NEW YORK STATE | Department of Environmental Conservation

State Superfund Program

Citizen Participation Plan
for
Cross-County Sanitary / Kessman Landfill
Town of Patterson, Putnam County, New York

April 2022

Site No. 340011
286 Cornwall Hill Road
Town Of Patterson
Putnam County, New York

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Note: The information presented in this Citizen Participation Plan was current as of the date of its approval by the New York State Department of Environmental Conservation. Portions of this Citizen Participation Plan may be revised during the Site's investigation and cleanup processes.

Site Name: **Cross-County Sanitary / Kessman Landfill**
Site Address: **286 Cornwall Hill Road**
Site County: **Putnam County**
Site Number: **340011**

1. What is New York's State Superfund Program?

New York's State Superfund (SSF) Program identifies and characterizes suspected inactive hazardous waste disposal sites. Sites that pose a significant threat to public health or the environment, such as the Site identified above, undergo a process of investigation, evaluation, cleanup, and monitoring.

The New York State Department of Environmental Conservation (NYSDEC) administers the SSF Program with assistance and input from the New York State Department of Health (NYSDOH). When the parties responsible for the contamination of the Site are known ("responsible parties"), they often pay for or perform the investigation and evaluation of cleanup options under an enforceable consent order. At sites where responsible parties cannot be found or are unable or unwilling to fund an investigation or cleanup, the State pays for the investigation or cleanup and may try to recover costs from a responsible party after the investigation and cleanup are complete.

The SSF Program contains investigation and cleanup requirements, ensuring that cleanups protect public health and the environment. For more information about the SSF Program, go online at: http://www.dec.ny.gov/chemical/8439.html .

2. Citizen Participation Activities

2.1 Why NYSDEC Involves the Public and Why It Is Important

NYSDEC involves the public to improve the process of investigating and cleaning up contaminated sites, and to enable citizens to participate more fully in decisions that affect their health, environment, and social well-being. NYSDEC provides opportunities for citizen involvement and encourages early, two-way communication with citizens before decision makers form or adopt final positions.

Involving citizens affected and interested in Site investigation and cleanup programs is important for many reasons. These include:

- Promoting the development of timely, effective Site investigation and cleanup programs that protect public health and the environment;

- Improving public access to, and understanding of, issues and information related to a particular site and that site's remedial process;

- Providing citizens with early and continuing opportunities to participate in NYSDEC's site investigation and cleanup process;

- Ensuring that NYSDEC makes site investigation and cleanup decisions that benefit from input that reflects the interests and perspectives found within the affected community;

- Encouraging dialogue to promote the exchange of information among the affected/interested public, state agencies, and other interested parties which strengthens trust among the parties, increases understanding of site and community issues and concerns, and improves decision making.

This Citizen Participation (CP) Plan provides information about how NYSDEC will inform and involve the public during the investigation and cleanup of the Site identified above.

Appendix A identifies NYSDEC and NYSDOH project contact(s) to whom the public should address questions or request information about the Site's investigation and cleanup program. The public's suggestions about this CP Plan and the CP program for the Site are always welcome. Interested people are encouraged to share their ideas and suggestions with the project contacts at any time.

2.2 Project Contacts

NYSDEC Contact
Project-Related Questions

Gail Dieter
NYSDEC Project Manager
Division of Environmental Remediation
625 Broadway, Albany, NY 12233
(518) 402-9645
Gail.Dieter@dec.ny.gov

NYSDOH Contact:
Project-Related Health Questions

Julia Kenney
New York State Department of Health
Empire State Plaza
Corning Tower Room 1787
Albany, New York 12237
(518) 402-7860
Julia.Kenney@health.ny.gov

3. Locations of Reports and Information

The locations and electronic links to the reports and information that relate to the Site's investigation and cleanup programs are identified in Appendix A. While all of the Site-related documents are currently saved on the NYSDEC website, NYSDEC will continue to inform the public using fact sheets distributed about the Site and by other means, as appropriate.

Project documents can be accessed through the DECinfo Locator at the following websites:

Project Specific Documents:
https://www.dec.ny.gov/data/DecDocs/340011/

Additional Site Details (enter the site code – **340011** – in the search field near the top):
https://www.dec.ny.gov/cfmx/extapps/derexternal/index.cfm?pageid=3

For more information about New York's State Superfund Program, visit:
www.dec.ny.gov/chemical/8439.html

3.1 Site Contact List

The Site Contact List, discussed in this section and included in Appendix B, has been developed to keep the community informed about, and involved in, the Site's investigation and cleanup process. The Site contact list will be used periodically to distribute fact sheets that provide updates about the status of the project. These will include notifications of upcoming activities at the Site (such as fieldwork), as well as availability of project documents and announcements about public comment periods.

The Site contact list found on the following page includes, at a minimum, pertinent county and local officials, Site owners and/or operators, and abutting/adjacent property owners.

The properties in the vicinity of the Site all appear to be serviced by private drinking water well systems (no record of public water supply). Vacant land parcels in the vicinity of and including the Site do not appear to have supplied water. Based on the absence of public water systems in the vicinity, regional or municipal water department contacts or notifications are unnecessary. The primary contact for the purposes of drinking water, in the absence of public water supply, is NYSDOH.

The Town of Patterson is in the watershed for the New York City Reservoir System. This means that streams, roadside ditches, and stormwater runoff from the Site and vicinity, potentially end up in one of the reservoirs that make up the Croton Reservoir system. Most of the streams in Patterson flow toward the East Branch Croton River which runs south and east through the heart of Putnam County. The East Branch Croton River eventually drains into the East Branch Reservoir near the Village of Brewster, and continues its path through the network of lower reservoirs in the Croton Reservoir System.

