



2nd Edition

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Of Special Interest:

- Contractors Earn Kudos for Protecting "The River"
- Preventing Stormwater Pollution from Land-Disturbing Activities
- What is a SWPPP?

Remember . . .



Pollutants that leave YOUR site via the storm drainage system travel directly, and WITHOUT treatment, to the nearest stream, creek, or the Roanoke River!

IT'S JUST DIRT

A Newsletter for Contractors

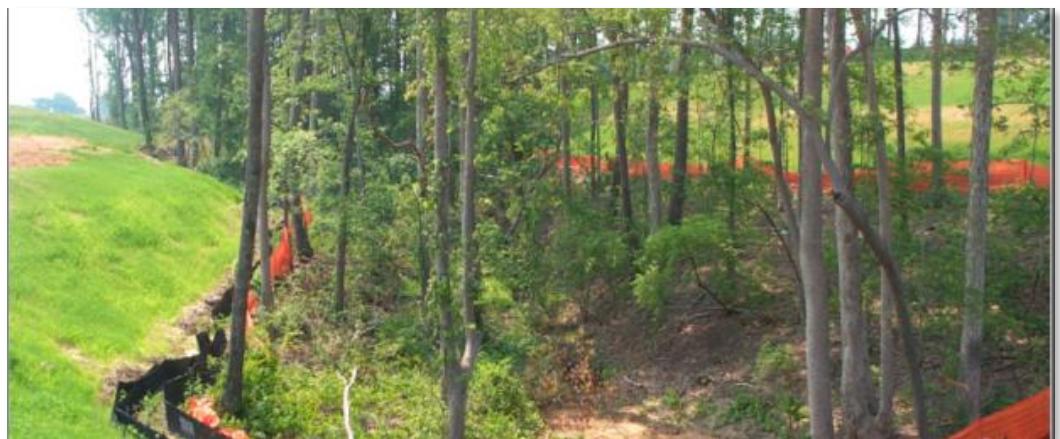
JUNE 2018

County Considering a Stream Buffer Ordinance

Roanoke County has many streams, including the Roanoke River, and most of them are impaired due to excessive sediment loadings. A primary cause of sediment reaching local waters is its migration from land-disturbing activities, especially those located in the "aquatic corridor," i.e., that area where the land and water meet. Grading right down to the creek or stream or placing fill material near or at the creek, results in bare soil that is highly subject to erosion. Once erosion starts, the dislodged soil particles start to migrate and eventually enter the adjacent waterway. This causes property damage for the landowner, fouls habitat for the fish and other aquatic critters, and degrades overall water quality.

In an effort to prevent further damage to area waterways and avoid the consequences mentioned above, Roanoke County is considering adoption of a Stream Buffer Ordinance via revisions to Chapter 8.1 of the Roanoke County Code (Erosion and Sediment Control).

The new requirements would provide for an **undisturbed buffer**, 25 feet in width, around perennial and intermittent streams and wetlands. No land disturbance would be allowed in this zone. This requirement would affect all land-disturbing activities beside streams that require permitting under the County's Erosion and Sediment Control (ESC) Ordinance.



Example of a land-disturbing project employing a 25 ft. wide stream buffer

The new requirements would also provide for the following:

- Exceptions for certain utility lines, water dependent facilities, and road crossings
- Exemptions for lots platted prior to the effective date of the new requirements, if compliance would result in significantly higher development costs

Additional information, and a draft of the proposed revisions to Chapter 8.1 Erosion and Sediment Control of the Roanoke County Code may be found at the following website:
<https://www.roanokecountyva.gov/index.aspx?NID=1648>

NOTE: Roanoke County is currently accepting public comments on the draft Stream Buffer Ordinance. For more information or to provide your comments, please call the County's Stormwater Program Manager, Cynthia Linkenhoker, at 540-772-2036. ■

Stormwater Clean Award Winners

Roanoke County's Department of Community Development proudly unveiled its Contractor Appreciation Program in the spring of 2017. The program was created to recognize land-disturbing contractors who conduct exemplary work within the County to protect its natural water resources, despite the difficulties presented by the area's steep slopes and highly erodible soils.

Within just a few months of the Program's announcement, a variety of projects were nominated. A Stormwater Clean Award banner, like the one shown below, was placed on each of the project sites at the time of their selection.



Roanoke County's Stormwater Program Manager, Cindy Linkenhoker, presented the Stormwater Clean Award to Jeff Nordstrom of Charles Perry Partners, Inc. (CPPI) at the LewisGale Emergency Center project. CPPI has the distinguished honor of being the first recipient of the County's Stormwater Clean Award. Such banners remain on-site throughout the construction period, provided the selected project stays in compliance with the program requirements.

