Town of Woodstock Drinking Water Source Protection Program (DWSP2) Plan

Woodstock Water District (NY5503394)

Prepared For

Town of Woodstock

76 Tinker Street, Woodstock, NY 12498

October 2026

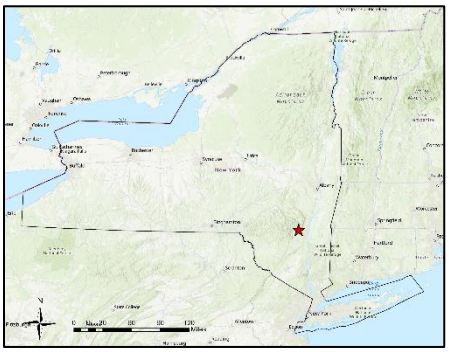
NEW YORK STATE OF OPPORTUNITY. Department of Health

NE IW PCC

Drinking Water Source Protection Program (DWSP2)

Town of Woodstock

Executive Summary



The Town of Woodstock applied to New York State for free technical assistance to create a tailored, locally developed Drinking Water Source Protection Program (DWSP2) Plan that builds off previous work, helps align priorities, and fills gaps within the municipalities' current and future source water protection efforts. The Town was paired with Technical Assistance Providers (TA Providers) from the New York State Department of Health (NYSDOH) to develop their DWSP2.

The work began with assessing current and future water quality concerns of the Town's municipal drinking water sources, and their contributing source water area. In preparation of the DWSP2 Plan, a stakeholder group was formed and provided local knowledge of the current conditions of their source water as well as some of their concerns regarding water quality. Together, the stakeholders and the TA providers interpreted water data, developed maps, identified potential sources of contamination, developed an actionable list of protection methods, and identified funding and partnership opportunities. The Town now has a comprehensive, step-by-step plan that can be used to implement actions and promote public health and safety, avoid preventable drinking water treatment costs, increase community confidence in drinking water, gauge future water usage and availability, and strengthen community partnerships. Due to the dependency that the community has on its wells, it is crucial to implement the identified strategies of protection for current and future generations.

Priority Concerns

Working together, the stakeholders and the TA providers compiled a list of current and potential concerns based on available data and updated mapping. The following list of concerns was identified as priorities for the Town to protect the quality and longevity of their drinking water sources.

1. Per and Polyfluoroalkyl substances (PFAS)
2. Residential sources of contamination
3. Transportation runoff
4. Community awareness and engagement
5. Management of potential contaminant sources

6. Future development and land use

Protection and Management Strategies

To address the identified concerns, the stakeholders and TA Providers determined strategies that can be implemented to prevent future contamination of the source water. The list below summarizes these strategies for each priority concern listed above.

Per and Polyfluoroalkyl Substances (PFAS)

To understand current concentrations and prevent future contamination of PFAS the Town can expand monitoring and conduct a public outreach campaign to reduce future contamination.

Residential Sources of Contamination

To reduce potential contamination from residential sources, the Town can develop implementation protocols for their Water District Wellhead Protection Overlay (WDWP-O) and educate homeowners on best management practices for fertilizer use, septic maintenance, oil tanks, as well as the Fill and Grading Law for the Town of Woodstock, Chapter 280 of the Woodstock Code.

Transportation Runoff

Roads in Woodstock are maintained by the Town Highway Department, Ulster County Highway and Bridges Division, and NYS Department of Transportation. Increasing communication and coordination between these three entities to implement road salt and vegetative best management practices can reduce transportation related contamination.

Community Awareness and Engagement

Community participation in source water protection efforts is important in protecting the Town's source water. To educate and engage residents in source water protection efforts the Town can utilize outreach tools such as presentations, social media, newsletters, and the Town website. Additionally, the Town aims to collaborate with local businesses to promote the sale of sustainable products that support water quality.

Management of Potential Contaminant Sources

Establishing reliable lines of communication between the Town/Building Department and facilities of concern can ensure the Town is notified promptly in the event of a contaminant spill or accident.

Future Development and Land Use

To mitigate the impacts of future development, the Town can designate the source water areas as a critical environmental area and acquire conservation easements.

Additional Woodstock Priorities

The Woodstock DWSP2 team considered a wide range of drinking water source-related issues to prioritize through this plan, and the Woodstock stakeholders consistently highlighted two concerns they believe are threats to the Town wellfields:

1. In 2025, a number of Woodstock's wells tested positive for low concentrations of perfluorooctane sulfonic acid (PFOS) and perfluorooctanoic acid (PFOA), types of per – and polyfluoroalkyl substance (PFAS). Wells were tested quarterly throughout the year, and concentrations remained below NYSDOH standards.
2. In 2019-2020, construction/demolition debris was deposited on a private residential parcel in Woodstock's source water area (Figure 3). The site where this debris was deposited has been the topic of public debate in Woodstock, and the Town's residents are working to justify a study that evaluates to what extent the debris may be impacting the underlying aquifer. In 2023, a Town Board-approved cleanup was conducted at the site to remove visual chunks of debris. As of January 2026, the Town of Woodstock's Town Code §192-4 indicates that the Town has jurisdiction to determine next actionable steps for the site. The Town should confirm the jurisdictional status. NYSDEC has inspected the site on five separate occasions and has determined the site does not require additional State action. There are ongoing conversations regarding further site assessment by the Town.

This plan's narrative, maps, and recommended next steps reflect those concerns.

Conclusion

The Town of Woodstock is making strides to protect its source water and its surrounding watershed area. To maintain the quality of their groundwater, the Town will move forward with the most important component of DWSP2: Plan Implementation. Potential funding sources and partnerships are listed in the full DWSP2 plan to aid the Town with DWSP2 implementation. For more information, please see a copy of the final DWSP2 Plan.

ABBREVIATIONS ..... **iii**

INTRODUCTION **1**

BACKGROUND **1**

1.0 FOUNDATION AND FORMATION **2**

1.1. Prepare Drinking Water Source Protection Maps 2

1.2. Form a Stakeholder Group 2

1.3. Establish Goals and Formulate a Vision 4

2.0 DRINKING WATER SOURCE ASSESSMENT **4**

2.1. Develop a Water System Overview 4

2.2. Prepare a Drinking Water Source Protection Map 5

2.2.1. Hydrogeological Setting 5

2.2.2. Drinking Water Source Protection Areas 6

2.2.3. Drinking Water Source Protection Maps 7

2.3. Create a Potential Contaminant Source Inventory 8

3.0 PROTECTION AND IMPLEMENTATION STRATEGIES **10**

3.1. Identify Protection and Management Methods 10

3.1.1 Current Source Water Protection Methods 10

3.1.2 Additional Regulatory and Non-Regulatory Protection Methods 10

3.1.3 Land Use Tools and Methods 10

3.1.4 Monitoring and Reporting 11

3.1.5 Public Education and Outreach 11

3.2. Priority Issues 11

3.3. Develop an Implementation Timeline 14

4.0 PLAN FINALIZATION **14**

4.1. Plan Management 14

4.2. Compile Plan 16

5.0 IMPLEMENTATION AND MAINTENANCE **16**

5.1. Implement the Program 16

5.2. Progress Reports 16

Tables

Table 0-1: Phases and Key Components 2

Table 1-1: Town of Woodstock's Stakeholder Group 3

Table 2-1: Water Quantity Summary 5

Table 2-2 Land Cover in the Source Water Protection Areas 7

Table 2-3 Potential Contaminant Source Categories and Sources 9

Table 4-1 Plan Management Team 15

Figures

Figure 1 – Project Location Overview
Figure 2 – Source Water Protection Areas
Figure 3 – Potential Contaminant Sources
Figure 4 – Land Cover
Figure 5 – Steep Slopes
Figure 6 – Land Use
Figure 7 – Soil Types
Figure 8 - Septic Systems

Appendices

Appendix A – DWSP2 Data Summary
- A.1 – DWSP2 Plan Checklist
- A.2 – Stakeholder Group
- A.3 – Goals and Vision
- A.4 – Overview of Water system
- A.5 – DWSP2 Map Creation
- A.6 – Potential Contaminant Source Inventory
- A.7 – Implementation Timeline
- A.8 – Plan Management Team

Appendix B – Modeling Methodology
Appendix C – Project Profiles
Appendix D – Cost Estimates

ABBREVIATIONS

AEM	Agriculture Environmental Management
AWQR	Annual Water Quality Report
BMP	Best Management Practice
CBS	Chemical Bulk Storage
CCE	Cornell Cooperative Extension
CEA	Critical Environmental Area
DOT	Department of Transportation
DPW	Department of Public Works
DWSP2	Drinking Water Source Protection Program
GPD	Gallons per day
GPM	Gallons per minute
GIS	Geographical Information System
LHD	Local Health Department
MCL	Maximum Contaminant Level
MGD	Million gallons per day
NRCS	Natural Resources Conservation Service
NYS	New York State
NYSAGM	New York State Department of Agriculture and Markets
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSDOS	New York State Department of State
NYSDOT	New York State Department of Transportation
PBS	Petroleum Bulk Storage
PCS	Potential Contaminant Source
PFAS	Per and Polyfluoroalkyl Substances
PFOA	Perfluorooctanoic acid
PFOS	Perfluorooctanoic sulfonic acid
PMT	Plan Management Team
PWS-ID	Public Water System Identification Number
SDWA	Safe Drinking Water Act
SEQR	State Environmental Quality Review
SPDES	State Pollutant Discharge Elimination System
SWAP	Source Water Assessment Program
SWCD	Soil and Water Conservation District
TOT	Time-of-travel
USEPA	United States Environmental Protection Agency

USGS	United States Geological Survey
WEC	Woodstock Environmental Commission
WDWP-O	Water District Wellhead Protection Overlay
WLC	Woodstock Land Conservancy
WQIP	Water Quality Improvement Project
WRR	Watershed Rules and Regulations

INTRODUCTION

The purpose of this Drinking Water Source Protection Program (DWSP2) Plan is to improve and protect public water sources and the surrounding environment for current and future residents. The Town of Woodstock applied to New York State for free technical assistance to create a DWSP2 Plan, hereafter referred to as the "Plan," that will build off previous work within the Town's current and future source water protection efforts. The Town was paired with Technical Assistance Providers (TA providers) from the New York State Department of Health (NYSDOH) to develop their Plan. The Town and partners will use this plan to guide their implementation efforts and progress forward with drinking water source protection.

To help guide municipalities and their TA providers in developing DWSP2 plans, representatives of key state agencies, including NYSDOH, New York State Department of Environmental Conservation (NYSDEC), New York State Department of State (NYSDOS), and New York State Department of Agriculture and Markets (NYSAGM), created a draft "Framework for Creating a Drinking Water Source Protection Program."

The Plan will act as a guide for the Town and their partners to readily implement source water protection actions. Implementing the identified source water protection efforts can help the Town promote public health and safety, avoid preventable drinking water treatment costs, increase community confidence in their drinking water, and strengthen community partnerships.

BACKGROUND

In 2004 a Source Water Assessment Program (SWAP) was prepared by NYSDOH for the Town's seven groundwater wells. The SWAP report included a delineation of contributing land areas (watersheds), inventory of potential contaminant sources, and analysis of the susceptibility of a public water supply to contamination. This assessment was referenced and built upon for DWSP2.

The Town of Woodstock recognizes the importance of maintaining a quality and reliable drinking water source for the long-term benefit of its residents. This Plan focuses on the Town's seven groundwater wells and their contributing source water area. The source water is groundwater drawn from an unconfined sand and gravel aquifer and operates as the Woodstock Water District. The system is assigned Public Water ID NY5503394. As reported in the 2025 Annual Drinking Water Quality Report (AWQR), the Woodstock Water District serves 2,500 people through 750 service connections.

The Town's plan was developed with a local stakeholder group using the phases and key components of DWSP2 shown below (Table 0-1). The stakeholders were able to provide local knowledge of current conditions of the town's source water and emerging concerns. In developing their DWSP2 plan, the stakeholders and their TA providers interpreted data, developed maps, identified potential sources of contamination, developed an actionable list of source water protection methods, and researched funding and partnership opportunities.

Table 0-1: Phases and Key Components

Phase 1. Foundation and Formation
1.1 Prepare Drinking Water Source Protection Maps **1.2 Form a Stakeholder Group** **1.3 Establish Goals and Formulate a Vision**
Phase 2. Drinking Water Source Assessment
2.1 Develop a Water System Overview **2.2 Prepare a Drinking Water Source Protection Map** **2.3 Create a Potential Contaminant Source Inventory**
Phase 3. Protection and Implementation Strategies
3.1 Identify Protection and Management Methods **3.2 Develop an Implementation Timeline**
Phase 4. Progression and Maintenance
4.1 Designate a Plan Management Team **4.2 Compile Plan**
Phase 5. Implementation
5.1 Implement the Plan **5.2 Progress Reports**

1.0 FOUNDATION AND FORMATION

1.1. Prepare Drinking Water Source Protection Maps

Initial mapping efforts were made by the TA Providers and stakeholders to visualize the drinking water source and potential contribution areas. The TA Providers and stakeholders utilized these maps to determine additional stakeholders that may need to participate.

1.2. Form a Stakeholder Group

A stakeholder group was formed for this effort after community input and reviewing initial mapping to determine key members that should be invited to participate. The group consists of people from a multitude of backgrounds including Town board members, engineers, local leaders, and scientists. A small portion of the Town of Hunter is in Woodstock's source water area; however, land in this area is fully conserved and owned by New York State, so the Town of Hunter was not included in the DWSP2 planning process. Members of the group and their affiliations are listed in Table 1-1. The points of contact for the stakeholder group are Julia Blelock and Arlene Weissman.

Monthly meetings were established to maintain progress on the DWSP2 Plan. A full list of Stakeholder group members and meetings are documented and can be found in Appendix A.2. The group assisted in creating a vision statement and goals for the Town. They also provided

local knowledge and feedback during the drinking water source assessment phase and the protection and implementation strategies phase. Finally, they identified qualified individuals and groups to include in the Program Management Team (PMT). The public was informed of the Town's efforts through a Town Hall presentation on 7/24/2024 and again at a Town Board meeting on 3/11/2025.

The Town of Woodstock recognizes the importance of long-term plan implementation and how staff changes may impact the Plan's ongoing success. During the time of plan development, Woodstock was undergoing an election with anticipated staff turnover. To ensure continued success for DWSP2, political candidates running for the Town Board/Town Supervisor positions were invited to participate in the stakeholder group meetings. Although they are not listed as stakeholders, the Town would like to acknowledge and thank them for their contributions.

Table 1-1: Town of Woodstock's Stakeholder Group

Name	Relevant Affiliation(s)
Laura Ricci	Woodstock Town Board
Arlene Weissman	Vice Chair, Woodstock Environmental Commission, and former NYC DEP Supervisor of Land Acquisition Projects
Julia Blelock	Former Chair and current member of the Woodstock Environmental Commission
Judith Kerman*****	Vice Chair, Woodstock Planning Board
Tim Rose	Director of Environmental Health Services, Ulster County Department of Health
Jeff Albert	Associate Public Health Engineer, Ulster County Department of Health
William Carranza	Ulster County Department of Health
Woodstock Town Supervisor*	Woodstock Town Supervisor
Larry Allen*****	Town of Woodstock Water Superintendent
Woodstock Highway Superintendent*****	Woodstock Highway Superintendent
Jake Wedemeyer	Executive Director, Ulster County Soil and Water Conservation District

***** Advisory members of the group. Advisors are called upon when their expertise is required for a portion of plan development or implementation. Those who are invited as stakeholders but have limited capacity may also serve as advisors.

1.3. Establish Goals and Formulate a Vision

The stakeholder group met to establish goals and formulate a vision. It was established that the strongest motivations for creating this DWSP2 Plan were to gain a deeper understanding of their drinking water source, assess its capacity to meet current and future demands, and safeguard its quality for future generations. With these in mind, three goals were outlined for the Town which are listed below and can also be found in Appendix A.3.

Goals

1. Increase resiliency of the Town's source water to the impacts of climate change.

2. Assess and manage potential contaminant sources within the Town's source water area to protect Woodstock's aquifer and the future quality of the Town's water supply.

3. Improve public confidence and responsibility regarding their drinking water source by evaluating source water chemistry to inform future decisions related to water quality and educating the community to inspire future watershed stewardship.

Vision Statement

With these goals in mind, the stakeholder group established a vision statement:

The Town of Woodstock commits to supplying and maintaining quality source water for the Woodstock Water District, and to better understand how water quality and quantity in their aquifer could influence current and future drinking water sustainability. Improving this understanding of Woodstock's aquifer will benefit all that rely on it, including those outside of their water district.