Putnam County Executive Officer:

- MaryEllen Odell
  Putnam County
  40 Gleneida Avenue, 3rd flr
  Carmel, New York 10512
  (845) 808-1001
  maryellen.odell@putnamcountyny.gov

Town of Patterson Board Supervisor:

- Richard Williams, Sr.
  Town Of Patterson Town Hall
  1142 Route 311 / PO Box 470
  Patterson, NY 12563
  (845) 878-6500
  supervisor@pattersonny.org

New York State Senator:

- Sue Serino
  117 Town Park Land
  1st Floor
  Putnam Valley, NY 10579
  (845) 528-0417
  Serino@nysenate.gov

New York State Assembly Member:

- Kevin M. Byrne
  3 Starr Ridge Rd.
  Suite 204
  Brewster, NY 10509
  (845) 278-2926

Site Owner(s) and Operator(s):

- 286 Cornwall Hill Road (Site)
  Property Tax ID: 13-3-16 & 13-3-17
  Putnam County
  40 Glenedida
  Carmel, NY 10512

- 326 Cornwall Hill Road
  Property Tax ID: 13-3-14
  Hidden Valley Ranch LLC
  683 Route 311
  Patterson, NY 12563

Abutting/Adjacent Property Owners:

- 272 Cornwall Hill Road
  Property Tax ID: 13-3-18
  Svoboda Bulldozing & Trucking Corp
  1944 Route 22
  Brewster, NY10509

- 316 Cornwall Hill Road
  Property Tax ID: 13-3-15.3
  Jeffrey and Bridget Kessman
  316 Cornwall Hill Road
  Patterson, NY 12563

- 318 Cornwall Hill Road
  Property Tax ID: 13-3-15.2
  Andrew Barberesi
  318 Cornwall Hill Road
  Patterson, NY 12563

- 320 Cornwall Hill Road
  Property Tax ID:13-3-15.1
  Joseph Szilagyi
  320 Cornwall Hill Road
  Patterson, NY 12563

- Mathew Patterson Elementary School
  Property Tax ID: 13.8-1-88
  Carmel Central School District
  71-100 South Street
  Patterson, NY 12563

The Site contact list will be reviewed periodically and updated as appropriate. Individuals and organizations will be added to the Site contact list upon request. Such requests should be submitted to the NYSDEC project contact(s) identified in earlier and in Appendix A. Other additions to the Site contact list may be made at the discretion of the NYSDEC Project Manager, in consultation with NYSDOH and other NYSDEC staff, as appropriate.

Note: The Site fact sheets can be distributed both by paper mailing through the postal service and through DEC Delivers, its email listserv service. The fact sheets include instructions for signing up with the appropriate county listserv to receive future notifications about the Site. See the following NYSDEC link for instruction on how to sign up for Project notifications:

http://www.dec.ny.gov/chemical/61092.html .

Subsequent fact sheets about the Site will be distributed exclusively through the listserv except for households without internet access that have indicated the need to continue to receive Site information in paper form. Please advise the NYSDEC Site Project Manager identified in earlier and in Appendix A if this is the case.

3.2 Citizen Participation Activities

The table at the end of this section identifies the CP activities, which, at a minimum, will be conducted during the remainder of the Site's investigation and cleanup programs. The flowchart in Appendix D shows how these CP activities integrate with the Site investigation and cleanup processes. The public is informed about these CP activities through fact sheets and notices distributed at significant points during the program. Elements of the investigation and cleanup processes that match up with the CP activities are explained briefly in Section 5.

The importance of these CP activities are:

- **Notices and fact sheets** help the interested and affected public to understand contamination issues related to a site, and the nature and progress of efforts to investigate and clean up a site.
- **Public forums, comment periods, and contact with Project Managers** provide opportunities for the public to contribute information, opinions and perspectives that have potential to influence decisions about a site's investigation and cleanup.

Project documents can be accessed through the DECinfo Locator at the following websites:

Project Specific Documents:

https://www.dec.ny.gov/data/DecDocs/340011/

Additional Site Details (enter the site code – **340011** – in the search field near the top):

https://www.dec.ny.gov/cfmx/extapps/derexternal/index.cfm?pageid=3

The public is encouraged to contact project staff at any time during the Site's investigation and cleanup process with questions, comments, or requests for information.

This CP Plan may be revised due to changes in major issues of public concern identified in Section 4 or in the nature and scope of investigation and cleanup activities. Modifications may include additions to the Site contact list and changes in planned citizen participation activities.

3.3 Technical Assistance Grant

The Site identified above is considered a Class 2 site, by definition, since it poses a significant threat to public health or the environment. Based on this classification, a qualifying community group may apply for a Technical Assistance Grant (TAG). The purpose of a TAG is to provide funds to the qualifying community group to obtain independent technical assistance. This assistance helps the TAG recipient to interpret and understand existing environmental information about the nature and extent of contamination related to the Site and the development/implementation of a remedy.

An eligible community group must certify that its membership represents the interests of the community affected by the Site, and that its members' health, economic well-being, or enjoyment of the environment may be affected by a release or threatened release of contamination at the Site.

For more information about TAGs, go online at:

http://www.dec.ny.gov/regulations/2590.html .

Note: The table identifying the citizen participation activities related to the Site's investigation and cleanup program follows.

Description of Citizen Participation Activities	Timing of Citizen Participation Activities
Before Start of Remedial Investigation (RI):	
• Prepare Site contact list • Establish document repository • Prepare Citizen Participation (CP) Plan • Place approved RI Work Plan in document repository • Distribute fact sheet to Site contact list that announces availability of RI Work Plan and describes upcoming RI field work	• Before start of RI. Note: Draft CP Plan must be submitted to NYSDEC within 20 days of effective date of Consent Order. CP Plan must be approved by NYSDEC before distribution (In progress).
When NYSDEC Approves Remedial Investigation Report:	
• Distribute fact sheet to Site contact list that describes RI results • Place approved RI Report in document repository	• When NYSDEC approves RI Report (The Site RI Report was completed in 1992).
When NYSDEC Releases Proposed Remedial Action Plan (PRAP)	
• Place PRAP in document repository • Distribute fact sheet to Site contact list that describes PRAP and announces 30-day comment period and public meeting • Conduct 30-day public comment period • Hold public meetings about PRAP	• When NYSDEC releases PRAP. Comment period begins/ends as per dates identified in fact sheet. Public meeting is held during the comment period. (The Site PRAP was completed in 1994).

