

Raccoon Creek Region Conservation Plan



Executive Summary



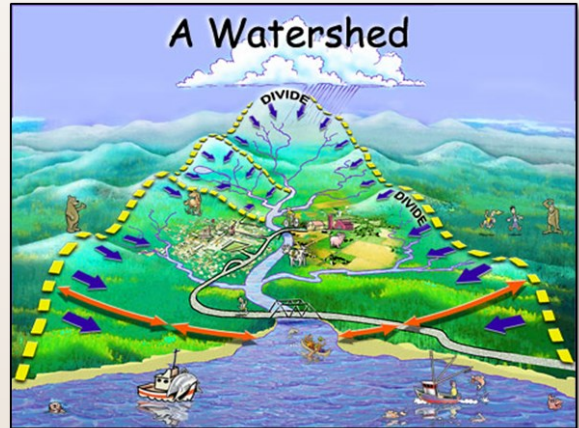
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What is a Watershed?

A **watershed** is the area of land where all rainfall drains to one location - a creek, river, pond, lake, etc. A watershed is a drainage area, sometimes called a drainage basin. It carries all the moisture that is “shed” from the land after rain or snowfall. Watersheds are defined by the contours of the land. Their boundaries are the highest ridges.

*No matter where you are
on earth, you are always in
a watershed!*



What is the Raccoon Creek Region Conservation Plan?

The Raccoon Creek Region Conservation Plan is a user-friendly guide to sustainable growth in the Region. The Plan proposes strategies to balance the interests of agriculture, industry, housing, recreation, resource extraction and conservation while emphasizing opportunities for economic growth. Information presented throughout the Plan is based on public input, data compiled from municipal and county comprehensive plans, extensive research, and knowledge shared by local experts in various fields.

The completed Plan is hosted on Independence Conservancy’s website, www.independenceconservancy.org. The Plan’s authors encourage local groups, residents, government officials, businesses and industries, planners, agencies and developers to use the Plan to support future community-based projects.

Local stakeholders have thoughtfully contributed ideas and concerns to craft a conservation Plan that reflects their vision for the future of the Region.