2.0 DRINKING WATER SOURCE ASSESSMENT

2.1. Develop a Water System Overview

This section of the plan provides an overview of the Town's water system and the hydrogeologic setting. The assessment also includes a delineation of the drinking water source protection areas and inventories potential contaminant sources.

The Town of Woodstock's current facilities draw water from two wellfields in the Bearsville Flats area. Water then moves into two treatment plants where a series of steps occur to prepare the water for consumption. Treatment includes disinfection in the form of hypochlorite, pH adjustment through the use of Sodium Carbonate, and the addition of Carrus 8100 (a blended phosphate solution) for corrosion control. A complete overview of the water system is available in Appendix A.4. A water quantity summary is provided in Table 2-1 below.

According to Woodstock's 2025 Annual Water Quality Reports, the system has had no water quality violations within the past 5 years. In the system's finished water, there are detections of PFOS/A, nitrate, copper, lead, and disinfection byproducts well below NYSDOH standards. Sodium is present above the health advisory limit for those with severely restricted sodium diets. Raw water sampling in Woodstock has shown low concentrations of PFOS and PFOA in Wellfield #1. Ambient water quality data was last taken by the United States Geological Survey (USGS) in the 1970s. More information can be found on the USGS Water Quality Portal.

Table 2-1: Water Quantity Summary

Current Water Withdrawal Permit Expiration Date(s)	3/25/2024*
Total Permitted Water Withdrawal Capacity	0.569 MGD
Average Daily Water Demand (= Yearly Usage / 365)	0.117 MGD
Maximum Daily Water Demand (Unofficial 3-day average in peak month - e.g. July)	0.212 MGD
Annual Water Losses (can be obtained from Water Conservation Program form)	7.7%

*Renewal submitted 1/26/2026 approval still pending as of 4/8/2026

2.2. Prepare a Drinking Water Source Protection Map

2.2.1. Hydrogeological Setting

Woodstock's two wellfields pull from an unconfined sand and gravel aquifer located near the Saw Kill, a stream that runs to the south and west of the wellfields. Rainfall, snowmelt, and induced infiltration from the Saw Kill recharge the aquifer. Wellfield #1 has two wells with a combined pumping capacity of 155 gpm, and Wellfield #2 has five wells with a combined capacity of 340 gpm. The Woodstock area receives ~50 in of precipitation a year.

Unconfined sand and gravel aquifers are more susceptible to surface contaminants than deeper confined and/or bedrock aquifers; however, because the Woodstock region has very few documented potential contaminant sources (Figure 3), the unconfined aquifer that Woodstock's wells pull from is productive and safe.

A MODFLOW groundwater model was created for this plan to 1) identify a critical area (Figure 2) for Woodstock's municipal wellfields and 2) help assess Woodstock's regional groundwater capacity and quality. Modeling details and methods can be found in Appendix B.

Additionally, MODFLOW-derived water budget calculations estimate that consistent recharge from the Saw Kill is sufficient to maintain water storage during drought in the Woodstock aquifer. Some Woodstock homeowners with private wells report water quantity issues during dry seasons; however, the location of Woodstock's municipal

wellfields directly alongside the Saw Kill (Figure 2) suggests Woodstock's public water supply will remain reliable during drought.

2.2.2. Drinking Water Source Protection Areas

Drinking water source protection areas were delineated to identify locations in the watershed that could potentially impact the Town's drinking water source. Protection areas in this plan include the Ownership and Control Area, the Critical Area, and the Source Water Area. Each protection area is defined below.

1. **Ownership and Control Area:** Regulations established by the NYSDOH require that the owner of the water system own 100 feet of land and control 200 feet of land activities surrounding each well. The Town currently owns parcels where both wellfields are located with buffers expanding over 200ft. The control and ownership areas were delineated using a buffer tool to create a 100ft and 200ft radius around each well.

2. **Critical Area:** The critical area is defined as the main source of water contributing to Woodstock's wells, an area delineated using a MODFLOW groundwater model. This contributing area represents a ~10-year time of travel. Groundwater modeling documentation and methodology is outlined in Appendix B.

3. **Source Water Area:** The source water area extends beyond the critical area but still has the potential to contribute to the drinking water source. Previous studies conducted by consultants in the Town of Woodstock identified the Saw Kill as a recharge source for the wells, and that work was built upon and further supported by a groundwater model that was developed for this Woodstock DWSP2 plan. Understanding the connection between the groundwater wells and the Saw Kill, the Saw Kill watershed was classified as the source water area. The area was delineated using the USGS spatial analysis tool StreamStats.

The surrounding land activities such as residential and commercial development can impact the source water. The designated source water protection areas provide the Town with areas of high importance for protection and managements actions. These protection areas also provide time-of-travel estimates to the wells. For further information relating to the data, analysis, and methodology used to delineate and map the source water protection areas, refer to Appendix A.5 and B.

2.2.3. Drinking Water Source Protection Maps

A series of drinking water source protection maps were prepared by the TA Providers using ESRI ArcGIS Pro 3.7.1. Information on the source water protection area(s) displayed on the maps was compiled and can be found in Appendix A.5.

Land use and land cover were assessed through the mapping process and are important factors when identifying potential contaminant sources (Figures 4 and 6). Land cover (Figure 4) is the mixture of natural and human influenced systems that cover a region. Woodstock's source water area is primarily forested, with forests covering about 90% of the area. The remaining 10% is composed of developed open space, open water, and hay and pasture. In contrast, Woodstock's critical area is composed of mainly light development, forests, and woody wetlands (Table 2-2).

Table 2-2 Land Cover in the Source Water Protection Areas

Land Cover Classification	Source Water Area	Critical Area
Open Water	1.8%	0%
Developed, Open Space	5.2%	23.0%
Developed, Low Intensity	0.7%	16.8%
Developed, Medium Intensity	0.1%	4.8%
Developed, High Intensity	0.02%	0.7%
Deciduous Forest	56.5%	28.3%
Evergreen Forest	4.9%	2.6%
Mixed Forest	28.7%	9.7%
Shrub/Scrub	0.2%	0.6%
Herbaceous	0.2%	0%
Hay/Pasture	1.1%	1.9%
Woody Wetlands	0.7%	11.6%

Soils were also assessed in the Source Water Protection Areas. Soil types play a role in runoff potential during significant storm events. The United States Department of Agriculture's Natural Resources Conservation Service (USDA NRCS) distributes groupings of soils that share similar runoff potentials, which are useful for considering both runoff and infiltration rates while also considering how and where land activities can affect dynamics such as erosion and sedimentation of waterways. They are ranked by rate of infiltration with Class A having the highest infiltration and Class D having the lowest infiltration and highest runoff. The Natural Resource Conservation Service (NRCS) classifies soil groups as follows:

- **Group A** soils have a high infiltration rate and low runoff. These soils consist of

deep, well drained sands or gravelly sands and have a high rate of water transmission.

- **Group B** soils have a moderate infiltration rate. This group consists chiefly of deep, well drained soils with a moderately fine to moderately coarse texture and a moderate rate of water transmission.
- **Group C** soils have a slow infiltration rate. This group consists of soils with a layer that impedes the downward movement of water or fine textured soils and a slow rate of water transmission.
- **Group D** soils have a very slow infiltration rate and high runoff potential. This group is composed of clays that have a high shrink-swell potential, soils with a high-water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission. If a soil is placed in Group D because of a high-water table, it may be assigned to a dual hydrologic group: A/D, B/D, or C/D. The first letter of the pair represents the soil's group if drained and the D represents the natural condition.

The critical area is composed of soil groups B, B/D, and A. See Figure 7 for a full map of soil types in the source water protection areas.

Figures 3 through 7 provide an overview of conditions within the source water protection areas. A comprehensive list of maps included in this plan are listed below.

- Figure 1 – Project Location Overview
- Figure 2 – Source Water Protection Areas
- Figure 3 – Potential Contaminant Sources
- Figure 4 – Land Cover
- Figure 5 – Steep Slopes
- Figure 6 – Land Use
- Figure 7 – Soil Types
- Figure 8 – Septic Systems

2.3. Create a Potential Contaminant Source Inventory

A potential contaminant source inventory was assembled for the Town and includes a list of potential contaminant sources (PCSs) that may impact the quality of drinking water sources, if improperly managed. The inventory of PCSs was created based on data available to the NYSDOH in both public and internal datasets. The stakeholder group also used local and historical knowledge to include community specific PCSs. Appendix A.6 shows the PCS inventory, and Figure 3 shows the locations of all PCSs mapped within the source water protection areas. See Table 2-3 below for potential contaminant source categories and sources. Although all potential contaminant sources in the Framework were referenced, not all were found within the protection areas at the time of this report.

Table 2-3 Potential Contaminant Source Categories and Sources

Potential Contaminant Source Category	Source	Identified
Bulk Storage	Chemical Bulk Storage	No
	Major Oil Storage Facilities	No
	Petroleum Bulk Storage Facilities	**Yes**
Waste Management and Disposal	Active Landfills	No
	Inactive Landfills (Title 12)	No
	Hazardous Waste Management Facilities	No
	Land Application Sites	No
	Vehicle Dismantling Facilities	No
Contamination Sites or Incidents	Remediation Sites	No
	Spill Incidents	**Yes**
Mineral Extraction Sites	Oil and Gas Wells	No
	Orphan Oil and Gas Wells	No
	Mines	No
	Historical Abandoned Mines	No
Discharge to Water	State Pollutant Discharge Elimination System permitted (SPDES) Facilities	No
	Combined Sewer Overflows (CSOs) and Sanitary Sewer Overflows (SSOs)	No
Transportation	Airports	No
	Transportation Corridors	**Yes**
	Road and Maintenance Facilities	**Yes**
	Salt and Deicers Storage	No
Agriculture	Agricultural Activities	No
Residential Sources	On-Site Septic Systems	**Yes**
	Lawn and Garden Chemicals	**Yes**
	Waterfront Property Management	No
Conveyances and Pipelines	Oil and Gas Pipelines	No
Other (does not fit into DWSP2 Framework defined categories)	Golf Courses	No
	Marinas and Boat Launches	No
	Stormwater	No
	Toxic Release Inventory Facilities	No
	Fire Training and Dedicated Fire Training Facilities	No
	Nutrient Loading (Lakes Only)	No
	Saltwater Intrusion	No
	Road Salt Application	**Yes**
	Auto Maintenance Facilities	**Yes**
	Construction and Demolition Debris	**Yes**

Overall, there were very few discrete potential contaminant sources in Woodstock's source water area. The area has six petroleum bulk storage facilities of which only two are currently active, and there is one auto maintenance facility. Throughout Woodstock's source water area there is some light agriculture; however, agricultural impact on source water is limited due to the land use of continuous hay and riparian buffers along the Saw Kill.

In terms of zoning, Woodstock's source water area has a mix of land uses including residential,

conservation, and vacant lands with the bulk of the area being residential (Figure 6). The critical area is also primarily residential with some light industrial and commercial development. Due to the prevalence of residential development, contamination originating from related sources like septic systems and lawn and garden chemicals was identified as a potential contaminant source.

Last, the Town of Woodstock's Town Code prohibits the illegal dumping of solid waste such as construction and demolition debris within the Town's municipal boundaries. Consequently, construction and demolition debris are classified as a potential contaminant source in this plan.

Figure 3 shows the locations of the identified potential contaminant sources in the Town's critical and source water areas, and Appendix A.6 outlines a complete inventory of potential contaminant sources.

3.0 PROTECTION AND IMPLEMENTATION STRATEGIES

3.1. Identify Protection and Management Methods

3.1.1. Current Source Water Protection Methods

Since the Town is fully dependent on groundwater for their drinking water source, it is critical to implement effective strategies for current and future source water protection. Policymakers in Woodstock have already been proactive about implementing source water protection actions. In 2009, the Town adopted local wetland and watercourse protection standards. From 2008-2014 the Town took the initiative to assess and remove old underground oil storage tanks. In 2020, the Town completed a Natural Resource Inventory to assist in planning for future development and land use, prioritizing the protection of natural resources. Last, a working group consisting of Laura Ricci, Bennet Ratcliff, Arlene Weissman, Judith Kerman, and Ken Panza created the Water District Wellhead Protection Overlay (WDWP-O) map, which was first approved by the Ulster County Planning Board. The Town Board approved the map on December 13, 2022, establishing the WDWP-O.

3.1.2. Additional Regulatory and Non-Regulatory Protection Methods

The recommended protection and management methods to address the Town's priority issues and potential contaminant sources can help minimize the risk posed to the source water. These methods can protect against existing and future potential contaminant sources. There are several regulatory and non-regulatory methods that the municipality can explore.

3.1.3. Land Use Tools and Methods

Under the broad scope of land use tools and methods, many methods of drinking water source protection are available. Land use tools and methods include zoning ordinances, special use permits, site plan reviews, subdivision controls, critical environmental area, watershed rules and regulations, intermunicipal agreements, land purchase or voluntary conservation easements, encouraging or incentivizing

the use of BMPs, and others.

3.1.4. Monitoring and Reporting

Additional monitoring throughout the source water area may help locate specific areas where sources of contamination affect the drinking water wells. A detailed review of current monitoring plans and existing data can identify gaps and highlight potential areas of vulnerability. Additionally, expanded monitoring could potentially uncover previously unknown contaminant sources and provide early warning of emerging contaminants.

3.1.5. Public Education and Outreach

Informing the public and providing educational tools to teach them about source water protection methods can reduce the risk of contamination from residential sources including septic systems, household products, and fertilizers. Public involvement in monitoring programs (citizen science) can be a highly effective means of building an understanding of source water issues and a commitment to stewardship.

The following questions should be considered when identifying potential outreach approaches:

1. Who are your target audiences and what do you want them to do in response to your project (e.g., what behaviors you seek to change, or actions you want them to take as a result of the information provided)?
2. What are your key messages and where do you want to direct people to get more information on the topic?
3. Are messages short, long, require graphics, etc.?
4. How do you plan to get the information out? (in-person, email, digitally, direct mail)?
5. How do you get residents to support the Town's proposed initiatives?
6. What partners can help you get the information out?
7. What is your budget? Example strategies for education and outreach include digital/social media, paid advertising, press release, newsletters, factsheets and flyers, email blasts, signage, tabling/presenting, community events, and training.

3.2. Priority Issues

Discussions were had with the Woodstock stakeholders to gain a deeper understanding of their priorities concerning source water. Priorities were ranked on a high, medium, or low scale based on several factors such as the Town's existing concerns, observed issues, proximity of PCS to the Town wells, and future water quality goals. Listed with each priority is a targeted potential contaminant source and goals to reduce or mitigate the issue. For a complete list of project

profiles and the implementation steps associated with each protection and management strategy, please refer to Appendix C.

Additionally, the Town of Woodstock recognizes the importance of safeguarding Kingston's water supply whose source water resides in Woodstock and serves as an emergency backup for the Town. However, since the City of Kingston is the focus of a separate DWSP2 plan, the Town's plan will not include protection and management strategies for Kingston's source water. The Woodstock Stakeholders attended a meeting with the City of Kingston to discuss ideas for informing visitors to Cooper Lake about the importance of the reservoir and the necessity of protecting the surrounding grounds. Continued collaboration is encouraged to ensure the protection of shared water resources. The top priorities identified by the stakeholder group at the time of plan development are summarized below ranked from high priority to lower priority.

1. Priority Issue #1: Per and Polyfluoroalkyl substances (PFAS)

Woodstock's first priority issue is to reduce the contamination of their municipal wellfields from per and polyfluoroalkyl substances (PFAS). PFAS are a group of man-made chemicals known for their widespread use and persistence in the environment. In recent years, Woodstock has had unexplained small detections of Perfluorooctane sulfonic acid (PFOS) and Perflurooctanoic acid (PFOA). The goal of this priority issue is to understand how PFAS concentrations vary throughout Woodstock's source water area and prevent future contamination. These goals will be accomplished through a combination of education/outreach strategies and expanded monitoring to better inform the implementation of proactive PFAS prevention efforts. Since Woodstock's source water area is primarily residential, the unintentional discharge of PFAS is a high priority concern.

The Woodstock PMT will compile existing local PFAS data, work with the Local Health Department (LHD) to determine if additional sampling is required to evaluate PFAS in the source water area (Figure 2) and if so, seek out and engage future sampling opportunities as they become available. The Woodstock DWSP2 stakeholders feel it is a priority to improve the Town's understanding of the current (and ultimately future) distribution of PFAS in their source water area.