Description of Citizen Participation Activities	Timing of Citizen Participation Activities
When NYSDEC Issues Record of Decision (ROD): • Place ROD in document repository • Distribute notice to Site contact list that announces availability of ROD. ROD includes responsiveness summary of significant comments about PRAP	• When NYSDEC issues ROD (The ROD was issued for the Site in 1995).
Before Start of Remedial Action or Implementation of Remedial System Optimization Cleanup:	
• Distribute fact sheet to Site contact list that describes upcoming remedial action	• Before start of remedial action at the Site (Original Remedial Action was completed in 1995 – Remedial System Optimization activities to begin in 2022).
When NYSDEC Certifies Cleanup Requirements Achieved: • Distribute fact sheet to Site contact list that announces cleanup requirements achieved • If Certificate of Completion (COC) is issued, announce in fact sheet If COC is issued, place copy in document repository	• When NYSDEC certifies cleanup requirements achieved, or within 10 days after NYSDEC issues COC or other similar site closure document (to be completed after supplemental remediation).
If NYSDEC Reclassifies the Site If reclassifying Site, may announce in fact sheet announcing achievement of cleanup requirements	At time NYSDEC proposes to reclassify the Site.
If NYSDEC Proposes to Delist the Site from the Registry of Contaminated Sites • Publish notice in Environmental Notice Bulletin about proposal and 30-day public comment period • Distribute notice to Site contact list. May announce proposal in fact sheet announcing achievement of cleanup requirements • Conduct 30-day public comment period about proposed delist • Distribute notice to Site contact list when Site is delisted	At time NYSDEC proposes to delist the Site

4. Environmental Justice, Population, and Public Concerns

This section of the CP Plan identifies demographics in the area surrounding the Site, and describes the Site's location relative to nearby Potential Environmental Justice Areas (PEJAs). In addition, this section identifies issues that relate to the Site and upcoming work, which may be of concern to the public. Additional major issues of public concern may be identified during the course of the Site's investigation and cleanup process.

4.1 Data Collected From The 2020 Census Source

Several sources were reviewed to obtain demographic information for the Town of Patterson, Putnam County, New York. Initially the 2020 Census was reviewed. However, the data currently available was in the form of estimates and was yet to be finalized. Most of the data listed is from the census year of 2010, with data points dated 2012, 2016-2019, and data noted as estimated and dated April 1, 2020. Demographic data from several local and state sources varied as well and appeared to be based on the 2010 census information.

Based on the April 1, 2020 decennial census data (estimated), the population of the Town of Patterson is 11,541 with an approximate density of 358 people per square mile. The estimated population data is comprised of 81.0% White (alone), 72.9% White (alone, not Hispanic or Latino), 17.2% Hispanic or Latino, 8.8% Black or African American, 1.3% two or more races, 1.1% Asian (alone), 0.4% American Indian and Alaska Native (alone) and 0.2% Native Hawaiian and other Pacific Islander (alone).

Of the estimated 11,541 people residing in the Town of Patterson, there are 18.0% under the age of 18 years old, 14.8% age 65 years and older, and 4.9% under the age of 5 years old. The estimated population is comprised of 52.7% male and 47.3% female. There are an estimated 3,902 households (2016-2020) with 2.69% persons per household (2016-2020). The owner-occupied housing unit rate is 83.9% (2016-2020) and the median value per home is approximately $359,300 (2016-2020). The estimated median household income (2016-2020) based on 2020 inflation rate is listed as $107,164 and the per capita income in the past 12 months (2016-2020) again based on 2020 inflation rate is listed as $39,715.

4.2 Data Collected From ArcGIS and PEJA Source

Data provided by the ArcGIS PEJA mapping tool and the EPA Environmental Justice Screening and Mapping Tool were utilized to compile the information presented in this section.

Based on the ArcGIS and PEJA databases, the Town of Patterson has two Potential Environmental Justice Areas within its 32.21 square miles. The areas are identified by Census Block group numbers and the data collected for each group is provided below.

Census Block Group: 15000US360790102001

- Total Population Area: 1066
- Percentage Below Poverty Level: 29.48
- Percentage Minority Population: 34.99
- PEJA: Yes
- Area includes the Site or within 1 Mile Radius: Yes

Census Block Group: 15000US360790102002

- Total Population Area: 527
- Percentage Below Poverty Level: 17.59
- Percentage Minority Population: 39.27
- PEJA: Yes
- Area includes the Site or within 1 Mile Radius: Yes

Information that was reviewed and included above can be accessed via the following web links:

https://www.census.gov/quickfacts/pattersontownputamcountynewyork

https://ejscreen.epa.gov/mapper/ (Navigate to New York State and Patterson on the map then click on Environmental Justice Indices)

https://www.arcgis.com/home/webmap/viewer.html?url=https://services6.arcgis.com/DZHaqZm9cxOD4CWM/ArcGIS/rest/services/Potential_Environmental_Justice_Area__PEJA__Communities/FeatureServer/0&source=sd (Navigate to New York State and Patterson on the map and then click on town to see information)

4.3 Public Concerns

The primary contaminant of concern which is impacting the wetland area adjacent to the closed landfill is polychlorinated biphenyls (PCBs) in sediment. PCBs have been detected at depths of up to 4 feet below the sediment surface, and the estimated volume of impacted sediment is approximately 3,600 cubic yards.

The NYSDEC received a number of comments and questions during the public comment period for the 1994 Proposed Remedial Action Plan (PRAP) prior to construction of the existing landfill cap. The most prevalent concerns from the general public were the migration of contaminants into the Great Swamp, into the Croton Reservoir System, or generally into the local groundwater system. There were questions related to the capping alternative that had been chosen as the best remedy and also concerns about whether the cap would provide a sufficient barrier to protect human health and the environment. Several concerns were related to the ability of the cap to reduce or eliminate the impact of the landfilled waste on groundwater, including waste remaining in contact with the groundwater and whether a groundwater barrier system should be used. Finally, there was concern about responsibility for the long-term groundwater monitoring of the nearby private drinking water wells.

5. Site Information

The Site is located east of Cornwall Hill Road in the Town of Patterson, Putnam County, New York. Appendix C contains a map illustrating the location of the Site.

5.1 Site Description

The Cross-County Sanitary / Kessman Landfill Site is an approximate 10-acre Site located at 286 Cornwall Hill Road in the Town of Patterson, approximately one mile south of the Village of Patterson, Putnam County, New York. The Site is bounded by undeveloped land to the north, a commercial property to the south, residential properties and Cornwall Hill Road to the west, and the Metropolitan Authority (MTA) Metro North Railroad and the Great Swamp Wildlife Management Area, a more than 4,830-acre protected wetland (NYSDEC Classification DP-22), to the east and northeast. The Patterson Municipal Landfill and the Patterson Town Garage are southwest of the Site, and a maintenance facility for an excavating/heavy equipment and trucking business is adjacent to the southern Site boundary.

