The Village of Portville

Drinking Water Source Protection Program

(DWSP2) Plan

Prepared for:

Village of Portville

1 South Main Street

Portville, NY 14770

Southern Tier West
Regional Planning & Development Board

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LIST OF ACRONYMS

AWQR	Annual Water Quality Report
BMP	Best Management Practice
CBS	Chemical Bulk Storage
CCE	Cornell Cooperative Extension
CWSRF	Clean Water State Revolving Fund
DPW	Department of Public Works
DWSP2	Drinking Water Source Protection Program
EQIP	Environmental Quality Incentives Program
FEMA	Federal Emergency Management Agency
GIGP	Green Innovation Grant Program
GIS	Geographical Information System
gpm	Gallons per minute
MCL	Maximum Contaminant Level
MGD	Million gallons per day
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSDOL	New York State Department of Labor
NYSDOT	New York State Department of Transportation
PBS	Petroleum Bulk Storage
PCS	Potential Contaminant Source
PWS-ID	Public Water System Identification Number
SEQRA	State Environmental Quality Review Act
SDWA	Safe Drinking Water Act
SPDES	State Pollutant Discharge Elimination System
STW	Southern Tier West Regional Planning and Development Board
SWAP	Source Water Assessment Program
SWCD	Soil and Water Conservation District
TOGS	Technical & Operational Guidance Series
TOT	Time-of-travel
WQIP	Water Quality Improvement Project

INTRODUCTION

The intention of this Drinking Water Source Protection Program (DWSP2) Plan for the Village of Portville is to ensure the community's drinking water remains accessible, safe, and reliable. Source water protection actions prevent pollutants from entering the drinking water supply to protect public health. Preventing pollution at the source ultimately decreases water treatment costs and increases public confidence in their drinking water supply. Source water protection efforts increase public awareness and strengthen intermunicipal partnerships during both planning and implementation phases.

Provisions of the 1996 Safe Drinking Water Act (SDWA) required each public water system to evaluate the source of their drinking water. To meet this requirement, the New York State Department of Health (NYSDOH) developed a Source Water Assessment Program (SWAP) for public water supplies. Under the SWAP, staff from NYSDOH and regional planning agencies delineated contributing land areas (watersheds and/or aquifer recharge areas), inventoried potential contaminant sources, and analyzed the susceptibility of a public water supply to contamination. The SWAP reports did not include an implementation strategy to protect susceptible areas or a provision to update the plan based on emerging issues. A SWAP report was prepared by Cattaraugus County Health Department for the Village of Portville in 2002.

The DWSP2 is designed to engage community stakeholders to define priority issues and potential solutions. The core of the DWSP2 report is an implementation plan that identifies specific issues and potential threats to the drinking water supply, priority actions, resources, and a timeline required for implementation. A local Plan Management Team is tasked with evaluating and reporting progress. These changes to the initial SWAP approach were made to help ensure protection of the drinking water supply remains a focus of community decisions and actions.

Implementation of this plan and periodic updating of this source document is expected to contribute to the conservation of natural resources and preservation of public health. In addition, protection of the water source can create future benefits such as drinking water treatment savings costs, general liability insurance savings, maintenance of real estate values, and increased climate resilience.

BACKGROUND

This DWSP2 Plan was created to assess and protect the local source water using the New York State Department of Environmental Conservation (NYSDEC) and Health (NYSDOH) DWSP2 Plan Framework for Village of Portville, New York. In 2020, Southern Tier West Regional Planning and Development Board (STW) began assisting the Village of Portville on the first step of identifying a stakeholder group with knowledge of the present and potentially the past state of the water supply. The second step was to assess the condition of the water supply system. Cattaraugus County Department of Health (DOH) and NYSDOH worked with STW to provide history and the current condition of the water system as well as mapping of the protection areas. The third step was to identify effective strategies and methods for long-term protection as well as maintenance. A Plan management team was designated to ensure the DWSP2 Plan's protective actions are consistently implemented and to update the plan on a five-year basis.

This plan evaluates the Public Community Water System *Village of Portville*, PWS ID# NY0400347. The water source type is groundwater, withdrawn from the Olean-Salamanca Aquifer. The Village actively utilizes two wells, Well 1 (Lillibridge) and Well 3 (School). Well 1 was established to supply the Village of Portville with drinking water since the early 1950s. Water from the wells is treated before it serves a population of approximately 1,050 people. A third well, Well 2 (Wellington), is not being utilized currently.

The purpose of developing the DWSP2 Plan for these Wells is to protect public health and safety, and the environment. It is important that source water protection becomes a priority to ensure quality drinking water for years to come.

A list of source water protection elements has been developed through this project. A stakeholder group established by the Village of Portville assembled this plan in partnership with representatives from STW, Cattaraugus County DOH, and the Town of Portville. The reference section provides information on stakeholder meetings, potential contaminant threat analysis, previous studies and plans the team used to develop this DWSP2, and plan recommendations.

1.0 STAKEHOLDER GROUP

1.1 Form a Stakeholder Group

A stakeholder group was formed for this effort and consists of people from a multitude of backgrounds including Tony Evans, the mayor of the Village of Portville; the Village water operator; Village and Town and leadership; the Cattaraugus County Department of Health; regional planners; and others to represent the adjacent property to the wells, the Portville Central School. The stakeholder group can be contacted by email at *portvillemayor@gmail.com*. A full list of Stakeholder group members and meetings can be found below and in Appendix B.

Table 1.1.1: Stakeholders

Name	Affiliation
Tony Evans	Village of Portville, Mayor
Andy Hall	Village of Portville, DPW
Bob Fischer	Village of Portville, Code Committee
Ed Jennings	Village of Portville, Code Enforcement
Stu Frost	Town of Portville, Board Member
Dave Suain	Portville Central School Teacher
Tim Zerfas	Catt County DOH, Water Resource Specialist
Robert Ring	Catt County DOH, Environmental Health Director
Sarah Swinko	Southern Tier West, Sustainability Planner
Richard Zink	Southern Tier West, Executive Director

The stakeholder group held meetings from 2020 to 2023, starting with a kickoff meeting to introduce the DWSP2, review objectives of the program, identify other interested parties to engage, and establish specific goals and a vision to guide the plan. The pandemic in 2020 delayed the progress of this plan, but our meetings proceeded in-person in 2023. A detailed list of the meetings can be found in Appendix B.

1.2 Establish Goals and Formulate a Vision

The stakeholder group met to establish goals and formulate a vision. The strongest motivations for creating this DWSP2 Plan were protecting the source water and having open communication with those in the community for educational and potential risk mitigation purposes. With these in mind, four goals were outlined for the Village of Portville's DWSP2 Plan:

1. Educate the community on the importance of source water protection.
2. Build relationships for open communication with those who own a potential contaminate source.
3. Establish appropriate land use regulations near wells.
4. Develop a risk mitigation strategy to be ready and resilient for potential future contaminants.

After consideration of the community's goals, a vision statement was created. The statement reads: *"The Village of Portville is committed to educating and interacting with the community within the source water area to protect the water quality for years to come."*

The goals and vision statement can also be found in Appendix C.

2.0 DRINKING WATER SOURCE ASSESSMENT

This section of the plan provides an overview of the Village of Portville's Water System and the hydrogeologic setting. The assessment also includes the drinking water source protection areas, critical areas, and potential contaminants of concern within the watershed.

2.1 An Overview of the Water System

The Village of Portville's primary water source are two groundwater wells that withdraw from the Olean-Salamanca Area Primary Aquifer located in southeastern Cattaraugus County. Primary Aquifers are defined in the Division of Water Technical & Operational Guidance Series (TOGS) 2.1.33. as "highly productive aquifers presently utilized as sources of water supply by major municipal water supply systems." This valley-fill aquifer system underlies the entire Allegany River, Olean Creek, Five Mile Creek, and Haskell Creek valleys and occupies parts of their tributary valleys. See Appendix D for the water system overview worksheet.

Well 1 is located on the east side of Lillibridge Road along the edge of the Village's border. To provide water to the local community in 1954, this 12-inch diameter well was drilled 195 feet into the bedrock aquifer. It is a stainless-steel open bore well. Based on the Annual Water Quality Report (AWQR) of 2022, Well 1 produces 250 gallons per minute (gpm).

Well 2 on Wellington Drive was drilled in 1977 to support the growth of the community. The well was drilled 242 feet into the bedrock aquifer. Based on the report in 1994 from Hydro

Group, Well 2 can produce 300 gpm. Unfortunately, due to objectionable water quality, Well 2 has not been in use in approximately 30 years. In order to get Well 2 back online, the Village would need to add additional corrosion inhibitor to prevent the cast iron lines from corroding, decrease the pH, and conduct consistent water testing that may not be possible at this moment.

Well 3, east of the Portville Central School, was drilled in 1996 to provide drinking water to the growing community that Well 2 could not. The well has a 10-inch diameter and was drilled 200 feet into the bedrock aquifer. Based on the AWQR of 2022, Well 3 produces 150 gpm.

Today, the Village continues to draw water from the two active municipal wells, Well 1 and Well 3. These Wells are located near the edge of the valley filled with glacial outwash/lacustrine sediments, generally parallel to the Allegheny River. Near the wells, the total saturated thickness of the outwash aquifer reportedly varies between 0-10 feet and is overlain by 10-30 feet of till. Well characteristics obtained from the AWQR of 2022 are summarized in Table 2 and this table can be found in Appendix M.

Table 2.1.2: Portville Well Characteristics

Well Number	Well Location	Characteristics
Well 1	Lillibridge Road	Date of drill: 1954 Depth to bottom: 320 ft Screen: none Stainless Steel Max Rate: 250 gpm
Well 2	Wellington Road	Date of drill: 1977 Depth to bottom: 242 ft Screen: yes Stainless Steel Max Rate: 300 gpm
Well 3	Behind School	Date of drill: 1996 Depth to bottom: 200 ft Screen: none Stainless Steel Max Rate: 150 gpm

There have been no known maximum contaminant level (MCL) violations in the last five years for the system, and no water quality violations were reported in the 2022 AWQR. Water from the two active wells, Well 1 and Well 3, is treated before distribution. The water at each well site is disinfected by adding liquid sodium hypochlorite, fluoride as a public benefit, and ortho/polyphosphate to prevent corrosion of the pipes, before being pumped to the two nearby

reservoirs. The North Reservoir is uphill from Well 1 and has a capacity of 240,000 gallons. The South Reservoir is uphill from Well 3 and has a capacity of 160,000 gallons. Each reservoir provides water to the distribution system by gravitational feed and both reservoirs are filled by both well pumps when the water level sensors detect a low amount of water in the reservoirs. The source water is then distributed throughout the Village of Portville. The locations of the reservoirs can be found in Table 3 below and in Appendix M.