2. Priority Issue #2: Residential Sources of Contamination

Woodstock's second priority issue is to reduce residential sources of p contamination. Residents living in the critical or source water area may not be aware of how their personal choices can have a direct influence on water quality. For example, failing septic systems can introduce pathogens, nitrates, and other contaminants into the source water. Due to the close proximity and high density of septic systems near Woodstock's wellfields (Figure 8), its important residents are maintaining their septic tanks. Local Law in Woodstock requires residents living in the Water District Wellhead Protection Overlay (WDWP-O) to have their septic tank pumped out and inspected every three to five years. Ensuring the implementation of this local law is vital

to protecting their source water. This may involve the Town Building Department following up on a regular schedule with residents in the WDWP-O. Also, educating residents on other residential sources of contamination is key (lawn and garden chemicals, home shops, household chemicals, etc.).

3. Priority Issue #3: Transportation Runoff

Woodstock's third priority issue is to reduce transportation related runoff. Deicing materials used during winter roadway maintenance can enter the Town's aquifer and contaminate their drinking water. Additionally, roadside spraying of herbicides during the spring and summer can lead to potential groundwater contamination. The goal of this priority issue is to decrease the amount of transportation-related runoff entering the groundwater. Roads in Woodstock are maintained by the Town's Highway Department, NYS Department of Transportation (NYSDOT), and the Ulster County Highway and Bridges Division. Collaboration between these three organizations to implement both road salt best management practices and best vegetative management practices is essential.

4. Priority Issue #4: Community Awareness and Engagement

Woodstock's fourth priority issue is to increase community awareness and engagement in source water protection actions. Residents in the Town of Woodstock have a widespread concern about keeping their public water system safe. This priority issue focuses on increasing community confidence in their drinking water by educating the community on current water protection efforts taken by the Town and engaging the community in those protection efforts. The town will also work with local businesses to help raise awareness about source water protection and promote the purchase of eco-friendly alternatives to commonly used products that can impact water quality (fertilizers, pesticides, etc.). This may include posting signage in stores about the program and highlighting participating businesses on the town webpages/social media outlets.

5. Priority Issue #5: Management of Potential Contaminant Sources

The fifth priority issue is to increase management of potential contaminant sources (PCS). Identified PCS are primarily regulated petroleum bulk storage (PBS) tanks, and potential spill incidents in the critical and source water area. Leaks or spills from regulated PBS facilities risk contaminating the Town's source water. Ensuring the Town has reliable lines of communication with facilities of concern can improve response efforts in the event of a contaminant spill/accident. Awareness and communication with new facilities built within the source water area can also benefit future source water protection efforts.

Potential spills can also come from local businesses, homes, and/or transportation corridors. To mitigate potential risks to source water, the town will review the DEC spills database on a

routine basis and increase public awareness on how to identify and report spills.

6. Priority Issue #6: Future Development and Land Use

Woodstock's sixth priority issue is reducing risks of future development and land use. This priority issue focuses on ensuring source water protection is integrated into planning as the Town's development increases. New development can introduce potential contaminants into water resources (on-site septic systems, chemical storage tanks, increased runoff, etc.). These risks can be exacerbated by climate related events such as flooding and drought. To mitigate some of the potential effects of new development, while ensuring future development is not discouraged, the Town can designate a critical environmental area within the source water area to ensure source water protection is considered by the Planning Board when discussing projects that require a State Environmental Quality Review (SEQR). Partnering with the Woodstock Land Conservancy to identify key parcels worth acquiring as conservation easements can also benefit source water protection efforts. Last, the Town began having preliminary discussions during the DWSP2 process on updating their WDWP-O to include the DWSP2 critical area. This update will allow the Town to provide additional protection around their wellfields from new development projects that could have an impact on water quality.

3.3. Develop an Implementation Timeline

For each protection and management method identified, the stakeholder group has established a step-by-step process for implementation. Refer to Appendix C for the project profiles, which identify project leaders and partnerships needed, potential funding sources, costs, project timing, and step-by-step implementation processes. Refer to Appendix A.7 for a table summary of the implementation timeline for each protection and management method. Refer to Appendix D for cost estimates. Potential costs are classified into low, medium, and high. Low-cost projects are those that would ideally be completed using the existing municipality's budget or with a budget amendment. Medium-cost projects may require the use of capital funding and may require external or new personnel. High-cost projects would require capital funding and would require additional staff or contracted personnel. Please note that potential funding sources are not guaranteed, and costs outlined in this report are estimates. It is the responsibility of the community to determine funding eligibility and apply for any potential funding source listed in this report, as well as to conduct a thorough cost analysis for the project.

4.0 PLAN FINALIZATION

4.1. Plan Management

As the community designs their Plan, it is important to designate a Plan Management Team (PMT) to implement it. A PMT was established to guide the implementation of the Plan. PMT members were chosen based on their positions in the community, scientific expertise, knowledge of source water, and other qualifications that could be useful when planning and implementing source water protection efforts. PMT membership can be adjusted over time.

When a PMT member steps down, current PMT members will meet to designate a replacement if needed. The PMT aims to keep at least eight core members on the PMT at all times including two members of the town board, four water professionals, three members of the WEC (plus one former member), and one member of the WLC. Tracy Bouvette has been identified to champion the PMT moving forward. The PMT's point of contact, and contact information can be found in Table 4-1 and in Appendix A.8.

The team will meet on a regular basis to review the Plan and will coordinate with their respective organizations to share the ideas and methods contained within the Plan for succession planning. Progress reports will be produced on an annual basis and shared with NYSDEC, NYSDOH and the community. The PMT will update their Plan to reflect progress and emerging issues every five years.

Table 4-1 Plan Management Team

Name	Relevant Affiliation(s)
Laura Ricci	Woodstock Town Board
Arlene Weissman	Vice Chair, Woodstock Environmental Commission, and former NYC DEP Supervisor of Land Acquisition Projects
Julia Blelock	Former Chair and current member of the Woodstock Environmental Commission
Beth Reichheld	Former Director, NYC DEP Streams Management Program
Woodstock Highway Superintendent *	Woodstock Highway Superintendent
Robert Wolff	Qualified Environmental Professional (QEP) and former member of Woodstock Environmental Commission.
Larry Allen*	Town of Woodstock Water Superintendent
Will Carranza	Ulster County Department of Health
Jake Wedemeyer*	Executive Director, Ulster County Soil and Water Conservation District
Marcel Nagele	Longtime resident and member of Woodstockers United for Change
Kenneth Panza	Secretary, Woodstock Environmental Commission; Town of Woodstock Liaison to the Ulster County Climate Smart Committee.
Hannah Birenz	Communication & Outreach Manager, Woodstock Land Conservancy
Judith Kerman*	Vice Chair, Woodstock Planning Board
Anula Courtis*	Woodstock Town Supervisor

Tracy Bouvette	Retired Water Resource Engineer and Manager
Lauren Bunce	Water Resources Coordinator, Hudson Valley Regional Council

*Advisory PMT members. Advisors are called upon when their expertise is required for a portion of plan development or implementation. Those who are invited as stakeholders but have limited capacity may also serve as advisors.

4.2. Compile Plan

The TA providers compiled the information gathered throughout plan development and compiled the Town of Woodstock's DWSP2 Plan for review. The stakeholder group reviewed the draft plan and met with their TA providers over six months to address comments from the group. The group also reviewed the state reviewer guidance to be sure the final draft plan included the required item for state acceptance. The Plan will be stored at the Town offices and on the Town website, along with a copy at DOH for documentation.

5.0 IMPLEMENTATION AND MAINTENANCE

5.1. Implement the Program

The PMT is tasked with overseeing the implementation of the Plan. During the first kickoff meeting, the team will review the PMT Roles and Responsibilities and add information as appropriate. The Team will also follow a meeting schedule to ensure the source water is protected well into the future. Steps to implementing the plan below will aid in ensuring its usefulness for the Town.

Steps to implementing the plan.

1. Start with priority action from the implementation timeline table.
2. Review project profile for the action including steps.
3. Assign how work will be divided for the project.
    a. For example, if one of the earlier steps is to contact a local partner, who will conduct that outreach? Once that individual/group is on board, designate individuals for the remaining tasks.
4. Identify lead for the project.
5. Implement project. Note that certain projects may be recurring, therefore certain steps for the project will become routine over time and allow for projects to be implemented simultaneously. If this is not the case, review the project with the team before considering it completed/closed out and moving on to the next action.
6. The team may decide to complete a retrospective review of how the implementation action went to enhance the process moving forward.

Items for the plan management team to consider include: the team may decide to implement one action at a time or have certain actions concurrently. The team should frequent the state DWSP2 webpage for any new templates or resources that will aid with plan implementation.

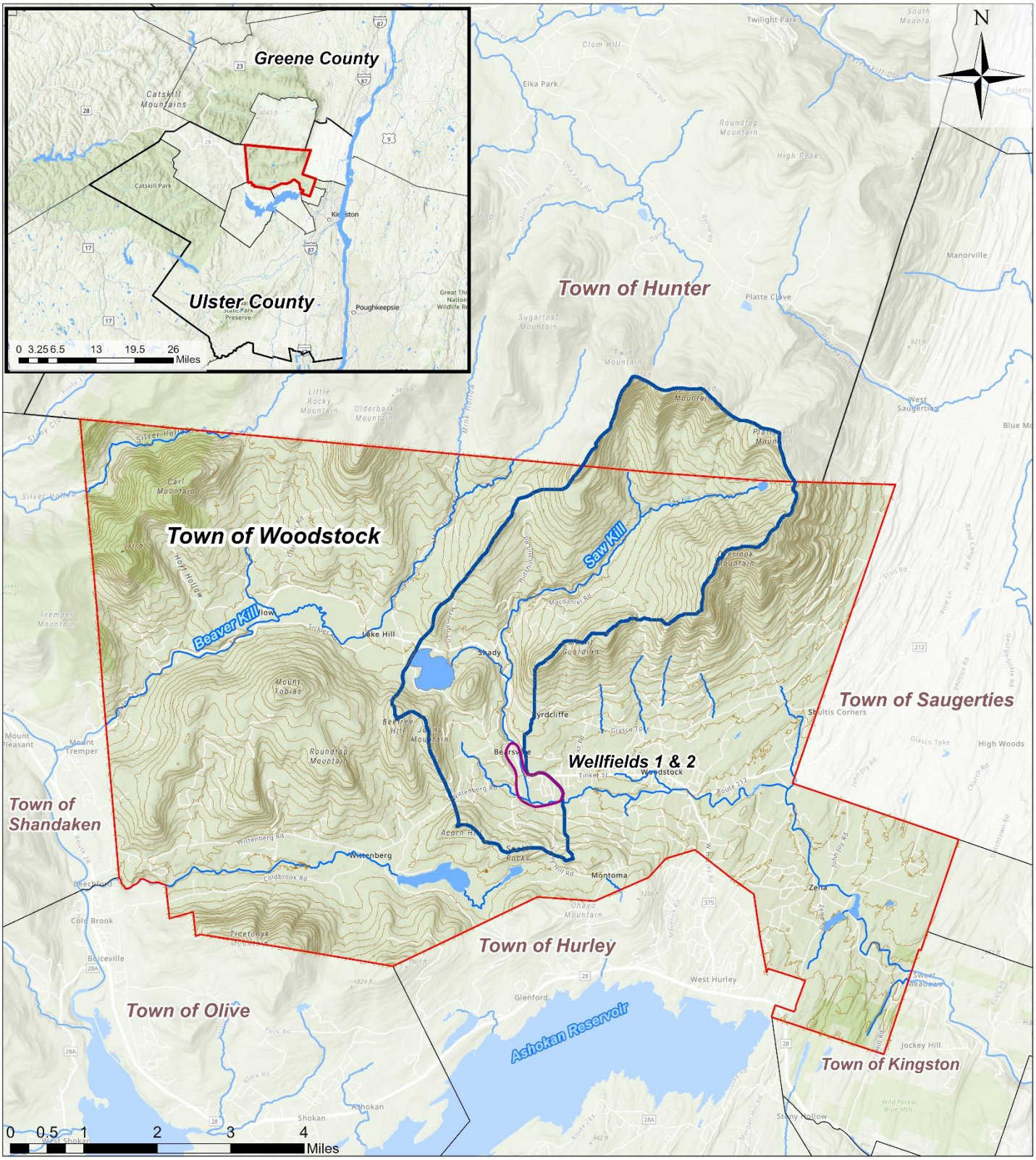
5.2. Progress Reports

An additional responsibility that the PMT is tasked with is to generate and share progress reports with the community to build support for implementation strategies. These reports will be available on the Town website. Community awareness strategies will include but not limited to town hall presentations, newspaper articles, utilizing the Town website, and social media.

Figures

Figure 1
Project Location Overview

Town of Woodstock DWSP2 Project Location Overview



Legend

- Critical Area
- Source Water Area
- Town of Woodstock
- Municipal Boundaries
- Waterbodies
- 100ft Contours

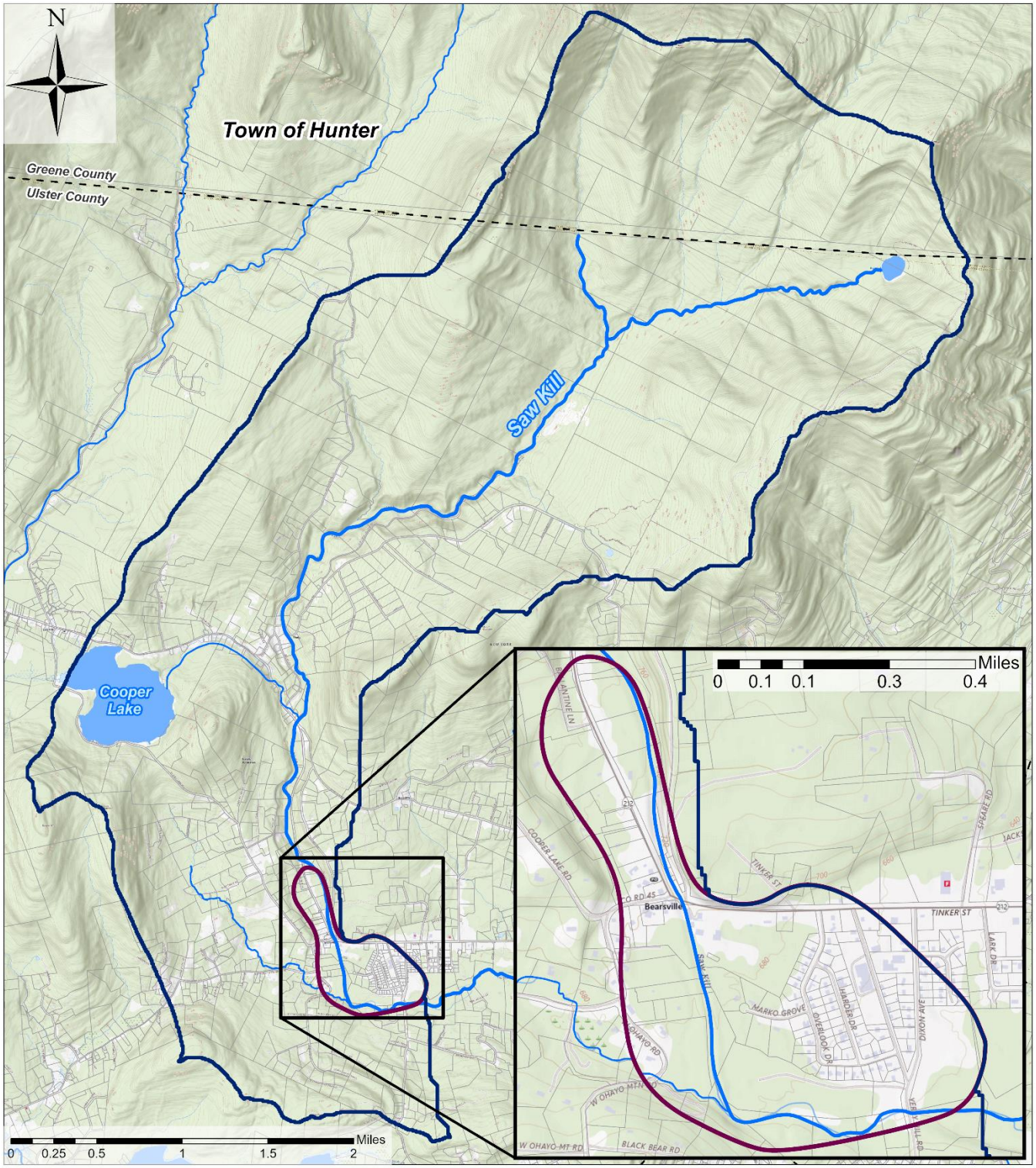
Disclosure: Geographic data represented on this map are based on entries to the Safe Drinking Water Information System (SDWIS), Department of Health, and/or other government agency. As such, the map may contain errors or inaccuracies, and represents a generalized description of the area. Basemap provided by the Environmental Systems Research Institute (ESRI).

