

**FOURTH FIVE-YEAR REVIEW REPORT FOR
LEY CREEK PCB DREDGINGS SUBSITE
ONONDAGA LAKE SUPERFUND SITE
ONONDAGA COUNTY, NEW YORK**



Prepared by

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Region 2
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LIST OF ABBREVIATIONS & ACRONYMS

CFR	Code of Federal Regulations
EPA	United States Environmental Protection Agency
FYR	Five-Year Review
GM	General Motors
ICs	Institutional Controls
IFG	Inland Fisher Guide
µg/kg	micrograms per kilogram
mg/kg	milligrams per kilogram
mg/L	milligrams per Liter
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
NYSDEC	New York State Department of Environmental Conservation
OM&M	Operation, Monitoring and Maintenance
OU	Operable Unit
PCBs	Polychlorinated Biphenyls
PRP	Potentially Responsible Party
RACER	Revitalizing Auto Communities Environmental Response
RAOs	Remedial Action Objectives
REALM	Remediation and Liability Management Company, Inc.
RA	Remedial Action
RD	Remedial Design
ROD	Record of Decision
SVOCs	Semivolatile Organic Compounds
UU/UE	Unlimited Use/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 Onondaga Lake site currently includes eleven subsites (subsites are defined as any site that is situated on Onondaga Lake's shores or tributaries that has contributed contamination to or threatens to contribute contamination to Onondaga Lake). Each subsite is an operable unit (OU). This FYR report evaluates OU10, the Ley Creek PCB Dredgings subsite (Subsite).

This is the fourth FYR for the Subsite. The triggering action for this statutory review is the completion date of the previous FYR, which was April 27, 2017. 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 U.S. Environmental Protection Agency (EPA) is preparing this FYR review pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act Section 121, consistent with the National Contingency Plan (NCP)(40 CFR Section 300.430(f)(4)(ii)), and considering EPA policy.

The Subsite FYR team was led by the EPA remedial project manager, Robert Nunes. Other participants included New York State Department of Environmental Conservation (NYSDEC) project manager, Jacky Luo, EPA hydrogeologist, Kathryn Flynn, EPA human health and ecological risk assessor, Nicholas Mazziotta, and EPA community involvement coordinator, Larisa Romanowski. The potentially responsible party, Revitalizing Auto Communities Environmental Response (RACER) Trust, was notified of the initiation of the FYR. The review began on February 24, 2021.

Site Background

The Subsite is located along the south bank of Ley Creek in the Town of Salina, Onondaga County, New York. A site location map and site plans are included as Figures 1 through 6 in Appendix A. It is bounded by Factory Avenue on the south and Ley Creek to the north. The New York State Thruway is located immediately to the north of Ley Creek. The eastern limit of the Subsite is the General Motors Outfall 003, which is located just west of Townline Road. The western limit is located approximately 4,000 feet downstream near the Town of Salina Highway Department garage. A fence extends along the south side of the study area approximately 10 feet north of Factory Avenue and to the east and west; however, access along the bank of Ley Creek, which forms the northern site boundary, remains unrestricted.

Prior to the early 1970s, the combination of poor channel conditions and large impermeable areas in the Ley Creek watershed resulted in extensive flooding, some of the worst of which was near the General Motors Corporation (GM)-Inland Fisher Guide (IFG) facility in 1969. Following the

1969 flooding event, the Ley Creek Drainage District was created to facilitate mitigative measures, which included the clearing and dredging of the creek channel in order to alleviate future flooding. In 1970, contractors, under the direction of the Onondaga County Department of Drainage and Sanitation, began dredging of a portion of Ley Creek. Other reaches of the creek were subsequently dredged in phases. While the final disposition of much of the dredged material is not known, some dredged material generated during these activities was placed along the south bank of the creek or used for land restoration projects. It was subsequently determined that much of the dredged sediments were contaminated with polychlorinated biphenyls (PCBs) as a result of various industrial wastewater discharges to the creek. The Subsite is currently zoned for commercial use.

The 18-acre Subsite consists of dredged spoil materials located on the south bank of the creek. These materials have been covered with a one-foot thick soil cover.

Appendix B, attached, summarizes the documents utilized to prepare this FYR.

FIVE-YEAR REVIEW SUMMARY FORM

SITE IDENTIFICATION		
Site Name: Onondaga Lake site (Ley Creek PCB Dredgings Subsite – Operable Unit 10)		
EPA ID: NYD986913580		
Region: 2	State: NY	City/County: Town of Salina, Onondaga County
SITE STATUS		
NPL Status: Final		
Multiple OUs? Yes	Has the site achieved construction completion? No	
REVIEW STATUS		
Lead agency: State <i>[If "Other Federal Agency", enter Agency name]:</i>		
Author name (Federal or State Project Manager): Robert Nunes		
Author affiliation: EPA		
Review period: 4/28/2017 – 3/23/2022		
Date of site inspection: 7/15/2021		
Type of review: Statutory		
Review number: 4		
Triggering action date: 4/27/2017		
Due date (five years after triggering action date): 4/27/2022		

II. RESPONSE ACTION SUMMARY

Basis for Taking Action

The deposited dredge spoil materials was determined to represent a threat to the environment as a contributing source of PCBs to the fish, sediments, and groundwater in the vicinity of the Subsite. Ecological risk calculations indicated that the un-remediated PCB-contaminated dredge material/soils posed an unacceptable risk to terrestrial species and their predators, such as the short-tailed shrew and the red-tailed hawk.

Response Actions

After investigations related to the deposited dredge materials conducted in 1985, 1987, and 1989, in 1991, NYSDEC and GM entered into an Administrative Order on Consent for performance of a remedial investigation and feasibility study (RI/FS) to fully characterize the areal and vertical extent of contamination present and to identify and evaluate remedial alternatives. In 1993, the RI was completed. Also in 1993, the adjacent GM-IFG subsite was listed on NYSDEC's Registry of Inactive Hazardous Waste Disposal Sites, as a Class 2 site. In 1996, the FS report was accepted by NYSDEC.

A Record of Decision (ROD) was issued for the Subsite by NYSDEC in March 1997; EPA concurred with the ROD in February 1998. The following remedial action objectives (RAOs) were identified in the ROD:

- reduce, control, or eliminate the PCB contamination present within the dredge materials/soils on the Subsite;
- eliminate the threat to surface waters and sediments by eliminating any future contaminated surface run-off from the contaminated dredge material/soils on site;
- reduce short-term impacts to surface water and air expected as a result of remedial activities;
- eliminate a source of PCBs for uptake by fish and other organisms in Ley Creek;
- eliminate the potential for direct human or animal contact with the contaminated dredge materials/soils on site; and
- prevent, to the extent possible, migration of contaminants into the groundwater.

