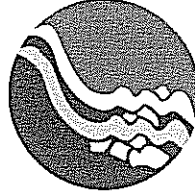


THE ONESQUETHAW-COEYMAN'S WATERSHED STUDY



Prepared by:

**Onesquethaw-Coeymans Watershed Council
and
Capital District Regional Planning Commission**



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Table of Contents

1. Executive Summary	5
2. Introduction	
2.1. General outline of this study.....	9
2.2. History of the OCWC.....	10
3. A Brief Watershed Tour.....	13
4. Watershed Concept Descriptions	
4.1. Watersheds	24
4.2. Stream Processes, Erosion and Sedimentation	25
4.3. Stormwater Runoff and Impervious Surfaces	28
5. Natural Features Related to the Watershed	
5.1. Wetlands	31
5.2. Flood Plains	33
5.3. Steep Slopes.....	35
5.4. Soils	36
5.5. Aquifers	39
5.6. Karst Terrain.....	40
5.7. Water Bodies (surface water)	43
5.8. Land Cover	45
6. Human Impacts Within the Watershed	
6.1. Existing Land Use	46
6.2. Population Growth and New Development.....	51
6.3. Nonpoint Source Pollution	52
6.4. Point Source Pollution.....	53
6.5. Public Water and Sewer	54
6.6. Water Diversions	56
6.7. Landfills.....	58
6.8. Trout Stocking	60
6.9. Dams and Barriers	61
6.10. Agriculture.....	61
7. Monitoring and Observations in the Watershed	
7.1. Water Quality and Biomonitoring	64
7.2. Flow Data	68
7.3. Temperature Monitoring	70
7.4. Fish Surveys	71
7.5. Stream Stability	73
7.6. Biodiversity	74
7.7. Climate and Precipitation	79

8. Law and Regulations Related to the Watershed	
8.1. Federal	80
8.2. State	82
8.3. Local	85
9. Issues and Conclusions	
9.1. Future Development and Land Use Practices	88
9.2. Issues and Outreach for Communities.....	94
9.3. Landfills.....	96
9.4. Industrial Activity and Point Discharges.....	96
9.5. Barriers and Water Diversion	97
9.6. Impervious Surfaces	98
9.7. Stream Stability	98
9.8. Public Access.....	99
9.9. Riparian Buffers	100
9.10. Land Conservation.....	100
9.11. Agriculture.....	101
10. Appendices	
10.1. Sediment and Erosion Control, Storm Water Management Guidelines, and Best Management Practices	102
10.2. SPDES Permits.....	108
10.3. Local Laws and Regulations	112
10.4. Glossary of Nonpoint Source Pollution Definitions.....	147
10.5. Biodiversity – Table of Watershed Animals and Habitat.....	149
10.6. Stream Flows	150
10.7. Municipal Code Rating Worksheet	159
10.8. Agricultural Programs	164
10.9. Stream Stability (Eroded Sites)	169
10.10. Where the Coeymans Meets the Hudson.....	172
10.11. List of Charts and Graphs.....	175

1 – Executive Summary

The Onesquethaw-Coeymans (OC) watershed is located in southeastern Albany County, New York. The watershed encompasses an area of approximately fifty-two square miles, which includes portions of five municipalities - the towns of Berne, New Scotland, Bethlehem, and Coeymans, and the village of Ravena. From its headwaters in the Helderbergs west of Clarksville, the stream travels approximately 19 miles in its 1400-foot descent to the Hudson River. It enters the Hudson just east of the village of Ravena about 12 miles south of the city of Albany.

The Onesquethaw Coeymans Watershed Council (OCWC) was incorporated in 2000 as a not-for-profit organization. The founding organizations are Trout Unlimited, Audubon Society of New York, the Albany County Water Quality Coordinating Committee and the Mohawk Hudson Land Conservancy.

The purpose of the OCWC is to protect and improve the quality of the creek and its watershed for the benefit of people, wildlife and the environment. This watershed assessment, funded by a grant from DEC's Hudson River Estuary Program, is a major step in achieving that purpose; it provides the foundation for a comprehensive watershed management plan.

Section 3, entitled A Brief Watershed Tour, gives an overview of important points along the creek, highlighting problems that must be addressed. For example, at the confluence of the Onesquethaw and Coeymans, the clear water of the Onesquethaw joins the murky water of the Coeymans. Just below the confluence, eroding banks and debris jams make the creek's shorelines unstable, contributing sediment that impacts water quality. The obvious questions are "why" and "what can and should be done about it?"

Section 4, Watershed Concept Descriptions, provides the general background readers need to understand the report. Included is a description of a watershed; a discussion of the various parts of a watershed, such as stream banks, riparian zone, and flood planes; an explanation of how streams evolve; and how various man-made features of a watershed, such as impervious surfaces, can influence that evolution.

