

**SIXTH FIVE-YEAR REVIEW REPORT FOR  
ENDICOTT VILLAGE WELL FIELD SUPERFUND SITE  
BROOME COUNTY, NEW YORK**



**Prepared by**

**U.S. Environmental Protection Agency  
Region 2  
New York, New York**

**Pat Evangelista** Digitally signed by Pat Evangelista  
Date: 2026.01.29 16:06:41 -05'00'

**January 29, 2026**

---

**Pat Evangelista, Director  
Superfund and Emergency Management Division**

---

**Date**

## Table of Contents

LIST OF ABBREVIATIONS & ACRONYMS .....	iii
I. INTRODUCTION .....	1
FIVE-YEAR REVIEW SUMMARY FORM .....	2
II. RESPONSE ACTION SUMMARY .....	2
Basis for Taking Action .....	2
Response Actions .....	3
Systems Operations/Operation & Maintenance .....	7
III. PROGRESS SINCE THE LAST REVIEW .....	8
IV. FIVE-YEAR REVIEW PROCESS.....	8
Community Notification, Involvement & Site Interviews .....	8
Data Review .....	9
Site Inspection .....	11
V. TECHNICAL ASSESSMENT .....	12
QUESTION A: Is the remedy functioning as intended by the decision documents? .....	12
QUESTION B: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of the remedy selection still valid? .....	13
QUESTION C: Has any other information come to light that could call into question the protectiveness of the remedy? .....	14
VI. ISSUES/RECOMMENDATIONS .....	14
VII. PROTECTIVENESS STATEMENT.....	14
VIII. NEXT REVIEW .....	15
APPENDIX A – REFERENCE LIST .....	16
APPENDIX B – REMEDY RESILIENCE ASSESSMENT .....	17
APPENDIX C - FIGURES .....	18

## LIST OF ABBREVIATIONS & ACRONYMS

ARAR	Applicable or Relevant and Appropriate Requirement
CAA	Controlled Activity Area
CD	Consent Decree
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CIC	Community Involvement Coordinator
cm/sec	centimeters/second
COCs	Contaminants of Concern
DCA	1,1-Dichloroethane
DCE	1, 2-Dichloroethene
EPA	United States Environmental Protection Agency
ESD	Explanation of Significant Differences
FAA	Federal Aviation Administration
FYR	Five-Year Review
gpm	gallons per minute
HI	Hazard Index
IBM	International Business Machines
ICs	Institutional Controls
IRMs	Interim Remedial Measures
MCLs	Maximum Contaminant Level
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSWQS	New York State Water Quality Standards
O&M	Operation and Maintenance
OU	Operable Unit
PAHs	Polynuclear Aromatic Hydrocarbons
PCBs	Polychlorinated biphenyls
ppb	parts per billion
PRP	Potentially Responsible Party
RAO	Remedial Action Objectives
RD	Remedial Design
RD/RA	Remedial Design/Remedial Action
RI/FS	Remedial Investigation and Feasibility Study
ROD	Record of Decision
RPM	Remedial Project Manager
SEMD	Superfund and Emergency Management Division
SPW	Supplemental Purge Well
STP	Sewage Treatment Plant
TCE	Trichloroethene
UU/UE	Unlimited Use and Unrestricted Exposure
VOCs	Volatile Organic Compounds

## I. INTRODUCTION

The purpose of a five-year review (FYR) is to evaluate the implementation and performance of a remedy in order to determine if the remedy is and will continue to be protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in FYR reports such as this one. In addition, FYR reports identify issues found during the review, if any, and document recommendations to address them.

The U.S. Environmental Protection Agency (EPA) is preparing this FYR review pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121, consistent with the National Contingency Plan (NCP) (40 CFR Section 300.430(f)(4)(ii)), and considering EPA policy.

This is the sixth FYR for the Endicott Village Well Field Superfund Site. The triggering action for this statutory review is the completion date of the previous FYR. The FYR has been prepared due to the fact that hazardous substances, pollutants or contaminants remain at the site above levels that allow for unlimited use and unrestricted exposure (UU/UE).

The Site consists of three separate phases called operable units (OUs). OU1 addresses contamination in the Village of Endicott Ranney drinking water well through the installation of an air stripper. OU2 focuses on the identification and remediation of the source of contamination to the groundwater (i.e., the Endicott Landfill). OU3 addresses the remediation of the groundwater by a supplemental purge well (SPW) to expedite cleanup of the aquifer and to reduce the potential threat to the Ranney well, as necessary. OU1 has been completed, and no waste is left on-site above UU/UE related to this OU. OU2 and OU3 are in the operation and maintenance phase and are the subject of this review.

The Endicott Village Well Field Superfund Site FYR was led by Kelly Gaffney, EPA Remedial Project Manager (RPM). Participants included Pete Mannino (EPA Western New York Remediation Section Chief), William Yeung (EPA Hydrogeologist), Tara Bhat (EPA Human Health Risk Assessor), Julie McPherson (EPA Ecological Risk Assessor), and Larisa Romanowski (EPA Community Involvement Coordinator (CIC)). Payson Long, representative for the New York State Department of Environmental conservation (NYSDEC) also assisted in the preparation of this report. The Potential Responsible Parties (PRPs) were notified of the initiation of the FYR. The review began on 6/2/2025.

### **Site Background**

The Site is located on South Grippen Street at the western end of the Village of Endicott (the Village), New York (see Site Map, Appendix C). It consists of the Ranney well, which is a municipal drinking water supply well, and its zone of influence on area groundwater. The Site is composed primarily of flat to gently rolling open land associated with the En-Joie Golf Course, facilities of the Village's Sewage Treatment Plant (STP), and the Endicott Landfill. A portion of the landfill adjacent to the Tri-Cities Airport extends into an approximately eight-acre area designated by the Federal Aviation Administration (FAA) as the Controlled Activity Area (CAA), which includes the Runway Object Free Area. A six-acre parcel on the landfill near the entrance to the STP is currently permitted for use by the Village to compost yard waste; approximately two acres of the composting area are paved. Private homes are not located within the site. These or similar uses are expected to continue well into the future.

The Endicott Landfill accepted municipal refuse and industrial waste from approximately the late 1950s until 1977. The Ranney well operated without major problems until May 1981, when during a routine inspection, EPA detected vinyl chloride and trace amounts of other volatile organic compounds (VOCs) in the Ranney well, which provides approximately 47 percent of the total water supply to the Village of Endicott

municipal water supply system. Subsequent sampling conducted by EPA and the New York State Department of Health (NYSDOH) confirmed EPA's initial findings and, as a result, four of the lateral supply lines to the well were closed and diffused air aeration equipment was installed to reduce the levels of VOCs.

**FIVE-YEAR REVIEW SUMMARY FORM**

SITE IDENTIFICATION		
Site Name: Endicott Well Field Superfund site		
EPA ID: NYD980780746		
Region: 2	State: NY	City/County: Endicott/Broome
SITE STATUS		
NPL Status: Final		
Multiple OUs? Yes	Has the site achieved construction completion? Yes	
REVIEW STATUS		
Lead agency: EPA		
Author name (Federal or State Project Manager): Kelly Gaffney		
Author affiliation: EPA		
Review period: 6/2/2025 - 10/7/2025		
Date of site inspection: 6/11/2025		
Type of review: Statutory		
Review number: 6		
Triggering action date: 12/22/2020		
Due date (five years after triggering action date): 12/22/2025		

**II. RESPONSE ACTION SUMMARY**

**Basis for Taking Action**

After listing on the National Priorities List (NPL) in July 1987 contractors for NYSDEC, pursuant to a cooperative agreement with EPA, completed the OU1 Remedial Investigation and Feasibility Study (RI/FS) at the Site that was intended to define the nature and extent of contamination and to identify the source(s) of contamination to the Ranney well. The RI indicated that the most probable source of contamination was the Endicott Landfill. However, additional data were required to evaluate further contaminant distribution and conclusively identify the source of contamination. Trichloroethene (TCE), 1,2-dichloroethene (DCE), vinyl chloride, and chloroethane were identified as the primary contaminants of concern (COCs) in groundwater exceeding drinking water maximum contaminant levels (MCLs).

The results of the risk assessment conducted during the RI indicated that ingestion of contaminated groundwater at the Site was the primary pathway of concern. The carcinogenic risk to adult residents from ingestion of contaminated groundwater was greater than EPA's acceptable risk range of  $10^{-4}$  to  $10^{-6}$  (1 in ten thousand to 1 in a million). The cancer risks were  $1 \times 10^{-3}$  (1 in a thousand) for resident adults and  $4 \times 10^{-4}$  (4 in 10,000) for children for the present and future use scenario. The Hazard Index (HI) for non-carcinogenic effects from ingestion of groundwater under a Reasonable Maximum Exposure scenario to residents was 14 for the adult, 28 for the child, and 5 for future construction workers. The HI exceeded the goal of protection of a HI = 1 established under the NCP. The excess cancer risk and non-cancer HI at the site are primarily due to vinyl chloride in groundwater and carcinogenic polynuclear aromatic hydrocarbons (PAHs), total polychlorinated biphenyls (PCBs), arsenic and beryllium in soil.

