Stormwater

Pollution Prevention Plan

NPDES ID: MAR053674

Prepared for:

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- Stormwater Fact Sheet Series: Sector L: Landfills and Land Application Sites
- Stormwater Fact Sheet Series: Sector O: Steam Electric Power Generating Facilities, Including Coal Handling Areas

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- MSGP Annual Report Form
- MSGP Discharge Monitoring Report (DMR) Form
- NPDES Corrective Action Form
- NPDES MSGP Sampling Form – Chain of Custody Form (Alpha Labs)
- NPDES Quarterly Visual Assessment Form
- NPDES Quarterly Visual Assessment Instructions

The following records are maintained electronically on the Covanta Haverhill SharePoint site and in hardcopy form in binders located in the Environmental Specialist's Office.

- Stormwater Sampling Results
- Weekly Environmental Inspections
- Discharge Monitoring Reports
- Visual Assessment Reports
- NetDMR Submittals

The following guidance documents are maintained electronically on the Covanta Haverhill SharePoint site and in hardcopy form in binders located in the Environmental Specialist's Office.

- 2021 USEPA Multi-Sector General Permit (MSGP) and Appendices
- Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators, March 2021
- Draft Pathogen TMDL for the Merrimack River Watershed
- Industrial Stormwater Monitoring and Sampling Guide, April 2021
- Massachusetts Integrated List of Waters for the Clean Water Act 2018/2020 Reporting Cycle -- Draft for Public Comment\
- Northeast Regional Mercury Total Maximum Daily Load – Final Addendum for Massachusetts (CN 377.0)

Acronyms & Abbreviations

APC	Air Pollution Control
BMP	Best Management Practice
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CMR	Code of Massachusetts Regulations
CWT	Centralized Waste Treatment
EDFP	Emergency Diesel Fire Pump
ESB	Eastern Sedimentation Basin
FE	Iron
FC	Fecal Coliform
FMG	Fleet Maintenance Garage
FWS	Fish and Wildlife Services
Hg	Mercury
IPac	Information, Planning, and Consultation System
LFGTE	Landfill Gas Engine
MBF	Mass Burn Facility
NPDES	National Pollutant Discharge Elimination System
NMFS	National Marine Fisheries Service
LTP	Leachate Treatment Plant
LPT	Leachate Pre-treatment Plant
MassDEP	Massachusetts Department of Environmental Protection
MSGP	Multi-Sector General Permit
MSW	Municipal Solid Waste
NAICS	North American Industry Classification System
NIB	Northern Infiltration Basin
NESB	Northeast Sedimentation Basin
NO_X	Oxides of Nitrogen
PM	Particulate Matter
RCRA	Resource Conservation and Recovery Act
SIB	Southern Infiltration Basin
SIC	Standard Industrial Classification
SO_2	Sulfur Dioxide
SPCC	Spill Prevention, Control and Countermeasure
SWPPP	Storm Water Pollution Prevention Plan
TSS	Total Suspended Solids
USEPA	United States Environmental Protection Agency

Section 1

Introduction

1.1 Purpose

This Storm Water Pollution Prevention Plan (SWPPP or Plan) describes the practices and controls that are used at the Covanta Haverhill, Inc. facility (Facility) located at 100 Recovery Way in Haverhill, MA related to stormwater discharges. The Facility is comprised of a Municipal Solid Waste (MSW) Mass Burn Facility (MBF) and the Ward's Hill Neck landfill (Landfill). Support structures at the Facility include a Fleet Maintenance Garage (FMG) and a Leachate Treatment Plant (LTP), both operated by Covanta Haverhill, Inc. The primary purpose of this Plan is to comply with the requirements of the U.S. Environmental Protection Agency's (USEPA) National Pollutant Discharge Elimination System (NPDES), Multi-Sector General Permit (MSGP) for Storm Water Discharges Associated with Industrial Activities (Permit).

The USEPA requires that a SWPPP be developed for each facility covered by the Permit, and that the SWPPP be prepared in accordance with good engineering practices (GEP). This SWPPP identifies potential sources of pollution that may reasonably be expected to affect the quality of storm water discharges associated with industrial activities from the Landfill, MBF, FMG, and LTP. In addition, this plan describes the implementation of practices that are to be used to reduce the pollutants in storm water discharges and to assure compliance with the terms and conditions of the Permit.

This SWPPP has been prepared in accordance with requirements and guidelines as specified in the NPDES MSGP that became effective on March 1, 2021. The MSGP will expire at 11:59 pm eastern time, February 28, 2026. It is noted that the USEPA has extended coverage beyond the expiration date for previously issued MSGPs.

1.2 Scope

This Plan provides useful information on many pollution prevention and best management practices (BMPs), which can be used to prevent or reduce the discharge of sediments and other pollutants in stormwater runoff from the site. This Plan also contains information on deadlines, signature and plan review, and monitoring requirements. Finally, the Plan provides guidelines for maintenance of the controls in the plan.

1.3 Organization of the Plan

This SWPP is organized into nine sections which are described below:

- **Section 1**: (Section you are reading) This section identifies the need and scope of the SWPPP, signatory requirements as well as the SWPP certification statement with signature

- **Section 2**: This section discusses the site's pollution prevention team as well as coordination of the SWPPP with other Facility plans.

- **Section 3**: This section describes the physical facility and the activities performed at the site. It also discusses if stormwater discharges could potentially impact endangered species or federally listed historical properties located within the stormwater discharge action area. Potential pollutant sources at the Facility are identified and a summary of past discharge monitoring data and spills are presented.

- **Section 4**: This section identifies the selected control measures and BMPs used at the Facility to manage stormwater collection, treatment, and discharge.

- **Section 5**: This section discusses the implementation of the controls and BMPs identified in Section 4. It also discusses the employee training program for compliance to the SWPPP requirements and stormwater controls.

- **Section 6**: This sections discusses the monitoring activities that will be used to ensure the controls and BMPs identified and implemented in the SWPP are followed and are effective. It also discusses the procedure for implementing corrective actions for any deficiencies discovered.

- **Section 7**: This section discusses the reporting and recordkeeping requirements of the Permit.

- **Section 8**: This section discusses the sector–specific requirements of the Permit that apply to the MBF and Landfill operations.

- **Section 9**: This section discusses any additional requirements of the Permit that may be required for Massachusetts.

1.4 Signatory Requirements

The SWPPP must be signed by a responsible corporate officer or a duly authorized representative of that person (MSGP Appendix B., Subsection B.11). A person is a duly authorized representative only if:

1. The authorization is made in writing by a person described in MSGP Appendix B, Subsection B.11.A;
2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the **position of plant manager**, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
3. The signed and dated written authorization is included in the SWPPP. A copy must be submitted to EPA, if requested.

Under the General Permit, a "Responsible Corporate Officer" is defined as:

> *"For the purpose of this subsection, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.*

For the Covanta Haverhill SWPPP, Bill Zaneski, Facility Manager, is the Responsible Corporate Officer.

1.5 SWPPP Certification

> *"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."*

SIGNATURE: 

NAME (PRINT): Bill Zaneski

TITLE: Facility Manager

DATE: 5/27/2021

Section 2

Planning and Organization

2.1 Facility Information

Address: Covanta Haverhill, Inc.
100 Recovery Way
Haverhill, MA 01835
Middlesex County

NPDES ID:	MAR053674	
Facility Coordinates	**Latitude:** 42.7654 ° N **Longitude:** -71.124025 ° W	
Facility Operation	**Ward's Hill Neck Landfill**	**Covanta Mass Burn Facility**
Primary NAICS Code	**562212** Solid Waste Landfill	**562213** Solid Waste Combustors & Incinerators
Primary SIC Code	**49530302** Sanitary Landfill Operation	**49539903** Incineration Operations

2.2 Contact Information / Responsible Parties

Facility Owner / Operator:

Name: Covanta Haverhill, Inc.
Address: 100 Recovery Way
City, State, Zip Code: Haverhill, MA 01835
Telephone Number: 978-372-6288
Fax number: 978-521-1359

SWPPP Contact (Primary):

Name: David Cotter, PE
Telephone number: 978-914-0725 (mobile)
Email address: dcotter@covanta.com

SWPPP Contact (Backup):

Name: George Drew
Telephone number: 978-697-6547 (mobile)
Email address: gdrew@covanta.com

2.3 Pollution Prevention Team

When setting up a pollution prevention team, it is important to identify the key people onsite who are most familiar with the facility and its operations, and to provide adequate structure and direction to the facility's storm water management program. There are two important features in

organizing a team: selecting the right individuals; and establishing good channels of communication.

Team members include personnel from Covanta's site management and engineers/supervisors. Some of these personnel serve on both the spill prevention and response team and the SWPPP team.

The SWPPP team is responsible for:

- Implementation of NPDES storm water discharge permit and pollution prevention plan requirements;
- identification and development of specific goals for continuous improvement to the Covanta storm water management program;
- Review and evaluation of changes to plant operations to determine potential impact and need for update of the Covanta SWPPP;
- Review and evaluation of other related Covanta plans for consistency with SWPPP, including communication with plant management to ensure a cooperative partnership.

Appendix A, Table 2-1 lists the SWPPP team members and their responsibilities.

Covanta's pollution prevention core team consists of the site's Environmental Compliance Specialist, Facility Manager, Operations Manager and Maintenance Supervisor. The MBF on-shift supervisor(s) are also part of the SWPPP team and are responsible for implementing the Plan. The SWPPP team assists the Facility Manager in developing, implementing, maintaining, and revising the SWPPP for the MBF, Landfill, FMG, and LTP.

2.4 General Location Map

The Facility is located on the Ward's Hill Neck peninsula in Haverhill, MA. The peninsula is bounded on the east by Route 495; to the northeast, north, west and southwest by the Merrimac River; and to the south by farmland. A Facility map can be found in **Appendix B, Figure 1**.

2.5 Site Map

A Facility map identifying the MBF, Landfill, FMG, and LTP, along with stormwater collection, treatment and discharge locations can be found in **Appendix B, Figure 2**.

2.6 Coordination with Other Plans

Within this SWPPP, references are made to the Facility's SPCC plan including potential pollutant sources, spill prevention procedures, inspections, spill response and notifications.

The facility maintains an updated SPCC Plan for the site. A hard copy can be found in the environmental compliance office. An electronic copy of this SWPPP is maintained on the Covanta SharePoint site at:

https://covanta.sharepoint.com/:f:/r/sites/HaverhillFacilityDocuments/Shared%20Documents/Facility%20Documents/Environmental%20Manuals/SWPPP?csf=1&web=1&e=kluY6h

Section 3
Facility Assessment

3.1 General

A facility assessment is used to determine what materials and practices are or may be a source of pollutants in storm water discharges from this site. This section includes a pollutant source assessment at the facility. Drainage and pollutant source maps were developed. A material inventory was conducted, past leaks and spills were evaluated, storm water quality data was collected and evaluated, and non-storm water discharges were looked for and identified if found.

3.2 Site Description

The site is located in the Ward Hill Neck section of Haverhill, Massachusetts. Interstate Route 495 borders the site on the east, and the Merrimack River borders on the north, west and south. **Appendix B, Figure 3-1** shows a locus map of the site.

The site is occupied by the MBF and the 70-acre Landfill. Support structures at the site include a FMG, and the LPF. The location of the MBF, Landfill and support buildings are shown on **Appendix B, Figure 3-2**.

3.3 Site Operations

3.3.1 Mass Burn Facility (MBF)

The MBF is an eight-story building with associated ancillary structures. It is permitted to combust up to 1,650 tons per day of MSW. The MSW is transported to the site by independent haulers. The hauler trucks pass over the incoming scale and then proceed to the enclosed tipping floor where the MSW is offloaded and inspected before being pushed into the refuse storage pit. Loads are screened to prevent the acceptance of hazardous materials and divert other unacceptable waste such as batteries and white goods. The waste is mixed within the refuse pit and deposited in the MBF boiler feed chutes by one of two overhead cranes. The waste is combusted in the water-wall boiler and the heat generated is used to generate steam. The steam is supplied to a turbine that drives an electric generator. When needed, the boiler's auxiliary burners use diesel oil as a supplementary fuel source. The diesel oil is stored in a 23,000 gallon above ground storage tank. The MBF boilers combust refuse 24 hours a day, seven days a week. MSW is typically accepted from 3 am to 5 pm during the week and from 6 am to 12 pm on Saturday.

3.3.2 Combustion Ash

The bottom ash that remains after MSW combustion is processed to remove ferrous metals and non-ferrous metals for recycling. The remaining bottom ash after metals removal is stockpiled in ash bays within the enclosed ash building. Ash entrained in the boiler flue gas is known as fly ash. The fly ash is collected from various parts of the

boiler and the air pollution control devices, and conveyed to the ash building where it is moisture conditioned before being stockpiled in the ash bays. The stockpiled bottom and fly ash are loaded by front end loaders into moisture tight dump trucks which transport the combined ash to the Landfill for disposal.

3.3.3 Air Pollution Control Systems

The boiler flue gas from each boiler is treated by an air pollution control (APC) system for the following pollutants:

- Nitrogen Oxides (NOx) - Aqueous ammonia injection system utilizing a 19% ammonia by weight solution.
- Mercury (Hg) and metals - Activated carbon injection systems.
- Sulfur dioxide (SO2) and acid gases - A semi-dry lime slurry injection scrubber
- Particulate matter (PM) - Fabric filter baghouse

3.3.4 Fleet Maintenance Garage

The FMG is a one and a half story building utilized to maintain and repair the Covanta transportation fleet, landfill equipment, MSW front-end loaders, and other mobile equipment used at the MBF. The building is equipped with a number of storage tanks to store equipment oils, antifreeze, diesel fuel, heating oil, and waste oil. The building consists of:

- a maintenance bay that spans the length of the building
- a warehouse bay that spans the length of the building
- an liquid materials storage and equipment fueling bay
- an electrical room, a water service room, and office, and
- two lavatory/showers.

3.3.5 Leachate Pre-Treatment Facility (LPF)

Leachate is wastewater generated by stormwater, and water in the deposited ash, that percolates down through the Landfill to the Landfill liner. It, along with underdrain waters, is collected by a series of pipes and pumps in the Landfill and transported to the LPF where it is pH adjusted prior to pumping. A 50% caustic soda solution, which is stored in a 500 gallon tank located inside the LPF, is used to adjust the pH of the leachate.

3.3.6 Ward Hill Neck Sanitary Landfill

The Landfill is used to dispose of the ash residues generated from the combustion of MSW. Normal operation has ash hauled from the MBF ash building to the Landfill five days per week. The ash is deposited on the working face of the Landfill, spread out, compacted, and covered with soil (a.k.a. average daily cover).

At the end of each operating day, the ash is covered with soil to protect it from storm water runoff. In addition, all external ash slopes are covered with 12 inches of dirt for intermediate cover. Landfill access roads are routinely maintained to minimize stormwater runoff of the ash.

3.4 Site Plan

Stormwater from developed areas at the site are directed to a stormwater collection system and treated based on the collection source. The collected stormwater is directed to one of the four collection basins located at the site depending on the collection source and directional flow of the stormwater. The basins are depicted on **Appendix B, Figure 3-2** and are described below:

- **Northern Infiltration Basin (NIB)** - Developed specifically to collect stormwater from landfill areas that are capped with final cover materials. The area of collection is depicted on **Appendix B, Figure 3-2** as the Northern Infiltration Basin Drainage Area.
- **Southern Infiltration Basin (SIB)** - Developed specifically to collect stormwater from landfill areas that are capped with final cover materials. The area of collection is depicted on **Appendix B, Figure 3-2** as the Southern Infiltration Basin Drainage Area.
- **Northeast Sedimentation Basin (NESB**) - Collects runoff from active and newly developed landfill areas. The area of collection is depicted on **Appendix B, Figure 3-2** as the Northeast Basin Drainage Area.
- **Eastern Sedimentation Basin (ESB)** - handles storm water flow from the paved roadway and parking areas around the site, as well as some off-site areas. The area of collection is depicted on **Appendix B, Figure 3-2** as the Eastern Basin Impervious Drainage Area. A detailed drawing of this system is depicted in **Appendix B, Figure 3-3.**

3.5 Stormwater Discharges

The ESB and NESB discharge directly to the Merrimack River. The ESB discharges to Outfall 001 and the NESB discharges to Outfall 002. A summary of the drainage areas and the acreage of the areas directed to each basin are shown in **Appendix A, Table 3-1.**

3.5.1 Site Map

The site drainage map and facility site map presented in **Appendix B, Figure 3-2** shows an outline of the drainage area for each storm water basin and outfall; the location of existing structural control measures used to reduce pollutants in stormwater runoff (including basins and vegetative swales); surface water bodies; locations of material exposure to precipitation; locations of major spills and leaks; locations of fueling areas; vehicle and equipment maintenance; loading and unloading areas; liquid storage tanks; processing areas; storage areas; waste disposal areas; and active and closed landfill areas.

3.6 Material Inventory – Summary of Potential Pollutant Sources

An inventory of the materials used and stored at the site are shown on **Appendix A, Table 3-2.** There are three main areas at the Facility where industrial materials and activities can be exposed to storm water. These include the MBF, the FMG, and the Landfill.

3.6.1 Mass Burn Combustion Facility (MBF)

There are various activities at the MBF that have the potential to expose pollutants to stormwater. Unloading areas for oils and chemicals can be exposed to storm water. The ash loading and trash unloading areas are contained within buildings; however, truck traffic could track materials outside, where they could impact the storm water systems.

There is a potential for trucks to track ash out of the Ash Loading Building onto the paved surfaces. The area where trucks are loaded with ash is inside, however, if there is spillage and the truck's wheels drive over it, the ash could be tracked outdoors which could potentially runoff into the storm drainage system during a storm event. This may occur if trucks don't park on the elevated ash building grates, if grates are not kept clean or if trucks are overloaded. Ash residue potentially increases iron, other metals and TSS levels in storm water.

Lime and carbon is used in the MBF for air pollution control. The lime and carbon are stored in silos in the air pollution control area south of the MBF. Aqueous ammonia is also used in the MBF and is stored in an above ground tank equipped with secondary containment.

There is a potential for trucks to track MSW out of the MBF Tipping building onto paved surfaces. This may occur if the MSW truck doesn't dump the refuse as close to the refuse pit as possible or if truck drives over previously dumped MSW. MSW tracked outside could run off into the storm drainage system and potentially increase TSS and other MSW contaminant levels in storm water.

Various above ground oil and chemical storage containers and chambers are located in the MBF. A list of MBF tanks, their materials, locations, quantities stored, and secondary containments are shown on **Appendix A, Table 3-3**. All have secondary containment and level gauges and are not exposed to storm water runoff.

Various 55 gallon drums for lube oil, waste oil, and fan oil are stored within the building – all with secondary containment. See **Appendix A, Table 3-4** for drum locations.

The FMG is the second area with a potential for pollutants to impact storm water runoff. The FMG is used to maintain and repair the landfill equipment and equipment for the MBF and transportation. The garage is covered, but equipment stored outdoors in this area could have oil and grease leaks that may be washed away with precipitation.

The garage includes two maintenance bays and one fueling bay. Waste oil generated at the FMG is stored in a 300 gallon tank. A 292 gallon waste oil burner supply tank is also located in the FMG Fueling bay. Hydraulic oils and antifreeze are stored in aboveground tanks and drums inside the fueling bay. All tanks have secondary containment.

Equipment refueling takes place within the fueling bay of the FMG. The fueling bay is equipped with a floor drain and a lined containment sump in case of a spill. Outside, adjacent to the FMG's fueling bay sits the double-walled 11,000-gallon aboveground diesel storage tank. Also in this area, is the 600 gallon heating oil AST used to supply the FMG. This tank is also equipped with level gage and secondary containment. **Appendix A, Table 3-5** lists the FMG tanks, their materials, locations, quantities stored, and secondary containments.

Storm water runoff in the area of the FMG flows in the direction of the nearest storm water catch basin.

3.6.2 Ward Hill Neck Sanitary Landfill

Sediment is the most prevalent potential pollutant at the landfill. The existence of large un-vegetated site areas can lead to sediment in the runoff during a storm event. After a landfill cell is closed and vegetation is established, the chance of erosion and sediment in the runoff decreases.

The potential exists for ash and soil sediment to be tracked outside the landfill limits. This can occur when:

- Trucks drive over uncovered ash;
- Operations are conducted during inclement weather;
- Trucks are not utilizing designated onsite landfill access roads;
- Roadways not being kept swept; or when
- Active landfill areas and slopes not properly covered.

The material can then be washed into the storm water system during an event.

Leachate within the landfill cells and within the leachate collection system piping and pumps could impact the storm water system via the site groundwater if leachate levels become excessive or if a leak occurs within the piping systems going to and from the leachate plant.

Dirt stockpiles located on site are used for landfill intermediate cover on external slopes. If these piles are not stabilized, erosion could cause TSS impacts to the storm water.

Fertilizer is another pollutant that is occasionally used on the capped landfill area to enhance vegetative growth. Fertilizer can run off with the storm water when it is first applied. Normally, fertilizer is only used on site for when repairs are made to established vegetated cells.

3.6.3 Other Site Potential Pollutant Sources

The Warehouse has two 275-gallon AST for heating oil. The above ground tanks are located within the southeast corner of the warehouse.

There is a pick-up truck equipped with a 100-gallon diesel tank to fuel equipment in the landfill site. This mobile tank is equipped with secondary containment and a level gauge.

The site's mobile equipment (dump trucks, dozer, sweeper, etc.) have hoses, fuel tanks and hydraulic tanks. These could be a potential pollutant source if there is a leak or break.

During the winter, snow from the roads is piled in an area by the warehouse where it will melt into one of the storm water basins. Salt mixture, stored under the MBF baghouse, is used to keep the roads safe for travel during inclement weather.

3.7 Identify Past Leaks and Spills

This step of the assessment phase is to develop a list of significant spills and significant leaks of toxic or hazardous materials that have occurred at the facility. USEPA has defined "significant spills" to include releases within a 24-hour period of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act and Section 102 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Reportable quantities are set amounts of substances in pounds, gallons, or other units and are listed in **40 CFR Part 117** and **40 CFR Part 302**.

The spills at the Ward Hill Neck landfill and Mass Burn Combustion Facility are included in **Appendix A, Table 3-6**. This table will be updated as necessary.

MSGP Section 5.1.3.4 states:

> *"You must document that you have evaluated for the presence of non-storm water discharges and that all unauthorized discharges have been eliminated. Documentation of your evaluation must include:*
>
> - *The date of any evaluation;*
> - *A description of the evaluation criteria used;*
> - *A list of the outfalls or onsite drainage points that were directly observed during the evaluation;*
> - *The different types of non-storm water discharge(s) and source locations; and*
> - *The action(s) taken, such as a list of control measures used to eliminate unauthorized discharge(s), if any were identified. For example, a floor drain was sealed, a sink drain was re-routed to sanitary, or an NPDES permit application was submitted for an unauthorized cooling water discharge.*

As noted, unless covered by an NPDES permit, non-storm water discharges are illegal. However, certain sources of non-storm water are allowable:

- Discharges from fire-fighting activities
- Fire hydrant flushes
- Potable water sources including waterline flushing

Uncontaminated condensate from air conditioners, coolers and other compressors

- Irrigation drainage
- Landscape watering
- Routine exterior building wash down without detergents
- Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred and where detergents are not used
- Uncontaminated groundwater or spring water
- Foundation or footing drains where flows are not contaminated with process materials
- Mist discharges which originate from cooling towers and which are deposited at an industrial facility and may be discharged.

There are two non-storm water discharges to the storm water system. The first discharge is a short-term, annual flow test of the Emergency Diesel Fire Pump (EDFP) conducted by an outside vendor. The second discharge is a seasonal discharge of potable water used for exterior cooling of the closed loop cooling tower. The two systems are visually inspected annually to confirm. See Section SWPPP 6.2 for more information.

All wastewater generated by the MBF is reused in the MBF facility. All wastewater generated by the MBF is collected in a basement sump then reused. The landfill leachate pumping facility collects all leachate and underdrain waters from the landfill. A portion of the leachate is transferred to the MBF facility for reuse. The majority of the leachate is discharged to the City of Haverhill under the conditions of an industrial discharge permit.

3.8 Stormwater Monitoring Data

The summary of the past Permit's storm water data is presented in **Appendix A, Table 3-7**. These results are from grab samples. Covanta samples stormwater in accordance with MSGP requirements and published guidelines.

Sampling points for Outfalls 001 and 002 are located closer to the basin outlets so that employees can safely collect samples before the discharge reaches the river.

The MSGP requires a description summarizing the potential source of stormwater pollutants, and what types of pollutants have already been, or may be found in stormwater runoff from the Facility. **Appendix A, Table 3-8** is a summary of the potential pollutant sources, the potential cause of that pollutant, the associated pollutants and the current preventative practices that are in place.

BMPs designed to prevent and reduce pollutants from entering stormwater are discussed **SWPPP Section 4**.

3.9 Endangered Species

Per MSGP guidance, an "Action Area" was defined around the Facility to represent the area which could be impacted by stormwater discharges from the Facility. Covanta consulted the U.S. Department of the Interior, U.S. Fish and Wildlife Service (FWS) Information, Planning, and Consultation System (IPaC) and the National Marine Fisheries Service (NMFS) to determine if endangered species are located in the Action Area.

It was determined from the FWS IPaC Official Species List report that stormwater run-off from the Facility does not adversely affect endangered species or the habitat of endangered species due to the fact that they are not present in the action area.

While the FWS Official Species List indicated the Northern Long-Eared Bat as threatened within the Action Area, this species was not considered when determining eligibility, per advisement from the USEPA as stormwater discharges would not affect any habitats.

The NMFS New England Map indicated that the Merrimack River and its sub-watersheds are habitat for the Atlantic and Short nose Sturgeon. The Facility therefore meets Criterion C Eligibility.

The FWS IPaC Official Species List report including a map of the Action Area and the New England NMFS map are provided in **Appendix C.**

3.10 Effects on Historic Properties

The Facility is not located within, contain, or abuts any historic properties. Stormwater discharges, and BMPs to control stormwater runoff and discharges, are not considered to affect a property listed on the National Register of Historic Places. Documentation of this determination is located in **Appendix C.**

Section 4

Identification of Control Measures/Best Management Practices

4.1 General

This section describes the BMPs chosen for the Facility that will eliminate, reduce or prevent pollutant loadings in stormwater discharges from the Facility. The list BMPs includes process controls and procedures, scheduling of activities, prohibitions on certain practices, and other management controls. The selected BMPs are implemented as part of the SWPPP.

4.2 Baseline Best Management Practices

Stormwater management controls appropriate for the Facility are listed in this section, along with a schedule for implementing the controls. The stormwater management controls include the following minimum components:

- Inspections
- Exposure Minimization
- Good Housekeeping
- Maintenance
- Spill Prevention and Response
- Sediment and Erosion Control
- Management of Runoff
- Waste, Garbage, Floatable Debris Control
- Dust Generation and Vehicle Tracking Control
- Employee Training
- Recordkeeping and Reporting

The above listed activities are applicable to a wide variety of activities and are relatively inexpensive and simple to implement. Other BMPs that are more activity specific, are included in **SWPPP Section 4.3.**

4.2.1 Inspections

Weekly environmental inspection are conducted by the Environmental Specialist or Environmental Technician. These inspections include the stormwater collection systems (swales, catch basins) and the infiltration and sedimentation basins.

Results of the inspection are documented using the Covanta EHS System Process Map application. There is both a mobile app version and computer version of the software available for use. The computer version can be accessed at the following link:

https://covanta.processmap.com/home

The report includes any proposed actions to correct deficiencies and/or proposed opportunities for improvement. All action items are tracked till completion and notifications of their status emailed weekly to the Covanta Regional Environmental Manager, the Facility Manager, and the Environmental Specialist. Details on the inspections performed at the site are contained in **SWPPP Section 6.**

Operating Landfill cells are inspected at least weekly. The focus of the inspection is on areas of the Landfill that have not yet been stabilized, storage areas of waste and materials exposed to precipitation, the leachate collection system and pumping facility. Sediment and erosion control measures are checked for proper operation. Daily, and more frequently during periods of wet weather, personnel monitor vehicles for track out issues at the entrance and exit areas of the ash and tipping floor, the road to and from the truck scales, the paved areas of the Facility, and the Landfill access road. A list of inspections at the Facility are contained on **Appendix A, Table 4-1**.

4.2.2 Exposure Minimization

As required by the Permit, the Facility must minimize the exposure of manufacturing, processing, and material storage areas (including loading and unloading, storage, disposal, cleaning, maintenance, and fueling operations) to rain, snow, snowmelt, and runoff, by either locating these industrial materials and activities inside or protecting them with storm resistant coverings (although significant enlargement of impervious surface area is not recommended). In minimizing exposure, the facility should pay particular attention to the following:

- **Use grading, berming, or curbing to prevent runoff of contaminated flows and divert run-on away from these areas.** A speed bump, constructed at the exit of the MBF tipping floor, diverts storm water away from the building exit. The bump, as well as a manhole at the exit, helps contain any contaminated storm water and divert it to the leachate collection system.

- **Locate materials, equipment, and activities so that leaks are contained in existing containment and diversion systems (confine the storage of leaky or leak-prone vehicles and equipment awaiting maintenance to protected areas).** In general, whenever a vehicle leak is identified, that vehicle is brought into the FMG to await repair. In space is not available, catch pans are placed under the leak and checked weekly at a minimum.

- **Clean up spills and leaks promptly using dry methods (e.g., absorbents) to prevent the discharge of pollutants**. This practice is performed at the facility as noted in Good Housekeeping section.

- **Use drip pans and absorbents under or around leaky vehicles and equipment or store indoors where feasible**. This practice is performed as noted above.

- ***Use spill/overflow protection equipment.*** All outdoor storage of oil and chemicals, as a well as majority of indoor storage, has secondary containment berms or skids.