Center for Environmental Health,
Bureau of Water Supply Protection GIS
Date: 9/23/2026

NEW YORK STATE | Department of Health

Figure 2
Source Water Protection Areas

Town of Woodstock Source Water Protection Areas



Legend

- Critical Area
- Source Water Area
- Tax Parcels
- Municipal Boundaries

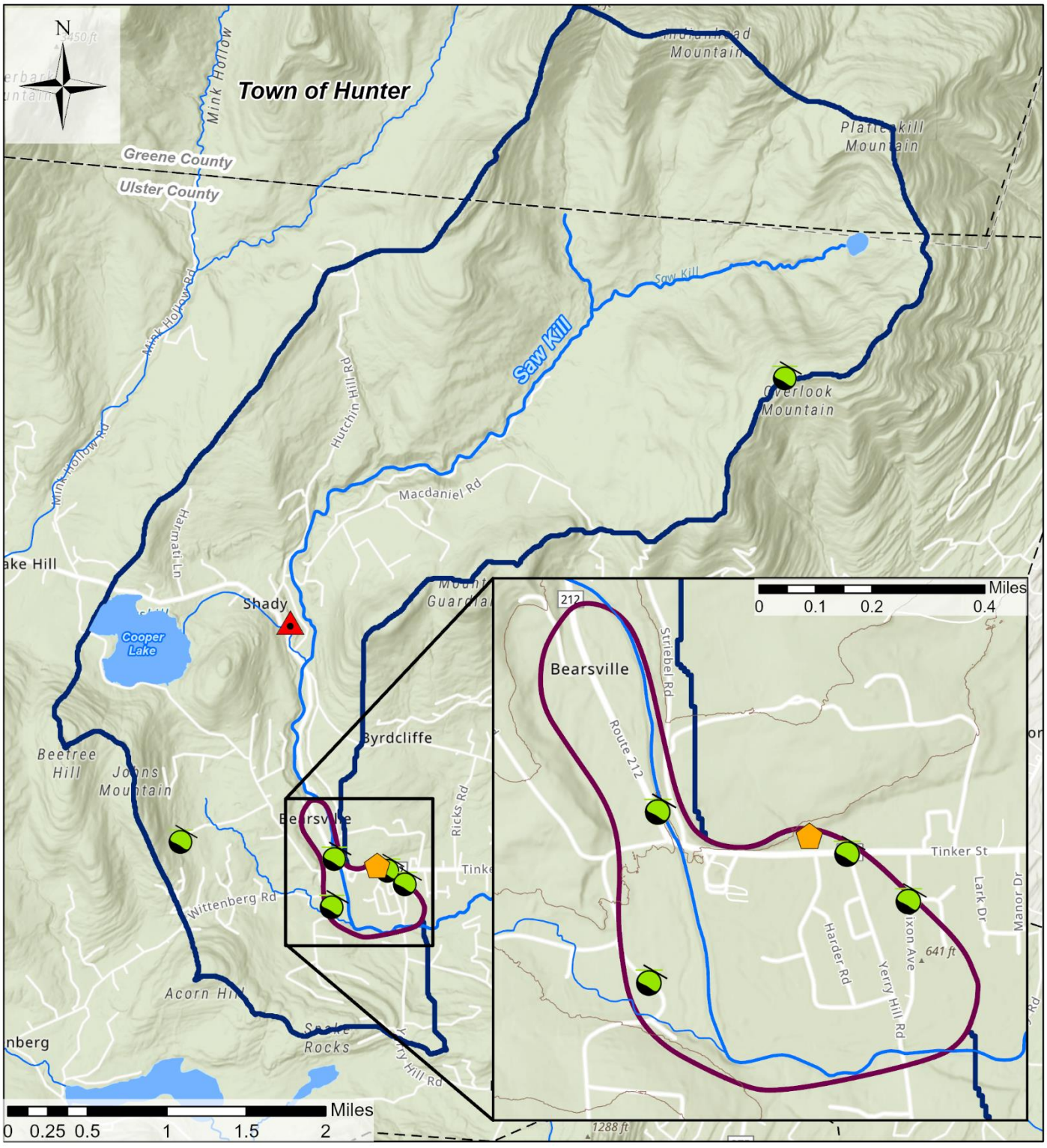
Disclosure: Geographic data represented on this map are based on entries to the Safe Drinking Water Information System (SDWIS), Department of Health, and/or other government agency. As such, the map may contain errors or inaccuracies, and represents a generalized description of the area. Basemap provided by the Environmental Systems Research Institute (ESRI).

Center for Environmental Health,
Bureau of Water Supply Protection GIS
Date: 9/23/2026

NEW YORK STATE | Department of Health

Figure 3
Potential Contaminant Sources

Town of Woodstock Potential Contaminant Sources



Legend

- Critical Area
- Source Water Area
- Municipal Boundaries
- Waterbodies
- Streams

Potential Contaminant Sources

- Petroleum Bulk Storage
- Auto Maintenance Facility
- Construction and Demolition Debris

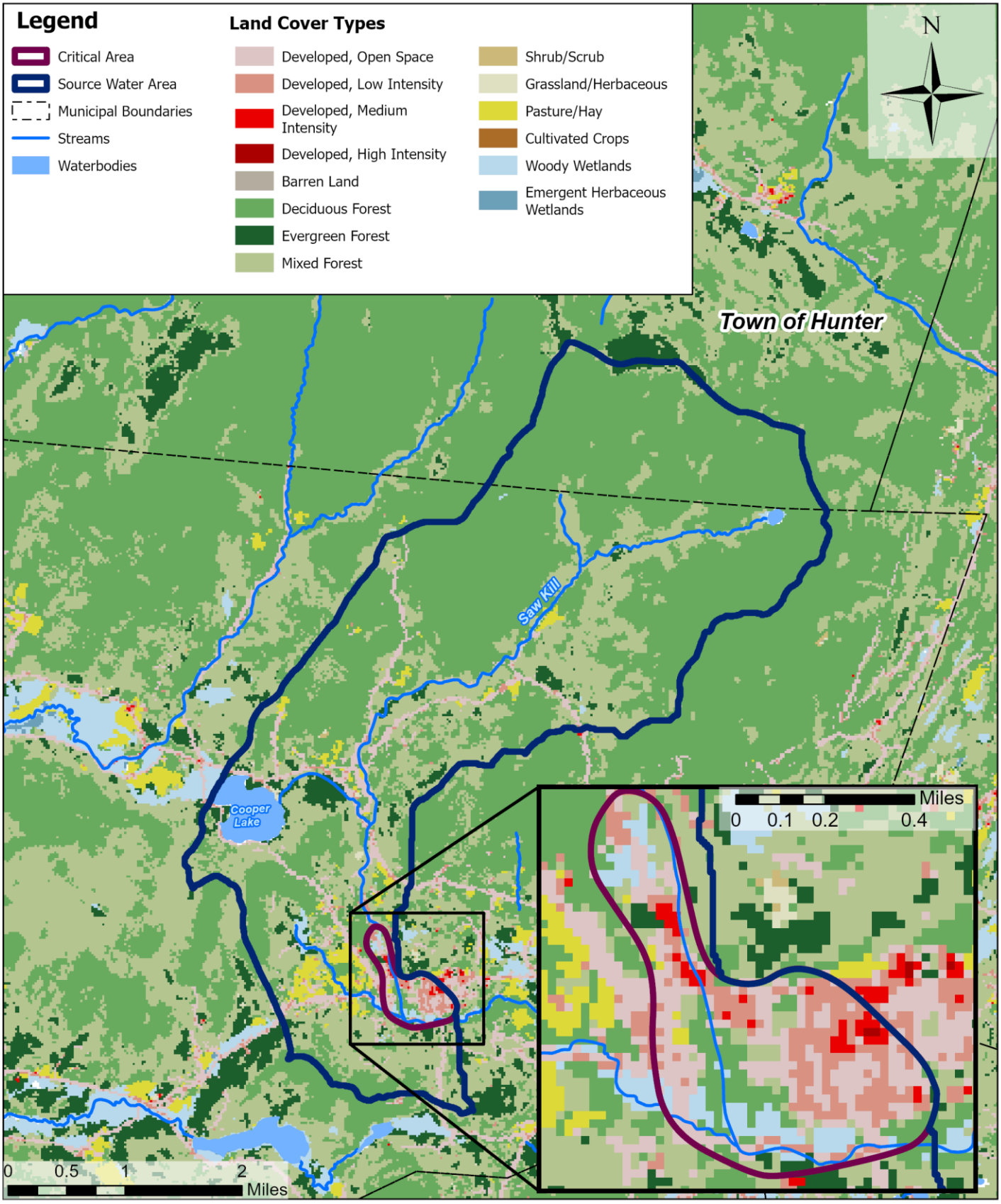
Disclosure: Geographic data represented on this map are based on entries to the Safe Drinking Water Information System (SDWIS), Department of Health, and/or other government agency. As such, the map may contain errors or inaccuracies, and represents a generalized description of the area. Basemap provided by the Environmental Systems Research Institute (ESRI).

Center for Environmental Health,
Bureau of Water Supply Protection GIS
Date: 9/23/2026

NEW YORK STATE | Department of Health

Figure 4
Land Cover

Town of Woodstock Land Cover



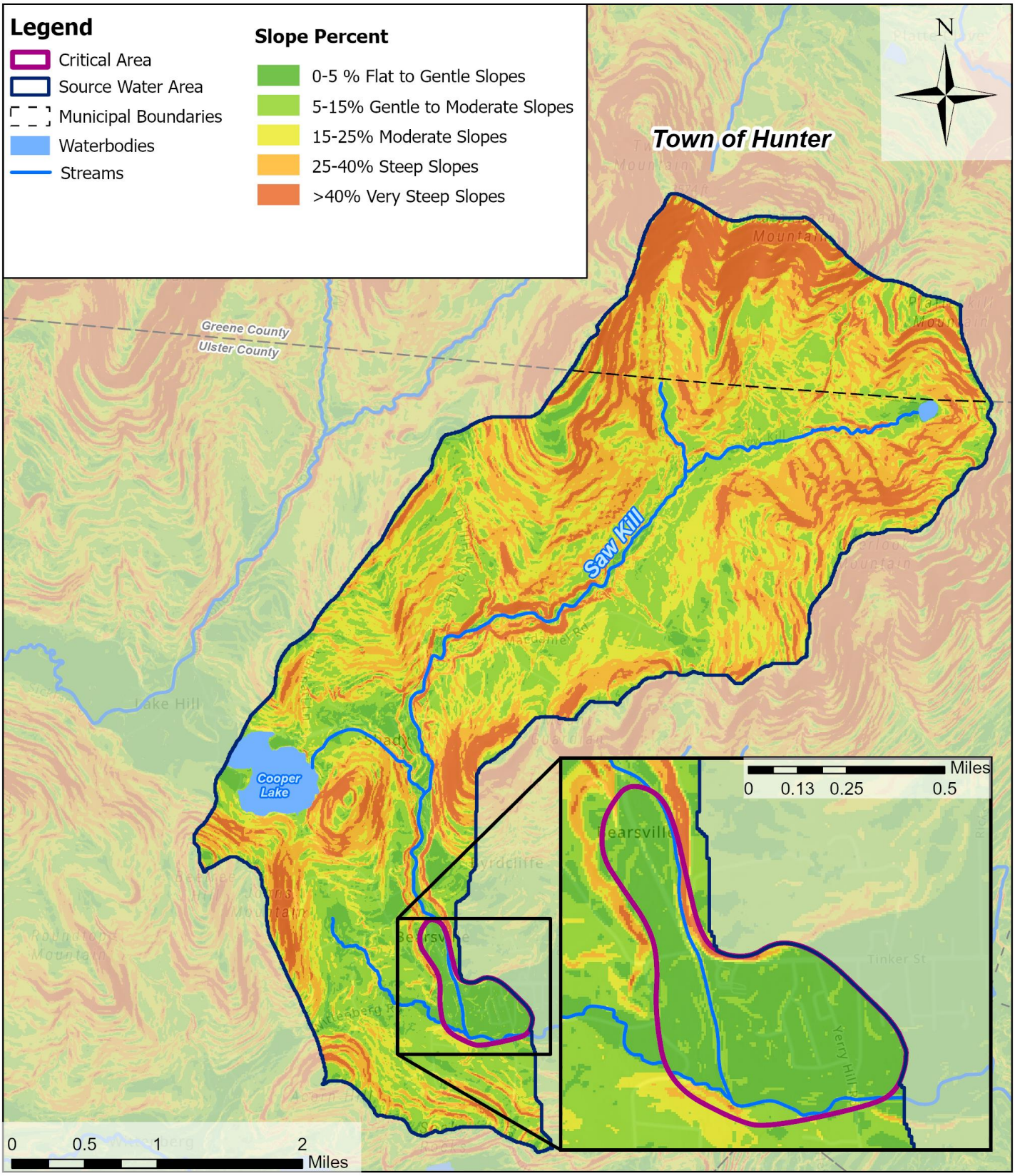
Disclosure: Geographic data represented on this map are based on entries to the Safe Drinking Water Information System (SDWIS), Department of Health, and/or other government agency. As such, the map may contain errors or inaccuracies, and represents a generalized description of the area. Basemap provided by the Environmental Systems Research Institute (ESRI).

Center for Environmental Health,
Bureau of Water Supply Protection GIS
Date: 9/23/2026

NEW YORK STATE | Department of Health

Figure 5
Steep Slopes

Town of Woodstock Steep Slopes



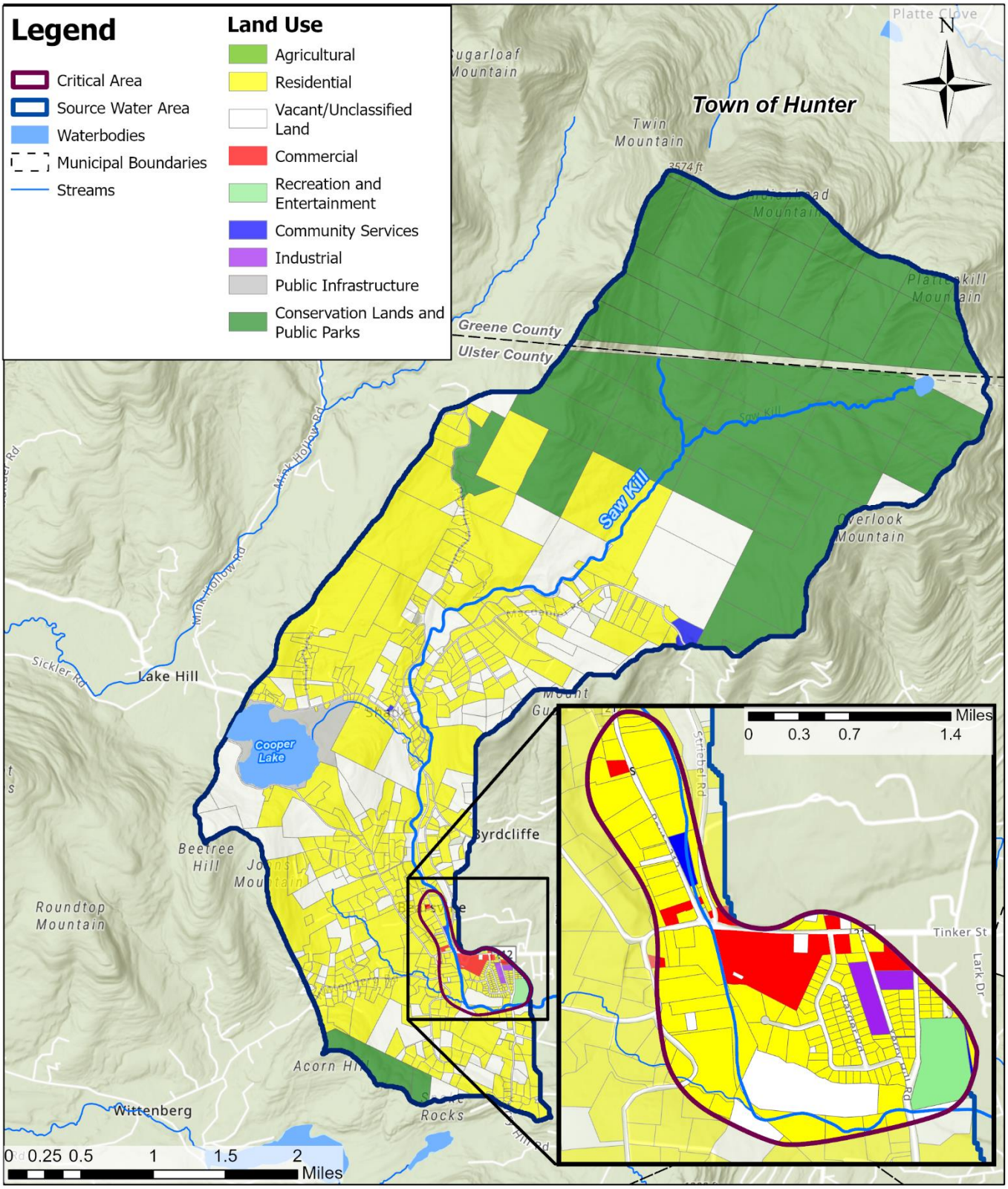
Disclosure: Geographic data represented on this map are based on entries to the Safe Drinking Water Information System (SDWIS), Department of Health, and/or other government agency. As such, the map may contain errors or inaccuracies, and represents a generalized description of the area. Basemap provided by the Environmental Systems Research Institute (ESRI).

