

**TOWN OF VINTON**  
**Virginia Pollutant Discharge Elimination**  
**System (VPDES) Phase II Report**

**VSMP PERMIT NO. VARO40026**

**REPORTING PERIOD OF**  
**JULY 1, 2008 – JUNE 30, 2009**

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**SUPPORTING MATERIALS**

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# Clean Valley Council Outreach Programs For Pre School to High School

## Elementary School

### Preschool or Kindergarten (30 to 45 minutes)

#### ***Rigsby's Cleanup Surprise***

(Science SOL K.9, K.10, & Civics SOL K.7)

Students will identify differences between natural and human-made objects. They will recognize that they have control over litter. Students investigate a park that's been littered and meet "Rigsby", the Raccoon, who teaches the harm that litter brings to all of his park pals. They will learn what kinds of litter can be recycled.

**Vocabulary Introduced:** Litter, Natural Objects, Man Made Objects, Recycling

**Equipment Needed:** None

#### ***Who Polluted the River? (Can be adapted for grades K – 3)***

(Science SOL K.10, 1.8, 2.5, 2.7, 3.9, 3.10, 3.11)

Students will identify sources of pollution and how they get into the river. A pickle jar is used to represent the river, and students help "pollute" the river. Prevention of water pollution is discussed, to include recycling, reusing, and reducing waste.

**Vocabulary Introduced:** Litter, Natural Objects, Man Made Objects, Recycling;

(For grades 2-3: Pollution, Acid Rain, Sewage, Pesticides, Fertilizer)

**Equipment Needed:** None

### Grade 1 (45 minutes)

#### ***Think Earth***

(Science SOL 1.8 Economics 1.10,1.11)

Students identify natural resources which are found in the Greater Roanoke Valley and consider ways that they can personally reduce consumption of these resources.

**Vocabulary Introduced:** Natural Resources, Conservation

**Equipment Needed:** VCR

#### ***Wartville Wizard***

(Science SOL 1.8, Economics 1.10,1.11)

Students will identify the components of a community: human resources, natural resources, capital resources used to produce goods. A 35-mm slide story explores litter as being an undesirable component.

**Vocabulary Introduced:** Community, Litter

**Equipment Needed:** Slide projector, Cassette Player

#### ***The Truth about Trash***

(Science SOL 1.8)

Students will discover that trash has better uses than just throwing it in the "regular" trash can. Using Pokemon posters and a bag of collected trash, students will find better uses for trash. Optional activity: Using plastic drink bottles, students will create toys from trash.

**Vocabulary Introduced:** Litter, Solid Waste, Natural Resources

**Equipment Needed:** None

## **Grade 2 (45 minutes)**

### ***Kids-Eye View***

(Science SOL 2.5, 2.8)

Students will define ECOLOGY and will focus on ways in which they can care for their environment. A list of "25 Things Kids Can Do" is part of the program.

**Vocabulary Introduced:** Ecology, Environment

**Equipment Needed:** VCR

### ***The Lorax***

(Science SOL K.5, 2.5, 2.8, 3.6, 3.10)

Students will listen to Dr. Seuss' story of the "Lorax" to learn about the human effects on animals and the environment. They will recognize that they have control over their consumption of natural resources.

**Vocabulary Introduced:** Conservation, Environment, Ecology, Natural Resources, Pollution

**Equipment Needed:** VCR

### ***Travelin' Trash***

(Science SOL K.5, 1.8, 2.5, 3.6, 3.10) **Can be adapted for grades K-3.**

A series of activities/demonstrations that demonstrate the characteristics of marine debris, and how these characteristics affect where marine debris is found in the environment. Students will determine whether or not trash can float, be moved by the wind, or wash away.

**Vocabulary Introduced:** Buoyant, Marine Debris

**Equipment Needed:** None

## **Grade 3 (45 minutes)**

### ***Think Earth, "e"***

(Science SOL 3.6, 3.10)

Students will examine the 3 R's as a means to conserve identified natural resources.

**Vocabulary Introduced:** Reduce, Reuse, Recycle

**Equipment Needed:** VCR

### ***The Rotten Truth***

(Science SOL 3.10)

Solid waste disposal is a major industry. Students learn different methods of waste disposal and ways they personally can reduce the waste stream.

**Vocabulary Introduced:** Solid waste disposal, Landfill, Compost, Waste stream

**Equipment Needed:** VCR

## **Grade 4 (45 minutes)**

### **Aluminum (Plastic, or Paper) Recycling (Science SOL 4.2, 4.8)**

Students will follow a can to a recycling center and learn about recycling, how it works, why it's important, what they can do to help. Trash can be dangerous when it's not in its proper place: the garbage can or recycling can. Students will keep one piece of litter (aluminum can) in mind as they follow it from the street to a new container or usable item. This program can also substitute "Paper Recycling" or "Plastic Recycling" for the title. Students will see a variety of new materials that were recycled from other materials.

**Vocabulary Introduced:** Recycling, Reduce, Reuse, Natural Resources, Machines  
**Equipment Needed:** VCR

### ***Environmental Bingo***

(Science SOL 3.11,4.8)

Students will examine aspects of recycling and solid waste management, and then play a fun interactive game reviewing what they have learned.

**Vocabulary Introduced:** Litter, Recycle

**Equipment Needed:** None

## **Grade 4 - 5 (45 Minutes)**

### ***Watersheds to Oceans***

(Science SOL 4.8, 5.6; English SOL 4.2, 5.1, 5.8; Math SOL 4.12, 5.11)

Students will identify watersheds and map the movement of solid waste from storm drains to the ocean. The Enviroscape (or Watershed Demo Pans) will show the effects of erosion, pesticides, fertilizers, and litter on waterways and bodies of water. The effects of natural disasters and litter will be compared and contrasted.

**Vocabulary Introduced:** Litter, Solid Waste, Pollution, Watershed, Erosion, Pesticides, Fertilizers, Natural Disasters

**Equipment Needed:** None

### ***The Trash Train***

(Science SOL: 3.11, 4.5, 4.8, 5.6, 5.7)

Students will follow trash as it is brought in by localities (Roanoke City, Roanoke County, and Vinton) as it is dumped on the transfer station floor for inspection, loaded onto "Trash Train" rail cars, and travels to the Smith Gap Landfill. Ways of decreasing the amount of trash will be addressed.

**Vocabulary:** Recycle, Decompose, Biodegrade, Ventilation, Wasteline Express, Synthetic, Leachate, Natural Buffer, Compost,

## **Grade 5 (45 Minutes)**

### ***Oceans of Trash***

(Science SOL 5.4)

A 35 mm slide presentation and discussion review of Roanoke Valley's connections to the ocean and ocean characteristics. Marine debris is a health hazard, presenting a threat for entanglement by marine mammals and aquatic life.

**Vocabulary Introduced:** Salinity, Estuary, Riparian

**Equipment Needed:** Slide projector/ Screen (or blank wall), Overhead Projector

## **Middle School**

### **Grade 6-8 (45 minutes)**

#### ***Drains to Rivers!***

(Science SOL 6.7, 6.9, LS.11, LS.12, ES.9)

Students will discover what happens to common household waste, as it becomes "runoff". Solutions for cleaner and less runoff will be explored, using an Enviroscape runoff model or watershed demo pans that represent individual parts of a community.

**Vocabulary Introduced:** Litter, Solid Waste, Natural Resources, Storm Drain, Runoff, Nonpoint Source Pollution

**Equipment Needed:** None

**\*Excellent Precursor to *Reeling in Runoff* Program**

#### ***Reeling in Runoff***

(Science SOL 6.7, 6.9, LS.11, LS.12, ES.9)

Students will discover practical solutions for preventing water pollution. Best Management Practices (BMPs) are systems, activities, and structures that can reduce and prevent nonpoint source pollution. Solutions for cleaner and less runoff will be explored, using a model that represents individual parts of a community.

**Vocabulary Introduced:** Litter, Solid Waste, Natural Resources, Storm Drain, Runoff, Nonpoint Source Pollution, BMPs

**Equipment Needed:** None

#### ***Oceans of Trash***

(Science SOL 6.9, LS.4, LS.7, LS.10, LS.11, LS.12)

A 35 mm slide presentation and discussion review of Roanoke Valley's connections to the ocean and ocean characteristics. Marine debris is a health hazard, presenting a threat for entanglement by marine mammals and aquatic life.

**Vocabulary Introduced:** Salinity, Estuary, Riparian.

**Equipment Needed:** Slide projector/ Screen (or blank wall), Overhead Projector

#### ***Environmental Jeopardy***

(Science SOL 6.2, 6.3, 6.6, 6.9, LS.7, LS.12, PS.6)

Students will examine aspects of environmental issues, and then play a fun interactive game reviewing what they have learned. Topics to choose from (choose one) are Energy, Solid Waste, or Ecological Footprint.

**Vocabulary Introduced:** Energy, Natural Resources, Renewable Resources, Litter, Solid Waste, Recycle.

**Equipment Needed:** None

#### ***Watershed Connections***

(Science SOL 6.3, 6.5, 6.7, 6.9, LS.7, LS.10, LS.12)

A 35 mm slide presentation and discussion will examine watersheds and determine the problems associated with erosion, pollution, and litter.

