



IMPORTANT INFORMATION FOR
FARMERS AND LANDOWNERS



Where is your next
project planned?



STREAM



FLOODPLAIN



WETLAND

What you need to know and do *before* you begin work.

When small projects cause **big** problems

Small projects planned for streams, floodplains and wetlands can have big environmental and legal consequences for farmers and landowners.

Every year, we investigate dozens of complaints from neighbors and concerned citizens about unauthorized activities in streams, floodplains, and wetlands. In most instances, farmers and landowners are simply unaware that they need a permit for certain activities—even when these activities take place on their own land. These violations can result in hundreds, even thousands of dollars in penalties and legal fees, along with unexpected stop work orders and expensive corrective actions.

Why do you need a permit?

Streams, floodplains and wetlands perform many important environmental functions for you and your neighbors—both upstream and downstream.

Altering a stream channel—or any body of water—can have major impacts on water quality, flood control, wildlife and fish migration. For downstream neighbors, an altered stream channel can lose its capacity to store and control the speed of flowing water when it rains. The result is downstream flooding.

If you plan to remove trees, grasses and bushy growth along the water's edge, erosion and sediment issues are sure to follow. Likewise, unauthorized activities in wetlands and along floodplains can have unforeseen consequences for flood control, erosion, water quality, and the fish and wildlife that depend on these ecosystems for food and shelter.

You can protect yourself, dodge trouble and safeguard these critical natural resources by getting the proper authorizations *before* you begin a project. This ensures that all work performed meets environmental requirements with minimal impacts to the environment.

Common activities that require a permit.

Work performed in or around:

- **STREAMS**

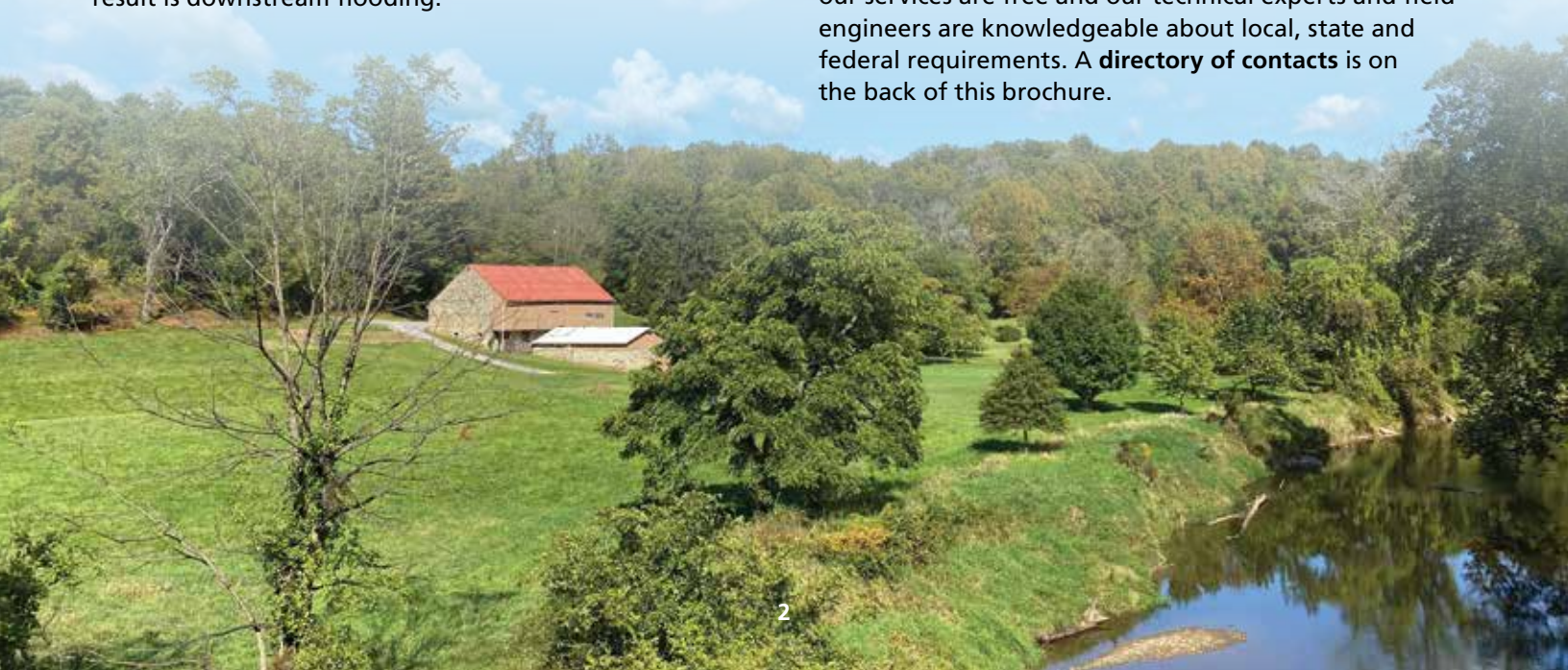
- Activities and projects that alter a stream channel
- Installation or replacement of bridges or culverts
- Grading streambanks, including removal of tree and brush stumps and roots

