

**NORTHEAST OHIO FOUR COUNTY REGIONAL
PLANNING AND DEVELOPMENT ORGANIZATION**

**Breakneck Creek Watershed Management Plan
Phase I**

Final Report

December 2006

The preparation of this report was financed through a water quality management-planning grant provided through the Lake Erie Protection Fund and with matching funds provided by the Northeast Ohio Four County Regional Planning and Developmental Organization (NEFCO).

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Summary

Breakneck Creek is a major tributary to the Cuyahoga River. Protection and restoration of Breakneck Creek is necessary to protect and maximize the investment of resources to protect and restore in the mainstem of the Cuyahoga River. This project initiated the development of a watershed management plan to guide the work and track progress in the Breakneck Creek Watershed.

NEFCO facilitated the development of geographical information system (GIS) maps. This included the development of GIS data of existing land use and potential point and non-point pollution sources. Over 75 layers of GIS layers were generated to create the maps. The maps will be useful to target areas for detailed field investigation and set priorities for restoration. The maps can illustrate the magnitude of conditions and raise awareness in the public about the need for their support to protect local water resources.

The first maps and feedback from the Breakneck Creek Watershed Coalition helped develop a preliminary list of restoration goals was developed for the basis of an action plan. This list was discussed at Coalition meetings and a public meeting.

The Coalition assisted with the feedback and review of the Management Plan. The project assisted the Coalition with drafting by-laws and considering a dues structure. NEFCO encouraged the Coalition to begin a process to formalize their structure. This would enhance future opportunities to obtain resources for restoration and protection of the watershed.

Future steps for the work are aimed at defining an action plan with objectives and actions to accomplish the goals. Additional outreach effort is also planned to get support for implementation projects.

Introduction

The effective restoration and protection of Breakneck Creek can only be accomplished through a thought out plan, the Watershed Management Plan. The Plan identifies and matches available funding resources with watershed problems. The Plan also identifies priority activities and locations. When funds are scarce, it is important to maximize efforts for the greatest return. This especially important since often the results of activities will not be immediately apparent. This project seeks to begin the process of developing a watershed management plan. The project will collect data in a computer-mapping database, produce some maps and public outreach material, initiate and support public outreach, and begin to develop a list of goals for the protection and restoration of Breakneck Creek. Breakneck Creek Watershed coalition meetings and public meetings are important to raise awareness in the public to gain support for protection and restoration activities.

Discussion

The Breakneck Creek watershed management plan was undertaken to preserve and protect the water resources of the Breakneck Creek watershed. Breakneck Creek is a major tributary to the Cuyahoga River. It provides critical spawning and nursery habitat for aquatic fauna to the middle section of the Cuyahoga River. Extensive wetlands and forests are characteristic of the riparian areas along the stream. Breakneck Creek is also a drinking water source for the City of Ravenna and the City of Kent. Much of the watershed beyond the riparian areas have rural and agricultural land uses.

An Advisory Committee consisting of members from the Breakneck Creek Watershed Coalition assisted with the development of this watershed management plan. One of the objectives of this project was to enhance the ability of the Coalition to function more effectively as a watershed organization. Advisory meetings with the Coalition encouraged them to begin to formalize their structure. This included the election of officers and the development of by-laws. A draft slate of officers and by-laws had been prepared by December 2006. Copies of the meeting announcements and agendas are included in Appendix A. A public meeting was hosted by NEFCO and the Coalition to raise general awareness of the watershed and the watershed planning process. Copies of the meeting announcement, press release, sign-in sheet, and power point presentation are included in Appendix A. Newsletters were used to provide information about the watershed and the planning process. Copies of the newsletters are included in Appendix B.

One of the meeting activities NEFCO used in other watersheds was a perception survey to gain insight regarding what participants perceived as pollution threats. The survey is adapted from the Ohio Comparative Risk Study (circa 1990). The survey looks at 21 potential pollution sources and asks participants to rate their awareness of a pollution source as affecting the watershed. Seven surveys were returned to NEFCO. The most commonly perceived pollution sources were home sewage treatment systems, agricultural areas, and solid waste disposal areas. Copies of the survey results are included in Appendix B.

NEFCO began the process of preparing maps of the watershed to understand the existing conditions. The first maps produced show hydrology, riparian condition, steep slopes on agricultural lands, oil and gas well locations, and impervious areas. Approximately 75 layers of geographical information system (GIS) data were assembled to allow for the creation of a variety of maps for the watershed. Copies of the first maps and the GIS layers are included in Appendix C.

The maps and the survey data provide a foundation for developing an action plan. The information evolved into a series of eight goals for an Action Plan. The eight goals are listed in Newsletter Number 3 in Appendix B. The Action Plan, with goals, objectives, and actions, provides the guidance to direct the expenditure of resources and the priority of areas to work on.

Conclusion

The Breakneck Creek Watershed Management Plan-Phase I was meant to initiate the planning process for a watershed management plan in Breakneck Creek in the Cuyahoga River watershed. This project included the preparation of maps, newsletters, Action Plan goals, and enhancement of the Breakneck Creek Watershed Coalition. The next steps are anticipated to be the refinement of a Watershed Action Plan and additional public outreach.

APPENDIX A
Meeting Materials

APPENDIX B

Breakneck Creek Watershed Management Plan-Phase I

Newsletters

APPENDIX C

Breakneck Creek Watershed Management Plan-Phase I

Perception Survey

APPENDIX D

Breakneck Creek Watershed Management Plan-Phase I

Maps and GIS Data

Breakneck Creek Watershed Management Plan – Phase I

Technical Advisory Committee Meeting Agenda

Thursday, January 19, 2006

2:00 PM

Rootstown Township Hall
3988 State Route 44
Rootstown, OH 44272

1. Welcome/Introductions
2. Power Point Presentation
3. Mapping Progress
4. Pollution Rating Survey – Take home assignment
5. Management Plan Format
6. Open Discussion
7. Call for Photos
8. Schedule next meeting and Adjourn

MEMORANDUM

To: Breakneck Creek Watershed Partners and Interested Parties
From: Claude Custer, Water Quality Planner
Subject: Breakneck Creek Watershed Management Plan Advisory Committee

NEFCO has received a grant from the Lake Erie Protection Fund to begin the process of developing a watershed management plan for Breakneck Creek, a tributary of the Cuyahoga River. The initial steps of this project will include the mapping and inventory of watershed resources, discussion of potential water quality problems, and building of public support. It is NEFCO's desire to convene an Advisory Committee to assist with the development of the plan.

NEFCO has scheduled the first meeting for Thursday, January 19, 2006 at the Rootstown Town Hall, 3986 St. Rt. 44 (southeast corner of the intersection of Rt. 44 and Rt. 18, behind the white church), from 2:00 to 3:30 p.m. Our goal for the first meeting is to review the mapping progress to date, existing reports, water quality issues, and to discuss the format of a management plan.

If you can attend this first meeting please RSVP to NEFCO at 330-252-0337 or Email Claude Custer at ccuster@nefcoplanning.org.

Breakneck Creek Watershed Management Plan – Phase I

Lake Erie Protection Fund Grant

Project Duration:

October 2005 – December 2006

Project Summary:

This project will begin the process of completing a watershed management plan for the Breakneck Creek Watershed. The project will consist of three main components:

1. Mapping/inventory of watershed resources
2. Defining problems
3. Building public support

Activities:

1. Mapping/Inventory
 - Collect spatial data and metadata
 - Map watershed resources and potential priority sites
2. Technical Advisory Committee Meetings
 - Committee composed of agency personnel and community representatives
 - 4 meetings held quarterly during the duration of the project grant period
3. Public Information Meeting
 - Held in third or fourth month of project – provide information to watershed residents, gain public input on problem areas and potential solutions, solicit questions and concerns
4. Education/Outreach
 - 2 Newsletters - update project status, summarize meetings, and announce upcoming meeting dates

Partnership:

This project will require active participation from a number of agencies, communities, and watershed residents. NEFCO will depend largely on the Breakneck Creek Coalition and Portage County agencies and communities to help put this plan together. Collaboration and cooperation will be imperative in completing the watershed management plan. All key stakeholders will need to be involved in all portions of the planning process to ensure the success of and support for the plan.