**Vocabulary Introduced:** Riparian Corridor, Litter, Erosion.

**Equipment Needed:** Screen, Electrical Outlet

***Plants Eat Bad Chemicals***

(Science SOL 6.7, 6.9, LS.3, LS.4, LS.7, LS.10, PS.7)

The students will learn about the process of Phytoremediation, where plants remove, transfer, stabilize or destroy contaminants in soil and groundwater. Through classroom demonstrations the students will observe groundwater and soil contamination as a result of chemicals accumulating in soil and water, and review plant anatomy.

**Vocabulary Introduced:** Phytoremediation, Groundwater, Transpiration, Contamination, Infiltration, Riparian

**Equipment Needed:** None

***Water: Nature's Recycling System:***

(Science SOL 6.1, 6.7, 6.9, LS.1, LS.3, LS.7, LS.10)

This interactive program takes students through the Water Cycle with emphasis on water management, topography, infiltration, runoff and erosion. Through hands on activities and demonstrations students will discuss these occurrences and how they are influenced by human activities.

**Vocabulary Introduced:** Precipitation, Evaporation, Transpiration, Topography, Infiltration, Erosion, Runoff

**Equipment Needed:** None

***Stream School (offered in the Fall and Spring)***

(Science SOL 6.5, 6.7, LS.7, LS.10, LS.12, ES.7, ES.9, ES.II, BIO.3, BIO.9, CH.I)

Students will participate in a field trip experience at a local stream to identify macroinvertebrates and perform chemical tests. This will enhance their understanding of the factors involved in determining water quality, and the connection between point source and non-point source pollution in their waterways.

**Vocabulary Introduced:** Riparian Corridor, Litter, Erosion, Point Source Pollution, Nonpoint Source Pollution

**Equipment Needed:** Old sneakers or water shoes/boots

**High School**

**Grade: 9 –12 (45 minutes)**

***Watershed Connections***

(Science SOL ES.7, ES.9, ES.11, BIO.3, BIO.9)

A 35 mm slide presentation and discussion will examine watersheds and determine the problems associated with erosion, pollution, and litter.

**Vocabulary Introduced:** Riparian Corridor, Litter, Erosion,

**Equipment Needed:** Screen, Electrical Outlet

***Plants Eat Bad Chemicals***

(Science SOL ES.2, ES.7, ES.9, BIO 9)

The students will learn about the process of Phytoremediation, where plants remove, transfer, stabilize or destroy contaminants in soil and groundwater. Through classroom demonstrations the students will observe groundwater and soil contamination as a result of chemicals accumulating in soil and water, and review plant anatomy.

**Vocabulary Introduced:** Phytoremediation, Groundwater, Transpiration, Contamination, Infiltration, Riparian

**Equipment Needed:** None

***Water: Nature's Recycling System:***

(Science SOL ES.2, ES.7, ES.9, BIO.9)

This interactive program takes students through the Water Cycle with emphasis on water management, topography, infiltration, runoff and erosion. Through hands on activities and demonstrations students will discuss these occurrences and how they are influenced by human activities.

**Vocabulary Introduced:** Precipitation, Evaporation, Transpiration, Topography, Infiltration, Erosion, Runoff

**Equipment Needed:** None

***Water: Woes to Wonders***

(Science SOL BIO.9, CH.1, CH.6, PH.4, English SOL: 9.4, 11.4)

Students will discover why the overuse of groundwater has been described as a non-renewable resource that is being "mined". Wetlands will be described and students will see what makes wetlands awesome natural wonders. Activities and demonstrations will discuss their watershed address, and suggestions for the quality and quantity of water preservation will be discussed.

**Vocabulary Introduced:** Solid Waste, Natural Resources, Storm Drain, Runoff, Nonpoint Source Pollution, Groundwater, Water Conservation, Wetlands, Riparian, Watershed Address

**Equipment Needed:** Overhead Projector, VCR

***How Much is 6000 cubic km of Water?***

(Science SOL BIO.9, CH.1, CH.6, PH.4, Mathematics SOL: A.10, English SOL: 9.4, 11.4)

Students will discover that the water cycle is the most impressive geothermal cycle on earth. The transfer and storage of water on a global scale gives the appearance of an abundance of water, but with only 1% available for people, plants, and animals we need to be extremely careful in managing Earth's water resources. Activities and demonstrations will address the causes of water pollution and suggestions for the quality and quantity of water preservation will be discussed.

**Vocabulary Introduced:** Solid Waste, Natural Resources, Storm Drain, Runoff, Nonpoint Source Pollution, Water Conservation, Watershed Address

**Equipment Needed:** Overhead Projector, VCR

***After the Storm***

(Science SOL BIO.9, CH.1, CH.6, PH.4; English SOL: 9.4, 11.4)

Students will discover what happens after it rains, and what ends up in our streams, lakes, rivers, and oceans. How ecosystems can collapse due to turbidity and low oxygen levels will be outlined and suggestions for filtering runoff by use of wetlands and green roofs will be discussed.

**Vocabulary Introduced:**

Solid Waste, Natural Resources Storm Drain, Runoff

Nonpoint source, Fecal Coliforms, Hypoxic, Groundwater, Water Conservation and Quality, Wetlands, Green Roof, Watershed Address

**Equipment Needed:** Overhead Projector, VCR

***Stream School***

(Science SOL 6.5, 6.7, LS.7,LS.10, LS.12, ES.7, ES.9, ES.11, BIO.3, BIO.9, CH.1)

Students will participate in a field trip experience at a local stream to identify macroinvertebrates and perform chemical tests. This will enhance their understanding of the factors involved in determining water quality, and the connection between point source and non-point source pollution in their waterways.

**Vocabulary Introduced:** Riparian Corridor, Litter, Erosion, Point Source Pollution, Nonpoint Source Pollution

**Equipment Needed:** Old sneakers or water shoes/boots

### **Environmental Jeopardy**

(Science SOL ES.7, ES.9, ES.11, BIO.5, BIO.8, BIO.9, PH.8)

Students will examine aspects of environmental issues, and then play a fun interactive game reviewing what they have learned. Topics to choose from (choose one) are Energy, Solid Waste, or Ecological Footprint.

**Vocabulary Introduced:** Energy, Natural Resources, Renewable Resources, Litter, Solid Waste, Recycle

**Equipment Needed:** None

### **Oceans of Trash**

(Science SOL ES.7, ES.9, ES.11, BIO.5, BIO.8, BIO.9)

A 35 mm slide presentation and discussion review of Roanoke Valley's connections to the ocean and ocean characteristics. Marine debris is a health hazard, presenting a threat for entanglement by marine mammals and aquatic life.

**Vocabulary Introduced:** Salinity, Estuary, Riparian

**Equipment Needed:** Slide projector/Screen (or blank wall), Overhead Projector

### **Land Use: For the People, the Government, or the Environment?**

(Science SOL: BIO.5, 8, 9 Government SOL: 12.6, 12.8, 12.10, 12.13, 12.14, 12.15, 12.16)

Students will discover what decisions need to be made when they try to place a school on a tract of land that has many aspects to be considered: citizens, government regulations, environmental impacts. These decisions will carry costs and benefits, value, and personal choices. Principles to be discussed include: a. scarcity forces choices; b. resource management decisions are made by people acting alone or in groups; c. changes in rules and laws alter incentives and decisions; d. people value things differently.

**Vocabulary Introduced:**

Costs and Benefits = positive and negative factors involved as a result of choices

Natural Resources = all the Earth's materials that make other products

Incentives = rewards or punishment for behavior

Hammock = stand or preserved, original trees

Hazardous Waste = waste that is harmful to the environment and people

Groundwater = water found beneath the soil's surface

Water Conservation = the careful use and protection of water resources in quantity and quality

Wetlands = landforms that are wet at least part of the year and have a particular type of soil and plants

Scrub Habitat = area with small trees, bushes or plants that have low moisture

Superfund = underground storage site of hazardous waste on a list to be cleaned up and restored by the government

Watershed Address = area you live in that drains to the nearest creek, stream, or river

**Equipment Needed:** Overhead projector

**Clean Valley Council's 2008-2009 Outreach Report  
Public & Private School's of the Roanoke Valley  
Linda Barker & Beth Walton – Environmental Educators**

**Total # of Students Reached:** 25,726  
**Total # of Programs Presented:** 879  
**Total Materials Distributed:** 15,511  
**Total # of Days/Outreach Visits:** 432  
**Total # of Schools Visited:** 166  
**Localities Covered:** Botetourt County, City of Roanoke, Roanoke County,  
Town of Vinton, City of Salem

**Botetourt County - 11 Schools 88 Programs/2,844 Students**

Breckinridge	Greenfield
Buchanan	James River HS
Central Academy MS	Lord Botetourt HS
Cloverdale	Read Mountain MS
Colonial	Troutville
Eagle Rock	

**Roanoke City - 29 Schools 29 Programs/7,021**

Addison MS	Huff Lane	Roanoke Academy
Breckinridge MS	Hurt Park	Round Hill Montessori
Crystal Spring	James Madison MS	Stonewall Jackson MS
Fairview	Lincoln Terrace	Virginia Heights
Fallon Park	Monterey	Wasena
Fishburn Park	Morningside	Westside
Forest Park	Patrick Henry HS	William Fleming HS
Garden City	Preston Park	Woodrow Wilson MS
Grandin Court		
Highland Park		