The major components of the selected remedy include:

- Excavation and disposal of deposited dredge material/soils that contain PCBs at concentrations exceeding 50 milligrams per kilogram (mg/kg) at a permitted hazardous waste landfill;
- Consolidation and covering of the remaining PCB-contaminated dredge materials where concentrations are less than 50 mg/kg but exceed 1 mg/kg at the surface and 10 mg/kg in subsurface areas;
- Removal of deposited dredged materials, at a minimum, from the first 25 feet of the floodway area to restore the area to an appropriate elevation. After the restoration of the floodway elevations, covering of any remaining materials above the remedial level

- remaining in the floodway with a geomembrane or clay and 12 inches of soil or a gravel roadway. Grading and covering with a vegetated soil cover consisting of 12 inches of soil in areas outside of the floodway;
- Construction of a gravel access road adjacent to the southern bank of the Creek to allow for future maintenance and/or dredging;
 - Grading and covering four drainage swales from Factory Avenue with a vegetated cover. Lining with a half pipe or formed concrete spillway where the swales pass through the area of covered dredge spoils. Provision of access pads and pathways, as well as gates in the fence, to allow access for maintenance of the County sewer line which is also located in the area to be covered;
 - Completion during the remedial design (RD) of a hydraulic analysis and floodplain assessment to assure compliance with Executive Order 11988 (Floodplain Management) for the consolidated capped materials to ensure that the material to be left in the floodplain and floodway will not result in any significant change in flood elevations and that there will not be any adverse impact to the remedy from a 100- or 500-year flood;
 - Installation of a chain-link fence around the area of the vegetative cover to limit access;
 - Implementation of deed restrictions to preclude activities that could potentially expose contaminated materials and to ensure that the integrity of the cover is maintained; and
 - Implementation of a long-term monitoring program.

Response Action Implementation

During the RD, based upon surface water flow velocity calculations, it was determined that a cover consisting of 12 inches of well-maintained vegetative cover would provide adequate erosion protection for even a 500-year flood and could be used in lieu of a cover with geomembrane or clay in the floodway as specified in the ROD. However, as a measure of additional erosion protection, a cover which includes a synthetic geomat from the southern edge of Ley Creek to the northern edge of the access road was included in the RD.

Excavation and staging of the deposited dredged material/soil that contained PCBs greater than or equal to 50 mg/kg was conducted from 1999 to 2000. Approximately 3,750 cubic yards of excavated, material/soil were loaded into dump trailers and were transported to the Chemical Waste Management facility in Model City, New York. Approximately 920 cubic yards of deposited dredged material/soil located on the north bank of Ley Creek were excavated from an area of approximately 6,200 square feet to a depth of 4 feet and consolidated with the on-site dredged spoils on the south bank of Ley Creek containing PCBs less than 50 mg/kg. The excavated area on the north bank was backfilled and seeded with Reed Canary Grass (*Phalaris arundinacea*).

A vegetative cover was installed over the consolidated dredged material/soil on the south bank of Ley Creek to meet the RAOs called for in the ROD. Due to constructability concerns with respect to the installation of the nonwoven geotextile between the vegetative soil and top soil layers, the RD was modified with NYSDEC approval during the remedial action (RA) to allow for the geotextile to be placed beneath one 12-inch layer of soil suitable to support vegetation. With the exception of areas identified for wetland mitigation and the excavated area in the northern area of the north bank of Ley Creek, the vegetative cover system was hydroseeded with Lancer Flat Pea

(*Lathyrus sylvestris*) and was fertilized to establish vegetation. Wetland mitigation consisted of planting Reed Canary Grass (*Phalaris arundinacea*) in approximately 1.5 acres of the Subsite to replace 1.4 acres of wetlands eliminated during the RA. By 2005, restoration goals for the wetland area were met in three of the four sample plots. Following additional restoration work in the sample plot in 2007, an additional 0.6-acre area of vegetation buffer was established along the southern boundary of the restored wetland area in lieu of additional wetland monitoring.

During the RA, six monitoring wells were decommissioned in accordance with NYSDEC-approved procedures because they were located in areas designated for excavation. One additional well was decommissioned because it exhibited artesian conditions, with water flowing from the top of the casing, which would likely have eroded the vegetative cover. Three additional monitoring wells were also lost during excavation activities. Six monitoring wells did not need to be removed to accommodate construction, but were modified to an elevation flush with the final grade of the vegetative cover. Three groundwater monitoring wells were installed in 2001 to assess groundwater quality in the deep overburden migrating from the GM-IFG subsite. Two additional shallow monitoring wells and one nested well pair (one shallow well and one deep well) were installed at the Subsite in 2006.

During the RA, surface water control was enhanced by the installation of five new catch basins and five new culverts to convey storm water to Ley Creek. Overflow spillways were constructed adjacent to the culverts to provide a controlled path for stormwater to flow to Ley Creek in the event that the flow to the catch basins is restricted by debris.

Institutional Controls Summary

Table 1 summarizes the status of the institutional controls (ICs).

Table 1: Summary of Planned and/or Implemented Institutional Controls

Media, engineered controls, and areas that do not support UU/UE based on current conditions	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Title of IC Instrument Implemented and Date (or planned)
Vegetative/Soil Cover	Yes	Yes	All	Cover be maintained in accordance with the operation, maintenance, and monitoring (OM&M) plan. No activities that would threaten the integrity of the cover be undertaken or permitted	Deed restriction recorded in the Onondaga County Clerk’s office on July 6, 2007.
Groundwater				Groundwater be prohibited from use as drinking water.	

Systems Operations/Operation & Maintenance

This Subsite has ongoing maintenance and monitoring activities. Since the completion of the RA, site inspections have been conducted in accordance with the NYSDEC-approved OM&M Manual for the Subsite. Routine annual inspections have been conducted on the Subsite since 2007. No modifications to these activities have been made since the previous FYR.

