

FINAL PLAN OF REMEDIAL ACTION



South Wilmington Stormwater Pilot Site

March 2017

Wilmington, Delaware

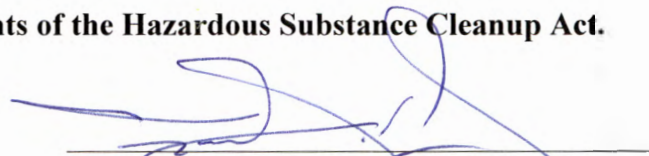
DNREC Project No. DE-1500

This Final Plan of Remedial Action (Final Plan) presents clean-up actions required by the Department of Natural Resources and Environmental Control (DNREC) to address environmental contamination at the South Wilmington Stormwater Pilot Site.

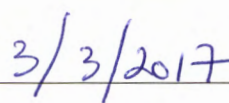
DNREC issued public notice of the Proposed Plan of Remedial Action (Proposed Plan) for the South Wilmington Stormwater Pilot Site on January 29, 2017 and opened a 20-day public comment period. The Proposed Plan is attached. There were no substantial comments from the public; therefore, the Proposed Plan is adopted as the Final Plan.

Approval:

This Final Plan meets the requirements of the Hazardous Substance Cleanup Act.

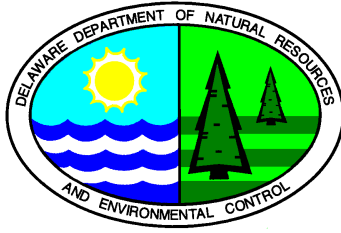


Timothy T. Ratsep, Program Administrator
Site Investigation and Restoration Section



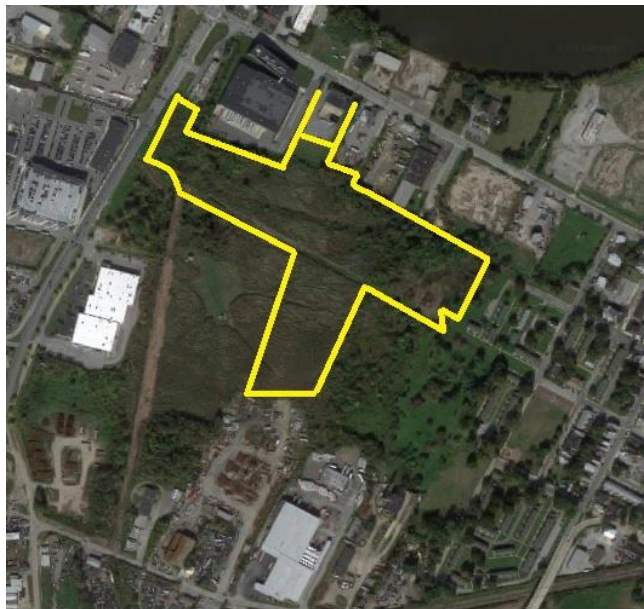
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PROPOSED PLAN OF REMEDIAL ACTION

South Wilmington Stormwater Pilot
Wilmington, Delaware
DNREC Project No. DE-1500



January 2017

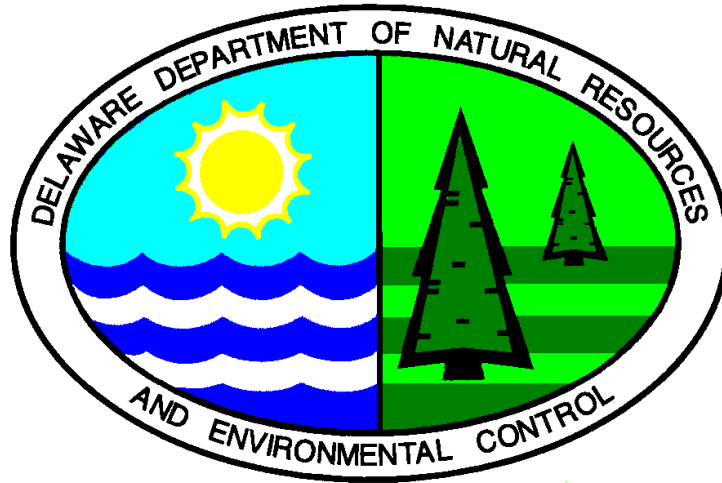
Delaware Department of Natural Resources and Environmental Control
Division of Waste and Hazardous Substances
Site Investigation & Restoration Section
391 Lukens Drive
New Castle, Delaware 19720

CONTENTS

- Figures 1, 2 & 3
- Glossary of Terms

PROPOSED PLAN OF REMEDIAL ACTION

South Wilmington Stormwater Pilot
Wilmington, Delaware
DNREC Project No. DE-1500



Approval:

This Proposed Plan meets the requirements of the Hazardous Substance Cleanup Act.