**Roanoke County - 28 Schools 435 Programs/12,156**

Back Creek	Fort Lewis (Salem)	Mason Cove (Salem)
Bent Mountain	Glen Cove	Mountain View
Bonsack	Glenvar (Salem)	Mt. Pleasant
Burlington	Glenvar HS	Northside HS
Cave Spring	Glenvar MS	Northside MS
Cave Spring HS	Green Valley	Oak Grove
Cave Spring MS	<b>Herman Horn (Vinton)</b>	Penn Forest
Central MS	Hidden Valley HS	<b>W.E. Cundiff (Vinton)</b>
Clearbrook	Hidden Valley MS	<b>William Byrd HS (Vinton)</b>
		<b>William Byrd MS (Vinton)</b>

**City of Salem - 6 Schools 170 Programs/2,784 Students**

Andrew Lewis MS	Salem HS
East Salem	South Salem
G.W. Craver	West Salem

**Private - 7 Schools 11 Programs/569 Students**

Achievement Center	North Cross
Community (PS-8)	Roanoke Valley Montessori
Community HS	Salem Montessori
New Vista Montessori	

**Church Schools - 11 Schools 2 Programs/206 Students**

Church Court day Nursery & K	New Life Christian Academy
Faith Christian	Parkway Wesleyan Preschool
First Wesleyan Christian School	Roanoke Adventist Preparatory
Life Academy	Roanoke Catholic School
Little Angels Learning Center	Roanoke Valley Christian School
Mineral Springs Christian School	

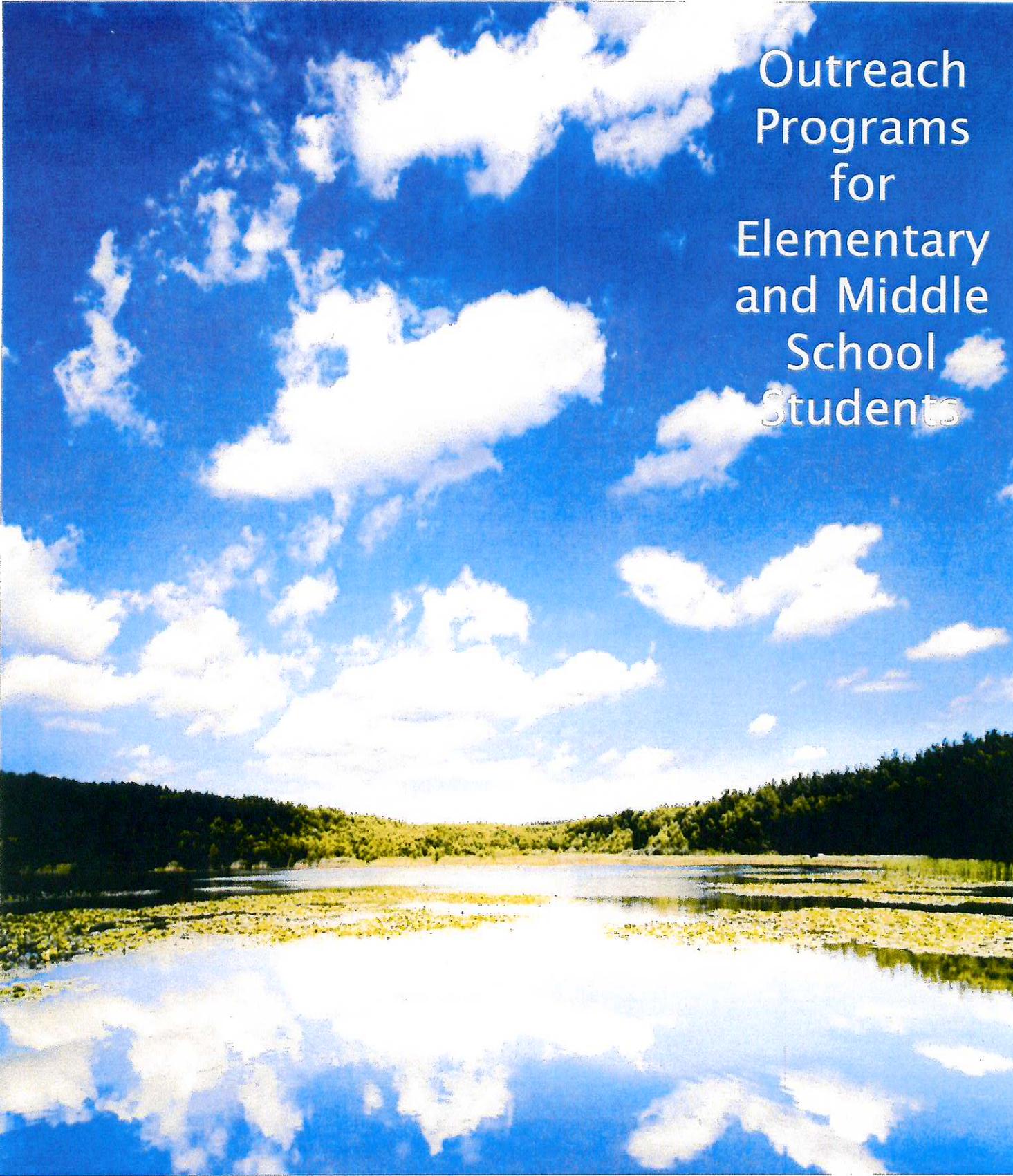
**Miscellaneous Outreach Programs**

Clubs	Stream Schools
Puppet w/Pizzazz	Wildlife Center Shows
Scouts	

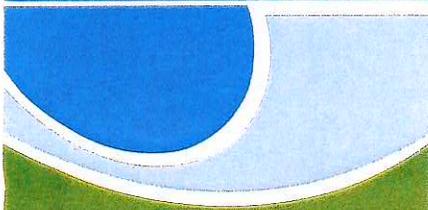
**Roanoke Valley High School's Earth Summit for Juniors and Seniors  
Attendees: 120 Students, 10 Teachers**

**High Schools Attending - 9 Schools**

Cave Spring	North Cross
Glenvar	Patrick Henry
Governor's School	Roanoke Catholic School
Lord Botetourt	Salem
	William Byrd

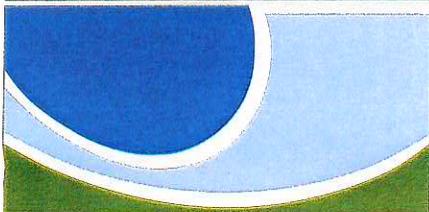
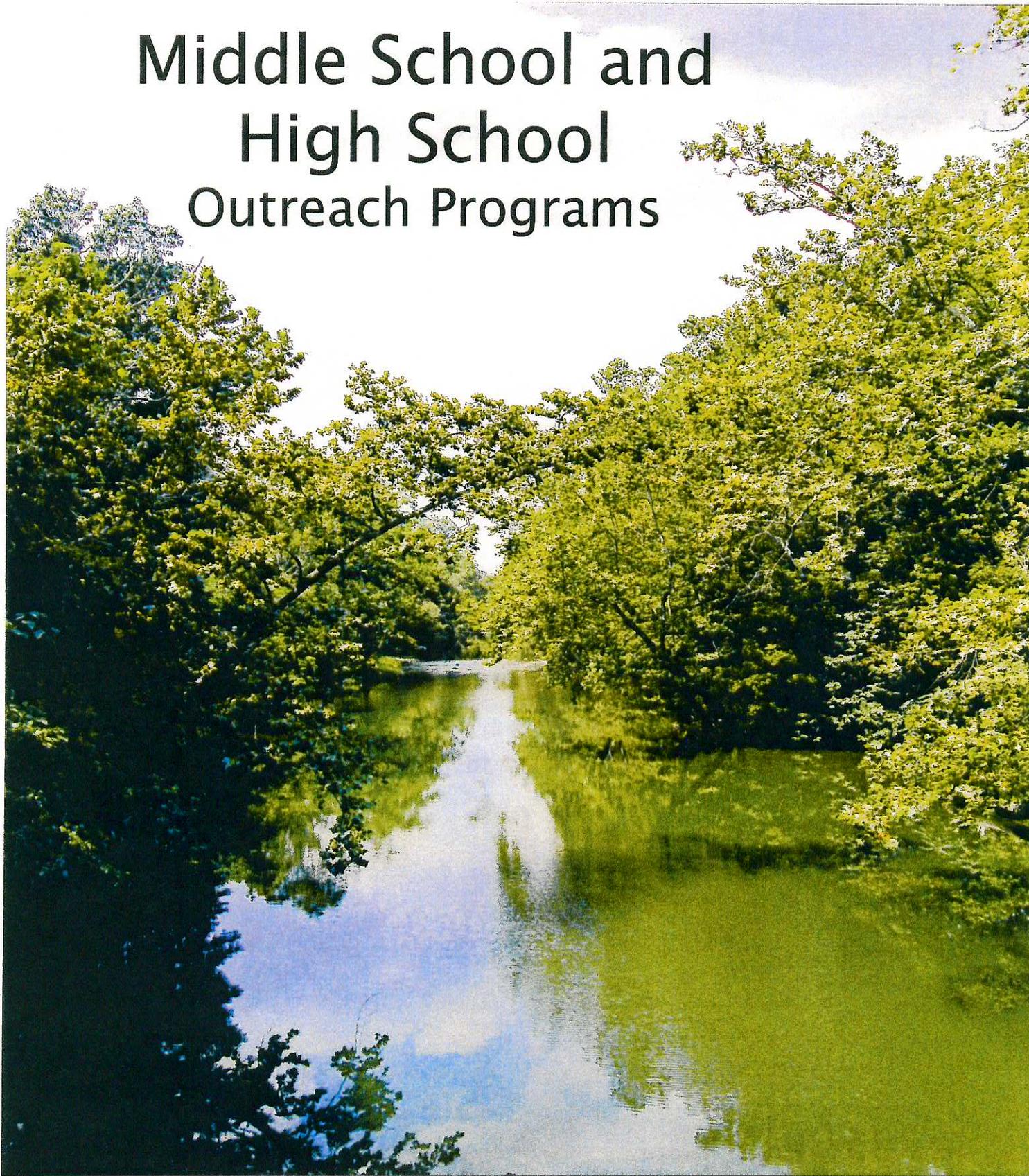


Outreach  
Programs  
for  
Elementary  
and Middle  
School  
Students



WESTERN VIRGINIA  
WATER AUTHORITY

# Middle School and High School Outreach Programs



WESTERN VIRGINIA  
WATER AUTHORITY



## Kindergarten

### Water Wonders

SOLs: Science K.2, K.5, K.6, K.8, K.10

Ms. April Showers teaches students in both preschool and kindergarten about the properties of water through simple hands-on experiments.