The Site is the location of a closed and capped landfill which operated between approximately 1963 and 1974. The Site, which occupies two parcels (Tax Map Nos. 13-3-16 and 13-3-17) and a portion of a third parcel (Tax Map No. 13-3-14), is zoned as R4-Residential according to the Town of Patterson Assessor's online database. Three single-family residences are located west of the Site on property formerly used for agricultural purposes, and one additional private property (the maintenance facility discussed above) abuts the Site to the south.

5.2 Site Features

Relevant Site features are described below -

- The Site is approximately 10 acres, consisting of approximately 7.2 acres of closed and capped landfill and 2.8 acres of low-lying wetland area (approximately 1.6 acres of which contain impacted sediment)
- The surface elevation of the top of the landfill cap is approximately 440 feet above mean sea level (AMSL), 10 to 12 feet above the surrounding ground and the Great Swamp
- The capped landfill and the adjacent wetland area are relatively flat, in contrast to hills and ridges west and south of the Site, which rise to more than 550 feet AMSL

- The wetland area includes a shallow pond (approximately 1 to 2 feet deep) connected to a red maple/ash swamp which extends to the northeast off-Site
- The shallow pond is bordered by the capped landfill to the west and south, and the MTA Metro North Railroad embankment (ballast and track) to the east
- The intermittent/seasonal connection of the pond to the Great Swamp is to the north, adjacent to the railroad
- Muddy Brook, a tributary to the East Branch Croton River, flows from east to west through a culvert beneath the MTA Metro North Railroad embankment, located approximately 1,000 feet north of the Site. This culvert is the primary connection of the portions of the Great Swamp on the east and west sides of the railroad embankment
- The shallow pond is surrounded by a thick, inner ring of broadleaf cattail and a dense, outer ring of phragmites. The phragmites dominate the shallower portions of the pond, the surrounding wetland area, and extend far off-Site to the north as an understory in the red maple/ash swamp
- There are several single-family residences west of the Site, along Cornwall Hill Road. The Patterson Municipal Landfill and the Patterson Town Garage are southwest of the Site, and a maintenance and repair facility for heavy equipment borders the Site to the south
- The Site is fenced with a locked gate at the entrance to restrict vehicle traffic

5.3 Site Geology and Hydrogeology

The geological features and descriptions of Site hydrogeology are summarized in the following bullets:

- The refuse/fill thickness on-Site is approximately 10 to 14 feet in thickness;
- Beneath the refuse/fill is a thin layer of peat and organic soil, 2 to 4 feet in thickness;
- A thicker layer of glacial, silty, fine-to-coarse sand, approximately 20 to 35 feet in thickness, underlies the peat and organic soil layer;
- Beneath the glacial silty sand are softer carbonate and dolomite rocks (bedrock);.
- Water table elevation measurements indicated groundwater beneath the Site flows east toward the MTA Metro North Railroad embankment, the wetland area, and Muddy Brook; and
- The water table is approximately 5 to 15 feet below ground surface.

5.4 Past Use(s) of the Site

The Site was operated as a municipal landfill by the Town of Patterson on the Kessman family property from approximately 1963 to 1972. In 1972 the landfill was sold to Cross County Sanitation, Inc., a private carting company, which operated at the Site until 1974. Historic information collected by NYSDEC alleges that unknown types and quantities of industrial and hazardous wastes were disposed of at the landfill between 1972 and 1974. The Site was ordered closed in 1974 by NYSDEC, at which time the previous landowner (Kessman) repossessed the property. Clean soil was obtained from nearby sources and used to cover the refuse after landfill operations ceased.

5.5 Historic Site Investigations and Remedial Action

A Phase I Environmental Site Assessment performed in 1983 identified the presence of leachate seeps and approximately 40 to 60 partially exposed 55-gallon drums, several leaking and emitting strong chemical odors. In addition, the vegetation in areas between the toe of the landfill slope and the MTA Metro North Railroad embankment were observed to be discolored and distressed.

Based on the findings of the Phase I, a Phase II Environmental Site Investigation (ESI) was performed in 1985. The Phase II ESI included a geophysical survey; collection and analysis of surface water, groundwater, sediment, and leachate samples; excavation of test pits and collection of soil samples; and collection of groundwater samples from a nearby domestic water well and other installed wells. One ground water monitoring well downgradient of the Site and adjacent to the area where drums were observed exhibited impacts from the landfill. Two groundwater monitoring wells downgradient of the Site but upgradient of the drum area were sampled and results indicated the wells were not impacted.

Sediment samples collected from a downstream location indicated the presence of contamination. Based on the findings of the Phase II ESI, the Site was reclassified to Class 2 by NYSDEC. A Class 2 site represents a significant threat to public health or the environment. By May 1991, the NYSDEC, under the State Superfund Program, initiated a Remedial Investigation (RI) and subsequent Feasibility Study (FS) to address the contamination and facilitate decisionmaking for a Site remedy.

The RI was conducted between December 1991 and May 1992. The primary objective of the RI was to characterize the nature and extent of contamination in soil, sediment, surface water, and groundwater at the Site and evaluate the risk for migration from the

Site to sensitive receptors. During the RI, Site-specific data was obtained from an variety of sources: aerial photographs and historical records; ecological inventories; geophysical surveys; samples of cover soil, landfill refuse, and overburden soil collected from beneath the fill areas via test pits and soil borings; groundwater samples collected from existing and newly installed monitoring wells and nearby private drinking water wells; leachate seep, wetland surface water, and sediment samples collected from the Site; hydrogeologic testing; and, photogrammetric survey maps. The RI Report is available in electronic format as indicated in Appendix A.