Approved by:

Timothy Ratsep, Environmental Program Administrator
Site Investigation & Restoration Section

January 25, 2017

Date



What is the Proposed Plan of Remedial Action?

The Proposed Plan of Remedial Action (Proposed Plan) summarizes the clean-up (remedial) actions that are being proposed to address contamination found at the Site for public comment. A legal notice is published in the newspaper for a 20-day comment period. DNREC considers and addresses all public comments received and publishes a Final Plan of Remedial Action (Final Plan) for the Site.

What is the South Wilmington Stormwater Pilot Site?

The South Wilmington Stormwater Pilot Site (Site) consists of seven tax parcels (26-050-044, -046, -056, -058, -074, -075, and -080) which comprise the approximate 23.3 acre site (Figures 1 and 2). The site is generally bordered by South Walnut Street to the west, Buttonwood St. to the east, A St. to the north, and Garasches Lane to the south. The majority of the property is undeveloped, densely vegetated wetlands. The site is located approximately 400 feet south of the Christina River.

What happened at the South Wilmington Stormwater Pilot Site?

According to historical records, much of the Site and surrounding areas previously consisted of undeveloped, commercial or industrial properties. This included marsh land, an incinerator, salvage yards, railroad tracks, and residential properties. The majority of the site is currently densely vegetated wetland. Historic contamination is apparent in the wetland, which resulted from filling with soil and industrial waste material.

What is the environmental problem at the South Wilmington Stormwater Pilot Site?

Environmental investigations conducted at the site between 2008 and 2016 have confirmed that up to 12.5 feet of soil and sediment were dumped into the original marsh. Upon completion of a Brownfield Investigation in 2014 and Ecological Remediation Goals assessment in 2016, it was determined that soils and sediment at various locations in the wetland contain unacceptable levels of polychlorinated biphenyls (PCBs), copper, chromium, zinc and iron. Other contaminants of potential concern include arsenic, lead, and volatile organic compounds (VOCs) in groundwater, and metals, VOCs, semivolatile organic compounds (SVOCs), pesticides and PCBs in surface water. Surface water has been impacted by aluminum, arsenic, barium, copper, iron, lead, and manganese. Unacceptable carcinogenic risks to human receptors currently exist to restricted (commercial) indoor workers, general and restricted outdoor workers, recreational users and trespassers from exposure to soils at the Site; therefore cleanup actions are required (Figure 3).

What clean-up actions have been taken at the South Wilmington Stormwater Pilot Site?

In 2014, Amtrak and their consultant removed 225 tons of PCB impacted soils from the former Krieger Finger Property (which is part of the South Wilmington Stormwater Pilot Site). Once sufficiently removed and back-filled with clean fill, a geotextile marker fabric was placed over the area and covered with two feet of clean soil. The remediated area covered approximately 1.6 acres. The area is currently planted with meadow grasses and will remain as an upland portion of the restored wetland.

What does the owner want to do at the South Wilmington Stormwater Pilot Site?

The City of Wilmington is currently planning and designing a large scale wetland restoration project that will mitigate existing human health and ecological risks in the project area while also reducing flooding, helping to clean stormwater, creating park areas and improving community access through trails.

What additional clean-up actions are needed at the South Wilmington Stormwater Pilot Site?

DNREC proposes the following remedial actions for the Site, which need to be completed before a Certificate of Completion of Remedy (COCR) can be issued.