- **Drain fluids from equipment and vehicles prior to on-site storage or disposal**. This practice is performed as noted above.

- **Delivery Vehicles. Minimize contamination of storm water runoff from delivery vehicles arriving at the plant site**. Consider procedures to inspect delivery vehicles arriving at the plant site and ensure overall integrity of the body or container and procedures to deal with leakage or spillage from vehicles or containers. Inspected visually at Scale House.

- **Ash-Hauling Vehicles.** Inspect all ash-hauling vehicles for proper covering over the load, adequate gate sealing, and overall integrity of the container body. Repair vehicles without load covering or adequate gate sealing, or with leaking containers or beds.

- **Perform all cleaning operations indoors, under cover, or in bermed areas that prevent runoff and run-on and also that capture any overspray; and ensure that all wash water drains to a proper collection system (i.e., not the storm water drainage system).** Vehicles are not to be washed outdoors. Rather, they are washed in the MBF's Ash Building wash bay. All wash water from this bay drains to the MBF basement where it is reused. The building has a berm at the exit door to prevent runoff.

In addition, all trash is stored in the enclosed tipping floor, ash within enclosed hoppers, enclosed conveyors or the enclosed ash building which is under a negative pressure. See also below, sections on loading and unloading, salt storage, metal stockpiles, etc.

4.2.3 Good Housekeeping

All areas of the facility exposed to storm water shall be kept in a clean, orderly manner. The following activities are considered good housekeeping BMPs.

- Ash trucks within the Ash Building shall be parked upon elevated grates.

- Prior to the start of ash loading, the grates will be inspected and cleaned as necessary. The grates must be kept clean during loading operations.

- Vehicles are not to leave the Ash Building until their wheels have been inspected and cleaned of ash residue.

- Vehicles exiting the landfill will use the paved Landfill access road to minimize tracking of sediment out of the Landfill as well as tracking around the site by other vehicles.

- As portions of the Landfill are filled to capacity and the trucks must travel further to arrive at the active disposal face, additional sections of roadway may be paved temporarily to reduce mud formation and provide greater lengths of roadway that can be mechanically swept.

- The paved Landfill access road must be inspected frequently for sediment tracking. This road must be kept scraped and swept as necessary throughout the operating day.

- The MBF tipping floor must be managed to minimize tracking. Wet loads should be directed to dump as close to the pit as possible. Mattresses and waste should be used to soak up additional moisture.

- The exit of the MBF tipping floor must be monitored for residue tracking by the tipping floor staff throughout the day and swept by the street sweeper as necessary. During non-ash hauling days, the tipping floor staff may operate the sweeper.

- Storage areas and loading areas\docks shall be swept and kept clean. If lime or carbon is spilled during a delivery, it must be swept up before driver leaves site.

- Any oil leaks onto the roadways or parking areas shall be absorbed and cleaned up as son as possible.

4.2.4 Maintenance

Inspection of the Facility, including storm water systems and other BMPs, is done during the weekly environmental inspection and during large storm events. For deficiencies noted, a corrective action plan will be developed to schedule repairs or restoration.

Landfill and site maintenance is performed throughout the good weather season. The following routine maintenance activities are performed:

- Dredging of the four storm water basins and forebays of accumulated silt as needed to maintain proper design function.

- Annual cleaning of silt from swales, rebuilding swales (as needed), and restoring hay bale check dams (as needed).

- Weekly evaluation of the integrity and effectiveness of the active Landfill slopes' intermediate cover and making repairs as necessary.

- Bi-monthly evaluation of the integrity and effectiveness of the Landfill slopes' final cover and making repairs as necessary.

- Semi-annual cutting of Landfill grass to prevent dead vegetation and potential erosion.
- Annual inspection of the two stormwater Vortechnic units, the FMG oil grease separator and the FMG Fueling bay sump. Cleanout of the units is to be documented.
- Annual cleaning of each Landfill cell's leachate collection pipe and leachate transfer piping.
- All parts of the leachate collection and transfer system must be maintained to prevent co-mingling of leachate and stormwater. Every five years a tightness test of the leachate piping and manholes should be conducted to determine if any leaks exist.
- Filter inserts are installed in the stormwater catch basins to minimize the discharge of incidental sediment or oil. Inserts shall be inspected weekly and replaced as necessary.

Equipment and systems in the MBF areas must be maintained in good operating condition to lower the risk of a hose or pipe break or leak. When equipment deficiencies are identified, a work order is created to ensure that the timely repairs are scheduled and completed.

Facility maintenance is tracked using a software program called PeopleSoft. PeopleSoft is used to generate work orders and schedule maintenance. Completed work orders for stormwater related projects are maintained in the PeopleSoft system and can be printed at any time.

Onsite vehicles are inspected by the operators daily before use. A daily inspection report is completed for each of the active vehicles. When deficiencies are noted, the FMG schedules the repairs.

4.2.5 Spill Prevention and Response

Covanta has a SPCC Plan for the Facility. This plan can be found in the environmental compliance office and on the Covanta SharePoint site at:

https://covanta.sharepoint.com/:f:/r/sites/HaverhillFacilityDocuments/Shared%20Documents/Facility%20Documents/Environmental%20Manuals/SPCC?csf=1&web=1&e=mqBggf

The SPCC Plan includes procedures to follow during spill and leak clean up, equipment and materials used for clean up, material handling, storage requirements, secondary containment, and equipment intended to minimize leaks. Other SPCC steps taken to minimize exposure to storm water include: Using containment berms for truck loading and unloading areas to minimize the spread of any leak or spill; providing secondary containment for all aboveground storage tanks; conducting routine SPCC inspections in

addition to the weekly site environmental inspection; and requiring that SPCC trained personnel must be available during fuel/chemical deliveries.

4.2.6 Sediment and Erosion Control

The use of daily and intermediate cover in the Landfill can lead to sediment in the runoff during a storm event. Soil is used for temporary stabilization on inactive, unvegetated portions of the landfill and sometimes on stockpiles of daily, intermediate, and final cover. Where appropriate hay bales are installed at the base of un-stabilized slopes and maintained to prevent silt runoff. During construction of additional cells and during closure construction, sediment and erosion controls include hay bales and silt fence. After a cell is closed, vegetation on the landfill or impervious covers, swales and pipe drains control the erosion of the Landfill surface, so that the amount of sediment in runoff decreases.

Once a Landfill cell is filled to its approved grades, a closure design plan will be completed and submitted to MassDEP for approval. Once approved, final closure of that cell is usually completed during the next construction season. Timely closure of cells will minimize the issues of erosion of intermediate cover and silt runoff into swales and basins.

4.2.7 Management of Runoff

Stormwater discharges from the site have reduced pollutant loadings because the runoff is controlled and treated through BMPs. There are four storm water basins on the site. Two basins discharge to the Merrimack River and two are groundwater infiltration basins with only emergency overflow discharge points.

The basins settle out solids and reduce the peak rate of runoff to prevent erosion and flooding downstream of the site. Swales direct stormwater to the basins and also help settle out solids. Swales are constructed of rip-rap stone to reduce the velocity of the storm water flow and settle out solids. Hay bale check dams are installed as necessary. Catch basins are fitted with oil, grease and sediment filter inserts in the vicinity of the MBF to filter storm water and allow solids to settle and separate oil and grease. Inline Vortechnics storm water interceptor units are installed to further separate oil and grease from the parking lot and the driveways.

4.2.8 Waste, Garbage and Floatable Debris Control.

As detailed above under Good Housekeeping, the facility ensures that waste, garbage, and floatable debris are not discharged to the river by keeping the site free of such materials, or by intercepting them before they are discharged. As part of the weekly inspection, the site grounds as well as the storm water basins and forebays are checked for waste and debris. If noted, the areas are cleaned to prevent any discharge of the materials into storm water.

4.2.9 Dust Generation and Vehicle Tracking of Industrial Materials Control.

As detailed above in Good Housekeeping, the facility minimizes generation of dust and off-site tracking of raw, final, or waste materials through regular inspections and housekeeping.

4.2.10 Employee Training

Covanta conducts pollution-prevention environmental training for employees annually. The topics covered in training include spill prevention, spill response, good housekeeping, and material management practices. Employee training is provided for all employees working in areas where materials or industrial activities are exposed to storm water and for employees responsible for implementing activities and practices described in the SWPPP. The employees are informed of the components and goals of the SWPPP. Initial and annual training is conducted as part of the SPCC Plan and SWPPP.

4.2.11 Recordkeeping and Reporting

Spills, other discharges, sampling results and inspections shall be written and appended to this plan. Past records can indicate problem areas and may lead to a change in practice that will reduce pollution. Refer to **SWPPP Section 7** for additional record keeping and reporting information.

4.2.12 Inspections

Covanta conducts facility inspections on a weekly, monthly and quarterly and annual basis. A listing of the inspections performed are shown on **Appendix A, Table 4-1.**

4.3 Activity Specific Best Management Practices

Activity specific BMPs for storm water control are listed below.

- Fueling
- Maintaining Vehicles and Equipment
- Painting Vehicles and Equipment
- Washing Vehicles and Equipment
- Loading and Unloading Bulk Materials
- Liquid Storage in Aboveground Tanks and Drums
- Industrial Waste Management
- Winter Road Treatment BMP

4.3.1 Fueling

Fueling equipment (other than tracked landfill compaction equipment) shall be done only when equipment is parked in the FMG fueling bay. This bay is equipped with a spill containment sump. The operator must stay with the vehicle or equipment while fueling.

4.3.2 Maintaining Vehicles and Equipment

Mobile equipment is inspected daily to try to prevent hose breaks and seal failures. Mobile equipment is inspected for leaks and general condition before use. Equipment that is commonly parked outside shall have spill buckets available to catch minor leaks when observed. Minor leaks shall be repaired as soon as possible. Equipment that is not used frequently is checked during the weekly site inspection for leakage or shall be drained of all fluids. Equipment maintenance is performed within the FMG. Paved surfaces shall be cleaned to remove oil and grease. No vehicles that are leaking oil shall be parked outside without the ability to catch the leaks.

4.3.3 Painting Vehicles and Equipment

Vehicle painting is done occasionally and is only allowed within the FMG repair bay.

4.3.4 Washing Vehicles and Equipment

Vehicles and equipment are washed in the MBF ash building. Wash water flows into the sump, then down to the MBF basement (a.k.a. -27 level) for reuse.

4.3.5 Loading and Unloading Bulk Materials

Prior to oil or chemical products being transferred into storage tanks, the tank level must be confirmed and the delivery amount noted. The level indicator is monitored during the transfer process. The hose is inspected before it is pressurized. The hose and the backflow valve of the tanker are located in the bermed area. Covanta personnel and the delivery truck operator must supervise and remain at the transfer site throughout the filling operation. Tank fill valves are maintained in the locked position except during deliveries.

4.3.6 Liquid Storage in Aboveground Tanks and Drums

Regular inspection of the integrity of the tanks greatly reduces unanticipated failures. SPCC inspections of these tanks are conducted monthly. General inspection of these areas for leaks is performed during the weekly environmental inspection. Potential spills would be contained by secondary containment. Check valves and gate valves for filling, draining, and other tank operations must be checked and worked annually. The structural integrity of tanks, foundations and supports should be physically and visually inspected every ten years. Tests include visual inspections, ultrasonic, acoustic emissions and other non-destructive testing techniques in accordance with API standards.

Facility personnel inspect drum storage areas during the weekly environmental inspection. Drums and smaller containers are visually inspected upon delivery.

Drums will not be accepted if the container appears to be compromised. The transporter must properly secure the container prior to leaving the facility. In general, drums should be delivered to the building where it will be utilized. No drums are stored in the warehouse. Care shall be exercised if there is a need to transport drums and containers between the MBF, warehouse, landfill and the FMG. Individual drums are not carried directly on the forks of the forklift or attempted to be moved by the forklift without a pallet or appropriate drum-handling device. Prior to transport between buildings, the drums are secured by use of wrapping or strapping materials. Drums are stored in enclosed areas, away from areas where there is the risk of getting hit by equipment.

Piping, valves, and pumps are regularly inspected for integrity. Depending on the pipe run, the section could be isolated by closing the appropriate valve during a leak or spill. Knowledge of the pipe and valve layout shall be reviewed during annual training. Drawings showing the system layout shall be readily available in case a leak or spill should occur. Valves are chained open or shut depending on the operation to prevent inadvertent opening or closing of the valves by someone not familiar with the piping and valves system. Pumps are within a sheltered area and leaks are repaired quickly. Hydraulic chambers in the MBF will be inspected regularly. A spill from the hydraulic chambers would be contained by the floor trenching.

Facility operational and maintenance personnel conduct facility and preventive maintenance inspections as part of their duties. Items inspected are:

- Secondary containment area: cracks and holes
- Secondary containment area: water, spillage or other materials. Any such materials are to be removed and properly disposed
- Overfill controls and data monitoring equipment
- Leakage or structural deformations of containers and tanks
- Containers are closed and sealed, except for vent pipes
- Proper labeling and identification of containers
- Containers are within designated area, segregated from equipment and 3 feet of aisle space is available
- Status of emergency fire and spill equipment

Spill clean-up equipment shall be accessible and include the following:

- Shovels, brooms, squeegees
- Absorbent
- Booms
- Absorbent pads

- Drain blocker
- Caution tape roll
- Danger tape roll

Refer to the SPCC Plan for additional detailed information on spill clean up procedures.

4.3.7 Industrial Waste Management

Waste oil is stored in tanks or in drums with the drums stored on secondary containment pallets and the tanks equipped with integral secondary containment system. Storage areas are marked as to the materials stored. Waste oil areas are inspected and results recorded weekly.

4.3.8 Winter Road Treatment BMP

For winter road treatment, the facility utilizes a magnesium chloride treated rock salt, commercially known as Magic Salt. Magic Salt is much more effective at melting ice and snow off the road and maintains the snow melt at a much lower freezing point.

4.4 Summary

Using BMPs and conducting inspections for proper operation can significantly reduce the contaminants in storm water runoff. Inspectors should be diligent and comprehensive in checking BMPs, various activities and practices at the site, and keeping records.

Section 5
Implementation

5.1 General

Implementation of the appropriate items in this SWPPP is critical for permit compliance. The structural and non-structural controls as well as employee training must be implemented and monitored to assure that the goals of the Plan are achieved.

5.2 Implement Controls

Facilities must implement the provisions of the SWPPP as a condition of the Permit.

5.3 Employee Training

Employee training programs must inform personnel at all levels of responsibility of the components and goals of the SWPPP. Training should address each component of the SWPPP including how and why tasks are to be implemented. Topics must include:

- Spill prevention and response
- Good housekeeping/BMPs
- Material management practices

5.3.1 Spill Prevention and Response

Spill prevention and response procedures are described earlier. These procedures are to be discussed in the training program in order to ensure all plant employees, not just those on the spill response teams, are aware of what to do if a spill occurs. Specifically, all employees involved in the industrial activities of the facility should be trained about the following measures, including how to:

- Identify potential spill areas and drainage routes, including information on past spills and causes
- Report potential spills to appropriate individuals, without penalty
- Specify material handling procedures and storage requirements
- Implement spill response procedures

Onsite contractors and temporary personnel should also be informed of the plant operations and design features in order to help prevent accidental discharges or spills from occurring.

5.3.2 Good Housekeeping

Facility personnel must be taught how to maintain a clean and orderly work environment. The following points should be emphasized in the good housekeeping portion of the training:

- Sweep or vacuum at regular intervals or, alternatively, wash down the area and collect and/or treat, and properly dispose of the wash down water
- Store materials in appropriate containers
- Keep all dumpster lids closed when not in use
- Spilled materials must be promptly cleaned up
- Sign should be displayed reminding employees of the importance and procedures of good house keeping
- Instruction should be provided on securing drums and containers and checking frequently for leaks and spills
- A regular schedule for housekeeping activities should be outlined to ensure that the job is being done

5.3.3 Materials Management Practices

On site materials should be organized and handled in a consistent, safe manner.

- Materials must be organized for storage
- Facility must identify all toxic and hazardous substances that are stored, handled, and produced onsite
- The facility should discuss handling procedures for these materials

5.3.4 Schedule for Training

Formal employee training occurs annually. Updates should occur more frequently. The effectiveness of the training program should be evaluated by discussing the goals with the employees to determine if the information has been communicated effectively.

Section 6
Evaluation and Monitoring

6.1 General

The work on a SWPPP does not finish after the development and implementation of the BMPs. The plan must be evaluated for its effectiveness and kept up-to-date with changes occurring at the Facility. This includes the following:

- Conducting site inspections and evaluations;
- Monitoring storm water quality;
- Documenting deficiencies and developing corrective actions;
- Maintaining records of inspections and reports; and
- Revising the plan as needed.

6.2 Inspections

6.2.1 Weekly Site Inspection

Once a week, an environmental inspection of the site is conducted by qualified personnel (SWPP team member), normally the environmental compliance specialist. As part of this inspection, the required SWPPP areas are also inspected. At least once per year, the weekly site inspection must be conducted during period of storm water discharge. A copy of the site's weekly environmental inspection report is in **Appendix D**.

The inspector must examine or look out for the following:

- Industrial materials, residue or trash that may have or could come into contact with storm water
- Leaks or spills from industrial equipment, drums, tanks and other containers
- Offsite tracking of industrial or waste materials, or sediment where vehicles enter or exit the site
- Tracking or blowing of raw, final or waste materials from areas of no exposure to exposed areas
- Control measures needing replacement, maintenance or repair

Following the inspection, a report is completed, deficiencies are identified, actions are proposed to correct any deficiencies and any opportunities for improvement are identified.

The inspection report is then e-mailed to members of the SWPPP team. Items are discussed at the morning operations meetings to discuss the issues and monitor

corrective action progress. Completed copies of the report are filed. See Section 7 for more information on Recordkeeping.

6.3 Monitoring

Section 4 of the MSGP contains the monitoring requirements for facilities covered by the permit. The MSGP lists the following types of required analytical monitoring, not all of which are applicable to the Covanta Facility:

- Quarterly Visual Assessments
- Indicator Monitoring
- Benchmark Monitoring
- Annual Effluent Limitations Guideline Monitoring
- State or Tribal-specific Monitoring
- Impaired Waters Monitoring
- Other Monitoring as required by USEPA

A listing of the above monitoring analytic requirements and their applicability to the Covanta Facility as contained in **Appendix A, Table 6-1**.

6.3.1 Quarterly Visual Assessments (MSGP Section 3.2)

Visual assessment sampling must be completed each quarter for the entirety of the permit coverage for each basin. This assessment shall be conducted on the samples collected from the ESB (Outfall 002) and the NESB (Outfall 002). The samples are collected in the discharge channel just prior to the stormwater being discharged to the Merrimack River. These sample locations are locally marked with a flag. The location of the outfalls is shown on **Appendix A, Figure 3-2**.

In addition to the two storm water discharge basins, the SIB and NIB are also checked during storm events to determine if any emergency overflow is occurring. Overflow from these basins is rare, but could occur during unusual long wet seasons or after excessively large rainfall events.

6.3.1.1 Visual Assessment Procedures

You must do the following for the quarterly visual assessment:

- Make the assessment of a stormwater discharge sample in a clean, colorless glass or plastic container, and examined in a well-lit area;
- Make the assessment of the sample you collected within the first 30 minutes of an actual discharge from a storm event. If it is not possible to collect the sample within the first 30 minutes of discharge, the sample must be collected as soon as practicable after the first 30 minutes and you must document why it was not

possible to take the sample within the first 30 minutes. In the case of snowmelt, samples must be taken during a period with a measurable discharge; and

- For storm events, make the assessment on discharges that occur at least 72 hours (three days) from the previous discharge. The 72-hour (three-day) storm interval does not apply if you document that less than a 72-hour (three-day) interval is representative for local storm events during the sampling period.

- Visually inspect or observe for the following water quality characteristics, which may be evidence of stormwater pollution:

  a. Color;

  b. Odor;

  c. Clarity (diminished);

  d. Floating solids;

  e. Settled solids;

  f. Suspended solids;

  g. Foam;

  h. Oil sheen; and

  i. Other obvious indicators of stormwater pollution.

Whenever the visual assessment shows evidence of stormwater pollution in the discharge, you must initiate the corrective action procedures outlined in **MSGP Section Part 5.1.1.**

A copy of the Facility's Quarterly Visual Assessment form and Sampling Instructions is contained in Appendix F. More consistent data will be provided if the same individual carries out the collection and the examination of all discharges every quarter. Currently, the assessments are conducted by the facility's environmental compliance specialist or environmental technician.

When adverse weather conditions prevent the collection of samples during a quarter, Covanta must take a substitute sample during the next qualifying storm event. Documentation of the rationale for no visual assessment for the quarter must be included with the SWPPP records. Adverse conditions are those that are dangerous or create inaccessibility for personnel, such as local flooding, high winds, electrical storms, or situations that otherwise make sampling impractical, such as extended frozen conditions, or deep snow.

Since the Facility is located in an area subject to snow, at least one quarterly visual assessment must capture snowmelt discharge taking into account the exception for climates with irregular storm water runoff. Normally, for this site, the 1st Quarter of the calendar year, January-March, will be chosen to meet this requirement. In the case of

snowmelt, samples must be taken during a period with a measurable discharge from the site.

This facility may be subject to **MSGP Section 4.2.3** "Climates with Irregular Storm water Runoff" since it is located in an area where freezing conditions can exist that can prevent runoff from occurring for extended periods. Normally, this condition would only occur at this site during the 1st quarter of the year, January-March. However, if a prolonged drought should occur during the summer quarter (July-September), the same condition of no discharge may occur. If these eligible conditions should occur for that quarter, then that quarter's visual assessments may be re-distributed during seasons when precipitation runoff begins again.

Documentation of such conditions must be also be completed and maintained in **SWPPP Appendix D**. See for More information on reporting and recordkeeping is contained in **SWPPP Section 7**

To ensure safety of sampling personnel, Quarterly Visual Assessment samples should be taken during daylight hours. Samples should not be taken during adverse weather conditions such as local flooding, high winds, or electrical storms, or situations that otherwise make sampling unsafe.

If a quarterly sample can not be taken due to lack of qualifying events, safety reasons, or adverse weather conditions, the rationale for not taking a sample for the quarter must be documented and maintained in the SWPPP in **Appendix D**. A substitute sample must be taken during the next qualifying event in the next quarter.

Please note: "Adverse Weather Conditions" nor "Climates with Irregular Storm water Runoff", exempt the facility from having to file benchmark monitoring report in accordance with its sampling schedule. If such conditions should occur during a quarter, preventing an eligible sampling from occurring, then the facility must still report, as specified in **SWPPP Section 7.1**, indicating the basis for not sampling during the usual monitoring period.

The completed reports shall be retained onsite with the SWPPP in **Appendix D**. If deficiencies are observed during the assessment, the site should be inspected for possible causes\sources and results noted on the report.

The completed Visual Assessment reports must be submitted to the facility's environmental compliance specialist, or the designated SWPP alternate by the next business day.

Deficiencies must be documented within 24 hours in accordance with **SWPPP Section 6.4** and forwarded to the SWPP team. If necessary, a corrective action plan must be developed and implemented as soon as possible but within 14 days in accordance with **SWPPP Section 6.4**. Follow-up sampling is then conducted.

6.3.2 Indicator Monitoring (MSGP Section 4.2.1)

The MSGP permit requires indicator monitoring of stormwater discharges for three parameters:

- pH,
- Total Suspended Solids (TSS), and
- Chemical Oxygen Demand (COD)

Indicator monitoring data provides a baseline and comparable understanding of industrial stormwater discharge quality and potential water quality problems. The indicator monitoring parameters are "report-only" and do not have thresholds or baseline values for comparison, therefore no follow-up action is triggered or required.

Although indicator monitoring is report-only and is neither benchmark monitoring nor an effluent limitation, it is a permit condition. Thus, failure to conduct indicator monitoring is a permit violation.

Indicator monitoring must be conducted each quarter, beginning in the first full quarter following either May 30, 2021 or the date of discharge authorization, whichever comes later. Monitoring will be completed at least once in each of the following quarters:

- January 1 – March 31
- April 1 – June 30
- July 1 – September 30
- October 1 – December 31.

6.3.3 Benchmark Monitoring (MSGP Section

Benchmark monitoring is required based on the industrial sector. Landfills fall under Sector L, requiring iron and total suspended solids (TSS) benchmark monitoring. The MWC falls under Sector O, requiring only iron benchmark monitoring. Covanta is not subject to effluent limitations in **40 CFR 445 Subpart B**, therefore the effluent limitations in the MSGP do not apply.

The cut-off concentrations for benchmark monitoring are 100 mg/L for TSS and 1.0 mg/L for total recoverable iron.

The benchmark concentrations are not effluent limitations; a benchmark exceedance, therefore, is not a permit violation. Benchmark monitoring data are primarily for use to determine the overall effectiveness of the control measures and to assist the facility in knowing when additional corrective action(s) may be necessary to comply with the effluent limitations in Part 2.

Monitoring requirements begin in the first full quarter following either May 30, 2021 or the date of discharge authorization, whichever comes later. Monitoring will be completed at least once in each of the following quarters:

- January 1 – March 31
- April 1 – June 30
- July 1 – September 30
- October 1 – December 31.

All benchmark samples must be made from grab samples collected: 1) Within the first 30 minutes of basin discharge, or as soon thereafter as practicable; 2) From a measureable storm event (0.1 inch); and 3) from a measureable storm event occurring more than 72 hours since the last measureable storm event (0.1 inch). A storm event is being interpreted as an event that receives 0.1 inches or greater precipitation.

Samples shall be collected from the center of the channel, where turbulence is maximum. The collection of the samples should be supervised by someone experienced in performing sampling of storm water discharges. See Appendix G for the Facility's Quarterly Visual Assessment and Sampling Instructions and Report form. Currently, the sampling is conducted by the facility environmental compliance specialist and a third party consultant. These sample locations are locally marked with a flag. See outfall locations mapped on **Appendix B, Figure 3.3.**

All samples must be analyzed consistent with 40 CFR 136 analytical methods and using test procedures with quantitative limits at or below benchmark values.

Once available, the sampling results are to be evaluated by SWPP team members.

6.3.4 Effluent Limitations Monitoring (MSGP Section 4.2.3)

6.3.4.1 Subpart L

The effluent monitoring limits of MSGP Part 8, Subpart L do not apply based on the following note to Table 8.L.3:

> *As set forth at 40 CFR Part 445 Subpart B, these numeric limitations apply to contaminated stormwater discharges from MSWLFs that have not been closed in accordance with 40 CFR 258.60, and to contaminated stormwater discharges from those landfills that are subject to the provisions of 40 CFR Part 257* ***except for discharges from any of the following facilities:***
>
> > *(a) landfills operated in conjunction with other industrial or commercial operations, when the landfill receives only wastes generated by the industrial or commercial operation directly associated with the landfill;*

The MBF is considered an "other" industrial operation, it is directly associated with the landfill, and the landfill only receives wastes (ash) generated by it. For this reason the landfill is considered exempt from the Subpart L effluent limitations monitoring based on the above exception.

6.3.4.2 Subpart O

The effluent monitoring limits of MSGP Part 8, Subpart O Table 8.O-2 do not apply as the Covanta Facility does not have any coal storage piles at the facility.

6.3.5 Impaired Waters Monitoring (MSGP Section 4.2.5)

Impaired waters monitoring is required when discharging to an impaired water body. Outfalls 001 and 002 discharge to the following impaired segment of the Merrimack River[1]:

AU ID: MA84A-04

Description: Essex Dam Lawrence to confluence with Little River in Haverhill.

Size: 10 miles

Impairments: Escherichia Coli (E. Coli), PCBs in Fish Tissue, Phosphorous

Impaired waters monitoring is required annually at Outfalls 001 and 002 for E. coli and phosphorous in year one and four of permit coverage, with exceptions as noted below.

If monitoring results indicate the monitored pollutant is not detected in your discharge, or is within the acceptable range for a given parameter for the waterbody to meet its designated use (e.g., pH or temperature), monitoring may be discontinued for that pollutant for the next two years. Monitoring must resume for that pollutant in year four of permit coverage.

If monitoring results indicate that the monitored pollutant is detected in your stormwater discharge, or is outside the acceptable range for a given parameter (e.g., pH or temperature) for the waterbody to meet its designated use, monitoring for the pollutant must continue annually until it is no longer detected, after which monitoring may be discontinued for that pollutant until monitoring resumes in year four of permit coverage.

Impaired Waters sampling will normally be conducted as part of the sampling performed for the benchmark monitoring. **Refer to SWPPP Section 6.3.2** for more details on sampling procedures and locations.

6.4 Corrective Actions

6.4.1 Conditions Requiring Review and Revision to Eliminate Problem

If any of the following conditions occur, the facility must review and revise the SWPPP control measures to ensure that the condition is eliminated and will not be repeated in the future:

[1] Massachusetts Integrated List of Waters for the Clean Water Act 2018/2020 Reporting Cycle – Draft for Public Comment April 2021 (2) CN 505.0

- The facility finds during the Weekly Site Inspection (**SWPPP Section 6.2.1**) or Quarterly Visual Assessment (**SWPPP Section 6.4.1**) that the control measures are not being properly operated and maintained.
- Unauthorized release or discharge (e.g., spill, leak, or discharge of non-storm water not authorized by this or another NPDES permit) occurs at the facility;
- The facility becomes aware, or USEPA determines, that the control measures are not stringent enough for the storm water discharge to meet applicable water quality standards or;
- An inspection or evaluation of the facility by an USEPA official, or local, State, or Tribal entity, determines that modifications to the control measures are necessary to meet the non-numeric effluent limits in this permit.