Ecological assessments of the adverse effects of the COCs on ecosystems were conducted during the RI using exposure and toxicity data to estimate the potential impact on the ecosystem. Surface water and sediment samples collected from the Susquehanna River, Nanticoke Creek, and Dead Creek showed no significant concentrations of VOCs. Therefore, it was determined that the site is not adversely impacting ecological receptors.

### **Response Actions**

Based on the results of investigations conducted by NYSDEC, in July 1984, an existing purge well designed to pump approximately 600 gallons per minute (gpm) and three additional monitoring wells that were installed on the En-Joie Golf Course were used to intercept and monitor groundwater contamination before it reached the Ranney well. Water from this purge well was pumped to the golf course pond system where it was aerated before it was ultimately discharged to Nanticoke Creek. In accordance with an Explanation of Significant Differences (ESD), operation of the existing purge well was discontinued on December 15, 1995.

The RI for OU1 did not determine the source(s) of the VOCs in the groundwater at the Ranney well. Therefore, in accordance with the 1987 Record of Decision (ROD), a supplemental RI/FS was initiated to investigate further the nature and extent of contamination in suspected source areas and to evaluate possible source control measures. On September 19, 1988, EPA, the International Business Machines Corporation (IBM), the Village, and the Town of Union (the Town) signed an Administrative Order on Consent for performance of the supplemental RI/FS. The supplemental RI/FS activities were undertaken in two phases and were performed by IBM through its consultants, Lozier/Groundwater Associates, Inc. with EPA oversight.

The RI Report for the Phase I study was designated as OU2 and indicated that additional remedial measures were needed to control the plume of contaminated groundwater emanating from the Endicott Landfill. During the OU2 investigations intended to identify the source(s) of contamination to the Ranney Well, it was determined that implementation of an interim action was needed to expedite cleanup of the groundwater and was designated as OU3.

### **OU1 ROD**

The goal of the remedial action for the OU1 ROD, issued on March 31, 1987, was to provide a safe and reliable supply of drinking water to residents by requiring the installation of an air stripper at the Ranney well to prevent ingestion of contaminated groundwater. The major components of the selected remedy included the following:

- Constructing an air stripper at the Ranney well designed to treat the current use flow rate of approximately 3,700 gpm;
- Treatment of the contaminated Ranney well water to drinking water quality standards (i.e., Maximum Contaminant Levels or MCLs) under the Safe Drinking Water Act;

- Continuing operation of the existing purge well system;
- Continuing the monitoring program designed to detect the presence of VOCs in the Ranney well water; and
- Performing a supplemental RI/FS to further investigate the nature and extent of contamination in suspected source areas, to evaluate possible source control measures for such areas, and to evaluate further the extent of aquifer contamination together with alternatives for aquifer restoration.

### OU3 ROD

The goal of the interim remedial action for the OU3 ROD, issued on March 29, 1991, was to expedite the cleanup of the groundwater aquifer and to reduce the potential threat to the Ranney well. The major components of the selected remedy included the following:

- Upgrading the existing purge well system with the installation of a supplemental purge well (SPW);
- Implementing a SPW monitoring program;
- Continuing operation and maintenance of the existing purge well system; and
- Conducting an aquifer pump test to determine treatment requirements.

### OU2 ROD

The following RAOs were established for the OU2 ROD issued on September 30, 1992:

- Groundwater control to prevent migration of the VOC-contaminated plume;
- Remediation of contaminated groundwater emanating from the Endicott Landfill to drinkable levels;
- Landfill waste containment and control of associated landfill gas; and
- Control and treatment of the leachate seep to levels acceptable for proper disposal<sup>1</sup>.

The major components of the selected remedy included the following:

- Capping the majority of the landfill surface with a low permeability barrier cap;
- Capping with bituminous (asphalt) the 6-acre parcel of the landfill where the Village has a permitted yard waste composting facility and the 8-acre CAA of the Tri-Cities Airport regulated by the FAA;
- Performing an explosive gas investigation and installing a passive gas-venting system;
- Collecting, treating, and disposing of the leachate seep;
- Recommending that institutional controls in the form of deed restrictions be established on future uses of the landfill;
- Implementing site access restrictions;
- Performing long-term operation and maintenance of the landfill cap, gas-venting, and leachate systems;
- Performing long-term air and water quality monitoring;
- Continuing operation and maintenance of the groundwater collection and treatment measures already selected for the site; and
- Continuing groundwater monitoring.

---

<sup>1</sup> After installation of the cap, leachate seeps were no longer present at the site. Therefore, collection of leachate was not warranted.

## ESD

All three RODs selected the continued operation of the existing purge well as a component of the remedies. Once the OU3 ROD was implemented, an aquifer pump test was conducted. Based on the results of the aquifer pump test, the Village notified EPA that it believed that the SPW alone, without the existing purge well, could achieve containment and capture of contaminated groundwater.

Subsequently, EPA gave approval to the Village to perform a pilot study to evaluate if pumping of the existing purge well could be discontinued when the SPW was fully operational. Based on the results of the pilot study, EPA issued an ESD on December 11, 1995 which allowed for discontinuing the operation of the existing purge well. EPA gave permission to the Village to discontinue operation of the existing purge well on December 15, 1995.

## **Status of Implementation**

### OU1 Remedial Actions

In 1988, EPA concluded consent decree (CD) negotiations with the Town and the Village related to the performance of the remedial design (RD), remedial construction, operation, maintenance, and monitoring of the remedy selected in the OU1 ROD. On January 10, 1989, the CD was entered in United States District Court for the Northern District of New York.

The remedial action (RA) was formally initiated on December 10, 1989 when the Village awarded the RA contract. The remedy was implemented in a manner consistent with the 1987 ROD and in accordance with the plans and specifications of the remedial design. Construction of the air stripping unit at the Ranney well was completed by the Village in the fall of 1991 and the air stripper has been in continuous operation since that time.

In a letter dated September 26, 1996, the Village requested that EPA allow it to discontinue operation of the air stripper. After a review of all available data, EPA determined that water from the Ranney well was meeting MCLs prior to treatment. Therefore, EPA gave permission to discontinue operation of the air stripper with the understanding that the Village will maintain the air stripper so that it can be restarted immediately in the event that MCLs are exceeded in the future. However, as a precautionary measure, the air stripper is still being operated by the Village.

### OU3 Remedial Actions

Pursuant to a second CD entered in United States District Court for the Northern District of New York on March 25, 1992, the Village, the Town, Endicott Johnson Corporation (EJ), IBM and George Industries, Inc., agreed to perform the OU3 Remedial Design/Remedial Action (RD/RA).

To determine if the water pumped from the SPW could be treated by the STP, a temporary SPW pumping system and a discharge pipeline were constructed. Pumping of the SPW, with discharge to the STP, was initiated in August 1993. The permanent hook-up to the STP was completed in June 1995. EPA and NYSDEC determined that the remedy was implemented in a manner consistent with the 1991 ROD and in accordance with the plans and specifications of the RD.

The SPW Monitoring Plan was approved by EPA in March 1993. The approved monitoring plan includes flow readings and sampling and analysis of effluent from the SPW along with water elevation measurements in 25

monitoring wells to document the capture zone of the SPW. The monitoring results indicate that the SPW is performing as designed.

### OU2 Remedial Actions

Pursuant to a third CD entered in United States District Court for the Northern District of New York on January 18, 1994, EJ, the Village, the Town and IBM agreed to perform the OU2 RD/RA.

The implemented remedy consists of a landfill cover system, a gas venting system, a leachate seep collection system, long-term Operation and Maintenance (O&M) and ICs.

The purpose of the cover system is to reduce the vertical migration of water through the landfill, to minimize the potential for leaching of site contaminants into the groundwater. Two types of covers were constructed on the landfill, bituminous and soil. In July 1996 construction was completed for a bituminous cover on approximately 10 acres of the landfill which lies primarily in the FAA controlled Activities Area and beneath the Village's yard waste composting facility. In addition, in September 1996, construction of a low-permeability soil cover on approximately 62 acres of the landfill was completed with placement of the top-soil material. The soil cap was placed on the area which lies predominantly within 1,000 feet of the Susquehanna River. To address potential post-closure issues associated with the presence of landfill gases, including the possibility of migration, a passive gas collection and venting system was completed at the Site in June 1996. The gas collection system is comprised of a 12-inch layer of sand and gravel with a permeability of  $1 \times 10^{-3}$  cm/sec. The passive venting was installed beneath the barrier material and asphalt cap over the entire extent of the landfill. The purpose of the gas vent layer is to prevent the local buildup and migration of landfill gases, by conveying them to a venting location.