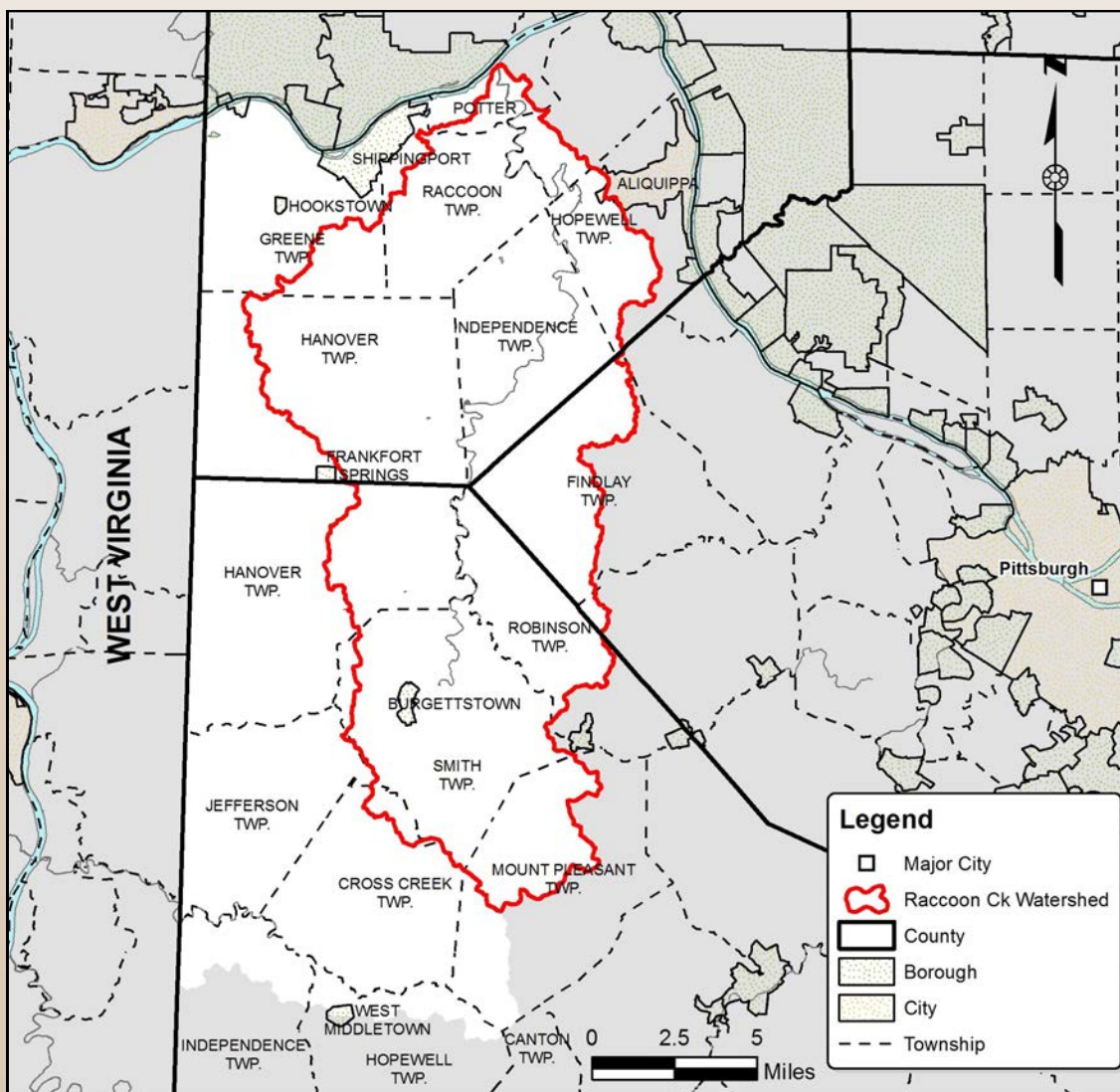


Where is the Raccoon Creek Region?

The Raccoon Creek Watershed is located in the rolling hills between Pittsburgh and the West Virginia state line. The area is identified by the Pennsylvania State Water Plan as the “20D Sub-basin”, which includes not only the drainage area of Raccoon Creek and its tributaries, but also the streams west of the Raccoon basin – Mill Creek, King’s Creek, Harmon Creek and Cross Creek. It is home to about 35,000 people.

Throughout this document, the land within State Water Plan 20D will be referred to as “the Raccoon Creek Region” or just “the Region” for simplicity’s sake. This roughly rectangular area covers 330 square miles or 211,496 acres. It includes 10 major streams and is part of the Ohio River Basin of western Pennsylvania.

The 20D Region includes all or part of twenty-four municipalities in portions of three counties - Allegheny, Beaver and Washington.



Fast Facts About the Raccoon Creek Region

Section 1: Project Area Characteristics provides a general background of the 20D Region - its people, history, economy, culture and natural features. **Did you know...?**

- *Meadowcroft Rockshelter near Avella is the oldest known human habitation in North America, dating back some 16,000 years.*
- *Young George Washington, sent to survey the colonial Virginia frontier, claimed all of Pennsylvania south of the Ohio River for himself.*
- *Lewis and Clark, on their expedition to the west coast, stopped in Georgetown to replace a leaking boat. Their new boat leaked as well.*
- *The Pittsburgh Coal Seam fueled the industrial might that transformed the United States into a global superpower.*
- *The Kobuta petrochemical plant secured synthetic rubber production throughout World War II.*
- *The world's largest welded steel tank, with a 1.75 million gallon capacity, is underground near the mouth of Raccoon Creek.*
- *The Shippingport Atomic Power station marked the first peacetime use of nuclear power.*
- *The tragic crash of US Air Flight 427 near Raccoon Creek in Hopewell resulted in sweeping changes to commercial air transportation safety.*



Raccoon Creek Region by the Numbers

- The Region contains all or part of 17 townships, 6 boroughs and a small portion of one city. 5% of the watershed lies in western Allegheny County, 41% in southern Beaver County and 54% in northern Washington County.
- Existing land uses are 58% forested, 21% agricultural and 13% urban built-up.
- The 20D Region is home to about 35,000 people. Estimates by county are: Allegheny, 550; Beaver, 19,000; Washington, 15,450.
- Major employers include petrochemical manufacturers, electrical generation and transmission, the shale gas industry, construction, metallurgy, agriculture, a major concert venue and a rehabilitation clinic.
- 9 public school districts and 5 private schools serve the Region.