Table 2.1.3: Reservoir Location

Reservoir Number	Reservoir Location	Ownership
Well 1 Reservoir	Lillibridge Road	Village of Portville 51.53 acres
Well 3 Reservoir	Behind School	Daniel L. Schmidt 14.54 acres

2.2 Prepare a Drinking Water Source Protection Map

Drinking water source protection areas are established to protect against different classes or types of contaminants. For wells serving public water systems, there are various protection areas that can be identified. These include: (1) the ownership and control area; (2) the critical area; and (3) the source water area.

The ownership and control areas are established from the New York State Sanitary Code - the area a purveyor of public water supply must own around the well is a minimum 100 feet, and control land activities within 200 feet of the well. The critical area is the space surrounding the control area, where it takes relatively less time to reach and contaminate the drinking water source. Ideally, this is based upon a certain time-of-travel (TOT) to the well. Finally, the source water area is beyond the critical area and includes a zone that still contributes water to the wells either at a longer TOT or indirectly such as through surface water runoff for eventual groundwater recharge.

In 2020 the Village of Portville and STW worked with NYSDOH to identify their TOT areas around the wells. NYSDOH created the TOT zone shapefiles around Well 1, Well 2, and Well 3 using GW Vistas and MODFLOW. A drinking water source protection map was prepared by STW using ArcGIS software. On this map are the estimated one-year, three-year, and five-year TOT zones based on the particle trace from MODFLOW. See Appendix F for the Source Water Protection Area Map.

The Village of Portville has ownership and control of 51 acres around Well 1 and 1.9 acres around Well 2. The Portville Central School has ownership of 50 acres round Well 3. Well 3 does not meet current well siting requirements, which specify that “Wells serving public water

systems shall be located such that the owner of the water system possesses legal title to lands within 100' of the well and the owner controls by ownership, lease, easement or other legally enforceable arrangement the land use activities within 200' of the well." (Drinking Water Regulations, Part 5, Subpart 5-1). The Village of Portville will go through the land acquisition process after this DWSP2 Plan is complete to own and control the area around Well 3. Ownership is shown below in Table 4 and in Appendix M.

Table 2.2.2: Well System Location and Ownership

Well Number	Well Location	Ownership Area
Well 1	Lillibridge Road	51.53 acres
Well 2	Wellington Road	1.90 acres
Well 3	Behind School	None

The ownership and control areas were decided upon by utilizing NYS Sanitary Code stating the public water supply must own a minimum 100 ft radius around the wells. All the ownership and control areas are fenced in and protected, but the Village of Portville will need to acquire ownership around Well 3.

The critical areas were decided upon based on the one-year TOT protection areas, about 200-500 feet from each well. Well 1 and Well 3's critical areas are fenced in, located uphill, and somewhat secluded from the rest of the village. Well 2's critical area is also fenced in but is located in the middle of the Village on a flat slope and is the main well that could be impacted by potential contamination. The critical area map is shown in Appendix F.

The source water area was set as the five-year TOT distance, about 300-2,000 feet from each well. Again, Well 1 and Well 3's source water areas are located uphill, and somewhat secluded while Well 2's source water area is located in the middle of the Village on a flat slope and is the main area that could be impacted. The source water area map is shown in Appendix F, as well as other figures to provide an overview of conditions within the critical and source water areas.

The figures in Appendix F are shown as follows: Figure 1 – Ownership, Critical, and Source Water Areas, Figure 2 – Land Use, Figure 3 – Land Cover.

The committee decided not to use the previous SWAP map from 2002 because the protection area was a radius with Well 1 at the center and did not factor in the topography. Using GW Vistas and MODFLOW to show the TOT zones based on topography (in addition to other hydrogeologic variables), the protection areas were more realistic for the Village of Portville.

2.3 Create a Potential Contaminate Source Inventory

In 2002, NYSDOH completed a source water assessment (SWAP) for the Village's water system to evaluate possible and actual contaminants. The overall contaminant prevalence ratings for each type of potential contaminate sources (PCS) were low. For the Sensitivity Analysis, the microbial and chemical categories rated high because "based on the data provided, the well draws from fractured bedrock and no lower permeability layer exists above the aquifer." Even though there are limited PCSs near Well 1 and Well 3, the hydrogeology around these wells makes them susceptible to possible future contaminants.

A PCS inventory was prepared by the stakeholder group. They documented a few PCSs that may impact the quality of drinking water sources, if improperly managed, and reviewed them with the publicly available information on DECinfo Locator to create the inventory. The stakeholder group discussed and concluded there are no immediate "high risk" PCSs to the Village's active wells, and PCSs were either moderate or low, and could be managed accordingly. The PCSs were sorted between moderate or low based on their distance from the wells. The closer they are to the wells, the quicker they could contaminate, which results in a more crucial PCS to address. They also recognized certain planning protection measures, such as zoning, only manage future land use risks while others such as local education and policy recommendations are better suited to manage existing, ongoing PCSs.

Broadly summarized, the Village of Portville's PCSs include:
a cemetery, WNY PA Railroad, residential and school fertilizers, a history of petroleum spills of various sizes, underground petroleum storage tanks including a 7-Eleven gas station, the Village's septic system, pathogens and trace personal care chemicals to groundwater, road de-icing concerns where salt from Village and Town may enter the aquifers, oil gas and other regulated wells, and other chemical bulk storage.

Although not all PCSs listed above are found within the critical and source water areas, many could be a future PCS. It is also important to recognize that these are not sources of contamination per se, but rather represent areas with potential groundwater risk based on the histories of groundwater contaminants associated with land uses of these types.

STW created a map of these PCSs with the source water protection areas shown as well. With Well 1 and Well 3 on a sloped forested area, the PCSs are few to none. Well 2, on a flat slope and open space, has more to impact the water quality. The PCS inventory and map can be found in Appendix G. The various map layers used to compile the PCS data into a map can be found in Appendix E.

3.0 PROTECTION AND IMPLEMENTATION STRATEGIES

Since the Village of Portville is fully dependent on groundwater for their drinking water source, it is crucial to implement effective strategies for current and future source water protection. Implementation of these strategies will allow the vision and goals of the stakeholder group to be

met, which include educating the public, establish relationships with PCSs, planning for future land use, and develop strategies to be more resilient for potential future risks.

Given the moderate to low levels of PCSs, the stakeholder group believed most of the potential contaminants posed, this DWSP2 Plan effort focuses heavily on educating the public and local officials about the proximity of the local drinking water source to the Village and maintaining or building on existing strategies.

3.1 Identify Protection and Management Methods

The stakeholder group discussed in detail the PCSs and decided on a few protection and management methods. These methods were ranked by how immediate the need is for the issue. Owning the land around Well #3 is the most important action of protection and became the first priority. All the other methods fell close behind each other. These protection and management methods will help to mitigate concerns associated with potential contaminant sources identified in Appendix F.

3.1.1 Land Use

Under the broad scope of land use, many methods of drinking water source protection are available including 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.

The first method is acquiring the land around Well 3, the area identified as the ownership area. Acquiring the critical area around this well would also be beneficial for safety. The stakeholder group understands their current land use regulation tools may not adequately prevent future sources of chemical, physical, and/or biological contamination within the land area that recharges their public water supply wells. Due to the risk of contamination to the well-head and the threat to the community's capacity to provide potable water, this issue is their highest priority. At the time of completing this report, the Village is already working towards this goal by preparing for the 2024 WQIP Land Acquisition Project.

The second method is protecting the forested areas around Well 1 and Well 3 in the source water protection areas. Protecting these lands would prevent residential or commercial development in the future. This goal can only be achieved with the collaboration of the Town of Portville since this area is in the town. An Aquifer Overlay (AO) District would be a consideration for preserving and maintaining the quality of water found in the aquifer, thereby protecting this principal water supply source for the Village who draws from this aquifer.

The third method is adopting a municipal roads de-icing policy. The stakeholder group recognizes safe winter roads are a priority but recommends refining best practices so necessary but not excessive road salt is applied within the Critical Areas. Educational efforts will be

developed to minimize rock salt remaining on road margins beyond the duration of the snow season since excessive salt simply dissolves into the environment without providing de-icing benefits. The use of brine rather than spreading rock salt is known to de-ice roads more precisely, using less salt and leaving far less of a post-winter salt residue.

3.1.2. Monitoring and Reporting

Reviewing existing data and monitoring through communication are more potential strategies for protection and management. Communication with the PCSs would provide additional insight regarding the contaminants that could potentially affect the drinking water wells. This may uncover previously unknown contaminants, which can help the Village plan and adjust protection methods. Many of these PCSs are already regulated and monitored by the state.

The fourth method is to reduce the application of herbicides and pesticides within the source water areas. This is specifically focused on Well 2 before it becomes active again since the other source water areas are forests. The Village may develop relationships with residents, business owners, and the school in the critical area of Well 2 to monitor these chemicals and benefit the Village's resiliency in the future. Excessive contaminants can impair the aquifer and increase treatment costs at the water treatment plant for their removal. Well 2 is the only well with a PCS in its protection area, so the goal is to reduce the risk of contamination from these sources.

The fifth method is monitoring other PCSs. These sources include chemical bulk storage tanks, waste management and disposal, SPDES discharges, oil and gas pipelines, and septic systems. Leaks and spills may allow contaminants to enter the groundwater or waterbody directly, requiring increased treatment costs, and could cause restrictions on the use of the wells. Although none of these were found within the critical or source water areas, many could be future PCSs for the groundwater. Again, these are already regulated and monitored by the state, but it is valuable to know what is going on in the Village.

3.1.3. Public Education and Outreach

An important next step is providing information about source water protection in and around the Critical Area (particularly for those who live over it), sending out information in water bills, and holding public meetings to share the findings of the development of the DWSP2 Plan and provide information on how to protect the water source.

Some strategies for education and outreach include digital/social media, paid advertising, press releases, newsletters, factsheets and flyers, email blasts, signage, tabling/presenting, community events, and training.