Center for Environmental Health,
Bureau of Water Supply Protection GIS
Date: 9/23/2026

NEW YORK STATE Department of Health

Figure 6
Land Use

Town of Woodstock Land Use



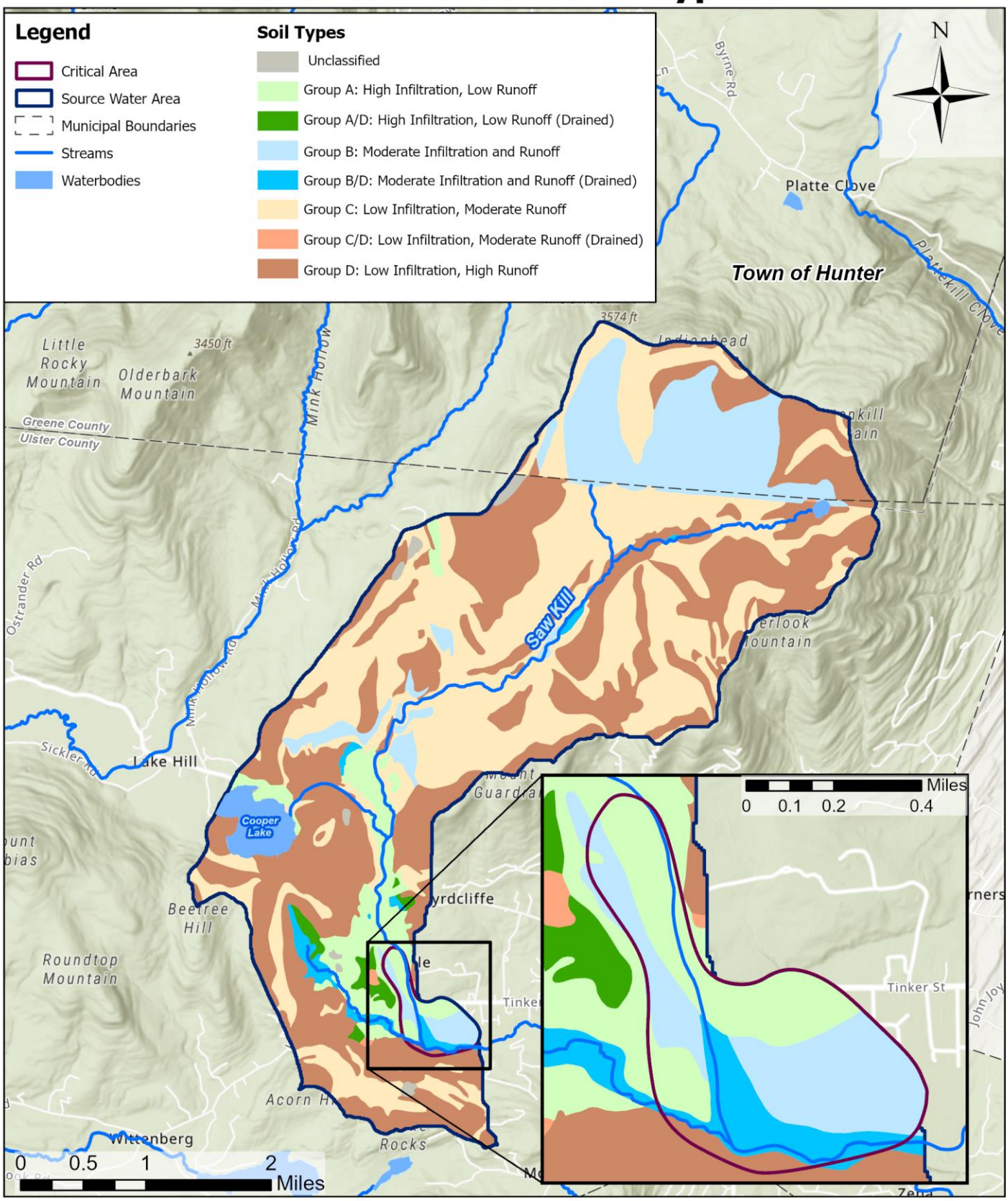
Disclosure: Geographic data represented on this map are based on entries to the Safe Drinking Water Information System (SDWIS), Department of Health, and/or other government agency. As such, the map may contain errors or inaccuracies, and represents a generalized description of the area. Basemap provided by the Environmental Systems Research Institute (ESRI).

Center for Environmental Health,
Bureau of Water Supply Protection GIS
Date: 9/23/2026

NEW YORK STATE | Department of Health

Figure 7
Soil Types

Town of Woodstock Soil Types



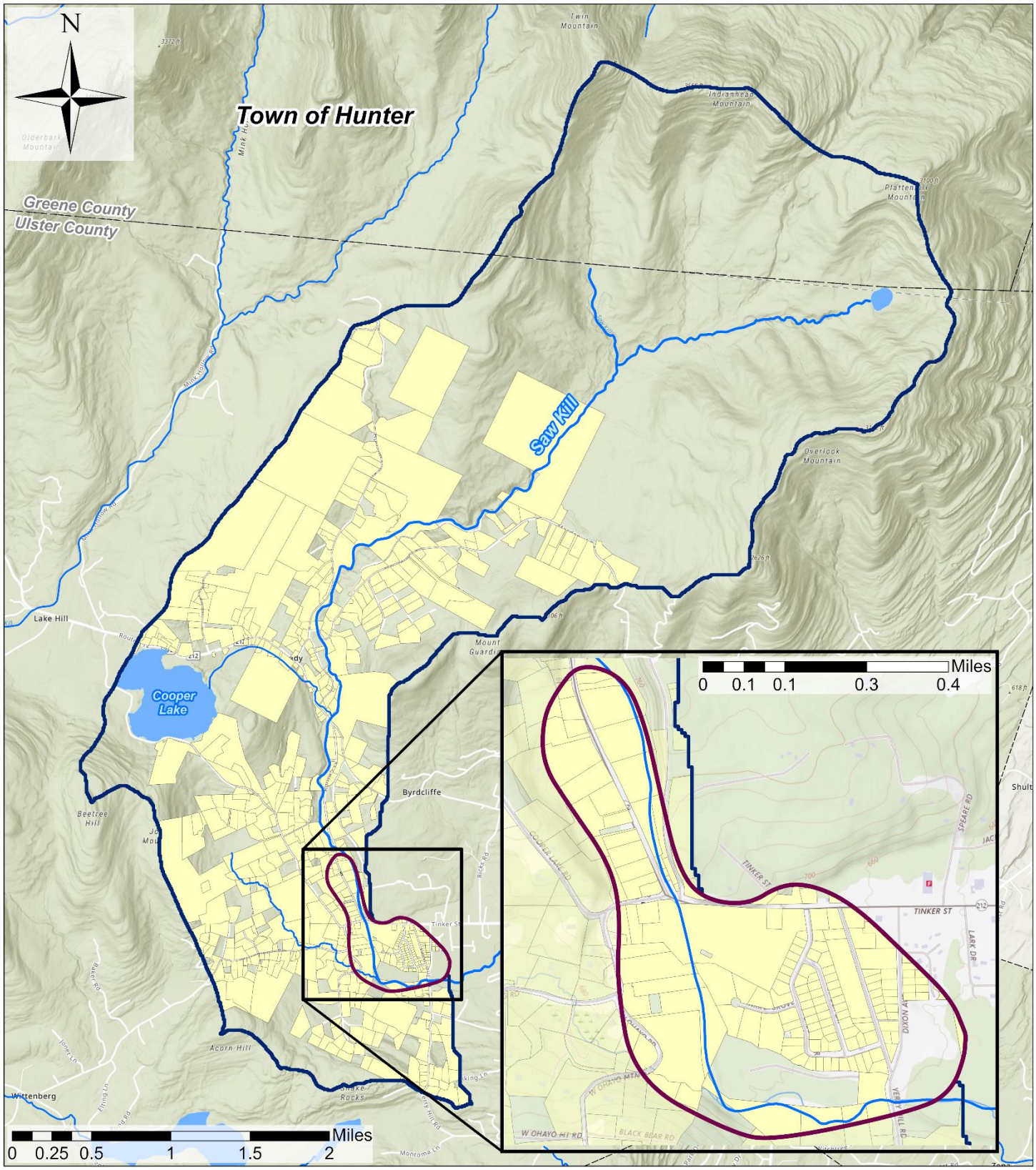
Disclosure: Geographic data represented on this map are based on entries to the Safe Drinking Water Information System (SDWIS), Department of Health, and/or other government agency. As such, the map may contain errors or inaccuracies, and represents a generalized description of the area. Basemap provided by the Environmental Systems Research Institute (ESRI).

Center for Environmental Health,
Bureau of Water Supply Protection GIS
Date: 9/23/2026

NEW YORK STATE | Department of Health

Figure 8
Septic Systems

Town of Woodstock Septic Systems



Legend

- Well Locations
- Critical Area
- Source Water Area
- Municipal Boundaries
- Streams
- Waterbodies
- Septic Parcels

Disclosure: Geographic data represented on this map are based on entries to the Safe Drinking Water Information System (SDWIS), Department of Health, and/or other government agency. As such, the map may contain errors or inaccuracies, and represents a generalized description of the area. Basemap provided by the Environmental Systems Research Institute (ESRI).

Center for Environmental Health,
Bureau of Water Supply Protection GIS
Date: 9/23/2026

NEW YORK STATE | Department of Health

Appendix

Appendix A
DWSP2 Data Summary

Appendix A.1
DWSP2 Plan Checklist

Drinking Water Source Protection Program (DWSP2) Plan Data Summary

Description

This DWSP2 Plan Data Summary is a tool to summarize data gathered throughout the protection planning process using the DWSP2 Framework. The sections in this Data Summary align with the components of the DWSP2 Framework.
Communities may seek to include information beyond what is outlined in this document and should make additions based on local needs. The tables and information in this document will be valuable to include within a community's DWSP2 Plan.
For guidance on writing a DWSP2 Plan, refer to the DWSP2 Plan Template. The DWSP2 Plan Template specifies where the tables from the data summary can be included in a DWSP2 Plan.

DWSP2 Plan Checklist

This checklist can be used throughout the protection planning process to keep track of components that are in-process or complete. Select "in-process" or "complete" under the status dropdown menu for each component.

Component	Status
Phase 1. Foundation and Formation	**Complete**
1.1 Prepare Drinking Water Source Protection Maps	Complete
1.2 Form a Stakeholder Group	Complete
1.2 Establish a Vision Statement and Goals	Complete
Phase 2. Drinking Water Source Assessment	**Complete**
2.1 Develop a Water System Overview	Complete
2.2 Prepare a Drinking Water Source Protection Map	Complete
2.3 Create a Potential Contaminant Source Inventory	Complete
Phase 3. Protection and Implementation Strategies	**Complete**
3.1 Identify Protection and Management Methods	Complete
3.2 Develop an Implementation Timeline	Complete
Phase 4. Progression and Maintenance	**Complete**
4.1 Designate a Plan Management Team	Complete
4.2 Compile Plan	Complete
Phase 5. Implementation	
5.1 Implement the Plan	
5.2 Progress Reports	

Appendix A.2
Stakeholder Group

Form a Stakeholder Group	
Member Name	**Relevant Affiliation(s)**
Laura Ricci	Woodstock Town Board member
Arlene Weissman**	Vice Chair, Woodstock Environmental Commission, and former NYC DEP Supervisor of Land Acquisition Projects
Julia Blelock**	Former Chair and current member of the Woodstock Environmental Commission
Judith Kerman*	Vice Chair, Woodstock Planning Board
Tim Rose	Director of Environmental Health Services, Ulster County Department of Health
Scott Benson	Ulster County Department of Health
Jeff Albert	Associate Public Health Engineer, Ulster County Department of Health
Larry Allen*	Town of Woodstock Water Superintendent
Bill Mckenna*	Woodstock Town Supervisor
Don Allen*	Woodstock Highway Superintendent
William Carranza	Ulster County Department of Health
Jake Wedemeyer	Executive Director, Ulster County Soil and Water Conservation District
*Advisory members of the group **Stakeholder group points of contact	

Stakeholder Group Meetings	
Date	**Topics Covered**
3/20/2024	Introductory overview, DWSP2 overview
4/23/2024	DWSP2 overview for new stakeholders. Goals and Vision Discussion. Potential contaminant source map review and discussion.
5/28/2024	Preliminary mapping efforts, priority issues discussion
6/24/2024	Review of PCS, Land Cover, and Slopes map. Priority issue discussion
8/27/2024	Discussed protection and management strategies.
9/24/2024	Continued discussion on protection and management strategies. Introduced implementation timeline.
10/29/2024	Reviewed new protection area around the Saw kill creek. Discussed education and outreach objectives.
12/10/2024	Reviewed Critical and Source Water Areas. Discussed PFAS and monitoring in the Saw Kill.
1/28/2025	DWSP2 draft review- narrative and finalized maps
2/25/2025	Reviewed plan appendices and discussed implementation timing
3/25/2025	Reviewed cost estimates and project profiles
4/22/2025	Discussed plan management team and partnerships
6/13/2025	Draft Review #2 and Implementation Timing

Appendix A.3
Goals and Vision Statement

Establish Goals and Formulate a Vision	
Vision Statement	
The Town of Woodstock commits to supplying and maintaining quality source water for the Woodstock Water District, and to better understand how water quality and quantity in their aquifer could influence current and future drinking water sustainability. Improving this understanding of Woodstock's aquifer will benefit all that rely on it, including those outside of their water district.	
Goals	
1	*Increase resiliency of the town's source water to the impacts of climate change.*
2	*Assess and manage potential contaminant sources within the Town's aquifer as development increases to ensure the quality of Woodstock's aquifer is prioritized.*
3	*Improve public confidence and responsibility regarding their drinking water source by evaluating source water chemistry to inform future decisions related to water quality and educating the community to inspire future watershed stewardship.*

Appendix A.4
Overview of the Water System

Public Water Supply (PWS) Information	
PWS Name:	Woodstock Water District
PWS ID:	NY5503394
Type of sources identified in the plan:	Groundwater
Name(s) of sources being protected:	Wells 1,2,3,4,5,6,7

2.1 Develop an Overview of the Water System		
Water system name:	Woodstock Water District	
NYS PWS ID:	NY5503394	
Type of water system (e.g. community, non-community, transient, non-transient):	Community	
Name of community, or communities, served by system:	Town of Woodstock	
Population served by the system:	2500	
# of service connections:	750	
Summary of wells, intakes, infiltration galleries, and/or springs including name, depth, screen length, and pumping rates where applicable:	Water is drawn from two wellfields located near the Saw Kill Creek in Woodstock's Bearsville Flats. There are 7 total wells with wells 1-2 located in wellfield 1 and wells 3-7 located in Wellfield 2. Wells are drilled to a depth of about 20ft and yield ~300,000gallons/day. Wells are pumped through two pumphouses, and then into a series of storage tanks with a total capacity of 1.3 million gallons. The upper Saw Kill watershed is the primary source of water recharging the well aquifers.	
General treatment information:	Disinfected by chlorine in the form of hypochlorite. pH is adjusted with sodium carbonate for corrosion control. Additionally, Carus 8100, a blended phosphate solution, is added for corrosion control.	
Summary of hydrogeographic setting of drinking water sources including watershed information and/or type of aquifer and aquifer materials (this information may be gathered after completing Section 2.2):	Ice-contact deposits overlying the area to the west and northwest of Bearsville. Proglacial deposits consisting of fluvial sand and gravel or outwash sand and gravel (i.e. coarse-to-fine gravel and sand).	
Water quality summary including any known raw or ambient water quality information, finished water detections, and/or history of maximum contaminant level (MCL) violations:	In 2025, finished water detected contaminants including Lead, Copper, Nitrate, Sodium, PFAS, and Disinfection Byproducts. Sodium is present above the health advisory level for those with severely restricted sodium diets. PFOA and PFOS were detected in raw water for wells 1 and 2 ranging from (2.06-3.67 ng/l). No detections of PFAS were present in wellfield #2. Ambient water quality data was last taken by the United States Geological Survey (USGS) in the 1970s. More information can be found on the USGS Water Quality Portal.	
Water quantity summary:	Current Water Withdrawal Permit Expiration Date(s)	3/25/2024*
	Total Permitted Water Withdrawal Capacity	0.569 MGD
	Average Daily Water Demand (= Yearly Usage / 365)	0.117 MGD
	Maximum Daily Water Demand (Unofficial 3-day average in peak month e.g. July)	0.212 MGD
	Annual Water Losses	7.7 %
*Renewal submitted 1/26/2026. Approval still pending as of 4/8/2026.		