Ms. Showers will also help the students learn about water conservation around the home and at school.

## First Grade

### Water Matters!

SOLs: Science 1.1, 1.3, 1.6, 1.7, 1.8

This first grade program examines how common household materials interact with water. Will the liquids mix? Separate? Dissolve? Students will make simple predictions and have fun testing for the results.

## Second Grade

### Water – It’s Amazing!

SOLs: Science 2.1, 2.3, 2.6, 2.7

Students will be introduced to the water cycle and will learn about the three states of water via demonstrations and role playing activities. By creating a model of a water cycle, students will learn about condensation, evaporation and precipitation. Students will also learn how we can protect and conserve our water supply both inside our homes and in our neighborhoods.

## Third Grade

### The Incredible Journey

SOLs: Science 3.6, 3.9, 3.10, 3.11

Let your students become water drops and travel through the water cycle! Students will learn about water’s incredible journey by simulating the movement of water within the water cycle.



Will your students evaporate, condense, fall back to earth as precipitation or just go with the flow down a river?

## Fourth & Fifth Grade

### EnviroScape Watershed Model

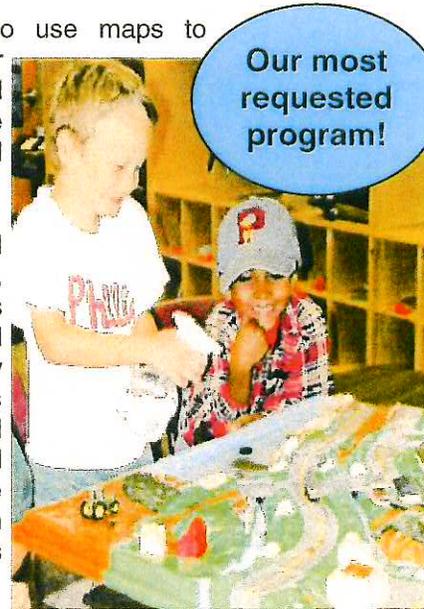
SOLs: Science 4.5, 4.8 Science 5.7

Students will use a watershed model to learn how humans and animals in a watershed contribute to different kinds of pollution including soil run-off, litter, animal waste, oil, industrial pollution, fertilizers and pesticides.

Best management practices will also be discussed to help students understand how they can help prevent pollution in our watersheds and waterways.

Students will also use maps to identify major water bodies and watersheds in the Roanoke area and Virginia.

In fifth grade, we’ll use GIS images, current photos and historical trends to see how our watersheds have changed over time and what impact those changes have on our watersheds and waterways.



Our most requested program!

Students will also learn about erosion, how it can be minimized and how excess soil run-off impacts our environment.

www.enviroscape.co

## Water Conservation



Offered for all grade levels, our short water conservation lesson is incorporated into any of the other lessons you choose.

Students will look at their current water use around their home and then learn ways they can use their water more wisely.

We’ll also throw in some math activities to help students understand that little leaks and drips really do add up!

## Sixth Grade

### We All Live Downstream

SOLs: Science 6.7, 6.9

If your students had an unlimited amount of money and land, how would they use it? What impact do their decisions have on their property and the water downstream? We'll use art and storytelling to explore the impact our actions have on the land and water where we live as well as the impact our actions have on others who live downstream. After all, we all live downstream from someone or something else.

### EnviroScape Watershed Model

SOLs: Science 6.5, 6.7, 6.9

Students will use a watershed model to learn about point and non-point source pollution and how that pollution can be prevented. Students will also use maps to identify water bodies and watersheds in the Roanoke area and Virginia.

## Life Science

### Thirsty Plants

SOLs: L.S. 4, 7

Students will learn about the role of plants in the water cycle, how plants transport water through cohesion and adhesion and what plants are the most "water-wise" in our area.

We'll also see how our drinking water is just a "drop in the bucket" in comparison to all the water in the world.

## Earth Science

### Clean Cities = Clean Streams

SOL: ES.9

Through demonstrations with a watershed model, students will learn about different kinds of water pollution (point source and non-point source), their affect on aquatic life and how water pollution can be prevented. Students will learn to recognize benthic macroinvertebrates and see how their populations can give us clues to the water quality in rivers and streams.

## World Water Monitoring Day

### Be a Part of a Global Effort- Right in Your Own Backyard!

Looking for a Meaningful Watershed Educational Experience? World Water Monitoring Day (WWMD) gives your students hands-on experiences in their watershed, and it helps them be part of a global study on water quality. WWMD is celebrated on September 18; however, the monitoring window is open from September 18 to October 18.

During the testing window, students from around the world select and register a body of water, such as a neighborhood stream, pond or river, where they will conduct simple tests on water quality. The Western Virginia Water Authority can provide your classroom a kit to conduct multiple tests on dissolved oxygen, pH, turbidity and the temperature of the air and water.

Once you collect your data, you can enter your results on the [worldwatermonitoringday.org](http://worldwatermonitoringday.org) website and compare the findings of your students to results from all over the world.

If you are interested in participating, a limited number of kits are available at no cost to you courtesy of the Western Virginia Water Authority and the Virginia Department of Environmental Quality. Limit one kit per teacher while supplies last.



Call or email the Western Virginia Water Authority to schedule an in-class presentation or field trip for your students.

All presentations take about 45-minutes and are free of charge.

**Sarah Baumgardner**  
[sarah.baumgardner@westernvawater.org](mailto:sarah.baumgardner@westernvawater.org)  
853-5707

**Robin Bailey**  
[robin.bailey@westernvawater.org](mailto:robin.bailey@westernvawater.org)  
853-5863

# Ecology

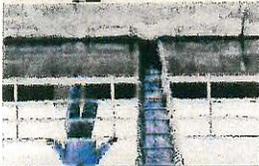
## We All Live Downstream

Students will demonstrate how everyone contributes pollution to our environment and how that pollution impacts everyone and everything downstream. The actions we take on our land impact our own property, but those actions also have an impact on others who live downstream.

## EnviroScape Watershed Model

Students will use a watershed model to learn about point and nonpoint source pollution and how that pollution impacts our environment. Students will also use maps to identify water bodies and watersheds in the Roanoke area and Virginia.

Students will also analyze their own water use and learn about water conservation practices at home.



## Helping Your Students Find a Great Career

The Western Virginia Water Authority employs over 260 people in a wide range of fields including: Engineering, Biology, Chemistry, Customer Service, Water & Wastewater Operations, Marketing, Human Resources, Finance, Accounting, and Utility Technician.

Representatives from the Authority are available to speak to your students about current and future positions available at the Authority. In fact, the Water Authority will have high demand for new employees over the next five years as some of our long term employees retire.

The Authority offers a secure career with competitive salary, generous benefit package and unique training opportunities. The Authority has actively partnered with Virginia Western Community College to provide the classes and certificates needed for many of our positions.

Please give us a call if you are interested in scheduling a representative from the Water Authority to talk to your students in your class or at your school's career fair.

# Biology & Chemistry

The Western Virginia Water Authority's Water technicians perform bacteria and chemical analysis on our drinking water and wastewater samples every day. We invite you to schedule a time to visit our treatment facilities and labs to help your students understand how the information they are learning is used in real-world processes.

## Water Operations Laboratory at Spring Hollow



Our laboratory technicians perform more than 4,000 bacteriological and chemical analysis on reservoir, plant and distribution samples every month. Daily testing allows our plant operators to make appropriate adjustments in the treatment process. Our lab is fully certified to collect and process bacteriological samples, test for turbidity, total organic carbon and to run an Induced Coupled Plasma test to identify metals. Results are published annually in the Water Quality Report.



## Regional Water Pollution Control Plant Laboratory

Trained laboratory technicians perform chemical and bacterial analysis on the final effluent to demonstrate permit compliance. Typical tests include pH, dissolved oxygen, total residual chlorine, biochemical oxygen demand, total suspended solids, Escherichia coli, total phosphorus and total kjeldahl nitrogen. Daily testing allows the operations superintendent to make appropriate adjustments to the treatment process. The lab is inspected annually by DEQ and is currently in the process of becoming certified under the new Commonwealth of Virginia Environmental Laboratory Certification program.