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

1. Who is your target audience and what do you want them to do in response to your project (e.g., what actions do you want them to take as a result of the information provided)?
2. What are your key messages and where to direct people to get more information?
3. Are your messages short, long, require graphics, etc.?
4. How do you plan to get the information out (in-person, mail, email, social media)?
5. Who are partners who can help you get the information out?
6. What is your budget?

An increase in public awareness will support efforts to maintain clean water and help prevent the contamination of source water. Signage along roadways to indicate when entering a recharge area is one way to do this, as are inserts about DWSP2 and water quality in quarterly water bills. Signage alerting the public in the Critical and Source Areas is a common practice to alert the public of a protected area, and a method the Village should consider. Select signs could include the DEC spill hotline phone number.

The NYSDEC requires spill response reporting to NYS Spill Hotline within two hours of discovery for petroleum spills. (Spills of fewer than five gallons, are contained and under the control of the spiller, have not and will not reach NYS water or land, and/or are cleaned up within two hours of discovery are exempt). Various NYS regulations require the reporting of discharged petroleum, chemicals and materials that may cause environmental damage. In all cases, the responsible party or the property owner is required to report the discovery of a spill. NYSDEC recommends anyone with knowledge to report the discovery of any contamination or a discharge to the NYS Spill Hotline (1-800-457-7362) as soon as possible. The Village should review these regulatory programs consistently to help ensure spills are addressed properly.

The long-term protection of the Village's water supply will require leadership and oversight to manage implementation of the recommended actions. Designating a Watershed Coordinator to lead this effort is highly recommended. This position could be newly created, or tasks can be assigned to existing staff. Opportunities to partner with regional or state resources for technical support and funding should be explored.

3.2 Develop an Implementation Timeline

The stakeholder group created an implementation process for each protection and management method identified. The implementation process and timeline for each protection and management method can be found in Appendix H while the project profile can be found in Appendix I. The project profile identifies project leaders and partnerships needed, potential funding sources, costs, project timing, and the step-by-step processes. Refer to Appendix J for cost analysis. The cost analysis includes tasks required, approximate hours needed, extra costs, and the total potential cost.

4.0 PROGRESSION AND MAINTENANCE

This DWSP2 Plan was developed to provide the Village of Portville with the tools and information, including the potential contaminant source list and implementation timeline, needed to protect their drinking water which will be overseen by a team.

4.1 Designate a Plan Management Team

The stakeholder group formed a Plan Management Team to guide and oversee the implementation of the DWSP2 Plan. The Team is also responsible for generating and sharing progress reports with the community. Members were selected based on their knowledge of the water system, position, and potential to lead or contribute to implementation of the recommended actions. The Team is encouraged to include a new member from each organization each year to enable transfer of institutional knowledge and succession planning. The Plan Management Team Members can be found below in Table 4.1 and in Appendix K.

Table 4.1 Plan Management Team Members

Name	Affiliation	Email
Tony Evans	Village Mayor	portvillemayor@gmail.com
Andy Hall	Village DPW	andrewcarterhall@gmail.com
Bob Fischer	Village Code Committee	29ford@roadrunner.com
Sarah Swinko	Southern Tier West Regional Planning and Development Board	sswinko@southerntierwest.org

The Plan Management Team will review the plan every year in February, or as needed, to evaluate progress on the implementation process and examine any issues or emerging concerns. Members are expected to coordinate with their respective organizations to share the ideas and methods contained within the plan. The Team was provided with an editable Microsoft Excel file to track progress on all implementation steps. Annual progress reports should be produced after adoption of the DWSP2 Plan. These progress reports shall be shared with NYSDEC, NYSDOH, and with the community at large via the Village's website, at workshops, and/or at board meetings. The Team is expected to update their DWSP2 Plan to reflect progress and emerging issues every five years. This revision tracker can be found in Appendix K. Updates and revisions to the plan will be documented in Appendix L.

The DWSP2 Plan for Village of Portville was completed on June 16, 2023 and held a public hearing on June 19, 2023. The DWSP2 Plan will be available as a PDF on the Village of Portville's website.

5.0 CONCLUSION

This DWSP2 Plan serves to guide the Village of Portville toward implementation of various methods designed to protect their drinking water sources, Well 1 (Lillibridge), Well 2 (Wellington), and Well 3 (School). The drinking water maps outline the source water area and critical area which are a priority for protection, and the PCS inventory within these priority areas identifies potential point and nonpoint sources of contamination within the watershed. The project profiles of this plan outline specific goals, partnerships, funding opportunities, and implementation steps to complete a variety of projects that align with the Village of Portville's goals and vision. The Plan Management Team will use this plan to progress forward with their drinking water source protection efforts.

6.0 REFERENCES

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Appendix A – DWSP2 Plan Check List

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. Stakeholder Group	**Complete**
1.1 Form a Stakeholder Group	Complete
1.2 Establish Goals and Formulate a Vision	Complete
Phase 2. Drinking Water Source Assessment	**Complete**
2.1 Develop an Overview of the Water System	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

Public Water Supply (PWS) Information		
PWS Name:	Village of Portville	
PWS ID:	NY0440347	
Type of Sources identified in plan:	Groundwater	
Name(s) of sources being protected (if different than PWS Name):		

Appendix B – Stakeholder Group Members

Table 1.1.1 Stakeholder Group Members		
Name	**Affiliation**	**Email**
Tony Evans	Village Mayor	portvillemayor@gmail.com
Bob Fischer	Village Code Committee	29ford@roadrunner.com
Andy Hall	Village DPW Superintendent	andrewcarterhall@gmail.com
Edward Jennings	Village Code Enforcement	ejenn01@yahoo.com
Stu Frost	Town Board Member	sfoster2@roadrunner.com
Dave Suain	Portville Central School Teacher	dsuain@portvillecsd.org
Sarah Swinko	Sustainability Planner at Southern Tier West	sswinko@southerntierwest.org
Richard Zink	Executive Director at Southern Tier West	rzink@southerntierwest.org
Robert Ring	Catt Co DOH Environmental Health Director	rwring@cattco.org
Tim Zerfas	Catt Co DOH Water Resource Specialist	tdzerfas@cattco.org

Table 1.1.2 Stakeholder Group Meetings			
Item	**Actions Item**	**Open/Closed (Date)**	**Responsibility**
1	Kick off, DWSP2 overview	9/30/2020	Understand why DWSP2 is important
2	Review the aquifer	11/25/2020	Understand the water system
3	Discuss DWSP2 overview again	4/29/2022	Determine stakeholder group
4	Virtual meeting to discuss what is needed for the plan and introduce new Stakeholder – Sarah Swinko	1/25/2023	Gather maps
5	Revised plan and discussed water system and possible stakeholders	3/7/2023	Determine goals, vision, other stakeholders
6	Revised plan and maps. Also discussed protection areas and possible contaminant sources. Introduce new stakeholder – Stu Frost & Dave Suain	4/18/2023	Determine protection areas and contaminant sources
7	DWSP2 Plan Public Hearing	6/19/2023	Approve plan before sent to DEC
8	Go over implementation actions	6/29/2023	Set an implementation timeline

Appendix C - Village of Portville's DWSP2 Plan Goals & Vision

Table 1.2.1 Community's Vision Statement
The Village of Portville is committed to educating and interacting with the community within the source water area to protect the water quality for years to come.

Table 1.2.2 DWSP2 Plan Goals	
Item	**Goal**
1	Educate the community on the importance of source water protection.
2	Build relationships for open communication with those who own a potential contaminate source.
3	Establish appropriate land use regulations near wells.
4	Develop a risk mitigation strategy to be ready and resilient for potential future contaminants.