Appendix A.5
Map Creation

Prepare a Drinking Water Source Protection Map

Protection Areas	Description	Delineation Method
Ownership and Control Areas	Required 100 and 200ft buffers around the town's wells under the New York State Sanitary Code	Arbitrary Fixed Radius
Critical Area	Defined as the wellhead contributing area for Woodstock's seven groundwater wells (~10-year time of travel) calculated using MODFLOW. See Appendix B for a full description on how the critical area was calculated.	MODFLOW
Source Water Area	Saw Kill Watershed	StreamStats

Below is a list of sources of publicly available data:	
URL	**Publicly Available Data**
https://data.ny.gov/	• Bulk Storage Facilities • Solid Waste Management Facilities • Environmental Remediation Sites • Superfund Sites • Spill Incidents • Oil, Gas and Other Regulated Wells • SPDES Multi-Sector General Permit • Combined Sewer Overflows (CSOs) • Water Withdrawals by Facility • Boat Launch Sites • Inventory & Priority Waterbodies
https://gis.ny.gov/	• State Pollutant Discharge Elimination System • NYS DOT Facilities • NYS Tax Parcels • USGS Digital Raster Graphic Quadrangle • NYS Tax Parcels
https://mrlc.gov/	• NLCD Land Cover
http://opdgig.dos.ny.gov/index.html#/home	• Unconsolidated Aquifers
https://datagateway.nrcs.usda.gov/GDGOrder.aspx	• NRCS Conservation Easement Areas by State
https://www.conservationeasement.us/	• Conservation Easement Areas US
https://datagateway.nrcs.usda.gov/GDGOrder.aspx#	• National Hydrography Dataset 1:24,000
http://www.dec.ny.gov/lands/5374.html	• Mines
https://www.eia.gov/	• Pipelines
https://www.epa.gov/	• TRI Basic Data Files

Layer	Date created or acquired	Description
Woodstock Wells	March 2024	Locations of Woodstock's wells provided by the Water Operator.
Land Use	April 2024	Tax Parcel shapefile was provided by the Town. Land Use data derived using property class codes.
Land Cover	June 2021	Land Cover data derived from the National Land Cover Database
Steep Slopes	July 2024	Slope data was derived from a 1/3 arc-second DEM of the region. The DEM was obtained from the USGS National Map database, and ArcGIS was used to derive the slope data using the Slope (Spatial Analysis) tool.
Septic Systems	Dec. 2024	NYS Tax Parcels downloaded from NYS GIS Clearinghouse, and the data was filtered to parcels with private septic.
Soils	April 2025	Soils data derived from NCRS.
Town Boundary	March 2024	NYS municipal boundaries shapefiles downloaded from NYS GIS Clearinghouse
Source Water Area	Dec 2024	Saw Kill watershed delineated Using Streamstats
Critical Area	Dec 2024	Defined as the wellhead contributing area for Woodstock's seven groundwater wells calculated using MODFLOW
100ft contours	Aug 2024	Contour data was downloaded from NYSGIS clearinghouse. Contours generated by NYS were generated using Global Mapper "Generate Contours" tool and running against the bare earth digital elevation model
Potential Contaminant Sources		
Petroleum Bulk Storage	Dec 2024	Bulk storage facility information and location were derived using data.ny.gov and DEC info locator
Auto maintenance Facility	Jan 2025	Location of auto maintenance facility provided by the stakeholders
Construction and Demolition Debris	Jan 2025	Known location of construction and demolition debris provided by the stakeholders

Appendix A.6
Potential Contaminant Source Inventory

2.3 Create a Potential Contaminant Source Inventory

Unique ID	Potential Source Category	Potential Source	Facility	Contaminant Category of Concern	Protection Area(s) Impacted	Status	Relevant Information	Latitude	Longitude	Street	City	Zip	Database Name
3-025739	Bulk Storage	Petroleum Bulk Storage Facility	OVERLOOK MOUNTAIN TOWER, LLC	Chemical (#2 fuel oil)	Source Water Area	Unregulated/Closed	Location has two tanks. Tank 1: closed and removed. Tank 2: 25 gallon tank in service aboveground - in contact with impervious barrier.	42.08576448	-74.10011198	OVERLOOK MOUNTAIN ROAD/TRAIL	Woodstock	12502	NYS DEC Bulk Storage Database
3-601921	Bulk Storage	Petroleum Bulk Storage Facility	TOWN OF WOODSTOCK	Chemical (diesel, lube oil, waste oil/used oil)	Critical Area, Source Water Area	Active	Location has four aboveground storage tanks all in contact with an impervious barrier.	42.04322224	-74.15616358	3218 ROUTE 212	BEARSVILLE	12409	NYS DEC Bulk Storage Database
3-601146	Bulk Storage	Petroleum Bulk Storage Facility	TOWN OF WOODSTOCK	Chemical (gasoline)	Critical Area, Source Water Area	Unregulated/Closed	Location has three bulk storage tanks converted to non regulatory use. Tanks 1 &2 are aboveground in contact with an impervious barrier. Tank 3 is 10% or more below ground	42.042037	-74.1597	HIGHWAY DEPARTMENT	BEARSVILLE	12409	NYS DEC Bulk Storage Database
3-601931	Bulk Storage	Petroleum Bulk Storage Facility	FEROLITO RESIDENCE	Chemical (#2 fuel oil)	Source Water Area	Unregulated/Closed	Location has one Tank Underground and vaulted with no access for inspection	42.04365587	-74.1744194	94 RACE TRACK ROAD	BEARSVILLE	12409	NYS DEC Bulk Storage Database
3-058084	Bulk Storage	Petroleum Bulk Storage Facility	SIMULAIDS INC	Chemical (#2 fuel oil (on-site consumption))	Critical Area, Source Water Area	Unregulated/Closed	Location has one Tank Underground and vaulted with no access for inspection	42.039151	-74.1469	12 DIXON AVENUE	Woodstock	12498	NYS DEC Bulk Storage Database
3-179701	Bulk Storage	Petroleum Bulk Storage Facility	EG & G ROTRON	Chemical (#2 fuel oil)	Critical Area, Source Water Area	Unregulated/Closed	Location has one Tank Underground and vaulted with no access for inspection	42.04037551	-74.14703883	YERRY HILL RD	BEARSVILLE	12409	NYS DEC Bulk Storage Database
N/A	Other	Auto Maintenence Facility	BEARSVILLE GARAGE	Chemical (oils, degreasers, other contaminants associated with auto maintenance)	Critical Area, Source Water Area	Active	No additional information	42.04085843	-74.15029721	272 Tinker Street	Woodstock	12498	Local knowledge
N/A	Other	Construction and Demolition Debris	Private Residence	Physical/Chemical	Source Water Area	Active	No additional information	42.06315367	-74.16050489	Church Road	Shady	12409	Local knowledge
N/A	Residential Sources	On Site Septic Systems	Homes within the Source water area	Chemical, Biological (bacteria, pathogens, nutrients, household cleaners, personal care products)	Critical Area, Source Water Area	Current/Future	Unmaintained or old septic system can introduce pathogens/bacteria into the aquifer. Residents may also unintentionally discharge other household chemicals into septic systems that can impact the water supply.	NA	NA	NA	NA	NA	Local knowledge
N/A	Residential Sources	Lawn and Garden Chemicals	Homes within the source water area	Chemical (fertilizers, pesticides, herbicides)	Critical Area, Source Water Area	Current/Future	Excessive fertilizer or pesticide use can introduce contaminants into the water supply.	NA	NA	NA	NA	NA	Local knowledge
N/A	Transportation Cooridors	Road Salt	Town, State and County roads in the source water area	Chemical (deicers)	Critical Area, Source Water Area	Current/Future	When salt dissolves in water, it forms sodium and chloride. High levels of sodium in drinking water can be a health concern for people with health conditions requiring low-sodium diets	NA	NA	NA	NA	NA	Local knowledge
2501111	Contamination Sites or Incidents	Spill Incidents*	Tanker Truck Rollover	Chemical (#2 fuel oil)	Source Water Area	Not Closed	Spill Date: 5/8/2025 Impacted resources: Soil, Surface Water, Impervious Surface More information can be found on the DEC Spills Database	42.06630123	-74.15914946	30 Macdaniel Road	Woodstock	12409	NYS DEC Spills database
2502247	Contamination Sites or Incidents	Spill Incidents*	Underground Tank	#2 Fuel Oil	Source Water Area	Closed	Spill Date: 6/17/2025 Impacted resources: Soil More information can be found on the DEC Spills Database	42.0796758	-74.15623578	189 Hutchin Hill Road	Woodstock	12409	NYS DEC Spills database
2306439	Contamination Sites or Incidents	Spill Incidents*	Schickele Residence	Chemical (#2 fuel oil)	Source Water Area	Closed	Spill Date: 10/29/2023 More information can be found on the DEC Spills Database	42.07088912	-74.1742418	65 Harmati Lane	Woodstock	12409	NYS DEC Spills database

*Spills in the source water protection areas within the last 5 years are included. For additional historical data please visit the DEC Spills Database

Appendix A.7
Implementation Timeline

Protection and Management Methods and Implementation Timeline								
	Priority Issue	**Targeted Potential Contaminant Source(s)**	**Goal**	**Protection Method and/or Management Method**	**Potential Cost**	**Potential Funding Sources**	**Project Leader and Partnerships Needed**	**Implementation Start Date and Timing**
1	**Per and Polyfluoroalkyl substances (PFAS)**	Sources of PFAS	Understand potential sources of PFAS in the source water area and reduce future contamination.	Increasing monitoring of PFAS to help identify potential sources of contamination to ensure effective implementation of proactive PFAS prevention	$8,000 – 18,000+	Dedicated Town Budget.	Project Leader: Plan Management Team Partnerships: Ulster County Department of Health	Winter 2025 to Summer 2026
				Conduct a public information campaign to help residents understand the current levels of PFAS and how to prevent future contamination.	$4600	NYS Pollution Prevention Institute – Community Grants Program	Project Leader: Plan Management Team Partnerships: WEC, Town Board, Ulster County Department of Environment	
2	**Residential Sources of Contamination**	Septic Systems, Lawn and Garden Chemicals	Prevent groundwater contamination from failing septic systems, and other residential sources of contamination	Develop implementation protocols for the towns Water District Wellhead Protection Overlay.	$4600	Dedicated town staff and interns	Project Leader: Plan Management Team Partnerships: WEC, Town Board, Planning Board, Building Department	Winter 2025 to Summer 2026
				Educate homeowners in the critical and source water area on residential sources of contamination through Town Hall meetings, social media, flyers, etc.	$4600	NYS Pollution Prevention Institute – Community Grants Program		
3	**Transportation Runoff**	Road Salt, Pesticides	Reduce the amount of transportation related contaminants	Implement Road Salt Best Management Practices and have highway department staff attend road salt trainings/events led by the Cornell Local Roads Program	$150,000+	Water Quality Improvement Program (WQIP) – Salt Storage and Road Salt Reduction	Project Leader: Town of Woodstock Highway Department	Winter 2025 to Summer 2026

			including deicing material and herbicides applied during roadway management from entering Woodstock's aquifer	Maximize communication between the Towns Highway Department, NYSDOT, and the County Highway Department	$4,600	Non-Agricultural Nonpoint Source Planning and MS4 Mapping Grant (NPG)	Potential Partnerships: Ulster County Highway and Bridges, NYSDOT, Cornell Cooperative Extension, WEC	
4	**Community Awareness and Engagement**	All PCS outlined in Table 2-3	Increase community confidence and awareness of the towns drinking water	Create educational material to distribute through Town website, leaflets, pamphlets, town hall presentations, etc.	$4600	NYS Pollution Prevention Institute	Project Leader: Plan Management Team Partnerships: Town Board, WEC, WLC, Ulster County Department of Health	Winter 2025 - Ongoing
			Engage the community in source water protection efforts	Collaborate with local businesses to encourage the purchase of sustainable products as it relates to water quality.	$4600			
5	**Management of Potential Contaminant Sources**	Petroleum Bulk Storage Tanks; Spill Incidents	Enhance monitoring and communication with PCS facilities to reduce the risk of contaminants entering the source water	Communicate with Petroleum Bulk Storage facilities to ensure the Town of Woodstock is on their emergency notification list in the event of a spill.	$2000	Dedicated town staff and interns	Project Lead: Plan Management Team	Summer 2026 to Fall 2026
				Site visits to facilities of concern in the source water area		Dedicated town staff and interns		
6	**Reducing Risks of Future Development and Land Use**	Residential and Commercial Development in the Source water area	Incorporate source water protection into future land use decisions.	Identify and acquire high priority parcels for land acquisition or conservation easements.	$7000 plus parcel acquisition costs	Water Quality Improvement Program (WQIP) – Land Acquisition for Source Water Protection	Project Lead: Plan Management Team Partnerships: Town Planning Board, WLC, Catskill Watershed Corporation	Summer 2026 - Ongoing (5+ years)

				Designate Critical Environmental Areas to include the source water area to ensure SEQR projects consider water quality in their environmental review.	$8,000	NYS Conservation Partnership Program NYSDEC Grant Partnerships with Land Trusts		

Appendix A.8
Plan Management Team

Designate a Plan Management Team	
Name	**Affiliation**
Laura Ricci	Woodstock Town Board
Arlene Weissman	Vice Chair, Woodstock Environmental Commission, and former NYC DEP Supervisor of Land Acquisition Projects
Julia Blelock	Former Chair and current member of the Woodstock Environmental Commission
Beth Reichheld	Former Director, NYCDEP Streams Management Program
Woodstock Highway Superintendent *	Woodstock Highway Superintendent
Judith Kerman	Vice Chair, Woodstock Planning Board
Larry Allen*	Town of Woodstock Water Superintendent
Will Carranza	Ulster County Department of Health
Jake Wedemeyer*	Executive Director, Ulster County Soil and Water Conservation District
Marcel Nagele	Longtime resident and member of Woodstockers United for Change
Kenneth Panza	Secretary, Woodstock Environmental Commission; Town of Woodstock Liaison to the Climate Smart Communities
Robert Wolff	Qualified Environmental Professional (QEP) and former member of Woodstock Environmental Commission
Hannah Birenz	Communication and Outreach Manager, Woodstock Land Conservancy
Anula Courtis*	Woodstock Town Supervisor
Tracy Bouvette**	Retired Water Resources Engineer and Manager
*Advisory members of the group **PMT Point of Contact	

Use the table below to document the Plan Management strategy for keeping your DWSP2 Plan up to date:	
Plan Management Summary	
Item	**Status**
Designate a Plan Management Team	COMPLETE
Determine progress report frequency	COMPLETE
Share progress reports	
Review and share the plan	
Verification from NYS DOH and DEC for completeness	
Create a revision schedule	

Use the table below to track updates and revisions to the DWSP2 Plan. Use the notes section to detail changes made in each update and/or revision:		
Update/Revision Tracker		
Report	**Date**	**Notes**
First Report	October 2026	
Update/Revision 1		
Update/Revision 2		

Appendix B
Modeling Methodology

Groundwater Modeling Documentation

The groundwater modeling effort completed by NYSDOH/NEIWPCC staff serves as a supplement to DWSP2 plans created for community drinking water systems throughout NY State. Using advanced modeling software, staff will design, implement, and interpret conceptual and numerical groundwater models for systems on a case-by-case basis. These models may be changed based on the needs of the community but should include a simulation of the current groundwater regime and pumping schedules validated by the most up to date data available to the modeling staff. End products will include shapefiles for GIS-created wellhead contributing areas produced using particle trace simulations to delineate the source water protection areas for the community.
This document describes the DWSP2 groundwater models for the Town of Woodstock's seven wells at Wellfield #1 and Wellfield #2. The groundwater model in this report is subject to change with new or additional information. The associated DWSP2 TA Providers may reach out at any time for additional information.

