

COWANSHANNOCK CREEK WATERSHED RIVER CONSERVATION PLAN

EXECUTIVE SUMMARY

February 2002

The Planning Process...Community Involvement and Visioning

Throughout the planning process, CCWA sought input from the public, local municipalities, and agencies. A public visioning session held at the first in a series of three public meetings in November 2000 helped identify highlights and challenges faced within the watershed and set the stage for plan development.

Watershed highlights noted at the public meeting were improved water quality in recent years, availability of a variety of recreational opportunities, farmers interested in improving their land, reduction of untreated sewage in the stream in recent years, and easy access to natural areas.

Major challenges still faced in the watershed listed at the public meeting were illegal dumping, lack of community interest in watershed issues, streambank erosion, poor habitat for fisheries such as trout, need for riparian buffers, and lack of zoning. In addition, physical alteration of the streambanks, sediment loadings in streams, and sewage and agricultural runoff in streams were identified as "prevalent concerns" by most attendees based on a questionnaire distributed at the public meeting.

ON THE ROAD TO CONSERVATION AND SUSTAINABLE DEVELOPMENT

The Cowanshannock Creek watershed is a 63.3 square mile area that drains portions of Armstrong County (58.2 square miles) and Indiana County (5.1 square miles) in rural, midwestern Pennsylvania. The creek consists of approximately 153 total stream miles and discharges into the Allegheny River. Typical of many areas across western Pennsylvania, past mining activities from the late 1800's through to the mid-1970's (when adequate environmental protections were established), left the Cowanshannock Creek watershed in need of restoration. Since the mid-1970's much work has been completed to remediate impacts from past mining in the area, and restoration efforts have successfully contributed to improved quality of life for local residents.

However, many opportunities to improve and conserve the watershed's condition have yet to be realized. In Fall 2000, with goals to further promote and implement conservation and sustainable development efforts, the Cowanshannock Creek Watershed Association (CCWA), a conservation association working in the area since 1980, instigated a grassroots watershed planning effort to develop the Cowanshannock Creek Watershed River Conservation Plan (RCP). The plan was designed to help communities better understand the natural, physical, and cultural resources in their watersheds, so that they can make conscious decisions regarding potential improvements, and conserve important features.

This executive summary serves as a snapshot of the current condition, issues, and opportunities in the Cowanshannock Creek watershed which are discussed in the final RCP.

GOALS AND OBJECTIVES

The plan is intended to be a living document that will be a catalyst and basis for sound land use management and conservation efforts in the watershed. A further objective is to obtain DCNR approval of the river conservation

plan in order to place the Cowanshannock Creek watershed on the Pennsylvania Rivers Conservation Registry. This status gives special recognition to communities that lie within the Cowanshannock Creek watershed and makes them eligible for money available through the Keystone Grant Program. All municipalities that support the plan are also made eligible for funding through the program.

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Copies of the Final RCP can be viewed at the following locations:

- Kittanning Public Library
- Armstrong County Planning Office
- Armstrong County Conservation District
- Indiana County Planning Office

ISSUES AND OPPORTUNITIES

A cornerstone of the plan was the development of a series of management recommendations to address the identified issues and concerns throughout the watershed. **It will be up to the local community organizations, municipalities, and residents to collectively work together to implement outlined actions and achieve desired environmental, economic, and social improvements.** The following six major issue areas were identified as top priorities for the watershed.

- (1) Implementation of local planning and zoning to protect farmland and forest resources, the riparian corridor, floodplains, and wetlands;
- (2) Water quality improvement and protection efforts that focus on agricultural pollution sources, sewage management, riparian buffers, key areas for streambank stabilization, and impacts from abandoned mine drainage (AMD);
- (3) Collection of information on existing biological resources within the watershed needed to identify key areas for long term protection, as well as sustainable management of forest resources;
- (4) Addressing illegal dumping occurring throughout the watershed;
- (5) Protection and enhancement of natural recreational resources; and
- (6) Additional watershed education opportunities.

Further description of these issues and management recommendations are described in the remainder of this executive summary.

Local Planning and Zoning

Unplanned growth can lead to impacts to vital community resources including drinking water, flood protection, alteration of stream hydrology and stability, etc. Although developed areas compose only 1.5% of the watershed currently, protection of existing resources will be very important as communities change and grow. The population is expected to grow by 8% from 2000 to 2025 with some municipalities declining in population and others increasing significantly. In addition to promoting economic development goals and conserving critical areas, local planning and zoning can encourage and enforce use of best management practices for agricultural operations, timbering, and sewage management that have major impacts on Cowanshannock Creek and its tributaries.