NEFCO – (330) 252-0337

Nick Lautzenheiser – nlautzenheiser@nfcoplanning.org

Claude Custer – ccuster@nfcoplanning.org

Claude Custer

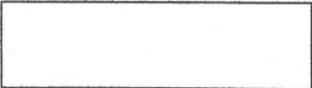
From: Fred Pierre [fredamie@sbcglobal.net]
Sent: Wednesday, June 14, 2006 7:54 PM
To: Fred Pierre
Cc: clerk@rootstowntwp.com; dmerleno@ci.ravenna.oh.us; Walt Adams; Vincent Komenda; Tom Euclide; Steve Tuckerman; Mike Mennett HBA; Mike Kostensky; Merrill Groom; Maureen Frederick; Mark Bergman; Mark Beckwith; Kim Coy; Kay Carlson; Kathleen Chandler 2; Kathleen Chandler; Kathleen Bradley; John Idone; Jim White-RAP; Jennifer Eckroate; Jay Abercrombie; James Bierlair; Hudson; Ferenc deSzalay; Ed Moon; Dick Leonard; Diane Conyers Rizzo; Denny Taylor; Dennis Cooke; Dave Fredl; Daniel Moss; Dana Oleskiewicz; Claudia James; Cindy Andreas; Chuck Keiper; Christopher Smeiles; christine craycroft; Charles Ramer; Charles Frederick; Chantelle Carrol; Carl Ganocy; Bob Heath; Bob Carlson; Beth Buchanan; Becky Carter; Brad Bolton; B. A. Foote; ashley c heeney; Dr Sam Mazzer; Marie Sullivan; Bonetta Guyette; Bob Brown; Barbara Abbott; Julie Nieset; Ken Christensen; Steve Hardesty; Elaine Marsh; Robin Abrams; Max Johns; Chip Porter; Christopher Chrin; Claude Custer; jthomasvt@earthlink.net
Subject: Breakneck Coalition meets 6:30 pm

Fred Pierre wrote:

> Dear Breakneck Creek Watershed Coalition,
>
> We will be meeting at 6:30 pm (Thursday the 15th), at the Portage
> County Regional Planning Offices. That is on Prospect St. in downtown
> Ravenna, just north of S.R. 59. There has been a change to the agenda
> - we will not be reviewing the brochure as it is still under
> construction. Marie and Abby are working hard on the layout, arranging
> the text and pictures. Thank you for your work. This meeting will be a
> good chance to catch up on what's been happening with the Coalition.
> There's been a lot of progress on preserving the Breakneck Creek
> Watershed!
>
> Sincerely, Fred Pierre
> (330) 678-4081
>
>
> ----- revised -----
>
> Breakneck Creek Coalition
> Meeting
> June 15, 2006, 6:30 p.m.
> Portage County Regional Planning Commission Office, Ravenna
>
> Agenda
>
> 1. Introductions
> 2. Updates
> a. Breakneck Creek Planning project and proposals: Claude Custer
> b. Portage County Watersheds Plan: Chris or Claudia
> c. Landowner Outreach project: Chris
> d. Signs: Jen White
> 3. Review draft bylaws for Coalition
> 4. Plan next meetings/field trips
>

*~3000 parcels tied to the
Parcel*

Breakneck Creek



A tributary to the Cuyahoga American Heritage River

Watershed Size: 78 square miles- the second largest tributary to the Cuyahoga River.

Communities: Drains 11 communities with 13,000 households and 34,000 residents.

Growing Rural Communities

The Breakneck Creek Watershed is located amidst the urban centers of Northeast Ohio. It is rich in natural and cultural resources such as forests, wetlands, farmlands, scenic landscapes, recreation areas and rural small-town communities. Much of the land is still undeveloped, with many large parcels still intact. This appealing natural and cultural heritage is attracting significant growth and development, and with it the need to balance changing land uses with wise conservation. (Pic of rural watershed)

A Long and Winding Creek

The Breakneck Creek Watershed, like most of Northeast Ohio, was shaped by glacial activity thousands of years ago. The surrounding land is relatively flat creating a slow, calmly moving stream flanked by a variety of wetlands in many areas. Breakneck Creek begins to flow from Congress Lake in Stark County and travels north draining 11 different communities before emptying into the Cuyahoga (American Heritage) River near the City of Kent. It is the second largest tributary to the Cuyahoga, and so contributes to the quality of all downstream communities, including Lake Erie. The watershed is also the source of drinking water from surface lakes or wells for tens of thousands of people.

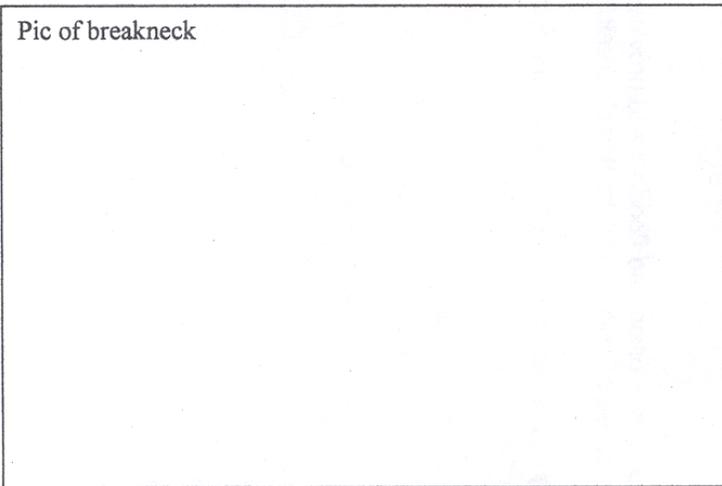
Watershed (side box)

A **watershed** is a geographic area of land that collects and drains water to a common location such as a stream or lake. Watersheds are generally named for the river to which the land drains, such as Breakneck Creek Watershed or the Cuyahoga River Watershed. –

- Include watershed diagram-

Watershed boundaries follow the hills and valleys of the landscape, not political boundaries that we see on a map. The Breakneck Creek watershed covers 78 square miles and includes 11 communities. The manner in which these communities develop land influences water quality in Breakneck Creek and the groundwater, as well as the amount of flooding and erosion residents will experience.

Pic of breakneck



Diverse Habitats

The watershed is home to a great diversity of plant and animal communities, including ~~XX~~ threatened and endangered species. The Creek and its adjacent wetlands are important fish and waterfowl breeding grounds, and the riparian and uplands forests and meadows provide important migration corridors.

the 11X17 centerfold of the brochure—suitable for the refrigerator door or wall poster. If possible it should identify these things,

adjacent watershed names at boundary and beyond the watershed boundary to give better orientation.

Maybe the inset map from the Davey posters? Refreshed, illustrative of the features, problems, positive actions and benefits of the watershed. Such as: Creek Watershed is the source of drinking water for tens of thousands of people ped to clean up the Creek monitored for leachate pollution strips, mention pesticides, fertilizers, sediment): Good farming practices can keep the stream creek healthy.

)

for reduces erosion and flooding and provides wildlife habitat main cause of pollution in Breakneck Creek, reducing aquatic visibility and choking gills and eggs.

it sign: Conservation easements are one way to ensure conservation of stream corridors—landowners can donate easements or programs

endangered species

Breakneck, or kayakers in the Cuyahoga at Kent?): The Cuyahoga is one of only 13 designated American Heritage Rivers in the

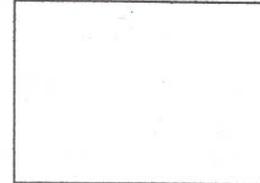
Concerns

Pollution

Storm water washes pollutants such as pesticides, sediments and trace metals into Breakneck Creek. Sources of these pollutants range from farms to construction sites and parking lots. This type of pollution, termed "nonpoint source pollution", contributes to water quality problems in Breakneck Creek. Polluted runoff affects our drinking water and can increase the level of treatment needed for both public and private sources.

Flooding and Erosion

Development can increase impervious surfaces and storm water runoff. This causes Breakneck Creek to receive larger volumes of storm water at higher velocities, which can threaten roads, bridges and homes with more frequent flooding and erosion problems and upset aquatic life habitat.

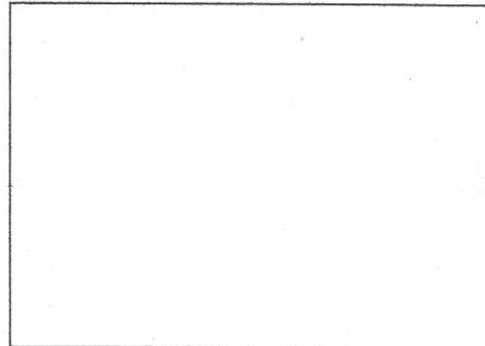


Loss of Habitat

As communities develop, existing wildlife habitat is lost, fragmenting what remains.

Benefits of Watershed Conservation

- ❖ Reduced Flooding
- ❖ Drinking Water Protection
- ❖ Wildlife Habitat
- ❖ Recreation Opportunities
- ❖ Quality of Life
- ❖ Scenic Beauty
- ❖ Economic Savings
- ❖ Sustainable Resource Use



How You and Your Community Can Help

You can help by:

- Managing your property wisely by minimizing fertilizer and pesticide use, and not mowing to the edge of streams and wetlands.
- Using conservation tillage and other Best Management Practices on farmlands. This can minimize the loss of productive soil and can improve growing conditions on the land.
- Maintaining a properly functioning home sewage treatment system.
- Disposing of waste oil and hazardous household waste properly.
- Learning more about your watershed and sharing that knowledge
- Volunteering to help with watershed cleanups, monitoring, and restoration.
- Encourage others to get involved, and local officials to support conservation

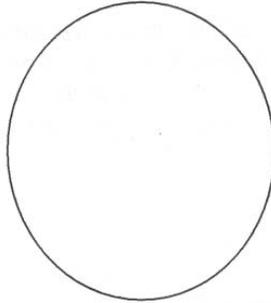
Communities need to adopt, enforce and promote:

- Land use plans and regulations that identify appropriate conservation and development areas, with consideration of the long-term sustainable economic, social and environmental health of the community and region.
- Storm water management plans to control runoff and protect water quality from development both during and after construction occurs.
- Riparian and wetland setback ordinances to help protect these important resources.
- Land conservation plans and programs through the Portage County Soil and Water Conservation District, Portage Park District, Western Reserve Land Conservancy and other conservation organizations.