Site-related organic and inorganic contaminants were detected in surface soil, refuse, marsh deposits beneath the refuse, soil underlying the marsh deposits, and bedrock (groundwater). The Site-related contaminants (primarily PCBs and volatile organic compounds, and to a lesser extent, pesticides and metals) were believed to have originated from four drum disposal areas (drum nests) identified along the eastern boundary of the landfill adjacent to the wetland. In addition, the RI identified the landfill refuse as the source of the other contaminants including pesticides and metals. Combinations of these constituents was detected in the leachate seeps, groundwater, sediment, and surface water. The Remedial Investigation was completed in 1994 and concluded that Site-related contaminants were migrating off-Site. The data collected during the RI was used to prepare the FS later in 1994 to evaluate potential remedial strategies and facilitate decisionmaking for the Site remedy.

While the RI and FS were occurring, the NYSDEC conducted an Interim Remedial Measure between the fall of 1993 and December of 1994. More than 115 drums were removed in 1993, and the surrounding contaminated soil was excavated from the northern toe of the landfill (adjacent to the wetland). The work continued into 1994, and at the completion of the Interim Remedial Measure in December 1994, a reported 100 cubic yards of soil had been excavated and a total of 272 drums had been removed and transported off-Site for disposal.

Subsequently, NYSDEC decided upon a remedy for the Site, and a Record of Decision was published in November 1994. Remedial Action activities at the Site were initiated in August 1995 and completed in August 1996. The Remedial Action consisted of excavation of PCB-impacted sediment from the wetland immediately adjacent to the landfill; restoration of the remediated wetland area; installation of landfill gas venting and leachate collection systems; and capping of the landfill. Post remedial activities, consisting of routine operation, maintenance, and monitoring were initiated in 2000, and are ongoing.

5.6 Follow-up Monitoring and Investigations

Early monitoring results (2003) indicated the presence of residual PCBs in sediment adjacent to the landfill. Follow-up sampling was conducted between 2003 and 2012 to identify the nature and extent of contamination in sediment. Investigations into the source of contamination were undertaken in 2012 and 2013. Discussion of further steps taken to address the residual PCBs found in 2003 are presented in the following section.

6. Remedial System Optimization Process

This section of the CP Plan summarizes the Remedial System Optimization (RSO) process, including recently completed investigation and decision-making activities, outlines the upcoming cleanup activities, and identifies CP opportunities during implementation of the RSO.

6.1 RSO Study

An RSO study is conducted after a Remedial Action is complete when the NYSDEC determines that an in-depth evaluation of the remedy performance is needed. An RSO may be deemed necessary if any of the following occur:

- The remedial actions have not met or are not expected to meet the remedial action objectives in the estimated time frame;
- The management and operation of the remedial system is exceeding the estimated costs;
- The remedial system is not performing as expected or as designed;
- Previously unidentified source material may be suspected;
- Plume shift has potentially occurred;
- Site conditions change due to development, change of use, change in groundwater use, etc.;
- There is an anticipated transfer of the site management to another remedial party or agency; and/or
- A new and applicable remedial technology becomes available.

An RSO is intended provide a critique of a site's conceptual model, give a summary of past performance, document current cleanup practices, summarize progress made toward the site's cleanup goals, gather additional performance or media specific data and information, and provide recommendations for improvements to enhance the ability of the present system to reach the remedial action objectives or to provide a basis for changing the remedial strategy.

The RSO focuses on overall site cleanup strategy, process optimization and management, with the intent of identifying impediments to the cleanup strategy, as well as recommending potential improvements to site operations to increase efficiency, cost effectiveness, and remedial time frames. Green remediation technology and principles

are also considered when performing the RSO. Recommendations developed in the RSO process may address concepts such as:

- Improvements that will make the cleanup strategy more efficient, decrease maintenance costs and downtime, and effectively target the contamination;
- Modification or optimization of a treatment system process;
- Determining whether an in-situ remedy or monitored natural attenuation can replace an active treatment remedy;
- Determining the effectiveness of the system versus system shutdown;
- Application of a new technology or remedial approach;
- Improvements that will reduce energy cost or frequency of site visits;
- Evaluation of vendors and disposal arrangements for cost savings;
- Consideration of alternate site management techniques; and
- Implementation of green remediation concepts.

The phases of the RSO process generally include:

- Work Plan/Investigation Plan Development;
- Work Plan/Investigation Plan Implementation;
- RSO Report Preparation; and
- Implementation of Recommended Actions and Final Report.

Investigations to delineate the extent of contamination at the Site began in 2013 and were completed in November 2017. In the fall of 2018, supplemental sediment and groundwater sampling, geotechnical investigations, and geophysical investigations centered on the leachate collection system were performed. These investigations were aimed at determining whether or not the landfill was a continuing source of contamination to the wetland area. Although a definitive source of contamination was not identified, the source was not believed to be related to failure of the landfill closure systems. Ultimately, the contamination was believed to have been inadvertently not removed during the earlier Remedial Action.

Following delineation of the extent of residual contamination, an RSO Report was prepared and completed in December 2020. The RSO Report focuses on the remediation of residual PCB contamination in sediment in the wetland adjacent to the closed landfill. The RSO Report includes an evaluation of various alternatives to address the contamination, facilitating Department decisionmaking for selection of cleanup actions. Other studies performed in support of the RSO included a Fish and Wildlife Resource

Impact Assessment (December 2019) and a Phase I Bog Turtle Habitat Survey (June 2020). The Final RSO Report is available here:

https://www.dec.ny.gov/data/DecDocs/340011/

The only step remaining in the RSO process is Implementation of the Recommended Cleanup Actions and Final Report. The following section describes the recommended actions and the plan for implementation.

6.2 RSO Recommended Cleanup Actions

The goal of the RSO Cleanup for the Site is to achieve cleanup levels that protect public health and the environment. The key components of the recommended cleanup actions are:

- Installation of temporary facilities and controls in support of the cleanup action including offices and sanitary facilities, erosion and sediment controls, and equipment staging areas;
- Control, removal, and treatment of standing water, including installation, setup, and operation of a temporary on-Site water treatment system;
- Excavation and removal of PCB-contaminated sediment to the cleanup objectives in the RSO Report;
- Dewatering, processing, and stabilization of excavated sediment, and transport and disposal of stabilized sediment at an off-Site disposal facility;
- Restoration of the affected wetland area and disturbed areas of the existing landfill cap, including supply and placement of imported soils, trees, shrubs, and grasses;
- Removal of temporary facilities and controls, and demobilization from the Site; and
- Update of the existing Site Management Plan outlining inspections, maintenance and monitoring to be used to ensure continued protectiveness of the remedy.