What Matters in the Raccoon Creek Region?

Section 2: Issues, Concerns and Constraints was developed from stakeholder surveys focusing on land use, water quality issues, recreation, valued aspects of the Region, natural conditions, areas for improvement and issues of concern. This is what people had to say...

- *Many expressed thoughtful concern for the long-term, unforeseen impacts of the developing shale gas industry on the environment and quality of life for residents.*
- *The Marcellus Shale industry's long-term impact is a greater concern in the north than in the south where the industry is already well-underway.*
- *The 'green and quiet' aspect of the 20D Region is highly valued, as is the beautiful scenery, rural character, local history and recreational potential; people do not want this spoiled by development or pollution.*
- *Abandoned Mine Drainage is a greater concern in the southern headwaters (historic mined areas of the Pittsburgh Coal Seam) than farther downstream in the north.*
- *Most popular outdoor recreational opportunities are hiking, paddling/floating and visiting public lands.*

Citizens are most concerned about:

- Water quality improvement
- Resource extraction industries
- Open space preservation
- Illegal dumping
- Invasive species

Municipal Officials are most concerned about:

- Sewage management
- Stormwater runoff
- Flooding
- Development by energy industries



Q: What is your favorite thing to do in the Raccoon Creek Region?

A: Breathe fresh air and see stars at night.

Land of Rich Resources

Section 3: Land Resources provides an overview of the Region with mapping that includes physiography, ecoregions, geology, soils, farmlands, waste sites and energy resources. Here are some highlights:

- *Development of the shale gas industry is likely to last for many decades. The Marcellus, Upper Devonian and Utica/Point Pleasant Shales may constitute the largest known natural gas field on earth.*
- *The 20D Region's coal, petrochemical and nuclear power industries were crucial to the nation's development and defense.*
- *More than 200 abandoned coal mine sites in the 20D Region contain an estimated 90 million tons of coal waste, much of it reusable, in piles and lagoons.*
- *About 26,000 acres of prime farmland and 62,000 acres of farmland of statewide importance are found in the 20D Region.*
- *Deciduous forest is the predominant land use.*
- *About 93% of the 211,496-acre 20D Region is privately owned with about 7% held as public lands, primarily for recreational purposes.*
- *Land resource issues that need to be addressed include streambank erosion, flooding, illegal dumping, reclamation of abandoned mine lands, and update of AML inventories.*



The Champion Coal Waste Pile

Largest coal refuse pile east of the Mississippi River

Formed by washing and processing coal from 1929 through 1980

Covers more than 400 acres in Robinson Township

Contains 38 million tons of coal waste, much of it re-useable

Water Quality Keeps Improving

Section 4: Water Resources provides an overview of water quality throughout the Region. It includes mapping that shows the major streams, or sub-watersheds, of the 20D Region, major water features and stream uses as designated by the PA Department of Environmental Protection. Major sub-watersheds and their tributaries are identified and described, as are public water supplies and sewage treatment systems.

- *Three streams are classified as High Quality Warm Water Fisheries: Traverse Creek and Service Creek from their headwaters to JC Bacon Dam, Cross Creek from its source to the Avella water intake. The entirety of King's Creek within PA is a High Quality Cold Water Fishery.*
- *Wetlands comprise 3910 acres, or 1.85% of the Region.*
- *Ambridge Reservoir, a public water supply, is the largest lake at 406 acres; Cross Creek County Park's 258-acre lake is the Region's largest lake open for public recreation.*
- *Three active USGS gaging stations in the Region measure water levels – one on Raccoon Creek, one above and one below Montgomery Dam on the Ohio River.*
- *179 miles of streams are impaired; 56%, or 99 miles, are impacted by abandoned mine drainage.*
- *The Ohio River serves as the Region's northern boundary; its water quality and aquatic diversity have been steadily recovering over the past 30 years.*



Five environmentally-friendly passive treatment systems process 2.49 billion gallons of Abandoned Mine Drainage yearly, removing...