To learn more, check out: www.cuyahogariverrap.org/BreakneckCreek/Coalition

Help Support Your Watershed

LOGO



Join the Breakneck Creek Watershed Coalition

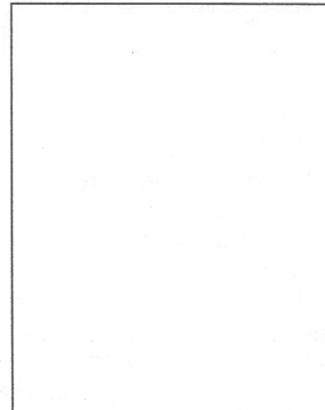
The Mission of the Breakneck Creek Watershed Coalition is:

To protect and restore the water quality and habitat in the Breakneck Creek Watershed through conservation, preservation, and education for present and future generations.

The Coalition is a group of concerned citizens, local governments, non-profit organizations and resource agencies that meets regularly to learn more about the watershed and work towards its conservation.

Some of our planned activities include:

- Watershed conservation action planning
- Stream and highway clean-ups
- Participating in community events with displays and educational activities
- Stream and wetland quality assessment and monitoring
- Ecological restoration
- Distributing educational materials and giving presentations to local officials, schools and public.



To become a member, please complete the form below and mail to:

~~NEFCO?????~~

~~Park District??????????/~~

*City of Racine
c/o Don Morley*

Yes, I want to join the Breakneck Creek Watershed Coalition

Name _____

Address _____

City, State, Zip _____

Email _____

Phone(s) _____

Please contact me to volunteer

to learn more go to www.cuyhogariverrap.org/BreakneckCreek/Coalition

Breakneck Creek Watershed Coalition

Bylaws

The Breakneck Creek Watershed Coalition is a broad-based, non-incorporated group of watershed stakeholders, including landowners, citizens and representatives from government agencies, educational institutions, non-profit organizations and businesses.

LOCATION:

The Breakneck Creek Watershed Coalition's principal mailing address shall be in *C/O the Portage Park District, 128 N. Prospect St., Ravenna, OH 44266 or NEFCO*

MISSION STATEMENT:

The mission of the Breakneck Creek Watershed Coalition is to protect and restore the water quality and habitat in the Breakneck Creek Watershed through conservation, preservation, and education for present and future generations.

GOALS:

1. Increase community awareness and understanding of watershed issues and conservation tools through literature, educational programs and other communications.
2. Support efforts to conserve, restore, steward and monitor the watershed through fundraising and volunteer activities.
3. Engage in continuous membership development and organizational improvement.

MEMBERSHIP:

All interested individuals who support the mission and goals of the Coalition may be members by completing a membership form and paying any annual dues to the Coalition. Dues shall be fixed by a vote of the Steering Committee at the Annual Meeting.

COALITION ORGANIZATION:

Steering Committee: The general membership shall elect a Steering Committee of at least 5 individuals at the Annual Meeting from a list of candidates compiled via open invitation, and through a Nominating Committee. The Steering Committee shall serve for a term of two years unless re-elected. The Steering Committee shall meet as often as necessary to coordinate work and overlapping areas of interest of the various committees and conduct any other business that is necessary to complete the tasks and missions as established by the general membership. Steering Committee members may resign by giving written notice to the Steering Committee Chairperson. Steering Committee members may be removed if deemed necessary by a 2/3 majority vote of the Steering Committee, after a written notice of a the removal vote was given to all Steering Committee members at least 2 weeks prior to the meeting. The Steering Committee shall elect officers from amongst the Steering Committee members, including Chairman, Vice Chairman, Secretary and Treasurer with the following duties:

Chairman: Preparing the agenda and conducting meetings.

Vice Chairman: Assisting the Chairman when necessary and act on behalf of the Chairman upon his/her absence.

Secretary: Distributing meeting notices and agendas, writing and distributing meeting minutes, managing membership and outreach database, keeping a Record of Proceedings of the Coalition.

Treasurer: Collect and account for dues, prepare financial reports.

COMMITTEES: Committees shall be formed as needed to address specific issues or problems relative to the watershed. Each committee will have as its chairman a member of the Steering Committee. The initial committees shall be established by the Steering Committee. These committees may be dissolved and other committees formed as needed in the future.

DECISION MAKING: The Committees of the Coalition shall strive to operate by consensus. In the event consensus cannot be reached, a vote to determine a simple majority may be called by the Chairman on any issue during the course of a meeting that a quorum of over 50% of Steering Committee members is present.

There shall be meetings of the general membership as often as is practical and necessary. Notification of meetings shall be made by newspaper phone, email and postal mail.

ADDITIONS TO AND AMENDMENT OF BY-LAWS:

These by-laws may be changed at any time by recommendation of the Steering Committee and vote of the general membership. A majority of the members attending shall constitute a valid vote of the membership.

Identify a fiscal year

Township or
Municipal officials

Land Conservation Workshop

Land development
professionals

Land owners

Where: Maplewood Career Center
7075 State Route 88
Ravenna, Ohio 44266

Date: June 22, 2006

Time: 12:30 pm to 5 pm

Topics:

- **A Common Sense Approach to Tree Preservation on Development Sites**

Alan Siewert, Urban Forester, Division of Forestry,
Ohio Department of Natural Resources

- **Conservation Options for Land Owners**
Western Reserve Land Conservancy

- **Sustainable Development - Best Practices**

Kirby Date, Coordinator, Countryside Program,
Cleveland State University

Lynne Erickson, Director,
Portage County Regional Planning Commission

As part of the **Portage County Watersheds Plan**, the Portage County Regional Planning Commission is offering a workshop to provide information about methods of conserving our county's natural resources. Speakers will cover a variety of topics of interest to those who own or develop land and those who help regulate land use and development. Please join us.



RSVP by June 9th if you can attend so we can make arrangements for facilities and refreshments