- **100-YEAR FLOODPLAIN**

- **WETLANDS**

Help is just a phone call away.

Your local soil conservation district can help you get the necessary authorizations to begin a project. All of our services are free and our technical experts and field engineers are knowledgeable about local, state and federal requirements. A **directory of contacts** is on the back of this brochure.



Do you have a project planned for a Stream, Floodplain, or Wetland?

STREAM: A body of water that flows for at least part of the year.



- Streams drain water from the landscape.
- Streams create unique habitat for plants and wildlife.
- Winding curves or bends in a stream called meanders help to slow stream flow and store water during flood events.
- There are more than 9,000 miles of perennial or “flowing” streams in Maryland with at least as many smaller, “intermittent” streams that only flow part of the year.
- Activities in streams require multiple authorizations and approvals.

How big is your culvert?



✘ This culvert is too small and will not drain water quickly enough during storm events.



✔ This culvert is correctly sized and will handle increased stream flow.

COMMON STREAM VIOLATIONS

- **Straightening a stream** causes water to flow faster, removes storage capacity for flood waters, and increases erosion. Higher stream velocity and less flood water storage can cause problems for upstream and downstream neighbors.
- **Stabilizing a section of streambank with concrete, rocks, or other materials** moves erosion problems downstream to an area below the stabilization project.
- **Repairing eroded streambanks with fill materials** can have consequences for downstream neighbors. Materials placed on streambanks can wash downstream during floods.
- **Removing tree stumps and roots from streambanks** destabilizes the banks, increases erosion, and can change the course of the stream.
- **Bridges and culverts that are incorrectly sized or poorly placed** can prevent fish and wildlife from migrating upstream. Undersized pipes will restrict water flow during flood events and construction activities can cause sediment to fill in stream channels.

FLOODPLAIN: A flat low-lying area next to a stream, river, or estuary that experiences occasional flooding.

- Healthy floodplains protect against floods, recharge groundwater, improve water quality, and provide wildlife habitat.
- Floodplains reduce the frequency and severity of floods.
- Floodplains store water when streams overflow and slowly release that water into adjacent waterways or underground aquifers.
- In Maryland, more than 850,000 acres of land fall within the 100-year floodplain, an area of land that is likely to be underwater during severe storms.
- Activities in the 100-year floodplain require multiple authorizations.

COMMON FLOODPLAIN VIOLATIONS

- **Depositing fill material** (soil, rocks, rubble, construction debris, woody debris, etc.) in the floodplain requires a permit.



WETLAND: An area that has standing water or elevated water tables for all or part of the year and is characterized by specific vegetation and soils.

- **Grading the existing soil in the floodplain** can impact upstream and downstream properties.
- **Construction and development activities** in floodplains affect the flood carrying capacity of waterways and can have serious and costly consequences. These activities must meet special building codes and cannot increase flooding or create a dangerous situation, especially on someone else’s property. Examples of unauthorized activities include new construction projects and expansions, improvements or renovations to existing structures.
- **Trash, debris and brush piles stored in a floodplain** can easily wash into the stream channel during storms and impact downstream properties.
- **Manure that is stockpiled in the floodplain** poses a direct threat to water quality. Maryland’s nutrient management regulations are quite clear on this. Manure should never be stored in areas prone to flooding. Every precaution must be taken to reduce manure and its nutrient content from reaching waters of the state.