Appendix D – Overview of the Water System

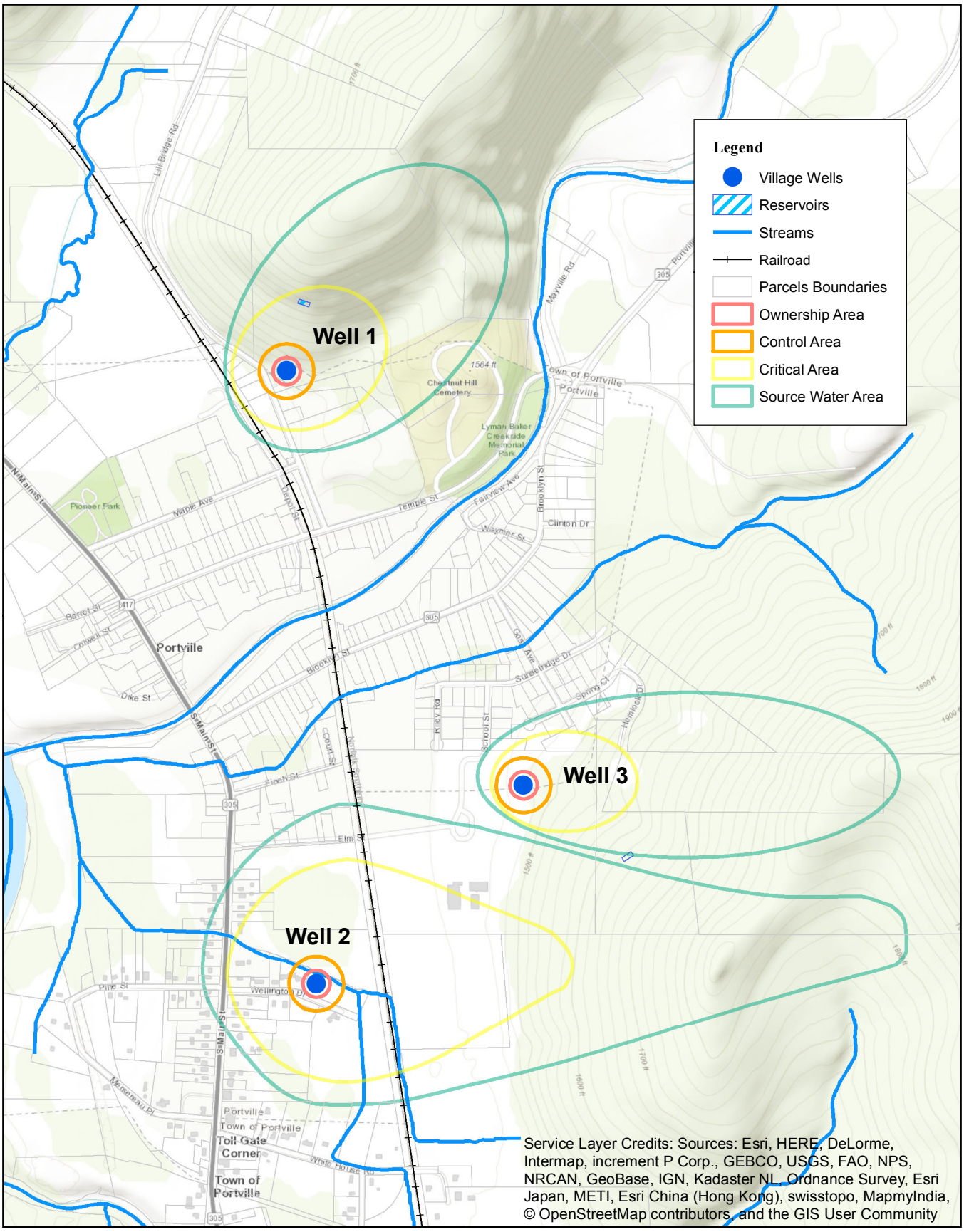
Table 2.1 Overview of the Water System			
Water system name:	Village of Portville		
NYS PWS ID:	NY0440347		
Type of water system: **(e.g. community, non-community, transient, non-transient)**	Community		
Name of the community, or communities, served by the system:	Village of Portville		
Population served by the system:	1050 (in the Village)		
# of service connections:	420		
Summary of wells, intakes, infiltration galleries, and/or springs including name, depth, screen length and pumping rates where applicable:	The Village has 3 wells: Well 1 (Lillibridge) 320' depth, no screen, 250 gpm. Well 2 (Wellington) 242' depth, screen, 300 gpm. Well 3 (School) 200' depth, no screen, 150 gpm. *Well 2 in not currently in use.		
General treatment information:	The Village's two active wells receive liquid sodium hypochlorite (disinfection), fluoride solution, ortho/poly phosphate (a corrosion inhibitor).		
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 delineating protection areas in section 2.2):	The two active municipal wells are located near the edge of a valley filled with till and glacial outwash/lacustrine sediments. The wells lie along the east Allegheny Riverbank. Total saturated thickness of the aquifer varies between 0-10 feet near the wells. At the well sites the till sediments are fine-grained and coarsen with depth.		
Water quality summary including any known ambient water quality information, finished water detections, and/or history of maximum contaminant level (MCL) violations*:	There is no history of recent water quality standard violations in the two active wells.		
Water quantity summary:	Current Water Withdrawal Permit Expiration Date(s)	No Expiration	
	Total Permitted Water Withdrawal Capacity	0.528	MGD
	Average Daily Water Demand (= Yearly Usage / 365)	0.1	MGD
	Maximum Daily Water Demand (Unofficial 3-day average in peak month - e.g. July)	0.12	MGD
	Daily Water Losses (can be obtained from Water Conservation Program form)	0.005	MGD
*Refer to "Sources of Water Quality Information" in Drinking Water Source Assessment Resource Kit			

Appendix E – Source Water Protection Areas

Table 2.2 DWSP2 Map		
Protection Areas	**Description**	**Delineation Method**
Ownership and Control Areas	The Village of Portville owns parcels around their Well 1 and Well 2 locations. They do not own the land around Well 3. Parcel boundaries and NYS Sanitary Code states the public water supply must own a minimum 100 ft radius and control 200 ft radius around the wells.	Parcel boundaries and NYS Sanitary Code
Critical Areas	In 2022 NYSDOH updated the Village of Portville's SWAP maps using GW Vistas and MODFLOW. The software was used to define 1-year, 3-year, and 5-year TOT zones which extends under the aquifer to the secondary recharge areas. The 1-year TOT zones are the Critical Areas for these Source Water wells.	GW Vistas and MODFLOW
Source Water Areas	Based on the 2022 NYSDOH updated SWAP maps using GW Vistas and MODFLOW. The software was used to define recharge areas as well as the 5-year TOT zone which extends under the aquifer to the secondary recharge areas. The 5-year TOT zones are the Source Water Areas for these Source Water wells.	GW Vistas and MODFLOW
URL	**Publicly Available Data**	
https://data.ny.gov/	Bulk Storage Facilities Solid Waste Management Facilities Environmental Remediation Sites Superfund Sites Spill Incidences 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 (SPDES) NYS DOT Facilities NYS Tax Parcels USGS Digital Raster Graphic Quadrangle	
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	
http://www.dec.ny.gov/lands/5374.html	Mines	
https://www.eia.gov/	Pipelines	
https://www.epa.gov/	TRI Basic Data Files	

Table 2.2 continued DWSP2 Map Sources		
Layer	**Data Created or Acquired**	**Description**
Wells	5/19/2023	Created a new layer after seeing the wells with the municipality.
Ownership Area	5/22/2023	Created a new layer based on 100' from wells.
Critical Area	4/29/2022	From 1 year TOT shapefile received form NYSDOH
Source Water Area	4/29/2022	From 5 year TOT shapefile received from NYSDOH
Streams	5/19/2023	USDA Geospatial Data Gateway
Particle Trace	4/29/2022	Shapefile from NYSDOH
Reservoirs	5/19/2023	USDA Geospatial Data Gateway
Cattaraugus County Parcels	9/10/2012	NYS GIS Clearinghouse
Land Use	5/19/2023	USDA Geospatial Data Gateway
Petroleum Bulk Storage Facility	5/31/2023	NYS GIS Clearinghouse - Petroleum Bulk Storage Facility
Oil Gas and Other Regulated Wells	5/31/2023	NYS GIS Clearinghouse - Oil Gas and Other Regulated Wells
State Pollutant Discharge Elimination System Permitted (SPDES) Facilities	5/31/2023	NYS GIS Clearinghouse – Wastewater Facility
Spills	5/19/2023	NYS DEC Environmental Remediation Databases