603 tons of iron
62 tons of aluminum
6 tons manganese
1505 tons of acidity

Abundance of Natural Life

Section 5: Biological Resources describes biodiversity, or the variety of life, found in the 20D Region. The section includes native and non-native (or invasive) species, provides mapping and descriptions of natural heritage areas, and describes changes in the natural world brought about by human inhabitants of the Raccoon Creek Region.

- *Native vegetation and wildlife are discussed; guidelines are offered for wildlife viewing etiquette.*
- *Invasive plants, animals and microbes are discussed; pest management strategies are suggested.*
- *Plant and animal species of conservation concern, both terrestrial and aquatic, are listed; species believed to be extirpated (locally extinct) from the 20D Region are included.*
- *Important habitats for birds and mammals, natural heritage areas, and land cover are mapped and described.*
- *Much of the Region is an Important Birding Area as defined by the National Audubon Society.*



The Ohio River: Recovering and Rebounding

Industries that built, powered and defended our nation wiped out nearly all aquatic life in the Ohio River. Untreated sewage added to the destruction.

Decline of the steel industry, stronger pollution regulations and better sewage treatment have enabled some native fish and mussel species to return.

Rare freshwater mussels live in the Ohio River near the mouth of Raccoon Creek. These waters are home to threatened, endangered and rare species of fish.

Much to See, Learn and Enjoy

Section 6: Cultural Resources focuses on the archaeological, historical, cultural and recreational features that make the Raccoon Creek Region a great place to live, work and play. Here are just a few notable items:

- *Meadowcroft Rockshelter is the site of the oldest known human habitation in North America, dating back 16,000 years.*
- *Early peoples of the Region were the Monongahela in pre-history; then Native Americans of the Lenape and Sioux tribes.*
- *History awaits rediscovery at 11 National Register Historic Places, 11 National Register Eligible Places, and various sites of importance in military, industrial, transportation or cultural history.*
- *Farm markets, agri-businesses, fairs, festivals and cultural events offer something for everyone.*
- *Three watershed associations serve the Region – the Washington County Watershed Alliance, Cross Creek Watershed Association and Raccoon Creek Watershed Association.*
- *Independence Conservancy is a watershed-based land trust and the only land trust headquartered in the 20D Region.*

Get out and enjoy...

Public Lands:

Hillman and Raccoon Creek State Parks
Wildflower Reserve
Cross Creek County Park
3525 acres in State Gamelands
23 Municipal Parks

Trails:

Panhandle Trail
Montour Trail
Ohio River Water Trail
Raccoon Creek Canoe Trail

Family Fun:

5 Privately-owned campgrounds
7 golf courses
14 sportsmen's clubs
Hookstown Fair
Pepsi-Cola Roadhouse
First Niagara Pavilion
Southside Historical Village
Meadowcroft Museum of Rural Life
Washington Co. Covered Bridge Festival



Hard Work and Persistence Pay Off

Section 7: Achievements highlights the successful efforts of people working together to reclaim, restore and improve the 20D Raccoon Creek Region. Good things are happening! Here are some accomplishments, both completed and on-going:

- *14,460 acres of publicly-accessible open space - including state game lands, municipal, private and state parks - comprise about 7% of the Region's total area.*
- *5 Passive Abandoned Mine Discharge Treatment Systems treat 2.49 billion gallons of polluted water annually.*
- *Datashed, a web-based clearinghouse for monitoring and sharing information about AMD restoration sites, is available at www.datashed.org.*
- *Educational and interpretive programs are offered at state, local and private parks and recreational facilities.*
- *5 Natural Stream Channel Restoration projects have been completed on the Region's waterways.*
- *Dozens of tracts of Agriculture Security Areas in the Region total 33,891 acres; 2115 acres of farmland are permanently preserved with conservation easements.*



What Happens Next?