Between April 18, 1996 and April 22, 1996, a groundwater/leachate interception trench measuring 100-foot long by 20- feet wide by 28- feet deep was installed five feet west of the leachate seep limit along the Susquehanna Riverbank. A 44-foot wide by 100-foot long, factory-seamed barrier of geomembrane was installed into the trench. However, once the cap was installed, no more leachate was being generated. Therefore, the operation of the leachate management portion of the remedy was never implemented.

The O&M plan, approved by EPA in August 1995, provides for long-term maintenance of the landfill cap and gas venting system.

## IC Summary Table

Table 1: Summary of Planned and/or Implemented ICs

Media, engineered controls, and areas that do not support UU/UE based on current conditions	ICs Needed <sup>2</sup>	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Title of IC Instrument Implemented and Date (or planned)
Landfill	Yes	Yes*	Endicott Landfill	Rely on Village's ownership of landfill and participation in the CD to ensure potential future uses of the landfill are protective of the remedy.	Legally enforceable Consent Decree requirement to regularly maintain the landfill in accordance with the O&M Plan, to regularly report to EPA on the status of its work under the CD, and to advise EPA of any changes in any conditions, including ownership.
Groundwater	No	No	Groundwater between the Endicott Landfill and the Ranney Well	Rely on state and local laws to help limit future groundwater use by regulating the installation of water wells at the site.	NYSDOH standards for individual or private water supply wells in the Aquifer Recharge Zone (Zone 2) and Wellhead Protection Zone (Zone 1) in place for The Village of Endicott and Town of Union

\*Although the specific types of ICs that were "recommended" in the ROD have not been implemented, there are controls in place that achieve the objective of those recommended ICs.

### Systems Operations/Operation & Maintenance

Operation, maintenance, and monitoring (OM&M) activities are currently carried out by the Village on behalf of the PRPs in accordance with the O&M Plan. Pursuant to the three RODs, as amended by the ESD and as otherwise approved by EPA, the necessary O&M activities currently include:

- Quarterly groundwater quality monitoring at the SPW to determine if the levels of contamination are at or below MCLs;

<sup>2</sup> The OU2 ROD recommended, but did not require, that the Village implement ICs in the form of deed restrictions on future uses of the landfill. As recommended in the fourth FYR, EPA requested that the Village address this recommendation by placing a deed restriction in the form of an environmental easement on the landfill property. In a letter dated October 13, 2020, the Village declined to implement the recommendation. As discussed further in the IC Implementation subsection of Question A below, as in the previous FYR, EPA believes that effective IC measures are in place that continue to serve as acceptable controls on future uses of the landfill. The OU2 ROD did not provide for ICs for groundwater but there are existing state and local laws that serve to limit access to the groundwater.

- Sampling of effluent from the SPW;
- Sampling of groundwater monitoring wells once every five years;
- Groundwater elevation monitoring at 27 monitoring wells to determine if changes occur in the direction of groundwater flow;
- Inspection of the landfill to insure that no erosion damage has occurred; and
- Submittal of quarterly reports.

The OM&M program also includes routine inspections of the capped area and maintenance of the established vegetation cover within the capped area.

In July 2023, EPA approved the Village’s request for a reduction in the frequencies of the OM&M requirements. Sampling of the SPW effluent and water level measurements was changed from semi-annually to every 15 months and submittal of summary reports was changed from annually to every 15 months.

Potential site impacts from severe weather events have been assessed, and the Site may be impacted by flooding in the region, but the performance of the remedy is currently not at risk due to these expected effects. Please see Appendix B for the full remedy resilience assessment.

### III. PROGRESS SINCE THE LAST REVIEW

This section includes the protectiveness determinations and statements from the **last** FYR as well as the recommendations from the **last** FYR and the current status of those recommendations.

**Table 2:** Protectiveness Determinations/Statements from the 2020 FYR (Fifth FYR)

OU #	Protectiveness Determination	Protectiveness Statement
2	Protective	The remedy at OU2 is protective of human health and the environment.
3	Protective	The remedy at OU3 is protective of human health and the environment.
Sitewide	Protective	The remedies implemented for the site are protective of human health and the environment.

There were no issues and recommendations identified in the last FYR.

### IV. FIVE-YEAR REVIEW PROCESS

#### Community Notification, Involvement & Site Interviews

On July 21, 2025, the EPA Region 2 posted a notice on its website indicating that it would be reviewing site cleanups and remedies at Superfund sites in New York, New Jersey, and the U.S. Virgin Islands, including the Endicott Village Well Field Superfund Site. The announcement can be found at the following web address: <https://www.epa.gov/superfund/R2-fiveyearreviews>.

In addition to this notification, the EPA Community Involvement Coordinator, or CIC for the Site, Larisa Romanowski, posted a public notice on the EPA site webpage [www.epa.gov/superfund/indicott-village](http://www.epa.gov/superfund/indicott-village) and provided the notice to the Village of Endicott and the Town of Union by email on October 9, 2025 with a request that the notice be posted in municipal offices and on the village/town webpages. This notice indicated that a FYR

would be conducted at the Endicott Village Well Field Superfund Site to ensure that the cleanup at the Site continues to be protective of human health and the environment. Once the FYR is completed, the EPA will make the results available to the following repositories: EPA Region 2 Superfund Records Center, 290 Broadway, 18th Floor, New York, New York and the Village of Endicott Clerk’s Office, Municipal Building, 1009 East Main Street, Endicott, New York. In addition, the EPA will post the final report on the following website: [www.epa.gov/superfund/endicott-village](http://www.epa.gov/superfund/endicott-village). The CIC will make efforts to reach out to local public officials to inform them of the results.

**Data Review**

**Groundwater Quality Data**

*SPW Influent/Effluent*

Long-term groundwater monitoring at the Site has been conducted since 1997. Monitoring of the Ranney well is not part of the long-term monitoring for the Site. The objective of monitoring the SPW is to determine concentrations of COCs (principally VOCs) relative to their respective MCLs and standards. Results were compared to both the federal MCLs and New York State Class GA Standards. The long-term monitoring data indicate that VOC concentrations in the SPW, which is downgradient of the landfill, have declined since 1995, and have generally remained stable over the last five years. Analysis of sampled SPW influent for the period between 2021 and 2025 indicates that most VOC constituents were either not detected or detected at low-level concentrations below the MCLs.

Vinyl chloride was the only exception, which remains above the federal MCL and state standard of 2 parts per billion (ppb). Vinyl chloride concentrations were detected as high as 21.7 ppb in March 2021 and declining to 15.2 ppb in March 2025 (Table 6). Cis-1,2-dichloroethene, benzene, and chloroform were detected at levels exceeding the State standards but below EPA MCLs. Other compounds that were detected at concentrations below federal MCLs and state standards or do not have MCLs/standards included trichloroethylene, chlorobenzene, chloroethane, and 1,1-dichloroethane (Table 6). During the most recent sampling round in 2025, concentrations of 1,1-dichloroethane and cis-1,2-dichloroethene were detected below their respective federal MCLs and state standards at concentrations of 1.6 ppb and 22 ppb, respectively.

Table 6: Maximum concentration of compounds detected in SPW influent 2021-2025

Compound	NYSDEC Class GA Standards (ppb)	USEPA MCL (ppb)	Max (ppb) 2021-2025	Date of Max
Vinyl Chloride	2	2	<b><u>21.7</u></b>	Mar 2021
Trichloroethene	5	5	0.67	Oct 2021
cis-1,2-Dichloroethene	5	70	<u>27.7</u>	May 2024
Chlorobenzene	5	100	4.09	Mar 2021
Benzene	1	5	<u>1.22</u>	Mar 2021
Chloroethane	n/a	n/a	0.93	Oct 2021
1,1-Dichloroethane	5	n/a	2.39	Oct 2021
Chloroform	7	n/a	<u>187</u>	Sept 2025
Total VOCs	n/a	n/a	54.2	May 2022

**Notes:**

- bold: result exceeds USEPA MCL
- underline: result exceeds NYSDEC MCL

-n/a: contaminants that do not have USEPA or NYSDEC MCLs

VOC concentrations from effluent samples collected from SPW have predominately been non-detect. Chloroform and bromodichloromethane were detected at low levels throughout the review period. Concentrations of chloroform ranged from 1.0 ug/L (May 2022) to 8.26 ug/L (October 2021). Concentrations of bromodichloromethane ranged from 1.05 ug/L (May 2022) to 9.28 ug/L (October 2021). These results continue to indicate that the system is effectively removing site-related contamination upon collection.

### *Monitoring Well Sampling*

Although not part of the regular sampling activities currently required at the Site, a select grouping of wells were sampled in August 2025 (in addition to SPW) to assess VOC concentrations in site monitoring wells compared to VOCs identified in the RI/FS. Monitoring wells EW-3D, EW-14, MW-6D, MW-13D, MW-22D, MW-25D, and MW-29 (Figure 2) were analyzed for the target compound list (TCL) VOCs.