6.4.2 Conditions Requiring Review to Determine if Modifications Are Necessary

If any of the following conditions occur, the facility must review its control measures to determine if modifications are necessary to meet the effluent limits in this permit:

- Construction or a change in design, operation, or maintenance at the facility significantly changes the nature of pollutants discharged in storm water from the facility, or significantly increases the quantity of pollutants discharged; or
- The average of 4 quarterly sampling results exceeds an applicable benchmark. If less than 4 benchmark samples have been taken, but the results are such that an exceedance of the 4 quarter average is mathematically certain (i.e., if the sum of quarterly sample results to date is more than 4 times the benchmark level) this is considered a benchmark exceedance, triggering this review.

6.4.3 Corrective Action Deadlines

The facility must document its discovery of any of the conditions listed in **SWPPP Sections 6.3.1 and 6.3.2** within 24 hours of making such discovery. Subsequently, within 14 days of such discovery, the facility must document any corrective action to be taken to eliminate or further investigate the deficiency.

Upon discovery of a deficiency requiring a corrective action, the condition is reported to a SWPP team, normally via the facility's email to satisfy the 24 hours notification requirement. The email will document the following information:

- Identification of the condition triggering the need for corrective action review;
- Description of the problem identified; and
- Date the problem was identified.

The storm water pollution prevention team will then issue a corrective action form that will document and track the corrective action. Corrective actions may require design, installation, and implementation of new or modified control measures.

Within 14 days, the following must be documented in the corrective action report:

- Summary of the corrective action taken or to be taken
- Notice of whether the SWPP plan needs to be updated
- Date corrective action was initiated
- Date corrective action completed

6.5 Plan Revision

The plan must be amended whenever there is a change in design, construction, operation, or maintenance, which may impact the potential for pollutants to be discharged or if the Plan proves to be ineffective in controlling the discharge of pollutants. The Plan must be amended during inspections, monitoring, and investigations also. Facilities are not required to submit a notice to the Director each time the pollution prevention plan is modified unless the Director specifically requests changes to be made to the plan.

For the SWPPP to be effective, the plan must comply with any permit conditions that apply to your facility and accurately represent facility features and operations. Plan changes can be the result of a change at the facility or from the evaluation of the effectiveness of the BMPs.

Section 7

Reporting and Recordkeeping

7.1 Reporting Monitoring Data

7.1.1 Reporting Monitoring Data to USEPA

All monitoring data collected pursuant to the MSGP (SWPPP Section 6.3 (Benchmark Monitoring, and Impaired Waters Monitoring) must be submitted to USEPA using the online NetDMR system (https://npdes-ereporting.epa.gov/net-netdmr/). Data must be submitted no later than 30 days (email date or postmark date) after the facility has received the complete laboratory results for all monitored outfalls for the reporting period.

If the facility collects multiple samples in a single quarter (e.g., due to adverse weather conditions, climates with irregular storm water runoff, or areas subject to snow), it is required to submit all sampling results to USEPA within 30 days of receiving the laboratory results.

If the facility monitors any pollutant more frequently than required by the permit using test procedures approved under **40 CFR Part 136** or as specified in the permit, the results of this monitoring must be included in the calculation and reporting of the data submitted in the MSGP Discharge Monitoring Report.

Calculations for all limitations which require averaging of measurements must use an arithmetic mean. For averaging purposes, use a value of zero for any individual sample parameter, which is determined to be less than the method detection limit. For sample values that fall between the method detection level and the quantitation limit (i.e., a confirmed detection but below the level that can be reliably quantified), use a value halfway between zero and the quantitation limit.

7.1.2 Reporting Monitoring Data to MassDEP (MSGP 7.4)

The results of any monitoring required by the Permit that identify violations of any effluent limits or benchmarks for any parameter for which monitoring is required shall be sent to the MassDEP. In addition, any follow-up monitoring and a description of the corrective actions required and undertaken to meet the effluent limits or benchmarks shall be sent to the MassDEP. All MassDEP notifications should be sent to:

MassDEP
North East Regional Office
205B Lowell Street
Wilmington, MA, 01887
Attention: Bureau of Waste Prevention

7.2 Annual Report (MSGP Section 7.4)

The Facility must submit an annual report to USEPA that includes the findings from the routine inspections, summary of the past year's quarterly visual assessment, monitoring exceedance explanation and any corrective action documentation as required in **SWPPP Section 6.3**. If corrective action is not yet completed at the time of submission of the annual report, the facility must describe the status of any outstanding corrective action(s).

In addition to this information, the facility must include the following information with its annual report:

- Facility name
- NPDES permit tracking number
- Facility physical address
- Contact person name, title, and phone number
- Statement contained in the **MSGP 2021 Appendix B Subsection 11**

The annual report is due to USEPA by January 30th for each year of permit coverage.

7.3 Additional Reporting

The facility is also subject to the standard permit reporting provisions of **MSGP Appendix B, Subsection 12**.

7.3.1 USEPA Regional Office Reporting

When applicable, the facility must submit reports to the USEPA regional office:

U.S. EPA Region 1
Office of Ecosystem Protection
5 Post Office Square, Suite 100 (OEP06-1)
Boston, MA 02109-3912
Telephone: (617) 918-1695

7.3.2 Twenty-Four Hour Reporting (MSGP Appendix B, Subsection 12.F)

The Facility must report any non-compliance which may endanger health or the environment. Any information must be provided orally within 24 hours from the time that the Facility becomes aware of the circumstances. A written submission must also be provided within five days of the time that the facility becomes aware of the circumstances.

The written submission must contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance

has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

The following shall be included as information which must be reported within 24 hours under this paragraph.

- Any unanticipated bypass which exceeds any effluent limitation in the permit. (See **40 CFR 122.41(m)(3)(ii)**);
- Any upset which exceeds any effluent limitation in the permit; or
- Violation of a maximum daily discharge limit for any numeric effluent limitation. (See **40 CFR 122.44(g)**).

USEPA may waive the written report on a case-by-case basis for reports under Appendix B, Subsection 12.F.2 if the oral report has been received within 24 hours.

7.3.3 Federal Reportable Quantity Spills (MSGP Part 2.1.2.4)

The Facility must provide notification to USEPA, as required under MSGP Part 2.1.2.4, as soon as it has knowledge of a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a federal reportable quantity.

The Facility's SPCC Plan describes the procedures that will be followed for responding to spills or leaks. All spills shall be documented at a minimum using the SPCC spill report form.

If the spill is determined to exceed reportable quantities under state or federal regulations, the appropriate agencies will be notified. Once a notification is made externally to an agency, additional standardized reports will be required depending on the agency.

Spill Reports will include the date and time of the incident, weather conditions, duration, cause, environmental problems, response procedures, parties notified, recommended revisions of the BMP program, operating procedures, and/or equipment needed to prevent recurrence.

The list of spills and leaks in the SWPPP must be updated if significant spills or leaks occur in exposed areas of the Facility during the time the Facility is covered by the permit. More information on past spills that have occurred at the site is contained in **SWPPP Section 3**.

7.3.4 USEPA Headquarters Reports

When applicable, the facility must submit the following reports to USEPA Headquarters at the appropriate address listed in **SWPPP Section 7.3.1** above:

- Planned changes (**MSGP Appendix B, Subsection 12.A**) – a facility must give notice to USEPA as soon as possible of any planned physical alterations or

additions to the permitted facility that qualify the facility as a new source or that could significantly change the nature or significantly increase the quantity of pollutants discharged. Notice is required only when:

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in **40 CFR 122.29(b)**; or
2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under **40 CFR 122.42(a)(1)**.

- Anticipated noncompliance (**MSGP Appendix B, Subsection 12.B**) – a Facility must give advance notice to USEPA of any planned changes in the permitted facility or activity which it anticipates will result in noncompliance with permit requirements;
- Transfer of ownership and/or operation (**MSGP Appendix B, Subsection 12.C**) – the Facility must submit a complete and accurate NOI in accordance with the requirements of **MSGP Appendix G** and by the deadlines specified in **MSGP Appendix G Table 1-2**;
- Compliance schedules (**MSGP Appendix B, Subsection 12.F**) - Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the MSGP permit must be submitted no later than 14 days following each schedule date;

7.4 Recordkeeping (MSGP Section 7.7)

The Facility is required to keep the following inspection, monitoring, and certification records with its SWPPP. The facility must retain the records and documentation for a period of at least three years from the date that Facility coverage under the MSGP permit expires or is terminated.

- Copies of the SWPPP (including any modifications made during the term of the MSGP permit),
- Monitoring data,
- Records of all data used to complete the NOI to be covered by this permit,
- A copy of the NOI submitted to USEPA along with any correspondence exchanged between the facility and USEPA specific to coverage under this permit;
- A copy of the acknowledgment letter received from the NOI Processing Center m assigning your permit tracking number;
- A copy of the MSGP permit (an electronic copy easily available to SWPPP personnel is also acceptable);
- Descriptions and dates of any incidences of significant spills, leaks, or other releases that resulted in discharges of pollutants to waters of the U.S., through

storm water or otherwise; the circumstances leading to the release and actions taken in response to the release; and measures taken to prevent the recurrence of such releases (**MSGP Part 2.1.2.4**);

- Records of employee training, including date training received (**MSGP Part 2.1.2.8**);
- Documentation of maintenance and repairs of control measures, including the date(s) of regular maintenance, date(s) of discovery of areas in need of repair/replacement, and for repairs, date(s) that the control measure(s) returned to full function, and the justification for any extended maintenance/repair schedules;
- All inspection reports including the weekly facility inspection reports (**SWPPP Section 6.2.1**) and the Quarterly Visual Assessment Reports (**SWPPP Section 6.3.1**).
- Description of any deviations from the schedule for visual assessments and/or monitoring, and the reason for the deviations (e.g., adverse weather or it was impracticable to collect samples within the first 30 minutes of a measurable storm event) (**MSGP Parts 3.2.3, 6.1.5**);
- Description of any corrective action taken at your site, including triggering event and dates when problems were discovered and modifications occurred;
- Documentation of any benchmark exceedances and how they were responded to, including either (1) corrective action taken, (2) a finding that the exceedance was due to natural background pollutant levels, or (3) a finding that no further pollutant reductions were technologically available and economically practicable and achievable in light of best industry practice consistent with **MSGP Part 6.2.1**;
- Documentation to support any determination that pollutants of concern are not expected to be present above natural background levels if you discharge directly to impaired waters, and that such pollutants were not detected in your discharge or were solely attributable to natural background sources (**MSGP Part 6.2.4.1**); and
- Documentation to support your claim that your facility has changed its status from active to inactive and unstaffed with respect to the requirements to conduct routine facility inspections (**MSGP Part 3.1**), quarterly visual assessments (**MSGP Part 3.2**), and/or benchmark monitoring (**MSGP Part 6.2.1**).
- In accordance with, **MSGP Part 8.L.8**.1 Recordkeeping and Internal Reporting, the facility will keep records of the types of wastes disposed of in each cell of the landfill. Landfill O&M plan

Table 7-1 provides a list of where all the routine documentation, records and reports required by this Plan can be located. Due to the volume of paperwork, not all documents can be appended directly to this Plan. However, this list provides a guide to locating the document of interest.

7.5 Signature Requirements

7.5.1 Applications Including NOIs

For a corporation, all applications, including NOIs, must be signed by a "Responsible Corporate Officer".

For the purpose of this subsection, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

7.5.2 SWPPP and Required SWPPP Reports

This SWPPP, including changes to the SWPPP to document any corrective actions taken as required by **MSGP Part 5.3**, and all reports submitted to USEPA, must be signed by a person described in **SWPPP Section 7.5.1** above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

1. The authorization is made in writing by a person described in **MSGP Appendix B, Subsection 11.A**;

2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

3. The signed and dated written authorization is included in the SWPPP. A copy must be submitted to USEPA, if requested.

7.5.3 Other Documentation

All other changes to your SWPPP, and other compliance documentation required under **MSGP Part 7**, must be signed and dated by the person preparing the change or documentation.

7.5.4 Certification Statement

Any person signing documents in accordance with **MSGP Appendix B**, **Subsections 11.A or 11.B** must include the following certification:

> "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

The Certification Statement and signature for this SWPPP is contained in **SWPPP Section 1.5.**

Section 8

Sector-Specific Requirements for Industrial Activities

In addition to the general requirements for all facilities covered under the MSGP, the Facility must also comply with **MSGP Part 8** Sector-Specific requirements associated with its primary industrial activity and any co-located industrial activities, as defined in **MSGP Appendix A**. Since the site includes a Landfill (SIC code 4953), it must comply with the requirements of **MSGP Part 8, Subpart L-Sector L: Landfills, Land Application Sites and Open Dumps.**

In addition, the MBF is an electric generating facility (SIC code 4953), and is required to comply with the requirements of **MSG: Part 8, Subpart O-Sector O: Steam Electric Generating facilities.**

8.1 Sector L: Landfills

8.1.1 General

The requirements in Subpart L apply to storm water discharges associated with industrial activity from Landfills and Land Application Sites and Open Dumps as identified by the Activity Code specified under Sector L in Table D-1 of Appendix D of the MSGP permit.

The MSGP may authorize storm water discharges for Sector L facilities associated with waste disposal at landfills, land application sites, and open dumps that receive or have received industrial waste, including sites subject to regulation under Subtitle D of RCRA. This permit does not cover discharges from landfills that receive only municipal wastes.

The following discharges are not authorized by this permit:

- leachate,
- gas collection condensate,
- drained free liquids
- contaminated ground water
- laboratory wastewater, and
- contact wash water from washing truck and railcar exteriors and surface areas that have come in direct contact with solid waste at the landfill facility.

8.1.2 Sector L Definitions

The following definitions as defined in **MSGP Section 8.L.4** are applicable to the Landfill operations:

Contaminated storm water - is storm water that comes into direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater. Some areas of a landfill that may produce contaminated storm water include (but are not limited to) the open face of an active landfill with exposed waste (no cover added); the areas around wastewater treatment operations; trucks, equipment, or machinery that has been in direct contact with the waste; and waste dumping areas.

Drained free liquids - aqueous wastes drained from waste containers (e.g., drums) prior to landfilling.

Landfill wastewater - all wastewater associated with, or produced by, landfilling activities except for sanitary wastewater, non-contaminated storm water, contaminated groundwater, and wastewater from recovery pumping wells. Landfill process wastewater includes, but is not limited to, leachate; gas collection condensate; drained free liquids; laboratory-derived wastewater; contaminated storm water; and contact wash water from washing truck, equipment, and railcar exteriors and surface areas that have come in direct contact with solid waste at the landfill facility.

Leachate - liquid that has passed through or emerged from solid waste and contains soluble, suspended, or miscible materials removed from such waste.

Non-contaminated storm water - storm water that does not come into direct contact with landfill wastes, the waste handling and treatment areas. This includes storm water that flows off the cap, cover, intermediate cover, daily cover and/or final cover of the landfill.

8.1.3 Additional Technology-Based Effluent Limits

Preventive Maintenance Program - (**MSGP Part 2.1.2.3**) As part of the facility's preventive maintenance program, the following must be maintained:

- All elements of leachate collection and treatment systems to prevent commingling of leachate with storm water; and
- The integrity and effectiveness of the intermediate or final cover (including repairing the cover as necessary), to minimize the effects of settlement, sinking, and erosion.

Erosion and Sedimentation Control (**MSGP Part 2.1.2.5**) - The Facility must provide temporary stabilization (e.g., temporary seeding, mulching, and placing geotextiles on the inactive portions of stockpiles) for the following:

- Materials stockpiled for daily, intermediate, and final cover
- Inactive areas of the landfill or open dump
- Landfills or open dump areas that have gotten final covers but where vegetation has yet to establish itself, and
- Land application sites where waste application has been completed but final vegetation has not yet been established

8.1.4 Additional SWPPP Requirements

Drainage Area Site Map (**Part 5.2.2**) - Document in your SWPPP where any of the following may be exposed to precipitation or surface runoff: active and closed landfill cells or trenches, active and closed land application areas, locations where open dumping is occurring or has occurred, locations of any known leachate springs or other areas where uncontrolled leachate may commingle with runoff, and leachate collection and handling systems.

Summary of Potential Pollutant Sources (**Part 5.2.3**) - Document in your SWPPP the following sources and activities that have potential pollutants associated with them: fertilizer, herbicide, and pesticide application; earth and soil moving; waste hauling and loading or unloading; outdoor storage of significant materials, including daily, interim, and final cover material stockpiles as well as temporary waste storage areas; exposure of active and inactive landfill and land application areas; uncontrolled leachate flows; and failure or leaks from leachate collection and treatment systems.

8.1.5 Additional Inspection Requirements. (MSGP Part 3)

Inspections of Active Sites - Except in arid and semi-arid climates, inspect operating landfills, open dumps, and land application sites at least once every 7 days. Focus on areas of landfills that have not yet been finally stabilized; active land application areas, areas used for storage of material and wastes that are exposed to precipitation, stabilization, and structural control measures; leachate collection and treatment systems; and locations where equipment and waste trucks enter and exit the site. Ensure that sediment and erosion control measures are operating properly. For stabilized sites and areas where land application has been completed, or where the climate is arid or semiarid, conduct inspections at least once every month.

Inspections of Inactive Sites - Inspect inactive landfills, open dumps, and land application sites at least quarterly. Qualified personnel must inspect landfill (or

open dump) stabilization and structural erosion control measures, leachate collection and treatment systems, and all closed land application areas.

8.1.6 Additional Post-Authorization Documentation Requirements.

Keep records with your SWPPP of the types of wastes disposed of in each cell or trench of a landfill or open dump. For land application sites, track the types and quantities of wastes applied in specific areas.

8.1.7 Sector-Specific Benchmarks

MSGP Table 8.L-1 identifies benchmarks that apply to the specific subsectors of Sector L. These benchmarks apply to both your primary industrial activity and any co-located industrial activities, which describe your site activities. A listing of the Sector L benchmarks is contained on **Appendix A, Table 8-1**.

8.1.8 Effluent Limitations Based on Effluent Limitations Guidelines (See also MSGP Part 6.2.2.1)

The effluent limits that apply to the industrial activities conducted at the Facility are shown on **Appendix A, Table 8-2**. Compliance with these effluent limits is determined based on discharges from the industrial activities independent of commingling with any other waste streams that may be covered under the MSGP.

As set forth at **40 CFR Part 445 Subpart B**, these numeric limitations apply to contaminated storm water discharges from MSWLFs that have not been closed in accordance with **40 CFR 258.60**, and to contaminated storm water discharges from those landfills that are subject to the provisions of **40 CFR Part 257** except for discharges from any of the following facilities:

(a) Landfills operated in conjunction with other industrial or commercial operations, when the landfill receives only wastes generated by the industrial or commercial operation directly associated with the landfill;

(b) Landfills operated in conjunction with other industrial or commercial operations, when the landfill receives wastes generated by the industrial or commercial operation directly associated with the landfill and also receives other wastes, provided that the other wastes received for disposal are generated by a facility that is subject to the same provisions in **40 CFR Subchapter N** as the industrial or commercial operation, or that the other wastes received are of similar nature to the wastes generated by the industrial or commercial operation;

(c) Landfills operated in conjunction with CWT facilities subject to **40 CFR Part 437**, so long as the CWT facility commingles the landfill wastewater with other non-landfill wastewater for discharge. A landfill directly associated with a CWT

facility is subject to this part if the CWT facility discharges landfill wastewater separately from other CWT wastewater or commingles the wastewater from its landfill only with wastewater from other landfills; or

(d) Landfills operated in conjunction with other industrial or commercial operations when the landfill receives wastes from public service activities, so long as the company owning the landfill does not receive a fee or other remuneration for the disposal service.

8.2 Sector O: Steam Electric Generating Facilities

8.2.1 General

The requirements in MSGP Subpart O apply to storm water discharges associated with industrial activity from Steam Electric Power Generating Facilities as identified by the Activity Code specified under Sector O in **MSGP Table D-1 of Appendix D**.

This permit authorizes storm water discharges from the following industrial activities at Sector O facilities:

- Steam electric power generation using coal, natural gas, oil, nuclear energy, etc., to produce a steam source, including coal handling areas;
- Coal pile runoff, including effluent limitations established by **40 CFR Part 423**; and
- Dual fuel facilities that could employ a steam boiler.

8.2.2 Limitations on Coverage.

Prohibition of Non-Storm water Discharges - Non-storm water discharges subject to effluent limitations guidelines are not covered by this permit.

Prohibition of Storm water Discharges - Storm water discharges from the following are not covered by this permit:

- Ancillary facilities (e.g., fleet centers and substations) that are not contiguous to a stream electric power generating facility;
- Gas turbine facilities (providing the facility is not a dual-fuel facility that includes a steam boiler), and combined-cycle facilities where no supplemental fuel oil is burned (and the facility is not a dual-fuel facility that includes a steam boiler); and
- Cogeneration (combined heat and power) facilities utilizing a gas turbine.

8.2.3 Additional Technology-Based Effluent Limits

The following good housekeeping measures are also required:

Fugitive Dust Emissions - Minimize fugitive dust emissions from coal handling areas. To minimize the tracking of coal dust offsite, consider procedures such as installing specially designed tires or washing vehicles in a designated area before they leave the site and controlling the wash water.

Delivery Vehicles - Minimize contamination of storm water runoff from delivery vehicles arriving at the plant site. Consider procedures to inspect delivery vehicles arriving at the plant site and ensure overall integrity of the body or container and procedures to deal with leakage or spillage from vehicles or containers.

Fuel Oil Unloading Areas - Minimize contamination of precipitation or surface runoff from fuel oil unloading areas. Consider using containment curbs in unloading areas, having personnel familiar with spill prevention and response procedures present during deliveries to ensure that any leaks or spills are immediately contained and cleaned up, and using spill and overflow protection devices (e.g., drip pans, drip diapers, or other containment devices placed beneath fuel oil connectors to contain potential spillage during deliveries or from leaks at the connectors).

Chemical Loading and Unloading - Minimize contamination of precipitation or surface runoff from chemical loading and unloading areas. Consider using containment curbs at chemical loading and unloading areas to contain spills, having personnel familiar with spill prevention and response procedures present during deliveries to ensure that any leaks or spills are immediately contained and cleaned up, and loading and unloading in covered areas and storing chemicals indoors.

Miscellaneous Loading and Unloading Areas - Minimize contamination of precipitation or surface runoff from loading and unloading areas. Consider covering the loading area; grading, berming, or curbing around the loading area to divert run-on; locating the loading and unloading equipment and vehicles so that leaks are contained in existing containment and flow diversion systems; or equivalent procedures.

Liquid Storage Tanks - Minimize contamination of surface runoff from above-ground liquid storage tanks. Consider protective guards around tanks, containment curbs, spill and overflow protection, dry cleanup methods, or equivalent measures.

Large Bulk Fuel Storage Tanks - Minimize contamination of surface runoff from large bulk fuel storage tanks. Consider containment berms (or their equivalent). You must also comply with applicable State and Federal laws, including Spill Prevention, Control and Countermeasure (SPCC) Plan requirements.

Spill Reduction Measures - Minimize the potential for an oil or chemical spill, or reference the appropriate part of your SPCC plan. Visually inspect as part of your routine facility inspection the structural integrity of all above-ground tanks, pipelines, pumps, and related equipment that may be exposed to storm water, and make any necessary repairs immediately.

Oil-Bearing Equipment in Switchyards - Minimize contamination of surface runoff from oil-bearing equipment in switchyard areas. Consider using level grades and gravel

surfaces to retard flows and limit the spread of spills, or collecting runoff in perimeter ditches.

Residue-Hauling Vehicles - Inspect all residue-hauling vehicles for proper covering over the load, adequate gate sealing, and overall integrity of the container body. Repair vehicles without load covering or adequate gate sealing, or with leaking containers or beds.

Ash Loading Areas - Reduce or control the tracking of ash and residue from ash loading areas. Clear the ash building floor and immediately adjacent roadways of spillage, debris, and excess water before departure of each loaded vehicle.

Areas Adjacent to Disposal Ponds or Landfills - Minimize contamination of surface runoff from areas adjacent to disposal ponds or landfills. Reduce ash residue that may be tracked on to access roads traveled by residue handling vehicles, and reduce ash residue on exit roads leading into and out of residue handling areas.

Landfills, Scrap yards, Surface Impoundments, Open Dumps, General Refuse Sites - Minimize the potential for contamination of runoff from these areas.

8.2.4 Additional SWPPP Requirements.

- **Drainage Area Site Map (MSGP Part 5.1.2)** - Document in your SWPPP the locations of any of the following activities or sources that may be exposed to precipitation or surface runoff: storage tanks, scrap yards, and general refuse areas; short- and long-term storage of general materials (including but not limited to supplies, construction materials, paint equipment, oils, fuels, used and unused solvents, cleaning materials, paint, water treatment chemicals, fertilizer, and pesticides); landfills and construction sites; and stock pile areas (e.g., coal or limestone piles).

- **Documentation of Good Housekeeping Measures** - You must document in your SWPPP the good housekeeping measures outlined in **SWPPP Section 8.2.3**.

8.2.5 Additional Inspection Requirements.

As part of your inspection, inspect the following areas monthly: coal handling areas, loading or unloading areas, switchyards, fueling areas, bulk storage areas, ash handling areas, areas adjacent to disposal ponds and landfills, maintenance areas, liquid storage tanks, and long term and short term material storage areas.

8.2.6 Sector-Specific Benchmarks

MSGP Table 8.O-1 identifies benchmarks that apply to the specific subsectors of Sector O. These benchmarks apply to both your primary industrial activity and any co-located industrial activities, which describe your site activities. A summary of the benchmarks is contained in **Appendix A, Table 8-2**.

Section 9

Additional Conditions Required by Massachusetts (MAR050000)

USEPA MSGP permittees (MAR050000) located in Massachusetts must also meet the following conditions.

9.1 Additional conditions required by Massachusetts.

Discharges covered by the general permit must comply with the provisions of **314 CMR 3.00; 314 CMR 4.00; 314 CMR 9.00; and 314 CMR 10.00** and any other related policies adopted under the authority of the Massachusetts Clean Waters Act, MGL c.21, ss. 26-53 and Wetlands Protection Act, MGL s. 40.

New facilities or redevelopment of existing facilities subject to this permit must comply with applicable storm water performance standards prescribed by state regulation or policy. A permit under **314 CMR 3.04** is not required for existing facilities which meet state storm water performance standards. An application for a permit under **314 CMR 3.00** is required only when required under **314 CMR 3.04(2)(b)** {designation of a discharge on a case-by-case basis} or is otherwise identified in **314 CMR 3.00** or any MassDEP policy as a discharge requiring a permit application. MassDEP water resource regulations, standards, and policies can be obtained through the State House Bookstore or online at: https://www.mass.gov/lists/water-resources-regulations-and-standards

9.2 SWPPP Availability

The MassDEP may request a copy of the SWPPP and the permittee is required to submit a copy within 14 days of such a request.

9.3 Authorization to Inspect

The MassDEP may conduct an inspection of any facility covered by this permit to ensure compliance with state law requirements, including state water quality standards. The MassDEP may enforce its certification conditions.

9.4 Submission of Monitoring Data

The results of any monitoring [four samples required in the first year of the permit] required by this permit must be sent to the appropriate Regional Office of the MassDEP [attention: Bureau of Waste Prevention] where the monitoring identifies violations of any effluent limits or benchmarks for any parameter for which monitoring is required under this permit. In addition, any follow-up monitoring and a description of the corrective actions required and undertaken to meet the effluent limits or benchmarks must be sent to the appropriate MassDEP Regional Office.

MassDEP, Northeast Regional Office
205B Lowell Street
Wilmington, MA, 01887
Attention: Bureau of Waste Prevention
USEPA MSGP Monitoring Reports

9.5 Sector-Specific Requirements

The Massachusetts Coastal Zone Management Program submitted the following conditions to be added to the permit in order to meet the Programs' Consistency Review and which are included in the requirements of this Water Quality Certification:

- In Sector Q [Water Transportation] add copper to the required monitoring parameters with a benchmark monitoring concentration as included in the **MSGP 2021 Fact Sheet Part X.B.1, and Appendix J**.
- In Sector R [Ship and Boat Building and Repair Yards] add aluminum, iron, lead and copper to the list of required monitoring parameters with a benchmark monitoring concentration as included in the **MSGP 2021 Fact Sheet Part X.B.1 and Appendix J.**
- Modify the monitoring requirements **[Part 6.2.1.2]** for Sectors Q and R such that all four of the quarterly monitoring samples must meet the benchmarks rather than the average of the four before no further monitoring is required.

Appendix A

Tables

Table 2-1: Covanta Haverhill SWPPP Team

Position	Title	Name	Office Phone	Cell Phone	Responsibilities
Leader	Environmental Specialist	David Cotter	978-241-3015	978-914-0725	Implements SWPPP including: conducts weekly inspections, conducts annual comprehensive inspection, conducts annual SWPP Plan review and updates, reviews stormwater sampling results, notifies appropriate team members of any problems, helps develop corrective action plans, assists with emergency response, completes reporting.
Member	Facility Manager	Bill Zaneski	978-241-3041	978-518-9230	Ensures team is implementing the SWPPP including inspection and sampling programs, implementation of applicable corrective action plans and SWPPP updates. Assists with emergency response.
Member	Maintenance Manager	Liam Curry	716- 278-8515	315-447-0298	Implements SWPPP including: oversees FMG inspections, notifies Environmental Specialist of any problems, helps develop applicable corrective action plans and ensures that they are implemented. Helps with SWPPP updates. Assists with emergency response.
Member	Chief Engineer	George Bakas	978-241-3013	617-653-0219	Implements SWPPP including: oversees MBF inspections, notifies Facility Manager and Environmental Specialist of any problems, helps develop applicable corrective action plans and ensures they are implemented. Helps with SWPPP updates. Assists with emergency response.
Member	FMG Mechanic	Mike Fitzgerald	978-372-6288, x3011		Ensures FMG Inspections are completed, notifies Environmental Specialist of any problems, addresses deficiencies and assists with emergency response.
Member	Facility Safety Coordinator	Sarah Smith	978-241-3024	781-354-8486	Ensures safety issues are addressed during emergency response scenarios.
Member	Regional Environmental Coordinator	George Drew	978-241-3025	978-697-6547	Ensures team is implementing the SWPPP including inspection and sampling programs, implementation of applicable corrective action plans and SWPPP updates. Assists with emergency response.