Currently, planning and zoning activities within the watershed exist only at the county level. Existing plans in both counties are outdated, with Armstrong County having a 1992 Subdivision and Land Development Ordinance in place, and Indiana County having a comprehensive plan adopted in 1967. Both are in various stages of developing new or updating existing comprehensive plans. A comprehensive plan serves as a guide for future growth, land use, and development activities. Although not enforceable, it can serve as guide for municipalities in the area. Public involvement in the development of these plans is expected to be critical. Also, education of municipal officials on the need to follow comprehensive plan guidelines or adopt local ordinances will be important.

Water Quality Improvement and Protection

Water quality of Cowanshannock Creek is good overall with some nutrient enrichment, erosion and sedimentation in places. Impacts to water resources are primarily from non-point source pollution (NPS) sources. NPS pollution comes from multiple, varied sources which make them more difficult to manage. Examples of NPS pollution include abandoned mine discharges, agricultural runoff with high nutrient and pesticide loadings, and residues from yards. Within the Cowanshannock watershed, NPS pollution from the following are most detrimental to water quality.

Watershed Facts

Location: Armstrong County (92% of the watershed) and Indiana County (8% of the watershed), PA

Type: Rural

Major Basin: Allegheny River sub-basin, Ohio River basin

Ecological Region: Pittsburgh Low Plateaus, Appalachian Plateaus Physiographic Province

Drainage Area: 63.3 square miles

Total Stream Miles: 153

Designated water use: Primarily warmwater fisheries; trout is stocked along a portion of Cowanshannock Creek from Huskins Run to the mouth.

Impaired Waters (PADEP 303(d) List): 8.52 stream miles, related to abandoned mine drainage

Land Use/Land Cover

- Forest: 51%
- Agriculture: 46%
- Other: 3%

Estimated Population, 2000: 5,500

Population Density, 2000: 87 persons per square mile

Projected Population Growth, 2000

- **Poor land use practices on residential and agricultural lands.** These include over-application of fertilizers and pesticides, as well as livestock access to streams. Education of proper fertilizer and pesticide application on residential lands, promotion of nutrient management planning on agricultural lands, and installation of stream bank fencing in livestock pastures, are recommended.

- **Lack of septic system use and/or maintenance.** This is especially an issue in the middle and eastern portions of the watershed where sewer service is not currently provided, nor planned in the near future. Many homeowners do not properly maintain existing septic systems (e.g., periodic pump out of septic systems every two years or so), or simply pipe sewage directly to the stream with no treatment. Inadequate soils also limit use of simpler, less expensive septic systems within the watershed. In addition to encouraging local municipalities to update local sewage plans (Act 537 plans), coordinated outreach and education to homeowners in areas without sewer service will be key.

- **Lack of riparian buffers in places.** In many agricultural and residential areas property owners have cleared and mowed grass and vegetation right up to the stream bank. Vegetated areas along waterways protect stream banks from erosion and catch nutrients and sediments that will otherwise pollute waterways. Outreach and education on the benefits of stream bank fencing, and technical and financial assistance to priority areas as identified in a recent fluvial geomorphology (FGM) study (2002) completed for the watershed are recommended.

- **Sedimentation and habitat impacts from stream bank erosion and sediment loadings from agricultural runoff, runoff from dirt and gravel roads, etc. in places.** Sediment loading to the Cowanshannock is a major issue. An estimated 10 miles of unstable stream banks that contribute sediment loadings from downcutting and widening of stream reaches should be stabilized and enhanced. Monitoring at one site measured erosion of approximately 35 tons of soil over an eight month period. Use of natural stream design methods to stabilize these areas is recommended.