Outside of SPW (discussed above), only MW-22D reported detections of VOCs during the August 2025 sampling event. MW-22D is located west of SPW. Vinyl chloride slightly exceeded the state standard and EPA MCL at a concentration of 3.1 ppb. These results are consistent with the previous FYR and also indicate a decline in vinyl chloride at this well, which was detected at 11.3 ppb in 2014. Concentrations of bromomethane and chloroethane were detected at levels below their respective MCLs at a concentration of 0.83 ppb for both. The data continue to demonstrate that the chlorinated plume which used to extend from the Endicott Landfill to the Ranney well has receded significantly.

### Emerging Contaminants

In 2020, New York State established a MCL of 1.0 µg/L for 1,4-dioxane and 10 nanograms per liter (ng/L) for perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS). In 2023, NYSDEC issued ambient water quality guidance (AWQG) values for PFOA (6.7 ng/L), PFOS (2.7 ng/L) and 1,4-dioxane (0.35 µg/L). In 2024, EPA established MCLs for PFOA and PFOS at 4.0 ng/L, along with six other per- and polyfluoroalkyl substances (PFAS).

Prior to this review period, 1,4-dioxane and PFAS were sampled in July 2019 at MW-25D, EW-8, and SPW. MW-25D, the most downgradient sample, had a detection of 1,4-dioxane at 0.22 µg/L and detections of PFOA and PFOS at 1.3 ng/L and 3.9 ng/L, respectively. The mid gradient well, EW-8 had a detection of 1,4-dioxane at 65 µg/L and detections of PFOA and PFOS at 46 ng/L and 150 ng/L, respectively. SPW had a detection of 1,4-dioxane at 22 µg/L and detections of PFOA and PFOS at 14 ng/L and 29 ng/L, respectively. The 1,4-dioxane, PFOA, and PFOS detections at EW-8 and SPW exceed the EPA MCLs and NYSDEC AWQG. These wells have not been sampled for emergent contaminants since the 2019 sampling event; however, sampling was expanded to additional wells during subsequent sampling events.

During this review period, 1,4-dioxane was sampled in July 2021, January and July of 2022, January, April, and July 2023, January, April and July 2024, and January, July and October 2025. PFAS was sampled in July 2021, July 2023, January 2024, April 2024, July 2024, January 2025, July 2025, and October 2025. Samples were collected from MW-5, MW-28 and MW-32. MW-5 and MW-32 are located to the south of SPW and southeast of EW-8 near the bank of the Susquehanna River. MW-28 is located north of the landfill. Concentrations of 1,4-dioxane from the sampling events in 2021 through 2025 marginally exceeded the NYSDEC AWQG value at MW-32 ranging from 0.39 ug/L (October 2025) to 0.63 ug/L (January 2022). Concentrations of 1,4-dioxane at MW-5 also slightly exceeded the NYSDEC AWQG in addition to the State MCL with a range from 0.42 ug/L (October 2025) to 2.7 ug/L (January 2022). Concentrations of 1,4-dioxane at MW-28 exhibited similarly low-level exceedances of the NYSDEC AWQG and MCL with a range from 0.42 ug/L (October 2025) to 2.3 ug/L (January 2022).

The only detection of PFOA during the review period was in MW-32 during the January 2024 sampling event, with a concentration of 1.0 ng/L, which is below the NYSDEC AWQG and EPA MCL. The remaining samples collected at MW-5, MW-28, and MW-32 throughout the review period were not detected for PFOS and PFOA.

In summary, the data from 2019 shows contamination within the waste mass based on elevated detections within EW-8, but the water supply wells do not show any impact. In addition, samples collected from MW-25D in 2019 as well as MW-5, MW-28 and MW-32 between 2021-2025 indicate that the elevated concentrations found in 2019 are likely contained by the pumping at SPW. Based on these results, the NYSDEC and EPA determined that monitoring for emerging contaminants should continue. Additional samples should be collected from EW-8 and SPW in future monitoring events to confirm that any elevated detections of emerging contaminants remain limited by the remedy.

#### Groundwater Level Data

The objective of the groundwater elevation monitoring program is to assess whether changes have occurred in the direction of groundwater flow and identify the capture zone of the SPW. Maintaining a hydraulic cone-of-depression around the SPW is necessary to entrain contaminated groundwater that may still emanate from the landfill area and also to prevent groundwater from flowing toward the Ranney well. Since water levels within the aquifer fluctuate seasonally, the program includes semi-annual data collection from 27 monitoring wells. The results of the groundwater level elevation monitoring indicate that the overall direction of groundwater flow has not changed since the RI, that a hydraulic cone-of-depression appears to be consistently maintained over the SPW regardless of seasonal water-level fluctuations, and that there is containment of the groundwater plume from the Endicott Landfill (Figure 2). Containment is also demonstrated by weekly groundwater-quality monitoring results, taken by the Village at the Ranney well, which continues to show readings below MCLs prior to treatment by the air stripper.

#### Landfill Cap Inspection

For inspections of the landfill, NYSDEC and EPA rely on the checklist post-closure reports which are submitted by the Village on an annual basis. Over the years, both NYSDEC and EPA have found these reports to be factually accurate. The Village's most recent annual checklist, dated September 30, 2025, indicates that a paved area of the landfill cap shows subsidence features. The Village indicated that they are planning to correct the issue.

#### Site Inspection

The inspection of the Site was conducted on 6/11/2025. In attendance were Kelly Gaffney, EPA RPM, Payson Long, NYSDEC Project Manager, Philip Grayson, Project Manager for the Village, and Stephen Brown on behalf of IBM. The purpose of the inspection was to assess the protectiveness of the remedy. During the site inspection, it was observed that some of the subsidence areas had been repaired, and only minor pooling was observed after a heavy rain event. As indicated above, the Village has plans to continue to address these areas and make repairs. In addition, several groundwater monitoring wells and gas vents were observed to be damaged. A plan should be developed to further inspect and repair the damages.

## V. TECHNICAL ASSESSMENT

### QUESTION A: Is the remedy functioning as intended by the decision documents?

According to the two RODs, the remedy for OUs 2 & 3 calls for installation and maintenance of an engineered landfill cap (OU2), and treatment of the groundwater plume (OU3) by the SPW. The objectives of the implemented remedies are to control the source of contamination at the Site, to minimize the migration of contaminants into the groundwater and surface water, to minimize any potential human health impacts resulting from the exposure to contamination at the Site, and to restore the aquifer.

The SPW continues to operate and based on groundwater level data, the SPW is effectively capturing the contaminants emanating from the landfill. The updated monitoring plan includes at least one water level measurement event per year where potentiometric data are contoured to confirm that there is hydraulic containment. Collection of analytical data between the landfill and the SPW to evaluate plume extent and progress towards restoration has continued. Groundwater samples for VOCs from the Site's monitoring wells for this FYR period were collected in August 2025. The select VOCs that were analyzed were non-detect in all the wells sampled except for the SPW and MW-22D. Results from the SPW showed detections for 1,1-dichloroethane and cis-1,2-dichloroethene, but below their respective federal MCLs and state standards. Vinyl chloride was detected in the SPW at 13 ppb, above the MCL of 2 ppb. In MW-22D, vinyl chloride was detected at 3.1 ppb, slightly above the MCL of 2 ppb. The groundwater data collected from the SPW reveals that VOC concentrations have decreased since the last FYR. Samples collected in 2019, during the previous FYR period, indicated an elevated presence of PFAS and 1,4-dioxane at EW-8 and SPW. Samples were also collected for these analytes at various times throughout this FYR period from MW-5, MW-28 and MW-32. The results indicate that the elevated detections observed in 2019 are likely limited to EW-8 and SPW by the pumping at SPW. However, additional samples have not been collected at EW-8 and SPW since 2019. Additional samples are suggested in the next FYR period to confirm the extent of these compounds remains limited by the remedy.

In general, the landfill cap is well-maintained, mowed, and operating as designed. Several areas of the paved landfill cap, however, have settled and subsidence noted during an inspection conducted on September 30, 2025. The area noted in the inspection is associated with the end of the eight-acre area designated by the FAA as the CAA, which includes the Runway Object Free Area. The Village indicated that they are planning to repair these areas.

#### IC Implementation

The OU2 ROD recommended, but did not require, that the Village implement ICs in the form of deed restrictions on future uses of the landfill. As recommended in previous FYRs, EPA requested that the Village address this recommendation by placing an environmental easement on the landfill property. In a letter dated October 13, 2020, the Village declined to implement the recommendation. As of this FYR, EPA believes that the Village's ownership of the landfill and its legal obligations under the CD continue to serve as effective IC measures to control future uses of the landfill. The Village and the other PRP signatories to the CD are legally required by the CD to regularly maintain the landfill in accordance with the O&M Plan, to regularly report to EPA on the status of its work under the CD, and to advise EPA of any changes in any conditions, including ownership. Thus, the Village and the other parties to the CD are legally obligated to ensure the long-term protectiveness of the landfill remedy. The CD is legally enforceable against all signatories.

