



Watervliet Reservoir

Watershed Protection Study Advisory Meeting #2

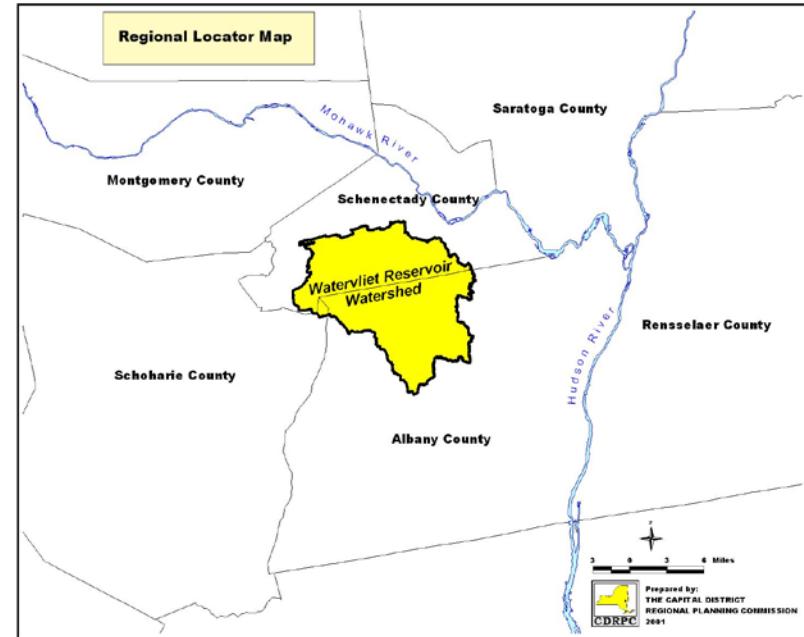
Capital District Regional Planning Commission



Task 1: Assemble a Stakeholder Group

Select municipalities within Watershed

- Town of Guilderland
- Town of Rotterdam
- *Town of Duanesburg*
- *Town of Berne*
- Town of New Scotland
- Village of Altamont
- City of Watervliet (as owner of resource)



Agencies and Organizations

- Hudson Mohawk Land Conservancy
- Albany County Department of Health
- Siena College Department of Environmental Studies and Sciences
- Albany County Department of Natural Resources
- Stormwater Coalition of Albany County
- Albany County Soil and Water Conservation District
- Hudson River Watershed Alliance
- New York State Farm Bureau, Albany County Section
- Schenectady County WQCC and SWCD



Plan Goals

- Increase stream buffers, working with willing landowners to purchase easements through grants or restrict encroachment
- Identify and address sources of pollutants of concern
- Focus development and minimize impacts, limit potential for harm to waterbodies feeding the reservoir
- Identify and address causes of nutrient loading and turbidity
- Provide assistance and support for the purchase or protect land of significant environmental protection value to the reservoir with the aid of willing landowners
- Remove invasives and work to ensure they do not return
- Ensure, if recreational access around or in the reservoir is allowed, that water quality is not impaired as a result



Vision

"Through a comprehensive analysis of threats - existing and potential - to the Watervliet Reservoir, and the development of potential solutions, policies, and regulatory guidelines that can mitigate these threats, this program will enable, encourage and support municipal and third party efforts within the watershed to protect this valuable resource and ensure the reservoir remains a quality drinking water source."



Study Update Timeline

- **August**
 - Finalize Stakeholder Group Membership
 - Develop Goals and Vision
 - Complete review of prior study objectives and performance measures
 - Complete review of maps and sampling data
- **September**
 - Review findings of Code Audits and provide feedback, corrections
- **October**
 - Review first draft of Code Audit recommendations
- **November**
 - Review Draft of Report recommendations
- **December**
 - Review Final Report and code recommendations
 - Develop an implementation timeline and designate a plan management team using the DWSP2 Framework to keep the protection program on track.



Responses from Stakeholders

- What concerns do you or your organization have for this resource?
 - Ability to preserve land adjacent the resource
 - Status of the gravel mine
 - Ability for Watervliet to provide input in development process (SWPPP review?)
 - Identify high-risk municipal facilities owned by MS4s within watershed
 - What is the revenue stream from the reservoir for Watervliet?
 - What are Watervliet treatment costs? Impacts of continued degradation?



Responses from Stakeholders

- Guilderland Landfill: Has any sampling been performed on the underground stream that feeds the reservoir?
- Greater emphasis on green infrastructure management in subdivision review
- Education of the importance of the protection of the reservoir. Perhaps trails with interpretive signs, newsletters.
- “Clip” maps to sub watersheds connect pollutants and areas of concern to land use
- What does it cost to implement an effective stormwater pollution program (both MS4 and non-MS4) which serves to protect the reservoir?



Growth Profiles*

Municipalit	1990 Watershed Population	2000 Watershed Population	Population Change 1990 - 2000	2010 Watershed Population	Population Change 2000- 2010	Population Change 1990- 2010
Berne	250	256	2.4%	1368	434.4%	444.8%
Duanseburg*	2715	2833	4.3%	6122	116.1%	121.1%
Knox	1646	1685	2.4%	2692	59.8%	61.2%
Rotterdam	8700	9,102	4.6%	13676	50.3%	52.6%
New Scotland	216	224	3.7%	337	50.4%	52.3%
Guilderland	5891	6984	18.6%	8411	20.4%	24.2%
Princetown	1360	1477	8.6%	1490	0.9%	1.0%
Altamont	1524	1737	14.0%	1720	-1.0%	-1.1%
Voorheesville	199	215	8.0%	175	-18.6%	-20.1%
Total	22501	24513	8.9%	35991	46.8%	51.0%

*Duanesbura includes Delanson

2003 Report Recommendations

Watervliet Reservoir Watershed Protection Study



Prepared by:

The Capital District
Regional Planning Commission



1. PROTECT SENSITIVE ENVIRONMENTAL AREAS:

Prevent development from occurring in floodplains, wetlands, steep slopes, mature forest, critical habitat areas, and along stream banks (conservation subdivisions, “design with nature”)

In addition, on site septic systems should not be allowed on soils that can't adequately filter septic effluent.



