appropriate certifications as identified above and/or Engineering Job Approval Authority (EJAA) for the designed and installed component(s). All practices are subject to spot check procedures and any other quality control measures.

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