Institutional controls for groundwater were not identified in the OU2 ROD and CD. However, existing state and local laws limit future groundwater use by regulating the installation of water wells at the site. The Village of Endicott and Town of Union have adopted NYSDOH standards for individual or private water supply wells in the

Aquifer Recharge Zone (Zone 2) and Wellhead Protection Zone (Zone 1), which limit the installation of wells at the Site. In addition, the SPW effectively inhibits migration of the remaining VOCs, resulting in a limited extent of contamination.

**QUESTION B:** Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of the remedy selection still valid?

There have been no changes in the physical conditions of the Site over the past five years that would change the protectiveness of the remedy. The Site has limited access based on its location within an industrial area, fencing, the presence of the Tri-Cities Airport and Airport Road that borders the Site to the west, the eastern boundary of the En-Joie Golf Course to the east, and the Susquehanna River to the South. In addition, the caps placed over the landfill provide an additional barrier to exposure.

Soil and groundwater use at the site did not change during the past five years; the period of time considered in this review. Changes in the land use are not expected to change during the next five years. The risk assessment in 1987 identified ingestion of groundwater by area residents as the principal route of exposure. The main COCs identified at the Site included: TCE, 1,2-DCE, vinyl chloride, and chloroethane in groundwater.

Emerging contaminants, 1,4 dioxane and PFAS have been monitored in site monitoring wells. The data from 2019 shows contamination within the waste mass based on elevated detections within EW-8, but the water supply wells do not show any impact. In addition, samples collected from MW-25D in 2019 as well as MW-5, MW-28 and MW-32 between 2021-2025 indicate that the elevated concentrations found in 2019 are likely contained by the pumping at SPW. Based on these results, the NYSDEC and EPA determined that monitoring for emerging contaminants should continue. Additional samples should be collected from EW-8 and SPW in future monitoring events to confirm that any elevated detections of emerging contaminants remain limited by the remedy.

The ROD established the federal MCLs as the cleanup criteria for the COCs identified above. There have been no changes to the toxicity values of the COCs since the last FYR. The federal MCLs have not changed and remain protective. Groundwater results from this FYR period were also compared to NYSDEC Class II groundwater standards, which remain valid. The sample concentrations did not exceed their respective MCLs with the exception of vinyl chloride, which was detected above the MCL in every SPW sample from 2021 to 2025.

Soil vapor intrusion based on groundwater concentrations was evaluated during the previous FYR. Evaluation of the groundwater concentrations using the USEPA Vapor Intrusion Screening Level (VISL) Calculator to evaluate potential vapor intrusion based on various media including groundwater concentrations was conducted. Comparison of the maximum concentrations of COCs in groundwater to the calculated risk-based concentration in groundwater using the USEPA VISL Calculator found that the concentrations of the COCs were below the calculated groundwater concentrations based on risk. The exception was vinyl chloride, which was detected above the USEPA VISL in the 2025 sample of MW-22D and every SPW sample from 2021 to 2025. Additionally, carbon tetrachloride, which was not identified as a COC, was detected above the USEPA VISL in the 2025 SPW sample. However, given that there are no inhabited buildings onsite, the vapor intrusion pathway is incomplete.

#### Ecological risk assumptions

An ecological assessment was conducted as part of the remedial investigation that focused on evaluating adverse effects on the ecosystem. The exposure pathways and toxicity data used to quantify ecological risk remain valid. The results of the ecological risk assessment, which used surface water and sediment samples collected from the Susquehanna River, Nanticoke Creek and Dead Creek showed no significant concentrations of VOCs and concluded that the Site was not adversely impacting ecological receptors. Given that the

contamination associated with the site is limited to groundwater contamination and waste material under the capped areas of the site, the primary concerns from an ecological perspective would be discharge of contaminated groundwater to surface water or exposure of ecological receptors to contaminated soil. These pathways are not complete, and there are no impacts to ecological receptors.

**QUESTION C:** Has any **other** information come to light that could call into question the protectiveness of the remedy?

No other information has come to light that would call into question the protectiveness of the remedy.

## VI. ISSUES/RECOMMENDATIONS

Issues/Recommendations
<b>OU(s) without Issues/Recommendations Identified in the Five-Year Review:</b>
<i>OU2, OU3</i>

### OTHER FINDINGS

The five-year review did not identify any issues affecting current or future protectiveness. However, the following are suggestions that were identified during the FYR that could enhance the remedy's performance:

- Expand monitoring for emerging contaminants to include wells EW-8 and SPW. These wells were sampled in 2019 and showed levels of emerging contaminants above federal MCLs and state standards. Adding these locations to the three wells currently sampled (MW-5, MW-28, and MW-32) would provide a more comprehensive assessment of the groundwater at the Site.
- Develop a permanent solution to address potholes and subsided areas.
- During the site inspection, several groundwater monitoring wells and gas vents were observed to be damaged. A plan should be developed to further inspect and repair the damages.

## VII. PROTECTIVENESS STATEMENT

Protectiveness Statement(s)	
<i>Operable Unit: OU2</i>	<i>Protectiveness Determination:</i> Protective
<i>Protectiveness Statement:</i> The remedy at OU2 is protective of human health and the environment.	

Protectiveness Statement(s)	
<i>Operable Unit: OU3</i>	<i>Protectiveness Determination:</i> Protective
<i>Protectiveness Statement:</i> The remedy at OU3 is protective of human health and the environment.	

Sitewide Protectiveness Statement
-----------------------------------

*Protectiveness Determination:*

Protective

*Protectiveness Statement:*

The remedies implemented for the site are protective of human health and the environment.

## **VIII. NEXT REVIEW**

The next FYR report for the Endicott Well Field Superfund Site is required five years from the completion date of this review.

## APPENDIX A – REFERENCE LIST

### Documents, Data, and Information Reviewed in Completing the Five-Year Review:

Document Title, Author	Date
OU1 Record of Decision, Endicott Village Well Field site, EPA	March 31, 1987
OU3 Record of Decision, Endicott Village Well Field site, EPA	March 29, 1991
OU2 Record of Decision, Endicott Village Well Field site, EPA	September 30, 1992
OU2 Remedial Action Report, PRP	May 1997
Semi-Annual Report, Endicott Village Well Field site, PRP	October 2021 – September 2025

## **APPENDIX B – REMEDY RESILIENCE ASSESSMENT**

## APPENDIX B – REMEDY RESILIENCE EVALUATION

Two tools were utilized to assess impacts from severe weather at the Endicott Village Well Field Superfund Site. Complete reports from each of the tools assessed are included below.

The first tool used to assess the Site was the *CMRA Assessment Tool*. The tool examined five hazards for the county where the Site is located. According to this tool, the National Risk Index Rating for extreme heat is “Relatively Low.” Figure 1 shows the projected increase in days per year with maximum temperatures > 100°F throughout the century. The National Risk Index Rating is “Relatively High” for flooding and “Not Applicable” for coastal inundation in Broome County. The two other hazards evaluated by this tool – drought and wildfire – both have a National Risk Index Rating of “No Rating” and “Very Low”, respectfully, for the county. Figure 2 reveals a projected increase in annual average total precipitation while Figure 3 shows a projected increase in days per year with precipitation. Additionally, Figure 4 shows a projected increase in annual days with total precipitation > 1 inch. These projections suggest future precipitation events may increase in frequency and also increase in intensity; however, such events are not expected to impact the remedies at the site.

The second tool utilized is the *United States Geological Survey Landslide Inventory* web application. As shown by Figure 5, there have been no landslides recorded in the vicinity of the Site.

Based on this information, potential Site impacts from severe weather have been assessed, and the performance of the remedy is currently not at risk due to the expected effects of weather-related events in the region and near the Site.

