

**COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER DIVISION  
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**Subject:** Guidance Memorandum No. 08-2004

Regulation of Ditches under the Virginia Water Protection Permit Program

**To:** Regional Directors

**From:** Ellen Gilinsky, Ph.D., Director



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**Copies:** James Golden, Rick Weeks, Regional VWP Managers, Regional Water Permit Managers, VWPP Staff

**Summary:**

The purpose of this guidance is to identify the circumstances under which different types of ditches should be considered a component of state waters and, as such, when these features should be regulated under the VWPP program.

**Electronic Copy:**

An electronic copy of this guidance in PDF format is available for staff internally on DEQNET, and for the general public on DEQ's website at: <http://www.deq.virginia.gov>.

**Contact information:**

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**Disclaimer:**

**This document is provided as guidance and, as such, sets forth standard operating procedures for the agency. However, it does not mandate any particular method nor does it prohibit any particular method for the analysis of data, establishment of a wasteload allocation, or establishment of a permit limit. If alternative proposals are made, such proposals should be reviewed and accepted or denied based on their technical adequacy and compliance with appropriate laws and regulations.**

## **REGULATION OF ACTIVITIES IN DITCHES AND ASSOCIATED WATERS**

### **Background:**

State Water Control Law (§ 62.1-44.15:21.C) states that “Any delineation accepted by the U.S. Army Corps of Engineers (the Corps) as sufficient for its exercise of jurisdiction pursuant to § 404 of the Clean Water Act shall be determinative of the geographic area of that delineated wetland.” In addition, according to the MOU between DEQ and the Norfolk Corps, as part of the delineation confirmation the Corps is to indicate what waters may be considered state-only in terms of jurisdiction. A delineation confirmation identifies the limits of surface waters. DEQ has relied on these delineation confirmations in determining the type of surface waters present for a particular project. However, it is DEQ’s responsibility to determine jurisdiction over those waters. DEQ has jurisdiction over surface waters of the state. In contrast, DEQ regulates certain activities in those surface waters.

### **I. Purpose:**

The purpose of this guidance is to clarify when activities in ditches are under our statutory authority. Ditches may contain wetlands, uplands, or open water (flowing or non-flowing water). Ditches may be constructed in wetlands or in uplands. In some cases, these ditches are dry most of the year; in others they contain standing or flowing water for lengthy periods of time. In many cases, ditches contain wetlands that satisfy the soil, hydrology, and vegetation criteria contained in the 1987 Corps of Engineers Wetland Delineation Manual.

DEQ has jurisdiction over all surface waters, including wetlands; therefore ditches that contain surface waters are jurisdictional. However, there are certain activities in certain types of jurisdictional waters located in ditches that DEQ may not choose to regulate based on the level of potential risk to water quality and fish and wildlife resources.

Ditches are inherently constructed for a purpose. It is often necessary to periodically maintain the integrity of the ditch in order to maintain that purpose. Because ditches can be constructed in uplands but contain surface waters or may be so integral to a drainage system that the natural aspects of the original surface water are lost, we must consider the need to consistently, and efficiently review proposed impacts to these ditches while protecting Virginia’s water quality.

This guidance document will answer the following questions:

- 1) When are wetlands in ditches jurisdictional for DEQ?
- 2) What is the difference between a channelized stream and a ditch?
- 3) What activities in ditches are regulated by DEQ?
- 4) How does DEQ regulate activities in surface waters that are integral parts of a drainage system?

## II. Definitions

For the purposes of VWP jurisdiction, the following definitions apply:

**Channelization** is defined in VWP regulation as “the alteration of a stream channel by widening, deepening, straightening, cleaning or paving certain areas”.

**Channelized Stream** is defined as a stream that has been widened, deepened, straightened, cleaned or paved. Where streams have been relocated into a ditch, in whole or in part, the ditch is considered a channelized stream and is regulated as a stream.

**Ditch** is defined as a linear feature excavated for the purpose of draining or directing surface or groundwater. Ditches may also be constructed to collect groundwater or surface water for the purposes of irrigation.

**Drainage System** is defined as a series of watercourses designed to direct excess water.

**Maintenance** is defined as activities that return a feature to its original design standards. For example, a maintained ditch does not exceed the average dimensions of the original ditch (no change is the cross-sectional dimensions). Culverting a ditch is not considered maintenance. Maintenance generally includes, but is not limited to, activities such as:

- Excavation of accumulated sediments
- Re-shaping of side slopes
- Stabilization of side slopes
- Armoring, lining, and/or paving where the ditch was previously armored, lined, or paved.

**Normal agricultural activities** are defined by VWP regulation as those activities defined as an agricultural operation in § 3.1-22.29 of the Code of Virginia and any activity that is conducted as part of or in furtherance of such agricultural operation, but shall not include any activity for which a permit would have been required as of January 1, 1997, under 33 USC § 1344 or any regulations promulgated pursuant thereto. Activities such as plowing, seeding, cultivating, minor drainage and harvesting for the production of food, fiber and forest products, or upland soil and water conservation practices are considered normal agricultural activities.