Appendix F - Map of Source Water and Protection Areas

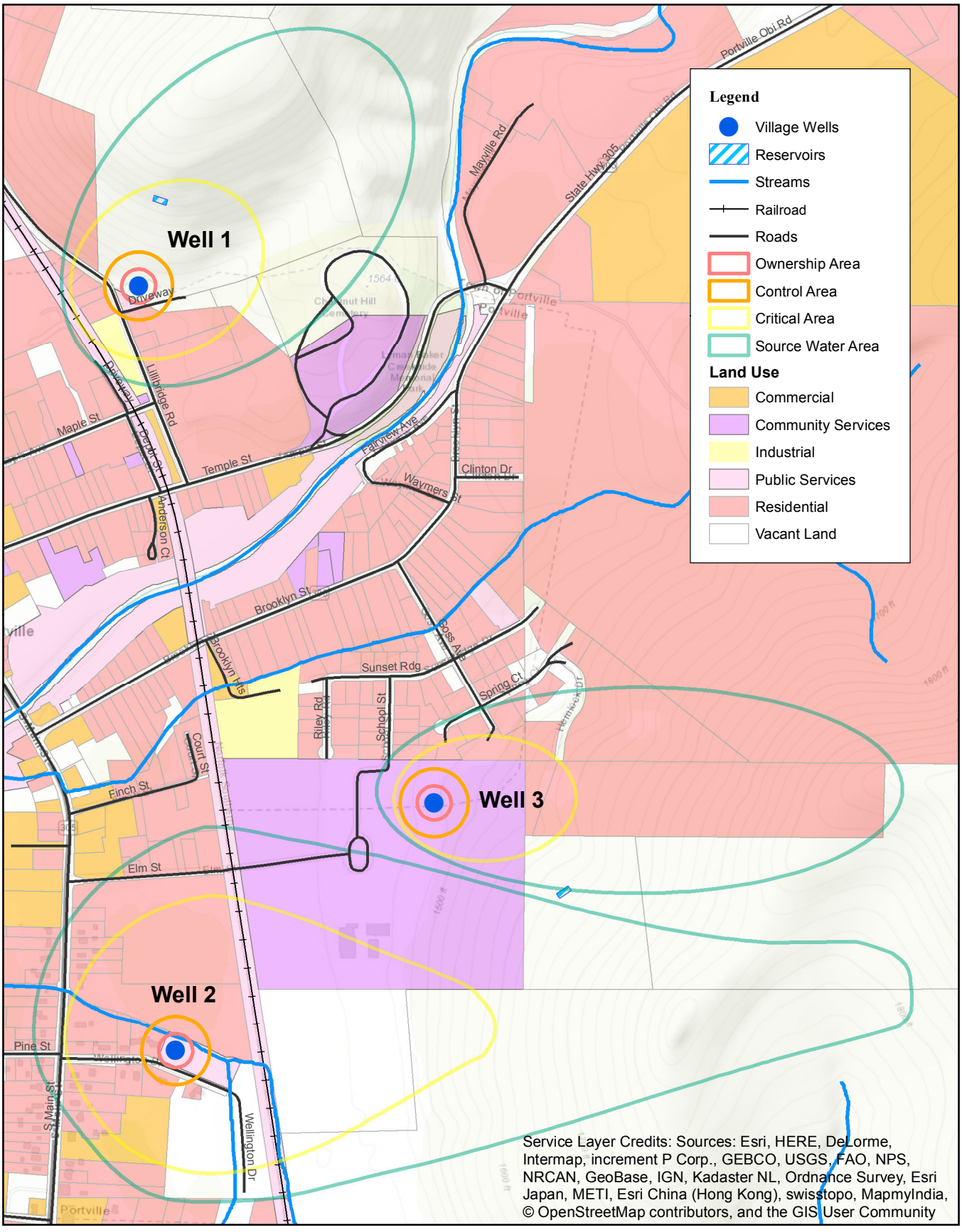


Village of Portville
Source Water Protection Areas

N

0 1,200 2,400 Feet

Southern Tier West 2023

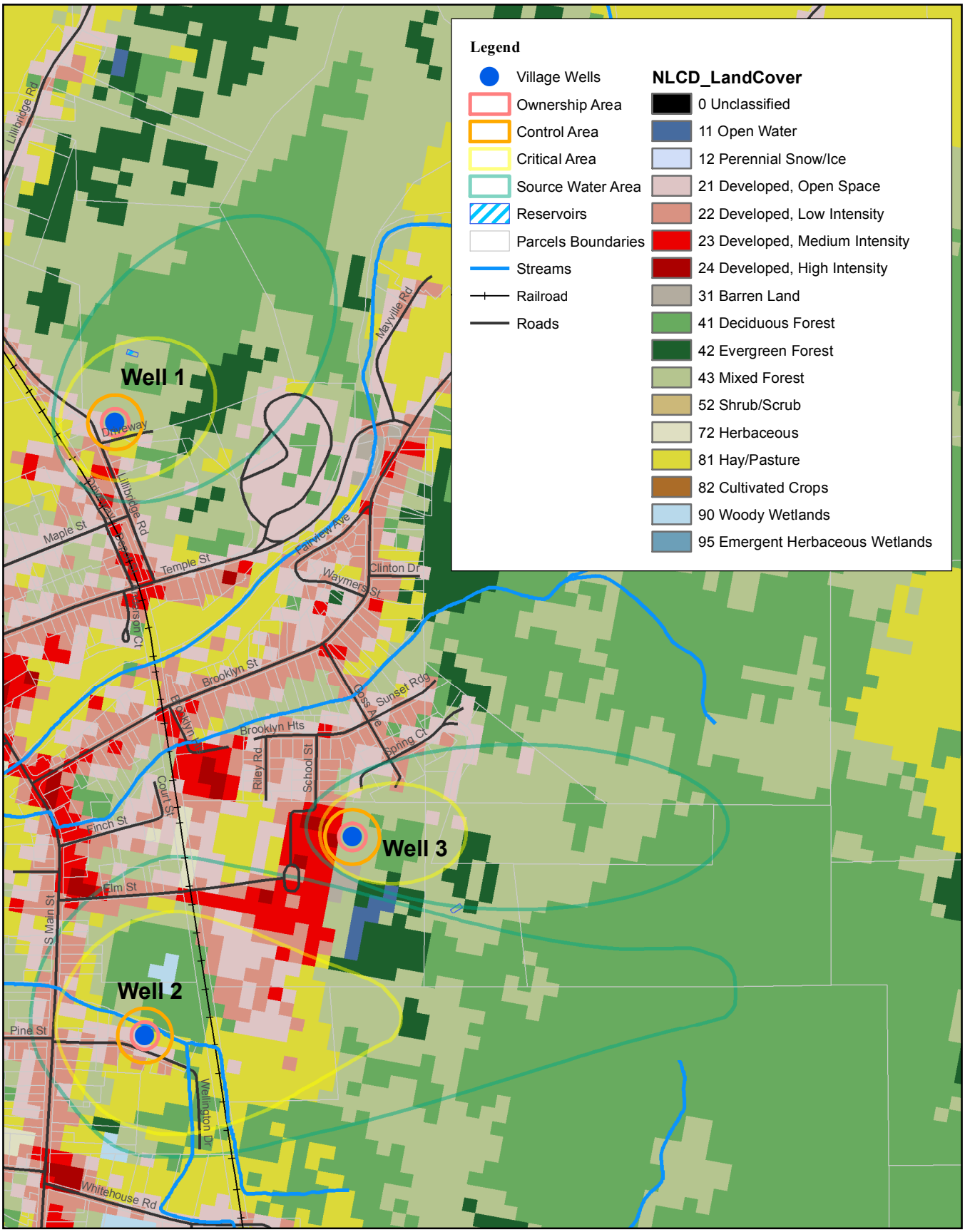


Village of Portville
Land Use Map

N

0 950 1,900 Feet

Southern Tier West 2023



Village of Portville
Land Cover Map

N

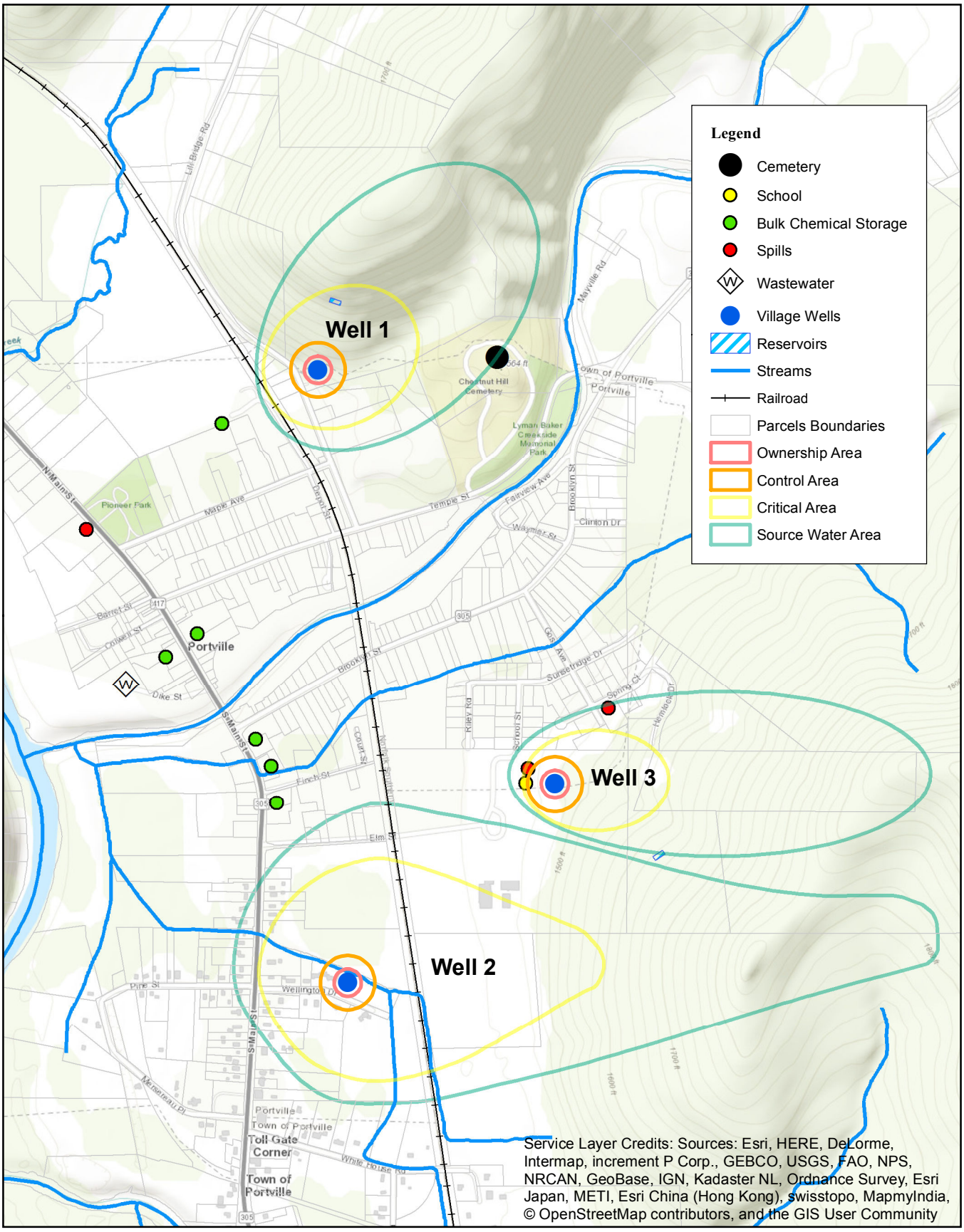
0 1,200 2,400 Feet

Southern Tier West 2023

Appendix G – Potential Contaminant Source Inventory

Table 2.3 Potential Contaminant Source Inventory										
Potential Source	**Facility**	**Contaminant of Concern**	**Protection Area Impacted**	**Status**	**Potential Risk**	**Relevant Information**	**Street**	**Site #**	**Spill Number**	**Date**
Cemetery	Chestnut Hill Cemetery	Chemicals - Fertilizers, Pesticides, etc.	Well 1 Source Water Area	Active	Med	They currently do not apply fertilizer or pesticides on the cemetery grounds.	1469 Lillibridge Rd	NA	NA	NA
Railroad	WNY PA Railroad	Chemicals – Petroleum, Pesticides, etc.	Well 1 and Well 2 Critical and Source Water Areas	Active	Med	Current railroad (RR) management practices appear acceptable but may warrant review in the future; this RR line conveys primarily nonhazardous products. The only possible hazard is wax at 212° F. If ever spilled, would pool on the ground but not infiltrate the underlying aquifer, so the primary derailment hazard may be the locomotive with its fuel.	NA	NA	NA	NA
School	Portville Central School	Chemicals - Fertilizers, Pesticides	Well 2 Source Water Area	Active	Low	The school uses fertilizer with no phosphorus, only nitrogen (21-00).	500 Elm St	NA	NA	NA
Road De-Icing	DOT	Chemical – Road Salt/ Sodium Chloride (NaCl)	Well 2 Source Water Area	Seasonal	Low	Sodium and Chloride concentrations are not elevated in the wells, suggesting that current Village and Town de-icing programs is providing adequate dilution for any infiltrating NaCl	(all Village roads)	NA	NA	NA
SPDES	Portville's Wastewater Treatment Plant	Chemicals - nutrients, trace pharmaceuticals/ forever chemicals (PFOA, PFOS), irregular discharges.	None but nearby	Active	Low	Ind. Code: 4952 DEC ID: 9-0474-00008/00001	42 S Main St	NY0020966	NA	1/27/2016
Chemical Bulk Storage	Portville Central School	Chemical - Petroleum	None but nearby	Closed	Low	There were 6 tanks, now only 1 is there but closed.	500 Elm St	9-001031	NA	4/15/2016
Chemical Bulk Storage	Portville Quaker State	Chemical - Petroleum	None but nearby	Closed	Low	There were 4 tanks. Is now Mark's Automobile Services.	75 S Main St	9-451282	NA	7/28/1993