During the site inspection for the third FYR, reddish/brown-colored stormwater was observed to be flowing into Catch Basin 2 (CB-2). An inspection was conducted in April 2017. Reddish/ brown staining was observed to originate on the south side of Factory Avenue (*i.e.*, unrelated to the Subsite or adjacent GM-IFG subsite). Four surface water and three sediment samples were collected by NYSDEC in September 2017 on the south side of Factory Avenue upstream of CB-2 in areas where reddish/brown-colored runoff was observed and analyzed for inorganics and semivolatile organic compounds (SVOCs). Mercury was detected in two of the three sediment samples at 0.25 mg/kg and 0.10 mg/kg, and in one of the four surface water samples at 0.00026 milligrams per liter. Several inorganics were detected, as well. Among the SVOCs, naphthalene was detected at 9,800 micrograms per kilogram ($\mu\text{g}/\text{kg}$) in one sediment sample. In the same sample, 2-methylnaphthalene was detected at an estimated concentration of 620 $\mu\text{g}/\text{kg}$. In one of the two other sediment samples, fluoranthene and pyrene were detected at estimated concentrations of 130 $\mu\text{g}/\text{kg}$ and 120 $\mu\text{g}/\text{kg}$, respectively. SVOCs were not detected in the remaining sediment sample nor in the four surface water samples. These constituents are not site-related. The reddish/brown colored stain is attributable to the presence of naturally-occurring iron in the vicinity. Due to the proximity of an active road relative to where the samples were collected, the detected SVOCs are most likely attributable to residuals from motor vehicles and roadway runoff. No further investigation or action relating to the presence of these constituents is warranted.

Potential site impacts from climate change have been assessed, and the performance of the remedy is currently not at risk due to the expected effects of climate change in the region and near the Subsite.

III. PROGRESS SINCE THE LAST REVIEW

The protectiveness determinations from the last FYR is presented in Table 2, below.

Table 2: Protectiveness Determinations/Statements from the 2017 Five-Year Review

OU #	Protectiveness Determination	Protectiveness Statement
10	Protective	The implemented actions at the Subsite are protective of human health and the environment.

Although there were no recommendations made in the last FYR, several suggestions were made. Table 3, below, summarizes the status of the suggestions.

Table 3: Status of Suggestions From 2017 Five-Year Review

Other Findings	Implementation Status
<p>Submersible pumps could not be lowered into groundwater monitoring wells MW-8, MW 12, and MW-13 during sampling. The wells could only be sampled with bailers. The wells should be repaired or replaced.</p>	<p>RACER’s consultant, Ramboll, reportedly observed the deformation described at monitoring wells MW-8 and MW-12, but did not understand why a submersible pump could not be lowered into monitoring well MW-13, as Ramboll did not observe deformation or defects at this well. RACER redeveloped monitoring wells MW-8 and MW-12 in November 2021. Ramboll has historically sampled monitoring wells MW-8 and MW-12 using a peristaltic pump and small diameter tubing and anticipates being able to perform future sampling without repairing or replacing the wells.</p>
<p>Groundwater monitoring wells OBG-25D & OBG-25S are in need of bolts to secure the well covers to the base.</p>	<p>Ramboll reported that at monitoring wells OBG-25S, all three bolts are securing the well (<i>i.e.</i>, no bolts were observed to be missing). At monitoring wells OBG-25D, two out of three bolts are securing the well cover; RACER replaced the missing bolt in November 2021.</p>
<p>Based on the annual maintenance and monitoring reports, the spring mowing events occurred on or after June 15 each year between 2012 and 2015. Consistent with a recommendation in the second FYR report, mowing of the upland portion of the site should be avoided during the bird-nesting season, which is between June 15 and August 31, and should be conducted before May 15 if site conditions allow (not too wet).</p>	<p>Efforts have been made, with ground conditions in mind and considering limited vegetation growth by mid-June the past several years, to comply. In 2021, the spring mowing was completed by June 10th and the fall mowing was undertaken in October.</p>
<p>The sampling plan currently under development and sample results pertaining to investigation of the reddish/brown colored stormwater flowing into CB-2 should be made available to NYSDEC and EPA.</p>	<p>Because it was concluded that neither the subsite nor the GM-IFG subsite were the source of the reddish-brown colored stormwater, the sampling plan was not completed and NYSDEC undertook surface water and sediment sampling in the area.</p>

IV. FIVE-YEAR REVIEW PROCESS

Community Notification, Involvement & Site Interviews

On August 6, 2021, 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, Puerto Rico and the U.S. Virgin Islands, including the Subsite. The announcement can be found at the following web address: <https://www.epa.gov/superfund/R2-fiveyearreviews>.

In addition to this notification, efforts will be made to reach out to local public officials to inform them of the results. The EPA Community Involvement Coordinator (CIC) for the site, Larisa Romanowski, arranged for a notice to be posted on the town of Salina website, as well as the EPA site website, www.epa.gov/superfund/onondaga-lake. The notice was also distributed via the NYSDEC's Onondaga Lake News email listserv, which includes approximately 11,000 subscribers. This notice indicated that a FYR would be conducted at the Subsite to ensure that the site is protective of human health and the environment.

Once the FYR is completed, the results will be made available at the following repositories: NYSDEC Region 7 Office, 615 Erie Boulevard West, Syracuse, New York; NYSDEC Central Office, 625 Broadway, Albany, New York; Salina Town Hall, 201 School Road, Liverpool, New York; Salina Free Library, 100 Belmont Street, Salina, New York; Onondaga County Public Library, Syracuse Branch at the Galleries 447 South Salina Street, Syracuse New York; Atlantic States Legal Foundation, 658 West Onondaga Street, Syracuse, New York, and the EPA Region 2 Superfund Records Center, 290 Broadway, 18th Floor, New York, New York. In addition, the final report will be posted on the following website: www.epa.gov/superfund/onondaga-lake.

No interviews were conducted for this FYR.

Data Review

Three of the 13 on-site groundwater monitoring wells were sampled in April 2019 for PCBs and volatile organic compounds (VOCs). PCBs were not detected in the 2019 groundwater samples. Additional sampling for VOCs at two monitoring wells located on the Subsite was conducted in April 2021. Because the GM-IFG subsite is the source of the groundwater contamination underlying the Subsite, the groundwater data, including potential PCB impacts from the Subsite, will be considered in the ongoing RI/FS for the GM-IFG subsite.

Site Inspection

The inspection of the Subsite was conducted on July 15, 2021. In attendance were Robert Nunes (EPA), Jacky Luo (NYSDEC), Alma Lowry, Hazel Powless, Kelly Gibson (Onondaga Nation), Clare Leary and Brian Platt (Ramboll, technical consultants for RACER), and Brendan Mullen (RACER). The purpose of the inspection was to assess the protectiveness of the remedy.

Site conditions were generally wet due to recent heavy rain events. Standing water was present along sections of the access road running parallel with Ley Creek. Ponded water was present at and in the vicinity of two catch basins located on the western end of the site. Prior to the site inspection, the site cover was most recently mowed by June 10 and appeared to be in good condition. No areas of erosion or holes produced by burrowing animals were observed during the site inspection.