Call Lisa Reeves at Regional Planning:
330-297-3613 or
E-mail: lreeves@pcrpc.org



124 N. Prospect St.
Ravenna, Ohio
44266

**Breakneck Creek Watershed Management Plan
Advisory Committee Meeting
June 29, 2006
2:00 p.m.-3:30 p.m.**

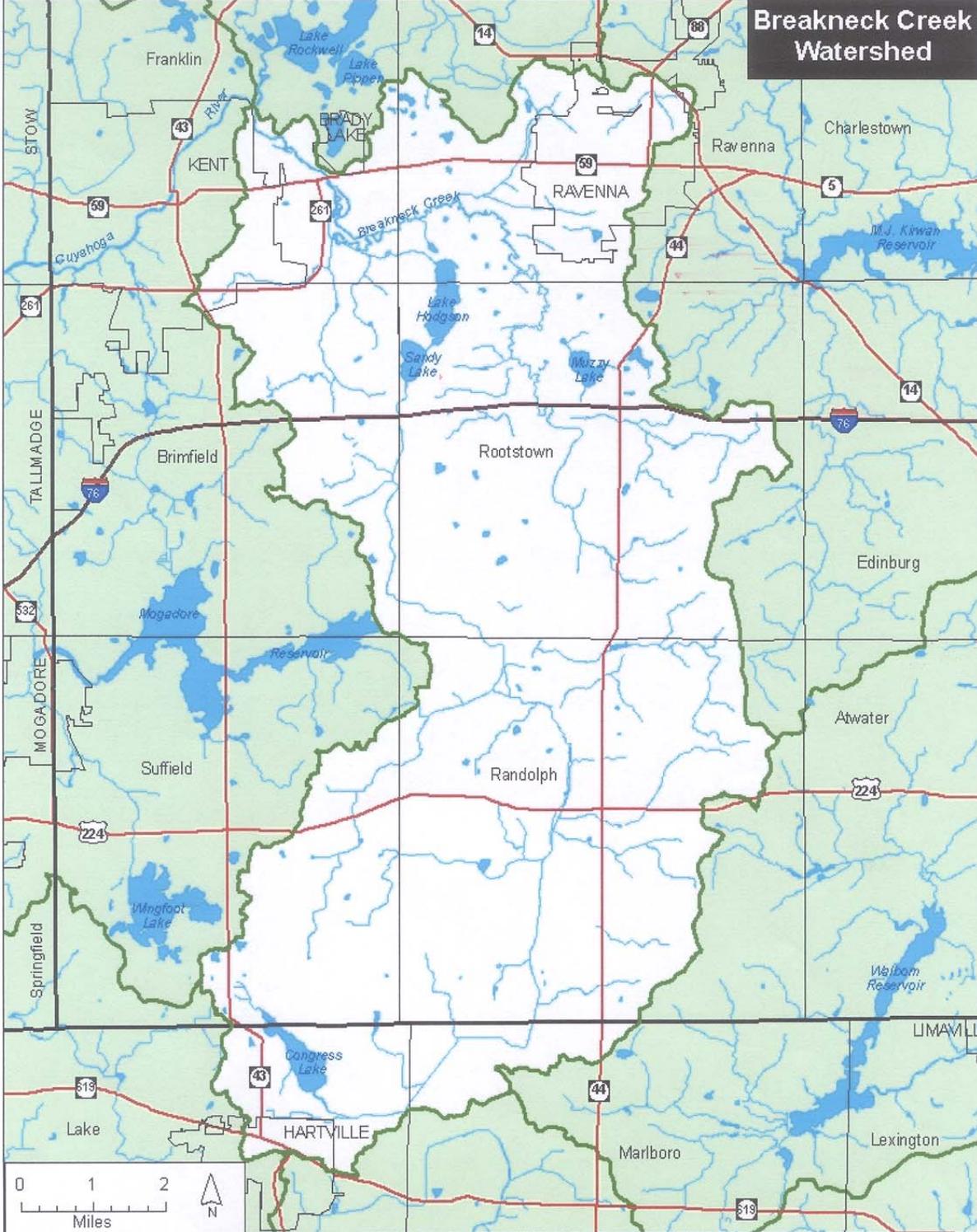
Agenda

1. Background
2. Survey Results
3. Public Meeting
4. Brochure
5. Upcoming Work
 - Potter Creek Habitat Restoration
 - Breakneck Creek Watershed Coordinator Application News Release

ATTENDANCE SHEET
Breakneck Creek Watershed Management Plan - Phase I
Portage SWCD Garden Room
Thursday, June 29, 2006
2:00 p.m.

	NAME (please print)	REPRESENTING	ADDRESS (email)
1	Rich Mostardi	Citizen	3376 Summit Ravenna 44266
2	Claudia James	PCRPC	
3	Crystal Cherry	PSWCD	crystal-cherry@oh.nacdn.net.org
4	NANCY RODD	BRIMFIELD TWP	brimfieldnrodd@mbizNET. com
5	Christine Craycroft	Park District	ccraycroft@portagepark-district.org
6	Edith Chase	self	Ph. 330-673-1193
7	JERRY GUBANICH	CITY KENT	STORMWATER@KENT-OHIO -ORG
8	Ken Christensen	Rootstown/Davey	Herptiles1@yahoo.com
9			
10			
11			
12			
13			

Breakneck Creek Watershed



Brecknock Creek Watershed Coalition Mtg 11/29/06
Attendance Sheet

Dan Frank
Dave Armentrout
Mike Gaynor
Marie Sullivan
Mr. [unclear]
Ken Macomber
Steve Tuckerman
Claude Custer
MARK BERGMAN

Claude Custer

From: Christine Craycroft [ccraycroft@portageparkdistrict.org]
Sent: Wednesday, December 06, 2006 3:34 PM
To: Fred & Amie Pierre; roberts@kent-ohio.org; Marie Sullivan; Steve Tuckerman; Dave Armentrout; Ken Christensen; Kerry Macomber; Becky Carter; Claude Custer; Mark Bergman
Subject: Breakneck Coalition

Hello Steering Committee, (and those present at the membership meeting),

well, guess what? I talked to the County Auditor and our attorney at the Prosecutor's office, and it doesn't look like the Park District is going to be able to handle the money for the Coalition afterall--at least not with the By-Laws as they are. If we have money in our Fund, the Park Board is the ultimate authority over how it is spent, and so the decision making described in the By-Laws would have to be ceded to the Park Board, and the Coalition would become a "committee" of the Park District, in an advisory capacity. So, looks like we have 4 choices:

1. Skip the dues altogether, but keep the By-Laws and keep functioning as we were, with membership defined differently--perhaps by the number of meetings attended, volunteer hours, etc.
2. Ask Cuyahoga RAP, Portage County Environmental Roundtable, or some other organization to serve as umbrella group for the Coalition and bank the dues and donations, in which case we'd need to get clarity on how the checks would be written and expenses made, etc.
3. Agree that the Breakneck Creek Coalition is a committee of the Park District, and have faith that we'll all agree. In that case, the concept of 'membership dues' is misleading because it suggests that the member has certain voting rights--it could more accurately be termed 'donations to the Breakneck Creek Watershed Protection Fund.'
4. Incorporate the group as a non-profit organization and open our own bank account.

In thinking about this, keep in mind what it is we're wanting to do--working on conservation and restoration of the watershed and educating the public. I see advantages and disadvantages with each option, and personally would like to keep things as simple as possible. Let's talk about this on the 12th, but please give it some thought ahead of time. Dave, could you please forward this to Dan Frank, I don't seem to have his email.

thanks everyone!!

Chris

ps I've attached the minutes and materials as they were amended from the last meeting



**Annual Meeting
November 29, 2006, 6:30 p.m.
Portage County Regional Planning Commission Office, Ravenna**

MINUTES

Present: Dan Frank, Dave Armentrout, Ken Christensen, Steve Tuckerman, Mark Bergman, Marie Sullivan, Christine Craycroft, Kerry Macomber, Claude Custer

1. Adopt By-Laws: The draft by-laws were reviewed and discussed. Suggested amendments included the ability for Steering Committee members to vote by proxy and name alternates, and revised provisions for removing steering committee members and updating By-Laws. Upon a motion by Steve Tuckerman and second by Dave Armentrout the amended draft By-Laws were unanimously approved by those present. See attached final version.
2. Adopt dues schedule: It was agreed that dues would serve the purpose of committing people to become official voting members, as well as provide some income for expenses such as postage, meeting refreshments and room rental and other materials and supplies as needed. It was also agreed that we should be able to accept additional donations in addition to or instead of membership. The following dues structure was included with the vote of the By-Laws and was unanimously approved.
 - a. Student, senior, limited income: \$10.00
 - b. Basic individual membership: \$20.00
 - c. Family membership: \$30.00
 - d. Nonprofit/government: \$40.00
 - e. Business: \$50.00
 - f. Additional donation: \$_____
3. Nominate and elect Steering Committee members and officers. The newly adopted By-Laws call for Steering Committee members to be elected by the membership and then the Steering Committee to elect from among themselves, the officers. The following Steering Committee members were nominated and elected, noting that confirmation of interest was necessary for nominees that weren't present:
 - a. Christine Craycroft (also nominated for Chair)
 - b. Dave Armentrout (also nominated for Vice Chair)
 - c. Fred Pierre (also nominated for Secretary)
 - d. Rebecca Carter (also nominated for Treasurer)
 - e. Ken Christensen
 - f. Dan Frank
 - g. Marie Sullivan
 - h. Claudia James

- i. Kerry Macomber
 - j. Len McKay
 - k. Dave Merleno
 - l. Gene Roberts
4. Establish regular schedule of meetings for 2007: It was agreed that the Coalition Steering Committee would meet monthly at a time convenient for its members. General membership meetings will be held quarterly. The Steering Committee will set dates for 2007 meetings at its next meeting on December 12, 2006 5:30 p.m. at the Garden Meeting Room of the OSU Extension Office 6970 SR 88, Ravenna.
5. Review NEFCO's maps and brochures: Claude Custer, Planner with NEFCO (Northeast Four County Environmental Planning Organization) reviewed a set of brochures and maps he is creating with a grant from the Lake Erie Protection Fund for a Phase I Watershed Plan. The Plan will mesh with the Portage County Watersheds Plan goals and objectives, but will have more specific detail relative to the Breakneck Watershed. A general public meeting about the watershed and plan will be held on December 12, 2006 6:00 p.m. at the Garden Meeting Room of OSU Extension Office, 6970 SR 88, Ravenna.
6. Discuss upcoming December 12 public meeting: Chris Craycroft will coordinate with Claude Custer to develop the agenda and presentations for the meeting.

Minutes prepared by Christine Craycroft

Membership Form



Name(s) _____

Address _____

City _____ State _____ Zip _____

Phone(s) _____

Email (s) _____

Enclosed are my annual membership dues for:

- \$10.00 Student, senior, limited income
- \$20.00 Basic membership
- \$30.00 Family membership
- \$40.00 Business
- \$_____ Additional donation

Please make checks payable to Breakneck Creek Watershed Coalition

Mail to:

Breakneck Creek Watershed Coalition
c/o Portage Park District
128 N Prospect St.
Ravenna, OH 44266

Because the Park District is a charitable organization, your contributions are tax-deductible to the extent allowable by law

I'd like to volunteer for:

- Water quality monitoring
- Giving presentations on the Breakneck Creek Watershed
- Staffing an education booth at community events
- Stream cleanups and canoe access clearing
- Ecosystem restoration
- Office work
- Other _____

Thanks!!