Table 2.3 Potential Contaminant Source Inventory										
Potential Source	**Facility**	**Contaminant of Concern**	**Protection Area Impacted**	**Status**	**Potential Risk**	**Relevant Information**	**Street**	**Site #**	**Spill Number**	**Date**
Chemical Bulk Storage	Portville Citgo	Chemical - Petroleum	None but nearby	Closed	Low	There were 5 tanks. Is now Myrge Café & Coffee House.	65 S Main St	9-384704	NA	7/20/1997
Chemical Bulk Storage	7-Eleven #35097	Chemical - Petroleum	None but nearby	Active	Low	Total of 14 tanks, only 4 in service now.	55 S Main St	9-500089	NA	6/29/2027
Chemical Bulk Storage	Portville Truck & Auto Repair	Chemical - Petroleum	None but nearby	Closed	Low	Is now FleetPride. There were 4 tanks, now only 1 is there but closed.	29 S Main St	9-600284	NA	09/10/2001
Chemical Bulk Storage	Dodge Creek Pump Station	Chemical - Petroleum	None but nearby	Closed	Low	There was one tank.	16 S Main St	9-601627	NA	07/21/2021
Chemical Bulk Storage	Campbell's Portville Sunoco	Chemical - Petroleum	None but nearby	Closed	Low	There were 5 tanks.	S Main St	9-119644	NA	8/24/1992
Chemical Bulk Storage	Rondor Construction Products Inc.	Chemical - Petroleum	None but nearby	Closed	Low	There were 2 tanks.	51 Maple St	9-119474	NA	8/24/1992
Spills	Front of Church and Manor	Unknown Chemical	None but nearby	Unknown	Low	NA	25 N Main St	NA	2300384	4/14/2023
Spills	Ditch	Unknown Chemical	None but nearby	unknown	Low	NA	2 Spring Ct	NA	2104229	8/3/2021



Village of Portville
Potential Contaminate Source Map

N

0 1,200 2,400 Feet

Southern Tier West 2023

Appendix H – Implementation Timeline

3.1 Protection and Management Methods & 3.2 Implementation Strategy Timeline										
Priority	Priority Issue (area)	Potential Contaminant Source	What is the Potential Risk?	Goal	Protection Method	Potential Funding	Partnerships needed	Implementation Timing	Potential Cost	Start Date
1	The Village does not own the critical area around Well 3	Multiple sources associated with development or land use activities	Direct contamination to the wellhead threatens the municipality's ability to provide potable water to its customers.	Reduce the possibility of direct wellhead contamination.	Land acquisition for a 100-200' radius around the wellhead. Work with attorneys.	WQIP Land Acquisition for source water protection	Town of Portville, Village of Portville, Plan Management Team, Owner of the wellhead area (School)	1 Year	$4,324	Sept 2023
2	Residential, cemetery, school, and railroad use of lawn and garden chemicals in the critical area	Herbicides and Pesticides	Infiltration from herbicides and pesticides bringing excess chemicals into the aquifer which can be toxic to humans and other organisms	Reduce the amount of herbicides and pesticides applied in the source water area	Education on the use of herbicides and pesticides and how they affect the groundwater and the homeowners drinking water source, Education on this topic through the CCE Master gardener program	EPA Environmental Education Grants, dedicated paid staff or interns	CCE Master Gardeners, Plan management team, Town and Village of Portville, Cattaraugus County SWCD	3 months	$4,125	Sept 2023
3	Transportation related contamination in the critical area	Transportation Corridors – access roads and railroad using chemicals or salt, and accidental chemical or petroleum spills	Chemical spills directly entering the waterbody from vehicles using the corridors and affecting the ecosystem.	To reduce the likelihood of spills in the corridors, more specifically around the Village Wells	Emergency Response Plan in place with local firefighters, Know the DEC response team, vegetative buffers	Budgeting priority and dedicated paid staff or interns	Cattaraugus County Emergency Services, Weston Mills Fire Department, NYSDEC response team, Town of Portville	3 years	$20,888	Feb 2024
			Deicing materials directly entering the waterbody from vehicles spreading the material and vehicles that transport it on their vehicle (tires, frame, etc.,)	Reduce the amount of deicing materials entering the waterbody	Roadway BMPs, vegetative buffers, Cornell Local Roads Program for collaboration,	Dedicated paid staff or interns, Transit Security Grant (FEMA), budgeting priority	Town of Portville Highway Department, Village of Portville, Portville DPW, Plan management team		$17,690	Feb 2024
4	Enacting protection methods to protect the watershed from future development in the source water area	Multiple sources associated with development or land use activities	Development associated with potential contaminant sources could occur in sensitive areas of the watershed with little consideration to the source water or best management practices resulting in contamination.	Reduce and manage the amount of development in the source water area to protect the drinking water source	Future Land Plans: (focus on the lands that are a high priority/will contribute the most to the source water), Land acquisition/easements, Conservation subdivisions, Look into Aquifer Overlay Zones/Stormwater Review, Special use permits	WQIP Land Acquisition for source water protection, GIGP Grant, CWSRF, EQIP, Trees for Tribs	Plan management team, Town and Village of Portville	1 Year	$20,375	Feb 2025
5	Management of regulated potential contaminant sources in the source water area	Chemical Bulk Storage	Chemical, biological or physical leaks and spills may allow contaminants to enter the groundwater or waterbody directly	To enhance communication with specific facilities or DEC staff that work with these regulated facilities to understand the nature of the threat as associated risk and response efforts.	Refer to the DWSP2 maps and the PCS inventory for any storage tanks in the critical or source water area. Monitor and inspect these tanks as they could leak causing a contaminant plume	Internal funding necessary, mandatory regulatory compliance obligations, dedicated paid staff or interns.	Plan management team, Town of Portville, Village of Portville, NYSDOH, Local PBS and CBS facilities, NYSDEC	5 months	$2,475	Feb 2025

Appendix I – Project Profile

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 J.

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 Village of Portville, they are shown in this appendix according to their priority, which was set by the Village based on their immediate needs and priorities.

Protection and Management Method Highlight: Outreach and Education

Implementation Steps:

1. Gather information via community surveys, local knowledge, and reports of issues. This includes:
    a. Current efforts to reach out to community members and organizations
    b. Current community state of knowledge
    c. Any specific information on current contaminants
    d. Example survey questions:
        i. “What, if any, organizations can you name that are working to get the community involved in reducing erosion in your area?”
        ii. “What do you know about how erosion happens?”
        iii. “What do you know about how erosion can affect local waterways?”
        iv. “Are you experiencing issues with erosion on your property?”

2. Consider combining outreach and education efforts for each project profile to consolidate and streamline efforts.

3. Research best management practices to combat the specific issue. Identify gaps in knowledge or actions based on best management practices for the specific issue.

4. Present findings in a simple, but informative manner to the public and involved parties. This may include: social media outreach, informational mailings, website postings, newspaper postings, public meetings or workshops, and/or event outreach.

5. Provide extended efforts to engage and educate the community. Ask for feedback and send another community survey later to quantify progress.

Project Profile 1: Ownership of the Critical Area around the Village Well #3

TARGETED POTENTIAL CONTAMINANT SOURCE: Direct Contamination to the Wellhead
Without the Village holding the deed to the property, unregulated activities surrounding the well-head may cause direct contamination of the groundwater, which threatens the municipality's ability to provide potable water to its customers.

GOALS AND PRIORITIES:

- Reduce the possibility of direct wellhead contamination by purchasing land around the well.

SUMMARY OF PROTECTION AND MANAGEMENT METHODS:
Methods to reduce the risk and mitigate the threat include:

- Land acquisition for a 100-200' radius around the well-head.
- Work with attorneys to ensure proper paperwork has been established.
- Record and save paperwork and the deed from this process.

POTENTIAL COSTS:
Potential costs include: staff wages, potential land purchases, auditing, survey, title search, insurance, appraisal, environmental assessment, and other legal fees.

Classification: Low

POTENTIAL FUNDING SOURCES:

- WQIP Land Acquisition for Source Water Protection
(https://www.dec.ny.gov/docs/water_pdf/wqipla.r19factsheet.pdf)
(https://www.dec.ny.gov/pubs/115920.html#Land_Acquisition_Project_Documents)

POTENTIAL PARTNERSHIPS - PEOPLE AND AGENCIES INVOLVED:

- Town of Portville
- Village of Portville
- Owner of the well-head area (school & other residents)
- Plan Management Team

SUGGESTED TIMELINE:
Length: Short (1 year)

CONSIDERATIONS FOR THE PLAN MANAGEMENT TEAM:

- Having a Phase I Environmental Assessment of the area
- Having an appraisal and boundary survey done
- Store new documents related to ownership around the well-head

IMPLEMENTATION STEPS:

1. Discuss the situation and work with the owner of the well-head area
2. Obtain proper documentation of ownership with the assistance of attorneys
3. Record and save paperwork and the deed acquired from this process
4. Complete the Conservation Easement Template if needed
5. Arranging an appraisal, survey, and an environmental assessment
6. Gather all documentation above to apply for WQIP Land Acquisition Grant
7. Once awarded, complete a Land Acquisition Project Work Plan, a Quarterly Report, and an Acknowledgement of Funding Sources

Project Profile 2: Herbicides and Pesticides in the Critical Area (Residential and Commercial Sources)

TARGETED POTENTIAL CONTAMINANT SOURCE: Herbicides and pesticides
Infiltration from herbicides and pesticides used on residential, school, cemetery, and railroad properties bring excess chemicals into the groundwater.

GOALS AND PRIORITIES:

- Reduce the amount of herbicides and pesticides applied in the source water area.

SUMMARY OF PROTECTION AND MANAGEMENT METHODS:
Methods to reduce the risk and mitigate the threat include:

- Increased monitoring and research on usage of herbicides and pesticides.
- Send out informational flyers on the use of herbicides and pesticides and how they affect the groundwater and the homeowner's drinking water source.
- Collaborate with the Cornell Cooperative Extension and their Master Gardener program.

POTENTIAL COSTS:
Potential costs include: Effort hours to research current conditions and usage, potential outreach costs (mailings, website fees, etc.), costs to implement a monitoring system/position, effort hours to meet with potential partnerships and subsequent progress meetings, effort hours to apply for funding on additional learning opportunities, effort hours to hold classes

Classification: Medium

POTENTIAL FUNDING SOURCES:

- EPA Environmental Education Grants (https://www.epa.gov/education/grants)

POTENTIAL PARTNERSHIPS - PEOPLE AND AGENCIES INVOLVED:

- Cornell Cooperative Extension (CCE)
- Plan Management Team
- Town of Portville
- Village of Portville
- Portville Garden Club
- Cattaraugus County Soil and Water Conservation District
- Portville Central School District
- WNY PA RR Corp. (Kylie McLaughlin - Kylie.McLaughlin@wnyprr.com)

SUGGESTED TIMELINE:
Length: Short (3 months)

CONSIDERATIONS FOR THE PLAN MANAGEMENT TEAM:

- Private landowner participation in projects and programs
- Knowledgeable local residents who may want to assist

IMPLEMENTATION STEPS:

1. Gather information on the current use of herbicides and pesticides, what residents currently know about how their use of outdoor chemicals can impact the source water, and previous efforts to combat this issue.