V. TECHNICAL ASSESSMENT

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

Site inspections indicate that residual PCB-contaminated materials remain capped, the vegetative cover is generally well established, and the Subsite perimeter remains fenced. In OM&M reports, it was indicated that some areas of exposed nonwoven geotextile were observed along the southern bank of Ley Creek, indicating that erosion may have occurred. The loss of the vegetative cover, where it may be occurring, presents a potential condition where PCB-contaminated soil may be exposed to the environment.

An IC in the form of a deed restriction was established in 2007 and remains in place. Only minor deficiencies in the remedy have been observed during annual Subsite inspections and document review. Based upon the inspections and a review of the documents summarized in Appendix A, it has been concluded that the remedy is functioning as intended by the ROD.

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 physical changes to the Subsite that would adversely affect the protectiveness of the remedy. Land use assumptions, exposure assumptions and pathways, cleanup levels and RAOs considered in the decision documents remain valid.

The soil cover prevents direct contact with contaminated soils and is protected by a deed restriction. Additionally, groundwater in the vicinity of the site cannot be used for drinking. The vapor intrusion pathway was not evaluated because the property does not have current development and the potential risk from exposure through inhalation of volatilized PCBs, the Subsite contaminant, is not significant. PCB-contaminated sediments in Ley Creek adjacent to the Subsite will be addressed as part of the remedy for the Ley Creek Deferred Media portion of the GM-IFG subsite. As such, all potential exposure pathways have been addressed by the remedy for the Subsite or will be addressed as part of the actions related to the GM-IFG subsite.

The remediation levels for PCBs selected in the ROD to meet Subsite remedial goals were 1 mg/kg for surface soils and 10 mg/kg for subsurface soils. These levels conformed with New York State Technical and Administrative Guidance Memorandum No. 94-HWR-4046 objectives and were consistent with EPA's policy for remediation goals for PCBs at Superfund sites so that the residual risk meets the target risk range identified in the National Oil and Hazardous Substances Pollution Contingency Plan (*i.e.*, 1×10^{-4} to 1×10^{-6}). Furthermore, calculation of the ecological risk using

the remediation levels for PCBs selected in the ROD indicate that the selected remedy is protective of the environment. The cleanup goals remain protective of human and ecological receptors.

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

No.

VI. ISSUES/RECOMMENDATIONS

Issues/Recommendations				
OU(s) without Issues/Recommendations Identified in the Five-Year Review:				
None.				
Issues and Recommendations Identified in the Five-Year Review:				
OU: 10	Issue Category: Remedy Performance			
	Issue: Some areas of exposed nonwoven geotextile have been observed along the southern bank of Ley Creek, indicating that erosion may have occurred. The loss of any vegetative cover, where it may be occurring, could potentially be exposing PCB-contaminated soil to the environment.			
	Recommendation: Additional measures should be taken to identify and repair/restore the cover system along the southern bank of Ley Creek where erosion may have occurred.			
Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party	Milestone Date
No	Yes	PRP	State	12/31/2023
OU: 10	Issue Category: Operations and Maintenance			
	Issue: PCB-contaminated material under the cover may be brought to the surface by burrowing animals resulting in potential ongoing exposures.			
	Recommendation: The OM&M Manual should be revised to incorporate additional maintenance activities to address potential exposures to PCB-contaminated material resulting from burrowing animals.			
Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party	Milestone Date
No	Yes	PRP	State	12/31/2022

OTHER FINDINGS

The current maintenance includes twice a year mowing; however, Flatpea (*Lathyrus sylvestris*), the most dominant plant species, need not be mowed twice per year. The site should only be mowed, as needed, to prevent woody vegetation from becoming established. Mowing activities should continue to be avoided during the peak portion of the bird-nesting season in this region, which is generally between June 15th and August 20th. Therefore, mowing should optimally be conducted (in upland areas only) before May 15th if site conditions allow (not too wet). Observations during this FYR period, however, have indicated that limited vegetation growth occurs before this date. Thus, the frequency of mowing each season should be dependent on the amount of vegetative growth observed at the site. If elevated rainfall occurs during spring and significant growth is identified, mowing earlier in the season, but not exceeding June 10th, should be pursued. Alternatively, if abundant growth is not observed due to drier conditions, mowing once per year outside of the nesting season (i.e., after August 20th) should be considered instead.

VII. PROTECTIVENESS STATEMENT

Protectiveness Statement(s)	
<i>Operable Unit:</i>	<i>Protectiveness Determination:</i>
OU10 (Ley Creek PCB Dredgings Subsite)	Short-term Protective
<i>Protectiveness Statement:</i>	
The remedy at the Subsite currently protects human health and the environment because the soil cover prevents direct contact with contaminated soils, the Subsite is fenced and it is protected by a deed restriction. Additionally, groundwater in the vicinity of the Subsite cannot be used as a drinking water supply. However, in order for the remedy to be protective in the long-term, additional measures should be implemented to identify and repair/restore any areas along the southern bank of Ley Creek where erosion of the vegetative cover may have occurred.	

VIII. NEXT REVIEW

The next FYR report for the Ley Creek PCB Dredgings Subsite of the Onondaga Lake Superfund Site is required five years from the completion date of this review.