RSO cleanup activities are expected to begin in May 2022, and should be completed within about 7 months. Maintenance and monitoring of the restored wetland plant growth and the restored landfill cap surface seed growth will continue following the cleanup. The existing environmental easements controlling future land use at the Site will remain in place. Following completion of the RSO recommended cleanup actions, a Final Engineering Report (FER) will be prepared to document the cleanup, and an updated Site Management Plan (SMP) will be prepared to outline the steps necessary to monitor and ensure future protectiveness. The FER and the SMP will both be prepared under the

supervision of, and certified by, a Professional Engineer licensed to practice in New York State.

6.3 Certificate of Completion

Upon approval of the FER, NYSDEC may issue a Certificate of Completion (COC). The COC would recognize the findings of the FER and note that the cleanup program achieved a cleanup level consistent with the use for the Site.

6.4 Site Management

Site management is the last phase of the Site cleanup program. This phase begins when the FER and SMP are prepared and certified, and the COC is issued. Site management may be conducted by NYSDEC, or under NYSDEC oversight since contamination will remain in place (in the capped landfill). Site management incorporates institutional and engineering controls to ensure that the remedy implemented for the Site remains protective of public health and the environment.

An *institutional control* is a non-physical restriction on use of the Site, such as a deed restriction that would prevent or restrict certain uses of the property. An institutional control may be used when the cleanup action leaves contamination that makes the Site suitable for certain, but not all uses. The Site will be subject to institutional controls for the foreseeable future.

An *engineering control* is a physical barrier or method to manage contamination. Examples include caps, covers, barriers, fences, and treatment of water supplies. The Site cap, perimeter fence, signage, leachate collection system, groundwater monitoring well network, and gas venting system are the primary engineering controls that will remain in place for the foreseeable future. These elements will be subject to regular inspections.

Site management will continue until NYSDEC determines that it is no longer needed. During the Site management phase, NYSDEC may also take steps to reclassify the Site or delist the Site from the Registry.

Appendix A Project Contacts and Locations of Reports and Information

Project Contacts

For information about the Site's investigation and cleanup program, the public may contact any of the following project staff:

New York State Department of Environmental Conservation (NYSDEC):
Project-Related Questions
Gail Dieter
NYSDEC Project Manager
Division of Environmental Remediation
625 Broadway
Albany, New York 12233
(518) 402-9645
Gail.Dieter@dec.ny.gov

New York State Department of Health (NYSDOH):
Project-Related Health Questions
Julia Kenney
New York State Department of Health
Empire State Plaza
Corning Tower Room 1787
Albany, New York 12237
(518) 402-7860
Julia.Kenney@health.ny.gov

Locations of Reports and Information

The websites identified below are being used to provide the public with convenient access to important project documents as well as promote sustainability by reducing the energy and raw materials used in paper production, distribution, use and disposal:

Access project documents through the DECinfo Locator at the following website:
https://www.dec.ny.gov/data/DecDocs/340011/

Environmental Site Remediation Database (enter the site code – **340011** – in the search field near the top):
https://www.dec.ny.gov/cfmx/extapps/derexternal/index.cfm?pageid=3

Interactive map to access DEC documents and public data about the environmental quality of specific sites:
https://www.dec.ny.gov/pubs/109457.html

Stay Informed with DEC Delivers and sign up to receive site updates by email:
www.dec.ny.gov/chemical/61092.html

For more information about New York's State Superfund Program, visit**:**
www.dec.ny.gov/chemical/8439.html

CUSTODIAL RECORD/PERTINENT SITE DOCUMENTS
New York State Department of Environmental Conservation
Cross-County Sanitary / Kessman Landfill, Site No. 340011
Patterson, New York

- Camp, Dresser, and McKee, Inc., Phase I Environmental Site Assessment (Phase 1 ESA), Cross County Sanitary - Kessman Landfill Site, 1983
- Wehran Engineering, P.C., Phase II Environmental Site Investigation (Phase II ESI), Cross County Sanitary Kessman Landfill Site, 1985
- EC Jordan Co., Remedial Investigation / Feasibility Study Health and Safety Plan, Part II, Kessman Landfill Site, August 1991
- EC Jordan Co., Final Remedial Investigation / Feasibility Study Quality Assurance Project Plan, Kessman Landfill Site, November 1991
- ABB Environmental Services, Final Remedial Investigation / Feasibility Study Work Plan, Kessman / Cross County Sanitation Landfill Site, November 1991
- ABB Environmental Services, Remedial Investigation Report – Volume I and II, Kessman / Cross County Sanitation Landfill Site, November 1992
- ABB Environmental Services, Phase I Feasibility Study Report, Kessman / Cross County Sanitation Landfill Site, December 1992
- ABB Environmental Services, Phase II Feasibility Study Report, Kessman / Cross County Sanitation Landfill Site, January 1993
- ABB Environmental Services, Phase II RI Sediment / Surface Water Sampling Data Summary Report, Kessman / Cross County Sanitation Landfill Site, September 1993
- ABB Environmental Services, Drum Removal IRM Work Plan, Kessman / Cross County Sanitation Landfill Site, September 1993
- NYSDEC, Proposed Remedial Action Plan, Kessman / Cross County Sanitation Landfill Site, July 1994
- ABB Environmental Services, Remedial Investigation Report, Volumes I and II, Kessman / Cross County Sanitation Landfill Site, September 1994
- ABB Environmental Services, Feasibility Study Report, Kessman / Cross County Sanitation Landfill Site, September 1994
- NYSDEC, Record of Decision (ROD), Kessman / Cross County Sanitation Landfill Inactive Hazardous Waste Site, November 1994
- ABB Environmental Services, Final Remedial Design Work Plan, Kessman / Cross County Sanitation Landfill Site, December 1994
- ABB Environmental Services, Construction Management Work Plan, Kessman / Cross County Sanitation Landfill Site, August 1995