Notes

FMG = Fleet Maintenance Garage

Table 3-1: Stormwater Outfalls

Discharge Point	Outfall ID	Areas Collected	Coordinates [1]	Total Collection Area (acres)	
				Total Surface	Impervious Surface
Eastern Sedimentation Basin (ESB)	001	MBF, FMG, Leachate Building, paved areas, and vegetated areas	42.76784° N 71.12258° W	12.4	8.2
Northeast Sedimentation Basin (NESB)	002	Landfill surface, paved roadway along northern and northwest sides of MB facility.	42.76883° N 71.12349° W	15.7	6.7

Notes: [1] Taken with Garmin GPSMap 276CX on 4/20/21.

Table 3-2: Material Inventory

Material	Material Use/Purpose	Location	Quantity (gallons)	Likelihood of Contact with Storm Water
Dirt (sediment)	Daily and Intermediate covering of ash in landfill	Landfill, Dirt Stockpiles, slopes, roadways	NA	Stormwater will run off landfill slopes as well as stockpile(s). If an area is not stabilized, dirt may erode and could enter stormwater system.
Ash	Landfilled	Landfill, MBF ash building, and possibly on roads from MBF to landfill if tracked or spilled.	NA	Depends on truck tracking onto roadways between MBF ash building and landfill. Stormwater will run off landfill slopes. If not properly covered and stabilized, dirt and possibly ash can erode and could enter stormwater system.
Leachate	Wastewater generated by waste in landfill.	Landfill cells, collection and transfer pipes, pumping systems, leachate and MBF plants	NA	Minimized if leachate systems are routinely inspected, tested and operated to ensure minimal levels and leak tight system.
MSW	Disposal by combustion	MBF Tipping Floor. Possibly onto roads from MBF if tracked out of the tipping floor.	NA	Depends on truck tracking from MBF Tipping Floor building onto paved roads.
Winter Road Salt Mixture	Winter use on roads	Stored under MBF Unit 2 baghouse	NA	Storage pile is not likely to have contact with storm water. Salt applied to roadways for winter treatment will enter stormwater systems.
Lime	MBF acid gas emissions air pollution control	Two lime silos south of MBF building.	NA	Not likely. Unless a baghouse breaks during a delivery.
Activated Carbon	MBF mercury emissions air pollution control	Silo south of MBF building	NA	Not likely. Unless a baghouse blows a bag during a delivery
Aqueous Ammonia	MBF nitrogen oxide emissions air pollution control	Southwest of MBF	21,604	Not likely, secondary containment
Sodium Hydroxide Mixtures	Boiler water treatment	MBF turbine building	< 1,500 (1,000 gal tank and 55-gal drums)	Not likely, secondary containment and inside building
	Leachate pH Control	Leachate building	1,500	Not likely, secondary containment and inside building

Material	Material Use/Purpose	Location	Quantity (gallons)	Likelihood of Contact with Storm Water
Diesel Oil	Auxiliary fuel for MBF boilers	Tank southeast of MBF, piping into MBF	23,527	Not likely, secondary containment, routine inspections, and good housekeeping
	Diesel driven fire pump	Tank in fire pump house southeast of MBF	359	Not likely, secondary containment, routine inspections, and good housekeeping
	Pressure washer burner - O/S	Tank SE of MBF	153	Tank empty
	Mobile equipment on site	Storage tank by FMG; Landfill pickup storage tank; equipment operated on: site roadways, landfill roads, inside MBF, outside FMG	11,860	Not likely, secondary containment, routine inspections, and good housekeeping
Kerosene	Winter use for space heaters	Tank by MBF Auxiliary Oil tank	327	Not likely, secondary containment
Non-PCB Transformer Oil	Utility Transformers	Electrical Switchyard - south of MBF	two 1,690 two 1,122l	Not likely, secondary containment
Waste oil	Waste	MBF Waste Oil Tank and various 55 gallon drums	< 220	Not likely, drums have secondary containment and are within the building
		FMG waste oil tank	300	Not likely, secondary containment
Mobil Delvac 1330 oil	Heavy equipment	FMG tank and equipment on site	700	Not likely, secondary containment
Mobil Delvac 1210 oil	Heavy equipment	FMG tank and equipment on site	700	Not likely, secondary containment
Antifreeze	Vehicle	FMG tank and equipment on site	700	Not likely, secondary containment
Heating Oil	FMG Heating	Tank Outside FMG	600	Not likely, secondary containment
Lube oil	Vehicles	Mobile equipment on site	220	Not likely - secondary containment
	Various equipment in MBF	Drums in MBF lube oil storage room and various equipment in plant.	55 gal drums	Not likely, drums have secondary containment and are within the building

Notes:
All tanks and drums are stored in areas with secondary containment
All tanks have level gauges

Table 3-3: MBF - Above Ground Storage Tanks

Tank	Tank Name	Material	Location	Tank Capacity (Gallons)	Secondary Containment(Gallons) (Type)
SPCC Tank #1: MB-#2FO	Mass Burn Auxiliary Oil Storage Tank	Ultra-Low Sulfur Diesel	Outside SE of Mass Burn Bldg	23,527	26,885 Concrete
SPCC Tank #4: MB-KERO	Kerosene Tank	Kerosene	Outside SE of Mass Burn Bldg	273	300 Steel
SPCC Tank #13: MB-PWDO	Steam Pressure Washer Diesel Storage Tank	Ultra-Low Sulfur Diesel	Outside SE of Mass Burn Bldg.	153	168 Steel
SPCC Tank #14: MB-FOM-Q2	Emergency Diesel Fire Pump	Ultra-Low Sulfur Diesel	Inside Mass Burn Fire Pump House	359	417 Steel
SPCC Tank #18: LFG-LO	Landfill Gas Engine Lube Oil Tank	Lubricating oil	Within the base of LFG Engine Enclosure West of Mass Burn Facility Switchyard	1,000	1,100 Steel
SPCC Tank #19: LFG-WO	Landfill Gas Engine Used Oil Tank	Used Lubricating oil		1,000	
SPCC Tank #21: MB-WO	Mass Burn Used Oil Collection Tank	Used hydraulic oils	Inside Mass Burn Turbine bldg	240	300 Steel
SPCC Tank #2: MB-NH3	Ammonia Storage Tank	Aqueous Ammonia (19%)	Outside SW of Mass Burn Bldg	21,604	25,284 Concrete
SPCC Tank #15: MB-1756	Chemtreat 1756 Storage Tank	Boiler Chemical Mixture	Sodium Tripolyphosphate 10% Sodium Hydroxide 5%	Inside Mass Burn Turbine Bldg Ground Level (Boiler Chemical Storage Area)	1000 Mass Burn interior trench system
SPCC Tank #20: MB-LIME	Lime Slurry Storage Tank	Calcium Hydroxide	Inside Lime Slaker Building South of Mass Burn bldg	18,425	Mass Burn interior trench system

Table 3-4: Drum Storage Areas

Location	Typical Quantity Stored	Container Size	Typical Volume Stored
Mass Burn Lube Oil Storage Room Boiler Building (Elevation 0'-0") Ref: Drawing 16163-EA-1E-6	50	55-gallon drums	2,750 gallons
Mass Burn Used Oil Storage Area Turbine Building (Elevation 0'-0") Ref: Drawing 16163-EA-1E-6	4	55-gallon drums	220 gallons
Mass Burn SDA Penthouse Oil Drum Storage Areas (2), Unit 1 and Unit 2 SDA Penthouses	1	55-gallon drum	55 gallons
FMG Drum Storage Area (Fueling Bay)	4	55-gallon drums	220 gallons

Notes:
FMG = Fleet Maintenance Garage
SDA = Spray Dryer Atomizer

Table 3-5: FMG - Above Ground Storage Tanks and Other Storage

Tank	Tank Name	Material	Location	Tank Capacity (Gallons)	Secondary Containment(Gallons) (Type)
SPCC Tank #6: FMG-12KDO	Mobile Equipment Diesel Storage Tank	Ultra-Low Sulfur Diesel	Outside Adjacent to FMG West	11,860	13,615 Steel
SPCC Tank #7: FMG-HO	FMG Heating Oil Tank	Heating Oil	Outside Adjacent to FMG West	600	718 Steel
SPCC Tank #8: FMG-1330	FMG 1330 Lube Oil Tank	Mobil Delvac 1330 Lube Oil	Inside FMG Fueling Bay	700	770 Steel
SPCC Tank #9: FMG-1210	FMG 1210 Lube Oil Tank	Mobil Delvac 1210 Lube Oil	Inside FMG Fueling Bay	700	770 Steel
SPCC Tank #16: FMG-WO	FMG Used Oil Collection Tank	Used Motor and hydraulic oils	Inside FMG Fueling Bay	300	479 Steel
SPCC Tank #17: FMG-WO2	FMG Used Oil Burner Tank 2	Used Motor and hydraulic oils	Inside FMG Fueling Bay	273	300 Steel
SPCC Tank #10: FMG-ANTIF	FMG Antifreeze Storage Tank	50-50 Antifreeze Mixture	Inside FMG Fueling Bay	700	770
SPCC Tank #22: LF-LEACH	Landfill Leachate Storage Tank	Landfill Leachate	Outside Leachate Plant	50,000	68,000 Glassed Lined
SPCC Tank #23 - Caustic	Caustic Storage Tank	Caustic Storage Tank	Inside Leachate Plant	1500	1,650 Polyethylene
		Unleaded Gasoline			

Notes: FMG = Fleet Maintenance Garage

Table 3-6: Facility Spill History

Date	Spill Source	Location	Material Spilled	Spill Volume (gals)	Did Spill				Reported to Agency	MassDEP RTN	Report Closed with Agency
					Impact Soil	Enter Storm Drain	Impact Wetlands	Impact River			
7/17/2015	Metal screener	FMG apron	Hydraulic oil	<3	No	No	No	No	No	NA	NA
6/26/2015	Lime truck	B Baghouse	Hydraulic oil	<3	No	No	No	No	No	NA	NA
5/29/2015	Loader	FMG apron	Hydraulic oil	<3	No	No	No	No	No	NA	NA
1/13/2015	Refuse vehicle fuel line	Truck staging area	Diesel	50	No	No	No	No	No	NA	NA
9/21/2016	Refuse vehicle	Truck staging	Hydraulic oil	<5	No	No	No	No	No	NA	NA
8/22/2016	Refuse vehicle hydraulic line	Inbound scale	Hydraulic oil	<5	No	No	No	No	No	NA	NA
8/5/2016	Covanta tractor saddle tank	FMG apron	Diesel	<5	No	No	No	No	No	NA	NA
7/26/2016	Refuse vehicle hydraulic line	Access roadway	Vegetable oil	<10	No	No	No	No	No	NA	NA
5/24/2016	Street sweeper	FMG apron	Vegetable oil	<10	No	No	No	No	No	NA	NA
5/20/2016	Refuse vehicle hydraulic line	Tipping Floor	Hydraulic oil	<10	No	No	No	No	No	NA	NA
4/14/2016	Genie lift	Lime off-load area	Hydraulic oil	<10	No	No	No	No	No	NA	NA
5/3/2017	Refuse vehicle	Roadway entrance	Oily material from MSW	<10	No	No	No	No	No	NA	NA
6/29/2017	MSW Delivery Truck	Truck staging	Oily water from MSW	>10	No	No	No	No	Yes	3-34351	Yes
7/15/2017	Genie Boom	Tipping Floor	Hydraulic oil (petroleum based)	2	No	No	No	No	No	NA	NA
7/31/2017	MSW Delivery Truck	Scale House outbound scale	Hydraulic oil (petroleum based)	3	No	No	No	No	No	NA	NA
8/1/2017	MSW Delivery Truck	Scale House outbound scale	Unknown viscous material	<10	No	No	No	No	No	NA	NA
10/5/2017	Tractor	FMG apron	Petroleum based fuel (diesel)	<5	No	No	No	No	No	NA	NA
11/16/2017	MSW Delivery Truck	Tipping floor	Hydraulic oil (bio based)	<50	No	No	No	No	No	NA	NA
4/11/2018	MSW Delivery Truck	Tipping floor	Hydraulic oil (bio based)	5-10	No	No	No	No	No	NA	NA
2/16/2018	Lull	Roadway outside FMG	Hydraulic oil (petroleum based)	<9	No	No	No	No	No	NA	NA
2/26/2018	MSW Delivery Truck	Roadway to tipping floor	Hydraulic oil (petroleum based)	<10	No	No	No	No	No	NA	NA
4/21/2019	Delivery Truck	Parking area ourtside admin area	Hydraulic oil (petroleum based)	<1	No	No	No	No	No	NA	NA
4/22/2019	Vacuum Truck	Paved area near oil pump house	Hydraulic oil (petroleum based)	<1	No	No	No	No	No	NA	NA
2/17/2020	Ash loader	Ouside north entrance of ash building	Hydraulic oil (petroleum based)	3.6	No	No	No	No	No	NA	NA
2/27/2020	MSW Delivery Truck	Lay down area outside main gate	Petroleum based oil	1.1	No	No	No	No	No	NA	NA
3/3/2020	MSW Delivery Truck	Lay down area outside main gate	Hydraulic oil (petroleum based)	2.7	No	No	No	No	No	NA	NA
6/3/2020	Ash Truck	Landfill exit to FMG	Transmission oil	5	No	No	No	No	No	NA	NA
6/4/2020	Ash Truck	FMG to laydown area outside main gate	Transmission oil	4.5	No	No	No	No	No	NA	NA
6/15/2020	Street sweeper	Roadway outside admin area	Hydraulic oil (petroleum based)	0.8	No	No	No	No	No	NA	NA
8/31/2020	Street sweeper	Roadway next to ammonia tank	Hydraulic oil (petroleum based)	6.5	No	No	No	No	No	NA	NA
9/9/2020	MSW Delivery Truck	Ouside east tipping floor entrance	Hydraulic oil (petroleum based)	40	No	No	No	No	Yes	3-36483	Yes
3/4/2021	MSW Truck	Tipping Floor	Hydraulic oil (petroleum based)	4	No	No	No	No	No	NA	NA

Table 3-7: Outfall Sampling Results

Outfall	Parameter	Units	2005					2006					2007			
			Mar-05	Apr-05	Jun-05	Sep-05	Nov-05	Jan-06	May-06	Jun-06	Aug-06	Dec-06	Mar-07	May-07	Sep-07	Dec-07
Eastern Sedimentation Basin (ESB) - Outfall 001	Total Suspended Solids	mg/L	16	10	17	53	19	15	<4	71	18	14	10	5	17	4
	Iron	mg/L	0.571	1.18	2.45	2.5	1.84	1.57	0.489	3.27	1.66	0.792	0.408	0.937	0.607	0.308
	Ammonia	mg/L														
	Fecal Coliform	col/100ml														
	E. Coli	col/100ml														
	Phosphorous	mg/l														
NorthEast Sedimentation Basin (NESB) - Outfall 002	Total Suspended Solids	mg/L	36	10	4	nd	28	11	nd	82	830	35	130	10	nd	4
	Iron	mg/L	1.96	1.77	0.425	nd	0.99	0.505	nd	4.64	43.4	0.79	5.7	0.653	nd	0.164
	Ammonia	mg/L														
	Fecal Coliform	col/100ml														
	E. Coli	col/100ml														
	Phosphorous	mg/l														

Outfall	Parameter	Units	2008				2009				2012				2013			
			Feb-08	Apr-08	Sep-08	Dec-08	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
Eastern Sedimentation Basin (ESB) - Outfall 001	Total Suspended Solids	mg/L	5	4	<4	19	8				<5	<10	NT	<5.0	29	6.6	11	10
	Iron	mg/L	1.08	0.417	0.36	1.91	1.87				0.7	1.4	0.68	0.43	1.5	0.73	0.82	0.43
	Ammonia	mg/L					NT				NT	NT	0.2	NT	0.171	NT	NT	NT
	Fecal Coliform	col/100ml					NT				NT	NT	13000	NT	NT	3900	NT	NT
	E. Coli	col/100ml													NT	5500	NT	NT
	Phosphorous	mg/l					NT				NT	NT	5600	NT				
NorthEast Sedimentation Basin (NESB) - Outfall 002	Total Suspended Solids	mg/L	5	4	38	5	<4				5.7	<5	ND	14	37	<5	NS	<5
	Iron	mg/L	0.526	2.2	1.77	0.272	0.533				0.75	0.11	ND	0.32	0.93	0.12	NS	0.09
	Ammonia	mg/L					NT				NT	0.243	ND	NT	0.114	NT	NS	NT
	Fecal Coliform	col/100ml					NT				NT	200	ND	NT	NT	NT	NS	NT
	E. Coli	col/100ml					NT				NT	200	ND	NT	NT	550	NS	NT
	Phosphorous	mg/l					NT				NT	NT	5600	NT				

Outfall	Parameter	Units	2014				2015				2016				2017			
			Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
Eastern Sedimentation Basin (ESB) - Outfall 001	Total Suspended Solids	mg/L	21	NT	NT	NT	NT	NT	NT	NT	<5.0	<5.0	32	<5.0				
	Iron	mg/L	0.68	NT	NT	NT	NT	NT	NT	NT	0.39	0.38	1.18	0.289				
	Ammonia	mg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT				
	Fecal Coliform	col/100ml	NT	NT	NT	NT	NT	NT	NT	NT	31	30	NT	NT				
	E. Coli	col/100ml	NT	2400	NT	NT	NT	52	NT	NT	88	NT	NT	NT				
	Phosphorous	mg/l		0.018	NT	NT	NT	0.046	NT	NT	0.092	NT	NT	NT				
NorthEast Sedimentation Basin (NESB) - Outfall 002	Total Suspended Solids	mg/L	40	NT	NT	7.2	NT	NT	NT	NT	<5.0	8.3	<10[1]	25				
	Iron	mg/L	0.86	NT	NT	0.19	NT	NT	NT	NT	0.45	0.83	0.527[1]	0.777				
	Ammonia	mg/L	NT	NT	NT	<0.150	NT	NT	NT	NT	NT	NT	NT	NT				
	Fecal Coliform	col/100ml	NT	NT	NT	98	NT	NT	NT	NT	11	4	NT	NT				
	E. Coli	col/100ml	NT	NT	NT	130	NT	5	NT	NT	50	NT	NT	NT				
	Phosphorous	mg/l					NT	0.027	NT	NT	0.053	NT	NT	NT				

Outfall	Parameter	Units	2018				2019				2020				2021			
			Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
Eastern Sedimentation Basin (ESB) - Outfall 001	Total Suspended Solids	mg/L																
	Iron	mg/L																
	Ammonia	mg/L																
	Fecal Coliform	col/100ml																
	E. Coli	col/100ml																
	Phosphorous	mg/l																
NorthEast Sedimentation Basin (NESB) - Outfall 002	Total Suspended Solids	mg/L																
	Iron	mg/L																
	Ammonia	mg/L																
	Fecal Coliform	col/100ml																
	E. Coli	col/100ml																
	Phosphorous	mg/l																

Notes:
[1] Used second sample from 4th Qtr discharge event

Table 3-8: Potential Pollutant Sources

Potential Source	Potential Cause	Associated Pollutants	Current Preventive Practices
Landfill	Erosion of slopes, track out from trucks, improper covering of waste	Sediment - TSS	Daily covering of the active ash face with soil, placement of intermediate cover over external slopes as lifts are constructed followed by a posi-shell erosion control layer, hay bales installed at base of slopes before swales, hay bales within swales, proper grading of slopes to shed water buildup, minimizing operations during wet weather, sweeping paved landfill access roads, maintenance of unpaved landfill access roads.
		Ash: Metals, chlorides, TSS	
	Leachate leaking from landfill cells, collection pipes, manholes or pump stations.	Metals, VOCs, Chlorides, pathogens	Weekday inspections of manholes, pump stations for proper levels and flow, testing of piping and manhole integrity, pipe cleaning to ensure proper flow out of cells and prevent overflow out of cell or a manhole.
Dirt Stockpiles	Erosion of slopes	Sediment - TSS	Piles stabilized with grass as possible, hay bales installed at base of pile slopes.
Site construction projects	Runoff from disturbed earth, erosion of temporary stockpiles	Sediment - TSS	Erosion control measures such as hay bales and silt fence set up around area to prevent silt runoff into stormwater systems. NPDES construction permit required for projects greater than 1 acre.
MBF Ash Building	Trucks tracking ash out of building, trucks spilling ash enroute to landfill	Ash: Metals, chlorides, TSS	Keeping ash building grates clean, keeping trucks parked on grates, not overfilling trucks, keeping truck speeds down, sweeping pavement as necessary, maintaining catch basin inserts.
MBF Tipping Floor	MSW hauler trucks tracking waste out of tipping floor, hauler trucks leaking oil.	TSS, oil, MSW	Keep tipping floor scraped, dumping loads close to pit, monitoring for truck oil leaks, sweeping pavement
Winter Road Salt pile	Stormwater runoff over pile	Salt (Na, Mg, Cl)	Salt stored under MBF Unit 2 baghouse to protect from precipitation runoff.
MBF Air Pollution Control Systems' chemicals	Tank overfilling, leaks from hoses during deliveries, tank\piping leak	Aqueous Ammonia	Tank has secondary containment. Area frequently inspected. Deliveries take place in truck berm.
		Lime	Powder. Not likely to run into storm water system.
		Carbon	Powder. Not likely to run into storm water system.
MBF Outdoor ASTs	Tank overfilling, leaks from hoses during deliveries, tank or piping leak	Diesel Oil, kerosene	Secondary containment in place for all tanks. Routine inspections performed. Deliveries take place in truck bermed area.
Electrical transformers	Leak or rupture of oil chambers\piping	Non-PCB Transformer Oil	Secondary containment in place for transformers. Routine inspections performed.

Potential Source	Potential Cause	Associated Pollutants	Current Preventive Practices
Vehicles\ Mobile Equipment	Overfilling equipment during refueling; hose, tank or seals leaking	Diesel oil, hydraulic oil	Refueling equipment inside FMG Fuel bay. Checks of mobile equipment before it is used.
Vehicle Maintenance areas	Equipment parts leaking oil, grease, or antifreeze, leaks during equipment repairs	Oil, grease, antifreeze, hydraulic fluids, lube oils	Weekly checks for leaks of equipment parked around site, Maintenance of equipment performed inside FMG, catch pails placed under equipment leaks until repairs can be made.
FMG Outdoor ASTs	Tank overfilling, leaks from hoses during deliveries, tank or piping leak	Diesel, heating oil	Secondary containment. Weekly inspections made. Deliveries take place in truck bermed area.
Particles	Filters plugged, filter bags rupture	Ash, Lime, carbon	Ash building roof fans are equipped with filters, silos also equipped with vent filters, filters changed on PM schedule.

Notes:

ASTs = Above Ground Storage Tanks

FMG = Fleet Maintenance Garage

MBF = Mass Burn Facility

TSS = Total Suspended Solids

VOCs = Volatile Organic Compounds

Table 4.1: Inspections & Monitoring Frequency

Inspection	Frequency	MSGP Section
Inspect operating landfill areas. Focus on:	Weekly	8.L.7.1
*Areas not finally stabilized		
*Areas used for storage of stockpiles that are exposed to precipitation		
*Stabilization and structural control measures		
*Leachate collection and treatment systems including leachate manhole levels		
*Locations where equipment and waste trucks enter/exit the site		
*Ensure sediment and erosion control measures are operating properly		
Visually inspect the structural integrity of:	Monthly	8.O.6.1
*All above ground tanks		
*Pipelines		
*Pumps and other related equipment		
*Make necessary repairs immediately		
Inspect the following MWC areas:	Monthly	8.O.6
*MSW Loading/unloading areas		
*Switchyards		
*Fueling areas		
*Bulk storage areas		
*Ash handling areas		
*Areas adjacent to landfill		
*Maintenance areas		
*Liquid storage tanks		
*Long term and short term material storage areas		
Inspect all the following areas and/or activities:	Frequency not listed in permit	8.O.6.1
*Storage areas for vehicles/equipment awaiting maintenance		
*Indoor & outdoor vehicle/equipment maintenance areas		
*Vehicle/equipment cleaning areas		
Routine Facility Inspections	Monthly	3.1
*Evaluate existing stormwater BMPs		
*Inspect all areas where industrial materials or activities are exposed to stormwater		
Visually examine stormwater discharge at each outfall	Quarterly	3.2
*Examine within first 30 minutes of when runoff begins discharging during daylight hours.		
*Collect samples to examine for color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of stormwater pollution		
Benchmark Monitoring	Quarterly (until successful completion)	
*Iron and TSS		
*First four full quarters starting January 1, 2016		6.2.1
* Depending on results additional monitoring may not be required		8.L.9
*Results must be submitted to EPA		8.O.7
Impaired Waters Monitoring	Annually	6.2.4
*Phosphorus, E.Coli		
*Beginning in the first full quarter following 1/1/16, must monitor once a year at each outfall discharging to an impaired water.		
* Depending on results additional monitoring may not be required		

Notes: [1] Results to be submitted to USEPA

Table 7-1: SWPPP Documentation Locations

Document	Location of Master Hardcopy [1][2]
Stormwater Pollution Prevention Plan (SWPPP)	Environmental Office, SWPPP binder
Multi-Sector General Permit (MSGP)	Environmental Office - SWPPP binder, Appendix B
Master copy of environmental forms and reports (blank)	None
Annual Reports	Environmental Office
Weekly Environmental Inspection reports [1]	Environmental Office - Weekly Environmental Inspection Reports binder
SPCC Inspection reports[1]	Environmental Office - SPCC Inspection Reports binder
Quarterly Visual Monitoring Reports	Environmental Office - Storm Water Discharge Monitoring Reports Binder
Quarterly Benchmark Monitoring Sample Reports	
Quarterly EPA Electronic Discharge Monitoring Reports	
Training Records	Admin – Employee training records cabinet
SWPPP Regulatory Correspondence	Environmental Office - SWPPP binder, Appendix B

Notes:
[1] Records for last five years are maintained in Environmental Office. Records requied to be maintained longer than five years are stored MBF Environmental Storage Room, or at our offsite storage facility.
[2] Electronic copies of documents are stored on the Covanta Haverhill SharePoint Site at:
https://covanta.sharepoint.com/:f:/r/sites/HaverhillFacilityDocuments/Shared%20Documents/Environmental?csf=1&web=1&e=l3eWjd

Table 8.1 Sector L Site Specific Benchmarks

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration[1]
Subsector Lt. - All Landfill, Land Application Sites and Open Dumps (Industrial Activity Code "LF")	Total Suspended Solids (TSS)	100mg/L
Subsector L2. - All Landfill, Land Application Sites and Open Dumps, except Municipal	Total Iron	1.0mg/L
Solid Waste Landfill (MSWLF) Areas Closed in Accordance with 40 CPR 258.60 Industrial Activity Code "LF"):	Not Applicable - Will become applicable when landfill closes.	

Notes 1 Benchmark monitoring required only for discharges not subject to effluent limitations in 40 CFR Part 445 Subpart B (see Table L-2 below).