2. ESTABLISH STREAM and WETLAND BUFFERS:

Establish vegetative buffers adjacent to the stream channels and large unregulated wetlands (50 - 200 ft.).

Restrict structures and clearing in buffer zones.

A stream buffer overlay zone could be incorporated into the local zoning codes. In cases where no viable use is left for a parcel, the municipality should purchase the land.



3. CONTROL EROSION FROM CONSTRUCTION ACTIVITY:

Sediment accumulation and soil movement - erosion - are influenced by the following primary factors:

- soil erodibility
- vegetative cover
- topography
- climate and season



Planning boards should examine these factors by requiring the submission of an erosion and sedimentation plan when one or more acres of land will be disturbed (Phase II SPDES permit)



4. MANAGE AND TREAT POST-CONSTRUCTION RUNOFF

Require a post-construction stormwater management plan for development activity that disturbs one or more acres of land

Attempt to replicate predevelopment stream hydrology

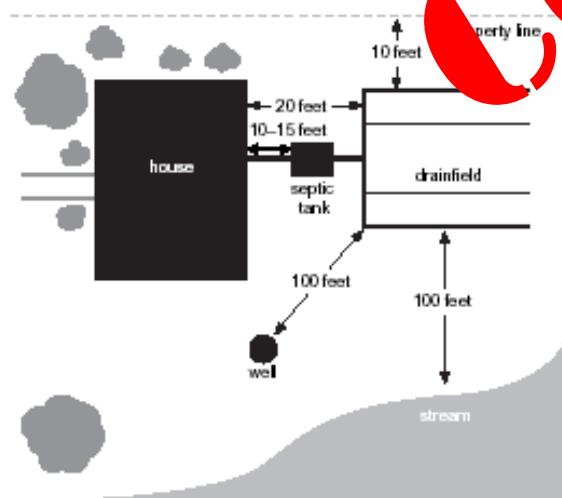
Institution inspection and maintenance program



5. Implement Post-development “Good Housekeeping” Practices

- Lawn Chemicals
- Household Waste
- Septic Tanks
- IDDE

**VARIES BY
COMMUNITY**



6. Consider purchase of the Gravel Quarry

The land, once reclaimed, could be converted into a public park with hiking and cross-country skiing trails. There are numerous existing trails that traverse the land adjacent to the reservoir. Some of this land is already owned by the city of Watervliet, and some of the land is private property. A plan could be created to purchase easements from private property owners, improve the public trails, and create new trails on the reclaimed mine land that link with existing trails. The park and trails could also be used as an outdoor classroom to teach students and interested citizens about water quality issues.



7. REDUCE IMPERVIOUS SURFACES:

Less impervious cover means less stormwater runoff, less downstream flooding, and lower pollutant loadings.

Cost of development reduced.

Open space preserved and community becomes more walkable.

Healthy watersheds usually have no more than 10 to 15% of their area covered by impervious surfaces. At 30% imperviousness, stream degradation becomes severe.

**VARIES BY
COMMUNITY**



Subdivision and zoning code modifications to reduce impervious surfaces and improve water quality

1. Reduce road width standards for new roads in new housing developments.
2. Reduce the size of parking lots and require shared parking (particularly in commercial areas).
3. Reduce building setbacks which reduces driveway length.
4. Reduce minimum lot size, which lessens road length/cost.
5. Drainage easements and sedimentation controls.

**VARIES BY
COMMUNITY**



Code modifications (cont.)

6. Cluster at the town scale: interconnected, higher density, mixed-use centers (Traditional Urbanism).
7. Limit infrastructure expansion into uplying areas.
8. Establish Stream and Wetland buffers
9. Preservation and Protection of Natural Areas
10. Steep slope and water course setback

Specific Code Recommendations
within the 2003 Report can be
found on pages 50-68.

**VARIETY BY
COMMUNITY**



Questions for Stakeholders

- Do you believe these recommendations are still valid?
- For those that are still valid, but unaddressed, why haven't they been advanced, and what may be done to modify or encourage the recommendation, so it is adopted?
- What protection strategies not in place today would you like to see proposed?



Next Steps



Task 4

Work with community to conduct a PCS inventory and identify protection methods that the community deems appropriate using the DWSP2 Framework and updated maps.

- Performance measure: Completed PCS Inventory table according to the DWSP2 Framework.
- Performance measure: Regulatory and/or non-regulatory protection methods are selected. Provide to DEC with Quarterly report.



Study Update Timeline

- September
 - Review findings of Code Audits and provide feedback, corrections
 - Distribute Potential Contaminant Source Table
- October
 - Review first draft of Code Audit recommendations
- November
 - Review Draft of Report recommendations
- December
 - Review Final Report and code recommendations
 - Develop an implementation timeline and designate a plan management team using the DWSP2 Framework to keep the protection program on track.



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