- ABB Environmental Services, Final Remediation Report, Volumes I and II, Kessman / Cross County Sanitation Landfill Site, July 1997
- Cross County Sanitary - Kessman Landfill Site (NYSDEC Site No. 340011)
  Custodial Record 2
- Iyer Environmental Group, PLLC, Operation, Maintenance and Monitoring (OM&M) Report, Cross
- County Sanitation / Kessman Landfill, Site No. 340011, March 2005
  Iyer Environmental Group, PLLC, OM&M Report (2005 – 2007), Cross County Sanitation / Kessman Landfill, Site No. 340011, November 2007
- NYSDEC, Site Management Plan (SMP), Cross County Sanitation - Kessman Landfill, June 2011
- Aztech Technologies, Inc., PCB Delineation Sampling Report, Cross County / Kessman Landfill, Site No. 340011, January 2013
- Aztech Technologies, Inc., Site Management Plan (Rev. 1), Cross County Sanitary – Kessman Landfill, NYSDEC Site Number: 3-40-011, January 2014
- NYSDEC, Environmental Easement, Site No. 340011(e), May 2014
- NYSDEC, Environmental Easement, Site No. 340011(e1), August 2014
- TRC Engineers, Inc., Remedial System Optimization Report, Cross-County Sanitary / Kessman Landfill, 286 Cornwall Hill Road, Patterson, New York 12563, NYSDEC Site No. 340011, December 2020
- TRC Engineers, Inc., Contract Documents, Cross-County Sanitary / Kessman Landfill, Site No. 340011, Contract No. D012180, Town of Patterson, Putnam County, New York, November 2021

Appendix B Site Contact List

This list has been developed to keep the community informed about, and involved in, the Site's investigation and cleanup process. The Site contact list will be used periodically to distribute fact sheets that provide updates about the status of the project. These will include notifications of upcoming activities at the Site (such as fieldwork), as well as availability of project documents and announcements about public comment periods.

County, Town, and State Officials:

Putnam County Executive Officer:

- Mary Ellen Odell
  Putnam County Office Building
  40 Gleneida Avenue, 3rd flr
  Carmel, New York 10512
  (845) 808-1001
  maryellen.odell@putnamcountyny.gov

Town of Patterson Board Supervisor:

- Richard Williams, Sr.
  Town Of Patterson Town Hall
  1142 Route 311 / PO Box 470
  Patterson, NY 12563
  (845)878-6500
  supervisor@pattersonny.org

New York State Senator:

- Sue Serino
  117 Town Park Land
  1st Floor
  Putnam Valley, NY 10579
  (845) 528-0417
  Serino@nysenate.gov

New York State Assembly Member:

- Kevin M. Byrne
  3 Starr Ridge Road
  Suite 204
  Brewster, NY 10509
  (845) 278-2926

Town Of Patterson Planning Board:

- Planning Board Chairman
  Kevin Butler
  Patterson Town Hall
  1142 Route 311 / P.O. Box 470
  Patterson, NY 12563
  (845) 878-6500
  (845) 878-2019 (fax)
  planning@pattersonny.org

- Planning Board Vice Chairman
  Ronald Taylor
  Patterson Town Hall
  1142 Route 311 / P.O. Box 470
  Patterson, NY 12563
  (845) 878-6500
  (845) 878-2019 (fax)
  planning@pattersonny.org

Site Owner(s) and Operator(s):

The Site is comprised of three parcels; lots 13-3-16 and 13-3-17, currently vacant, are owned by the County of Putnam; lot 13-3-14 (partial) is owned by Hidden Valley Ranch LLC. Site owners and/or operators and property owners of abutting/adjoining land, are listed on the following page.

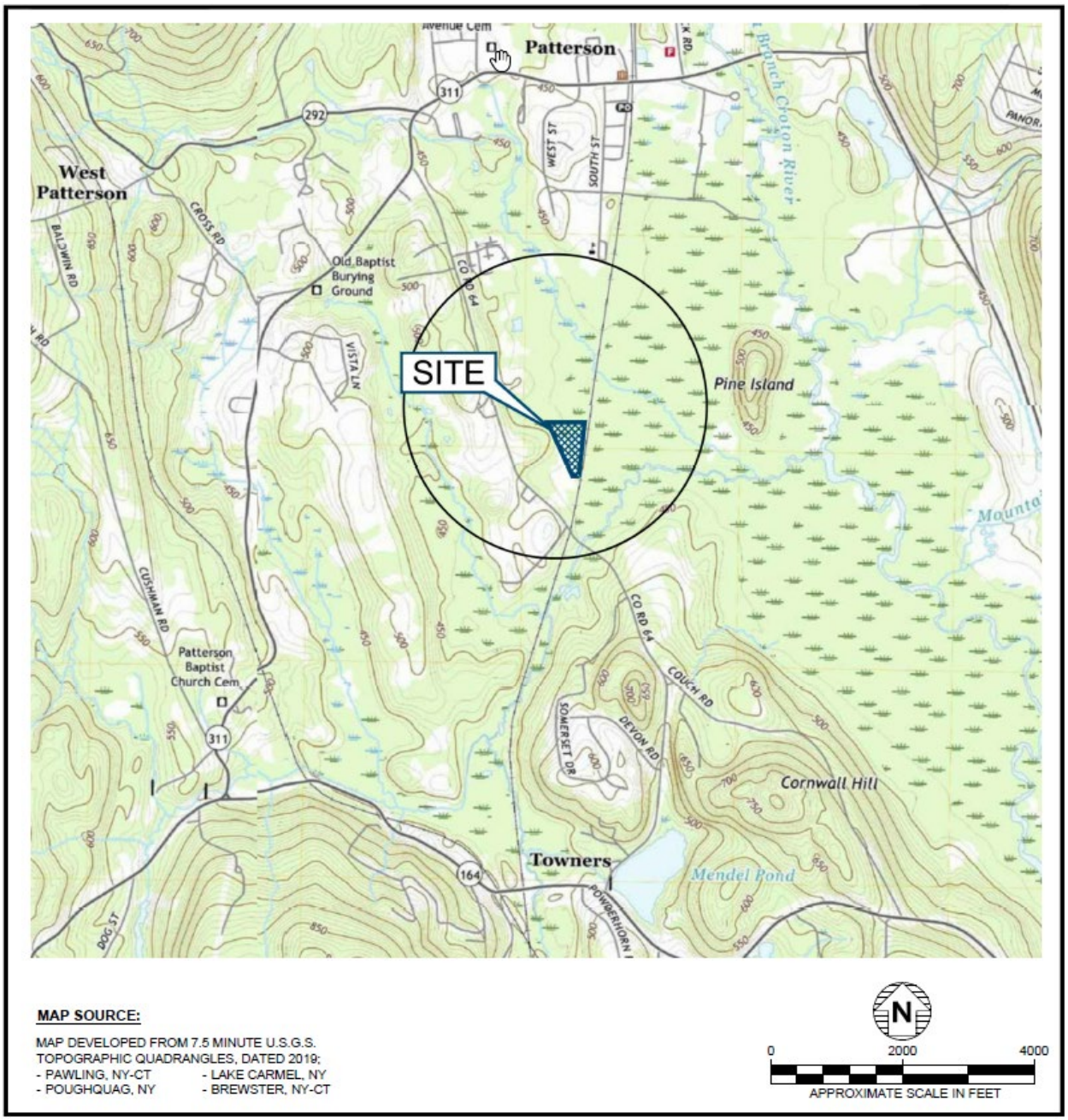
Site Owner(s) and Operator(s):