APPENDIX A – SITE FIGURES

T:4966_GMREALMXXD\34124\SITE.LOC.MXD

PLOT DATE: 12/19/06 DIV. 732 JPS

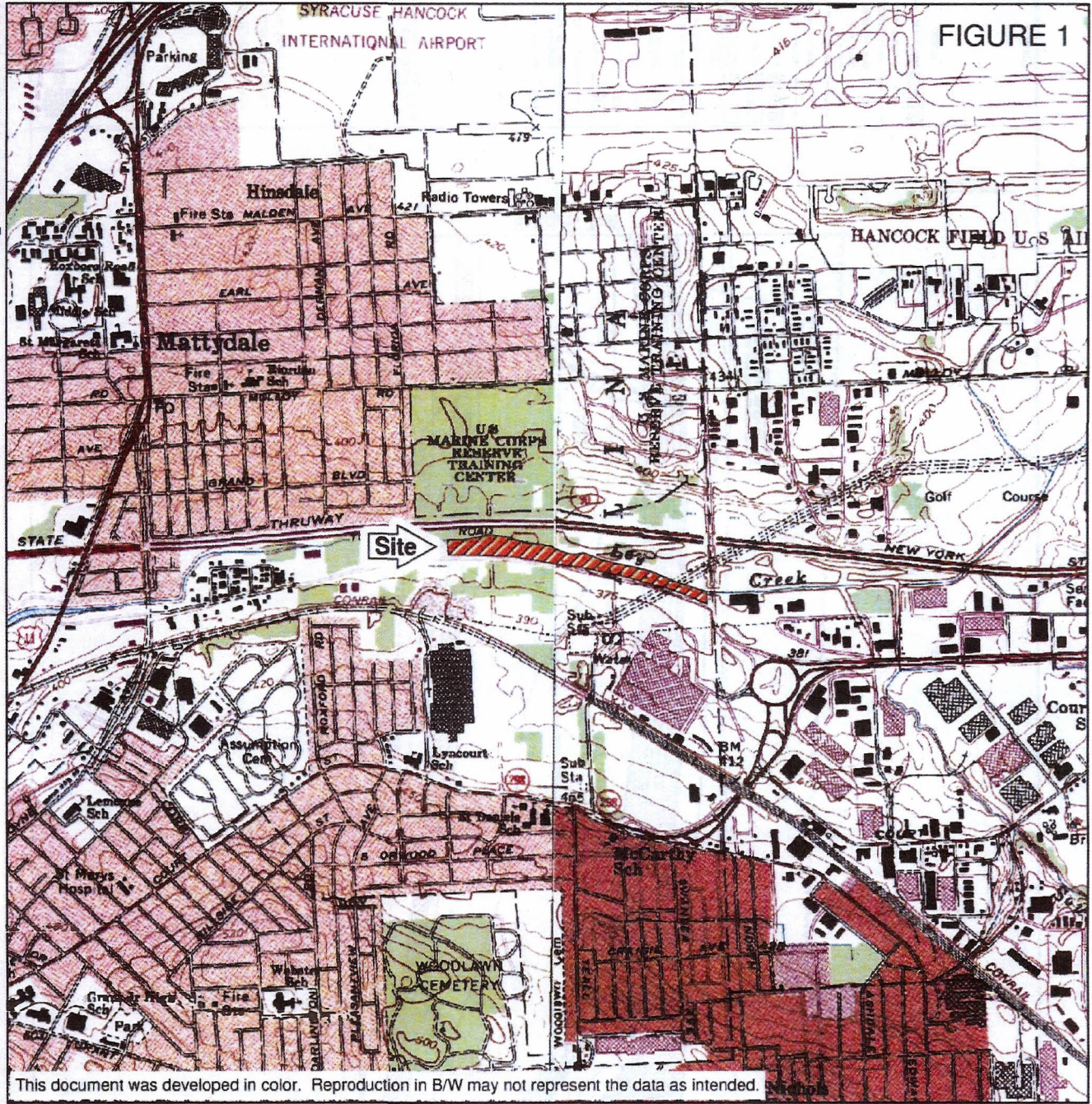


FIGURE 1

This document was developed in color. Reproduction in B/W may not represent the data as intended.

ADAPTED FROM: SYRACUSE EAST AND SYRACUSE WEST, NEW YORK USGS QUADRANGLES



LEY CREEK PCB
DREDGINGS SITE
SYRACUSE, NEW YORK

SITE LOCATION

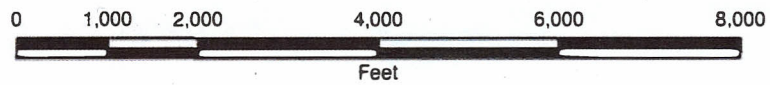
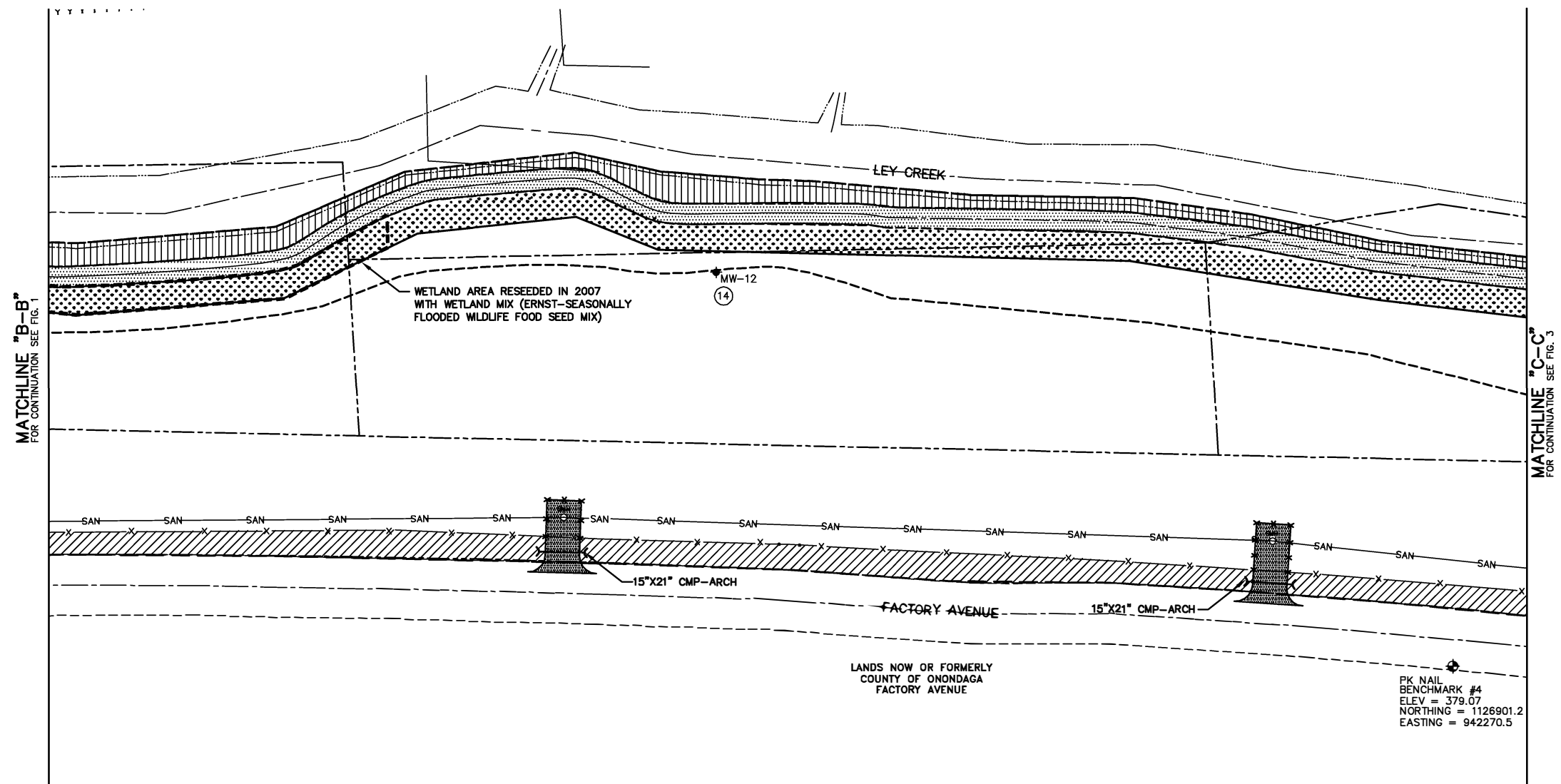
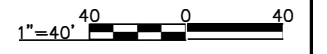