Bylaws



The Breakneck Creek Watershed Coalition is a broad-based, non-incorporated group of watershed stakeholders, including landowners, citizens and representatives from government agencies, educational institutions, non-profit organizations and businesses.

LOCATION:

The Breakneck Creek Watershed Coalition's principal mailing address shall be in *C/O the Portage Park District, 128 N. Prospect St., Ravenna, OH 44266*

MISSION STATEMENT:

The mission of the Breakneck Creek Watershed Coalition is to protect and restore the water quality and habitat in the Breakneck Creek Watershed through conservation, preservation, and education for present and future generations.

GOALS:

1. Increase community awareness and understanding of watershed issues and conservation tools through literature, educational programs and other communications.
2. Support efforts to conserve, restore, steward and monitor the watershed through fundraising and volunteer activities.
3. Engage in continuous membership development and organizational improvement.

MEMBERSHIP:

All interested individuals who support the mission and goals of the Coalition may be members by completing a membership form. Dues shall be fixed by a vote of the Steering Committee at the Annual Meeting to be held in November.

COALITION ORGANIZATION:

FINANCIAL MANAGEMENT: The Portage Park District shall act as the Coalition's fiscal agent by collecting and depositing grants, dues and donations in a restricted account, and making expenditures on behalf of the Coalition from that account. The Park District is audited biennially by the State Auditor.

Steering Committee: The general membership shall elect a Steering Committee of at least 5 individuals at the Annual Meeting from a list of candidates compiled via open invitation, and through a Nominating Committee. The Steering Committee shall serve for a term of two years unless re-elected. Steering Committee members may identify an alternate to serve in their place for meetings or for voting; the names of Alternates must be submitted to the Chair of the

Steering Committee before any meeting or vote in which the Alternate intends to participate. The Steering Committee shall meet as often as necessary to coordinate work and overlapping areas of interest of the various committees and conduct any other business that is necessary to complete the tasks and mission as established by the general membership. Steering Committee members may vote by proxy via postal mail, email, phone or in-person communication with the Chair or Vice Chair. Steering Committee members may resign by giving written notice to the Steering Committee Chairperson. Steering Committee members may be removed if deemed necessary by a 2/3 majority vote of the Steering Committee, after a written notice of a the vote to remove was given to all Steering Committee members at least 2 weeks prior to the meeting. The Steering Committee shall elect officers from amongst the Steering Committee members, including Chair, Vice Chair Secretary and Treasurer with the following duties:

Chair: Setting the agenda and conducting meetings.

Vice Chair: Assisting the Chair when necessary and acting on behalf of the Chair upon his/her absence.

Secretary: Distributing meeting notices and agendas, writing and distributing meeting minutes, managing membership and outreach database, keeping a Record of Proceedings of the Coalition.

Treasurer: Collect and account for contributions; coordinate financial transactions with Park District; prepare financial reports.

SUB-COMMITTEES: Committees shall be formed as needed to address specific issues or problems relative to the watershed. Each committee will have as its chairman a member of the Steering Committee. The initial committees shall be established by the Steering Committee. These committees may be dissolved and other committees formed as needed in the future.

DECISION MAKING: The Committees of the Coalition shall strive to operate by consensus. In the event consensus cannot be reached, a vote to determine a simple majority may be called by the Chair on any issue during the course of a meeting that a quorum of over 50% of Committee members is present, or has voted by proxy.

There shall be meetings of the general membership as often as is practical and necessary. Members may vote by proxy. A quorum of the Membership shall be at least 30% of the membership with paid dues. Notification of meetings may be made by newspaper, phone, email and/or postal mail.

ADDITIONS TO AND AMENDMENT OF BY-LAWS:

These by-laws may be changed at any time upon recommendation by the Steering Committee with notice given to the general membership to vote. A majority vote of a quorum of the general membership at the next scheduled general membership meeting shall constitute a valid vote of the membership.

Adopted: November 29, 2006



1st
Annual Meeting
November 29, 2006, 6:30 p.m.
Portage County Regional Planning Commission Office, Ravenna

AGENDA

1. Adopt By-Laws
2. Adopt dues schedule
3. Nominate and elect officers.
4. Establish regular schedule of meetings for 2007 — *monthly meetings?*
5. Review NEFCO's maps and brochures
6. Discuss upcoming December 12 public meeting

Meeting

Brecknock Creek Coalition 12/12/26 5:30pm

Dan Frank

DAVID J. MERLENO CITY OF RAVENNA (330)297-2768

Becky Carter

Twp of Randolph 330-418-4889

Jennifer White

Portage SWCD

Kerry Macomber

Portage County Box 297 3603

Claudia Saynes

PC Regional Planning 330-297-3613

Tom Carter

Twp of Rootstown Davey Resource Group

FOR IMMEDIATE RELEASE

November 30, 2006

Contact: Claude Custer
Northeast Ohio Four County Regional Planning and Development Organization
180 East South Street
Akron, Ohio 44311
330-252-0337

Subject: Breakneck Creek Watershed Management Plan -- Phase 1
Public Information Meeting

A public meeting has been scheduled for December 12, 2006, from 6:00 p.m. to 7:30 p.m. at the Portage Soil and Water Conservation District, Garden Room in Ravenna to discuss a watershed management plan for Breakneck Creek. The meeting is being conducted by the Northeast Ohio Four County Regional Planning and Development Organization (NEFCO) in collaboration with the Breakneck Creek Watershed Coalition. There will be informational displays, a brief presentation at 6:00 p.m., and opportunities to discuss comments, questions, and upcoming restoration work. The focus of the meeting will be the Watershed Management Plan

NEFCO has received a grant from the Lake Erie Protection Fund to begin the process of developing a watershed management plan for Breakneck Creek, a tributary of the Cuyahoga River. The initial steps of this project will include the mapping and inventory of watershed resources, discussion of potential water quality problems, and building of public support.

For more information concerning the Breakneck Creek Watershed Management Plan and/or directions to the meeting, please contact Claude Custer, NEFCO at 330-252-0337, or ccuster@necoplanning.org.

Breakneck Creek Watershed Management Plan—Phase 1 Public Information Meeting

**Tuesday December 12, 2006, 6-7:30
Portage Soil and Water District, Garden Room
6970 State Route 88, Ravenna**

Breakneck Creek Watershed Management Plan – Phase I

Public Meeting Agenda

Tuesday December 12, 2006

6:00 PM

**Portage Soil and Water Conservation District
Garden Room
Ravenna, Oh**

9. Welcome/Introductions

10. Power Point Presentation

11. Breakneck Creek Coalition Presentation

12. Next Steps

13. Open Discussion

14. Adjourn

ATTENDANCE SHEET
Breakneck Creek Watershed Management Plan - Phase I
December 12, 2006
6:00 p.m.

	NAME (please print)	REPRESENTING	ADDRESS (email)
1	Ken Christensen	Rootstown	Hemptiles1@yahoo.com
2	Bernard Lappe		Bernard.Lappe@neo.rr.com 3589 Herriff Rd. Ravenna, OH
3	DAN FRANK	ROOTSTOWN	NOFYRZ911@aol.com
4	David Hluch	Rootstown Mantas	hluch@sofcomdnhluch@aol.com 3579 Herriff Rd
5	David MERLENO	CITY OF RAVENNA	210 PARKWAY P.O. Box 1215 RAVENNA, Ohio 44266
6	Jean Bailey	Murray Lake Rootstown	4040 Harden Rd Ravenna, OH 44266
7	Suzanne Lorentz	Rootstown	4691 Sandy Lake Rd Ravenna, OH 44266
8	Sally Lorentz	Rootstown	own property on both sides of 76/Hyland Box 427
9	Bucky Carter	Randolph Twp	Randolph 44265
10	Kerry Macomber	Portage County BCC	kmacomber@ portage.co.com
11	Bob Heath	Kent State Univ Water Resources Res Dept	WRRI / Kent State U. Kent, OH 44242 RHEATH@KENT.EDU
12	Claudia James	Port. Co Reg. Planning	cjames@perpe.org
13	Gene Roliff	to Randolph Twp	6232 Lakeview Dr. Ravenna, OH 44266 croliff@kent.edu
14	Cynthia J. Mullins		cmullins@ juno.com →

Send pdf
maps please

	NAME (please print)	REPRESENTING	ADDRESS (email)
15	Jennifer White	Portage SWCD	jen-white@oh.nacdnnet.org
16	RON KERNS	Portage City - Landowner	r.kerns@panyard.com
17	Angel Bice	Portage City - Landowner	angel@panyard.com
18	JIM WHITE	CUYAHOGA-AMERICAN HERITAGE RIVER INITIATIVE	WHITEJ@CUYAHOGARIVERRAP.ORG
19	C.J. Chrin	self	cjchrin@math.kent.edu want PDF maps
20			
21			
22			
23			
24			

Please EMAIL BREAKNECK MAPS

City of Ravenna

Office Hours: 8 - 4:30 Mon.-Fri.