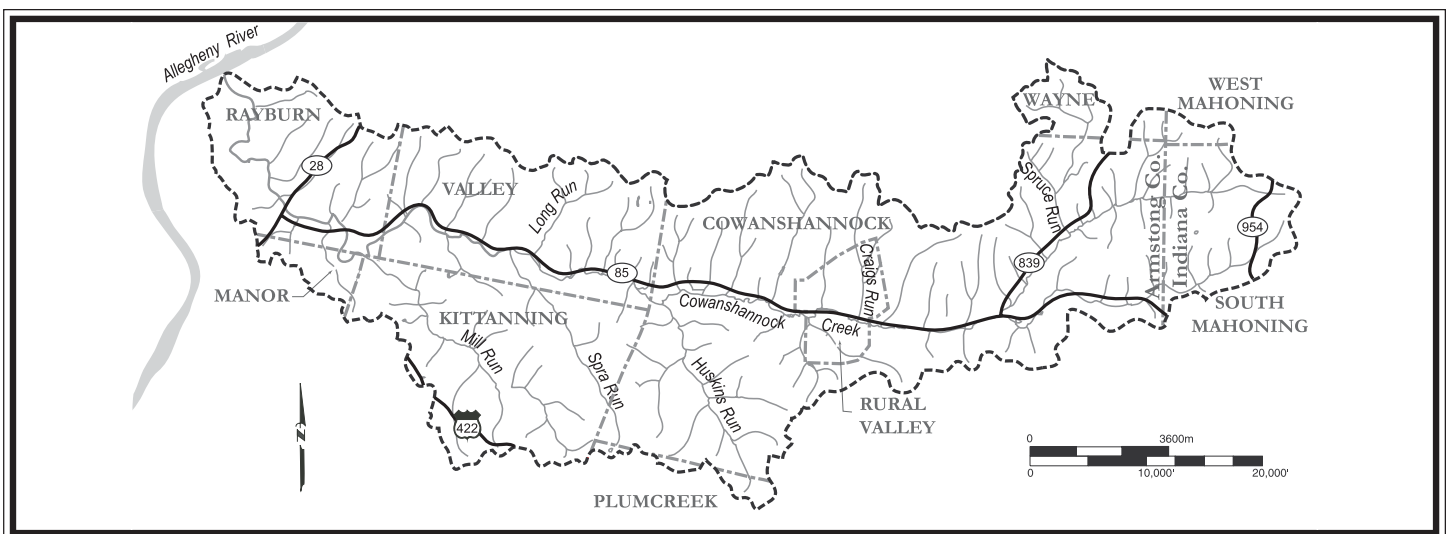
- **Lack of treatment of several abandoned mine discharges.** A total of 12 known remaining AMDs are found throughout the watershed. These remaining sources pose minor water quality impacts. Efforts should be made to treat all of the remaining sources as landowner cooperation and funding becomes available.



Buttermilk Falls

Finding out more about Biological Resources and Encouraging Sustainable Timber Management

Very little technical information is currently available on the biological resources within the watershed. Several areas, in particular an area referred to as “Buttermilk Falls” by local residents located in the western portion of the watershed on the downstream end, is expected to be abundant with diverse species of aquatic and terrestrial life. Further research and assessment of the biological diversity will be important to identifying critical areas for conservation. An annual community bio-blitz is encouraged, as well as pointing school studies toward bioassessment within the watershed. Also, with more than half of the watershed consisting of privately owned forests, sustainable timber management needs to be encouraged.



Illegal Dumping and Waste Management

Roadside solid waste, private burning of waste, and small dumping locations on public and private property is occurring throughout the watershed and is aesthetically displeasing. Fines have been issued to individuals for their actions; however, the problem continues to exist. A major challenge will be to change the attitudes of local residents who feel they have a "right to free dumping." Local residents need to understand that backyard dumping poses public health impacts and reduces property value within the *entire* community.

Public education campaigns on waste regulations, recycling options, and enforcement procedures, as well as involvement of organizations such as Pennsylvania Clean Ways, are needed. In particular, an Armstrong County chapter of the Pennsylvania Clean Ways should be started, and the existing Indiana County chapter of the Pennsylvania Clean Ways should be drawn upon for activity in the watershed. Identifying priority dumping sites and clean up activities in coordination with existing recycling activities at the county level is also recommended.

Protection and Enhancement of Natural Recreational Resources

Recreational opportunities are one of the best assets and greatest potentials within the watershed. They provide the chance for everyone to experience and gain a stronger appreciation and understanding of the importance of nature within the watershed. Protecting, enhancing, expanding, and promoting existing recreational opportunities will help build support within the watershed. A number of hiking and rail trails as well as small park and recreational areas already exist. These include the Bernie Snyder Picnic Area, Boat Launch along the Cowanshannock, White Lake and Wetland, Devil's Washbasin fishing area, Canfield Holmes Sanctuary, and Buttermilk Falls. In addition, more than 60 miles of existing and planned hiking and biking rail-to-trails are or will be located in the vicinity of the watershed. Opportunities to expand and connect trails within the watershed and to surrounding areas are available and are recommended.

A number of additional opportunities to encourage use of existing and future resources could be promoted. These include holding annual recreational events such as a fun run or bike-a-thon in coordination with community festivals to raise awareness. A recreational activity map of the watershed could also help promote ecotourism of this rural watershed.

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Watershed Education and Outreach

Some of the major challenges in the watershed arise from indifference toward illegal dumping, and lack of sewage management. Community resources are generally undervalued by local residents. Through education these attitudes can change.

A number of education and outreach opportunities exist throughout the watershed for both youth and adults. Efforts to involve local schools, local organizations, and general community members in conservation, beautification projects, and data collection activities will be critical to increasing community understanding and support for conservation and sustainable development efforts. In addition, development and promotion of an environmental education center is expected to increase community awareness of conservation activities, as well as provide a facility where youth and adults alike can explore conservation. Utilizing the media to keep the watershed's citizens informed of projects, concerns, and volunteer opportunities will help reach a larger, more diverse group.