FIGURE 3



- LEGEND**
- SEEDED WITH CANARY GRASS
 - OVERHEAD WIRES
 - PROPERTY BOUNDARY
 - EDGE OF WOODS
 - UTILITY POLE
 - GUY WIRE
 - SANITARY SEWER
 - SANITARY MANHOLE
 - SECURITY FENCE
 - PAVEMENT
 - GRAVEL ACCESS ROAD
 - LIMITS OF SOIL LOCATED ALONG FACTORY AVENUE RELOCATED BENEATH COVER SYSTEM
 - CATCH BASIN
 - MW-OBG7C MODIFIED MONITORING WELL
 - MONITORING WELL PRESUMED DESTROYED
 - ABANDONED MONITORING WELL
 - NEW MONITORING WELL
 - LIMITS OF EROSION CONTROL MAT
 - LIMITS OF COVER SYSTEM
 - LIMITS OF NON-WOVEN GEOTEXTILE
 - PHOTOGRAPH LOCATION






















LEY CREEK PCB DREDGINGS SITE
SYRACUSE, NEW YORK
SITE REMEDIATION PROJECT



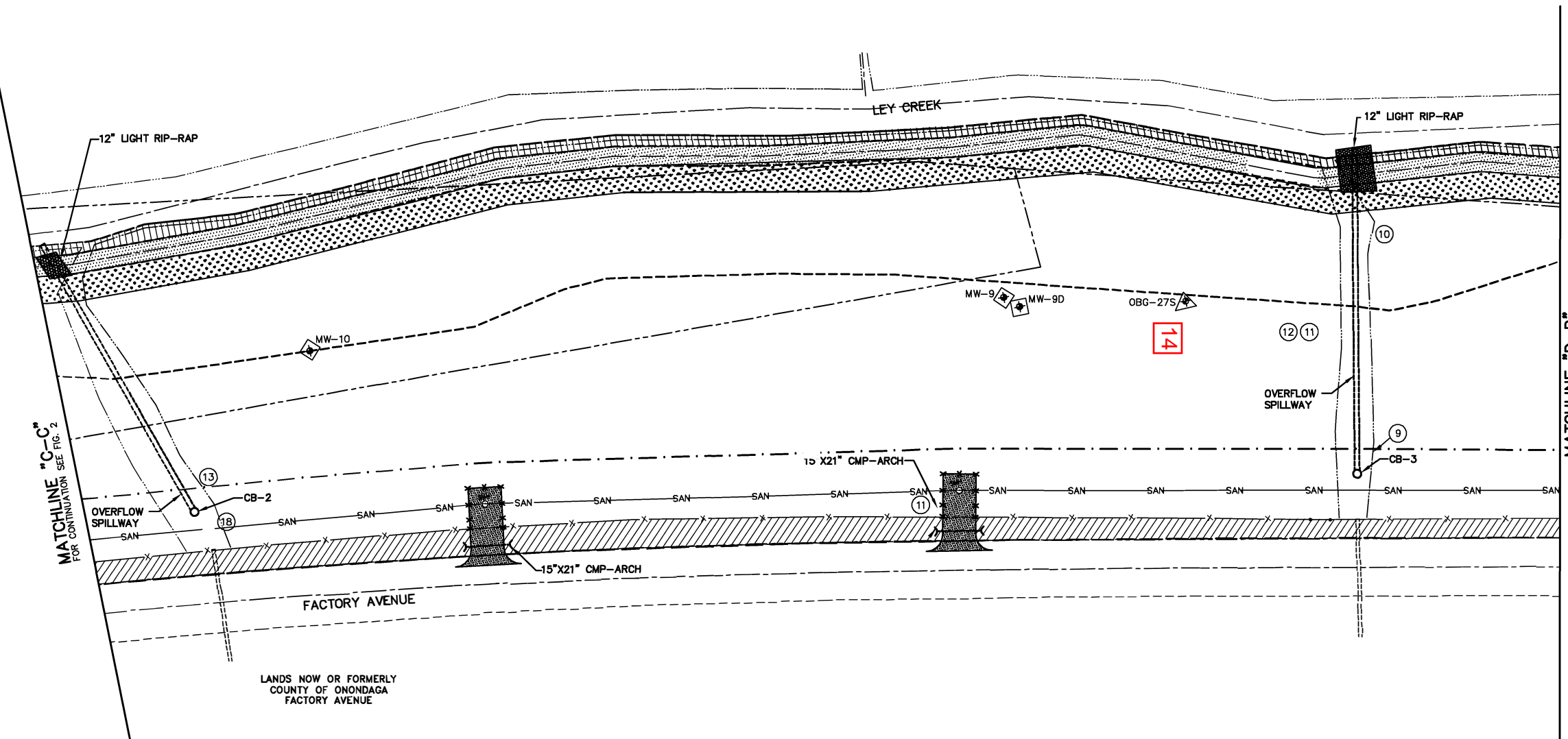
I:\PACER-TRUST\15388\LEY-CREEK-O-M-DOCS\DWG\SHEETS\48967-002-FIG2.DWG



LEGEND

-  SEEDED WITH CANARY GRASS
-  OVERHEAD WIRES
-  PROPERTY BOUNDARY
-  EDGE OF WOODS
-  UTILITY POLE
-  GUY WIRE
-  SANITARY SEWER
-  SANITARY MANHOLE
-  SECURITY FENCE
-  PAVEMENT
-  GRAVEL ACCESS ROAD
-  LIMITS OF SOIL LOCATED ALONG FACTORY AVENUE RELOCATED BENEATH COVER SYSTEM
-  CATCH BASIN
-  MODIFIED MONITORING WELL
-  MONITORING WELL PRESUMED DESTROYED
-  ABANDONED MONITORING WELL
-  NEW MONITORING WELL
-  LIMITS OF EROSION CONTROL MAT
-  LIMITS OF COVER SYSTEM
-  LIMITS OF NON-WOVEN GEOTEXTILE
-  PHOTOGRAPH LOCATION