# Field Trips to Enhance Your Watershed Experiences



The Western Virginia Water Authority treats and delivers over 23-million gallons of drinking water every day and treats almost 40-million gallons of wastewater. We invite you to bring your students to one of our water treatment facilities to learn where your drinking water originates and the steps we take to filter, treat and deliver it on a daily basis. Or you can tour our regional wastewater facility to see the many processes involved in treating the valley's wastewater.

The tours of all our facilities are **free** and offer ample bus parking.

## Carvins Cove Reservoir & Treatment Facility

The Carvins Cove Water Treatment Facility, located on Plantation Road, treats and delivers about seven million gallons of water a day. Students can tour the treatment facility and then take a short bus ride to our reservoir.

Carvins Cove Reservoir is located within the 12,000 acre Carvins Cove Natural Reserve, the second largest municipal park in the United States. In addition to the environmental education programs, water testing, nature hikes and picnic facilities are offered at the reservoir. Please allow approximately 45-minutes to tour the treatment facility and at least 45-minutes at the reservoir.

## Spring Hollow Reservoir & Treatment Facility

The Spring Hollow Reservoir and Treatment Facility is located in western Roanoke County, just past Dixie Caverns. From this 3.5 billion gallon side-stream reservoir, the Water Authority treats about nine million gallons of drinking water a day.

Students who visit our Spring Hollow facility will also visit our lab to learn about the chemical and bacteriological tests that we conduct on the drinking water in our distribution system. A classroom-style conference room is available for environmental education programs. Please allow 45 minutes to tour the treatment and laboratory facilities. Visits to the dam and reservoir will take an additional 30-minutes.

## Crystal Spring Filtration Facility & Historic Pump Station

Located next to Carilion Roanoke Memorial Hospital, Crystal Spring offers a look at Roanoke's oldest drinking water source. Visitors to Crystal Spring can view the water in the spring box, learn about the microfiltration process and see how Crystal Spring played a role in Roanoke's early history and development.

At the historic pumping station, located next to the filtration building, students can watch a short video about the history of Roanoke and Crystal Spring and see the Snow Steam Pump, manufactured during the Industrial Revolution to pump water into the growing City of Roanoke.

## Regional Water Pollution Control Plant

Located in Southeast Roanoke, the Roanoke Regional Water Pollution Control Plant (WPCP) treats almost 40-million gallons of wastewater every day from the City of Roanoke, Roanoke County, the City of Salem, the Town of Vinton and Botetourt County.

A tour of the WPCP offers students a chance to see how chemicals and bacteria are used to treat our wastewater. Students can also learn about our on-site recycling efforts involving methane gas, bacteria and biosolids. Please allow at least one-hour for this tour.

For more information about in-class presentations and field trips, contact Sarah Baumgardner or Robin Bailey  
[sarah.baumgardner@westernvawater.org](mailto:sarah.baumgardner@westernvawater.org) or [robin.bailey@westernvawater.org](mailto:robin.bailey@westernvawater.org)

# Life Skills



Follow us to fun... and learn something while you're doing it, with life skills programs designed to provide education and resource information.



Economy got you down? These classes can help you hold onto the green! (Below)

## Go Green/Save Green A

### Going Green - Safe Skin Products New!

If you care what you put into your body, you should care about what you put on your skin. To care properly for our skin, it's important for us to understand what type of skin we have and what is in our skin care products. This workshop offers you information to help you make better choices about these products. Learn what harmful ingredients to avoid, how to read ingredient labels, which ingredients are beneficial for your healthy skin, and how to save money by making your own personalized natural skin care products quickly and easily! Instructor: Cathy Dick.

Age	Date	Days	Time	Place	Course #	Fee
18+	Mar 31	Tu	7:00pm-9:00pm	Brambleton Center	13708	\$27
18+	Apr 15	W	6:30pm-8:30pm	Brambleton Center	13709	\$27
18+	May 2	Sa	10:00am-12:00pm	Brambleton Center	13710	\$27

### Going Green - Edible & Simple Gifts New!

Why spend lots of your hard earned money on the typical gift that may break down or be forgotten? We'll show you how to create memorable gifts that can be eaten, shared, and enjoyed for a minimum of the cost of buying something new. In a volatile economy we need to retrain ourselves to re-look at things we have, and rethink how we can enjoy them more. You'll learn about re-gifting, recycling, and transforming tired objects into new ones. Bring something you love, but can't fit into your decor. We'll brainstorm new ways to use it! Instructor: Cathy Dick.

Age	Date	Days	Time	Place	Course #	Fee
18+	Apr 9	Th	7:00pm-9:00pm	Brambleton Center	13728	\$27
18+	Apr 29	W	7:00pm-9:00pm	Brambleton Center	13729	\$27
18+	May 21	Th	6:30pm-8:30pm	Brambleton Center	13732	\$27

### Going Green - Safe Household Cleaners? New!

Did you know that your favorite cleaner could be making you sick? Compelling evidence now links the chemicals in our household products to a range of conditions including cancer, asthma, allergies, and many other sensitivities and disorders. This workshop will provide you with lots of information about what harmful ingredients to avoid, choosing alternative natural products, and even making your own nontoxic, eco-friendly products with ingredients you already have in your kitchen. Save money while keeping your home safer! Instructor: Cathy Dick.

Age	Date	Days	Time	Place	Course #	Fee
18+	Mar 21	Sa	10:00am-12:00pm	Brambleton Center	13715	\$27
18+	Apr 1	W	7:00pm-9:00pm	Brambleton Center	13716	\$27
18+	Apr 28	Tu	6:30pm-8:30pm	Brambleton Center	13721	\$27

### Life Uncluttered

Do you lose your keys, pay bills late, or wade through piles of 'stuff'? Learn the basics of getting organized and unclutter your life. Bring an organizing project with you like a drawer, a file, a stack of papers or your purse or wallet! You are going to have a blast! Instructor: Leah Kinder.

Age	Date	Days	Time	Place	Course #	Fee
18+	Mar 26	Th	6:30pm-8:30pm	Brambleton Center	13604	\$23
18+	Apr 14	Tu	6:30pm-8:30pm	Brambleton Center	13605	\$23
18+	May 7	Th	6:30pm-8:30pm	Brambleton Center	13606	\$23

## Featured Program New!

### Recession Survival Guide

Worried about your finances during times of economic trouble? Check out these classes from Member One Credit Union!

**Understanding Credit:** What would you do if you were turned down for credit? How much does paying your bills on time affect your credit score? Discover the elements that can impact your credit as well as the lender's loan decision and strategies to help improve your credit score

**Home Buyer Guide:** You have finally saved enough money for a down payment on your new home. What is different in the Real Estate market today? Get relevant information for those seeking to buy a home in today's economy. Learn what you should do before you even start looking for a home and what to do when you find your dream home. Let us help you understand the lender forms so you can compare apples to apples when you shop for a mortgage.

**Family Budgeting:** What did you do with that \$20 you got from the ATM yesterday? Where does your money go? This is an informative learning experience using basic budgeting principles, strategies and tools relevant to today's economic climate. Take home several templates to use to create your own family budget and get the whole family involved in the process.

Age	Topic	Date	Days	Time	Place	Course #	Fee
18+	Budgeting	April 7	Tu	7:00-8:00pm	Brambleton Center	13946	\$5
18+	Credit	April 14	Tu	7:00-8:00pm	Brambleton Center	13947	\$5
18+	Homes	April 21	Tu	7:00-8:00pm	Brambleton Center	13958	\$5

### Sidetracked Home Executives New!

Do you find yourself trying to clean house, get the kids to all their events, and have dinner on the table on time each day, only to find that you've gotten yourself sidetracked? We all have difficulty managing our time, and reacting to our days instead of enjoying them. Turn around those misplaced priorities and undirected energies. Go home armed with a rotating card system that schedules your chores and events on a daily, weekly and monthly basis. Plus many more time saving tips. Change your life, and improve your patience and attitude. Instructor: Cathy Dick.

Age	Date	Days	Time	Place	Course #	Fee
18+	Mar 16	M	7:00pm-9:00pm	Brambleton Center	13739	\$34
18+	Apr 7	Tu	7:00pm-9:00pm	Brambleton Center	13743	\$34
18+	May 9	Sa	10:00am-12:00pm	Brambleton Center	13907	\$34

### Papers, Papers & More Papers New!

How do you manage all the junk mail, financial papers, appointment lists, business cards, coupons, magazines, and all the other papers you accumulate? Start by defining your organizational needs! This workshop will discuss how to set up and maintain a file system to find what you need when you need it. Plus many more organizational tips. We all fall behind with paperwork, but we can conquer the piles and keep them small and manageable once we learn a few tricks. Instructor: Cathy Dick.