**Broome County,  
New York**

Total Population  
① **193,188**

% Population with Income Below Poverty  
① **17%**

Building Codes Hazard Resistance  
① **Resistant**

% Population Disadvantaged  
① **31.26%**

National Risk Index Rating  
**Relatively Low**  
Source: FEMA National Risk Index

**B** Billion-Dollar Weather and Climate Disasters



**U.S. Climate Resilience Toolkit**  
Source: Census Bureau, CEQ, Esri, FEMA, MRLC, NOAA, UCSD

# Extreme Heat

## Future Climate Indicators

Indicator	Modeled History (1976 - 2005) Min - Max	Early Century (2015 - 2044)		Mid Century (2035 - 2064)		Late Century (2070 - 2099)	
		Lower Emissions Min - Max	Higher Emissions Min - Max	Lower Emissions Min - Max	Higher Emissions Min - Max	Lower Emissions Min - Max	Higher Emissions Min - Max
<b>Temperature thresholds:</b>							
Annual days with maximum temperature > 90°F	2 days 2 - 4	11 days 4 - 21	12 days 5 - 19	16 days 6 - 33	22 days 8 - 40	22 days 8 - 48	50 days 14 - 88
Annual days with maximum temperature > 95°F	0 days 0 - 0	2 days 0 - 9	2 days 0 - 7	4 days 1 - 16	7 days 1 - 17	7 days 1 - 23	24 days 2 - 56
Annual days with maximum temperature > 100°F	0 days 0 - 0	0 days 0 - 1	0 days 0 - 2	1 days 0 - 5	2 days 0 - 9	2 days 0 - 5	9 days 0 - 36
Annual days with maximum temperature > 105°F	0 days 0 - 0	0 days 0 - 0	0 days 0 - 0	0 days 0 - 1	0 days 0 - 4	0 days 0 - 3	3 days 0 - 21
<b>Annual temperature:</b>							
Annual single highest maximum temperature °F	92 °F 90 - 93	95 °F 93 - 99	96 °F 93 - 101	97 °F 93 - 103	99 °F 95 - 107	99 °F 94 - 106	104 °F 95 - 114
Annual highest maximum temperature averaged over a 5-day period °F	87 °F 86 - 87	90 °F 88 - 95	91 °F 88 - 94	92 °F 89 - 97	94 °F 89 - 99	94 °F 90 - 100	99 °F 91 - 110
Cooling degree days (CDD)	421 degree-days 379 - 450	697 degree-days 525 - 923	735 degree-days 556 - 967	844 degree-days 594 - 1,207	983 degree-days 683 - 1,369	1,001 degree-days 683 - 1,496	1,609 degree-days 935 - 2,340

N/A = Data Not Available for the selected area

Figure B-1: Extreme Heat

**Broome County,  
New York**

Total Population  
📍 193,188

% Population with Income Below Poverty  
📍 17%

Building Codes Hazard Resistance  
📍 Resistant

% Population Disadvantaged  
📍 31.26%

National Risk Index Rating  
**No Rating**  
Source: FEMA National Risk Index

📍 Billion-Dollar Weather and Climate Disasters

U.S. Climate Resilience Toolkit  
Source: Census Bureau, CEQ, Esri, FEMA, MRLC, NOAA, UCSD



# Drought

## Future Climate Indicators

Indicator	Modeled History (1976 - 2005) Min - Max	Early Century (2015 - 2044)		Mid Century (2035 - 2064)		Late Century (2070 - 2099)	
		Lower Emissions Min - Max	Higher Emissions Min - Max	Lower Emissions Min - Max	Higher Emissions Min - Max	Lower Emissions Min - Max	Higher Emissions Min - Max
<b>Precipitation:</b>							
Average annual total precipitation	40" 39 - 42	42" 40 - 46	42" 38 - 46	42" 39 - 46	43" 40 - 46	43" 40 - 48	45" 41 - 49
Days per year with precipitation (wet days)	219 days 214 - 224	217 days 205 - 227	217 days 199 - 225	216 days 204 - 226	215 days 198 - 223	216 days 201 - 225	213 days 190 - 234
Days per year with no precipitation (dry days)	146 days 142 - 151	148 days 138 - 161	148 days 140 - 166	149 days 139 - 162	150 days 142 - 168	150 days 140 - 164	152 days 131 - 175
Maximum number of consecutive dry days	9 days 8 - 10	9 days 8 - 11	9 days 8 - 12	9 days 8 - 11	9 days 8 - 13	9 days 8 - 11	10 days 8 - 12
<b>Temperature thresholds:</b>							
Annual days with maximum temperature > 90 °F	2 days 2 - 4	11 days 4 - 21	12 days 5 - 19	16 days 6 - 33	22 days 8 - 40	22 days 8 - 48	50 days 14 - 88
Annual days with maximum temperature > 100 °F	0 days 0 - 0	0 days 0 - 1	0 days 0 - 2	1 days 0 - 5	2 days 0 - 9	2 days 0 - 5	9 days 0 - 36

N/A = Data Not Available for the selected area

Figure B-2: Drought

**Broome County,  
New York**

Total Population  
① **193,188**

% Population with Income Below Poverty  
① **17%**

Building Codes Hazard Resistance  
① **Resistant**

% Population Disadvantaged  
① **31.26%**

National Risk Index Rating  
**Very Low**  
Source: [FEMA National Risk Index](#)

**B** Billion-Dollar Weather and Climate Disasters



**U.S. Climate Resilience Toolkit**  
Source: Census Bureau, CEO, Esri, FEMA, MRLC, NOAA, UCSD



# Wildfire

## Future Climate Indicators

Indicator	Modeled History (1976 - 2005)	Early Century (2015 - 2044)		Mid Century (2035 - 2064)		Late Century (2070 - 2099)		
	Min - Max	Lower Emissions Min - Max	Higher Emissions Min - Max	Lower Emissions Min - Max	Higher Emissions Min - Max	Lower Emissions Min - Max	Higher Emissions Min - Max	
<b>Precipitation:</b>								
Days per year with no precipitation (dry days)	<b>146 days</b> 142 - 151	<b>148 days</b> 138 - 161	<b>148 days</b> 140 - 166	<b>149 days</b> 139 - 162	<b>150 days</b> 142 - 168	<b>150 days</b> 140 - 164	<b>152 days</b> 131 - 175	
Maximum number of consecutive dry days	<b>9 days</b> 8 - 10	<b>9 days</b> 8 - 11	<b>9 days</b> 8 - 12	<b>9 days</b> 8 - 11	<b>9 days</b> 8 - 13	<b>9 days</b> 8 - 11	<b>10 days</b> 8 - 12	
Days per year with precipitation (wet days)	<b>219 days</b> 214 - 224	<b>217 days</b> 205 - 227	<b>217 days</b> 199 - 225	<b>216 days</b> 204 - 226	<b>215 days</b> 198 - 223	<b>216 days</b> 201 - 225	<b>213 days</b> 190 - 234	
<b>Temperature thresholds:</b>								
Annual days with maximum temperature > 90°F	<b>2 days</b> 2 - 4	<b>11 days</b> 4 - 21	<b>12 days</b> 5 - 19	<b>16 days</b> 6 - 33	<b>22 days</b> 8 - 40	<b>22 days</b> 8 - 48	<b>50 days</b> 14 - 88	
Annual days with maximum temperature > 100°F	<b>0 days</b> 0 - 0	<b>0 days</b> 0 - 1	<b>0 days</b> 0 - 2	<b>1 days</b> 0 - 5	<b>2 days</b> 0 - 9	<b>2 days</b> 0 - 5	<b>9 days</b> 0 - 36	

N/A = Data Not Available for the selected area

Figure B-3: Wildfires

**Broome County, New York**

Total Population  
 ① **193,188**

% Population with Income Below Poverty  
 ① **17%**

Building Codes Hazard Resistance  
 ① **Resistant**

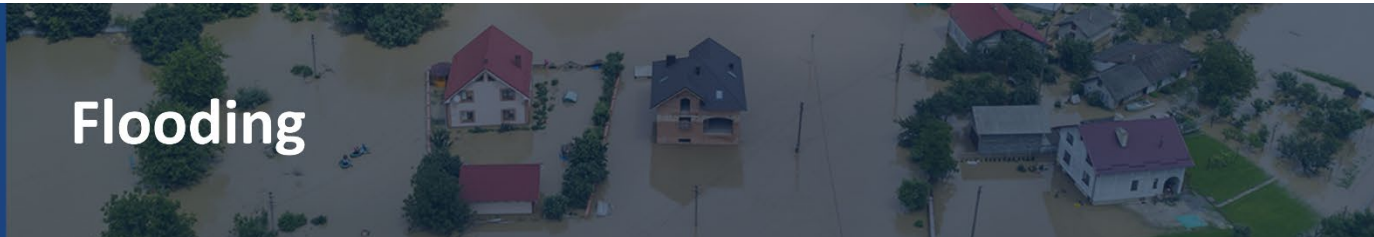
% Population Disadvantaged  
 ① **31.26%**

National Risk Index Rating  
**Relatively High**  
 Source: [FEMA National Risk Index](#)

**B** Billion-Dollar Weather and Climate Disasters



U.S. Climate Resilience Toolkit  
 Source: Census Bureau, CEQ, Esri, FEMA, MRLC, NOAA, UCSD