Since the inception of the program, there have been five recipient projects, two of which are still under construction:

Building Consultants, LLC

Single Family Residence
1600 Bottom Creek Lane
Bent Mountain, VA

Charles Perry Partners, Inc.

LewisGale Emergency Center
Corner of Ogden and Electric Roads
Roanoke, VA

David Frank Homes

Single Family Residence
4211 Alleghany Drive
Salem, VA

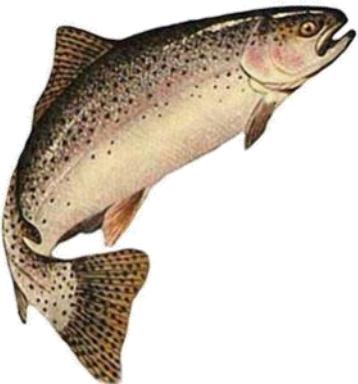
Dominion Builders

Single Family Residence
6726 Waterstone Drive
Roanoke, VA

Price Buildings, Inc.

Christ the King Presbyterian Church
2335 Electric Road
Roanoke, VA

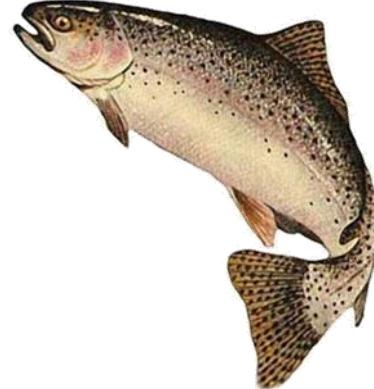


Stormwater Clean Award Recipients - *continued from Page 2*

Roanoke County's inspector, Rhonda Ferris, congratulated Rick Sigmon of Price Buildings, Inc. for their exemplary work on the Christ the King Presbyterian Church project.



Rhonda Ferris, inspector for Roanoke County, presented the Stormwater Clean Award to Stephen Jamison, of Building Consultants, LLC, and the site owners, Scott and Helen Barrier. The future home site is located at 1600 Bottom Creek Lane.



Roanoke County's inspector, Rhonda Ferris, presented the Stormwater Clean Award to the David Frank Homes' single family residential project at 4211 Allegheny Drive.



David Vaughn, of Dominion Builders, proudly accepted Roanoke County's Stormwater Clean Award for his single family residential project at 6726 Waterstone Drive.

Pollution Prevention & Good Housekeeping: Unveiling the Good and the Bad

Learning to recognize proper and improper practices associated with stormwater pollution prevention and overall good housekeeping is a key facet of keeping your project in compliance. Stormwater runoff is NOT treated before discharging into the area's receiving waters, so anything you can do to keep stormwater from coming into contact with pollutants typically found on a construction site is a plus, not only for your project site but also for local water quality.

Here are some examples of both good and bad practices. Be sure your employees and subs know what **NOT TO DO**.

*The Good... **WORTH REPEATING***



These portable toilets are appropriately placed on level ground in a grassy area, well away from any components of a storm drainage system. Anchoring to prevent tipping is encouraged.



This concrete washout was constructed in an easily-accessible area. It has been appropriately lined with plastic to prevent wash waters from infiltrating into the soil. (Note that portable concrete washouts are available for purchase; they are typically easier to install than those constructed on-site and are generally reusable.)

Once the concrete washout becomes almost full, hardened concrete should be removed and recycled. Remaining liquids may be recycled or disposed of in leak proof containers with construction waste. For more in-depth information about concrete washouts, see EPA's Fact Sheet at <https://www3.epa.gov/npdes/pubs/concretewashout.pdf>

*The Bad... **AVOID***



This portable toilet is inaptly placed adjacent to a storm drainage inlet, AND it is actively leaking into the inlet, which violates the County's Illicit Discharge Ordinance. Violations such as this may be subject to a **\$2500 per day fine** until corrected.



This concrete washout has become a concrete disposal area. It is inaccessible and unusable for its intended function.



Concrete has been inappropriately washed out directly onto the ground, which is another type of illicit discharge.

The Good... WORTH REPEATING

Keep dumpsters closed and ensure that they do not leak. Also, **DO NOT RINSE THEM OUT**, as the rinse water would be classified as an **Illicit Discharge** to the storm drainage system.