Age	Date	Days	Time	Place	Course #	Fee
18+	Mar 24	Tu	7:00pm-9:00pm	Brambleton Center	13747	\$27
18+	Apr 20	M	6:30pm-8:30pm	Brambleton Center	13748	\$27

# Technology A

## Basic Computer Repair

This course teaches you how to do simple repairs. You will have hands on training with a computer, learning how to replace memory, CD ROM, hard drives, removing viruses, spyware, even to formatting a hard drive and learning to install operating systems. Bring a notebook to class. Five week program. Instructor: Gary Foutz

Age	Date	Days	Time	Place	Course #	Fee
18+	Mar 16-Apr 13	M	6:00pm-8:00pm	Brambleton Center	13602	\$89
18+	Apr 28-Jun 2	Tu	6:00pm-8:00pm	Brambleton Center	13603	\$89

## Computer Basics for the Novice

Demystify the secrets of using a computer without getting lost in tech-talk or complicated explanations. If you want to discover a computer's potential and possibilities, this class is right for you. Especially designed for beginners, this course will introduce you to a computer's basic features and will show how to make them work for you. This course will cover basic computer terminology, use of a mouse, how to create and save files to a disk, and practice using Microsoft Windows and the Internet. You will become familiar with the World Wide Web and learn basic search techniques and concepts of e-mail. Each student will have a computer to use with a lot of hands-on work. The class will progress at a comfortable pace, leaving plenty of time to answer all of your questions. Bring a notebook to class. Five week program. Instructor: Gary Foutz.

Age	Date	Days	Time	Place	Course #	Fee
18+	Mar 16-Apr 13	M	10:00am-12:00pm	Brambleton Center	13599	\$89
18+	Mar 17-Apr 14	Tu	6:00pm-8:00pm	Brambleton Center	13600	\$89
18+	Apr 27-Jun 1	M	6:00pm-8:00pm	Brambleton Center	13598	\$89
18+	Apr 28-Jun 2	Tu	10:00am-12:00pm	Brambleton Center	13601	\$89

## Adobe Photoshop for Beginners

This workshop will cover beginner uses of Adobe Photoshop including the following: familiarization with the overall product, manipulation of layers, use of levels adjustments to correct color, keyboard shortcuts, using the tools palette, basic filter usage, blending properties, alpha channels, text, gradients, creating image cutouts, and more. Instructor will discuss uses of this incredible tool for applications in print, web and video design. Instructor: Scott Ramsburg.

Age	Date	Days	Time	Place	Course #	Fee
18+	Mar 28	Sa	9:30am-1:00pm	419 HQ Library	13461	\$37

## Adobe Indesign for Beginners New!

This software program is industry standard for design professionals in newspapers, magazines and web media. InDesign can be used for designing Stationary, Magazine Ads & Covers, Brochures, Posters, and text layouts. This class will teach you how to create a project, manipulate text tools, import photos, organize layers, and export your project for commercial printers. Instructor: Scott Ramsburg.

Age	Date	Days	Time	Place	Course #	Fee
18+	Apr 25	Sa	9:30am-1:00pm	419 HQ Library	13942	\$37



Roanoke County's technology classes help you better understand the world of computers! (Above)

## Gamer's Choice New!

Too old to come to the Teen Center? If you are 18-35 years old, have a night to yourself! Game systems available: PS2, PS3, GameCube, Wii, and 2 Xbox 360s. Also available: pool tables, air hockey, and foosball. Borrow one of ours or bring your own! Call us at 772-PLAY ext 3 for more information or to find out what games we have. Pre-register to reserve your spot! Deadline to register is April 15.

Age	Date	Days	Time	Place	Course #	Fee
18-35	Apr 21	Tu	5:30pm-7:30pm	Brambleton Center	13844	\$5



Make the most of your garden with lessons and a new brown bag lunch series. (Below)

# Home & Garden A

## Decorating With What You have New!

Get the beautiful look you want for the rooms in your home by using the space you have, the things you have, and the creativity we help you to find. Learn what the ten most common decorating mistakes are that make you feel uncomfortable; you'll learn to recognize them and correct them. Bring to class a photo of a problematic room and learn the steps needed to make it functional, appealing, and comfortable.

Age	Date	Days	Time	Place	Course #	Fee
18+	Mar 17	Tu	6:30pm-9:00pm	Brambleton Center	13735	\$31
18+	Apr 4	Sa	10:00am-12:30pm	Brambleton Center	13736	\$31

## Color Your Life New!

We use color in our clothing, to make a statement about ourselves and to project an image, yet we've been slow to consider what these colors say about us. Why are people afraid to use the colors they love in our interiors? Learn about color as an acquired cultural legacy, and understand how to break away from the mold we've created for ourselves. New color trends have brought new life to our interiors...and a new, brighter attitude of ourselves when we use them!

Age	Date	Days	Time	Place	Course #	Fee
18+	Apr 13	M	7:00pm-9:00pm	Brambleton Center	13745	\$27
18+	May 14	Th	7:00pm-9:00pm	Brambleton Center	13746	\$27

## Composting New!

Composting is the way to recycle your yard and kitchen wastes and is a critical step in reducing the volume of garbage needlessly sent to landfills for disposal. Learn the basics of composting natural materials into rich, black dirt for planting while gaining a new appreciation for garbage. Two week program. Instructor: Norma Silvius.

Age	Date	Days	Time	Place	Course #	Fee
18+	Apr 20-27	M	6:00pm-8:30pm	Brambleton Center	13575	\$28

## Flower Arranging for your Home

Bring beauty to your surroundings by learning the art of fresh flower arranging. Students will learn the basic fundamentals to feel confident in making arrangements for their homes. Bring a pair of sharp clippers to first class. Five week program. Instructor: Norma Silvius.

Age	Date	Days	Time	Place	Course #	Fee
18+	Mar 25-Apr 22	W	6:00pm-8:30pm	Brambleton Center	13577	\$124

## Flower Garden Design for Sun and Shade New!

Draw a plan for a sun garden and a shade garden. Proper plant choices will be discussed as well as the care and requirements of each plant. You will also learn which plants are the best for areas with deer problems. Bring pencils, notebook and graph paper to class. Four week program. Instructor: Norma Silvius.

Age	Date	Days	Time	Place	Course #	Fee
18+	Apr 30-May 21	Th	6:00pm-8:30pm	Brambleton Center	13576	\$67

## Brown Bag Gardening Series New!

Does your thumb lack a green sheen? Then bring your bag lunch and a thirst for gardening knowledge to this informative Brown Bag Gardening Series. Topics covered are composting, pruning, container gardening, and shade gardening. Four week program. Instructor: Norma Silvius.

Age	Date	Days	Time	Place	Course #	Fee
18+	Mar 26-Apr 16	Th	12:00-1:30pm	Northview Methodist Ch.	13875	\$30



# Clean Valley Day

April 4, 2009

It's time to fill up those trash bags!

Clean Valley Council welcomes groups to volunteer for our annual spring cleanup. Last year we had 78 teams (1,652 volunteers) from the cities of Roanoke and Salem, the Town of Vinton, and the counties of Roanoke and Botetourt.

This is a valley-wide clean up to promote respect and dedication to the beautiful community we share. It is a great opportunity for team building for corporations and organizations. Sponsors for this event include CVC, the Orvis Company, the Roanoke Times and with the cooperation from Roanoke Valley Resource Authority, the counties of Botetourt and Roanoke, the cities of Roanoke and Salem, the Town of Vinton, and the Virginia Department of Transportation.

So, let's get going, **Pick your spot**, a park, playground, roadside or a stream bank or your very own neighborhood that have an accumulation of unsightly litter are just waiting for you. Please help to keep our valley beautiful and its waterways clean.

All volunteers are provided with trash bags and gloves.

Please return the enclosed registration form by March 20<sup>th</sup> to register your group for the spring cleanup. When your registration is received, you will be notified when and where to pick up your supplies.

We sincerely appreciate your help. If you have any questions, or need further information, please call the CVC office at 540.345.5523.



James Breakell, Chairman  
Clean Valley Day Committee



Ann Masters  
Executive Director

CLEAN VALLEY COUNCIL, P O BOX 523, ROANOKE, VIRGINIA 24003-0523

**ORVIS**  
SPORTING TRADITIONS  
Since 1856



Clean Valley Council

# CELEBRATE EARTH DAY IN GRANDIN VILLAGE



*The Earth Day Celebration is an annual neighborhood event sponsored by the Blue Ridge Environmental Network (BREN), Grandin Village Business Association, Grandin Gardens, and Roanoke Natural Foods Co-op.*



[www.grandinville.org](http://www.grandinville.org)

**8 am – 8 pm**

**Roanoke Natural Foods Co-op**  
Organic seedling sale

**9 am – 1 pm**

**Grandin Gardens** (next to post office)  
Free workshops and demos on bike maintenance, composting, eco-driving, and more (see [www.grandinstitute](http://www.grandinstitute) for details)

**10 am – 4 pm**

**New To Me** (next to Texaco)  
Drop off clothes to donate to charity and get a store discount

**11 am – 10 pm**

**Plan 9 Record Store** (across from co-op)  
Live music, giveaways and more

**11 am – 4 pm**

**Roanoke Natural Foods Co-op**  
Local producers, samples, free film "Climate of Change", free talk ("Know Your Food"), face painting, and raffle to benefit Sharebike

**noon – 1 pm**

**Grandin Theatre**  
Free film: "Energy Crossroads"

**noon – 4 pm**

**Raleigh Court United Methodist**  
Environmental exhibitors, sponsored by BREN. Connect with local green groups!



# Clean Valley Council

Where Does the Rain Go?

PUPPETS WITH PIZZAZZ

EARTH DAY 2009

SATURDAY, APRIL 18TH

GRANDIN VILLAGE COURTYARD 12:30 P.M.





# RECLAIM OUR RIVERS

*Roanoke Valley, Virginia*

**Help reclaim our rivers at the annual**

**Fall Waterways Cleanup on Saturday, October 4**

Clean up your favorite waterway (or discover a new one) from 8:30 to 11:30 am, then come to the celebration and lunch in Wasena Park from noon to 2 pm.