DAVE MERLENO
Utilities Director

210 Park Way
P.O. Box 1215
Ravenna, Ohio 44266-1215

e-mail : dmerleno@ci.ravenna.oh.us
330-297-2168

A Bicentennial Community

12/11/06
Watershed plan APJ
topic of meeting

RAVENNA: A new watershed management plan for Breakneck Creek will be the subject of a Dec. 12 meeting.

The hearing will run from 6 to 7:30 p.m. in the Garden Room of the Portage Soil and Water Conservation District, 6970 State Route 88.

The Akron-based Northeast Ohio Four County Regional Planning and Development Organization and the Breakneck Creek Watershed Coalition are sponsors.

The Akron planning agency has a Lake Erie Protection Fund grant to begin the project, including mapping watershed resources, outlining potential water-quality problems and building public support.

For information, call Claude Custer at 330-252-0337.

Point vs. Non-Point Source Pollution

➤ **Point Source** = Pollution that enters the water at an easily identifiable, distinct location through a direct route, for example, a pipe from a factory.

➤ **Non-Point Source** = Pollution where you cannot pinpoint where it is coming from. For example, water running off a field.

Pollution can enter a stream in many forms. It can be as diffuse as sediment from a farmer's fields or a housing development. It can also be as precise as from a factory's wastewater discharge pipe. The watershed plan strives to identify pollution sources and the effects on the stream then develop strategies to alleviate the impacts. Pollution degrades the stream's water quality by throwing one or more of the aforementioned variables out of balance.

The Northeast Ohio Four County Regional Planning and Development Organization (NEFCO) was awarded a grant from the Lake Erie Protection Fund. The project, titled "Breakneck Creek Watershed Management Plan—Phase I," will take the first steps toward completing a comprehensive watershed management plan for Breakneck Creek. The grant period will expire in December 2006. NEFCO hopes this initial planning stage will lead to future planning developments and the completion of a watershed action plan.

NEFCO

NORTHEAST OHIO FOUR COUNTY REGIONAL PLANNING & DEVELOPMENT ORGANIZATION
180 East South Street, Akron, Ohio 44311-2035 (330) 252-0337 • Fax (330) 252-0664

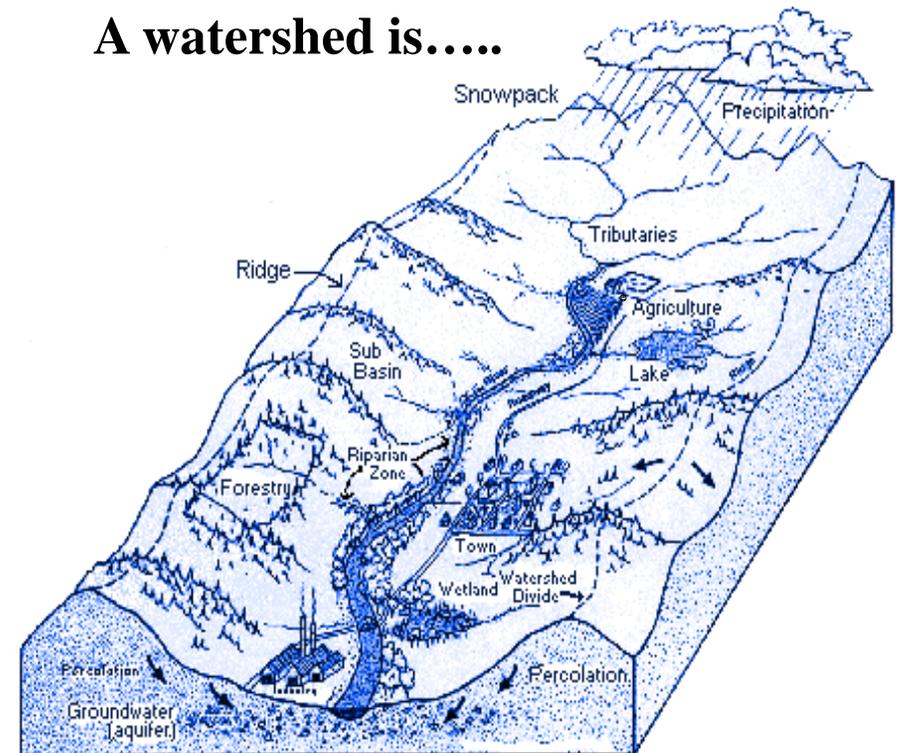
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BREAKNECK CREEK Watershed Management Plan Newsletter

PLANNING BASICS

A watershed is.....

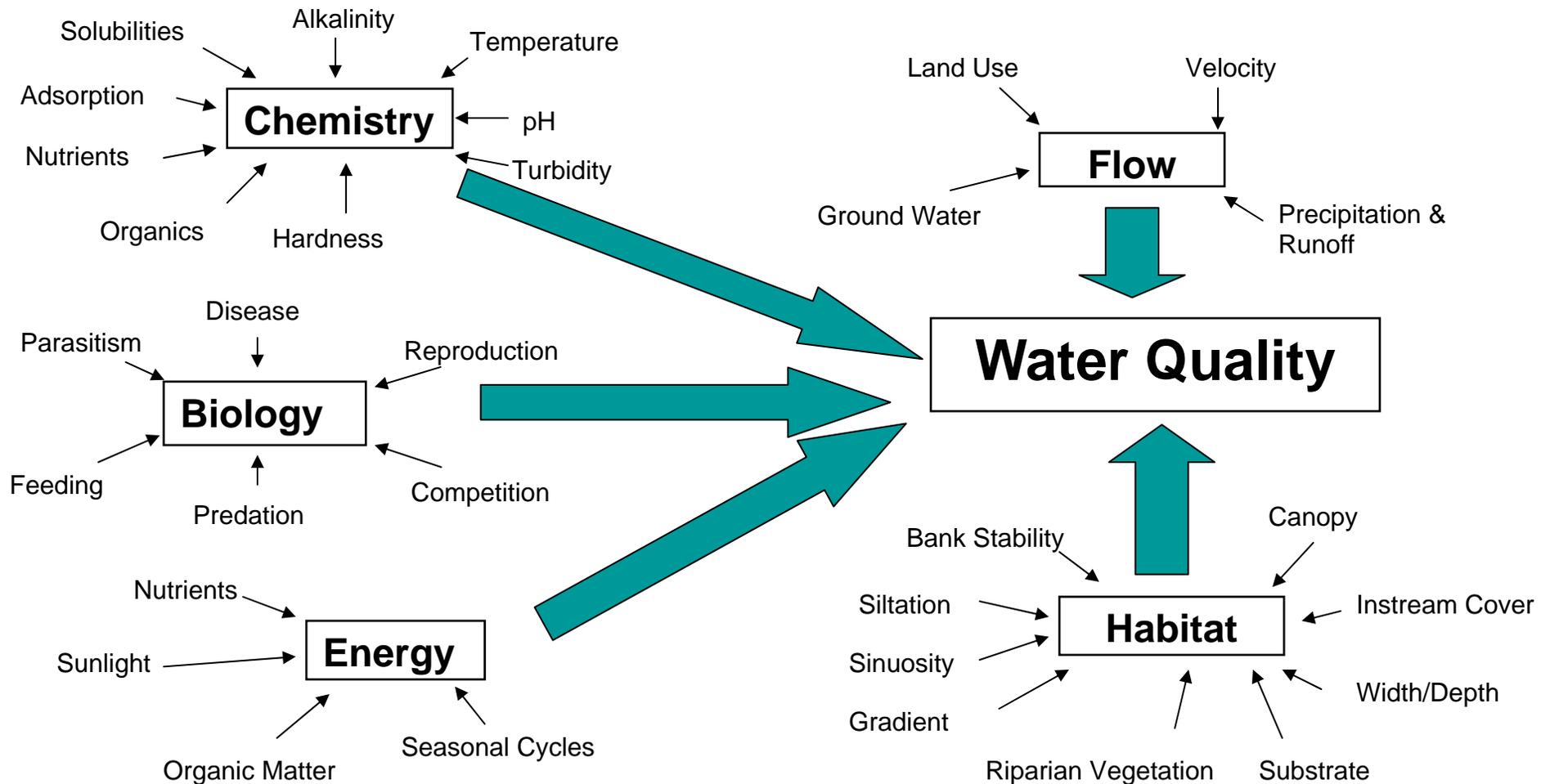


Produced by Lane Council of Governments

...an area that both surface water
and groundwater drain
to a common waterway.

Water Quality Variables

The water quality of a stream is the sum of many variables in the watershed. The categories include flow, chemical, biology, energy, and habitat. Managing a watershed to protect or restore the water quality of a stream requires knowledge of how these variables interact with each other. For example, exposing a stream to more sunlight raises the temperature which reduces the stream's ability to hold oxygen. Decreased oxygen causes taste and odor problems, overall poor water quality, and biological impacts, e.g. fish kills and pollution-tolerant fish. Watershed planning is a process to identify as many of these variables and develop strategies to preserve, restore, and protect the water quality of streams.