LEY CREEK PCB DREDGINGS SITE
SYRACUSE, NEW YORK
SITE REMEDIATION PROJECT



MATCHLINE "C-C"
FOR CONTINUATION SEE FIG. 2


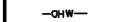
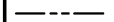


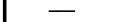


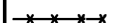












MATCHLINE "D-D"
FOR CONTINUATION SEE FIG. 4

I:\RACER-TRUST\15388\LEY-CREEK-0-M-DOCS\DWG\SHEETS\48967-003-FIG3.DWG

7
8
9

FIGURE 5

LEGEND

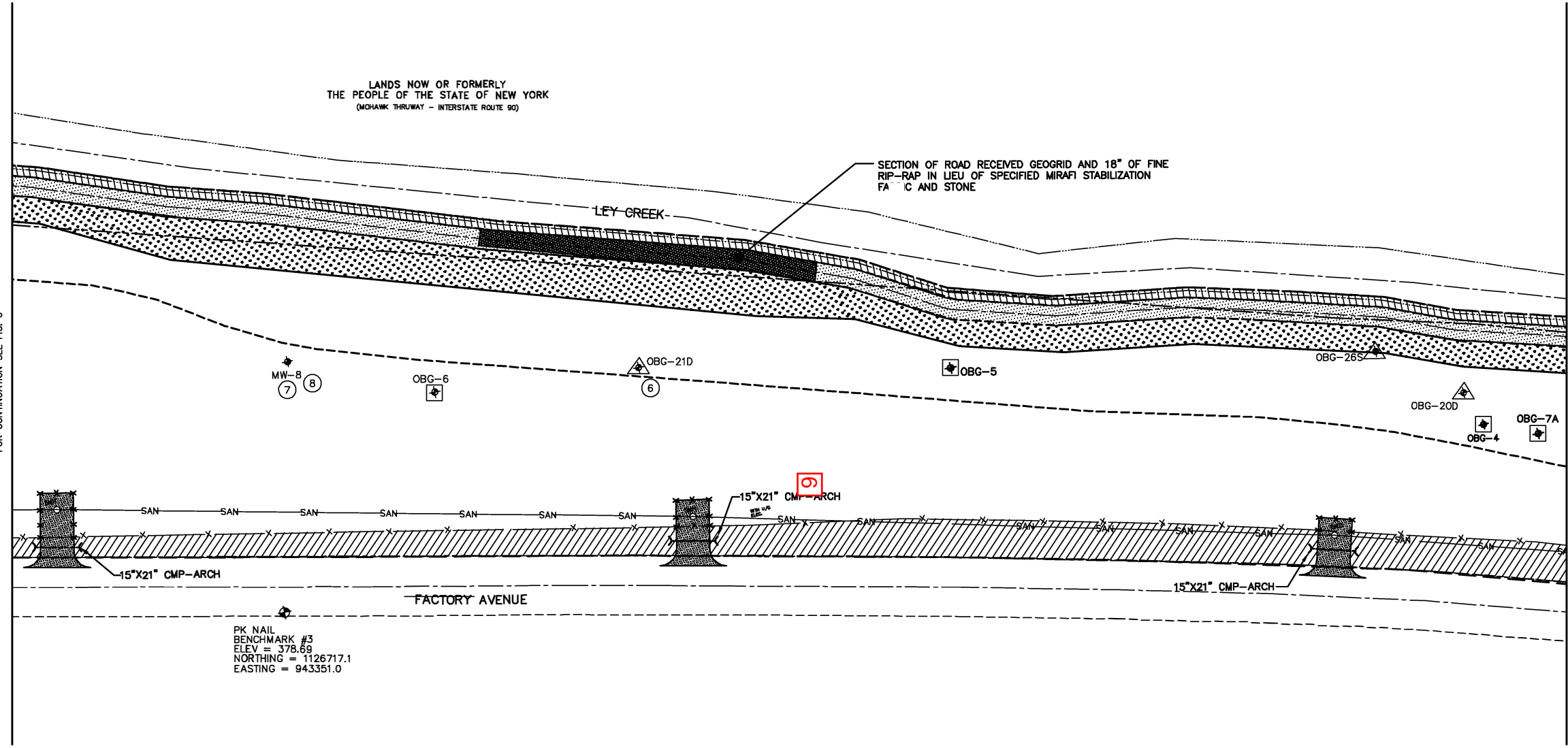
-  SEEDED WITH CANARY GRASS
-  OVERHEAD WIRES
-  PROPERTY BOUNDARY
-  EDGE OF WOODS
-  UTILITY POLE
-  GUY WIRE
-  SANITARY SEWER
-  SANITARY MANHOLE
-  SECURITY FENCE
-  PAVEMENT
-  GRAVEL ACCESS ROAD
-  LIMITS OF SOIL LOCATED ALONG FACTORY AVENUE RELOCATED BENEATH COVER SYSTEM
-  CATCH BASIN
-  MODIFIED MONITORING WELL
-  MONITORING WELL PRESUMED DESTROYED
-  ABANDONED MONITORING WELL
-  NEW MONITORING WELL
-  LIMITS OF EROSION CONTROL MAT
-  LIMITS OF COVER SYSTEM
-  LIMITS OF NON-WOVEN GEOTEXTILE
-  PHOTOGRAPH LOCATION