For more information or to register,

contact Clean Valley Council at [www.cleanvalley.org](http://www.cleanvalley.org) or 345-5523.

City of Roanoke, Roanoke County, Town of Vinton

Your partners in stormwater protection



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City of Roanoke, Roanoke County, Town of Vinton

Your partners in stormwater protection

*Mark your calendars!*

**Thursday, November 6TH,  
is Clean Valley Council's**

**EARTH SUMMIT 2008**

**at the Roanoke Higher Ed.  
Center!**

**FREE TO SELECTED JUNIORS & SENIORS  
a one-day environmental conference.**

Questions: Clean Valley Council 541 Luck Avenue Suite 319 Roanoke, VA 24016 540-345-5523  
[www.cleanvalley.org](http://www.cleanvalley.org)

# STORMWATER MANAGEMENT FACILITIES IN VINTON

FACILITY NAME	FACILITY OWNER	FACILITY ADDRESS	TAX MAP #	SWM BMP TYPE	YR BUILT
Town SW Detention Basin	Town of Vinton	3rd Street/Chestnut St.	70.08-1-1.8	Detention Pond	1986
River Park Shopping Center	McAdams Norman Properties	1092 Bypass Road	61.13-4-13.2	Retention Pond	1988
Brabham Off-Site Pond	Lancerlot Sports Complex LC	1135 Vinyard Road	60.20-3-81.3	Detention Pond	1997
First Citizens Bank	First Citizens Bank & Trust Co.	970 Hardy Road	61.17-1-8	Retention Pond	1997
Rite Aid Vacant Building	Wolverine Property Co. Trust	1000 Hardy Road	61.17-1-11	Retention Pond	1997
M & W Fire Apparatus	ROWM Company, Inc.	845 3rd Street	70.07-1-8	Retention Pond	1997
CVS Drugstore	Blue Gem Inc.	1022 Hardy Road	61.17-1-18	Detention Pond	1998
Meadows Subdivision #1	David and Judy Nuckolls	1781 Meadows Road	61.10-7-27	Retention Pond	2000
Meadows Subdivision #2	David and Lynn Glover	1836 Meadows Court	61.10-7-53	Retention Pond	2000
Wachovia Bank	First Union National Bank of VA	120 W. Virginia Avenue	60.15-6-45	Retention Pond	2000
Pennington Crown & Bridge Lab	Staley and Carolyn Pennington	935 Third Street	70.08-1-1.11	Retention Pond	2000
Speedee Oil Change	FTB LLC	910 Hardy Road	60.20-7-33	Underground Facility	2000
Carilion/Parkway Physicians	CHS Inc	415 S. Pollard Street	60.15-6-17	Retention Pond	2002
Valley Bank	Valley Bank	1003 Hardy Road	61.17-3-8	Underground Facility	2002
Hardy Road #1 (Town of Vinton)	Commonwealth of Virginia DOT	1301 Hardy Road	61.18-4-2	Detention Pond	2004
Hardy Road #2 (Town of Vinton)	Commonwealth of Virginia DOT	1329 Hardy Road	61.18-4-7.2	Detention Pond	2004
Jessup Medical Office	Neal and Tammy Jessup	600 S. Pollard Street	60.19-3-21	Underground Facility	2004
Kraft Foods Ware/Freezer	Crestwood of Virginia, LLC	865 Industry Circle	70.07-1-11	Retention Pond	2004
Cundiff Drugstore/Restaurant	Cundiff Properties, LLC	119 E. Cleveland Ave.	60.16-9-2	Underground Facility	2004
Herrman L. Horn Elem. School	Roanoke County School Board	1002 Ruddell Road	61.09-2-26	Retention Pond	2005
Steve's Automotive	Thomas and Terrie St. Clair	101 Highland Road	60.11-4-27	Retention Pond	2005
James B. Smith Subdivision	Lindsay Jayne Valentine	1129 Mountain View Rd	61.13-1-6	Underground Facility	2005
James B. Smith Subdivision	Lisa Via Chaney	1131 Mountain View Rd	61.13-1-6.2	Underground Facility	2005
James B. Smith Subdivision	Gloria Jean Frazier	1209 Mountain View Rd	61.13-1-21.1	Underground Facility	2005
James B. Smith Subdivision	Merita H. Etue	1213 Mountain View Rd	61.13-1-22.1	Underground Facility	2005
James B. Smith Subdivision	Thomas and Judy Tavela	1217 Mountain View Rd	61.13-1-23.1	Underground Facility	2005
James B. Smith Subdivision	Bonnie L. Conner	1221 Mountain View Rd	61.13-1-23.2	Underground Facility	2005
James B. Smith Subdivision	Jack and Joy Shepp	1225 Mountain View Rd	61.13-1-23.3	Underground Facility	2005
James B. Smith Subdivision	Jeffrey Davis and James Staton	1235 Mountain View Rd	61.13-1-24.1	Underground Facility	2005
Lewis Russell Estates	Parsell and Zeigler Dev. Corp.	100 Tobias Road	61.14-5-26	Detention Pond	2005
Lewis Russell Estates # T1	Allan and Josephine Floro	209 Minnie Bell Lane	61.14-5-20	Underground Facility	2005
Lewis Russell Estates # T2	Uldine Rae Haga	213 Minnie Bell Lane	61.14-5-19	Underground Facility	2005
Lewis Russell Estates # T3	Kynn Deadrick & Jessica St. Clair	217 Minnie Bell Lane	61.14-5-18	Underground Facility	2005
Lewis Russell Estates # T4	Todd and Lisa Smith	221 Minnie Bell Lane	61.14-5-17	Underground Facility	2005
Lewis Russell Estates # T5	Roger Beverly	225 Minnie Bell Lane	61.14-5-16	Underground Facility	2005

# STORMWATER MANAGEMENT FACILITIES IN VINTON

FACILITY NAME	FACILITY OWNER	FACILITY ADDRESS	TAX MAP #	SWM BMP TYPE	YR BUILT
Lewis Russell Estates # T6	Justin Arrington	224 Minnie Bell Lane	61.14-5-15	Underground Facility	2005
Lewis Russell Estates # T7	Carrie Dase & Ronda Krogman	220 Minnie Bell Lane	61.14-5-14	Underground Facility	2005
Pebbles Place Townhomes	Parsell and Zeigler Dev. Corp.	420 Pine Street	60.20-6-12	Detention Pond	2006
Vinton War Memorial	Town of Vinton	814 Washington Avenue	60.16-6-33	Detention Pond	2006
Wiley Development	H & S Leasing, LLC	940 3rd Street	70.08-1-1.9	Retention Pond	2006
Life Tabernacle Church	Life Tabernacle Church	801 Virginia Avenue	60.20-5-52.1	Retention Pond	2006
Campbell Memorial Pre. Church	Campbell MP Church	1130 Hardy Road	61.17-1-45	Retention Pond	2007
A. Porter's Haven Senior Hsg #1	Parree Porter Sr Housing, Inc.	Wyrndham Dr/Saunja Ln	70.08-1-1.13	Detention Pond	2009
A. Porter's Haven Senior Hsg #2	Parree Porter Sr Housing, Inc.	Saunja Lane	70.08-1-1.13	Detention Pond	2009
A. Porter's Haven Senior Hsg #3	Parree Porter Sr Housing, Inc.	Saunja Court	70.08-1-1.13	Detention Pond	2009