**Open Water Ditch** is defined as those ditches that are inundated with surface water for a sufficient period of time during a normal year to develop an Ordinary High Water Mark but that do not contain vegetation during all or part of the year.

**Ordinary high water or ordinary high water mark (OHWM)** is defined in VWP regulation as “the line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank; shelving; changes in the character of soil; destruction of terrestrial vegetation; the presence of litter and debris; or other appropriate means that consider the characteristics of the surrounding areas”.

**Prior Converted Cropland (PC Cropland)** as defined by the Natural Resources Conservation Service (NRCS) are those wetlands which were both manipulated (drained or otherwise physically altered to remove excess water from the land) and cropped before December 23, 1985, to the extent that they no longer exhibit important wetland values. PC Cropland shall be considered abandoned when it has lain idle so long that modifications to the hydrological regime are necessary to resume operation or if agricultural activities have not occurred on the site within the previous 5 years. A site is not considered abandoned if the land use changes but the site was cropped within the previous 5 years.

**State waters** are defined in statute and regulation as “all water, on the surface and under the ground, wholly or partially within or bordering the Commonwealth or within its jurisdiction, including wetlands”.

**Stream** is defined as a natural body of flowing water, such as a brook or a river. Streams do not always contain flowing water but contain flowing water for a significant period of time such that the stream has a defined bed and bank and an ordinary high water mark. The ordinary high water mark does not need to be continuously apparent throughout the stream reach.

**Stream bed** is defined in VWP regulation as “the substrate of a stream, as measured between the ordinary high water marks along a length of stream. The substrate may consist of organic matter, bedrock or inorganic particles that range in size from clay to boulders, or a combination of both. Areas contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed”.

**Surface water** is defined in statute and regulation as “all state waters that are not ground water as defined in § 62.1-255 of the Code of Virginia”. Thus, ditches that contain and/or convey surface water are considered state waters.

### **III. VWPP Program Regulatory Decision Process:**

Given the foregoing definitions, the following guidelines should be applied when determining whether a ditch containing wetlands and/or open water is subject to the VWPP regulations. Streams, ditches containing streams, and channelized streams are covered in Section V. Should a project proponent have a question regarding DEQ jurisdiction or if an activity is regulated, DEQ staff can provide a permit determination using the following guidelines.

1. Ditches excavated through wetlands are jurisdictional. Maintenance of existing drainage and irrigation ditches is excluded from regulation. All other activities in the ditch, unless specifically excluded in VWP regulation, are regulated. Therefore, activities in the drainage or irrigation ditches for the purposes of converting the area to another use are regulated (such as filling the ditch to create uplands). DEQ staff will determine, based on the information provided by the applicant and field visits, whether the ditch is vegetated (wetland) or unvegetated (open water) in order to determine compensation requirements.

2. Normal agricultural and silvicultural activities proposed in ditches that are associated with an active agricultural or silvicultural facility, are **not** regulated in accordance with VWP Regulation 9VAC25-210-60. This exemption does not authorize activities in the drainage or irrigation ditches for the purposes of converting the areas to another use. This exemption is not extended to stream impacts unless the activity is specifically excluded in VWP regulation. This exemption does not extend to alterations necessary to convert the property to another use (i.e., residential, commercial).
3. Activities proposed in ditches that are associated with 'prior converted cropland' are **not** regulated in accordance with VWP Regulation 9VAC25-210-60. Since VWP does not regulate PC cropland, the ditches that are a part of the PC cropland designation are not regulated. This exemption is not extended to stream impacts unless the activity is specifically excluded in VWP regulation.
4. Ditches excavated through wetlands and associated with abandoned PC cropland **are** jurisdictional.
5. If a ditch was constructed in an upland **AND** contains wetlands and/or open water, determine if the ditch is connected to another surface water (upstream or downstream):
  - a. If a ditch is **not** connected to a surface water (i.e., it is isolated), it is **not** regulated. If the ditch contains wetlands and/or open water but is not connected to another surface water, activities within the ditch are not regulated.
  - b. If a ditch **is** connected to a surface water, determine if the activity will affect upstream, downstream, or other surface waters **OR** if the activity will affect a threatened or endangered species. The Corps may identify these ditches as 'jurisdictional ditches' or 'other waters of the US' in their delineation confirmation.

An example of an activity that is not regulated in ditches that contain wetlands or open water **and** are connected to surface waters is the placement of a properly sized culvert for a driveway or roadway crossing that does not cause flooding upstream or affect downstream hydrology and where proper erosion and sediment controls are in place.

An example of an activity that is regulated in ditches that contain wetlands or open water **and** are connected to surface waters is the relocation of a ditch that would remove hydrology from a downstream surface water or a portion thereof.