1. A Remedial Action Work Plan must be submitted to DNREC for approval within 60 days of the issuance of the Final Plan of Remedial Action for those properties already incorporated into the project design.
2. Place a soil, stone, or impervious cap/cover on walkways and other areas accessible to human receptors.
3. Remove contaminants of potential ecological concern (COPECs) at concentrations above Preliminary Remediation Goals developed for ecological receptors in uncapped areas.
4. Place a Bentomat® or equivalent barrier along the northern edge of AOC 1, as shown on Figure 3, to prevent erosion of PCB impacted soil into the wetland.
5. A proposed Environmental Covenant must be submitted to DNREC for approval within 60 days of the issuance of the approved Long Term Stewardship (LTS) Plan.
6. An Environmental Covenant, consistent with Delaware's Uniform Environmental Covenants Act (7 Del.C. Chapter 79, Subchapter II) must be recorded in the Office of the New Castle County Recorder of Deeds within 60 days of the issuance of the Long Term

Stewardship Plan. The Environmental Covenant must include the following activity and/or use restrictions:

- [a.] Use Restriction. Use of the Property shall be restricted to non-residential type uses.
 - [b.] Interference with Remedy. There shall be no digging, drilling, excavating, grading, constructing, earth moving, or any other land disturbing activities on the Property [including any repair, renovation or demolition of the existing structures on the on the Property] without the prior written approval of DNREC;
 - [c.] Limitation of Groundwater Withdrawal. No groundwater wells shall be installed and no groundwater shall be withdrawn from any well on the Property in accordance with the City of Wilmington Exclusion Zone without the prior written approval of DNREC-SIRS and DNREC Division of Water;
 - [d.] Compliance with the Long Term Stewardship Plan. All work required by the Long Term Stewardship Plan must be performed to DNREC's satisfaction in accordance with the Plan; and
 - [e.] Compliance with Contaminated Materials Management Plan. All work required by the Contaminated Materials Management Plan must be performed to DNREC's satisfaction in accordance with the Plan.
7. A Contaminated Materials Management Plan (CMMP) must be submitted to DNREC within 90 days of the issuance of the Final Plan of Remedial Action. The CMMP will provide guidance to enable construction workers to safely manage, reuse, and/or dispose of all excavated soil, sediment, and water generated during construction at the Site.
 8. The CMMP will be implemented upon its approval by DNREC.
 9. A Long-Term Stewardship Plan shall be submitted to DNREC for approval in accordance with the schedule set forth in the approved Remedial Action Work Plan. The LTS plan will detail the site-inspection/sampling plan and schedule to be followed in order to ensure the long-term integrity of the remedy.
 10. The LTS Plan must be implemented within 60 days of its approval by DNREC.
 11. A Remedial Action Completion Report must be submitted to DNREC within 60 days of the completion of the remedial actions required in this Proposed Plan.
 12. A Certification of Completion of Remedy (COCR) will be issued by DNREC after approval of the Remedial Action Completion Report.

What are the long term plans for the Site after the cleanup?

The City of Wilmington plans to turn the Site into a wetland park.

How can I find additional information or comment on the Proposed Plan?

The complete file on the Site including the Brownfield Investigation Report, Ecological Remediation Goals Report and Feasibility Study and the various reports are available at the DNREC office, 391 Lukens Drive in New Castle, 19720. Most documents are also found on:

<http://www.nav.dnrec.delaware.gov/DEN3/>

The 20-day public comment period begins on January 30, 2017 and ends at close of business (4:30 pm) on February 20, 2017. Please send written comments to the DNREC office at 391 Lukens Drive, New Castle, DE 19720 to John Cargill, Project Officer.