- Wetlands reduce flooding and erosion by storing water and then releasing it slowly.
- Wetlands enhance water quality by capturing sediment and filtering pollutants from surface waters.
- Wetlands help maintain stream flow during dry periods.
- Wetlands provide unique animal and plant habitat.
- Wetlands create many recreational opportunities including hunting, fishing, and birdwatching.
- Maryland has an estimated one million acres of fresh and saltwater wetlands.
- Activities in wetlands require prior authorization.

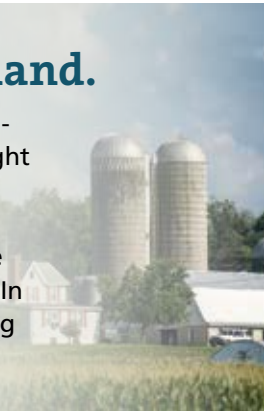
COMMON WETLAND VIOLATIONS

- **Draining a wetland by means of drainage ditches or subsurface drainage tile** will result in larger floods, increased erosion, loss of habitat, diminished water quality and reduced stream flow during droughts.
- **Adding fill material to a wetland** reduces its ability to store water and provide environmental benefits.

Avoid the hassle. Get approval for your project beforehand.

Most activities in streams, floodplains and wetlands require a permit or other authorization before you begin work. The experts at your local soil conservation district can point you in the right direction and help you determine what permits or authorizations are required.

We can also help you install many types of best management practices on your farm to achieve your goals and improve water quality—a win-win for you, your farm and its natural resources. In these instances, we will help you apply for both permits and cost-share funding which can bring down the cost of an improvement substantially. Call us today to get started.



A STORY OF TWO STREAM CROSSING PROJECTS



STREAM PROJECT Gone Wrong

On a rare free weekend, a farmer decides to regrade the streambank next to his pasture. He is concerned about the safety of his cattle. In recent months it has become dangerous for his cows to climb the steep, muddy banks of the stream that they must cross to get to his far pastures. A downstream neighbor notices the excavation equipment and is concerned about impacts to the stream. The neighbor alerts the Maryland Department of the Environment. In short order, a team of experts from the Maryland Departments of Environment and Agriculture and the local soil conservation district visit the site and identify multiple violations. The landowner is issued a corrective order to restore the damaged streambank by a specific date and apply for the necessary permits to perform work in the stream. Failure to comply will result in fines and penalties. Moreover, the landowner is directed to perform work that will leave the stream in better condition than he found it. The work will require an engineered design that includes erosion and sediment control measures, a pump around, streambank stabilization practices, and the establishment of a buffer area.

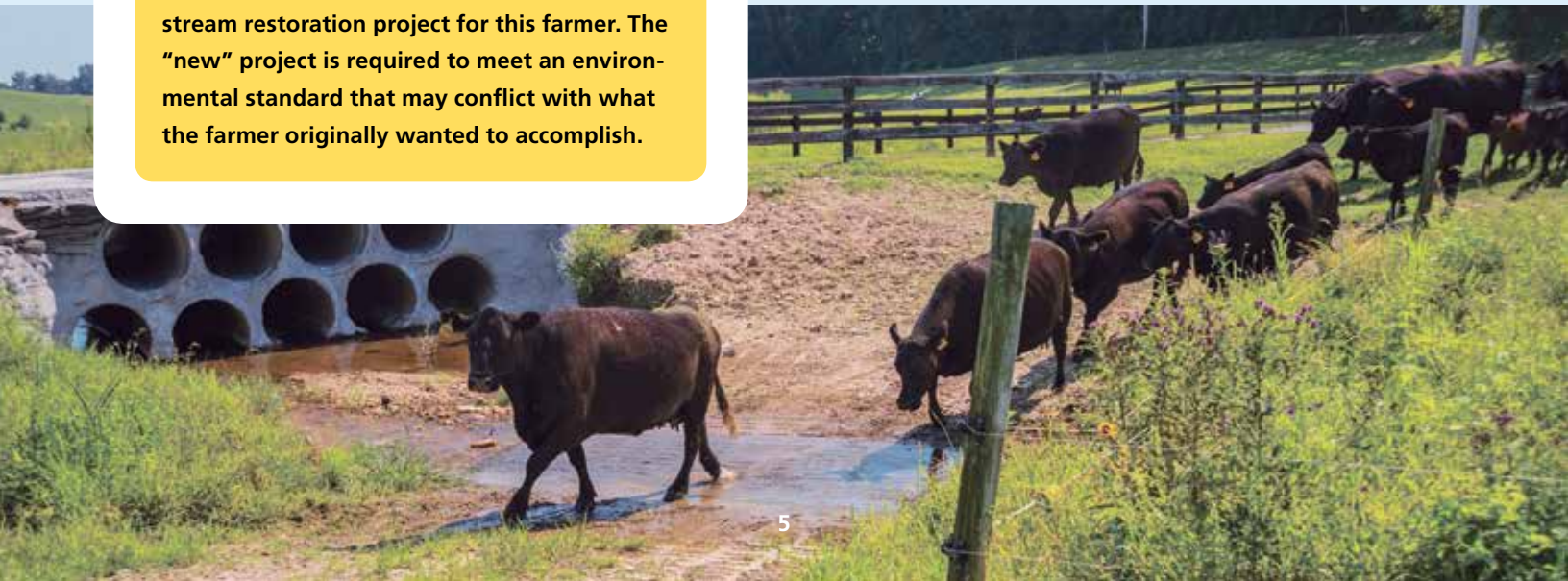
TAKEAWAY: A weekend project quickly and unexpectedly turned into an expensive stream restoration project for this farmer. The “new” project is required to meet an environmental standard that may conflict with what the farmer originally wanted to accomplish.