**Future Climate Indicators**

Indicator	Modeled History (1976 - 2005)	Early Century (2015 - 2044)		Mid Century (2035 - 2064)		Late Century (2070 - 2099)		
		Lower Emissions	Higher Emissions	Lower Emissions	Higher Emissions	Lower Emissions	Higher Emissions	
	Min - Max	Min - Max	Min - Max	Min - Max	Min - Max	Min - Max	Min - Max	
<b>Precipitation:</b>								
Annual average total precipitation	40" 39 - 42	42" 40 - 46	42" 38 - 46	42" 39 - 46	43" 40 - 46	43" 40 - 48	45" 41 - 49	
Days per year with precipitation (wet days)	219 days 214 - 224	217 days 205 - 227	217 days 199 - 225	216 days 204 - 226	215 days 198 - 223	216 days 201 - 225	213 days 190 - 234	
Maximum period of consecutive wet days	14 days 12 - 15	14 days 13 - 16	14 days 13 - 16	14 days 13 - 16	14 days 13 - 16	14 days 13 - 16	14 days 12 - 20	
<b>Annual days with:</b>								
Annual days with total precipitation > 1 inch	3 days 2 - 4	4 days 3 - 5	4 days 3 - 5	4 days 3 - 5	4 days 3 - 6	4 days 3 - 6	5 days 3 - 7	
Annual days with total precipitation > 2 inches	0 days 0 - 0	0 days 0 - 0	0 days 0 - 1	0 days 0 - 0	0 days 0 - 1	0 days 0 - 1	0 days 0 - 1	
Annual days with total precipitation > 3 inches	0 days 0 - 0	0 days 0 - 0	0 days 0 - 0	0 days 0 - 0	0 days 0 - 0	0 days 0 - 0	0 days 0 - 0	
Annual days that exceed 99th percentile precipitation	5 days 4 - 6	6 days 5 - 7	6 days 5 - 7	6 days 5 - 7	7 days 6 - 8	7 days 6 - 8	8 days 7 - 9	
Days with maximum temperature below 32 °F	50 days 47 - 54	37 days 18 - 47	37 days 25 - 47	32 days 12 - 43	28 days 15 - 38	27 days 8 - 38	14 days 3 - 26	

N/A = Data Not Available for the selected area

Figure B-4: Flooding

## APPENDIX C - FIGURES

Figure 1: Site Location

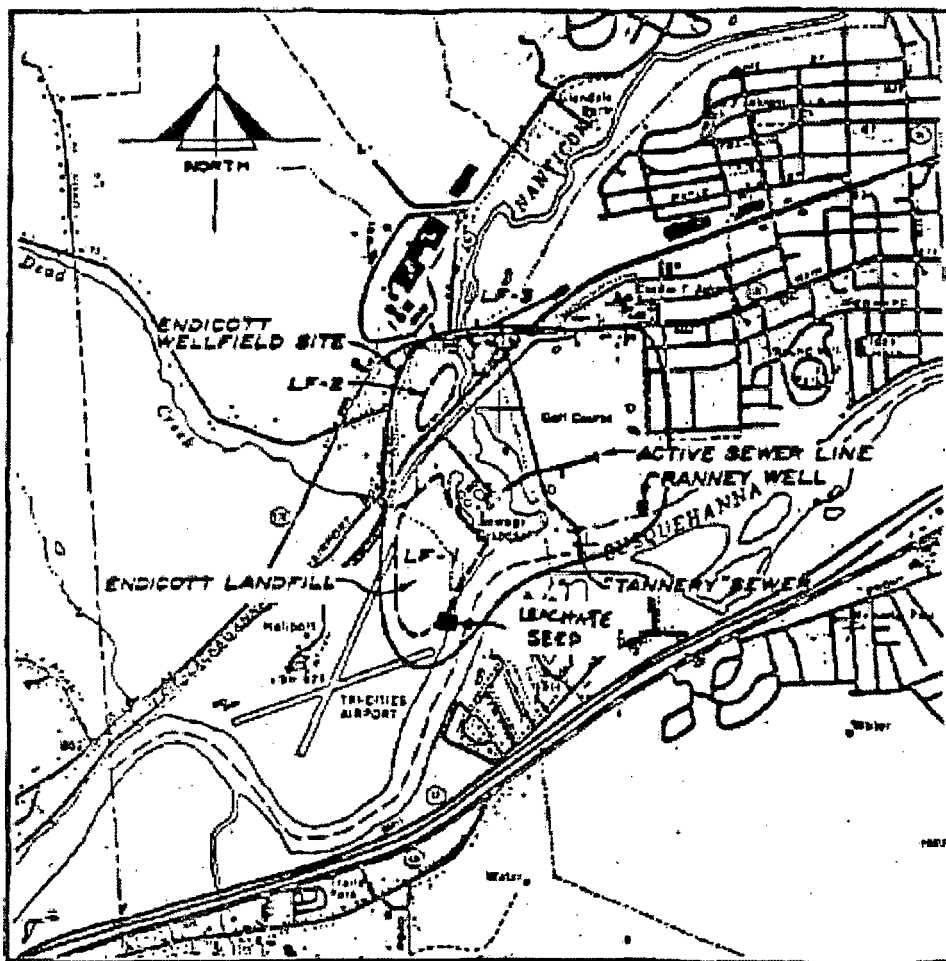


FIGURE 1  
LOCATION MAP  
ENDICOTT WELLFIELD SITE  
ENDICOTT, NEW YORK



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

**N**

**Legend**

- Well Locations
- 1 ft Contour

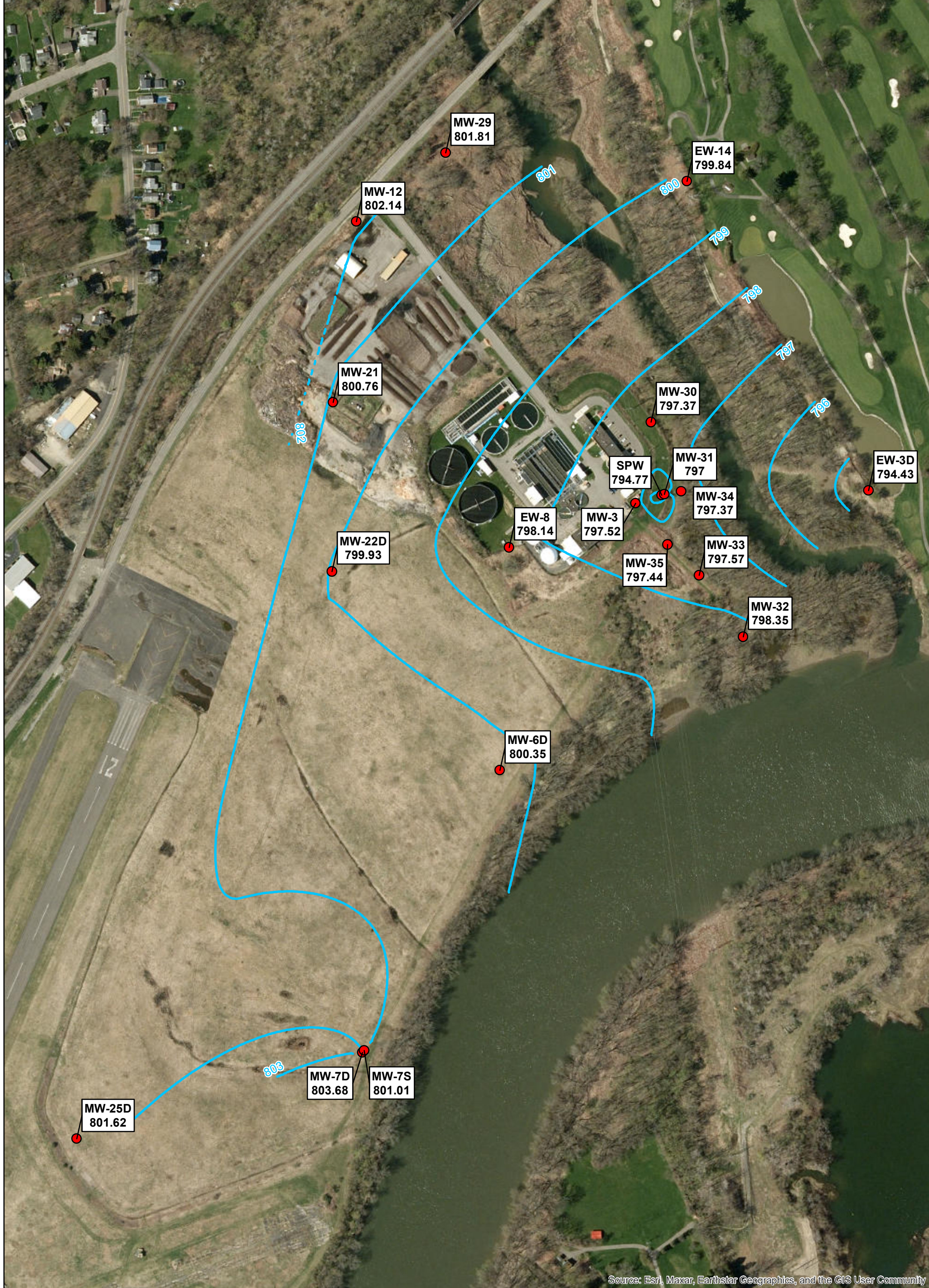
Groundwater elevation shown in feet amsl.