Keep a spill kit onsite, especially near hazardous material storage and fueling areas. Use it to clean up spilled fuel and other liquids. Properly dispose of the used materials and be sure to replenish the spill kit with fresh materials.



Use a drip pan when changing vehicle and equipment oil, and be sure to use an absorbent material, like cat litter, to clean up any spills. Put used, swept-up cat litter in the trash.

The Bad... AVOID

Dumpster Juice is a pollutant! What's in it? Who knows . . . Violations such as this may be subject to a **\$2500 per day fine** until corrected.



This open container is full and overflowing with an **un-named** murky, thick liquid. This makes it very difficult to determine how best to dispose of the substance. Instead, cover all containers and always label them.



Just one quart of oil can contaminate up to 250,000 gallons of water and can cause an oil slick almost 2 acres in size. ■

Developing a Stormwater Pollution Prevention Plan

SWPPP Requirements:

- The SWPPP must be amended whenever there is a change in design, construction, operation, or maintenance that has a significant effect on the discharge of pollutants to state waters and that has not been previously addressed in the SWPPP.
- The SWPPP must be maintained at a central location ONSITE! If an onsite location is not available, notice of the SWPPP's location must be posted near the main entrance at the construction site.

Section 9VAC25-870-54 of the Virginia Stormwater Management Program (VSMP) provides the requirements for preparing a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP must include (1) an approved Erosion and Sediment Control Plan, (2) an approved Stormwater Management Plan, (3) a Pollution Prevention Plan for regulated land-disturbing activities, and (4) a description of any additional control measures necessary to address a Total Maximum Daily Load (TMDL) requirement.

What is the Purpose of a SWPPP?¹

A SWPPP is a site-specific written document for a land-disturbing (construction) project that is designed to help prevent stormwater pollution. It is considered a "living document" that changes as the project changes, and it must:

- Identify potential sources of stormwater pollution at the construction site
- Describe practices to reduce pollutants in stormwater discharges from the construction site. This can often be achieved by controlling the volume of stormwater runoff (i.e., taking steps to allow stormwater to infiltrate into the soil)
- Identify procedures the operator will implement to comply with the terms and conditions of Virginia's [VPDES] Construction General Permit

What Requirements Must the SWPPP Address?

Pursuant to section 9VAC25-870-54, of the VSMP, the SWPPP must:

1. Control stormwater volume and velocity within the site to minimize soil erosion;
2. Control stormwater discharges, including both peak flow rates and total stormwater volume, to minimize erosion at outlets and to minimize downstream channel and stream bank erosion;
3. Minimize the amount of soil exposed during construction activity;
4. Minimize the disturbance of steep slopes;
5. Minimize sediment discharges from the site. The design, installation and maintenance of erosion and sediment controls must address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site;
6. Provide and maintain natural buffers around surface waters, direct stormwater to vegetated areas to increase sediment removal and maximize stormwater infiltration, unless infeasible;
7. Minimize soil compaction and, unless infeasible, preserve topsoil;
8. Stabilization of disturbed areas must, at a minimum, be initiated immediately whenever any clearing, grading, excavating, or other earth disturbing activities have permanently ceased on any portion of the site, or temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days. Stabilization must be completed within a period of time determined by the VSMP authority. In arid, semiarid, and drought-stricken areas where initiating vegetative stabilization measures immediately is infeasible, alternative stabilization measures must be employed as specified by the VSMP authority; and
9. Utilize outlet structures that withdraw water from the surface, unless infeasible, when discharging from basins and impoundments.

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¹ Developing Your Stormwater Pollution Prevention Plan. EPA-833-R-06-004. United States Environmental Protection Agency. May 2007.

Common SWPPP Compliance Problems During Inspections¹

According to the USEPA, the following are problems commonly found at construction sites. As you conduct your own site inspections, look for AND CORRECT any of these problems on your site:

- ◆ **Problem #1 - Not using phased grading or providing temporary or permanent cover (i.e., soil stabilization)**

In general, construction sites should phase their grading activities so that only a portion of the site is exposed at any one time. Also, disturbed areas that are not being actively worked should have temporary cover. Areas that are at final grade should receive permanent cover as soon as possible.

- ◆ **Problem #2 - No sediment controls onsite**

Sediment controls such as silt fences, sediment barriers, sediment traps and basins must be in place before soil disturbance activities begin. Don't proceed with grading work out-of-phase.

- ◆ **Problem #3 - No sediment control for temporary stockpiles**

Temporary stockpiles must be seeded, covered, or surrounded by properly installed silt fence. Stockpiles should never be placed on paved surfaces.