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Figure 1: Site Location Map

Figure 2: Site Parcels Map

Figure 3: Remediation Areas Map

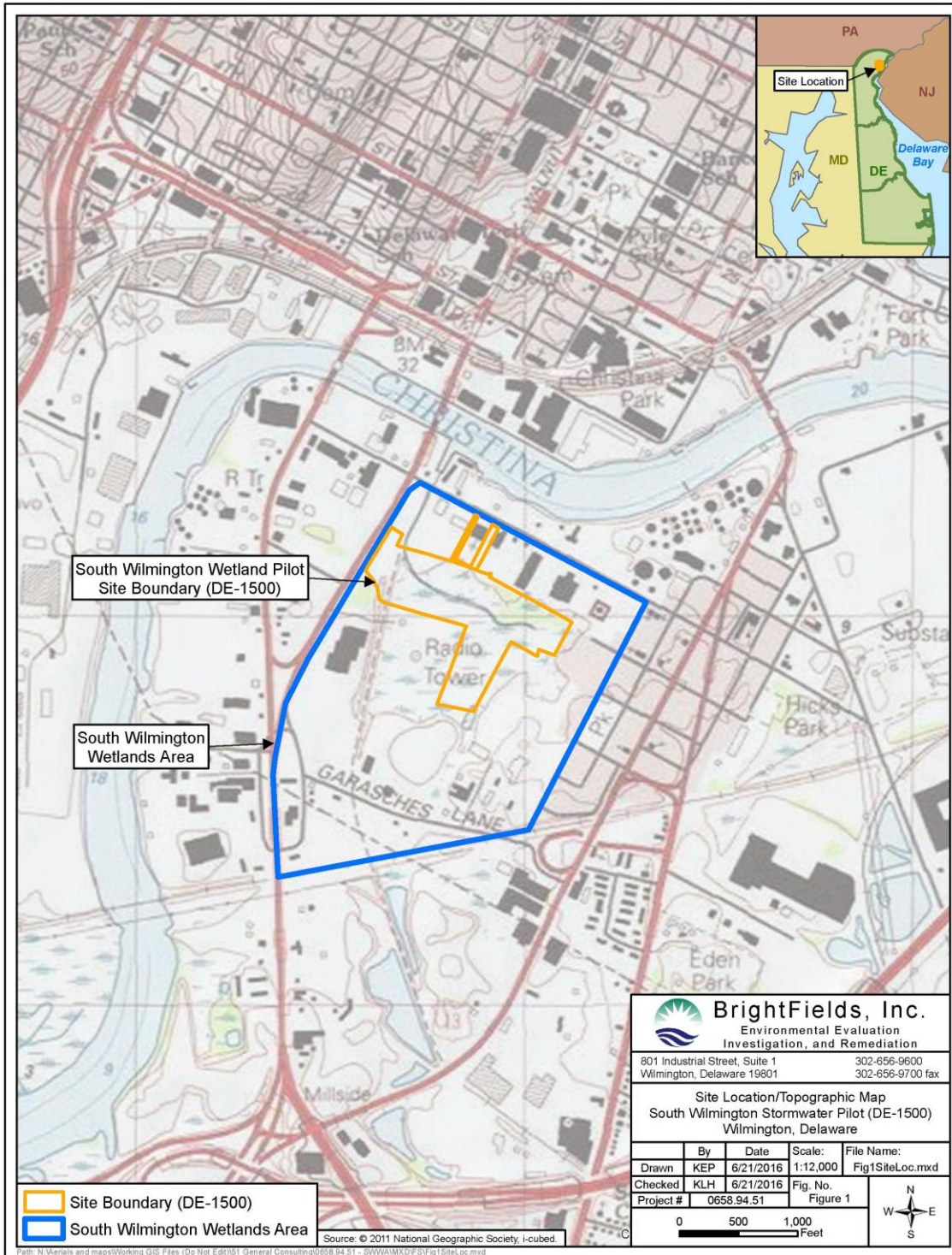


Figure 1- Site Location Map

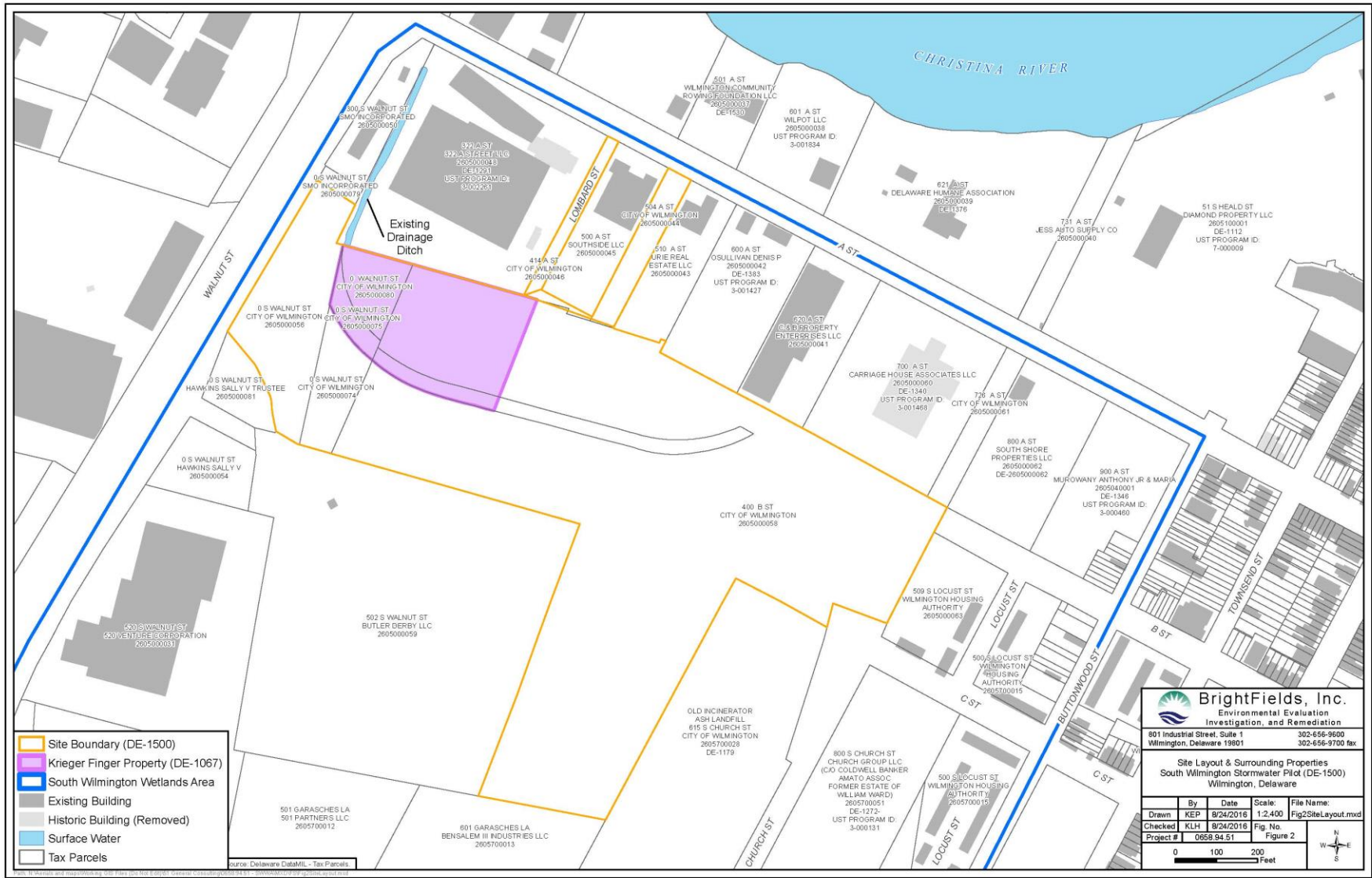


Figure 2 – Site Parcels Map

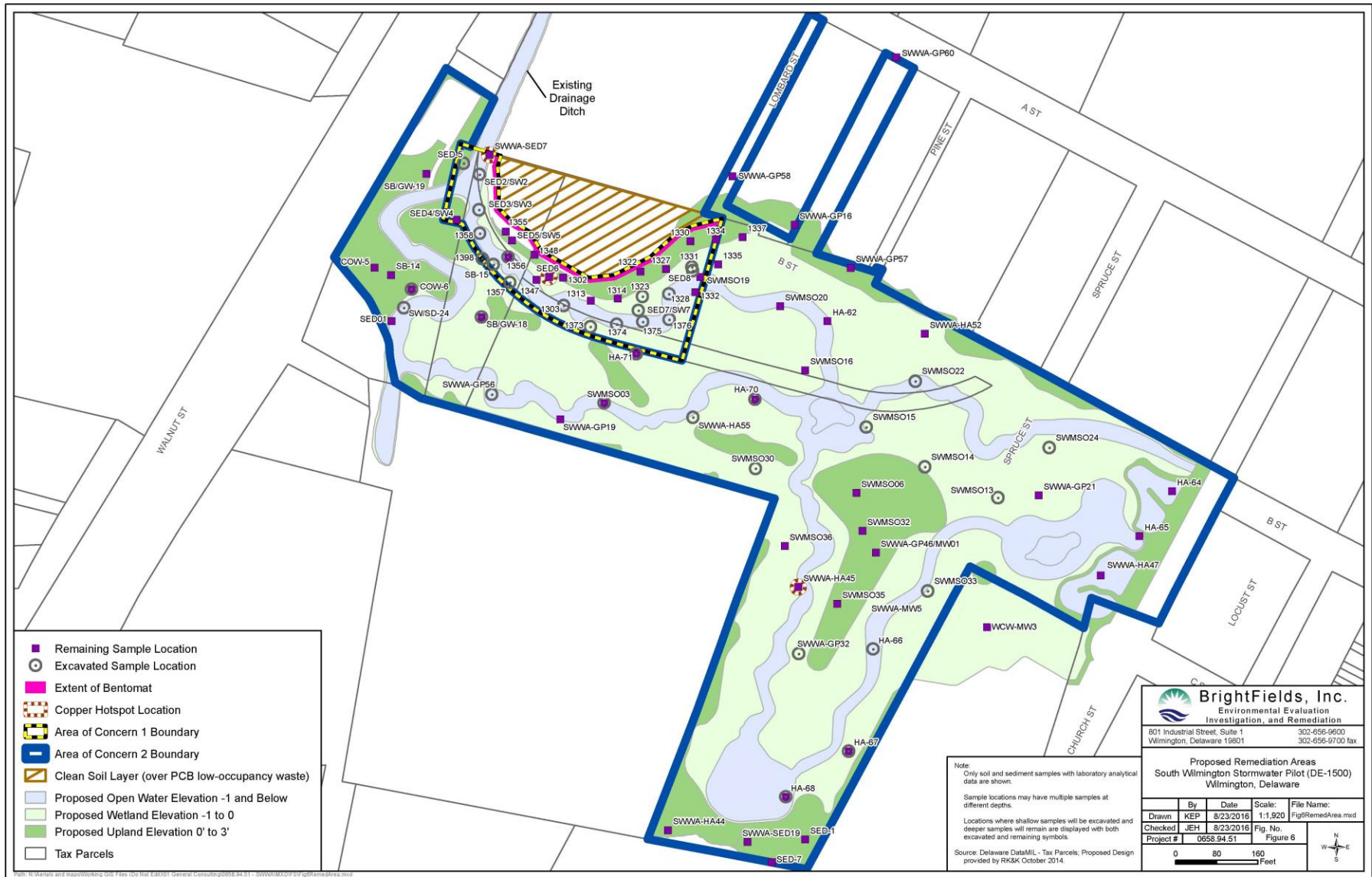


Figure 3 – Proposed Remediation Areas Map

Glossary of Terms Used in this Proposed Plan

Area of Concern (AOC)	A discrete section of the Site representing the local bounds of contamination in soil or ground water.
Certified Brownfield	A Brownfield that DNREC has determined is eligible for partial funding through the Delaware Brownfields Program
Certification of Completion of Remedy (COCR)	A formal determination by the Secretary of DNREC that remedial activities required by the Final Plan of Remedial Action have been completed.