Table 8.2: Subsector O - Benchmark Monitoring Concentrations

Subsector	Parameter	Benchmark Monitoring Concentration [1]
Subsector O1. Steam Electric Generating Facilities (Industrial Activity Code "SE")	Total Iron	1.0 mg/L

Appendix B

Figures

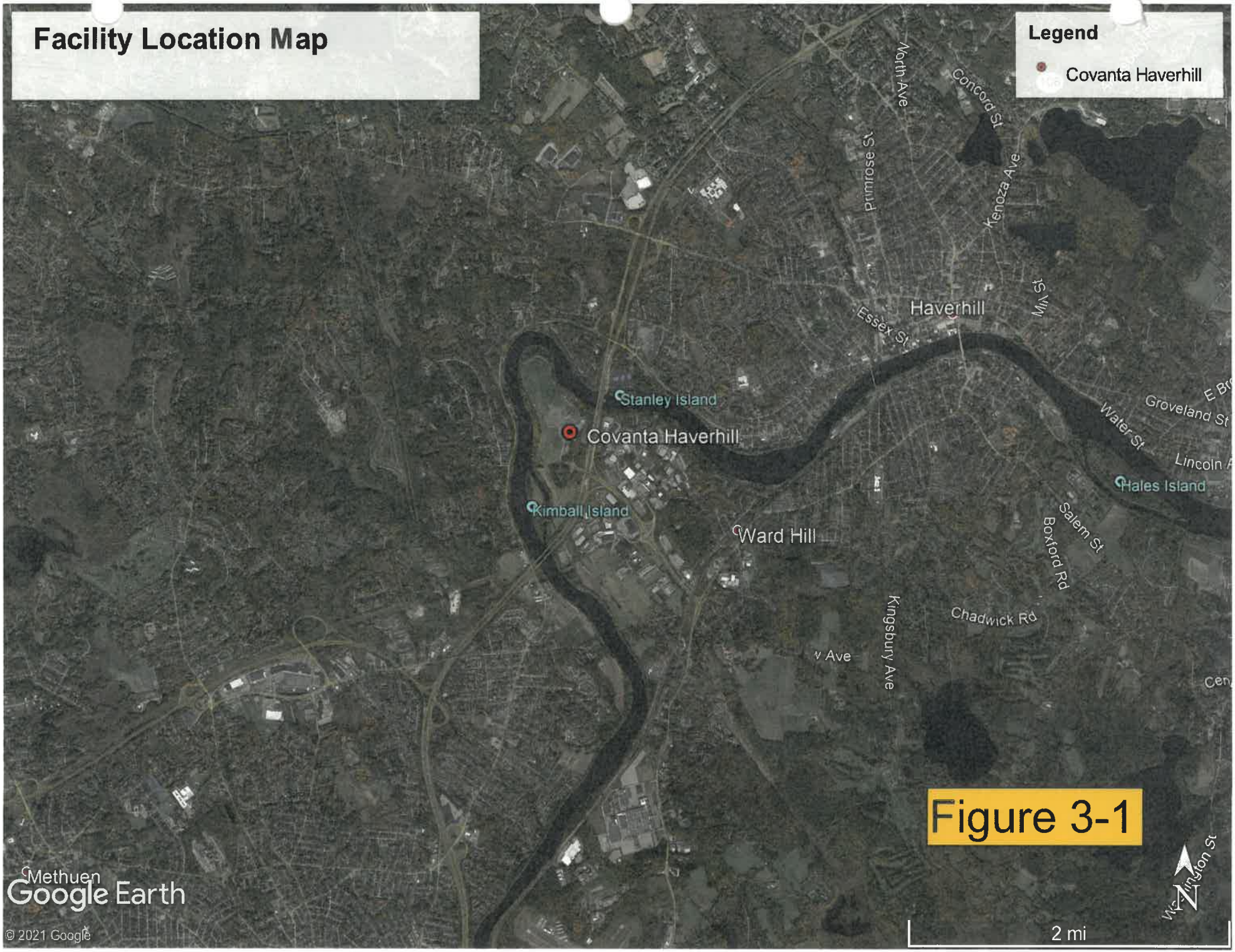
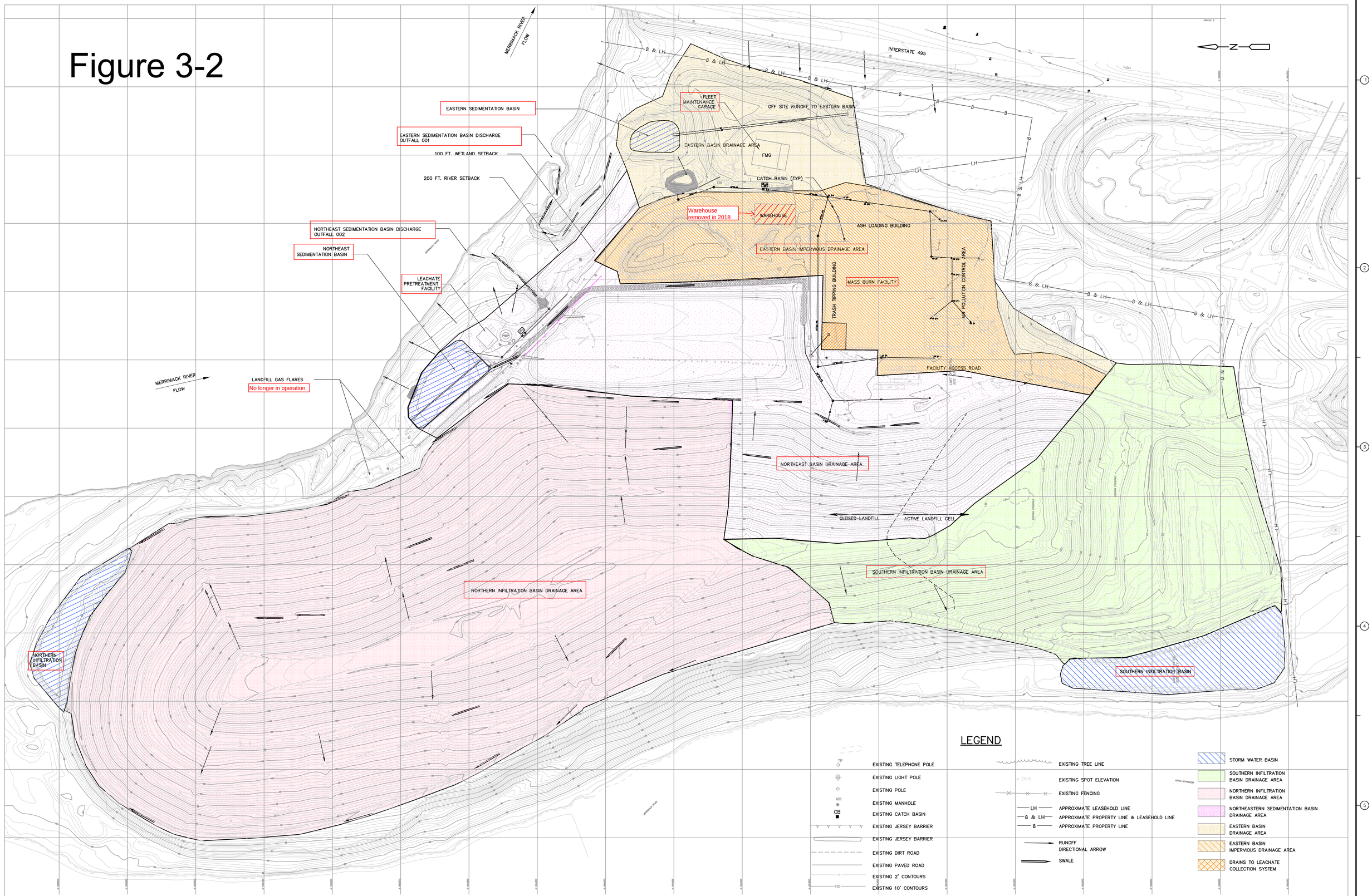

Facility Location Map
Legend
Covanta Haverhill
North Ave
Concord St
Primrose St
Kenoza Ave
Main St
Haverhill
Essex St
Stanley Island
Covanta Haverhill
Water St
Groveland St
Lincoln
Hales Island
Kimball Island
Ward Hill
Salem St
Boxford Rd
Kingsbury Ave
Chadwick Rd
Methuen
Google Earth
© 2021 Google
Figure 3-1
2 mi

Figure 3-2



LEGEND

- EXISTING TELEPHONE POLE
- EXISTING LIGHT POLE
- EXISTING POLE
- EXISTING MANHOLE
- EXISTING CATCH BASIN
- EXISTING JERSEY BARRIER
- EXISTING JERSEY BARRIER
- EXISTING DIRT ROAD
- EXISTING PAVED ROAD
- EXISTING 2' CONTOURS
- EXISTING 10' CONTOURS
- EXISTING TREE LINE
- EXISTING SPOT ELEVATION
- EXISTING FENCING
- APPROXIMATE LEASEHOLD LINE
- APPROXIMATE PROPERTY LINE & LEASEHOLD LINE
- APPROXIMATE PROPERTY LINE
- RUNOFF DIRECTIONAL ARROW
- SWALE
- STORM WATER BASIN
- SOUTHERN INFILTRATION BASIN DRAINAGE AREA
- NORTHERN INFILTRATION BASIN DRAINAGE AREA
- NORTHEASTERN SEDIMENTATION BASIN DRAINAGE AREA
- EASTERN BASIN DRAINAGE AREA
- EASTERN BASIN IMPERVIOUS DRAINAGE AREA
- DRAINS TO LEACHATE COLLECTION SYSTEM

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: N. M. ORAM
DRAWN BY: N. M. ORAM
SHEET CHK'D BY: R. O. BUTTON
CROSS CHK'D BY: G. W. MERCER
APPROVED BY: R. O. BUTTON
DATE: MARCH 2005

CDM Camp Dresser & McKee Inc.
consulting engineering construction operations

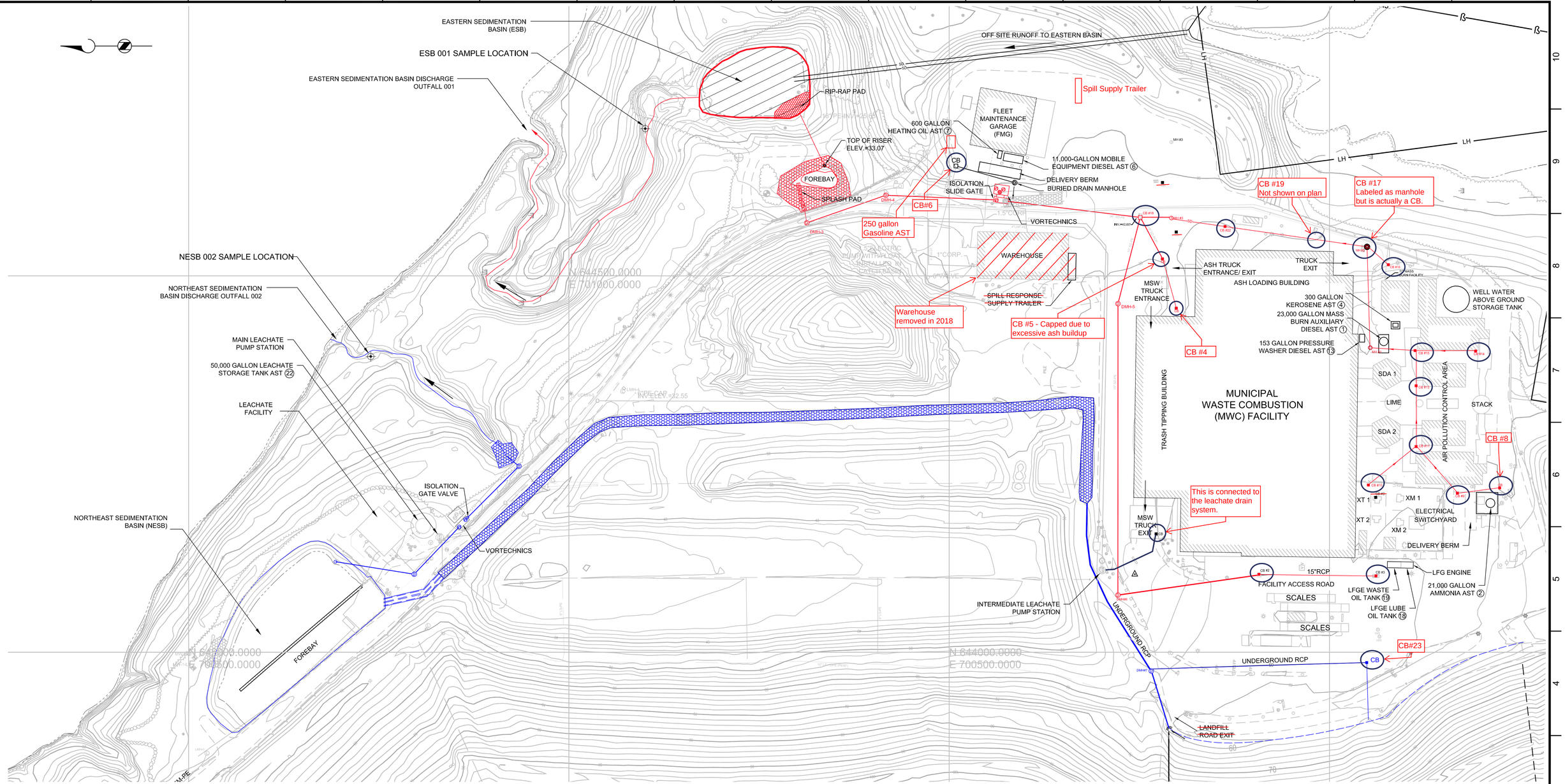
COVANTA – HAVERHILL
WARD HILL NECK LANDFILL
HAVERHILL, MASSACHUSETTS
NPDES STORM WATER PERMIT

SITE DRAINAGE MAP
NPDES PERMIT
SWPPP

PROJECT NO. 5094-39152
FILE NAME: FIG3-2.DWG

SHEET NO.
FIG. 3-2

Accession No: –



LEGEND

- EXISTING LIGHT POLE
- EXISTING MANHOLE (MH)
- EXISTING CATCH BASIN (CB)
- EXISTING JERSEY BARRIER
- EXISTING DIRT ROAD
- EXISTING PAVED ROAD
- EXISTING 2' CONTOURS (118)
- EXISTING 10' CONTOURS (120)
- EXISTING TREE LINE
- EXISTING SPOT ELEVATION (× 26.6)
- EXISTING FENCING
- LH — APPROXIMATE LEASEHOLD LINE
- ß & LH — APPROXIMATE PROPERTY LINE & LEASEHOLD LINE
- ß — APPROXIMATE PROPERTY LINE

NOTES:

1. EXISTING INFORMATION SHOWN ON THIS PLAN WAS TAKEN FROM AN AERIAL SURVEY BY WSP-SELLS TRANSPORTATION & INFRASTRUCTURE, DATED APRIL 14, 2010.

2. THE HORIZONTAL COORDINATES AND BEARING SYSTEM SHOWN HEREON IS BASED ON THE NORTH AMERICAN DATUM OF 1927 (MASSACHUSETTS MAINLAND STATE PLANE) COORDINATE SYSTEM. THE VALUES SHOWN HEREON ARE IN U.S. SURVEY FEET.

3. THE ELEVATIONS SHOWN HEREON IS BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929.

0 60 120
SCALE IN FEET

Figure 3-3

BROWN AND CALDWELL
MIDDLEBOROUGH, MASSACHUSETTS

SUBMITTED: _____ DATE: _____
PROJECT MANAGER

APPROVED: _____ DATE: _____
BROWN AND CALDWELL

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2" - SCALE ACCORDINGLY)

SCALE: 1"= 60'
DATE: 6/23/11
DRAWN: CSD
CHECKED: PNJ
APPROVED:

EXTERNAL REFERENCES: X-Ex Topo_4-14-10.dwg

IMAGE REFERENCES:

REVISIONS					
ZONE	REV.	DESCRIPTION	BY	DATE	APP.

SWPPP / SPCC SITE PLAN

WARD HILL NECK SANITARY LANDFILL
HAVERHILL, MASSACHUSETTS

PREPARED FOR:
COVANTA OF HAVERHILL, INC.

FILENAME: SWPPP-SPCC Plan
BC PROJECT NUMBER: 140416
CLIENT PROJECT NUMBER:
DRAWING NUMBER: 1
SHEET NUMBER: 1 OF 1

bforgette
Jul 12, 2011 - 10:07am
P:\Covanta - Haverhill\140416_Covanta_Ward_Hill_Neck_LF_CY11\CADD\2-Sheets\C-Civil\SWPPP-SPCC Plan.dwg

Appendix C

MSGP 2021 NOI Submittal & Supporting Documentation

Cotter,David M

From: no-reply@epacdx.net
Sent: Thursday, May 27, 2021 10:52 AM
To: no-reply@epacdx.net
Subject: EPA NeT MSGP Form Certified: COVANTA HAVERHILL, INC. - NPDES ID: MAR053674

2021-05-27

Dear NeT User,

William Zaneski successfully certified the following forms under the MSGP:

NPDES ID	Form Type	Operator	Facility Name	Year	Review Date Target End
MAR053674	Renew NOI	COVANTA HAVERHILL	COVANTA HAVERHILL, INC.	n/a	06/26/2021

A copy of the submission can be found here.

If you have questions about this email or about the NPDES Electronic Reporting Tool (NeT), please refer to the NeT Help Center or e-mail NPDESereporting@epa.gov for assistance.

This is an automated notification; please do not reply to this email.

NPDES FORM 3510-6

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460
NOTICE OF INTENT (NOI) FOR STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY UNDER THE NPDES MULTI-SECTOR GENERAL PERMIT

FORM Approved OMB No. 2040-0004

Permit Information

Master Permit Number: MAR050000

NPDES ID: MAR053674

Eligibility Information

State/territory where your facility is discharging: MA

Does your facility discharge to federally recognized Indian Country lands? No

Are you a *"Federal Operator"* as defined in Appendix A (https://www.epa.gov/sites/production/files/2021-01/documents/2021_msgp_-_appendix_a_-_definitions.pdf)? No

Which type of form would you like to submit? Notice of Intent (NOI)

By indicating "Yes" below, I confirm that I understand that the MSGP only authorizes the stormwater discharges in Part 1.1.2 and the allowable non-stormwater discharges listed in Part 1.2.2. Any discharges not expressly authorized in this permit cannot become authorized or shielded from liability under CWA section 402(k) by disclosure to EPA, state, or local authorities after issuance of this permit via any means, including the Notice of Intent (NOI) to be covered by the permit, the Stormwater Pollution Prevention Plan (SWPPP), during an inspection, etc. If any discharges requiring NPDES permit coverage other than the allowable stormwater and non-stormwater discharges listed in Parts 1.2.1. and 1.2.2. will be discharged, they must be covered under another NPDES permit.

Yes

Are you a new discharger or a new source as defined in Appendix A (https://www.epa.gov/sites/production/files/2021-01/documents/2021_msgp_-_appendix_a_-_definitions.pdf)? No

- **Have stormwater discharges from your facility been covered previously under an NPDES permit?** Yes
  - **If yes, provide your most current NPDES ID (i.e., permit tracking number) if you had coverage under EPA's MSGP or the NPDES permit number if you had coverage under an EPA individual permit:** MAR053674
- **Are you discharging to any waters of the U.S. that are designated by the state or tribal authority under its antidegradation policy as a Tier 3 water (Outstanding National Resource water)? (See Appendix L (https://www.epa.gov/sites/production/files/2021-01/documents/2021_msgp_-_appendix_l_-_list_of_tier_3_tier_2_and_tier_2.5_waters.pdf))**
  No

What is the legal name of the Operator as defined in Appendix A (https://www.epa.gov/sites/production/files/2021-01/documents/2021_msgp_-_appendix_a_-_definitions.pdf)? COVANTA HAVERHILL

What is the name of your facility or activity as defined in Appendix A (https://www.epa.gov/sites/production/files/2021-01/documents/2021_msgp_-_appendix_a_-_definitions.pdf)? COVANTA HAVERHILL, INC.

Operator Information

Operator Information

Operator Name: COVANTA HAVERHILL

Operator Mailing Address

Address Line 1: 100 Recovery Way

Address Line 2:

City: Haverhill

ZIP/Postal Code: 01835

State: MA

County or Similar Division: Essex

Operator Point of Contact Information

First Name Middle Initial Last Name: David M Cotter

Title: Environmental Specialist

Phone: 978-241-3015 **Ext.:**

Email: dcotter@covanta.com

NOI Preparer Information

☑ **This NOI is being prepared by someone other than the certifier.**

First Name Middle Initial Last Name: David M Cotter

Organization: Covanta Haverhill

Phone: 978-241-3015 **Ext.:**

Email: dcotter@covanta.com

Facility Information

Facility Information

Facility Name: COVANTA HAVERHILL, INC.

Facility Address

Address Line 1: 100 RECOVERY WAY

Address Line 2:

City: HAVERHILL

ZIP/Postal Code: 01835

State: MA

County or Similar Division: Essex

Latitude/Longitude for the Facility

Latitude/Longitude: 42.7654°N, 71.124025°W

Latitude/Longitude Data Source: GPS

Horizontal Reference Datum: NAD 27

General Facility Information

What is the ownership type of the facility? Corporation

Estimated area of industrial activity at your facility exposed to stormwater (rounded to the nearest quarter acre): 87.5

Is your facility presently inactive and unstaffed? No

Exception for Inactive and Unstaffed Facilities: The requirement for indicator monitoring, impaired waters monitoring, and/or benchmark monitoring does not apply at a facility that is inactive and unstaffed, as long as there are no industrial materials or activities exposed to stormwater.

If circumstances change during the permit term that affect your qualifications for this exception to monitoring requirements (i.e. industrial materials or activities exposure to stormwater or your facility's active/inactive and staffed/unstaffed status) you must submit a NOI notifying EPA of the change in circumstances.

Sector-Specific Information

Primary Sector: L

Primary Subsector: L1

Primary Activity Code: LF

Co-Located Sectors:

Co-Located Sector: O

Co-Located Subsector: O1

Co-Located Activity Code: SE

Discharge Information

By indicating "Yes" below, I confirm that I understand that the MSGP only authorizes the stormwater discharges in Part 1.2.1 and the allowable non-stormwater discharges listed in Part 1.2.2. Any discharges not expressly authorized in this permit cannot become authorized or shielded from liability under CWA section 402(k) by disclosure to EPA, state, or local authorities after issuance of this permit via any means, including the Notice of Intent (NOI) to be covered by the permit, the Stormwater Pollution Prevention Plan (SWPPP), during an inspection, etc. If any discharges requiring NPDES permit coverage other than the authorized stormwater and non-stormwater discharges listed in Parts 1.2.1 and 1.2.2 will be discharged, they must be covered under another NPDES permit.

Yes

Federal Effluent Limitation Guidelines

Identify the Effluent Limitation Guideline(s) that apply to your stormwater discharges.

40 CFR Part/Subpart	Eligible Discharges	Affected MSGP Sector	New Source Date	Applicability
Part 445, Subpart A & B	Runoff from hazardous waste and non-hazardous waste landfills	L	02/28/2000	**Does your facility have any discharges subject to this effluent limitation guideline?** No
Part 423	Coal pile runoff at steam electric generating facilities	O	11/19/1982, 10/08/1974	**Does your facility have any discharges subject to this effluent limitation guideline?** No

Are you requesting permit coverage for any stormwater discharges subject to effluent limitation guidelines? No

Other Discharge Information

Does your facility discharge into a Municipal Separate Sewer System (MS4)? No

Receiving Waters Information

List all of the stormwater discharge points from your facility.

Discharge Point 002: Northeast Sedimentation Basin Discharge

Applicable Sectors

Select the Sectors/Subsector(s) that apply to this discharge point.

	Sector	Subsector	SIC/Activity Code
☑	**L** - LANDFILLS, LAND APPLICATION SITES, AND OPEN DUMPS	**L1** - All Landfill, Land Application Sites and Open Dumps	LF
☑	**O** - STEAM ELECTRIC GENERATING FACILITIES	**O1** - Steam Electric Generating Facilities, including coal handling sites	SE

Latitude/Longitude: 42.7666°N, 71.1261°W

☐ **This discharge point is *Substantially Identical* to an existing discharge point.**

Receiving Water

GNIS Name:

Waterbody Name:

Listed Water ID:

n/a	MERRIMACK RIVER	n/a

Is this receiving water saltwater or freshwater? Freshwater

Is this receiving water designated by the state or tribal authority under its antidegradation policy as a Tier 2 (or Tier 2.5) water (water quality exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water)?

Yes

Will you have stormwater discharges from paved surfaces that will be initially sealed or re-sealed with coal-tar sealcoat where industrial activities are located during coverage under this permit? No

Benchmark Monitoring

Are you subject to benchmark monitoring requirements for a hardness-dependent metal? No

Impaired Waters Monitoring

NOTE: The information automatically populated in this section for determining if the receiving water is listed as impaired on the 303(d) list and in need of a TMDL, the cause(s) of the impairment if the receiving water is impaired on the CWA 303(d) list, if a TMDL has been completed for the receiving waterbody, and the TMDL ID and pollutants for which there is a TMDL may be outdated and inaccurate. It is recommended that you consult with your state's guidance for discharges into impaired waters to determine the correct pollutants and TMDLS and update the causes for the impairment and TMDL information accordingly.

Massachusetts Impaired Waters (IW) information and required monitoring parameters available at:

https://www.mass.gov/lists/integrated-lists-of-waters-related-reports (https://www.mass.gov/lists/integrated-lists-of-waters-related-reports)

https://www3.epa.gov/region1/npdes/stormwater/assets/pdfs/msgp-2021-part-425-parameters-ma.pdf (https://www3.epa.gov/region1/npdes/stormwater/assets/pdfs/msgp-2021-part-425-parameters-ma.pdf)

Where the Massachusetts monitoring guidance identifies one or more monitoring parameters that are different than the identified pollutant causing the impairment, indicate the monitoring parameter(s) as the pollutant(s) causing the impairment in the table below (select Yes for "Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL?" to display the pollutant table). Where the monitoring guidance indicates No Monitoring Required "NMR" for the pollutant causing the impairment, do not add a Cause of Impairment Group/Pollutant and delete any that were automatically populated in the table.

Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? Yes

Cause of Impairment Group	Pollutant
NUTRIENTS	Phosphorous, total elemental
PATHOGENS	E. coli

Has a TMDL been completed for this receiving waterbody? No

Discharge Point 001: Eastern Sedimentation Basin Discharge

Applicable Sectors

Select the Sectors/Subsector(s) that apply to this discharge point.

	Sector	Subsector	SIC/Activity Code
☑	L - LANDFILLS, LAND APPLICATION SITES, AND OPEN DUMPS	L1 - All Landfill, Land Application Sites and Open Dumps	LF
☑	O - STEAM ELECTRIC GENERATING FACILITIES	O1 - Steam Electric Generating Facilities, including coal handling sites	SE

Latitude/Longitude: 42.7683°N, 71.1227°W

☐ **This discharge point is *Substantially Identical* to an existing discharge point.**

Receiving Water

GNIS Name:	Waterbody Name:	Listed Water ID:
n/a	MERRIMACK RIVER	n/a

Is this receiving water saltwater or freshwater? Freshwater

Is this receiving water designated by the state or tribal authority under its antidegradation policy as a Tier 2 (or Tier 2.5) water (water quality exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water)?

No

Will you have stormwater discharges from paved surfaces that will be initially sealed or re-sealed with coal-tar sealcoat where industrial activities are located during coverage under this permit? No

Benchmark Monitoring

Are you subject to benchmark monitoring requirements for a hardness-dependent metal? No

Impaired Waters Monitoring

NOTE: The information automatically populated in this section for determining if the receiving water is listed as impaired on the 303(d) list and in need of a TMDL, the cause(s) of the impairment if the receiving water is impaired on the CWA 303(d) list, if a TMDL has been completed for the receiving waterbody, and the TMDL ID and pollutants for which there is a TMDL may be outdated and inaccurate. It is recommended that you consult with your state's guidance for discharges into impaired waters to determine the correct pollutants and TMDLS and update the causes for the impairment and TMDL information accordingly.

Massachusetts Impaired Waters (IW) information and required monitoring parameters available at:

https://www.mass.gov/lists/integrated-lists-of-waters-related-reports (https://www.mass.gov/lists/integrated-lists-of-waters-related-reports)

https://www3.epa.gov/region1/npdes/stormwater/assets/pdfs/msgp-2021-part-425-parameters-ma.pdf (https://www3.epa.gov/region1/npdes/stormwater/assets/pdfs/msgp-2021-part-425-parameters-ma.pdf)

Where the Massachusetts monitoring guidance identifies one or more monitoring parameters that are different than the identified pollutant causing the impairment, indicate the monitoring parameter(s) as the pollutant(s) causing the impairment in the table below (select Yes for "Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL?" to display the pollutant table). Where the monitoring guidance indicates No Monitoring Required "NMR" for the pollutant causing the impairment, do not add a Cause of Impairment Group/Pollutant and delete any that were automatically populated in the table.

Is the receiving water listed as impaired on the 303(d) list and in need of a TMDL? Yes

Cause of Impairment Group	Pollutant
NUTRIENTS	Phosphorous, total elemental
PATHOGENS	E. coli

Has a TMDL been completed for this receiving waterbody? No

SWPPP Information

Has the SWPPP been prepared in advance of filing this NOI, as required? Yes

SWPPP Contact Information:

First Name Middle Initial Last Name: David M Cotter

Phone: 978-241-3015 **Ext.:**

Email: dcotter@covanta.com

SWPPP Availability:

Your current SWPPP or certain information from your SWPPP must be made available through one of the following three options. Select one of the options and provide the required information.

Note: you are not required to post any confidential business information (CBI) or restricted information (as defined in Appendix A (https://www.epa.gov/sites/production/files/2021-01/documents/2021_msgp_-_appendix_a_-_definitions.pdf)) (such information may be redacted), but you must clearly identify those portions of the SWPPP that are being withheld from public access.

☐ **Option 1: Attach a current copy of your SWPPP to this NOI.**

☑ **Option 2: Maintain a Current Copy of your SWPPP on an Internet page (Universal Resource Locator or URL).**

Provide the web address URL (e.g. http://www.example.com): https://www.covanta.com/ma-stormwater

☐ **Option 3: Provide the following information from your SWPPP:**

Endangered Species Protection Worksheet: Criterion C1

The following questions will help you determine your eligibility under Part 1.1.4 of the permit with respect to protection of Endangered Species Act (ESA) species and critical habitat(s). Please refer to Appendix E (https://www.epa.gov/sites/production/files/2021-01/documents/2021_msgp_-_appendix_e_-_procedures_relating_to_endangered_species_protection.pdf) of the 2021 MSGP for important information regarding your obligations under this permit concerning ESA-protected species and critical habitat(s).

Determine ESA Eligibility Criterion

Are your industrial activities already addressed in another operator's valid certification of eligibility for your "action area" under eligibility criteria A, C, D, or E of the 2021 MSGP? No

Are your industrial activities the subject of a permit under section 10 of the ESA by the USFWS and/or NMFS, and this authorization addresses the effects of your facility's discharges and discharge-related activities on ESA-listed species and critical habitat?

No

You must determine whether species listed as either threatened or endangered under the Endangered Species Act, and/or their critical habitat are located in your facility's action area. ESA-listed species and critical habitat are under the purview of the NMFS and the USFWS.

Determine Your Action Area

Your "action area" (as defined in Appendix A (https://www.epa.gov/sites/production/files/2021-01/documents/2021_msgp_-_appendix_a_-_definitions.pdf)) includes all areas to be affected directly or indirectly by the action and not merely the immediate area involved in the action, including areas beyond the footprint of the facility that are likely to be affected by stormwater discharges, discharge-related activities, and authorized non-stormwater discharges. You must select and confirm that all the following are true:

- **In determining my "action area", I have considered that discharges of pollutants into downstream areas can expand the action area well beyond the footprint of my facility and the discharge point(s). I have taken into account the controls I will be implementing to minimize pollutants and the receiving waterbody characteristics (e.g. perennial, intermittent, ephemeral) in determining the extent of physical, chemical, and/or biotic effects of the discharges. I confirm that all receiving waterbodies that could receive pollutants from my facility are included in my action area.**

  True

- **In determining my "action area", I have considered that discharge-related activities must also be accounted for in determining my action area. I understand that discharge-related activities are any activities that cause, contribute to, or result in stormwater and authorized non-stormwater point source discharges, and measures such as the siting, construction, and operation of stormwater controls to control, reduce, or prevent pollutants from being discharged. I understand that any new or modified stormwater controls that will have noise or other similar effects, and any disturbances associated with construction of controls, are part of my action area.**

  True

Provide a written description of your action area and explain your rationale for the extent of the action area drawn on your map. Click here for an example.