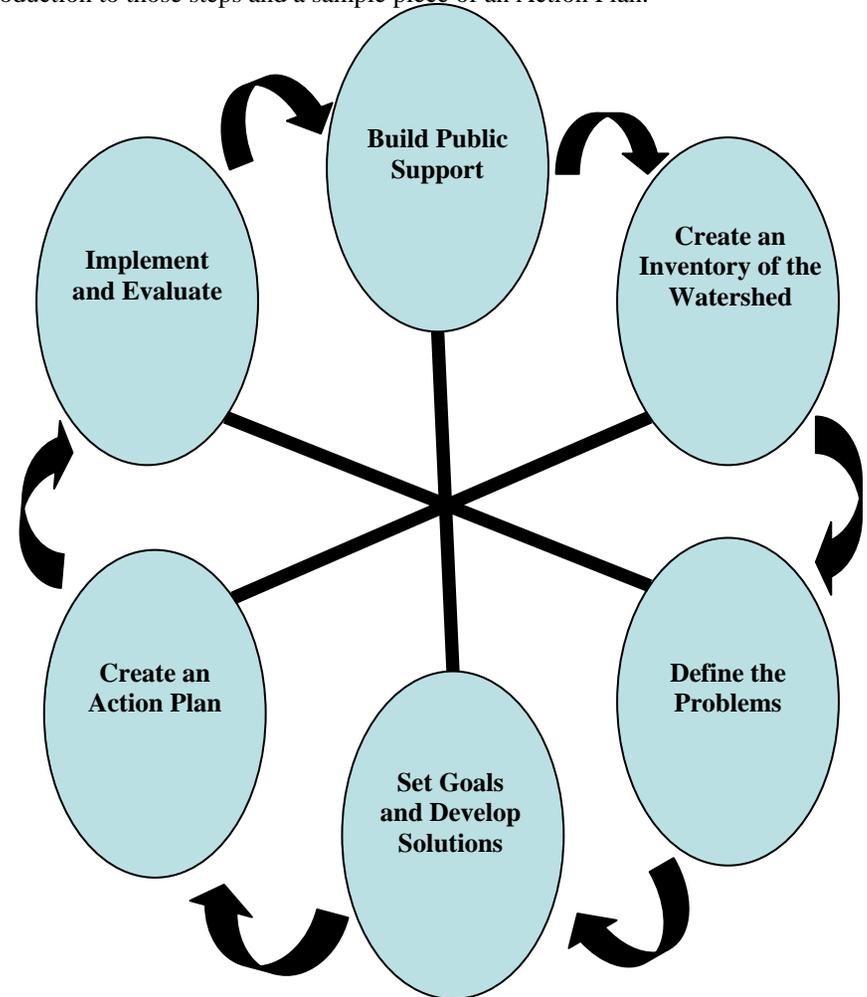


Source: Adapted from Ohio EPA – Division of Surface Water

BREAKNECK CREEK Watershed Management Plan Newsletter

The Nuts & Bolts of Watershed Action Plans

A successful Action Plan consists of many interrelated steps. This brochure presents an introduction to those steps and a sample piece of an Action Plan.



The table below shows a sample Goal from an Action Plan. The goal, objective, and priority area are identified. One small action to support the objective is illustrated. The action is a specific workable activity. The table outlines who could implement the action, possible funding sources, estimates of how long to implement the action, expected improvements, measurable results, estimate of costs, and the target area. In the plan more actions could be used to accomplish an objective and many objectives can work toward a goal.

Any Creek Watershed Action Plan							
Goal: Reduce the impact of storm water runoff on Any Creek.							
Objective 1: Increase removal of pollutants by filter strips.							
Priority Area: Central basin							
Action	Possible Coordinating Party	Possible Funding Source	Estimated Time Frame	Expected Improvement	Measurable Results	Estimated Cost	Target Area
1.1 Increase the coverage of filter strips	NRCS SWCD	Section 319 LEPP	3 Years	Less sediment in streams	# of linear feet installed	\$0.25 per sq. ft.	Little Creek Trib.
NRSC– Natural Resources Conservation Service SWCD– Soil and Water Conservation District LEPP– Lake Erie Protection Fund							

NEFCO

NORTHEAST OHIO FOUR COUNTY REGIONAL PLANNING & DEVELOPMENT ORGANIZATION
 180 East South Street, Akron, Ohio 44311-2035 (330) 252-0337 • Fax (330) 252-0664

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Source: Adapted from Ohio EPA's *Guide to Developing Local Watershed Action Plans in Ohio*.

The Action Plan (outlined below) provides the direction for a watershed group to restore a stream. The Plan begins by building public support. The environmental data helps define the problems that confront a stream. Using that information the watershed group identifies stream restoration goals and solutions (i.e. objectives and actions). Perhaps the greatest challenge is finding the money and resources to implement the solutions. Small workable restoration projects greatly enhance the chance of finding restoration funds. Repeated successes can increase the likelihood of attracting funding for larger projects. Periodically the plan is reviewed to measure progress and revise the goals and solutions if needed. It is important to stay persistent and accomplish workable projects.

1. Building Public Support and Plan Development

- Watershed Groups, Plan Outline, Local Buy-in

2. Inventory of Environmental Data

- Description of Watershed
- Previous or Complementary Efforts
- Water Quality Data

3. Defining the Problems and Watershed Impairments

- Sources vs. Causes
- Pollutant Loading
- Habitat Conditions
- Problem Statements
- What Needs to Happen to Achieve Goals

4. Set Restoration & Protection Goals and Develop Solutions

- Measurable Goals with Indicators
- Technical Solutions (BMPs, Polices, or Actions)

5. Create an Action Plan and Implementation

- Education and Information
- Prioritize Activities and Target Areas
- Marketing and Funding Strategy

6. Evaluation and Review

- Set Criteria
- Create a Plan to Track Progress
- Highlight Successful Activities
- Establish Monitoring
- Update and Revise Plan Every 2 to 5 Years
- Include Evaluation of New Information

Goal 7: Encourage the development of a sustainable agricultural economy in the Breakneck Creek watershed.



Good water quality and agriculture are compatible. Cost effective agricultural production is dependent on good water quality and quantity. Best management practices can protect and maintain water supplies.

Target Area: *Potter Creek, Cranberry Creek, and Congress Lake Outlet.*

Goal 8: Maintain and protect potential groundwater recharge areas.



Wetlands and streams are hydrologically connected to groundwater. Water can flow into and from groundwater sources.

Target Area: *Potter Creek, Breakneck Creek, and Reed Ditch*

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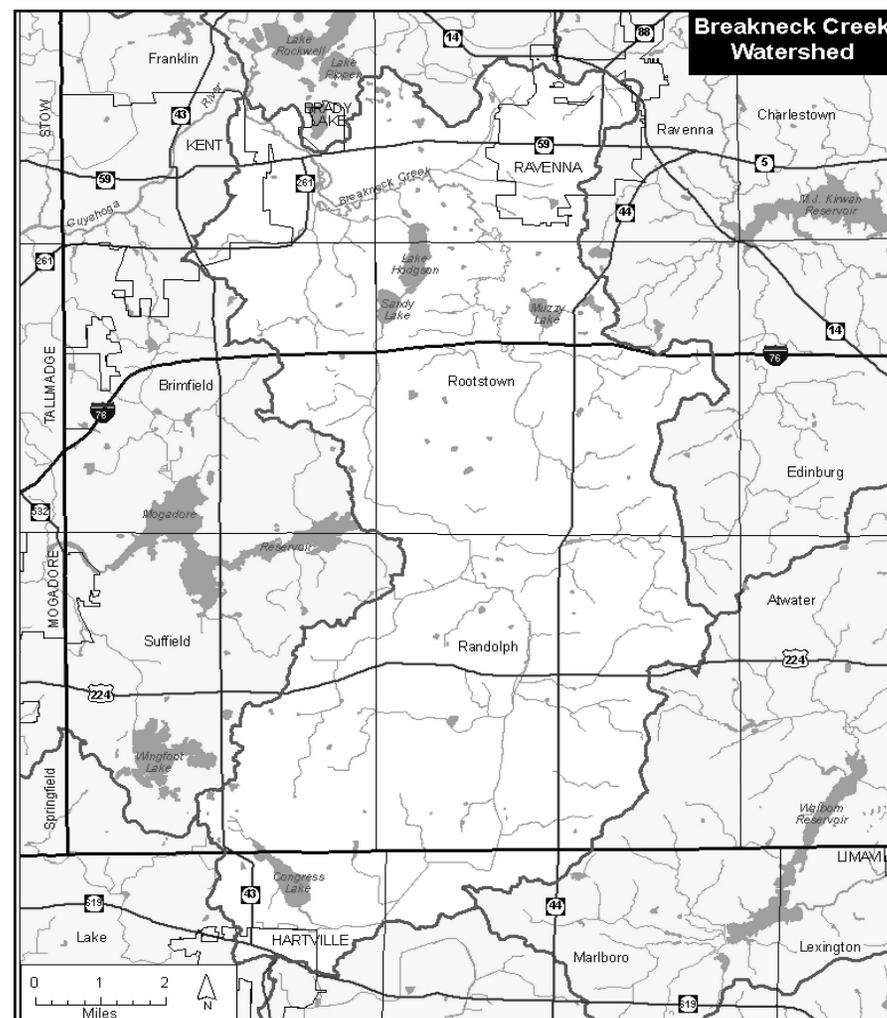
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BREAKNECK CREEK Watershed Management Plan Newsletter

Proposed Action Plan Goals

These goals and target areas are presented for discussion. They reflect NEFCO's analyses and initial efforts to develop a watershed management plan for the Breakneck Creek.