Contaminant of Concern (COC)	Potentially harmful substances at concentrations above acceptable levels.
Contaminated Materials Management Plan	A written plan specifying how potentially contaminated material at a Site will be sampled, evaluated, staged, transported and disposed of properly.
Exposure	Contact with a substance through inhalation, ingestion, or direct contact with the skin. Exposure may be short term (acute) or long term (chronic).
Final Plan of Remedial Action	DNREC's adopted plan for cleaning up a hazardous site.
Groundwater Management Zone	A geographical area where DNREC restricts drilling for ground water because it is contaminated
Hazardous Substance Cleanup Act (HSCA)	Delaware Code Title 7, Chapter 91. The law that enables DNREC to identify parties responsible for hazardous substances releases and requires cleanup with oversight of the Department.
Human Health Risk Assessment (HHRA)	An assessment done to characterize the potential human health risk associated with exposure* to site related chemicals.
Poly chlorinated biphenyls (PCBs)	A synthetic, carcinogenic chemical formerly used in a wide variety of industrial applications but banned from most uses by the US EPA in 1979.
Risk	Likelihood or probability of injury, disease, or death.
Risk Assessment Guidance for Superfund (RAGS)	An EPA guidance document for superfund sites
Restricted Use	Commercial or Industrial setting
SIRS	Site Investigation Restoration Section of DNREC, which oversees cleanup of sites that were contaminated as a result of past use, from dry cleaners to chemical companies
US EPA	United States Environmental Protection Agency