STREAM PROJECT Done Right

A farmer wants to create a safer and healthier way for her cattle to cross a stream to get to upland pastures. She knows that her local soil conservation district provides free technical services and can help her apply for conservation grants to install practices on her farm that protect water quality. She contacts the local office serving her county. A soil conservationist visits the farm, listens to the farmer’s concerns, and helps her identify the best location for a stream crossing. Back at the office, conservation specialists design a stream crossing and fencing plan to exclude animals from the stream. All of the design work is performed free of charge. District staff also secure the necessary permits and identify federal and state cost-share programs that will pay for a substantial portion of the work.

TAKEAWAY: Within a few months the new stream crossing and exclusion fencing are installed. The farmer now has a safer and healthier way to move cattle across the stream, does not face penalties and fines, and is helping to improve water quality.



Maryland's Soil Conservation Districts

| | | |
|-------------------|----------------------|--------------------------------------------------------------------------------------------------------|
| Allegany | 240-609-3493 | alleganyscd.com |
| Anne Arundel | 410-571-6757 | aascd.org |
| Baltimore County | 410-527-5920, ext. 3 | bcscd.org |
| Calvert | 410-535-1521, ext. 3 | calvertsoil.org |
| Caroline | 410-479-1202, ext. 3 | |
| Carroll | 410-848-8200, ext. 3 | carrollsoil.com |
| Catoctin | 301-695-2803, ext. 3 | catoctinfrederickscd.com |
| Cecil | 410-398-4411, ext. 3 | cecilscd.com |
| Charles | 301-638-3028 | charlesscd.com |
| Dorchester | 410-228-5640, ext. 3 | |
| Frederick | 301-695-2803, ext. 3 | catoctinfrederickscd.com |
| Garrett | 301-501-5886 | garrettscd.org |
| Harford | 410-638-4828 | harfordscd.org |
| Howard | 410-313-0680 | howardscd.org |
| Kent | 410-778-5150, ext. 3 | kentsoilandwaterconservationdistrict.org |
| Montgomery | 301-590-2855 | montgomeryscd.org |
| Prince George's | 301-574-5162, ext. 3 | pgscd.org |
| Queen Anne's | 410-758-3136, ext. 3 | qascd.com |
| St. Mary's | 301-475-8402, ext. 3 | stmarysscd.com |
| Somerset | 410-621-9310 | |
| Talbot | 410-822-1577, ext. 5 | talbotscd.com |
| Washington County | 301-797-6821, ext. 3 | conservationplace.com |
| Wicomico | 410-546-4777, ext. 3 | |
| Worcester | 410-632-5439, ext. 3 | |

HELPFUL LINKS FOR YOU:

- [A Farmer's Guide to Environmental Permits](#)
- [Maryland Department of Agriculture Office of Resource Conservation](#)
- [Maryland Department of the Environment Water and Science website](#)



Maryland Department of Agriculture

Office of Resource Conservation

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