2. Research BMPs for applying pesticides and herbicides, and natural alternatives that will not release chemicals into the environment.

3. Present information to the public. Options include social media, mailing information, website, email list, public forum, event outreach etc.

4. Provide extended outreach efforts to inform the public. Keep up with all forms of communication and monitor feedback received.

5. For additional learning opportunities, have a local education agency apply for the EPA Environmental Education Grants for the Master Gardener Program through CCE and other environmental educational programs that may be available.

6. To apply for the EPA Environmental Education Grants, you will need the Application for Federal Assistance, budget, and a work plan.

Project Profile 3.1: Transportation Related-Contamination in the Critical Area (Spills)

TARGETED POTENTIAL CONTAMINANT SOURCE: Chemical, physical, or biological spills
Chemical, physical, or biological spills that may directly enter the groundwater from vehicles using transportation corridors such as the nearby roads and the well's and aquifer's access roads.

GOALS AND PRIORITIES:

- To reduce the likelihood of spills in the corridors, more specifically around the Village Wells.

SUMMARY OF PROTECTION AND MANAGEMENT METHODS:
Methods to reduce the risk and mitigate the threat include:

- Developing an Emergency Response Plans with local fire department.
- Stay in contact with Cattaraugus County Spill Team & NYSDEC response team.
- Constructing vegetative buffers where appropriate.
- Installing signage when entering the Source Water Area

POTENTIAL COSTS:
Potential costs include: Effort hours to meet with potential partnerships and subsequent progress meetings, potential site visit assessment costs, and effort hours to create and update emergency response plans, staff hours for managing vegetative buffers, new signage for Source Water Area

Classification: Low

POTENTIAL FUNDING SOURCES:
Internal funding necessary to fund staffing to establish and maintain partnerships, track roadway and railway best management practice compliance.

POTENTIAL PARTNERSHIPS - PEOPLE AND AGENCIES INVOLVED:

- Cattaraugus County Office of Emergency Services
- Cattaraugus County Spill Team
- Weston Mills Fire Department
- NYSDEC response team
- WNY PA RR Corp. (Kylie McLaughlin - Kylie.McLaughlin@wnyprr.com)
- Town of Portville
- Village of Portville
- Village DPW
- Plan Management Team

SUGGESTED TIMELINE:
Length: Medium, Ongoing efforts (3 years)

CONSIDERATIONS FOR THE PLAN MANAGEMENT TEAM:

- Anticipating and quickly responding to spills
- Coordination with various partners (listed above)

IMPLEMENTATION STEPS:

1. Reach out to Weston Mills Fire Department, Portville DPW, and highway department to establish a relationship and gain information on current practices (emergency response plans, ditch management).

2. Review All Hazard Mitigation Plan and make amendments as necessary to protect the source water from roadway accidents.

3. DPW and highway department collaborate with Cornell Local Roads Program on roadway best management practices. Includes proper ditch management and emergency response plans in case of spills.

4. Continue to utilize and update the PCS inventory to track spills, bridges and/or roadways of concern, and ditches.

5. In the event of a spill, contact the Weston Mills Fire Department and Cattaraugus County Spill Team. Report any railroad accidents to Cattaraugus County Office of Emergency Services.

6. Explain to DPW and highway departments where the critical area for source water is.

7. Add signage to roads that say, “Entering a Critical Source Water Area”.

Project Profile 3.2: Transportation Related-Contamination in the Critical Area (Deicing)

TARGETED POTENTIAL CONTAMINANT SOURCE: Deicing materials (sodium chloride)
Deicing materials directly entering the groundwater from vehicles that transport it on their tires, frames, etc., as they traverse the transportation corridors (Lillibridge, Wellington, School).

GOALS AND PRIORITIES:

- Reduce the amount of deicing materials entering the groundwater.

SUMMARY OF PROTECTION AND MANAGEMENT METHODS:
Methods to reduce the risk and mitigate the threat include:

- Establish partnerships with departments that are responsible for salting locations near the well locations.
- Roadway BMPs and vegetative buffers.
- Review All Hazard mitigation plan, amend to include man-produced spills/railway spills.
- For additional learning opportunities, contact Cornell Local Roads Program for trainings and webinars.

POTENTIAL COSTS:
Potential costs include: Effort hours allocating internal funding, effort hours to meet with potential partnerships and subsequent progress meetings, potential site visit assessment costs, staff hours for managing vegetative buffers, additional learning opportunities, and hours for studies (track timing of salt being washed off of bridges and roadways).

Classification: Low

POTENTIAL FUNDING SOURCES:
Internal funding necessary to fund staffing to track roadway best management practice compliance and maintaining relationship with DPW.

POTENTIAL PARTNERSHIPS - PEOPLE AND AGENCIES INVOLVED:

- Town of Portville Highway Department
- Portville DPW
- Plan Management Team
- Village of Portville
- Cornell Local Roads Program

SUGGESTED TIMELINE:
Length: Medium (3 years)

CONSIDERATIONS FOR THE PLAN MANAGEMENT TEAM:

- State, county, and federal roads are out of the Town and Village's jurisdiction.
- Coordination with various partners on projects (listed above)

IMPLEMENTATION STEPS:

1. Reach out to Portville DPW and highway departments to establish a relationship and gain information on current practices (timing of washing salts off of bridges and roadways, ditch management).

2. Review Hazard Mitigation Plans and make amendments as necessary to protect the source water from roadway accidents.

3. Look into additional learning opportunities on best roadway management practices, including decreasing the frequency that salts are washed off bridges and roadways and proper ditch management.

4. Look into Cornell Local Roads Program's trainings and webinars.

Project Profile 4: Enacting Protection Methods to Protect the Watershed from Future Development in the Source Water Area

TARGETED POTENTIAL CONTAMINANT SOURCE: Multiple sources associated with development or land use activities
Future contamination from facility operations and land use from unregulated development impacting the groundwater quality.

GOALS AND PRIORITIES:

- Reduce and manage the amount of development in the source water area to protect the drinking water source.

SUMMARY OF PROTECTION AND MANAGEMENT METHODS:
Methods to reduce the risk and mitigate the threat include:

- Evaluate current land use
- Monitor Development
- Build-out Analysis
- Find opportunities with projects to add green infrastructure where new development cannot be avoided (install rain gardens, porous pavement, and other green infrastructure practices to encourage infiltration)
- Future Land Plans - Focus on the high priority lands that contribute the most to the source water
- Land acquisition or easements to protect lands from development
- Conservation subdivisions to preserve land as communal open space for residents
- Look into Aquifer Overlay Zones and/or Stormwater review
- Look into Wellhead protection areas
- Special use permits

POTENTIAL COSTS:
Potential costs include: Effort hours to apply for funding, effort hours to meet with potential partnerships and subsequent progress meetings, effort hours to research potential future issues, potential land acquisition costs, potential engineering planning costs, construction, and design, and costs to implement a monitoring system.

Classification: Low/Medium

POTENTIAL FUNDING SOURCES:

- WQIP Land Acquisition for Source Water Protection (https://www.dec.ny.gov/docs/water_pdf/wqipla.r19factsheet.pdf)

(https://www.dec.ny.gov/pubs/115920.html#Land_Acquisition_Project_Documents)

- Steps: Discuss the situation and work with the owner of the well-head area, gather proper documentation of ownership with the assistance of attorneys, arrange an appraisal, survey, and an environmental assessment, and apply in July. Once awarded, complete a Land Acquisition Project Work Plan, a Quarterly Report, and an Acknowledgement of Funding Sources.

- NYSDEC Climate Smart Communities Grant Program - acquire land for climate change mitigation and adaptation projects (https://www.dec.ny.gov/energy/109181.html#CSC)
  - Steps: (depend on if land value is being used as match) map of the property, arrange an appraisal, get a copy of the deed, description of pr property, documentation of taxes, additional information needed on a case-by-case basis. Applications are due in July.

- Green Innovation Grant Program (GIGP) - for water quality projects that mitigate climate change (https://efc.ny.gov/gigp)
  - Steps: plan to apply as a climate change adaptation project or treatment approach depending on how the project is worded. Complete a CFA, a feasibility study, an existing conditions graphic, a conceptual site plan, and site photographs. Applications are due in July.

- NYSDOS Smart Growth Comprehensive Grant Program (https://dos.ny.gov/nys-smart-growth-program)
  - Steps: plan to apply with focus to establish land use policies which support smart growth. Applications are due in July.

- NYSDEC Community Forest Conservation Grant Program - funds municipal land acquisition for community forests (https://www.dec.ny.gov/lands/124345.html)
  - Steps: Apply with a map of the property, copy of the deed, current taxes, market value, municipal resolution, letter of agreement from landowner, and sexual harassment form. Applications are due in October.

POTENTIAL PARTNERSHIPS - PEOPLE AND AGENCIES INVOLVED:

- Plan Management Team
- Town of Portville
- Village of Portville
- Municipal Planner/County & Regional Planning Division
- Owner of the property

SUGGESTED TIMELINE:

Length: Short initial implementation (1 year), ongoing monitoring

CONSIDERATIONS FOR THE PLAN MANAGEMENT TEAM:

- Balancing land protection and economic development
- Funding opportunities

IMPLEMENTATION STEPS:

1. Create a monitoring plan for new development. Follow up with new land purchases within the critical and source water area.
2. Consider land purchases for conservation easements. Apply for grant funding.
3. If developed, educate new landowners on best practices to maintain lawns, gardens, and general properties. (Create a renter's guide for pollution prevention)

Build-Out Analysis

(https://conservationtools.org/guides/42-build-out-analysis)

1. Choose a scale for conducting the build-out analysis. Simple or comprehensive. A comprehensive investigation will require more resources.
2. Start with all parcels within the Town Boundary.
3. Using GIS, create a layer with parcels and land areas that cannot be developed. These areas may be wetlands, conservation easements, unbuildable lot (I.e. slopes >20%).
4. Evaluate current zoning regulations. Integrate maximum lot coverage and building height per district, current or pending development application, identification of existing vacant, developable lots or lots targeted for redevelopment.
5. The result would be maximum development potential in square feet by zoning district, assessment of build-out potential and related traffic impacts, and the ability to make recommendations related to land use and transportation improvements.