Attached to this Draft DWSP2 Groundwater Model Data Distribution you will find 1 shapefile for the following items:

1. A wellhead contribution area (~10-year travel time) for the Town of Woodstock's two wells at Wellfield #1 and five wells at Wellfield #2.

Purpose and Background

The purpose of the groundwater modeling effort was to provide simulated contribution areas to community wells for the purpose of creating a DWSP2 plan. The Town of Woodstock is located just north of the Ashokan Reservoir ~9 miles west of the Hudson River, and their drinking water comes from seven wells split between two wellfields. Two wells are located at Wellfield #1 and five wells are located at Wellfield #2 (Figure 1). The Town is currently undergoing the DWSP2 process, and a groundwater model for their wellfield was created for potential use in this plan.

Model Details

A wellhead contribution area was delineated using the Aquaveo GMS version 10.7 groundwater modeling software, a pre- and post-processor for MODFLOW models. Prior to running MODFLOW, the regional stratigraphy was modeled by referencing private well logs provided by the Woodstock stakeholders, additional well logs acquired from DECInfo Locator, surficial geologic data and bedrock topography data from the New York State Geological Survey (NYSGS), and geologic context outlined in an earlier Horsley & Witten, Inc. report created for Woodstock's wellfields.

Woodstock's wellfields pump from an unconfined sand and gravel aquifer bordered to the west and south by the Saw Kill, a stream that consistently provides recharge to the aquifer. MODFLOW-derived water balances estimate the Saw Kill provides consistent recharge to Woodstock's wellfields, including during times of drought. The model for the Town of Woodstock's wellfields contains three layers. The first layer represents an unconfined sand and gravel aquifer, the second layer represents a ~15 ft confining layer of till, and the third layer represents a confined sand and gravel aquifer overlaying sandstone bedrock. A series of model runs were calibrated and combined to account for uncertainty associated with hydraulic variables and bedrock depth.

Town of Woodstock's wells all pull from the unconfined sand and gravel aquifer and the wells were simulated to run at their maximum approved pumping rates.

Additionally, the top elevations for layer 1 were assigned using a USGS 1/3 Arc Second GeoTIFF dataset, and layer thicknesses were estimated using well logs and NYSGS depth to bedrock data. As these values are best estimates, they are subject to change with new or additional information. Any changes to these values will require a modification to the current delineations for them to remain valid.

Appendix C
Project Profiles

Project Profile Summary and Notes

The project profiles outlined in this document are meant to be a suggested guide for the protection and management methods and implementation timeline and steps. Each project profile also outlines a priority issue, targeted potential contaminant source and threat, goals and priorities for the project, potential costs, funding sources, potential partnerships for project success, and implementation steps. Potential costs are classified into low, medium, and high. Low-cost projects are those that would ideally be able to be completed with the existing budget or with a budget amendment. Medium-cost projects may require the use of capital funding and may require external or new personnel. High-cost projects would require capital funding and would require additional staff or contracted personnel. Detailed cost estimates are included in Appendix D. Project schedules have been classified into short (1-2 years), medium (3-5 years), and long (5+ years). Many project profiles include education and outreach as a protection and management method. For simplicity, the broad implementation steps have been condensed into a protection and management highlight, included at the beginning of this document. Although all projects are important to the Town of Woodstock they are shown in this appendix according to their priority, which was set by the Town based on their immediate needs and priorities.

Project Profile 1: Per and Polyfluroalkyl Substances (PFAS) DWSP2 Program Implementation – Town of Woodstock	
The Town of Woodstock has had small, unexplained detections of PFOS and PFOA in their drinking water. The town is committed to understanding current concentrations of PFAS and reducing future contamination	
Priority Issue:	Per and Polyfluoroalkyl Substances (PFAS)
Priority Level:	High
Targeted Potential Contaminant Source:	Sources of Perfluorooctanoic sulfonic acid (PFOS), Perfluorooctanoic acid (PFOA)
Goals:	Understand potential sources of PFOS/A in the Town's wells to reduce future contamination
Protection Method and/or Management Method:	1) Increasing monitoring of PFAS to help identify potential sources of contamination to ensure effective implementation of proactive PFAS prevention. 2) Conduct a public outreach campaign to increase community awareness and proactively reduce potential PFAS contamination in the source water area.
Potential Costs:	Potential costs could include a) efforts to develop and distribute educational material, b) effort hours to meet with potential partnerships and subsequent progress meetings, c) laboratory costs for PFAS samples, and d) PFAS sample collection. Estimated Cost Classification: Medium
Potential Funding Sources:	NYS Pollution Prevention Institute (NYSP2I) -Community Outreach | New York State Pollution Prevention Institute | RIT Dedicated Town budget
Potential Partnerships Needed:	Project Leader: Plan Management Team

	Potential Partnerships: Woodstock Environmental Commission, Town Board, Ulster County Department of Health, Ulster County Department of Environment
Implementation Timing:	1-2 years: Initial implementation for sampling Ongoing: Efforts to reduce future contamination
Implementation Start Date:	Winter 2025
Step-by-step Process: Increased Monitoring	
Step 1:	Work with the Ulster County Local Health Department (LHD) to determine appropriate sampling schedule for the Town wells (annually, quarterly, etc.). Ensure all parties are brought up to speed on DWSP2 and familiarize them with the source water maps.
Step 2:	Compile existing PFAS data available throughout the source water area.
Step 3:	Work with the LHD to evaluate compiled PFAS data and determine if additional sampling is required to understand how PFAS concentrations vary throughout the Woodstock source water area.
Step 4:	If the Woodstock PMT decides additional sampling is required, position Woodstock to engage future funding opportunities as they become available by informing Town officials and Woodstock constituents about 1) PFAS and how it can impact drinking water, 2) the current state of PFAS (familiarizing the community with existing data) in Woodstock, and 3) the need for existing homeowners with private wells to participate in future sampling efforts (see step 5).
Step 5:	In collaboration with the LHD, identify wells within the source water area that could be sampled in addition to the Town's seven municipal wells. These wells could include those supplying water to local businesses, abandoned wells, private residential wells, etc. Sampled wells should be distributed throughout the source water area and not concentrated in one location.
Step 6:	Identify an accredited lab to analyze samples. https://apps.health.ny.gov/pubdoh/applinks/wc/elappublicweb/
Step 7:	Reference NYSDEC PFAS sampling and assessment guidelines when sampling begins. https://extapps.dec.ny.gov/docs/remediation_hudson_pdf/pfassampanaly.pdf

Step 8:	Using methods from the public outreach campaign outlined below, inform the public of the results of the study.
Step 9:	Use the results of the sampling campaign to inform future source water protection initiatives. For example, the PMT can use the results of the sampling to ensure effective implementation of education and outreach, specifically, outreach targeting potential sources of PFAS.
Step-by-step Process: Public Outreach Campaign	
Step 1:	Identify gaps in knowledge and develop objectives for educational materials. When applicable, use the results of the sampling campaign to prioritize outreach. Potential outreach topics may include • Potential contamination sources of PFAS • Movement of PFAS in the environment. • Potential health effects and ways to reduce risk. • PFAS in everyday products, and the responsibility of homeowners in the critical and source water area in keeping the public water system safe o Unintentional discharges of PFAS through septic systems.
Step 2:	Partner with local environmental groups, and county or state agencies to help produce accurate and informative educational material. • Look into preexisting materials to utilize and/or help produce material (NYSDOH, NYSDEC, EPA, etc.). Examples: PFAS Explained | US EPA, ; Reducing PFAS in Private Wells, ; Chemicals and Health: New York State PFAS, Exposure and Health Projects ; PFAS — Per- and Polyfluoroalkyl Substances
Step 3:	Apply for funding, if needed, for the creation of educational materials
Step 4:	Identify and evaluate current communication channels reaching residents in the Source Water Area (water bills, newspaper, newsletters, town halls, town website, social media etc.), and identify the most effective means of outreach.
Step 5:	Distribute educational material and monitor feedback. Provide contact information for the public if they have questions. Update material as necessary.

Project Profile 2: Residential Sources of Contamination DWSP2 Program Implementation – Town of Woodstock	
Contamination from residential areas can come from many different sources including septic systems, lawn and garden management (fertilizer/pesticide), road salts, home shops etc. Woodstock's critical area contains a high density of residential homes all of which have private on-site septic systems. Septic systems, in particular, can introduce bacteria, pathogens, and other contaminants such as PFAS, nutrients, and pharmaceuticals into the source water.	
Priority Issue:	Residential Sources of Contamination
Priority Level:	High
Targeted Potential Contaminant Source:	Potential contamination originating from residential homes (septic systems, fertilizer use, etc.).
Goals:	Reduce contamination originating from residential areas that may contaminate the Town's water source.
Protection Method and/or Management Method:	• Develop implementation protocols to better support septic system pumping and maintenance throughout the approved Water District Wellhead Protection Overlay (WDWP-O). • Educate homeowners living in the protection areas about the importance of the Town's source water and how to prevent potential contamination.
Potential Costs:	Potential costs include a) staff time and effort towards developing and implementing the aquifer overlay protocols b) development of educational materials c) distribution of educational materials Estimated Cost Classification: Low
Potential Funding Sources:	NYS Pollution Prevention Institute (NYSP2I) - Community Outreach | New York State Pollution Prevention Institute | RIT Dedicated staff and interns
Project Leader and Partnerships Needed:	Project Leader: Plan Management Team Potential Partners: Town Board, Town Planning Board, Woodstock Environmental Commission, NYS Department of Health, Ulster County Planning Department

Implementation Timing:	Short: 1-2 years to develop implementation protocols Distribution of educational materials should be ongoing
Implementation Start Date:	Winter 2025
Step-by-step Process: Developing Implementation Protocols	
Step 1:	Identify key individuals to work on the implementation of the septic system pumping requirement of the WDWP-O. May include the Building Department, Town Supervisor, Planning or Zoning Department, Woodstock Environmental Commission, Municipal Attorney, etc. Ensure all parties are caught up to speed on DWSP2, and the importance of source water protection.
Step 2:	Identify entities responsible for maintaining septic system records, sending notices, handling enforcement, and education of the local law.
Step 3:	The remainer of the steps should be done in collaboration with individuals identified in steps 1 and 2. Inventory septic systems within the wellhead protection overlay including the owner, address, parcel ID, tank size, last known pumping date, and age of system. Coordinate with relevant entities and review existing resources to help build the inventory (Ulster County Local Health Department, Tax parcels, building permits, past studies, etc.)
Step 4	Prepare standardized forms that will be used to implement the program (pumping/inspection verification form, violation notice, compliance letter, etc.).
Step 5	Before enforcement begins, reach out to impacted homeowners (mailers, social media posts, etc.) to explain the importance of wellhead protection, compliance schedules, and a list of licensed pumpers/inspectors. Consider holding a public informational meeting with residents living in the WDWP-O.
Step 6	Collect relevant records from homeowners to register them into the program.
Step 7	Implement program and continue to communicate with property owners (reminders before deadlines, provide information about proper septic maintenance, etc.). Consider working with the Town to develop a program to help homeowners finance septic pumping (tax incentives, rebates, etc.)
Step-by-step Process: Education and Outreach	
Step 1:	Determine outreach objectives, and current gaps in knowledge. Outreach is intended to be ongoing, and topics can be adjusted over time. For initial implementation, best management practices for each of the categories below will be highlighted in one or multiple leaflets. • Septic system maintenance and importance. • Fertilizer use and lawn care best management practices. • Household chemicals (including personal care products). • Residential Road Salt application/BMPs. • Home Shops (woodworking, metal shops, paint, etc.). • Water conservation BMPs (e.g. lawn irrigation practices) • Relevant local environmental laws in Woodstock.

Step 2:	Identify and evaluate current outreach channels reaching residents (water bills, newsletters, newspaper articles, town website etc.).
Step 3:	If needed, apply for funding for the creation of materials.
Step 4:	Prepare educational material for distribution. Look into preexisting materials to distribute or use as a reference. • Septic: SepticSmart Education Materials | US EPA • Lawn and Garden Chemicals: Look for the Zero Brochure ; Sustainable Landscaping - NYSDEC • Saving Water: Start Saving | US EPA • Road Salt: DEC Don't be Salty Campaign
Step 5:	Distribute educational material to homeowners through selected pathways (ex. Town Website, leaflets, social media, town meetings/presentations, etc.).
Step 6:	Monitor any feedback and make improvements to educational materials or distribution pathways as necessary.

Project Profile 3: Transportation Runoff DWSP2 Program Implementation – Town of Woodstock	
Road deicing in the wintertime is vital in preventing snow/ice accumulation on roadways and ensuring public safety. Roadside vegetative management is also important to maintaining roadways; however, contaminant runoff following these events can make their way into the drinking source water and become a public health concern.	
Priority Issue:	Transportation Runoff
Priority Level:	Medium
Targeted Potential Contaminant Source:	Transportation corridors
Goals:	• Reduce contamination relating to transportation runoff • Increase interagency collaboration with the Town, County, and State highway departments. • Understand and implement best management practices relating to both road salt and roadside vegetative management
Protection Method and/or Management Method:	1. Increase communication between the Towns Highway Department, NYSDOT, and the County Highway Department 2. Research and implement road salt, and vegetative best management practices (BMPs).
Potential Costs:	Potential costs include a) pilot testing new road salt technologies and BMPs b) efforts to apply for grants to support projects c) data review and trainings related to BMPs/pilot technologies d) planning and progress meetings. Estimated Cost Classification: High
Potential Funding Sources:	Water Quality Improvement Project (WQIP) Program - NYSDEC – Road Salt Reduction and Salt Storage Non-Agricultural Nonpoint Source Planning And MS4 Mapping Grant (NPG) - NYSDEC
Project Leader and Partnerships Needed:	Project Leader: Town Highway Department, Plan Management Team
	Potential Partners: NYS Department of Transportation, Ulster County Highway and Bridges, Town Board, Woodstock Environmental Commission, Ulster County Department of Environment, Cornell Local Roads Program
Implementation Timing:	Length: Medium (4-7 years)
Implementation Start Date:	Fall-Winter 2025
Step-by-Step: Increasing Communication and Collaboration	

Step 1:	Contact decision makers to collaborate on road maintenance and operation at the Town, County, and State levels. Provide a background on the DWSP2 process.
Step 2:	Evaluate and understand current practices each entity is using as it relates to vegetative management and road salt. Explain the importance of source water protection and how these practices may impact source water quality. Utilize the DWSP2 plan and maps to help convey this information.
Step 3:	Establish a communication protocol with entities (frequency of meetings, methods of communication (email, phone, etc.)
Step 4:	With partnerships formed, facilitate trainings that outline modern best management practices related to road salt and herbicides, and identify where local application methods can be improved.
Step 5:	Maintain long-term communication and set up a long-term plan to account for times of staff turnover. Stay up to date on new technologies/BMPs
Step-by-step Process: Road Salt Best Management Practices	
Step 1:	Utilizing the partnerships established in the steps above, evaluate current road management practices (inventory of road deicing materials used, frequency, specific practices, equipment upgrades, etc.). Identify gaps in knowledge within the highway department and attend trainings to stay up to date.
Step 2:	Coordinate with entities to explore the use and feasibility of road salt alternatives and BMPs. Review brine-based alternatives to road salts, and any necessary vehicle and equipment upgrades. Local highway department staff can attend the Cornell Local Roads Program trainings on road salt (NYS LTAP Center - Cornell Local Roads Program | CALS).
Step 3	Collaborating with entities; select best management practices to implement.
Step 4:	Review grant requirements and apply for funding to implement projects through the Water Quality Improvement Program or the Non-Agricultural Nonpoint Source Planning and MS4 Mapping Grant.
Step 5:	Implement new BMPs and pilot new technologies. Consider incorporating road signage such as “Entering a Source Water Protection Area”, or “Low Salt Zone”
Step 6:	Evaluate the results of new BMPs/pilot technologies. Parameters to consider include total salt usage, cost, water quality, and effectiveness.
Step 7:	Utilizing the results from the step above, restructure or reprioritize efforts as needed. If BMPs/pilots were successful, continue with implementation. Apply for additional funding or include implementation into annual budget.
Step-by-step Process: Vegetative Management	
Step 1:	Using the partnerships established in the steps above meet with regional entities to better understand how herbicides are applied to Woodstock roadways.
Step 2:	Outline concerns about how herbicide application within the DWSP2-defined source water area could affect drinking water.
Step 3:	When meeting with regional entities responsible for local herbicide application, provide the Town’s perspective on reducing herbicide application

	within the DWSP2-defined source water area; request feedback. Discuss additional alternatives to chemical application.
Step 4:	If/when a new herbicide quantity is agreed upon, or if other modifications to vegetative management practices were decided, remain in contact with the entity overseeing the modified protocol. Provide a reminder pre-season, and request an update outlining how modified vegetative management practices did or did not result in anticipated improvements post-season.