- ◆ **Problem #4 - No inlet protection**

All storm drain inlets that could receive a discharge from the construction site must be protected before construction begins and must be maintained until the site is finally stabilized.

- ◆ **Problem #5 - No BMPs to minimize vehicle tracking onto the road**

Vehicle exits must use BMPs such as stone pads, concrete or steel wash racks, or equivalent systems to prevent vehicle tracking of sediment.

- ◆ **Problem #6 - Improper solid waste or hazardous waste management**

Solid waste (including trash and debris) must be disposed of properly, and hazardous materials (including oil, gasoline, and paint) must be properly stored (which includes secondary containment). Properly manage portable sanitary facilities.

- ◆ **Problem #7 - Dewatering and other pollutant discharges at the construction site**

Construction site dewatering from building footings or other sources should not be discharged without treatment. Turbid water should be filtered or allowed to settle.

- ◆ **Problem #8 - Poorly managed washouts (concrete, paint, stucco)**

Water from washouts must not enter the storm drain system or a nearby receiving water. Make sure washouts are clearly marked, sized adequately, and frequently maintained.

- ◆ **Problem #9 - Inadequate BMP maintenance**

BMPs must be frequently inspected and maintained, if necessary. Maintenance should occur for BMPs that have reduced capacity to treat stormwater (construction general permits or state design manuals often contain information on when BMPs should be maintained), or BMPs that have been damaged and need to be repaired or replaced (such as storm drain inlet protection that has been damaged by trucks).

- ◆ **Problem #10 - Inadequate documentation or training**

Failing to develop a SWPPP, keep it up-to-date, or keep it onsite (or provide onsite notice of the SWPPP's location) are VPDES permit violations. You should ensure that SWPPP documentation, such as a copy of the coverage letter, inspection reports, and updates to the SWPPP, are all kept onsite. Likewise, personnel working onsite must be trained in the basics of stormwater pollution prevention and BMP installation/maintenance. ■

SWPPP Tips:

- Update & evaluate your SWPPP, adjust as needed
- Stabilize denuded areas as soon as practical
- Use EPA's SWPPP Template to prepare your SWPPP:
<http://www.epa.gov/npdes/swpppguide>



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This publication is a public service message brought to you by Roanoke County, Department of Community Development. As regulated by federal and state laws, the County's Stormwater Management Program must include public information strategies to encourage the prevention of stormwater pollution. For more brochures or information on ways to prevent stormwater pollution, please contact the County's Department of Community Development, Division of Stormwater Management, at 540-772-2065.

THE SCOOP: Hauling Dirt From Your Site

The Virginia Erosion and Sediment Control (ESC) Regulations (VESCR), specifically Minimum Standard 2 (MS-2), mandate that "the applicant is responsible for the temporary protection and permanent stabilization of all soil stockpiles on site **as well as borrow areas and soil intentionally transported from the project site.**" The highlighted portion of this requirement often catches contractors and property owners off guard. Suppose you are approached by a citizen who needs dirt. You have excess dirt on your project for which you need a disposal site. So, you opt to deliver dirt from your project to the citizen's property. As soon as you do this, YOU become responsible for providing temporary erosion controls on the citizen's property and for permanently stabilizing the transported material. Per MS-2, YOU, as the applicant, are responsible for the stabilization of the off-site material.

And, just what does it mean to provide permanent stabilization? It could mean pavement or stone, but if you use vegetation, then Minimum Standard 3 (MS-3) of the VESCR requires that **permanent vegetation shall not be considered established until a ground cover is achieved that is uniform in height,**



mature enough to survive, and thick enough to prevent erosion. Again, it is your responsibility, as the permit holder, to provide for temporary erosion controls and adequate stabilization of soil that is intentionally taken from your site and for any borrow areas from where you have obtained material.

PERMIT REQUIREMENTS

Along with stabilization requirements, you must insure that any site to which you haul dirt is similarly permitted to match your site's permit. For example, if your

project has coverage under Virginia's Stormwater Management Program (i.e., a VSMP permit), then you must take any dirt you haul off of your project to a VSMP-permitted site **OR** adjust your permit coverage to include the amount of off-site land disturbance. In the event that your project only has an ESC permit, but the land disturbance at the off-site location increases **the total disturbance** to over an acre, then you must get a VSMP permit for the entire activity (i.e., for the on- and off-site locations) or obtain an ESC permit for the off-site location **if** the amount of land disturbance at the off-site location is 2500 square feet or more. ■