The action area for the Covanta Haverhill facility's stormwater discharge extends only a short distance into the Merrimack River at Ward's Hill Neck. The downstream limit of the action area is limited due to the large dilution effects of the Merrimack River.

Attach a map of the action area for your facility. Mapping tool IPaC (the Information, Planning, and Consultation System) located at http://ecos.fws.gov/ipac/ (https://ecos.fws.gov/ipac/) or click here (/net-msgp/documents/action_area_example.pdf) for an example.

Name	Uploaded Date	Size
MSGP - Action Area Map and Text.pdf (attachment/713610)	05/24/2021	11.72 MB

Determine if ESA-listed species and/or critical habitat are in your facility's action area.

ESA-listed species and critical habitat are under the purview of the NMFS and the USFWS, and in many cases, you will need to acquire species and critical habitat lists from both federal agencies.

National Marine Fisheries Service (NMFS)

To obtain NMFS-listed species and critical habitat information, use the resources listed below:

General Resources:
- NOAA Fisheries, Regions Page (https://www.fisheries.noaa.gov/regions)

For the Northeastern U.S.:
- NOAA Fisheries Greater Atlantic Region ESA Section 7 Mapper (https://noaa.maps.arcgis.com/apps/webappviewer/index.html?id=1bc332edc5204e03b250ac11f9914a27)

For Puerto Rico:
- *Acropora* critical habitat map (https://www.fisheries.noaa.gov/resource/map/acropora-elkhorn-and-staghorn-coral-critical-habitat-map-and-gis-data)
- Green turtle critical habitat map (https://www.fisheries.noaa.gov/resource/map/green-turtle-critical-habitat-map-and-gis-data)
- Hawksbill Turtle critical habitat map (https://www.fisheries.noaa.gov/resource/map/hawksbill-turtle-critical-habitat-map-and-gis-data)

Western U.S.:
- West Coast Region Protected Resources App (https://www.webapps.nwfsc.noaa.gov/portal/apps/webappviewer/index.html?id=7514c715b8594944a6e468dd25aaacc9)

Pacific Islands:
- Contact the Pacific Islands Regional Office at (808) 725-5000 or pirohonolulu@noaa.gov (mailto:pirohonolulu@noaa.gov)

I have checked the webpages listed above and confirmed that: There are NMFS-listed species and/or critical habitat in my action area.

For NMFS species, include the full printout from the Species Directory with the correct Region selected.

Name	Uploaded Date	Size
ESA - Action Area & Overlapping S7 Consultation Areaa.pdf (attachment/713614)	05/24/2021	374.36 KB

U.S. Fish and Wildlife Service (USFWS)

To obtain FWS-listed species and critical habitat information, use the resources listed below:
- IPaC (the Information, Planning, and Consultation System) (https://ecos.fws.gov/ipac/)
- For instructions for using IPaC, click here.

I have checked the webpages listed above and confirmed that: There are FWS-listed species and/or critical habitat in my action area.

For FWS species, include the full printout from your IPaC query/Official Species List.

Name	Uploaded Date	Size
IPaC - Action Area Resource List.pdf (attachment/713641)	05/24/2021	377.26 KB

You may be eligible under **Criterion C.** You must assess whether your discharges and discharge-related activities are likely to adversely affect ESA-listed species or critical habitat, and whether any additional measures are necessary to ensure no likely adverse effects. In order to make a determination of your facility's likelihood of adverse effects, you must complete the Criterion C Eligibility fields below.

Criterion C Eligibility

Select which applies:

Criterion C1: Facility eligible for Criterion C in the 2015 MSGP with no change to ESA-listed species, critical habitat, or action area.

Your facility was eligible for Criterion C in the 2015 MSGP and there has been no change in your facility's action area and you have confirmed that there are no additional ESA-listed species or critical habitat under the jurisdiction of USFWS and/or NMFS in your action area since your certification under Criterion C in the 2015 MSGP. You must provide a description of the basis of this criterion selected on your NOI form and provide documentation supporting your eligibility determination in your SWPPP.

Select which applies:

I am seeking coverage under the MSGP as an existing discharger and my facility has modifications to its discharge characteristics (e.g., changes in discharge flow or area drained, different pollutants) and/or discharge-related activities (e.g., stormwater controls).

Provide a basis statement providing the USFWS and/or NMFS resources consulted that helped you determine that there are no additional ESA-listed species and/or critical habitat have been listed by under the jurisdiction of the Services in your action area.

A review of the USFWS and NMFS data indicated the same list of endangered species and habitats as was determined for the 2015 NOI submittal. Additionally, the National Heritage & Endangered Species Program's (NHESP) list of endangered species and habitats developed for the Massachusetts Endangered Species Act (MESA) was also consulted. The NHESP listed the same species as identified in the USFWS and NMFS data.

Note: Any missing or incomplete information in this section may result in a delay of your coverage under the permit.

Historic Preservation: Criterion A

The following questions will help you determine your eligibility under Part 1.1.5 of the permit with respect to preservation of historic properties. You may still use the paper instructions in Appendix F (https://www.epa.gov/sites/production/files/2021-01/documents/2021_msgp_-_appendix_f_-_procedures_relating_to_historic_properties_preservation.pdf) of the MSGP in advance or in conjunction with answering the questions in this section of the form. For more information about your State Historic Preservation Office (SHPO) or Tribal Historic Preservation Office (THPO), please visit the National Park Service (NPS) websites at:

- State Historic Preservation Office (SHPO) (https://www.nps.gov/subjects/nationalregister/state-historic-preservation-offices.htm)
- Tribal Historic Preservation Office (THPO) (https://www.nps.gov/history/tribes/Tribal_Historic_Preservation_Officers_Program.htm)

Are you an existing facility that is resubmitting for certification under the 2021 MSGP? Yes

If you are an existing facility you should have already addressed National Historic Preservation Act (NHPA) issues. To gain coverage under the 2015 MSGP, you were required to certify that you were either not affecting historic properties or had obtained written agreement from the relevant SHPO or THPO regarding methods of mitigating potential impacts.

Will you be constructing or installing any new stormwater control measures? No

You are eligible under Criterion A.

Certification Information

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. Signing an electronic document on behalf of another person is subject to criminal, civil, administrative, or other lawful action.

Certified By: William M. Zaneski

Certifier Title: Facility Manager

Certifier Email: bzaneski@covanta.com

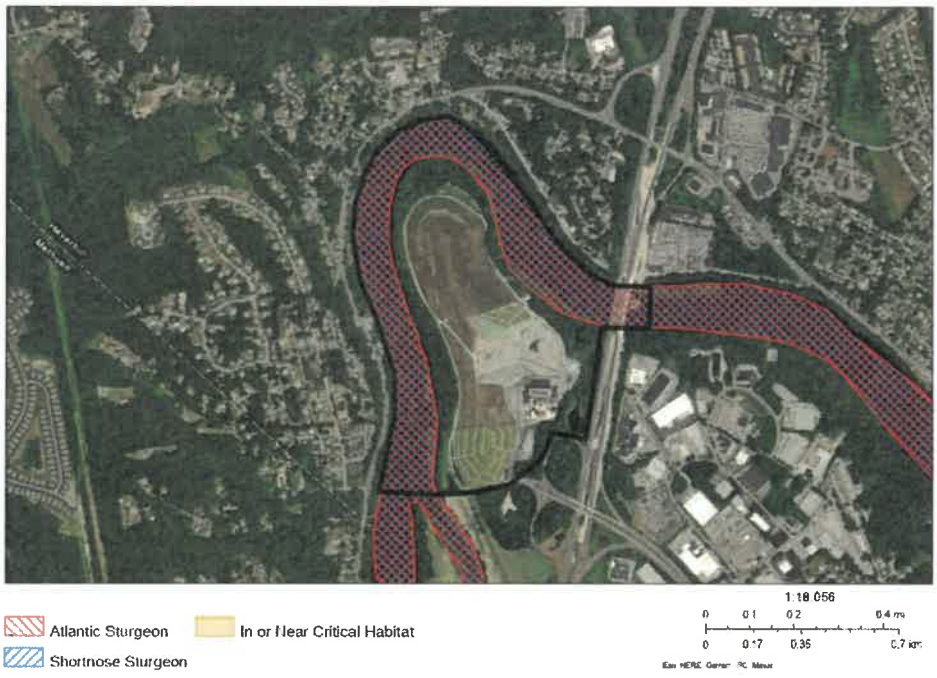
Certified On: 05/27/2021 10:51 AM ET

Drawn Action Area & Overlapping S7 Consultation Areas

Area of Interest (AOI) Information

Area : 3,826.98 acres

May 24 2021 14:46:10 Eastern Daylight Time



Summary

Name	Count	Area(acres)	Length(mi)
Atlantic Sturgeon	2	499.13	N/A
Shortnose Sturgeon	6	814.75	N/A
Atlantic Salmon	0	0	N/A
Sea Turtles	0	0	N/A
Atlantic Large Whales	0	0	N/A
In or Near Critical Habitat	1	249.57	N/A

Atlantic Sturgeon

#	Feature ID	Species	Life Stage	Behavior	Zone	From	Until	From (2)	Until (2)	Area(acres)
1	ANS_MER_SUB_MAF	Atlantic sturgeon	Subadult	Migrating & Foraging	Merrimack River	01/01	12/31	N/A	N/A	249.57
2	ANS_MER_ADU_MAF	Atlantic sturgeon	Adult	Migrating & Foraging	Merrimack River	01/01	12/31	N/A	N/A	249.57

Shortnose Sturgeon

#	Feature ID	Species	Life Stage	Behavior	Zone	From	Until	From (2)	Until (2)	Area(acres)
1	SNS_MER_JUV_MAF	Shortnose sturgeon	Juvenile	Migrating & Foraging	Merrimack River	01/01	12/31	N/A	N/A	249.57
2	SNS_MER_YOY_MAF	Shortnose sturgeon	Young of year	Migrating & Foraging	Merrimack River	01/01	12/31	N/A	N/A	249.57
3	SNS_MER_ADU_MAF	Shortnose sturgeon	Adult	Migrating & Foraging	Merrimack River	01/01	12/31	N/A	N/A	249.57
4	SNS_MER_EYL_NON	Shortnose sturgeon	Eggs and Yolk-sac Larvae	N/A	Merrimack River	04/1	06/15	N/A	N/A	22.02
5	SNS_MER_PYL_MAF	Shortnose sturgeon	Post Yolk-sac Larvae	Migrating & Foraging	Merrimack River	04/1	07/15	N/A	N/A	22.02
6	SNS_MER_ADU_SPN	Shortnose sturgeon	Adult	Spawning	Merrimack River	04/1	05/15	N/A	N/A	22.02

In or Near Critical Habitat

#	Species	In or Near Critical Habitat Unit	Area(acres)
1	Atlantic Sturgeon	Gulf of Maine Unit 5: Merrimack River	249.57

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Essex County, Massachusetts

Local office

New England Ecological Services Field Office

(603) 223-2541
(603) 223-0104

70 Commercial Street, Suite 300
Concord, NH 03301-5094

http://www.fws.gov/newengland

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS

Northern Long-eared Bat Myotis septentrionalis Threatened

Wherever found

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/9045

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	**Breeds Oct 15 to Aug 31**
Black-billed Cuckoo Coccyzus erythropthalmus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	**Breeds May 15 to Oct 10**
Bobolink Dolichonyx oryzivorus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	**Breeds May 20 to Jul 31**
Lesser Yellowlegs Tringa flavipes This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	**Breeds elsewhere**
Prairie Warbler Dendroica discolor This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	**Breeds May 1 to Jul 31**
Rusty Blackbird Euphagus carolinus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	**Breeds elsewhere**

Seaside Sparrow Ammodramus maritimus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 20
Semipalmated Sandpiper Calidris pusilla This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Short-billed Dowitcher Limnodromus griseus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480	Breeds elsewhere
Wood Thrush Hylocichla mustelina This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

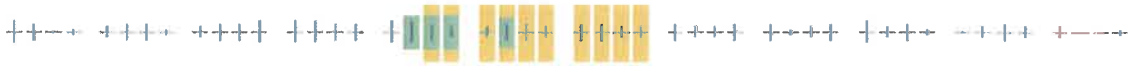
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

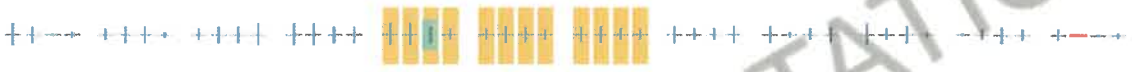
Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Bobolink BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Lesser Yellowlegs BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Prairie Warbler BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

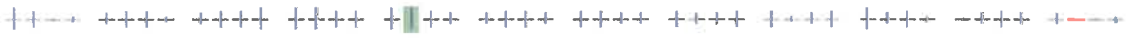


Rusty Blackbird BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Seaside Sparrow BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Semipalmated Sandpiper BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Short-billed Dowitcher BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Wood Thrush BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1A
- PSS1Eh

FRESHWATER POND

- PUBHx
- PUBHh

RIVERINE

- R5UBH
- R2UBH
- R4SBC

A full description for each wetland code can be found at the National Wetlands Inventory website

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

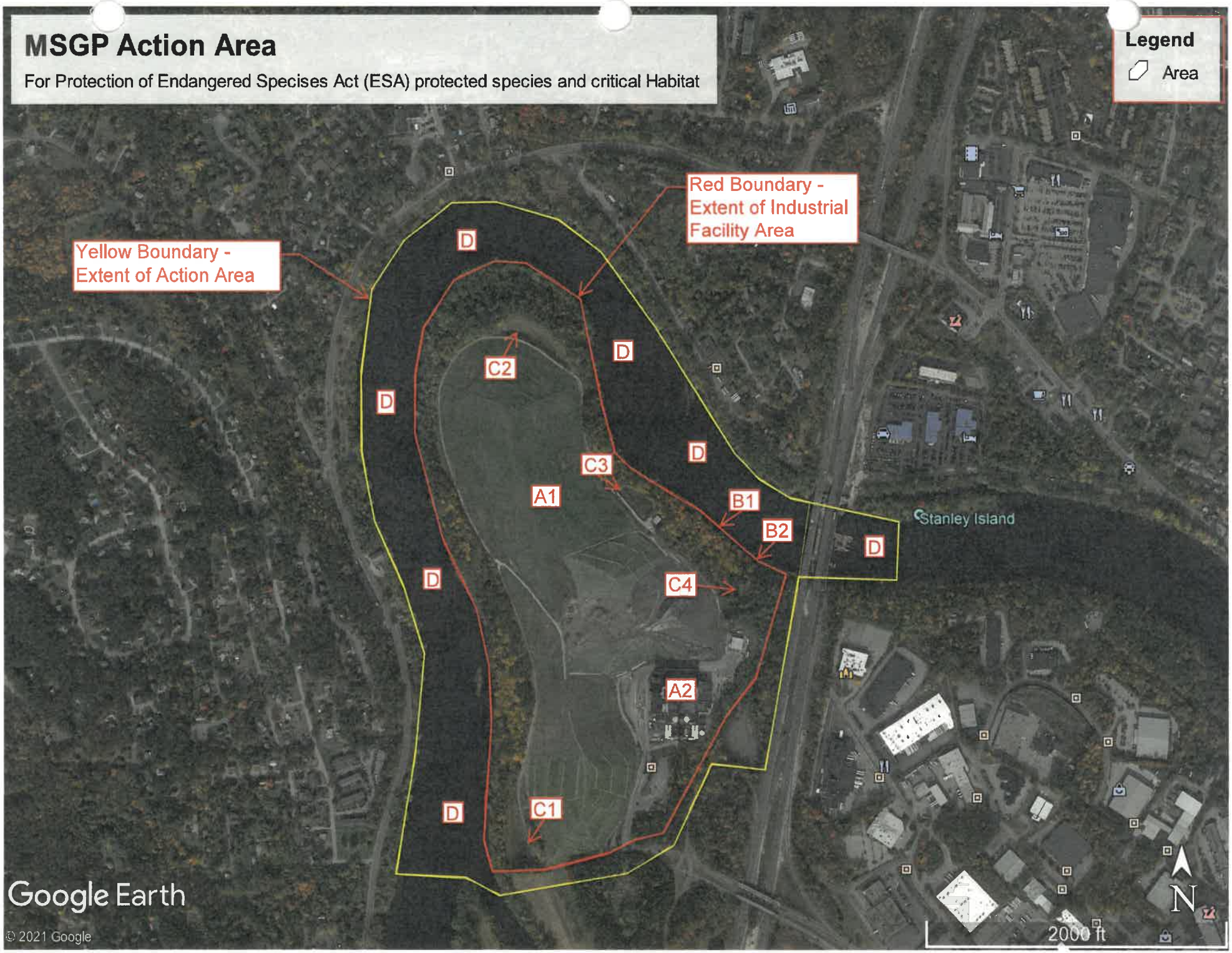
Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.


MSGP Action Area
For Protection of Endangered Species Act (ESA) protected species and critical Habitat
Legend
Area
Red Boundary - Extent of Industrial Facility Area
Yellow Boundary - Extent of Action Area
D
C2
C3
A1
B1
B2
C4
A2
C1
Stanley Island
Google Earth
© 2021 Google
2000 ft
N

Action Area: For the purposes of the MSGP and application of the Endangered Species Act requirements, the following areas are included in the definition of the Covanta Haverhill stormwater discharge action area:

A. Areas where stormwater discharges originate and flow from the industrial facility to the point of discharge into receiving waters.

   A1 – Wardhill Neck Landfill: Stormwater from surface areas are collected by swales around the perimeter of the landfill and directed to the Southern Infiltration Basin, Northern Infiltration basin or Northeast Sedimentation Basin.

   A2 – Covanta Haverhill Facility and paved areas: Stormwater is collected by a storm drain system and directed to the Eastern Sedimentation Basin.

B. The areas where stormwater from the Covanta Facility are discharged into the Merrimack River.

   B1 - Discharge 001

   B2 - Discharge 002

C. The areas where stormwater controls are constructed and operated.

   C1 - Southern Infiltration Basin

   C2 - Northern infiltration Basin

   C3 - Northeast Sedimentation Basin

   C4 - Eastern Sedimentation Basin

D. The upstream and downstream areas of the Merrimack that may be affected by Covanta Haverhill's stormwater discharges.

Category 5 waters listed alphabetically by major watershed
The 303(d) List – "Waters requiring a TMDL"

Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Massapoag Pond	MA84087	Dunstable/Groton/Tyngsborough.	111.00	Acres	(Curly-leaf Pondweed*)	
					(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Dissolved Oxygen	
					Mercury in Fish Tissue	33880
Merrimack River	MA84A-01	State line at Hudson, NH/Tyngsborough, MA to Pawtucket Dam (NAT ID: MA00837), Lowell.	9.00	Miles	(Fish Passage Barrier*)	
					Escherichia Coli (E. Coli)	
					Fecal Coliform	
					Mercury in Fish Tissue	
Merrimack River	MA84A-02	Pawtucket Dam (NAT ID: MA00837), Lowell to Lowell Regional Wastewater Utilities (NPDES# MA0100633) outfall at Duck Island, Lowell.	3.20	Miles	(Dewatering*)	
					(Fish Passage Barrier*)	
					Escherichia Coli (E. Coli)	
					Mercury in Fish Tissue	
					Phosphorus, Total	
Merrimack River	MA84A-03	Lowell Regional Wastewater Utilities (NPDES# MA0100633) outfall at Duck Island, Lowell to Essex Dam (NAT ID: MA00234), Lawrence.	8.80	Miles	(Fish Passage Barrier*)	
					Escherichia Coli (E. Coli)	
					Mercury in Fish Tissue	
					PCBs in Fish Tissue	
					Phosphorus, Total	
Merrimack River	MA84A-04	Essex Dam (NAT ID: MA00234), Lawrence to confluence with Little River, Haverhill.	10.00	Miles	Escherichia Coli (E. Coli)	
					PCBs in Fish Tissue	
					Phosphorus, Total	
Merrimack River	MA84A-05	Confluence Little River, Haverhill to confluence Indian River, West Newbury/Amesbury.	1.83	Square Miles	Enterococcus	
					PCBs in Fish Tissue	
Merrimack River	MA84A-06	Confluence Indian River, West Newbury/Amesbury to mouth at Atlantic Ocean, Newburyport/Salisbury (includes Back River, Salisbury).	4.46	Square Miles	Enterococcus	
					Fecal Coliform	
					PCBs in Fish Tissue	
Merrimack River	MA84A-26	The Basin in the Merrimack River Estuary, Newbury/Newburyport.	0.17	Square Miles	Fecal Coliform	
Mill Pond	MA84038	[North Basin] Littleton.	30.00	Acres	Aquatic Plants (Macrophytes)	
Mill Pond	MA84081	[South Basin] Littleton.	12.00	Acres	Aquatic Plants (Macrophytes)	
Millvale Reservoir	MA84041	Haverhill.	44.00	Acres	Mercury in Fish Tissue	
Nabnasset Pond	MA84044	Westford.	134.00	Acres	(Curly-leaf Pondweed*)	
					(Non-Native Aquatic Plants*)	
					Harmful Algal Blooms	
					Mercury in Fish Tissue	33880

*TMDL not required (Non-pollutant)

Ref#	Property Name	State	County	City	Street & Number
15000351	Bradford Burial Ground	MASSACHUSETTS	Essex	Haverhill	326 Salem St.
77000179	Bradford Common Historic District	MASSACHUSETTS	Essex	Haverhill	S. Main St.
90000228	Davis, Ephraim, House	MASSACHUSETTS	Essex	Haverhill	Merrimack Rd., N of jct. with Amesbury Line Rd.
90000227	Dustin House	MASSACHUSETTS	Essex	Haverhill	665 Hilldale Ave.
11000149	East Parish Meeting House	MASSACHUSETTS	Essex	Haverhill	150 Middle Rd. (formerly 267)
90000229	Emerson House	MASSACHUSETTS	Essex	Haverhill	5--9 Pentucket St.
90000225	Hastings--Morse House	MASSACHUSETTS	Essex	Haverhill	595 E. Broadway
7001008	Haverhill Board of Trade Building	MASSACHUSETTS	Essex	Haverhill	16-18 and 38-42 Walnut St.
5000560	Haverhill Historical Society Historic District	MASSACHUSETTS	Essex	Haverhill	240 Water St.
10001006	Hayes, Charles H., Building	MASSACHUSETTS	Essex	Haverhill	14-44 Granite St
90000226	Hazen--Spiller House	MASSACHUSETTS	Essex	Haverhill	8 Groveland St.
88000958	Intervale Factory	MASSACHUSETTS	Essex	Haverhill	402 River St.
9000032	L.H. Hamel Leather Company Historic District	MASSACHUSETTS	Essex	Haverhill	Bounded by Essex, Locke, Duncan, and Winter Sts., and the former Boston and Maine Railroad tracks
3000383	Main Street Historic District	MASSACHUSETTS	Essex	Haverhill	Main, Summer Sts.
9000436	Merrimack Associates Building	MASSACHUSETTS	Essex	Haverhill	25 Locust St.
86002900	Peabody School	MASSACHUSETTS	Essex	Haverhill	170 Salem St.
83000582	Primrose Street Schoolhouse	MASSACHUSETTS	Essex	Haverhill	71 Primrose St.
76001967	Rocks Village Historic District	MASSACHUSETTS	Essex	Haverhill	NE of Haverhill at Merrimack River
86002922	School Street School	MASSACHUSETTS	Essex	Haverhill	40 School St.
76000257	Washington Street Shoe District	MASSACHUSETTS	Essex	Haverhill	Washington, Wingate, Emerson Sts. Railroad and Washington Sqs.
14000759	Whittier, John Greenleaf, Homestead (Haverhill)	MASSACHUSETTS	Essex	Haverhill	305 Whittier Rd.
100000849	Winter Street School	MASSACHUSETTS	Essex	Haverhill	165 Winter St.

Appendix D

Reference Documents

INDUSTRIAL STORMWATER

FACT SHEET SERIES

Sector L: Landfills and Land Application Sites

U.S. EPA Office of Water
EPA-833-F-06-027
February 2021

What is the NPDES stormwater permitting program for industrial activity?

Activities, such as material handling and storage, equipment maintenance and cleaning, industrial processing or other operations that occur at industrial facilities are often exposed to stormwater. The runoff from these areas may discharge pollutants directly into nearby waterbodies or indirectly via storm sewer systems, thereby degrading water quality.

In 1990, the U.S. Environmental Protection Agency (EPA) developed permitting regulations under the National Pollutant Discharge Elimination System (NPDES) to control stormwater discharges associated with eleven categories of industrial activity. As a result, NPDES permitting authorities, which may be either EPA or a state environmental agency, issue stormwater permits to control runoff from these industrial facilities.

What types of industrial facilities are required to obtain permit coverage?

This fact sheet specifically discusses stormwater discharges from landfills and land application sites. Facilities and products in this group fall under the following categories, all of which require coverage under an industrial stormwater permit:

- Landfills
- Land application sites
- Open dumps that receive or have received industrial waste

These include sites subject to regulation under Subtitle D of the Resource Conservation and Recovery Act (RCRA) including municipal solid waste landfills (MSWLFs), industrial solid nonhazardous waste landfills, and industrial waste land application sites.

What does an industrial stormwater permit require?

Common requirements for coverage under an industrial stormwater permit include development of a written stormwater pollution prevention plan (SWPPP), implementation of control measures, and submittal of a request for permit coverage, usually referred to as the Notice of Intent or NOI. The SWPPP is a written assessment of potential sources of pollutants in stormwater runoff and control measures that will be implemented at your facility to minimize the discharge of these pollutants in runoff from the site. These control measures include site-specific best management practices (BMPs), maintenance plans, inspections, employee training, and reporting. The procedures detailed in the SWPPP must be implemented by the facility and updated as necessary, with a copy of the SWPPP kept on-site. The industrial stormwater permit also requires collection of visual, analytical, and/or compliance monitoring data to determine the effectiveness of implemented BMPs. For more information on EPA's industrial stormwater permit and links to State stormwater permits, go to **www.epa.gov/npdes/stormwater** and click on "Industrial Activity."

What pollutants are associated with activities at my facility?

Pollutants conveyed in stormwater discharges from landfills and land application sites will vary. There are a number of factors that influence to what extent industrial activities and significant materials can affect water quality.

- Geographic location
- Topography
- Hydrogeology
- Extent of impervious surfaces (e.g.,, concrete or asphalt)
- Type of ground cover (e.g., vegetation, crushed stone, or dirt)
- Outdoor activities (e.g., material storage, loading/unloading, vehicle maintenance)
- Size of the operation
- Type, duration, and intensity of precipitation events

Factors such as these will interact to influence the quantity and quality of stormwater runoff. At landfill and land application sites, runoff carrying suspended sediments and the commingling of runoff with uncontrolled leachate are the two primary sources of pollutants in stormwater. In addition, sources of pollutants other than stormwater, such as illicit connections, spills, and other improperly dumped materials, may increase the pollutant loading discharged into receiving waters. Other potential sources of pollutants at landfills and land application sites include those from ancillary areas and areas which are not directly associated with landfill or land application activities (e.g., vehicle maintenance, truck washing). These activities may be subject to permit requirements separate from those required of landfills and land application sites.

Municipal Solid Waste Landfills (MSWLFs). The wastes disposed of in MSWLFs are variable and may include household waste (including household hazardous waste which is excluded from RCRA hazardous waste regulation), nonhazardous incinerator ashes, commercial wastes, yard wastes, tires, white goods, construction wastes, municipal and industrial sludges, asbestos, and other industrial wastes. Industrial process wastes represent a small percent of the total wastestream (although most MSWLFs currently or have previously accepted industrial wastes and are therefore subject to stormwater permitting requirements). MSWLFs that operated prior to the implementation of RCRA hazardous waste management requirements in 1980 may have received wastes that would have been classified as hazardous wastes under current RCRA requirements.

Industrial landfills, most of which are privately owned, only receive wastes from industrial facilities such as factories, processing plants, and manufacturing sites. These facilities may also receive hazardous wastes from very small quantity hazardous waste generators. Included in these waste streams are some PCB contaminated wastes. The Toxic Substances Control Act PCB disposal regulations allow limited categories of PCB materials to be disposed of in RCRA Subtitle D landfills. Because wastes generated by industrial facilities vary considerably, both between and within industries, the wastes disposed of at industrial landfills can be highly variable. For example, the industrial nonhazardous waste category includes wastes from the pulp and paper industry, the organic chemical industry, the textile manufacturing industry, and a variety of other industries. Consequently, these waste streams may vary in chemical composition and/or physical form.

Land application sites receive wastes (primarily wastewaters and sludges) from facilities in virtually every major industrial category. Similar to landfills, the variability in types of waste that are land applied precludes any general characterization of the materials that may be exposed to stormwater. Typically, individual land applications will only dispose of wastes with specific characteristics. However, the criteria for selection are site-specific depending on type of process used and the soil characteristics. Waste application techniques are dependent on waste characteristics, cover crop and soil characteristics.

Stormwater discharges from landfills and land application sites often contain high TSS levels because of the extensive land disturbance activities associated with landfill operations. Suspended solids can adversely affect fisheries by covering the bottom of a stream or lake with a blanket of material that

may destroy spawning grounds or the bottom fauna upon which fish feed. In addition, while they remain in suspension, suspended solids can increase turbidity, reduce light penetration, and impair the photosynthetic activity of aquatic plants.