Project Profile 5: Management of Regulated Potential Contaminant Sources (Chemical Bulk Storage and Spill Incidents)

TARGETED POTENTIAL CONTAMINANT SOURCE: Chemical Bulk Storage

Chemical leaks and spills of petroleum, diesel fuel, or various chemicals stored in aboveground or underground bulk storage tanks may allow contaminants to enter the groundwater within the critical area or source water area. Spill incidents from facilities of this nature or other sources are a threat as well. This could contaminate the water source, necessitating increased treatment/costs as well as other restrictions on the use of the water source. This could cause further environmental and ecosystem damage as well.

GOALS AND PRIORITIES:

Enhance communication with specific facilities or NYSDEC staff that work with these regulated facilities to understand the nature of the threat and associated risk and response efforts.

SUMMARY OF PROTECTION AND MANAGEMENT METHODS:

Methods to reduce the risk include a review of and appropriate response to potential regulatory and environmental issues regarding chemical bulk storage facilities. Work with Cattaraugus County DOH, NYSDOH, and NYSDEC if obstacles come up with any potential contaminate source.

POTENTIAL COSTS:

Potential costs include: Effort hours to meet with potential partnerships and subsequent progress meetings, effort hours to research current conditions and to research databases, potential site visit assessment costs, potential spill response costs, potential engineering planning costs, construction, and design, and costs to implement a monitoring system.

Classification: Low

POTENTIAL FUNDING SOURCES:

Internal funding necessary to ensure regulatory compliance.

POTENTIAL PARTNERSHIPS - PEOPLE AND AGENCIES INVOLVED:

- NYSDEC
- NYSDOH
- Cattaraugus County DOH
- Local PBS and CBS facilities
- Facilities with history of spills or those at high risk of spills
- Plan Management Team
- Town and Village of Portville

SUGGESTED TIMELINE:
Length: Short (5 months)

CONSIDERATIONS FOR THE PLAN MANAGEMENT TEAM:

- Funding opportunities
- Participation from private companies

IMPLEMENTATION STEPS:

1. Use NYSDEC's PBS, CBS, and spills databases to finalize list of regulated facilities within the critical area. The PCS inventory is up to date with this information as of 2023.

2. Conduct a site visit to all facilities to confirm the location and status of tanks. Take note of any aging or deficient tanks. Identify any violations cited at any facility.

3. Partner with owners of facilities and review requirements for facilities to have Spill Prevention, Countermeasure, and Control (SPCC) Plans (40 CFR Part 112) or Spill Prevention Reports (6NYCRR 598.1(k)), if applicable.

4. Create a required plan for each facility, ensure that plans are up to date and are compliant with NY Code of Rules and Regulations (NYCRR). Bulk storage regulations can be found in NYCRR Subchapter E. Applicable CBS regulations can be found in Parts 596-599, and PBS regulations are found in Part 613.

5. Create a monitoring system for plan upkeep and adherence.

Appendix J – Cost Analysis

Table 3.2.2 Implementation Cost Analysis										
Priority	Protection Method	Tasks		Weekly Hourly Requirements	Total Hours Required	Labor Cost per Hour (NYSDOL Wages)	Cost of Total hours Required, including 50% for benefits	Non-Personnel Costs (equipment, land, contractor)		Total Potential Cost
1	Acquire the land around Well 3 (100' radius)	Planning and compliance steps with DOH and the School who owns the property	One time	1	52	$55.44	$4,324	0	None	$4,324
2	Educate property owners about the presence of recharge areas.	Annual mail to property owners and school handouts about point and non-point sources of groundwater contamination	Yearly	0.5	30	$55.44	$2,475	0	None	$2,475
2	Engage in regular communication and review of landscaping and burial practices with cemetery staff	Communication and response as necessary with cemetery owners. Annual site visit by Village to review and discuss.	Yearly	1	10	$55.44	$825	0	None	$825
2	Alert Catt Co SWCD to the presence of the recharge areas for general education to landowners	Annual communications with County SWCD	Yearly	1	10	$55.44	$825	0	None	$825
3	Conduct a municipal review of regulatory programs to help ensure that spills are addressed quickly	Annual review existing spill response programs, prepare new SOPs as needed, ensure that fire departments, DPW, and others understand first responder tactics	Yearly	2.5	120	$55.44	$9,900	0	None	$9,900
3	Create a plan for enhanced preparedness for spill response with local responders. Schedule an annual advisory communication to entities influencing Critical/ Source areas to remind them of the water supply and process for reporting spills.	Develop communication plan for emergency responders when spills occur in critical or secondary source water areas.	One time	2	100	$55.44	$8,250	$1,500	Allowance for mapping or consultation fees.	$9,750

Table 3.2.2 Implementation Cost Analysis										
Priority	Protection Method	Tasks		Weekly Hourly Requirements	Total Hours Required	Labor Cost per Hour (NYSDOL Wages)	Cost of Total hours Required, including 50% for benefits	Non-Personnel Costs (equipment, land, contractor)		Total Potential Cost
3	Update Emergency Response Plans for the water system and ask County to include recharge areas in any County Hazard Mitigation and Emergency Management Plans.	Annually develop risk mitigation strategies.	Yearly	1	15	$55.44	$1,238	0	None	$1,238
3	Educate about NaCl impact on wells and increase general awareness about how to optimize road salt use for road safety while minimizing groundwater impacts. Signage along Village and Town roads.	Annually assemble best practice training materials and meet with DPW personnel and municipal leadership for annual trainings and to secure buy-in.	Yearly	0.5	26	$55.44	$2,145	$400	Budget for "low salt area" road signage.	$2,545
3	Convert the road fleet to another de-icing source or application strategy, such as brine.	Conduct feasibility study to consider options to lower sodium and chloride use for road de-icing. Then implement preferred recommendation.	One time	0.5	26	$55.44	$2,145	$13,000	Planner and engineer to conduct options analysis and develop cost/benefits analysis. Implementation budget would be additional.	$15,145
4	Adopt a protective zoning Aquifer Overlay district in both the Village and Town.	Review meetings with planning board members, political leaders, Village and Town attorneys to confirm ordinance language, complete SEQRA. Adopt ordinances.	One time	6	150	$55.44	$12,375	$8,000	Consultant support to prepare draft documents and SEQRA negative declaration statements. ($4K per municipality)	$20,375
4	Nitrate loading analysis for any new septic systems proposed in the protection areas (Town)	Annually confirm new development does not overload local aquifer areas with wastewater discharges near Village wells.	Yearly	0	0	$55.44	0	0	These are program costs an applicant should pay, or perhaps the County DOH carries during project review.	0
5	Engage in regular communication between village and school regarding periodic sampling and coordination as needed	Annual site visit from Village to school for observation and discussion.	Yearly	1	10	$55.44	$825	0	None	$825

Table 3.2.2 Implementation Cost Analysis										
Priority	Protection Method	Tasks		Weekly Hourly Requirements	Total Hours Required	Labor Cost per Hour (NYSDOL Wages)	Cost of Total hours Required, including 50% for benefits	Non-Personnel Costs (equipment, land, contractor)		Total Potential Cost
5	Follow new science about emerging contaminants or pharmaceuticals released to septic systems.	Annually attend continuing education classes about non-point septic system contaminants. Respond as needed.	Yearly	1	10	$55.44	$825	0	None	$825
5	Develop simple response and communication plan and maintain awareness about oil and gas wells.	Annually develop simple communication/response plan including familiarization of well owners and their contact details, and maintain awareness of permitting and industry trends	Yearly	1	10	$55.44	$825	0	None	$825
		*Cost estimates are based on existing labor resources. For projects beyond the scope of internal resources that require contractual support, costs will be higher; the expected range is 30-70% increase from base estimates. The Plan Management Team and the Town and Village of Portville should have a more in-depth discussion about the capital construction costs of the implementation actions prior to submitting grant applications.								

Appendix K – Plan Management Team & Summary

Table 4.1 Plan Management Team Members		
Name	**Affiliation**	**Email**
Tony Evans	Village Mayor	portvillemayor@gmail.com
Andy Hall	Village DPW	andrewcarterhall@gmail.com
Bob Fischer	Village Code Committee	29ford@roadrunner.com
Sarah Swinko	Southern Tier West Regional Planning and Development Board	sswinko@southerntierwest.org

Table 4.1.2 Plan Management Summary	
Item	**Status**
Designate a Plan Management Team	Complete
Determine Progress report frequency	Complete (12 months)
Share progress reports	N/A
Review and share the plan	N/A
Verification from NYS DOH and DEC for completion	N/A
Create a revision schedule	Complete (Every February)

* Use this table above to document the Plan Management strategy for keeping the DWSP2 Plan up to date

Table 4.1.3 Update/Revision Tracker		
Report	**Date**	**Notes**
Revision 1		
Revision 2		
Revision 3		
Revision 4		

* Use this table above to track updates and revisions to the DWSP2 Plan. Use the notes section to detail changes made in each update/revision.

Appendix L – Log of Updates and Revisions to DWSP2 Plan

Table 5 Log of Updates and Revisions to DWSP2 Plan			
Item	**Date**	**Section**	**Revision**

Appendix M – Additional Tables

Table 2.1.2: Portville Well Characteristics		
Well Number	**Well Location**	**Characteristics**
Well 1	Lillibridge Road	Date of drill: 1954 Depth to bottom: 320 ft Screen: none Stainless Steel Max Rate: 250 gpm
Well 2	Wellington Road	Date of drill: 1977 Depth to bottom: 242 ft Screen: yes Stainless Steel Max Rate: 300 gpm
Well 3	Behind School	Date of drill: 1996 Depth to bottom: 200 ft Screen: none Stainless Steel Max Rate: 150 gpm

Table 2.1.3: Reservoir Location		
Reservoir Number	Reservoir Location	Ownership
Well 1 Reservoir	Lillibridge Road	Village of Portville 51.53 acres
Well 3 Reservoir	Behind School	Daniel L. Schmidt 14.54 acres

Table 2.2.2: Well System Location and Ownership		
Well Number	Well Location	Ownership Area
Well 1	Lillibridge Road	51.53 acres
Well 2	Wellington Road	1.90 acres
Well 3	Behind School	None