Section 8: Management Recommendations describes things that can be done to help the Raccoon Creek Region become a place where progress and quality of life are not mutually exclusive. Options proposed for the Raccoon Creek Region are drawn from the results of public interviews and surveys, as well as common themes in municipal and county planning documents drafted by others. Based on all of these sources, goals were developed for each of the four resource categories – **land, water, biological and cultural**.

In turn, each goal has a set of objectives with recommended courses of action to achieve good results. Also, each set of goals and objectives suggests potential responsible parties and key partners.

These themes appear often in the goals for each resource category:

- *Reclaim Abandoned Mine Lands, including coal waste piles.*
- *Operate, maintain and repair existing Abandoned Mine Discharge treatment systems.*
- *Expand/connect green corridors along major streams, park lands and conserved areas.*
- *Support land conservation efforts of local land trusts, watershed organizations and municipalities.*
- *Direct new development away from pristine natural areas, previously undisturbed areas and farm lands; re-develop/re-purpose previously disturbed areas.*
- *Eliminate illegal dumping; remove illegal dump sites.*
- *Cluster/consolidate/centralize earth disturbances; minimize forest fragmentation.*
- *Expand/connect existing land and water recreational trails; increase public recreational access to major waterways.*
- *Support farm preservation efforts; facilitate establishment of new farms by young farmers; facilitate access to locally grown fresh food.*
- *Maintain and upgrade county, municipal and state parks and public spaces.*
- *Increase environmental education opportunities for people of all ages.*



Call to Action

Section 8: Management Recommendations sets forth people's goals for the resources in the Raccoon Creek Region - land, water, biological and cultural. *You can help achieve these goals - get involved in your community!*

Land Resources

Goal: Preservation of the green, quiet, rural, scenic character of the Region.

Objectives:

- *Restore Abandoned Mine Lands.*
- *Preserve open, green space and green corridors.*
- *Minimize negative impacts of the energy development industry.*
- *Promote sustainable residential, industrial and transportation development.*
- *Facilitate access to locally-grown fresh food.*



Water Resources

Goal: Continual water quality improvement throughout the Region.

Objectives:

- *Treat Abandoned Mine Drainage.*
- *Minimize negative impacts of the energy development industry.*
- *Minimize pollution from sewage, litter, road runoff and agricultural runoff.*
- *Reduce erosion and siltation.*
- *Address storm water runoff and flooding issues.*



Call to Action

Biological Resources

Goal: Healthy and diverse terrestrial and aquatic habitats throughout the Region.

Objectives:

- *Identify, protect and connect significant biological diversity areas.*
- *Restore natural stream characteristics.*
- *Control invasive species.*
- *Cultivate public concern for biological resources.*



Cultural Resources

Goal: Plentiful recreational opportunities that showcase natural and historic resources of the Region.

Objectives:

- *Establish, expand and connect land and water trails.*
- *Identify and preserve historic structures, features and community character.*
- *Maintain and improve state, county and municipal parks and public lands.*
- *Improve public perception of the Region.*



First Steps

Work began on the 20D Raccoon Creek Region Conservation Plan in April 2011 with Washington County Conservation District's application to the Pennsylvania Department of Conservation and Natural Resources (DCNR) for funding through the Community Conservation Partnerships Program (C2P2). In 2012, DCNR awarded \$89,900 in C2P2 funding, which was generously supported by a \$15,000 grant from the Foundation for Pennsylvania Watersheds.

Representatives from local communities, businesses, conservation groups, state agencies and residents then formed a Steering Committee to provide guidance in developing the 20D Plan. BioMost, Inc. of Mars, PA, was retained by the Washington County Conservation District to prepare the Plan. BioMost's project team included:

Victoria E. Michaels - Project Facilitator, photographer and graphic designer

Shaun Busler, GISP - GIS mapping and figures

Melissa Brewer, Planner

Clifford F. Denholm, Geologist

Margaret H. Dunn, PG, Geologist

As part of the effort to gather input from those who live, work play in the Raccoon Creek Region, a series of advertised public meetings were held as listed below:

Public Meeting Location	Project Kick-off	Draft Plan Completion	Final Plan Presentation
Cross Creek Twp. Municipal Bldg.	7/23/2013	6/11/2014	-----
Raccoon Twp. Municipal Building	7/25/2013	6/16/2014	-----
Pepsi Cola Road House, Smith Twp.	7/30/2013	-----	-----
Recreation Hall, Raccoon Creek State Park	-----	-----	Spring 2015

Next Steps

Support for the 20D Plan began at the grassroots level. Continued interest and action from citizens, local officials, nonprofit groups, schools and businesses are the key to meeting the goals of the Plan.