**Groundwater Contour Map**  
October 2021

**Endicott Landfill**  
Village of Endicott  
Broome County

**HUNT** ENGINEERS | ARCHITECTS | SURVEYORS

0 225 450 675 900 Feet



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

**N**

**Legend**

- Well Locations
- 1 ft Contour

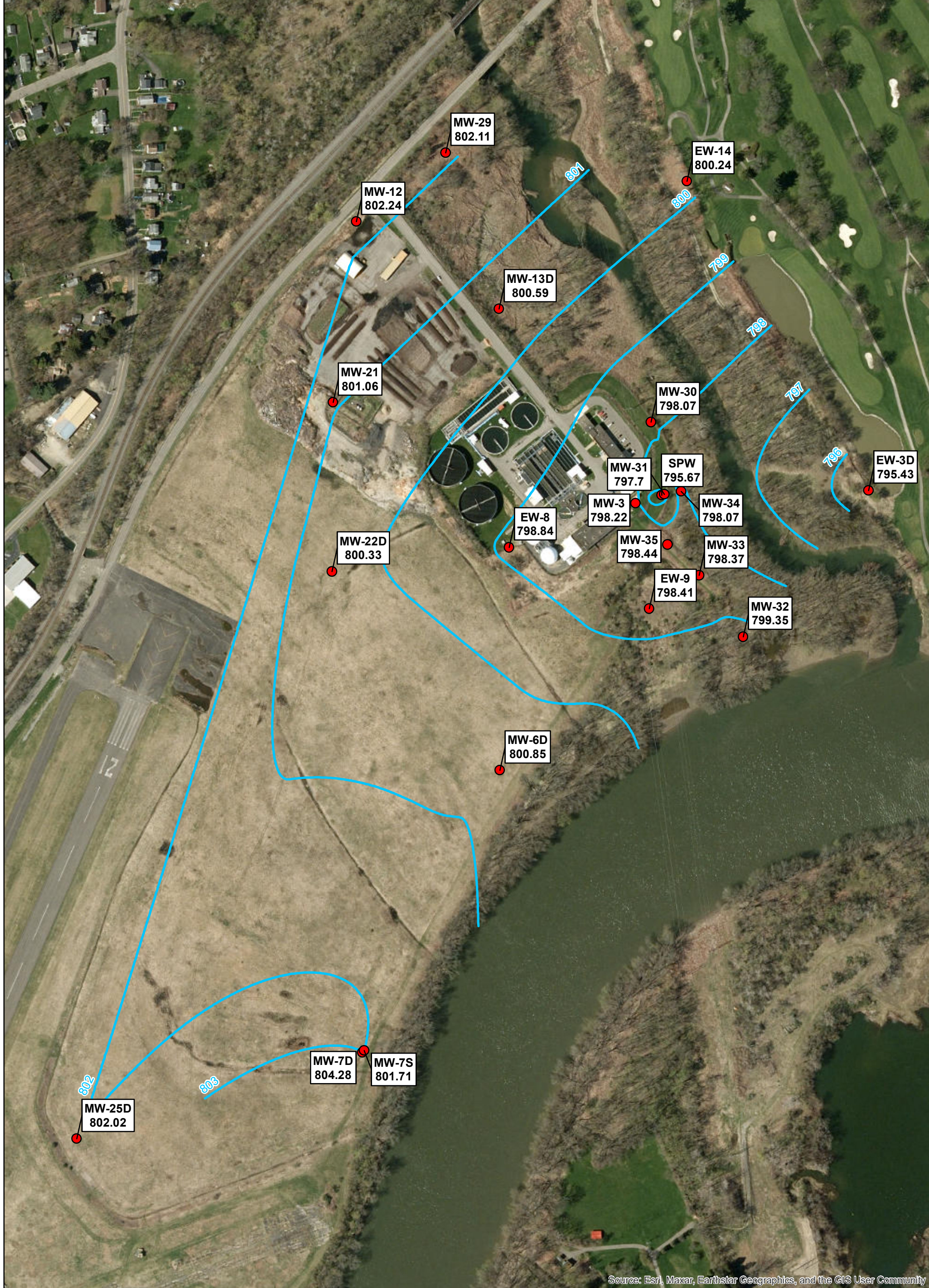
Groundwater elevation shown in feet amsl.

**Groundwater Contour Map**  
June 2022

**Endicott Landfill**  
Village of Endicott  
Broome County

**HUNT** ENGINEERS | ARCHITECTS | SURVEYORS

0 225 450 675 900 Feet



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

**N**

**Legend**

- Well Locations
- 1 ft Contour

Groundwater elevation shown in feet amsl.

**Groundwater Contour Map**  
October 2023

**Endicott Landfill**  
Village of Endicott  
Broome County

**HUNT** ENGINEERS | ARCHITECTS | SURVEYORS

0 225 450 675 900 Feet



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

**N**

**Legend**

- Well Locations
- 1 ft Contour

Groundwater elevation shown in feet amsl.

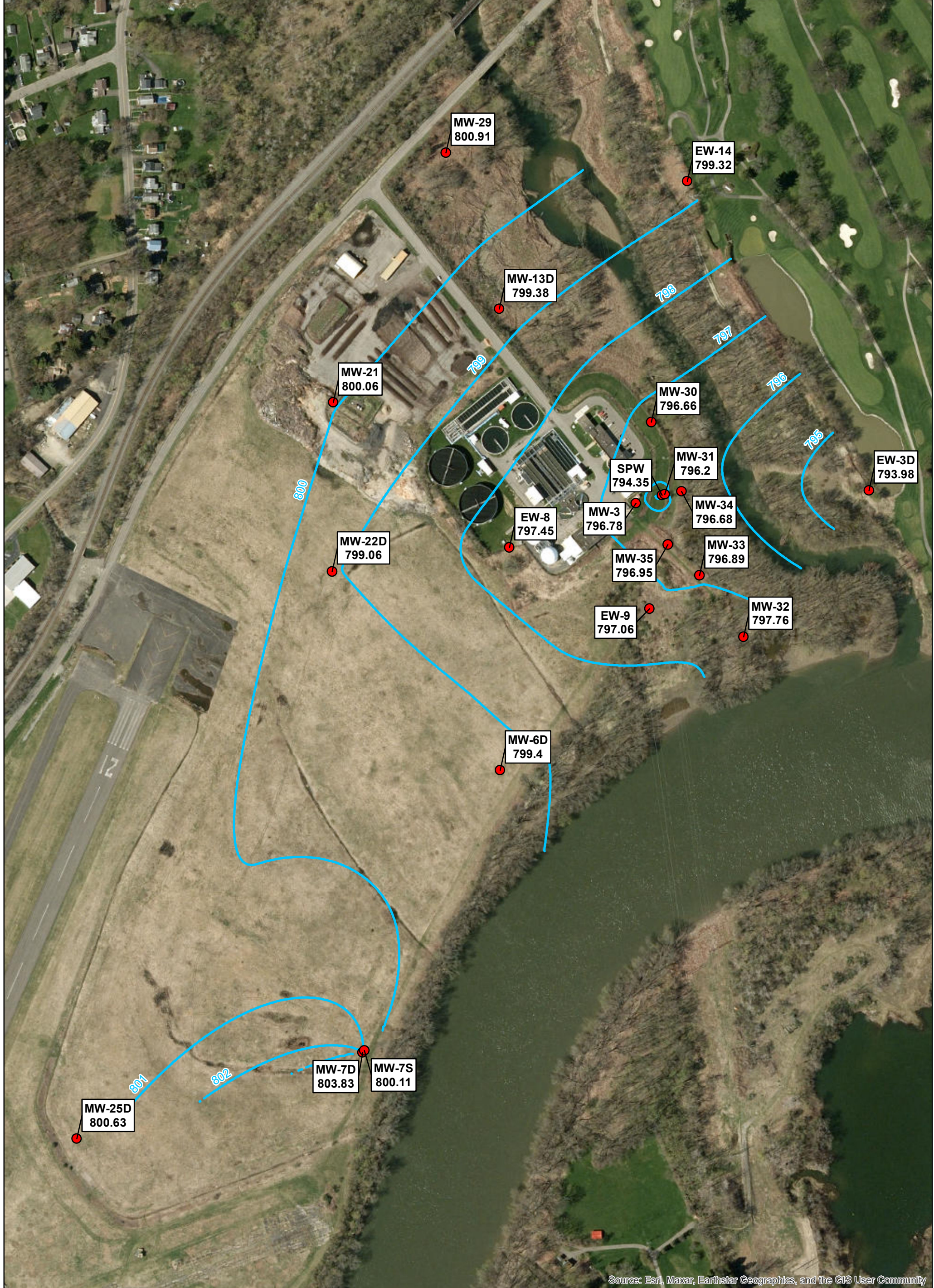
**Groundwater Contour Map**  
October 2024

---

**Endicott Landfill**  
Village of Endicott  
Broome County

**HUNT** ENGINEERS | ARCHITECTS | SURVEYORS

0    225    450    675    900  
Feet



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

**N**

**Legend**

- Well Locations
- 1 ft Contour

Groundwater elevation shown in feet amsl.

**Groundwater Contour Map**  
August 2025

**Endicott Landfill**  
Village of Endicott  
Broome County

**HUNT** ENGINEERS | ARCHITECTS | SURVEYORS

0 225 450 675 900 Feet