Project Profile 4: Community Awareness and Engagement DWSP2 Program Implementation – Town of Woodstock	
Community engagement and support is an important component in ensuring the success of source water protection efforts. The town plans to open lines of communication to Woodstock residents living both inside and outside of the water district. The town also aims to increase partnership with local businesses to support source water initiatives.	
Priority Issue:	Community Awareness and Engagement
Priority Level:	High
Targeted Potential Contaminant Source:	All Potential Contaminant Sources
Goals:	Engage community members in source water protection efforts Increase community confidence in the safety and quality of the towns drinking water.
Protection Method and/or Management Method:	1. Reach out to residents living in the source water area to ensure awareness of source water protection efforts, the community's role in keeping the public water system safe, and how to participate in protection efforts. 2. Partner with local businesses in Woodstock to encourage the sale and purchase of sustainable products. 3. Post final DWSP2 plan online, share DWSP2 progress reports and highlight recent achievements on the Town's website
Potential Costs:	Potential costs include a) costs associated with development and distribution of educational materials b) staff time conducting outreach and material preparation c) staff time communicating and working with local businesses. Estimated Cost Classification: Low
Potential Funding Sources:	NYS Pollution Prevention Institute (NYSP2I) - Community Outreach | New York State Pollution Prevention Institute | RIT Dedicated staff and interns
Project Leader and Partnerships Needed:	Project Leader: Plan Management Team Potential Partners: Town Board, Woodstock Environmental Commission, Woodstock Land Conservancy, Ulster County Department of Health

Implementation Timing:	Initial implementation 2-4 years; however, efforts should be ongoing.
Implementation Start Date:	Winter 2025
Step-by-step Process: General Outreach	
Step 1:	Conduct outreach to partners who can help with the development and/or distribution of educational materials.
Step 2:	Utilize local knowledge to develop outreach objectives. Topics may include DWSP2 initiatives (ex. road salt reduction, future development/land use), and ways to get involved.
Step 3:	Identify and evaluate current outreach mechanisms reaching residents in the town (water bills, newsletters, newspaper articles, town website, etc.), and determine additional methods of outreach (Town Halls, local tabling events, youth education through local school districts)
Step 4:	Research and review existing educational material to reference or utilize.
Step 5:	Apply for funding to create educational materials if needed.
Step 6:	Develop and prepare educational material for distribution. Consult and review with project partners on all material intended for distribution
Step 7:	Distribute educational material through selected pathways. (ex. Town Website, leaflets, social media, town meetings/presentations, etc.).
Step 8:	Monitor any feedback and make improvements to educational materials or distribution pathways as necessary.
Step-by-step: Local Business Outreach and Partnership	
Step 1:	Identify consumer products to target for the protection of water quality, such as fertilizers, pesticides, home cleaning products, pavement deicers, etc. Study EPA web pages that list "Safer Choice Products" (eco-friendly alternatives) and make lists of such products. Include this info in a best practices flyer and distribute it widely.
Step 2	Determine local businesses selling the products identified (i.e., local hardware stores, garden centers, pharmacies, and grocery stores).
Step 3:	Reach out to those local businesses and gauge their interest in participating in Woodstock's "Best Practices for Clean Drinking Water" campaign to promote eco-friendly versions of the products identified. Contact can be accomplished by phone and email to start, followed up by in-person visits. As an incentive to businesses, post information on the Woodstock Environmental Commission (WEC) and Town of Woodstock Facebook pages, Instagram, and web pages about the clean drinking water campaign. Promote stores that will enthusiastically participate, along with a list of safe products.
Step 4:	Present the program to the appropriate Town boards and to the public via social media and newspaper stories (in *Hudson Valley One*, *The Overlook*, and Kingston *Daily Freeman*).

Step 5:	Highlight and promote local businesses participating in the program—via above-mentioned social media outlets, etc. Create signage that the businesses can hang prominently in front windows or by cash registers, explaining the program and endorsing the products. Hold educational meetings at the Woodstock Community Center, the Woodstock Youth Center, the new local library (Woodstock Public Library District) and the Woodstock Elementary School, further explaining the campaign. Consider holding contests for school children or older residents—and/or developing additional promotional initiatives
Step-by-step: Share progress and information about DWSP2 on the Towns website	
Step 1:	1. Utilize the Town Website to: Post final DWSP2 plan, DWSP2 Fact sheet, progress reports, and ways to get involved. 2. Consider including outreach objectives from other priority issues (residential sources of pollution, PFAS, etc.)
Step 2:	Identify and utilize partnerships to help develop additional content or update content.
Step 3:	Inform audience of the web materials and gather feedback. Update as necessary.
Step 4:	Identify individual(s) who will update website in the long term.

Project Profile 5: Management of Potential Contaminant Sources DWSP2 Program Implementation – Town of Woodstock	
Petroleum Bulk Storage (PBS) facilities are those that store more than 1,100 gallons of petroleum in aboveground and underground storage tanks, or facilities with one or more underground storage tanks larger than 110 gallons. There are currently two active regulated petroleum bulk storage facilities in the Town's critical area. Potential spills can also pose a threat to the town's source water. Spills can come from many different sources such as transportation corridors, bulk storage tanks, businesses, etc.	
Priority Issue:	Management of Regulated Potential Contaminant Sources
Priority Level:	Medium
Targeted Potential Contaminant Source:	Petroleum Bulk Storage Facilities and spill incidents
Goals:	Reduce potential contamination originating from potential contaminant source facilities of concern. Increase awareness of future facilities that may pose a risk to the source water.
Protection Method and/or Management Method:	Enhance communication and collaboration with facilities in the critical and source water area to reduce the risk of contaminants entering the towns source water. Increase public awareness on how to identify and report spills.
Potential Costs:	Staff time to research and contact facilities, effort hours to collect and review permits, attend subsequent meetings, research current conditions and databases and potential site assessment visit costs. Estimated Cost Classification: Low
Potential Funding Sources:	Dedicated staff or Town budget.
Project Leader and Partnerships Needed:	Project Leader: Plan Management Team Potential Partners: Town Board, Woodstock Environmental Commission, DEC Region 3, Ulster County Department of Health
Implementation Timing:	Short: 6 months-1 year
Implementation Start Date:	Summer 2026
Step-by-step Process: Enhancing Communication with PCS facilities	
Step 1:	Assigned PMT member should ensure each facility has a current registration including the owner and emergency contact information. Information for facilities can be accessed using DECInfo Locator (dec.ny.gov/maps/interactive-maps/decinfo-locator). These facilities are

	required by state law to report any spills following applicable state and federal reporting requirements.. Relevant facilities are listed in the DWSP2 PCS inventory and maps.
Step 2:	Identify the appropriate position to receive spill notifications and contact all petroleum bulk storage facilities, inform them they are located in the Town's source water protection area, what that means, and orient them to the priorities of the Town's DWSP2. Request they add the designated individual(s) to their spill's notification procedures.
Step 3:	Regularly check the NYSDEC Spills Database (https://dec.ny.gov/environmental-protection/site-cleanup/database-search) for any spills from these facilities. Follow up with NYSDEC for clean-up and any concern of impacting the community's source water.
Step 4:	To the extent the community has access to these facilities, regularly visit the facilities to see if there are any obvious spills and mishandling of stored chemicals. Report any spills or obvious mishandling of the stored materials that would likely cause a release of the materials to the environment to NYSDEC Spills Hotline
Step 5:	Consider working with the local health department if interested in developing an ambient water sampling plan for contaminants of concern
Step by step: Spills education	
Step 1:	Research and review existing educational material focused on spill recognition and reporting requirements. Utilize this information to create a brochure/fact sheet.
Step 2:	Post the fact sheet/information on the Town's website including who to contact in an event of a spill (e.g. DEC Spill Hotline, local emergency responders).
Step 3:	If mailing the facts sheets, identify names and addresses of property owners within the critical and source water areas.
Step 4:	Prioritize and choose which property owners to conduct outreach too based upon protection areas, land use, historical incidents, etc.
Step 5:	Follow up with landowners regarding questions, etc.

Project Profile 6: Future Development and Land use DWSP2 Program Implementation – Town of Woodstock	
New development can introduce contaminants such as nutrients, lawn and garden chemicals, salt/chlorides, and others into the source water. New development should not be discouraged, but instead, source water protection should be considered during the planning process to ensure the protection of water resources.	
Priority Issue:	Reducing Risks from Future Development and Land Use
Priority Level:	Low
Targeted Potential Contaminant Source:	Contaminants associated with residential or commercial development in the source water area (petroleum, nutrients, stormwater runoff, new construction, etc.).
Goals:	Ensure future development in the source water area considers source water protection.
Protection Method and/or Management Method:	1. Designate the source water area as a Critical Environmental Area (CEA) 2. Identify and acquire high priority parcels for land acquisition or conservation easements 3. Monitor new development in the source water protection areas
Potential Costs:	Potential costs include a) land acquisition/restoration costs b) critical environmental area mapping and designation costs c) staff time Estimated Cost Classification: Medium
Potential Funding Sources:	Water Quality Improvement Program (WQIP) – Land Acquisition for Source Water Protection Climate Smart Communities (CSC) NYSDEC Grant Partnerships with Land Trusts Smart Growth Comprehensive Planning Grant Program NYS Smart Growth Planning Grant Program
Project Leader and Partnerships Needed:	Project Leader: Plan Management Team Potential Partnerships: Town Board, Woodstock Environmental Commission, Woodstock Land Conservancy (WLC)

Implementation Timing:	CEA designation: Short (0-3 years) Land acquisition: Medium (4-7 years)
Implementation Start Date:	Summer 2026
Step-by-step Process: Designate the source water area as a Critical Environmental Area	
Step 1:	Identify key contacts for planning and implementation. Reference Critical Environmental Areas fact sheet when beginning the process.
Step 2:	Prepare a map that is an appropriate scale to readily locate the CEA boundaries and create a written justification supporting the designation.
Step 3:	Communicate with NYS DEC Region 3 and Division of Environmental Permits as they may serve as a resource.
Step 4:	If applicable, hold an informal meeting with landowners located within and nearby the proposed CEA, the public and interested agencies to discuss the proposal.
Step 5:	Provide a written public notice and hold a public hearing prior to the designation. The act of designating a CEA is a discretionary decision by the designating agency and is, therefore, subject to SEQR.
Step 6:	After the agency approves the designation, the map, written justification, and proof of public hearing must be filed with the DEC Commissioner and others.
Step 7:	Designation takes effect 30 days after these filings
Step-by-step Process: Identify and acquire parcels for conservation easements	
Step 1:	Learn more about NYSDEC WQIP Land Acquisition grant program • Visit DEC's WQIP webpage to learn more about the grant program and when funding is available • Visit WQIP Land Acquisition Projects For Source Water Protection Toolkit - NYSDEC webpage to learn more about land acquisition and available resources for an awardee to complete such a project
Step 2:	Gather information • Review your Drinking Water Source Protection Plan (DWSP2) to understand the area that drains to your surface water intake.
Step 3:	Prioritize parcels. • Use the information gathered in Step 2 to prioritize parcels or an area for outright purchase or conservation easement that will protect the public drinking water source. • If you need assistance with identifying parcels, consider working with land acquisition and source water protection experts in your area that could aid with the Town's land acquisition for source water protection goals. For example, a consulting firm or land trust may be a great partner and aid with the transaction side (e.g., appraisals, survey, environmental assessments, title, etc.) of the land acquisition program.

Step 4:	Apply for funding. • Utilize the information gathered in Steps 2 and 3 to fill out a NYSDEC WQIP Land Acquisition application when available through the NYS Consolidated Funding Application.
Step 5:	Acquire parcels. • If you receive a NYSDEC WQIP Land Acquisition grant, acquire parcels for source water protection. • Review WQIP Land Acquisition Projects For Source Water Protection Toolkit - NYSDEC webpage for program and document resources that will aid with the land acquisition process.
Step 6:	Steward land. • Steward the land and make sure there are no violations (e.g. it is only used for activities that will not impair the public drinking water source).

Appendix D
Cost Estimates

Preliminary Cost Estimate

Note: These estimates are based on an opinion of time requirement and transactional costs. Depending on emerging needs or altered priorities, these could change. It is recommended that dedicated staff are designated to assist with these efforts, and it is not assumed that consultants will be hired to lead these efforts. The wage rate is based on one staff person with a salary of $82,419, including a 75% increase for staff benefits, overhead costs, etc. This cost estimate is based off of occupational wage rates estimated by NYS Department of Labor in 2026 for an average environmental scientist. All transactional costs are preliminary and subject to change greatly; THIS IS NOT INTENDED TO BE A FINAL EXACT ESTIMATE. Please note that many efforts across various projects can be combined to save costs. For the purposes of this estimate, each project is estimated individually. It is likely that actual costs will be lower given that efforts for steps like education and outreach are combined.

Project Profile	Priority Issue	Goal	Protection Method and/or Management Method	Timeline	Time Requirements	Weekly Hourly Requirements	Hours Required (per year)	Labor Cost per Hour (NYSDOL Wages)	Approximate Transactional Costs (Materials, Construction)	Total Cost (per year)
1	Per and Polyfluoroalkyl substances (PFAS)	Understand potential sources of PFAS in the source water area and reduce future contamination.	Increased monitoring of PFAS	2 years	Coordination, sampling, laboratory costs, analysis of results	1	52	69.35	5,000-15,000[1]	$8,606 - $18,606
			Education and Outreach	Ongoing	Outreach material preparation, event attendance	1	52	69.35	1,000	$4,606
2	Residential Sources of Contamination	Prevent groundwater contamination from failing septic systems, and other residential sources of pollution (fertilizer use, leaking oil tanks, etc.)	Develop implementation protocols for the towns WDWP-O	1-2 years	Meetings, Developing protocol	1	52	69.35	500	$4,606
			Education and Outreach	Ongoing	Education and outreach	1	52	69.35	1,000	$4,606
3	Transportation Runoff	Reduce the amount of transportation related contaminants including deicing material and pesticides applied during roadway management from	Road Salt Best Management Practices and attend Road Salt trainings and events led by the Cornell Local Roads Program	4-7 years	Research on BMPs, education and outreach, piloting new technologies	1	52	69.35	150,000+ (vehicle and equipment procurement placeholder)	See Footnote 2
			Increasing communication between the Towns	Ongoing with concentrated	Meetings, coordination and communication	1	52	69.35	1,000	$4,606

		entering Woodstock's aquifer	Highway Department, NYSDOT, and the County Highway Department	effort in 2-3 years						
4	Community Awareness and Engagement	Increase community confidence and awareness of the towns drinking water, and engage the community in source water protection efforts	Town Hall Presentations, Direct Mail, social media, Newspaper Articles, Local Business outreach	Ongoing	Event attendance, outreach material preparation, local business coordination	1	52	69.35	1,000	$4,606
5	Management of Potential Contaminant Sources	Enhance monitoring and communication with PCS facilities to reduce the risk of contaminants entering the source water	Communicate with PBS facilities to ensure the Town of Woodstock is on their emergency notification list in the event of a spill.	6 months	Site visits to PBS in the source water area, communication and coordination	1	26	69.35	0	$1,803
6	Future Development and Land Use	Incorporate source water protection into future land use decisions.	Land acquisition or conservation easements	5-10 years	Meetings, coordination, land surveying, land planning	2	104	69.35	Legal fees, survey fees, appraisal value	7,212 plus parcel value and legal/survey fees
			Designate a Critical Environmental Area (CEA). Ensure actions in the SWA are monitored, closely evaluated, and monitored over time.	1-3 years	Meetings, Coordination	2	104	69.35	1,000	$8,212

Footnotes:

1. Total sampling costs will vary based on the number of wells tested. Transactional costs included a low range (10 samples total) and a high range (30 samples total). Laboratory costs were estimated at about $500 per sample.

2. Total costs per year will vary (trainings, retrofitting trucks, vehicle and equipment upgrades, salt usage, etc.). See resources below for a breakdown of potential costs.

https://dutchessemc.org/wp-content/uploads/2012/09/road-salt-special-report-2010.pdf

https://dutchessemc.org/wp-content/uploads/2024/02/brine_cost_benefit_analysis.pdf


NEW YORK
STATE OF
OPPORTUNITY.
Department
of Health


NE
IW
PCC