The activities, pollutant sources, and associated pollutants detailed in Table 1A and 1B are commonly found at landfills and land application sites. It is important to note that the occurrence and levels of pollutants other than TSS in stormwater discharges are dependent on the types of wastes deposited/applied and facility design and operation (including use of stormwater management/treatment practices).

Table 1A. Common Activities, Pollutant Sources, and Associated Pollutants at Landfills

Activity	Pollutant Source	Pollutant
Cover crop management	Applied chemicals	Fertilizers, pesticides, and herbicides
Outdoor chemical storage	Exposure of chemical material storage areas to precipitation	Various chemicals stored
Waste transportation	Waste tracking on-site and haul road, solids transport on wheels and exterior of trucks or other equipment	TSS, total dissolved solids (TDS), turbidity, floatable
Leachate collection	Uncontrolled leachate (commingling of leachate with runoff or run-on)	Iron, TSS, biochemical oxygen demand (BOD), ammonia, alpha terpineol, benzoic acid, p-Cresol, phenol, zinc, pH
Landfill operations	Exposure of waste at open face	BOD, TSS, TDS, turbidity
Exposed soil from excavating cells/trenches	Erosion	TSS, TDS, turbidity
Exposed stockpiles of cover material		
Inactive cells with final cover but not finally stabilized		
Daily or intermediate cover placed on cells or trenches		
Haul roads (including vehicle tracking of sedimentation)		
Vehicle/equipment maintenance	Fueling activities	Diesel fuel, gasoline, oil
	Parts cleaning	Solvents, oil, heavy metals, acid/alkaline wastes
	Waste disposal of oily rags, oil and gas filters, batteries, coolants, degreasers	Oil, heavy metals, solvents, acids
	Fluid replacement including hydraulic fluid, oil, transmission fluid, radiator fluids, and grease	Oil and grease, arsenic, lead, cadmium, chromium, chemical oxygen demand (COD), and benzene

Table 1B. Common Activities, Pollutant Sources, and Associated Pollutants at Land Application Sites

Activity	Pollutant Source	Pollutant
Cover crop management	Applied chemicals	Fertilizers, pesticides, and herbicides
Outdoor chemical storage	Exposure of chemical material storage areas to precipitation	Various chemicals stored
Waste transportation	Waste tracking on-site and haul road, solids transport on wheels and exterior of trucks or other equipment	TSS, total dissolved solids (TDS), turbidity, floatable

Table 1B. Common Activities, Pollutant Sources, and Associated Pollutants at Land Application Sites (continued)

Activity	Pollutant Source	Pollutant
Vehicle/equipment maintenance	Fueling activities	Diesel fuel, gasoline, oil
	Parts cleaning	Solvents, oil, heavy metals, acid/alkaline wastes
	Waste disposal of oily rags, oil and gas filters, batteries, coolants, degreasers	Oil, heavy metals, solvents, acids
	Fluid replacement including hydraulic fluid, oil, transmission fluid, radiator fluids, and grease	Oil and grease, arsenic, lead, cadmium, chromium, chemical oxygen demand (COD), and benzene

Note: Activities may have additional pollutant sources that contain PFAS and can come into contact with stormwater discharges. Per- and polyfluoroalkyl substances (PFAS) are a group of man-made chemicals that include PFOA, PFOS, GenX, and many other chemicals.

What BMPs can be used to minimize contact between stormwater and potential pollutants at my facility?

A variety of BMP options may be applicable to eliminate or minimize the presence of pollutants in stormwater discharges from landfills and land application sites. You will likely need to implement a combination or suite of BMPs to address stormwater runoff at your facility. Your first consideration should be for pollution prevention BMPs, which are designed to prevent or minimize pollutants from entering stormwater runoff and/or reduce the volume of stormwater requiring management. Prevention BMPs can include regular cleanup, collection and containment of debris in storage areas, and other housekeeping practices, spill control, diversions, and employee training. It may also be necessary to implement treatment BMPs, which are engineered structures intended to treat stormwater runoff and/or mitigate the effects of increased stormwater runoff peak rate, volume, and velocity. Treatment BMPs are generally more expensive to install and maintain and include oil-water separators, sedimentation ponds, and proprietary filter devices.

BMPs must be selected and implemented to address the following:

Good Housekeeping Practices

Good housekeeping is a practical, cost-effective way to maintain a clean and orderly facility to prevent potential pollution sources from coming into contact with stormwater. It includes establishing protocols to reduce the possibility of mishandling materials or equipment and training employees in good housekeeping techniques. Good housekeeping practices must include a schedule for regular pickup and disposal of waste materials such as oils and fluids and routine inspections of drums, tanks, and containers for leaks and structural conditions. Practices also include containing and covering garbage, waste materials, and debris. Involving employees in routine monitoring of housekeeping practices has proven to be an effective means of ensuring the continued implementation of these measures.

Specific good housekeeping practices for landfills and land application sites include providing protected storage areas for pesticides, herbicides, fertilizers, and other significant materials, vehicle maintenance areas, and recycled materials areas if present. Additionally, a preventative maintenance program should be developed that addresses:

- The maintenance of containers used for outdoor chemical/significant materials/recyclables storage to prevent leaking
- All elements of leachate collection and treatment systems to prevent exposure of leachate to stormwater
- The integrity and effectiveness of any intermediate or final cover

Industrial facilities can conduct activities that use, store, manufacture, transfer, and/or dispose of PFAS containing materials. Successful good housekeeping practices to minimize PFAS exposure to stormwater could include inventorying the location, quantity, and method of storage; using properly designed storage and transfer techniques; providing secondary containment around chemical storage areas; and using proper techniques for cleaning or replacement of production systems or equipment.

Minimizing Exposure

Where feasible, minimizing exposure of potential pollutant sources to precipitation is an important control option. For landfills and land application sites, this measure is again most applicable to areas other than the active disposal/application sited although minimizing disturbance in these areas is important as well. Minimizing exposure prevents pollutants, including debris, from coming into contact with precipitation and can reduce the need for BMPs to treat contaminated stormwater runoff. It can also prevent debris from being picked up by stormwater and carried into drains and surface waters. Examples of BMPs for exposure minimization include covering materials or activities with temporary structures (e.g., tarps) when wet weather is expected or moving materials or activities to existing or new permanent structures (e.g., buildings, silos, sheds). Another example could include locating PFAS-containing materials and residues away from drainage pathways and surface waters.

Erosion and Sediment Control

BMPs must be selected and implemented to limit erosion on areas of your site that are likely to experience erosion, such as access roads, application areas, and active and recently reclaimed landfill areas. Erosion control BMPs such as seeding and mulching prevent soil from becoming dislodged and should be considered first along with diverting uncontaminated surface flows away from disturbed areas. Sediment control BMPs such as silt fences, sediment ponds, and stabilized entrances trap sediment after it has eroded. Sediment control BMPs should be used to back-up erosion control BMPs.

Landfill construction creates constant changes in the contours of the facility resulting in changing patterns of stormwater run-on and runoff. Controlling erosion of landfill slopes is among the primary concerns of the landfill operator. Practices generally include a combination of temporary controls (straw bales, silt fences, etc.) in active disposal areas and permanent controls (recontouring, revegetation, etc.) in areas where waste disposal has been completed.

Specific sediment and erosion practices for landfills and land application sites include providing temporary stabilization and placing geotextiles on the inactive portions of stockpiles. This should be done for:

- Materials stockpiled daily for immediate and final cover
- Inactive areas of the landfill or open dump
- Any landfill or open dump area with final covers but where vegetation has yet to establish itself
- Where waste application has been completed at land application sites but final vegetation has not yet been established

Management of Runoff

Your SWPPP must contain a narrative evaluation of the appropriateness of stormwater management practices that divert, infiltrate, reuse, or otherwise manage stormwater runoff so as to reduce the discharge of pollutants. Appropriate measures are highly site-specific, but may include, among others, vegetative swales, collection and reuse of stormwater, inlet controls, snow management, infiltration devices, and wet retention measures. Incorporating treatment like granular activated carbon may be helpful to remove certain pollutants like PFAS.

A combination of preventive and treatment BMPs will yield the most effective stormwater management for minimizing the offsite discharge of pollutants via stormwater runoff. Though not specifically outlined in this fact sheet, BMPs must also address preventive maintenance records or logbooks, regular facility inspections, spill prevention and response, and employee training.

All BMPs require regular maintenance to function as intended. Some management measures have simple maintenance requirements, others are quite involved. You must regularly inspect all BMPs to ensure they are operating properly, including during runoff events. As soon as a problem is found, action to resolve it should be initiated immediately.

Implement BMPs, such as those listed below in Table 2 for the control of pollutants at landfills and land application sites, to minimize and prevent the discharge of pollutants in stormwater. Identifying weaknesses in current facility practices will aid the permittee in determining appropriate BMPs that will achieve a reduction in pollutant loadings. BMPs listed in Table 2 are broadly applicable to landfills and land application sites; however, this is not a complete list and you are recommended to consult with regulatory agencies or a stormwater engineer/consultant to identify appropriate BMPs for your facility.

Table 2A. BMPs for Potential Pollutant Sources at Landfills and Land Application Sites

Pollutant Source	BMPs
Application of fertilizers, pesticides, and herbicides	❑ Observe all applicable Federal, State, and local regulations when using these products. ❑ Strictly follow recommended application rates and methods (i.e., do not apply in excess of vegetative requirements). ❑ Have materials such as absorbent pads easily accessible to clean up spills. ❑ Inspect and maintain all containers used to prevent leaking. ❑ Implement employee training program for proper application and spill prevention. ❑ Store drums and containers indoors when possible.
Chemical material storage areas	❑ Store drums, including empty or used drums, in secondary containment with a roof or cover (including temporary cover such as a tarp that prevents contact with precipitation). ❑ Provide secondary containment, such as dikes or portable containers, with a height sufficient to contain a spill (the greater of 10 percent of the total enclosed tank volume or 110 percent of the volume contained in the largest tank). ❑ Locate material storage areas away from high traffic areas and surface waters. ❑ Inspect storage tanks and piping systems (pipes, pumps, flanges, couplings, hoses, and valves) for failures or leaks and perform preventive maintenance. ❑ Clearly label drums with their contents. ❑ Maintain an inventory of fluids to identify leakage. ❑ Properly dispose of chemicals that are no longer in use. ❑ Store and handle reactive, ignitable, or flammable liquids in compliance with applicable local fire codes, local zoning codes, and the National Electric Code. ❑ Provide drip pads/pans where chemicals are transferred from one container to another to allow for recycling of spills and leaks. ❑ Have materials such as absorbent pads easily accessible to clean up spills. ❑ Develop and implement spill plans or spill prevention, containment, and countermeasure (SPCC) plans, if required for your facility. ❑ Provide transfer of PFAS containing materials and their proper collection and disposal methods in the event of a release from their container. ❑ Train employees in spill prevention and control and proper materials management.
Exposure of waste at open face (Landfills only)	❑ Minimize the area of exposed open face as much as is practicable. ❑ Divert flows around open face using structural measures such as dikes, berms, swales, or pipe slope drains. ❑ Maintain the integrity and effectiveness of any intermediate or final cover (including repairing the cover as necessary to minimize the effects of settlement, sinking, and erosion). ❑ Regularly inspect erosion and sediment controls.

Table 2A. BMPs for Potential Pollutant Sources at Landfills and Land Application Sites (continued)

Pollutant Source	BMPs
Exposure of waste at open face (Landfills only)	❑ Minimize the area of exposed open face as much as is practicable. ❑ Divert flows around open face using structural measures such as dikes, berms, swales, or pipe slope drains. ❑ Maintain the integrity and effectiveness of any intermediate or final cover (including repairing the cover as necessary to minimize the effects of settlement, sinking, and erosion). ❑ Regularly inspect erosion and sediment controls.
Waste tracking and solids transport on wheels and exterior of trucks or other equipment from on-site/offsite or haul roads.	❑ Clean wheels and exterior of trucks or other equipment as necessary to minimize waste tracking (but contain any wash waters). ❑ Establish procedures such as rumble strips and gravel apron to minimize offsite tracking
Uncontrolled leachate	❑ Divert flows around site using structural measures such as dikes, berms, or swales. ❑ Frequently inspect leachate collection system and landfill for leachate leaks. ❑ Maintain landfill cover and vegetation. ❑ Maintain leachate collection system. ❑ Maintain all elements of leachate collection and treatment systems to prevent commingling of leachate with stormwater.
Erosion from: Excavating cells/ trenches Stockpiles of cover material Inactive cells with final cover but not finally stabilized Daily or intermediate cover placed on cells or trenches Haul roads	❑ Implement structural controls such as dikes, swales, silt fences, filter berms, sediment traps and ponds, outlet protection, pipe slope drains, check dams, and terraces to convey runoff, to divert stormwater flows away from areas susceptible to erosion, and to prevent sediments from entering water bodies. ❑ Confine stockpiling to areas outside of drainage pathways and away from surface waters ❑ Stabilize soils with temporary seeding, mulching, and placing geotextiles on the inactive portions of stockpiles ❑ Leave vegetative filter strips along streams. ❑ Keep as much vegetation as possible when building roads and seed as necessary and appropriate. ❑ Construct vegetated swales along road. ❑ Stabilize haul roads and entrances to landfill with gravel or stone. ❑ Clean wheels and body of trucks or other equipment as necessary to minimize sediment tracking (but contain any wash waters). ❑ Frequently inspect all stabilization and structural erosion control measures and perform all necessary maintenance and repairs.
Vehicle/equipment fueling	Stationary fueling areas ❑ Conduct fueling operations (including the transfer of fuel from tank trucks) on an impervious or contained pad or under a roof or canopy where possible. Covering should extend beyond spill containment pad to prevent rain from entering. ❑ When fueling in uncovered area, use a concrete pad (asphalt is not chemically resistant to the fuels being handled). ❑ Use drip pans where leaks or spills of fuel can occur and where making and breaking hose connections. ❑ Use fueling hoses with check valves to prevent hose drainage after filling. ❑ Use spill and overflow protection devices.

Table 2A. BMPs for Potential Pollutant Sources at Landfills and Land Application Sites (continued)

Pollutant Source	BMPs
Vehicle/equipment fueling (continued)	Stationary fueling areas (continued) ❑ Keep spill cleanup materials readily available. Clean up spills and leaks immediately. ❑ Minimize/eliminate run-on onto fueling areas with diversion dikes, berms, curbing, surface grading or other equivalent measures. ❑ Collect stormwater runoff and provide treatment or recycling. ❑ Use dry cleanup methods for fuel area rather than hosing the fuel area down. Follow procedures for sweeping up absorbents as soon as spilled substances have been absorbed. ❑ Regularly inspect and perform preventive maintenance on storage tanks to detect potential leaks before they occur. ❑ Inspect the fueling area for leaks and spills. ❑ Provide curbing or posts around fuel pumps to prevent collisions during vehicle ingress and egress. ❑ Discourage "topping off" of fuel tanks. Mobile fueling areas ❑ Use drip pan under the transfer hose. ❑ Use fueling hoses with check valves to prevent hose drainage after filling. ❑ Ensure the fueling vehicle is equipped with a manual shutoff valve. ❑ Do not allow topping off of the fuel in the receiving equipment. ❑ Train personnel on fueling BMPs.
Vehicle/equipment maintenance	Good Housekeeping ❑ Eliminate floor drains that are connected to the storm or sanitary sewer; if necessary, install a sump that is pumped regularly. Collected wastes should be properly treated or disposed of by a licensed waste hauler. ❑ Use drip plans, drain boards, and drying racks to direct drips back into a fluid holding tank for reuse. ❑ Drain all parts of fluids prior to disposal. Oil filters can be crushed and recycled. ❑ Promptly transfer used fluids to the proper container; do not leave full drip pans or other open containers around the shop. Empty and clean drip pans and containers. ❑ Dispose of greasy rags, oil filters, air filters, batteries, spent coolant, and degreasers properly. ❑ Store batteries and other significant materials inside. ❑ Label and track the recycling of waste material (e.g., used oil, spent solvents, batteries). ❑ Maintain an organized inventory of materials. ❑ Eliminate or reduce the number of hazardous materials used and amount of waste by substituting nonhazardous or less hazardous materials. ❑ Clean up leaks, drips, and other spills without using large amounts of water. ❑ Prohibit the practice of hosing down an area where the practice would result in the exposure of pollutants to stormwater. ❑ Clean without using liquid cleaners whenever possible. ❑ Do all cleaning at a centralized station so the solvents stay in one area. ❑ If parts are dipped in liquid, remove them slowly to avoid spills. ❑ Do not pour liquid waste down floor drains, sinks, outdoor storm drain inlets, or other storm drains or sewer connections.

Table 2A. BMPs for Potential Pollutant Sources at Landfills and Land Application Sites (continued)

Pollutant Source	BMPs
Vehicle/equipment maintenance (continued)	Minimizing Exposure ❑ Perform all cleaning operations indoors or under covering when possible. Conduct the cleaning operations in an area with a concrete floor with no floor drainage other than to sanitary sewers or treatment facilities. ❑ If operations are uncovered, perform them on a concrete pad that is impervious and contained. ❑ Park vehicles and equipment indoors or under a roof whenever possible where proper control of oil leaks/spills is maintained and exposure to stormwater is prevented. ❑ Watch vehicles closely for leaks and use pans to collect fluid when leaks occur. Management of Runoff ❑ Use berms, curbs, or other diversion measures to ensure that stormwater runoff from other parts of the facility does not flow over the maintenance area. ❑ Collect the stormwater runoff from the cleaning area and provide treatment or recycle the runoff. Discharge vehicle wash or rinse water to the sanitary sewer (if allowed by sewer authority), wastewater treatment, a land application site, or recycle on-site. DO NOT discharge washwater to a storm drain or to surface water. Inspections and Training ❑ Inspect the maintenance area regularly for proper implementation of control measures. ❑ Train employees on proper waste control and disposal procedures.

What if activities and materials at my facility are not exposed to precipitation?

The industrial stormwater program requires permit coverage for a number of specified types of industrial activities. However, when a facility is able to prevent the exposure of ALL relevant activities and materials to precipitation, it may be eligible to claim no exposure and qualify for a waiver from permit coverage.

If you are regulated under the industrial permitting program, you must either obtain permit coverage or submit a no exposure certification form, if available. Check with your permitting authority for additional information as not every permitting authority program provides no exposure exemptions.

Where do I get more information?

For additional information on the industrial stormwater program see **www.epa.gov/npdes/stormwater/msgp**.

A list of names and telephone numbers for each EPA Region or state NPDES permitting authority can be found at **www.epa.gov/npdes/stormwatercontacts**.

References

Information contained in this Fact Sheet was compiled from EPA's past and current Multi-Sector General Permits and from the following sources:

- U.S. EPA, Office of Wastewater Management. *NPDES Stormwater Multi-Sector General Permit for Industrial Activities (MSGP)*.
  www.epa.gov/npdes/stormwater/msgp

INDUSTRIAL STORMWATER

FACT SHEET SERIES

Sector O: Steam Electric Power Generating Facilities, Including Coal Handling Areas

U.S. EPA Office of Water
EPA-833-F-06-030
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What is the NPDES stormwater permitting program for industrial activity?

Activities, such as material handling and storage, equipment maintenance and cleaning, industrial processing or other operations that occur at industrial facilities are often exposed to stormwater. The runoff from these areas may discharge pollutants directly into nearby waterbodies or indirectly via storm sewer systems, thereby degrading water quality.

In 1990, the U.S. Environmental Protection Agency (EPA) developed permitting regulations under the National Pollutant Discharge Elimination System (NPDES) to control stormwater discharges associated with eleven categories of industrial activity. As a result, NPDES permitting authorities, which may be either EPA or a state environmental agency, issue stormwater permits to control runoff from these industrial facilities.

What types of industrial facilities are required to obtain permit coverage?

This fact sheet specifically discusses stormwater discharges from steam electric power generating facilities including:

- Steam electric power generation using coal, natural gas, oil, nuclear energy, etc. to produce a stream source, including coal handling areas
- Coal pile runoff
- Dual fuel co-generation facilities

What does an industrial stormwater permit require?

Common requirements for coverage under an industrial stormwater permit include development of a written stormwater pollution prevention plan (SWPPP), implementation of control measures, and submittal of a request for permit coverage, usually referred to as the Notice of Intent or NOI. The SWPPP is a written assessment of potential sources of pollutants in stormwater runoff and control measures that will be implemented at your facility to minimize the discharge of these pollutants in runoff from the site. These control measures include site-specific best management practices (BMPs), maintenance plans, inspections, employee training, and reporting. The procedures detailed in the SWPPP must be implemented by the facility and updated as necessary, with a copy of the SWPPP kept on-site. The industrial stormwater permit also requires collection of visual, analytical, and/or compliance monitoring data to determine the effectiveness of implemented BMPs. For more information on EPA's industrial stormwater permit and links to State stormwater permits, go to **www.epa.gov/npdes/stormwater** and click on "Industrial Activity."

What pollutants are associated with activities at my facility?

Pollutants conveyed in stormwater discharges from steam electric generating facilities, including coal handling areas, will vary. There are a number of factors that influence to what extent industrial activities and significant materials can affect water quality.

- Geographic location
- Topography
- Hydrogeology
- Extent of impervious surfaces (e.g., concrete or asphalt)
- Type of ground cover (e.g., vegetation, crushed stone, or dirt)
- Outdoor activities (e.g., material storage, loading/unloading, vehicle maintenance)
- Size of the operation
- Type, duration, and intensity of precipitation events

Pollutants may be present in stormwater as a result of outdoor activities associated with steam electric power generating facilities such as: material handling and transport operations; waste disposal; and deposition of airborne particulate matter. In addition, sources of pollutants other than stormwater, such as illicit connections, spills, and other improperly dumped materials, may increase the pollutant loadings discharged receiving waters.

Although there are many activities that occur at a facility, this fact sheet only discusses those activities that occur outdoors and where activities or materials may be exposed to precipitation. The primary and largest potential source of stormwater pollutants from fossil-fueled steam electric generating facilities is ash refuse piles. Vanadium, sodium, sulfur, and nickel are all common elements found in oil ash. Silica, alumina, ferric oxide, calcium oxide, magnesium oxide, and sodium and potassium oxides are all common.

The activities, pollutant sources, and pollutants detailed in Table 1 are commonly found at steam electric generating facilities, including coal handling areas.

Table 1. Common Activities, Pollutant Sources, and Associated Pollutants at Steam Electric Generating Facilities, including Coal Handling Areas

Activity	Pollutant Source	Pollutant
Above ground liquid storage tanks	External corrosion and structural failure	Fuel, oil and grease (O&G), heavy metals, ammonia, chloride, sodium hydroxide, and other materials being stored
	Installation problems	
	Spills due to operator error	
	Failure of piping systems	
	Leaks or spills during pumping of liquids from barges, trucks, rail cars to a storage facility	
Vehicle and equipment maintenance	Parts cleaning	Oil and grease (O&G), heavy metals, chlorinated solvents, acid/alkaline wastes, ethylene glycol
	Spills of oil, degreasers, hydraulic fluids, transmission fluid, radiator fluids	Oil and grease (O&G), arsenic, heavy metals, organics, chlorinated solvents, ethylene glycol
	Fluids replacement	Oil and grease (O&G), arsenic, heavy metals, organics, fuel

Table 1. Common Activities, Pollutant Sources, and Associated Pollutants at Steam Electric Generating Facilities, including Coal Handling Areas (continued)

Activity	Pollutant Source	Pollutant
Fueling operations	Spills and leaks during fuel delivery	Fuel, oil and grease (O&G), heavy metals
	Spills caused by "topping off" fuel tanks	
	Leaking storage tanks	
	Allowing rainfall on the fuel area or stormwater to run onto the fuel area	
Coal handling areas	Coal storage	Suspended solids, copper, iron, aluminum, nickel, and trace metals
	Fugitive dust emissions from coal handing	
	Spills during delivery	
	Offsite tracking of coal dust	
Ash handling areas, ash landfills	Spills during transfer of ash to landfills	Suspended solids, chromium, copper, iron, zinc, oil and grease, aluminum
	Offsite tracking of ash	
Scrapyards, refuse sites	Discarded material	Fuel, oil and grease (O&G), heavy metals

Note: Activities may have additional pollutant sources that contain PFAS and can come into contact with stormwater discharges. Per- and polyfluoroalkyl substances (PFAS) are a group of man-made chemicals that include PFOA, PFOS, GenX, and many other chemicals.

What BMPs can be used to minimize contact between stormwater and potential pollutants at my facility?

A variety of BMP options may be applicable to eliminate or minimize the presence of pollutants in stormwater discharges from steam electric generating facilities, including coal handling areas. You will likely need to implement a combination or suite of BMPs to address stormwater runoff at your facility.

Your first consideration should be for pollution prevention BMPs, which are designed to prevent or minimize pollutants from entering stormwater runoff and/or reduce the volume of stormwater requiring management. Prevention BMPs can include regular cleanup, collection and containment of debris in storage areas, and other housekeeping practices, spill control, and employee training. It may also be necessary to implement treatment BMPs, which are engineered structures intended to treat stormwater runoff and/or mitigate the effects of increased stormwater runoff peak rate, volume, and velocity. Treatment BMPs are generally more expensive to install and maintain and include oil-water separators, wet ponds, and proprietary filter devices.

BMPs must be selected and implemented to address the following:

Good Housekeeping Practices

Good housekeeping is a practical, cost-effective way to maintain a clean and orderly facility to prevent potential pollution sources from coming into contact with stormwater. It includes establishing protocols to reduce the possibility of mishandling materials or equipment and training employees in good housekeeping techniques. Common areas where good housekeeping practices should be followed include trash containers and adjacent areas, material storage areas, vehicle and equipment maintenance areas, and loading docks. Good housekeeping practices must include a schedule for regular pickup and disposal of garbage and waste materials and routine inspections of drums, tanks, and containers for leaks and structural conditions. Practices also include containing and covering garbage, waste materials, and debris. Involving employees in routine monitoring of housekeeping practices has proven to be an effective means of ensuring the continued implementation of these measures.

Specific good housekeeping practices for steam electric power generating facilities include:

- Spill and overflow protection under chemical connectors to contain spillage at liquid storage tanks
- Dry cleanup methods at liquid storage tank areas
- Coal pile management
- Load covers on residue hauling vehicles and ensure gates on trucks are sealed and the truck body is in good condition
- Containment curbs around loading/unloading areas or tanks
- Techniques to reduce ash residue which may be tracked on to access roads traveled by residue trucks or residue handling vehicles.
- Techniques to reduce ash residue on exit roads leading into and out of residue handling areas

Industrial facilities can conduct activities that use, store, manufacture, transfer, and/or dispose of PFAS containing materials. Successful good housekeeping practices to minimize PFAS exposure to stormwater could include inventorying the location, quantity, and method of storage; using properly designed storage and transfer techniques; providing secondary containment around chemical storage areas; and using proper techniques for cleaning or replacement of production systems or equipment.

Minimizing Exposure

Where feasible, minimizing exposure of potential pollutant sources to precipitation is an important control option. Minimizing exposure prevents pollutants, including debris, from coming into contact with precipitation and can reduce the need for BMPs to treat contaminated stormwater runoff. It can also prevent debris from being picked up by stormwater and carried into drains and surface waters. Examples of BMPs for exposure minimization include covering materials or activities with temporary structures (e.g., tarps) when wet weather is expected or moving materials or activities to existing or new permanent structures (e.g., buildings, silos, sheds). Even the simple practice of keeping a dumpster lid closed can be a very effective pollution prevention measure. Another example could include locating PFAS-containing materials and residues away from drainage pathways and surface waters.

Erosion and Sediment Control

BMPs must be selected and implemented to limit erosion on areas of your site that, due to topography, activities, soils, cover, materials, or other factors are likely to experience erosion. Erosion control BMPs such as seeding, mulching, and sodding prevent soil from becoming dislodged and should be considered first. Sediment control BMPs such as silt fences, sediment ponds, and stabilized entrances trap sediment after it has eroded. Sediment control BMPs should be used to back-up erosion control BMPs.

Management of Runoff

Your SWPPP must contain a narrative evaluation of the appropriateness of stormwater management practices that divert, infiltrate, reuse, or otherwise manage stormwater runoff so as to reduce the discharge of pollutants. Appropriate measures are highly site-specific, but may include, among others, vegetative swales, collection and reuse of stormwater, inlet controls, snow management, infiltration devices, and wet retention measures. Incorporating treatment like granular activated carbon may be helpful to remove certain pollutants like PFAS.

A combination of preventive and treatment BMPs will yield the most effective stormwater management for minimizing the offsite discharge of pollutants via stormwater runoff. Though not specifically outlined in this fact sheet, BMPs must also address preventive maintenance records or logbooks, regular facility inspections, spill prevention and response, and employee training.

All BMPs require regular maintenance to function as intended. Some management measures have simple maintenance requirements, others are quite involved. You must regularly inspect all BMPs to ensure they are operating properly, including during runoff events. As soon as a problem is found, action to resolve it should be initiated immediately.

Implement BMPs, such as those listed below in Table 2 for the control of pollutants at team electric generating facilities, including coal handling areas, to minimize and prevent the discharge of pollutants in stormwater. Identifying weaknesses in current facility practices will aid the permittee in determining appropriate BMPs that will achieve a reduction in pollutant loadings. BMPs listed in Table 2 are broadly applicable to team electric generating facilities, including coal handling areas; however, this is not a complete list and you are recommended to consult with regulatory agencies or a stormwater engineer/consultant to identify appropriate BMPs for your facility.