**STORMWATER MANAGEMENT FACILITIES DATA IN VINTON**

**MS4 PERMIT YEAR 1/PERMIT NO. VAR040026/TOWN OF VINTON**

<b>FACILITY ADDRESS</b>	<b>BMP TYPE</b>	<b>HUC</b>	<b>IMPAIRED WATER</b>	<b>NO OF ACRES TREATED</b>
3rd Street/Chestnut St.	Detention Pond	RU 13	Tinker Creek	151
1092 Bypass Road	Detention Pond	RU13	Glade Creek	19.8
1135 Vinyard Road	Detention Pond	RU 13	Tinker Creek	8.53
970 Hardy Road	Retention Pond	RU 13	Glade Creek	1.23
1000 Hardy Road	Retention Pond	RU 13	Glade Creek	1.44
845 3rd Street	Retention Pond	RU 13	Tinker Creek	1.92
1022 Hardy Road	Detention Pond	RU 13	Glade Creek	2.18
1781 Meadows Road	Retention Pond	RU 14	(Wolf Creek - NI)	19.69
1836 Meadows Court	Retention Pond	RU 14	(Wolf Creek - NI)	6.14
120 W. Virginia Avenue	Retention Pond	RU 13	Tinker Creek	1.75
935 Third Street	Retention Pond	RU 13	Tinker Creek	2.14
910 Hardy Road	Underground Facility	RU 13	Glade Creek	1.1
415 S. Pollard Street	Retention Pond	RU 13	Glade Creek	2.68
1003 Hardy Road	Underground Facility	RU 13	Glade Creek	0.89
1301 Hardy Road	Detention Pond	RU 14	(Wolf Creek - NI)	1
1329 Hardy Road	Detention Pond	RU 14	(Wolf Creek - NI)	1
600 S. Pollard Street	Underground Facility	RU 13	Glade Creek	0.31
865 Industry Circle	Retention Pond	RU 13	Tinker Creek	2.24
119 E. Cleveland Ave.	Underground Facility	RU 13	Glade Creek	0.72
1002 Ruddell Road	Retention Pond	RU 13	Glade Creek	12
101 Highland Road	Retention Pond	RU 13	Glade Creek	0.87
1129 Mountain View Rd	Underground Facility	RU 13	Glade Creek	0.31
1131 Mountain View Rd	Underground Facility	RU 13	Glade Creek	0.34
1209 Mountain View Rd	Underground Facility	RU 13	Glade Creek	0.36
1213 Mountain View Rd	Underground Facility	RU 13	Glade Creek	0.4
1217 Mountain View Rd	Underground Facility	RU 13	Glade Creek	0.44
1221 Mountain View Rd	Underground Facility	RU 13	Glade Creek	0.5
1225 Mountain View Rd	Underground Facility	RU 13	Glade Creek	0.54
1235 Mountain View Rd	Underground Facility	RU 13	Glade Creek	0.35
100 Tobias Road	Detention Pond	RU 13	Glade Creek	5.97
209 Minnie Bell Lane	Underground Facility	RU 13	Glade Creek	0.13
213 Minnie Bell Lane	Underground Facility	RU 13	Glade Creek	0.3
217 Minnie Bell Lane	Underground Facility	RU 13	Glade Creek	0.28
221 Minnie Bell Lane	Underground Facility	RU 13	Glade Creek	0.38
225 Minnie Bell Lane	Underground Facility	RU 13	Glade Creek	0.21
224 Minnie Bell Lane	Underground Facility	RU 13	Glade Creek	0.19
220 Minnie Bell Lane	Underground Facility	RU 13	Glade Creek	0.17
420 Pine Street	Detention Pond	RU 13	Glade Creek	3.3
814 Washington Avenue	Detention Pond	RU 13	Glade Creek	11.27
940 3rd Street	Retention Pond	RU 13	Tinker Creek	1.43
801 Virginia Avenue	Retention Pond	RU 13	Glade Creek	2.62
1130 Hardy Road	Retention Pond	RU 13	Glade Creek	3.07
Wyndham Dr/Saunja Ln	Detention Pond	RU 14	Roanoke River	12.34
Saunja Lane	Detention Pond	RU 14	Roanoke River	1.01
Saunja Court	Detention Pond	RU 14	Roanoke River	4.74

**STORMWATER MANAGEMENT/BMP FACILITIES MAINTENANCE AGREEMENT**

THIS AGREEMENT, made and entered into this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, between

hereinafter called the "Landowner", and the Town Council of the Town of Vinton, Virginia, hereinafter called the "Town". WITNESSETH, that WHEREAS, the Landowner is the owner of certain real property described as:

\_\_\_\_\_  
(Roanoke County Tax Map/Parcel Identification Number)

\_\_\_\_\_  
(Roanoke County Tax Map/Parcel Identification Number)

\_\_\_\_\_  
(Roanoke County Tax Map/Parcel Identification Number)

hereinafter called the "Property"; and

WHEREAS, the Site Plan/Subdivision Plan known as

\_\_\_\_\_  
(Name of Plan/Development)

hereinafter called the "Plan", which is expressly made a part hereof, as approved or to be approved by the Town/Roanoke County, provides for treatment of stormwater within the confines of the property; and

WHEREAS, the tract(s) of land noted above are identified as areas of stormwater management and/or water quality Best Management Practices (BMP's) and their accompanying structures; and

WHEREAS, a plat identifying such areas is attached hereto for reference; and

WHEREAS, the stormwater facilities maintenance schedule for such areas is attached hereto for reference; and

WHEREAS, the Landowner is proceeding to build on and develop the property; and

WHEREAS, the Town and the Landowner, its successors and assigns, including any homeowners association, agree that the health, safety, and welfare of the residents of Town of Vinton, Virginia, require that on-site stormwater management/BMP facilities be constructed and maintained on the Property; and

WHEREAS, the Town requires that on-site stormwater management/BMP facilities as shown on the Plan be constructed and adequately maintained by the Landowner, its successors and assigns, including any homeowners association.

NOW, THEREFORE, in consideration of the foregoing premises, the mutual covenants contained herein, and the following terms and conditions, the parties hereto agree as follows:

1. The on-site stormwater management/BMP facilities shall be constructed by the Landowner, its successors and assigns, in accordance with the plans and specifications identified in the Plan.

2. The Landowner, its successors and assigns, including any homeowners association, shall adequately maintain the stormwater management/BMP facilities. This includes all pipes and channels built to convey stormwater to the facility, as well as all structures, improvements, and vegetation provided to control the quantity and quality of the stormwater. Adequate maintenance is herein defined as good working condition so that these facilities are performing their design functions.

3. The Landowner, its successors and assigns, shall periodically inspect the stormwater management BMP facilities. The purpose of the inspection is to assure safe and proper functioning of the facilities. The inspection shall cover the entire facilities, berms, outlet structure, pond areas, access roads, etc. Deficiencies shall be noted in the inspection report.

4. The Landowner, its successors and assigns, shall document all inspections, maintenance activities and repairs that are performed on the stormwater management BMP facilities. Documents shall be maintained for a minimum period of five (5) years and they shall be made available for review by, or copies shall be provided to, the Town upon request.

5. The Landowner, its successors and assigns, hereby grant permission to the Town, its authorized agents and employees, to enter upon the Property and to inspect the stormwater management/BMP facilities periodically and whenever the Town deems necessary. The purpose of inspection is to verify that proper maintenance is occurring and/or to follow-up on reported deficiencies and/or to respond to citizen complaints. The Town shall provide the Landowner, its successors and assigns, copies of the inspection findings and a directive to commence with the maintenance or repairs if necessary.

6. In the event the Landowner, its successors and assigns, fails to maintain the stormwater management/BMP facilities in good working condition acceptable to the Town, the Town may enter upon the Property and take whatever steps necessary to correct deficiencies identified in the inspection report and to charge the costs of such repairs to the Landowner, its successors and assigns. This provision shall not be construed to allow the Town to erect any structure of permanent nature on the land of the Landowner outside of the easement for the stormwater management/BMP facilities. It is expressly understood and agreed that the Town is under no obligation to routinely maintain or repair said facilities, and in no event shall this Agreement be construed to impose any such obligation on the Town.

7. The Landowner, its successors and assigns, will perform the work necessary to comply with the attached maintenance schedule, including sediment removal, and as otherwise required to keep these facilities in good working order as appropriate.

8. In the event the Town pursuant to this Agreement, performs work of any nature, or expends any funds in performance of said work for labor, use of equipment, supplies, materials, and the like, the Landowner, its successors and assigns, shall reimburse the Town upon demand, within thirty (30) days of receipt thereof for all actual costs incurred by the Town hereunder.

9. This Agreement imposes no liability of any kind whatsoever on the Town and the Landowner agrees to hold the Town harmless from any liability in the event the stormwater management/BMP facilities fail to operate properly.

10. This Agreement shall be recorded among the land records of Roanoke County, Virginia, and shall constitute a covenant running with the land, and shall be binding on the Landowner, its administrators, executors, assigns, heirs and any other successors in interests, including any homeowners association.

IN WITNESS of all which the parties hereto have caused this agreement to be executed on their behalf.

**Legal Names:**

Principal

Developer: \_\_\_\_\_  
(Insert Full Name of Company/Corporation/Partnership Name)

By: \_\_\_\_\_ (SEAL)  
(Duly Authorized Officer Signature)

As: \_\_\_\_\_ (TITLE)  
(Duly Authorized Officer Title)

Notary Statement

State of: \_\_\_\_\_

County/City of: \_\_\_\_\_, to wit:

The foregoing instrument was acknowledged before me this:

\_\_\_\_\_, day of \_\_\_\_\_, 20 \_\_\_\_\_,

By: \_\_\_\_\_ as \_\_\_\_\_  
(Duly Authorized Officer Printed Name) (Duly Authorized Officer Printed Title)

on behalf of \_\_\_\_\_  
(Insert Full Name of Company/Corporation/Partnership Name)

\_\_\_\_\_/\_\_\_\_\_  
(Notary Public Signature) (Notary Public Printed Name)

My Commission expires: \_\_\_\_\_ Registration # \_\_\_\_\_

Approved as to Form: Town Council of the Town of Vinton, Virginia

By: \_\_\_\_\_ (SEAL)  
Christopher S. Lawrence, Town Manager

State of: Virginia

County of: Roanoke, to wit:

The foregoing instrument was acknowledged before me this:

\_\_\_\_\_, day of \_\_\_\_\_, 20 \_\_\_\_\_,

by: Christopher S. Lawrence, Town Manager, on behalf of the Town Council of Town of Vinton, Virginia.

\_\_\_\_\_/\_\_\_\_\_  
(Notary Public Signature) (Notary Public Printed Name)

My Commission expires: \_\_\_\_\_ Registration # \_\_\_\_\_

# **STORMWATER MANAGEMENT AND BMP FACILITIES MAINTENANCE SCHEDULE**

Tax Map/Parcel Identification Number:

Deed Book/Page Number:

Name of Plan/Development:

List of BMP Types and Number of Facilities:

(Type of BMP) (Number of Facilities of Listed Type)

**PROVIDE COMPLETE MAINTENANCE SCHEDULE FOR EACH BMP TYPE. IF NECESSARY, EXPAND TYPICAL SCHEDULE.**