Section 5 shows the location and explains the relevance of specific features within the Onesquethaw Coeymans Watershed, including wetlands, flood plains, steep slopes and water bodies. One particularly important feature is the limestone bedrock in much of the Onesquethaw

watershed; during periods of low-flow, sections of the creek disappear and flow underground through crevasses, caves and other conduits in the limestone. One result is that the creek is cooled when it flows through the bedrock, helping to provide excellent trout habitat. On the other hand, in areas where the limestone is close to the surface, any polluted surface water can easily enter those same crevasses and flow long distances, unfiltered by soil, to pollute the stream.

Section 6, Human Impacts Within the Watershed, describes the diverse range of land uses within the watershed, and describes the ways those land uses interact with the watershed.

This section also describes point source pollution (such as discharges from pipes), which are regulated by the state; and non-point source pollution, which is of diffuse origin, such as street pavement, atmospheric fallout and agriculture. According to DEC, nonpoint sources are the primary sources of contamination for more than 90% of the impaired waterbodies in the state.

Section 6 goes on to describe water and sewer systems within the watershed, water diversions (such as the diversion to Vly Reservoir), landfills, mining, dams and agriculture. The section also mentions trout stocking; while indiscriminate stocking of hatchery fish can reduce healthy wild trout populations, this is not the case in this stream.

Section 7 describes monitoring and other observations done in the watershed. This includes: fisheries, water quality and biomonitoring done by DEC and graduate students, stream flow monitoring done by US Geological Survey, and temperature monitoring done by Trout Unlimited. The section also describes some stream stability work done by the Albany County Soil and Water Conservation District, and various observations of watershed biodiversity (such as work done as part of a Hudsonia biodiversity training program organized by OCWC).

Section 8, Law and Regulation Related to the Watershed, summarizes federal, state, county and local regulations that control activities in the watershed. Federal controls include the National Environmental Policy Act, the Clean Water Act, and various federal mandates for agriculture. State controls include the State Environmental Quality Review Act (SEQRA), State Pollution Discharge Elimination System (SPDES) permits, the Freshwater Wetlands Act, and other provisions of Conservation Law. The state and county health departments control residential wastewater treatment systems.

Local laws regulating land use and site design, as well as regulations pertaining to soil erosion, sedimentation and storm water runoff are found in zoning ordinances, subdivision laws,

site plan regulations, or in stand-alone laws. Just as there is a wide variation in the development pressures facing each municipality in the watershed, there is a broad range in the way the communities regulate land use, site design, and the impacts of erosion, sedimentation and storm water runoff. A table summarizes the controls, and relevant excerpts are included in an appendix.

Section 9, Issues and Conclusions, includes a series of recommendations for implementation at the municipal level. All of the communities within the watershed fall short of the impervious surface standards recommended by the Center for Watershed Protection. Large lots, large setbacks, overly wide roads, and oversized parking lots are required by local regulations, creating the potential for unnecessary, excessive impervious surfaces. Across the country many communities are starting to recognize that the suburban zoning and subdivision regulations that have become standard over the last half-century are in need of revision because they essentially mandate sprawl-type growth (while making smart growth illegal).

Smart growth means encouraging development at higher densities in key areas and limiting it in others. Smart growth is growth that is compact, connected, diverse (mixed-uses) and designed for both autos and non-auto mobility. A central recommendation is that municipalities modify their comprehensive plans, zoning laws, and subdivision regulations to efficiently facilitate this type of development.

Other recommendations for municipalities include: protect sensitive environmental areas; establish stream and wetland buffers; control construction related runoff; and conduct outreach, encouraging residents to adopt practices that reduce pollution.

Finally, there is a series of recommendations related to land fills, industrial activity (point discharges), barriers and water diversions, impervious surfaces, stream stability, public access to the stream, riparian buffers, land conservation and agriculture. For example, the stream corridor contains beautiful natural features such as waterfalls, caves, and gorges, which should be both protected and made accessible for public use. The stream itself contains a healthy population of wild trout, which could be a significant recreational resource for the residents of the region. Community organizations, local municipalities, and agencies should be alert to opportunities to obtain land and easements for public benefit.

The recommendations and implementation strategies developed by the OCWC and CDRPC, and presented in the Issues and Conclusions section of this watershed assessment

report, should be considered preliminary. As a next step, the OCWC will present this report to municipalities and other stakeholders for their comments, and the recommendations will be modified based on that input. The resulting Onesquethaw-Coeymans Watershed Management Plan is meant to serve as a guide to help the council, residents, and municipalities work together to promote the protection and improvement of water quality and stewardship of the watershed.