6. Activities in ditches constructed in an upland and that receive water solely from 'artificial' sources are not regulated, even if they contain wetlands or open water. Examples of these ditches include: ditches that drain water applied in greenhouses; ditches that drain a car-wash facility; roadside ditches that convey water solely off of road and surrounding upland areas; and agricultural ditches that convey excess irrigation water from upland fields.
7. Activities in ditches, or any surface water, created during a mining operation that is

permitted by the Department of Mines, Minerals, and Energy (DMME), Division of Mined Land Reclamation (DMLR), are not regulated by DEQ as state waters during the life of the mining permit. However, these same waters do become state waters when the site is no longer under an active DMME permit.

#### **IV. Activities in Ditches that are excluded from VWPP regulation:**

There are activities that are excluded from regulation when conducted in ditches containing surface waters (9 VAC 25-210-60). These activities include construction and maintenance of irrigation ditches for agricultural operations, the maintenance of drainage ditches, and fill associated with appurtenant facilities that are functionally related to irrigation ditches. The maintenance dredging of existing ditches is included in this exclusion provided that the final dimensions of the maintained ditch do not exceed the designed cross-sectional dimensions of the original ditch. The construction of new drainage ditches is not excluded, nor is the filling of existing ditches in accordance with this guidance. Channelization of streams is expressly not included in this exclusion.

In order for a maintenance activity to be excluded from VWP regulation, a project proponent shall demonstrate that the ditch is included in an existing drainage or irrigation easement, an existing drainage or irrigation system, on an existing drainage or irrigation map, or that the ditch has historically been maintained for the purpose of drainage or irrigation. If they cannot provide this demonstration, a VWP permit may be required to establish the ditch as a drainage or irrigation ditch. Once a ditch is established as a drainage or irrigation ditch, it shall be classified as such for all future maintenance activities. The project proponent must maintain documentation establishing the ditch as a drainage or irrigation ditch and must make this documentation available to DEQ upon request.

#### **V. Streams, Ditches, and Channelized Streams**

The VWP regulation makes a distinction between ditches and channelized streams. In many parts of the state, streams have been channelized and used as stormwater conveyances (i.e., streams located along roads that serve as roadside ditches and streams that serve as drainages in certain low-lying localities). These streams may colloquially be called ‘ditches’ even though they are actually part of the stream network. Streams that have been channelized, relocated, or incorporated into a ditch, wholly or in part, are still considered streams and are regulated as streams. (In other words, when a stream is relocated in whole or in part into a ditch, that ditch is regulated as a stream). However, it may be necessary to maintain the secondary purpose of these features (i.e., drainage).

The proponent of a proposed activity located in a channelized stream or ditch containing a stream shall document that the stream is included in an existing drainage easement, an existing drainage system or map, or that the stream has historically been channelized for this secondary purpose. The VWP Project Manager should consider proposals to maintain the channelized nature of these streams on a case-by-case basis. Factors to be considered include, but are not limited to:

1. Is this a new channelization?

2. Has the channelized stream naturalized (developed stable pattern, dimension, and profile)?
3. Will the activity alter the physical, chemical, or biological nature of the stream?
4. Will the functions and values of the stream be diminished?
5. Will the activity alter the physical, chemical, or biological nature of other waters?
6. Are there rare, threatened, or endangered species (i.e., mussels) that will be affected?
7. Will the activity degrade the stream beyond the level proposed by the activity (i.e. cause new/increased instability due to inappropriate pattern, dimension, and/or profile)?

If the answer to all of these questions is no, no permit is required for the proposed activity. If the answer is yes to one or more of these questions, the VWP Project Manager should consider the type of permit and compensation required for the proposed activity.

New stream channelization is regulated. In other words, streams included in a drainage easement that were never channelized for the purpose of drainage, cannot be considered for maintenance. For example, stormwater from a subdivision is discharged to a stream. That stream is not channelized but carries the stormwater flow to a regional stormwater impoundment. Excavation in that stream is regulated as channelization and requires permit authorization. Channelization of a stream is not considered maintenance.

The following information should be reviewed to determine if a linear feature is a stream or a ditch: topographic maps, aerial photographs, soil surveys, and previous design plans (e.g. VDOT and locality drainage plans). Field observations must also be used to determine if there is a stream channel upstream and/or downstream of the linear feature and if the feature is a channelized stream. The same information should be used in an enforcement case to determine if a feature is a stream.

## **VI. Compensation:**

For permitted activities, compensation is required for impacts greater than 1/10 acre of wetlands and open water and greater than 300 linear feet of stream channel. For ditches containing open water or wetlands, the impacts are calculated in acres. For streams, channelized streams, or ditches containing streams, the impacts are calculated in linear feet. In accordance with VWP Regulation, “compensation for open water impacts may be required, as appropriate, to protect state waters and fish and wildlife resources from significant impairment.”