Goal 1: Communicate with planners, watershed residents, and stakeholders to increase the understanding, awareness, participation, and cooperation with best management practices to protect water quality.



A key theme is to emphasize the benefits that can be expected through implementation of the plan. Local support is enhanced when benefits are realized by the watershed citizens and stakeholders.

Target Area: Watershed wide

Goal 2: Restore riparian and stream corridors.



Eroded stream banks can be a chronic source of sediment to the stream. The sediment will impede the growth of aquatic life. The accumulated sediment will worsen erosion downstream during high flows.

Target Area: Potter Creek, Cranberry Creek, Congress Lake Outlet, and small headwater

Goal 3: Protect current forested areas and promote additional tree planting.



Water soaks quickly through the loose and porous soil of the forest floor. Rotting leaves and branches create the spongy surface that water quickly moves through to join up with ground water. As groundwater, it replenishes the streams.

Target Area: Potter Creek, Cranberry Creek, Congress Lake Outlet, Breakneck Creek, and Reed Ditch

Goal 4: Identify and control soil loss in areas that have severe slopes.

Trees, shrubs, and grasses slow the flow of water off slopes and keep soil in place. The water percolates into the ground and is slowly released to the stream. This reduces erosion of the stream bank and downstream sedimentation.

Target Area: Potter Creek, Cranberry Creek



Goal 5: Adopt development practices to minimize the impact from the creation of impervious areas.

Extensive rooftops and parking lots prevent water from soaking in the ground. The runoff worsens erosion of stream banks and downstream sedimentation. Pollutants from the parking lots impair the growth of aquatic communities.

Target Area: Franklin, Ravenna, and Brimfield Townships

Right photo shows Breakneck Creek surrounded by trees and commercial development.



Goal 6: Describe a model of a storm water control plan for the communities within the watershed.

Challenges abound to manage storm water from the growing urban areas. Runoff will add erosive volumes of water to small streams causing erosion of stream banks. The ephemeral nature of the drainage ways make flows management difficult as well as presenting a safety hazard to nearby citizens and property.

Target Area: Franklin, Ravenna, and Brimfield Townships.



Submittals - 2

**Breakneck Creek Watershed
North Range (Areas North of Rt. 76)**
Potential Pollution Source Rating Survey

Listed below are potential pollution sources. Please indicate how much you suspect each source could be polluting the Breakneck Creek Watershed. Circle a number for each source in the right column (1 being the least threatening and 5 being the most threatening). If you are unsure of the threat leave the rating blank.

Potential Pollution Source	Threat Rating				
	LOW	-----	HIGH		
	1	2	3	4	5
1. Home Sewage Treatment Systems	1	2	3	4	5
2. Municipal Wastewater Treatment Plants	1	2	3	4	5
3. Trucking Activity and Related Maintenance	1	2	3	4	5
4. Oil and Gas Wells (Oil/Gas production, drilling, exploration)	1	2	3	4	5
5. Oil and Gas Pipelines	1	2	3	4	5
6. Leaking Underground Storage Tanks	1	2	3	4	5
7. Registered Underground Storage Tanks	1	2	3	4	5
8. Gasoline Use (transportation and storage)	1	2	3	4	5
9. Impervious Areas (Roads, rooftops, parking lots, etc.)	1	2	3	4	5
10. Agricultural Areas	1	2	3	4	5
11. Construction Sites	1	2	3	4	5
12. Nurseries, Greenhouses, and Landscaping Operations	1	2	3	4	5
13. Lawn and Garden/Household Maintenance Activity	1	2	3	4	5
14. Golf Courses	1	2	3	4	5
15. Fuel Oil Use (transport and storage of fuel oil)	1	2	3	4	5
16. Salt Storage and Seasonal Spreading of Salt	1	2	3	4	5
17. Polychlorinated Biphenyls (PCBs) Use (electrical transformers)	1	2	3	4	5
18. Abandoned Drinking Water Wells	1	2	3	4	5
19. Mining Activity	1	2	3	4	5
20. Solid Waste Disposal	1	2	3	4	5
21. Storm Water	1	2	3	4	5

*Please complete this survey and fax or mail your survey to Claude Custer at NEFCO. Please call if you have any questions.

NEFCO, 180 E. South St., Akron, OH 44311, Fax 330-252-0664
ccuster@nefcoplanning.org

Submittals - |

**Breakneck Creek Watershed
South Range (Areas South of Rt. 224)**
Potential Pollution Source Rating Survey

Listed below are potential pollution sources. Please indicate how much you suspect each source could be polluting the Breakneck Creek Watershed. Circle a number for each source in the right column (1 being the least threatening and 5 being the most threatening). If you are unsure of the threat leave the rating blank.

Potential Pollution Source	Threat Rating				
	LOW	-----	HIGH		
	1	2	3	4	5
1. Home Sewage Treatment Systems	1	2	3	4	5
2. Municipal Wastewater Treatment Plants	1	2	3	4	5
3. Trucking Activity and Related Maintenance	1	2	3	4	5
4. Oil and Gas Wells (Oil/Gas production, drilling, exploration)	1	2	3	4	5
5. Oil and Gas Pipelines	1	2	3	4	5
6. Leaking Underground Storage Tanks	1	2	3	4	5
7. Registered Underground Storage Tanks	1	2	3	4	5
8. Gasoline Use (transportation and storage)	1	2	3	4	5
9. Impervious Areas (Roads, rooftops, parking lots, etc.)	1	2	3	4	5
10. Agricultural Areas	1	2	3	4	5
11. Construction Sites	1	2	3	4	5
12. Nurseries, Greenhouses, and Landscaping Operations	1	2	3	4	5
13. Lawn and Garden/Household Maintenance Activity	1	2	3	4	5
14. Golf Courses	1	2	3	4	5
15. Fuel Oil Use (transport and storage of fuel oil)	1	2	3	4	5
16. Salt Storage and Seasonal Spreading of Salt	1	2	3	4	5
17. Polychlorinated Biphenyls (PCBs) Use (electrical transformers)	1	2	3	4	5
18. Abandoned Drinking Water Wells	1	2	3	4	5
19. Mining Activity	1	2	3	4	5
20. Solid Waste Disposal	1	2	3	4	5
21. Storm Water	1	2	3	4	5

*Please complete this survey and fax or mail your survey to Claude Custer at NEFCO. Please call if you have any questions.

NEFCO, 180 E. South St., Akron, OH 44311, Fax 330-252-0664
ccuster@nefcoplanning.org

Submittals - 4/11

Breakneck Creek Watershed Middle Range (Areas South of Rt. 76 and North of Rt. 224)

Potential Pollution Source Rating Survey

Listed below are potential pollution sources. Please indicate how much you suspect each source could be polluting the Breakneck Creek Watershed. Circle a number for each source in the right column (1 being the least threatening and 5 being the most threatening). If you are unsure of the threat leave the rating blank.

Potential Pollution Source	Threat Rating				
	LOW	-----			HIGH
	1	2	3	4	5
1. Home Sewage Treatment Systems				4	5
2. Municipal Wastewater Treatment Plants	1	2	3	4	5
3. Trucking Activity and Related Maintenance	1	2	3	4	5
4. Oil and Gas Wells (Oil/Gas production, drilling, exploration)	1	2	3	4	5
5. Oil and Gas Pipelines	1	2	3	4	5
6. Leaking Underground Storage Tanks	1	2	3	4	5
7. Registered Underground Storage Tanks	1	2	3	4	5
8. Gasoline Use (transportation and storage)	1	2	3	4	5
9. Impervious Areas (Roads, rooftops, parking lots, etc.)	1	2	3	4	5
10. Agricultural Areas	1	2	3	4	5
11. Construction Sites	1	2	3	4	5
12. Nurseries, Greenhouses, and Landscaping Operations	1	2	3	4	5
13. Lawn and Garden/Household Maintenance Activity	1	2	3	4	5
14. Golf Courses	1	2	3	4	5
15. Fuel Oil Use (transport and storage of fuel oil)	1	2	3	4	5
16. Salt Storage and Seasonal Spreading of Salt	1	2	3	4	5
17. Polychlorinated Biphenyls (PCBs) Use (electrical transformers)	1	2	3	4	5
18. Abandoned Drinking Water Wells	1	2	3	4	5
19. Mining Activity	1	2	3	4	5
20. Solid Waste Disposal	1	2	3	4	5
21. Storm Water	1	2	3	4	5

*Please complete this survey and fax or mail your survey to Claude Custer at NEFCO. Please call if you have any questions.

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