Nothing is constant but change. The 20D Plan is a living document, designed to be used by stakeholders and updated as the future unfolds. The Plan's Steering Committee encourages everyone to work toward a Raccoon Creek Region where progress and quality of life go hand-in-hand.

Please contact Independence Conservancy at info@independenceconservancy.org to make comments, offer suggestions or provide updates to improve the 20D Plan.

Thank You!

Sincerest appreciation is extended to everyone who gave of their time, talent and expertise in developing and promoting the 20D Raccoon Creek Region Conservation Plan. Your collective efforts made the 20D Plan possible.

Thank you to the PA Department of Conservation and Natural Resources, as well as the Foundation for Pennsylvania Watersheds, for funding this project. Thank you also, to BioMost, Independence Conservancy, Washington County Conservation District and Raccoon Creek State Park for substantial in-kind contributions of staff time and resources.

Special thanks is due to those who hosted public meetings - Cross Creek Township, Raccoon Township and Pepsi Cola Roadhouse. Thanks also to staff at Raccoon Creek State Park's Wildflower Reserve Interpretive Center for hosting Steering Committee meetings.

20D Raccoon Creek Region Conservation Plan Steering Committee

Melissa Brewer, *PEDA, Inc.*

Shaun Busler, *BioMost, Inc.*

Lisa Cessna, *Washington County Planning Commission*

Wayne Cumer, *Raccoon Creek Watershed Association*

Jennifer Dann, *Washington County Conservation District*

Jeffrey Donahue, *Washington County Parks & Recreation Department*

Sandie Egley, *Baker Corporation*

Nicholas Gerek, *State Representative Jesse White*

Jeremy Matinko, *Range Resources*

Rebecca Matsco, *Potter Township Board of Supervisors*

Janet Meyers, *Hopewell High School*

Vicky Michaels, *Independence Conservancy*

Shane Miller, *Raccoon Creek State Park*

Daniel Reitz, *Washington County Council on Economic Development*

Laura Rusmisl, *Range Resources*

Doniele Russell, *Beaver County Planning Commission*

Bruce Snyder, *Range Resources*

Gary Stokum, *Washington County Conservation District*

Marty Warchol, *Beaver County Conservation District*



20D Raccoon Creek Region Conservation Plan Key Assistance

Patrick Adams, *DCNR, Raccoon Creek State Park*
Beaver County Times
Ray Bologna, *Champion Processing, Inc.*
John Buerkle, *Pashek Associates*
Shaun Busler, *BioMost, Inc.*
James Camp III, *Beaver County Department of Public Works*
Sylvia Danehy, *BioMost, Inc.*
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Anne Daymut, *Western PA Coalition for Abandoned Mine Reclamation*
R. John Dawes, *Foundation for Pennsylvania Watersheds*
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Branden Diehl, *Foundation for Pennsylvania Watersheds*
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Terry Hough, *PA Department of Conservation & Natural Resources*
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Andrew McAllister, *Western PA Coalition for Abandoned Mine Reclamation*
Miriam Meislik, *University of Pittsburgh Library System*
Janice Mikoloski, *Raccoon Township*
PepsiCola Road House
Joseph Petrella, *Beaver County Agricultural Land Preservation Program*
Edmund Richards and Alison Hofer-Richards
Vincent Troia, *Ohio River Trail Council*
Rachel Warner-Blosser, *Cross Creek Township*
Nevin Welte, *PA Fish & Boat Commission*
Peter Woods, *Western Pennsylvania Conservancy*

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