LEY CREEK PCB DREDGINGS SITE
SYRACUSE, NEW YORK
SITE REMEDIATION PROJECT



MATCHLINE "E-E"
FOR CONTINUATION SEE FIG. 5

MATCHLINE "D-D"
FOR CONTINUATION SEE FIG. 3

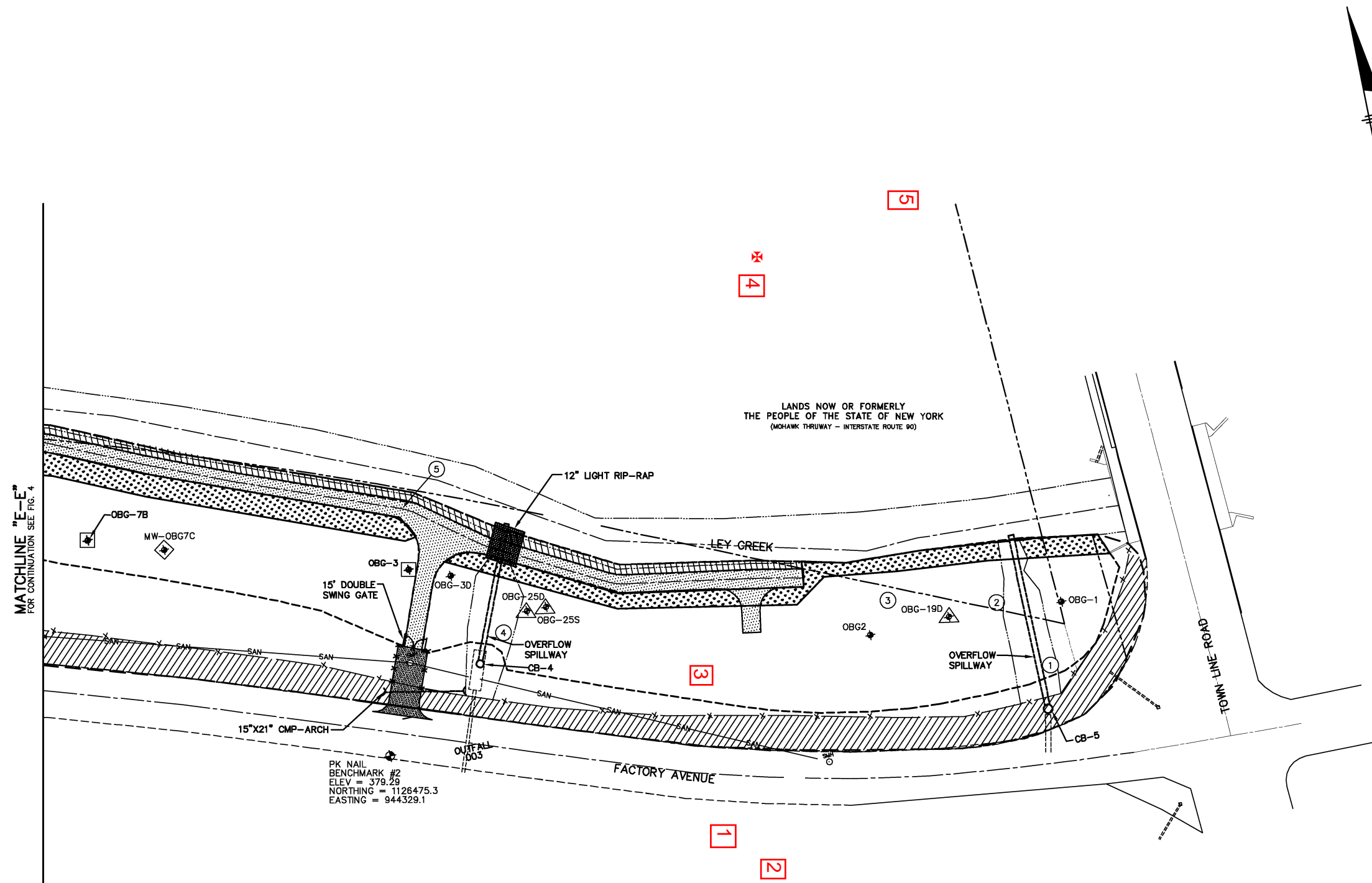


PK NAIL
BENCHMARK #3
ELEV = 378.69
NORTHING = 1126717.1
EASTING = 943351.0

I:\RACER-TRUST\15388\LEY-CREEK-O-M-DOCS\DWG\SHEETS\48967-004-FIG4.DWG



FIGURE 6



MATCHLINE "E-E"
FOR CONTINUATION SEE FIG. 4

PK NAIL
BENCHMARK #2
ELEV = 379.29
NORTHING = 1126475.3
EASTING = 944329.1

- LEGEND**
- SEEDED WITH CANARY GRASS
 - OVERHEAD WIRES
 - PROPERTY BOUNDARY
 - EDGE OF WOODS
 - UTILITY POLE
 - GUY WIRE
 - SANITARY SEWER
 - SANITARY MANHOLE
 - SECURITY FENCE
 - PAVEMENT
 - GRAVEL ACCESS ROAD
 - LIMITS OF SOIL LOCATED ALONG FACTORY AVENUE RELOCATED BENEATH COVER SYSTEM
 - CATCH BASIN
 - MW-OBG7C MODIFIED MONITORING WELL
 - MONITORING WELL PRESUMED DESTROYED
 - ABANDONED MONITORING WELL
 - NEW MONITORING WELL
 - LIMITS OF EROSION CONTROL MAT
 - LIMITS OF COVER SYSTEM
 - LIMITS OF NON-WOVEN GEOTEXTILE
 - PHOTOGRAPH LOCATION

LEY CREEK PCB DREDGINGS SITE
SYRACUSE, NEW YORK
SITE REMEDIATION PROJECT

1"=40' 40 0 40



I:\PACER-TRUST\5388\48967\LEY-CREEK-O-M-DOCS\DWG\SHEETS\48967-005-FIG6.DWG

APPENDIX B – REFERENCE LIST

Documents, Data, and Information Reviewed in Completing the Five-Year Review	
Document Title, Author	Submittal Date
Record of Decision for the Ley Creek PCB Dredgings Subsite, Town of Salina, NY, NYSDEC	1997
EPA Letter of Concurrence with Record of Decision	February 1998
Operation, Maintenance and Monitoring Manual, Ley Creek PCB Dredgings Subsite, Town of Salina, NY, Remediation and Liability Management Company Inc. (REALM), O'Brien & Gere Engineers, Inc.	2001
Remedial Action Engineering Report, Ley Creek PCB Dredgings Subsite, Town of Salina, NY, REALM, O'Brien & Gere Engineers, Inc.	2001
Quitclaim Deed between REALM and REALM	June 2007
Third Five-Year Review Report, Ley Creek PCB Dredgings Subsite	April 2017
Analytical Report, TestAmerica	September 2017
2017-2019 Operation, Maintenance and Monitoring Inspection Reports, Ley Creek PCB Dredgings Subsite, Town of Salina, NY, RACER, Inc./O'Brien & Gere.	December 2020
2020 Operation, Maintenance and Monitoring Inspection Report, Ley Creek PCB Dredgings Subsite, Town of Salina, NY, RACER, Inc./O'Brien & Gere.	October 2021
EPA guidance for conducting five-year reviews and other guidance and regulations to determine if any new Applicable or Relevant and Appropriate Requirements relating to the protectiveness of the remedy have been developed since EPA issued the ROD.	