- 286 Cornwall Hill Road (Site)
  Property Tax ID:13-3-16 & 13-3-17
  Putnam County
  40 Glenedida
  Carmel, NY 10512
- 326 Cornwall Hill Road
  Property Tax ID: 13-3-14
  Hidden Valley Ranch LLC
  683 Route 311
  Patterson, NY 12563

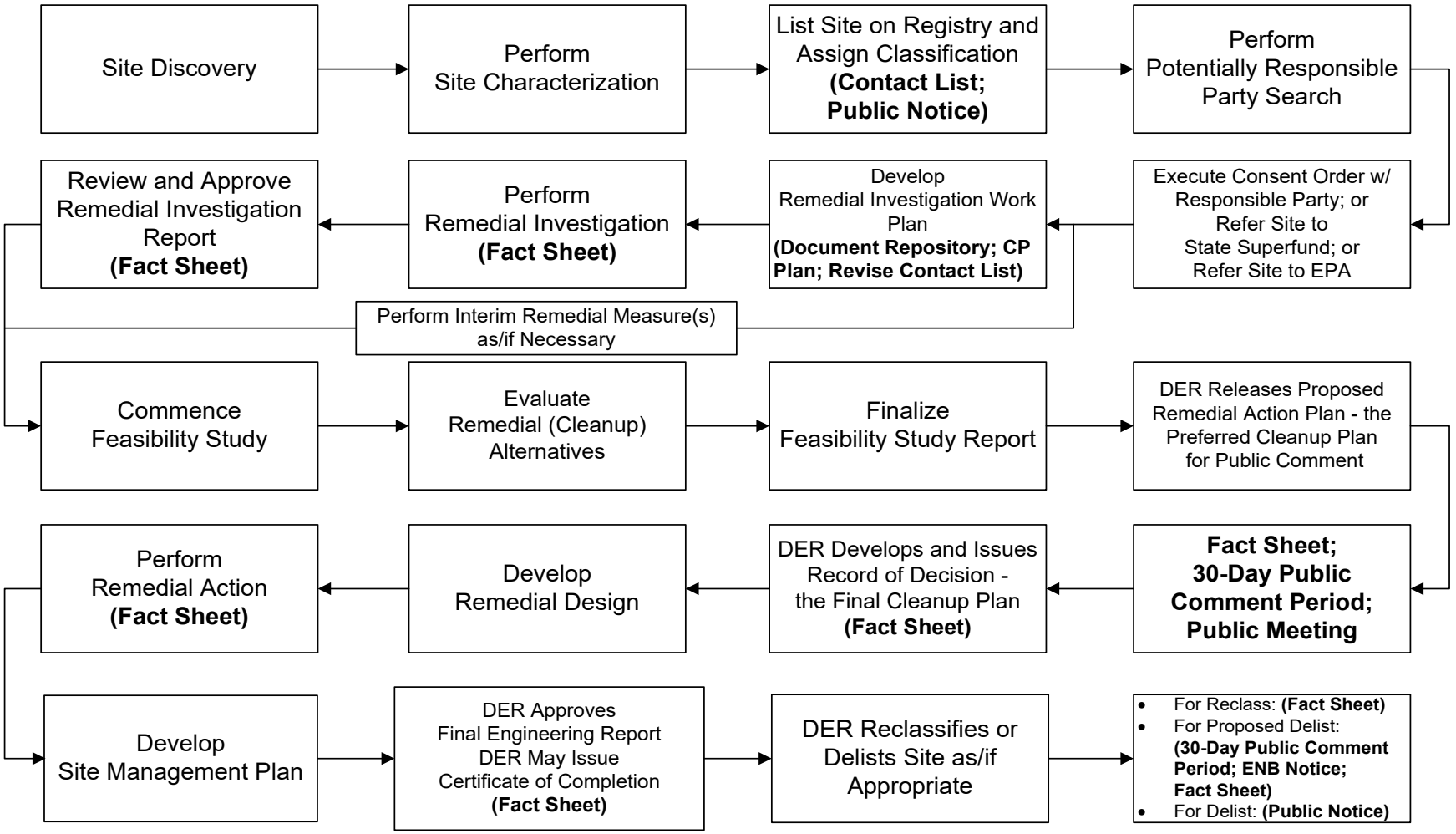
Abutting/Adjacent Property Owners:

- 272 Cornwall Hill Road
  Property Tax ID: 13-3-18
  Svoboda Bulldozing & Trucking
  1944 Route 22
  Brewster, NY10509
- 316 Cornwall Hill Road
  Property Tax ID: 13-3-15.3
  Jeffrey and Bridget Kessman
  316 Cornwall Hill Road
  Patterson, NY 12563
- 318 Cornwall Hill Road
  Property Tax ID: 13-3-15.2
  Andrew Barberesi
  318 Cornwall Hill Road
  Patterson, NY 12563
- 320 Cornwall Hill Road
  Property Tax ID:13-3-15.1
  Joseph Szilagyi
  320 Cornwall Hill Road
  Patterson, NY 12563
- Mathew Patterson Elementary School
  Property Tax ID: 13.8-1-88
  Carmel Central School District
  71-100 South Street
  Patterson, NY 12563

Appendix C Site Location Map



Appendix D State Superfund Program Remedial Process



Note: CP Activities are in **Bold**.

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