Table 2. BMPs for Potential Pollutant Sources at Steam Electric Generating Facilities, including Coal Handling Areas

Pollutant Source	BMPs
Coal pile management	❑ Confine storage to areas outside of drainage pathways and away from surface waters. ❑ Divert stormwater around storage areas with vegetated swales, and/or berms. ❑ Practice good housekeeping measures such as frequent removal of dust and debris. Cleanup methods may include mobile sweepers, scrapers, or scoops. ❑ Use properly designed basins for collection, containment, and recycling of pile spraying materials. ❑ Use control measures such as berms, silt fences or waddles to control sediment from leaving storage area. ❑ Train employees in good housekeeping measures
Fugitive dust emissions	❑ Establish procedures to minimize offsite tracking of coal dust. ❑ Use specially designed tires. ❑ Wash vehicles before they leave the site in a designated area where wash water can be controlled.
Delivery vehicles	❑ Develop procedure for the inspection of all vehicles arriving on the plant site and ensure overall integrity of the body or container. ❑ Control leakage or spillage from vehicles or containers and ensure that proper protective measurements.
Fuel oil unloading areas	❑ Confine loading/unloading activities to designated areas outside drainage pathways and away from surface waters. ❑ Provide diversion berms, dikes or grassed swales around the perimeter of the area to limit run-on. ❑ Use containment curbs in unloading areas. ❑ Use spill and overflow protection (drip pans, drip diapers, etc.) beneath fuel oil connectors. ❑ For rail transfer, a drip pan shall be installed within the rails to collect spillage from the tank. ❑ Develop and implement spill prevention, containment, and countermeasure (SPCC) plans. ❑ Train employees in spill prevention, control and cleanup. ❑ Personnel familiar with spill prevention and response procedures should be present during unloading to ensure that any leaks or spills are immediately contained and cleaned up.

Table 2. BMPs for Potential Pollutant Sources at Steam Electric Generating Facilities, including Coal Handling Areas (continued)

Pollutant Source	BMPs
Chemical loading/ unloading areas	❑ Cover chemical loading/unloading areas and store chemicals indoors, when possible. ❑ Provide diversion berms, dikes or grassed swales around the perimeter of the area to limit run-on. ❑ Use containment curbs at chemical loading/unloading areas. ❑ Develop and implement spill prevention, containment, and countermeasure (SPCC) plans. ❑ Train employees in spill prevention, control and cleanup. ❑ Personnel familiar with spill prevention and response procedures should be present during unloading to ensure that any leaks or spills are immediately contained and cleaned up. ❑ Provide transfer of PFAS containing materials and their proper collection and disposal methods in the event of a release from their container.
Miscellaneous loading/unloading	❑ Confine loading/unloading activities to designated areas outside drainage pathways and away from surface waters. ❑ Inspect containers for leaks or damage prior to loading/unloading. ❑ Avoid loading/unloading materials in the rain or provide cover or other protection for loading docks.
Miscellaneous loading/unloading (continued)	❑ Provide diversion berms, dikes or grassed swales around the perimeter of the area to limit run-on. ❑ Cover loading and unloading areas and perform these activities on an impervious pad to enable easy collection of spilled materials. ❑ Slope the impervious concrete floor or pad to collect spills and leaks and convey them to proper containment and treatment. ❑ Regularly sweep area to minimize debris on the ground.
Liquid storage tanks	❑ Cover and/or enclose chemical storage areas (including temporary cover such as a tarp that prevents contact with precipitation). Provide secondary containment around chemical storage areas. ❑ If containment structures have drains, ensure that the drains have valves, and that valves are maintained in the closed position. Institute protocols for checking/testing stormwater in containment areas prior to discharge. ❑ Use double-walled tanks with overflow protection. ❑ Locate storage areas away from high traffic areas and surface waters. ❑ Inspect storage tanks and piping systems (pipes, pumps, flanges, couplings, hoses, and valves) for failures or leaks and perform preventive maintenance. ❑ Maintain an inventory of fluids to identify leakage. ❑ Provide fluid level indicators. ❑ Properly dispose of chemicals that are no longer in use. ❑ Store and handle reactive, ignitable, or flammable liquids in compliance with applicable local fire codes, local zoning codes, and the National Electric Code. ❑ Provide drip pads/pans where chemicals are transferred from one container to another to allow for recycling of spills and leaks. ❑ Use dry cleanup methods.

Table 2. BMPs for Potential Pollutant Sources at Steam Electric Generating Facilities, including Coal Handling Areas (continued)

Pollutant Source	BMPs
Liquid storage tanks (continued)	❑ Develop and implement spill plans or spill prevention, containment, and countermeasure (SPCC) plans, if required for your facility. ❑ Train employees in spill prevention and control and proper materials management.
Large bulk fuel storage	❑ If area is uncovered, connect sump outlet to sanitary sewer (if possible) or an oil/water separator, catch basin filter, etc. If connecting to a sanitary sewer check with the system operator to ensure that the discharge is acceptable. If implementing separator or filter technologies ensure that regular inspections and maintenance procedures are in place.
Above ground tanks	❑ Provide secondary containment, such as dikes, with a height sufficient to contain a spill (the greater of 10 percent of the total enclosed tank volume or 110 percent of the volume contained in the largest tank). ❑ If containment structures have drains, ensure that the drains have valves, and that valves are maintained in the closed position. Institute protocols for checking/testing stormwater in containment areas prior to discharge. ❑ Use double-walled tanks with overflow protection. ❑ Keep liquid transfer nozzles/hoses in secondary containment area. ❑ Develop and implement spill plans or spill prevention, containment, and countermeasure (SPCC) plans, if required for your facility. ❑ Train employees in spill prevention and control.
Oil bearing equipment switchyards	❑ Construct level grades and gravel surfaces to retard flows and limit the spread of spills. ❑ Collect stormwater runoff in perimeter ditches.
Residue hauling vehicles	❑ Inspect all residue hauling vehicles for proper covering over the load, adequate gate sealing, and overall integrity of the body or container. ❑ Repair vehicles lacking in the above qualities.
Ash loading areas	❑ Clear the ash building floor and immediately adjacent roadways of spillage, debris, and excess water before each loaded vehicle departs
Vehicle and equipment maintenance	Good Housekeeping ❑ Eliminate floor drains that are connected to the storm or sanitary sewer; if necessary, install a sump that is pumped regularly. Collected wastes should be properly treated or disposed of by a licensed waste hauler. ❑ Do all cleaning at a centralized station so the solvents stay in one area. ❑ If parts are dipped in liquid, remove them slowly to avoid spills. ❑ Use drip pans, drain boards, and drying racks to direct drips back into a fluid holding tank for reuse. ❑ Drain all parts of fluids prior to disposal. Oil filters can be crushed and recycled. ❑ Promptly transfer used fluids to the proper container; do not leave full drip pans or other open containers around the shop. Empty and clean drip pans and containers. ❑ Clean up leaks, drips, and other spills without using large amounts of water. Use absorbents for dry cleanup whenever possible. ❑ Prohibit the practice of hosing down an area where the practice would result in the discharge of pollutants to a stormwater system.

Table 2. BMPs for Potential Pollutant Sources at Steam Electric Generating Facilities, including Coal Handling Areas (continued)

Pollutant Source	BMPs
Vehicle and equipment maintenance (continued)	❑ Do not pour liquid waste into floor drains, sinks, outdoor storm drain inlets, or other storm drains or sewer connections. ❑ Maintain an organized inventory of materials. ❑ Eliminate or reduce the number and amount of hazardous materials and waste by substituting nonhazardous or less hazardous materials. ❑ Label and track the recycling of waste material (e.g., used oil, spent solvents, batteries). ❑ Store batteries and other significant materials inside. ❑ Dispose of greasy rags, oil filters, air filters, batteries, spent coolant, and degreasers in compliance with RCRA regulations. Minimizing Exposure ❑ Perform all cleaning operations indoors or under covering when possible. Conduct the cleaning operations in an area with a concrete floor with no floor drainage other than to sanitary sewers or treatment facilities. ❑ If operations are uncovered, perform them on a concrete pad that is impervious and contained. ❑ Park vehicles and equipment indoors or under a roof whenever possible and maintain proper control of oil leaks/spills. ❑ Check vehicles closely for leaks and use pans to collect fluid when leaks occur. Management of Runoff ❑ Use berms, curbs, or grassed swales other diversion measures to ensure that stormwater runoff from other parts of the facility does not flow over the maintenance area. ❑ Collect the stormwater runoff from the cleaning area and provide treatment or recycling. ❑ Discharge vehicle wash or rinse water to the sanitary sewer (if allowed by sewer authority), wastewater treatment, a land application site, or recycle on-site. DO NOT discharge washwater to a storm drain or to surface water. Inspections and Training ❑ Inspect the maintenance area regularly to ensure BMPs are implemented. ❑ Train employees on waste control and disposal procedures.
Material storage areas	❑ Store materials indoors. ❑ Cover material with a temporary covering made of polyethylene, polyurethane, polypropylene, or hypalon. ❑ Provide diversion berms, dikes or grassed swales around the perimeter of the area to limit run-on. ❑ Construct an enclosure or build a berm around the area. ❑ Regularly sweep area to minimize debris on the ground. ❑ Train employees in spill prevention, control, cleanup and proper materials management techniques.

Table 2. BMPs for Potential Pollutant Sources at Steam Electric Generating Facilities, including Coal Handling Areas (continued)

Pollutant Source	BMPs
Fueling operations	❑ Conduct fueling operations (including the transfer of fuel from tank trucks) on an impervious or contained pad or under a roof or canopy where possible. Covering should extend beyond spill containment pad to prevent rain from entering. ❑ When fueling in uncovered area, use a concrete pad (not asphalt, which is not chemically resistant to the fuels being handled). ❑ Use drip pans where leaks or spills of fuel can occur and where making and breaking hose connections. ❑ Use fueling hoses with check valves to prevent hose drainage after filling. ❑ Keep spill cleanup materials readily available. ❑ Clean up spills and leaks immediately. ❑ Minimize/eliminate run-on onto fueling areas with diversion dikes, berms, curbing, surface grading or other equivalent measures. ❑ Collect stormwater runoff and provide treatment or recycling. ❑ Provide curbing or posts around fuel pumps to prevent collisions from vehicles. ❑ Use dry cleanup methods for fuel area rather than hosing the fuel area down. ❑ Perform preventive maintenance on storage tanks to detect potential leaks before they occur. ❑ Inspect the fueling area to detect problems before they occur. ❑ Discourage "topping off" of fuel tanks. ❑ Train personnel on vehicle fueling BMPs.

What if activities and materials at my facility are not exposed to precipitation?

The industrial stormwater program requires permit coverage for a number of specified types of industrial activities. However, when a facility is able to prevent the exposure of ALL relevant activities and materials to precipitation, it may be eligible to claim no exposure and qualify for a waiver from permit coverage.

If you are regulated under the industrial permitting program, you must either obtain permit coverage or submit a no exposure certification form, if available. Check with your permitting authority for additional information as not every permitting authority program provides no exposure exemptions.

Where do I get more information?

For additional information on the industrial stormwater program see **www.epa.gov/npdes/stormwater/msgp**.

A list of names and telephone numbers for each EPA Region or state NPDES permitting authority can be found at **www.epa.gov/npdes/stormwatercontacts**.

References

Information contained in this Fact Sheet was compiled from EPA's past and current Multi-Sector General Permits and from the following sources:

- Idaho Department of Lands. 1992. Best Management Practices for Mining in Idaho. **www.idl.idaho.gov/Bureau/Minerals/bmp_manual1992/bmp_index.htm**
- Pierce County, Washington, Public Works and Utilities. "Best Management Practices for Commercial and Industrial Activities." **www.piercecountywa.org/pc/services/home/environ/water/wq/bmpmanaul.htm**
- Naval Facilities Engineering Service Center. "Storm Water Best Management Practices (BMP) Decision Support Tool: Storm Water Pollution Prevention Operations by Category. Category: Steam Electric Power Generating Facilities." **http://205.153.241.230/stormwaterbmp/cgi-bin/P2Cat.cfm?Cat=Steam%20Electric%20Power% 20Generating%20Facilities**
- U.S. EPA, 1992. Stormwater Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices. EPA 832-R-92-006. **www.epa.gov/npdes/stormwater**
- U.S. EPA, 2001. Coal Remining - Best Management Practices Guidance Manual. EPA-821-B-01-010. **www.epa.gov/waterscience/guide/coal/bmp/**
- U.S. EPA, Office of Wastewater Management. *NPDES Stormwater Multi-Sector General Permit for Industrial Activities (MSGP).* **www.epa.gov/npdes/stormwater/msgp**

Appendix E

Forms

NPDES FORM 6100-28	EPA	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460 ANNUAL REPORT FOR STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY UNDER THE NPDES MULTI-SECTOR GENERAL PERMIT	OMB No. 2040-0300 OMB Approval Pending

A. Approval to Use Paper Annual Report Form

1. Have you been granted a waiver from electronic reporting from the EPA Regional Office*? ☐ YES ☐ NO

If yes, check which waiver you have been granted, the name of the EPA Regional Office staff person who granted the waiver, and the date of approval:

Waiver granted:
- ☐ The owner/operator's headquarters is physically located in a geographic area (i.e., ZIP code or census tract) that is identified as under-served for broadband Internet access in the most recent report from the Federal Communications Commission.
- ☐ The owner/operator has issues regarding available computer access or computer capability

Name of EPA staff person that granted the waiver:

Date approval obtained: / /

*** Note: You are required to obtain approval from the applicable EPA Regional Office prior to using this paper annual report form. If you have not obtained a waiver, you must file this form electronically using the NPDES eReporting Tool (NeT) at https://www.epa.gov/npdes/stormwater-discharges-industrial-activities**

B. Permit Information

1. NPDES ID:

C. Facility Information

1. Facility Name:

2. Facility Phone: - - Ext.

3. Facility Mailing Address:

Street:

City: State: ZIP Code: -

County or Similar Government Subdivision:

4. Point of Contact:

First Name, Middle Initial, Last Name

D. General Findings

1. Provide a summary of your past year's routine facility inspection documentation, including dates (see Part 3.1.6 of the permit). In addition, if you are an operator of an airport facility (Sector S) that is subject to the airport effluent limitations guidelines, and are complying with the MSGP Part 8.S.8.1 effluent limitation through the use of non-urea-containing deicers, provide a statement certifying that you do not use pavement deicers containing urea (e.g., "Urea was not used at [name of airport] for pavement deicing in the past year and will also not be used in 2021." (Note: Operators of airport facilities that are complying with Part 8.S.8.1 by meeting the numeric effluent limitation for ammonia do not need to include this statement.)

2. Provide a summary of your past year's quarterly visual assessment documentation, including dates (see Part 3.2.3 of the permit).

3. Provide a summary of your past year's corrective action and/or advanced implementation measures (AIM) documentation (See Part 5.1.3 of the permit). (Note: If corrective action is not yet completed at the time of submission of this annual report, you must describe the status of any outstanding corrective action(s).) Note that you must modify your SWPPP based on the corrective actions and deadlines required under Part 5. Also describe any incidents of noncompliance in the past year or currently ongoing, or if none, provide a statement that you are in compliance with the permit.

E. Certification Information

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

First Name, Middle, Last Name

Title:

Signature: _____ Date: / /

E-mail:

Instructions for Completing EPA Form 6100-28
Annual Report for Stormwater Discharges
Associated with Industrial Activity Under the NPDES Multi-Sector General Permit

This Form Replaces Form 6100-28 (06/15) OMB No. 2040-0300

Who Must File an Annual Report

Operators must submit an Annual Report to EPA electronically, per Part 7.4, by January 30th for each year of permit coverage containing information generated from the past calendar year.

Completing the Form

To complete this form, type or print, using uppercase letters, in the appropriate areas only. Please place each character between the marks. Abbreviate if necessary to stay within the number of characters allowed for each item. Use only one space for breaks between words, but not for punctuation marks unless they are needed to clarify your response. Please submit original document with signature in ink - do not send a photocopied signature.

Section A. Approval to Use Paper Annual Report Form

You must indicate whether you have been granted a waiver from electronic reporting from the EPA Regional Office. Note that you are not authorized to use this paper form unless the EPA Regional Office has approved its use. Where you have obtained approval to use this form, indicate the waiver that you have been granted, the name of the EPA staff person who granted the waiver, and the date that approval was provided. See https://www.epa.gov/npdes/contact-us-stormwater for a list of EPA Regional Office contacts.

Section B. Permit Information

Provide the NPDES ID (i.e., NOI tracking number) assigned to your facility.

Section C. Facility Information

Enter the official or legal name, phone number, and complete street address, including city, state, ZIP code, and county or similar government subdivision, for the facility that is covered by the NPDES ID identified in Section B. If the facility lacks a street address, indicate the general location of the facility (e.g., Intersection of State Highways 61 and 34). Also provide a point of contact name for the facility.

Section D. General Findings

To complete this section you must provide the following information in your annual report:

1. A summary of your past year's routine facility inspection documentation, including inspection dates, required by Part 3.1.6 of the permit.
2. A summary of your past year's quarterly visual assessment documentation, including visual assessment dates, required by Part 3.2.3 of the permit.
3. Information copied or summarized from the corrective action and/or advanced implementation measures (AIM) documentation required per Part 5.1.3 (if applicable). If corrective action and/or advanced implementation measures are not yet completed at the time of submission of this Annual Report, you must describe the status of any outstanding corrective action(s)/advanced implementation measures. You must also describe any incidents of noncompliance in the past year or currently ongoing, or if none, provide a statement that you are in compliance with the permit.

Section E. Certification Information

The Annual Report must be signed by a person described below, or by a duly authorized representative of that person.

For a corporation: By a responsible corporate officer. For the purpose of this Section, a responsible corporate officer means:

(i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or

For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this Part, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA). Include the name and title of the person signing the form and the date of signing.

A person is a duly authorized representative only if:

1. The authorization is made in writing by a person described above;
2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) and
3. The written authorization is submitted to the Director.

An unsigned or undated Annual Report form will be considered incomplete.

Paperwork Reduction Act Notice

This collection of information is approved by OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. (OMB Control No. 2040-0300). Responses to this collection of information are mandatory (40 CFR 122.26). An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The public reporting and recordkeeping burden for this collection of information is estimated to be 1 hour per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates and any suggested methods for minimizing respondent burden to the Regulatory Support Division Director, U.S. Environmental Protection Agency (2821T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

Instructions for Completing EPA Form 6100-28
Annual Report for Stormwater Discharges
Associated with Industrial Activity Under the NPDES Multi-Sector General Permit

This Form Replaces Form 6100-28 (06/15) OMB No. 2040-0300

Submitting Your Form

If you have been granted a waiver from your Regional Office to submit a paper Annual Report form, you must send your Annual Report form by mail to one of the following addresses:

For Regular U.S. Mail Delivery:

Stormwater Notice Processing Center
Mail Code 4203M, ATTN: 2020 MSGP Reports
U.S. EPA
1200 Pennsylvania Avenue, NW
Washington, DC 20460

For Overnight/Express Mail Delivery:

Stormwater Notice Processing Center
William Jefferson Clinton East Building - Room 7420
ATTN: 2020 MSGP Reports
U.S. EPA
1201 Constitution Avenue, NW
Washington, DC 20004

Visit this website for instructions on how to submit electronically:
https://www.epa.gov/npdes/stormwater-discharges-industrial-activities

NPDES FORM 6100-29	EPA	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460 MSGP INDUSTRIAL DISCHARGE MONITORING REPORT (DMR) FORM	OMB No. 2040-0300 OMB Approval Pending

A. Approval to Use Paper NOI Form

1. Have you been granted a waiver from electronic reporting from the EPA Regional Office*? ☐ YES ☐ NO

If yes, check which waiver you have been granted, the name of the EPA Regional Office staff person who granted the waiver, and the date of approval:

Waiver granted:
- ☐ The owner/operator's headquarters is physically located in a geographic area (i.e., ZIP code or census tract) that is identified as under-served for broadband Internet access in the most recent report from the Federal Communications Commission.
- ☐ The owner/operator has issues regarding available computer access or computer capability

Name of EPA staff person that granted the waiver:

Date approval obtained: / /

*** Note: Note: You are required to obtain approval from the applicable EPA Regional Office prior to using this paper DMR form. If you have not obtained a waiver, you must file this form electronically using the NetDMR at http://www.epa.gov/netdmr/**

B. Permit Information

1. NPDES ID:

2. Reason(s) for Submission (Check all that apply):

- ☐ Submitting monitoring data (Fill in all Sections).
- ☐ Reporting no discharge for all discharge points for this monitoring period (Fill in Sections A, B, C, D, E.1, and G).
- ☐ Reporting that your site status has changed to inactive and unstaffed and there are no industrial materials or activities exposed to stormwater (Fill in Sections A, B, C, D, and F.4 (include date of status change in comment field).
- ☐ Reporting that your site status has changed to active and/or there are industrial materials or activities exposed to stormwater (Fill in all Sections and include date of status change in comment field in Section F.4).

C. Facility Operator Information

1. Operator Information:

Operator Name:

Mailing Address:

Street:

City: State: ZIP Code: -

Phone: - - Ext.

E-mail:

2. DMR Preparer (Complete if DMR was prepared by someone otherthan the certifier):

First Name, Middle Initial, Last Name

Organization:

Phone: - - Ext.

E-mail:

D. Facility Information

1. Facility Name:

2. Facility Address:

Street/Location:

City: State: ZIP Code:

County or Similar Government Subdivision:

E. Discharge Information

1. Identify monitoring period: ☐ Check here if proposing alternative monitoring periods due to irregular stormwater runoff. Identify alternative monitoring schedule and indicate for which alternative monitoring period you are reporting monitoring data:

☐ Quarter 1 (January 1 – March 31)	☐ Quarter 1:	From / To /
☐ Quarter 2 (April 1 – June 30)	☐ Quarter 2:	From / To /
☐ Quarter 3 (July 1 – September 30)	☐ Quarter 3:	From / To /
☐ Quarter 4 (October 1 – December 31)	☐ Quarter 4:	From / To /

2. Are you required to monitor for cadmium, chromium, lead, nickel, silver, or zinc in freshwater? ☐ YES (Skip to 3) ☐ NO (Skip to 4)

3. What is the hardness level of the receiving water? (mg/L)

4. Does your facility discharge into any saltwater receiving waters? ☐YES ☐NO

EPA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460
MSGP INDUSTRIAL DISCHARGE MONITORING REPORT (DMR) FORM

OMB No. 2040-0300

F. Monitoring Information **Note: Make additional copies of this form as necessary.**

1. Nature of Discharge: ☐ Rainfall (Complete line items 2.a., 2.b., & 2.c.) ☐ Snowmelt

2.a. Duration of the rainfall event (hours): ☐☐ 2.b. Rainfall amount (inches): ☐☐.☐ 2.c. Time since previous measurable storm event (days): ☐☐☐

3.a. Discharge Point ID (list the same 3-digit discharge points identified on the NOI form	3.b. Check if Any Discharge Points are Substantially Identical to Other Discharge Points Listed	3.c. Check if No Discharge	3.d. Monitoring Type IM, BM, ELG, S/T, I, O*	3.e. Parameter	3.f. Quantity or Concentration	3.g. Units	3.h. Results Description	3.i. Collection Date	3.j. Exceedance solely attributable to natural background pollutant levels per Part 5.2.6.1	3.k. Exceedance due to run-on per Part 5.2.6.2	3.l Exceedance due to an abnormal event per 5.2.6.3	3.m Exceedance but discharge does not result in any exceedance of water quality standards per Part 5.2.6.5	3.n Aluminum Exceedance demonstrated to not result in an exceedance of your facility-specific criteria per Part 5.2.6.4.a	3.o Copper Exceedance demonstrated to not result in an exceedance of your facility-specific criteria per Part 5.2.6.4.b
	☐ Substantially identical to discharge point: ____	☐									☐	☐	☐	☐
	☐ Substantially identical to discharge point: ____	☐									☐	☐	☐	☐
	☐ Substantially identical to discharge point: ____	☐									☐	☐	☐	☐
	☐ Substantially identical to discharge point: ____	☐									☐	☐	☐	☐

* IM - Indicator monitoring; BM - Benchmark monitoring; (ELG) - Annual effluent limitations guidelines monitoring; (S/T) - State- or tribal-specific monitoring; (I) - Impaired waters monitoring; (O) - Other monitoring as required by EPA

4. Comment and/or Explanation of Any Violations (Reference all attachments here)

G. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

First Name, Middle, Last Name

Title:

Signature: _____ Date: / /

E-mail:

Instructions for Completing EPA Form 6100-29

Discharge Monitoring Report (DMR) for Stormwater Discharges Associated with Industrial Activity Under the NPDES Multi-Sector General Permit

OMB No. 2040-0300

Who Must Submit A Discharge Monitoring Report to EPA?

Facilities covered under EPA's NPDES Stormwater Multi-Sector General Permit (MSGP or permit) that are required to monitor pursuant to Parts 4.2 and 8 of the permit must submit Discharge Monitoring Reports (DMRs) consistent with the reporting requirements specified in Part 7.1 of the permit.

Completing the Form

Obtain and read a copy of the 2021 MSGP, viewable at https://www.epa.gov/npdes/stormwater-discharges-industrial-activities To complete this form, type or print, using uppercase letters, in the appropriate areas only. Please place each character between the marks. Abbreviate if necessary to stay within the number of characters allowed for each item. Use only one space for breaks between words, but not for punctuation marks unless they are needed to clarify your response. Please submit original document with signature in ink - do not send a photocopied signature. **Photocopy your DMR form for your records before you send the completed original form to the appropriate address.**

Section A. Approval to Use Paper DMR Form

You must indicate whether you have been granted a waiver from electronic reporting from the EPA Regional Office. Note that you are not authorized to use this paper DMR form unless the EPA Regional Office has approved its use. Where you have obtained approval to use this form, indicate the waiver that you have been granted, the name of the EPA staff person who granted the waiver, and the date that approval was provided. See https://www.epa.gov/npdes/contact-us-stormwater for a list of EPA Regional Office contacts.

Section B. Permit Information

Provide the NPDES ID (i.e., NOI tracking number) assigned to the facility for which this DMR is being submitted.

Indicate your reason(s) for submitting this DMR by checking all boxes that apply. The reasons for submission are defined as follows:

- *Submitting monitoring data*: For each storm sampled, submit one DMR form with data for all discharge points sampled. Select this reason even if you only have monitoring data for some of your discharge points (i.e., some discharge points did not discharge). If you select this reason you are required to complete all Sections of the form.
- *Reporting no discharge for all discharge points for this monitoring period*: Indicates that there were no discharges from all discharge points during this monitoring period. If you select this reason you are only required to complete Sections A, B, C, D, E.1, and G.
- *Reporting that your site status has changed to inactive and unstaffed* and there are no industrial materials or activities exposed to stormwater: Indicates that your facility is currently inactive and unstaffed and there are no industrial materials or activities exposed to stormwater (See Part 4.2.1.3 of the permit for more information). If you select this reason you are only required to complete Sections A, B, C, D, and F.4 (include date of status change in comment field).
- *Reporting that your site status has changed from inactive to active* and/or there are industrial materials or activities exposed to stormwater: Indicates that your facility is currently active (See Part 4.2.1.3 of the permit for more information). If you select this reason you are required to complete all Sections of the form and include date of status change in the comment field in Section F.4.

Section C. Facility Operator Information.

Provide the legal name of the person, firm, public organization, or any other entity that operates the facility for which this DMR is being submitted. An operator of a facility is the legal entity that controls the operation of the facility. Refer to Appendix A of the permit for the definition of "operator". Provide the operator's mailing address, phone number, and e-mail. The operator information in this Section should match the operator information provided on your NOI form.

Provide the name, organization, phone number, an e-mail address for the person who prepared this DMR form.

Section D. Facility Information

Enter the official or legal name and complete street address, including city, state, ZIP code, and county or similar government subdivision of the facility. If the facility lacks a street address, indicate the general location of the facility (e.g., Intersection of State Highways 61 and 34). Complete facility information must be provided for permit coverage to be granted. The facility information in this Section should match the facility information provided on your NOI form.

Section E. Discharge Information.

Indicate the appropriate monitoring period (Quarter 1, 2, 3, or 4) covered by the DMR. "Alternative" monitoring periods can apply to facilities located in arid and semi-arid climates, or in areas subject to snow or prolonged freezing. To use alternative monitoring periods, you must provide a revised monitoring schedule here. If using alternative monitoring periods, identify the first day of the monitoring period through the last day of the monitoring period for each of the four periods. The dates should be displayed as month (Mo) / day (Day). See Parts 4.1.6 and 4.1.7 of the permit for more information.

If you are submitting benchmark monitoring data, identify if your facility is required to collect benchmark samples for one or more hardness-dependent metals (i.e., cadmium, lead, nickel, silver, and zinc). If you select "yes" to this question provide the hardness level of the receiving water (in mg/L)). If you select "no" to this question, you must identify if your facility discharges into any saltwater receiving waters.

Instructions for Completing EPA Form 6100-29

Discharge Monitoring Report (DMR) for Stormwater Discharges Associated with Industrial Activity Under the NPDES Multi-Sector General Permit

OMB No. 2040-0300

Section F. Monitoring Information

For the reported monitoring event indicate whether the discharge was from a rainfall or snowmelt event. If you select "rainfall" then indicate the duration (in hours) of the rainfall event, rainfall total (in inches) for that rainfall event, and time (in days) since the previous measurable storm event in line items 2.a-c. For both rainfall and snowmelt monitoring, you must identify the date of collection for the monitoring event in column 3.i. of the table. If the discharge occurs during a period of both rainfall and snowmelt, check both the rainfall and snowmelt boxes and report the appropriate rainfall information in item 2.a-c. To report multiple monitoring events in the same reporting period, copy this form and enter each monitoring event separately with data for all discharge points sampled.

Identify all the discharge points from your facility that discharge stormwater. Each discharge point must be assigned a unique 3-digit number (e.g., 001, 002, 003), and should match the discharge points identified on your NOI form.

If any discharge points are substantially identical, check the box in 3.b and identify the discharge point that the discharge point in 3.a is substantially identical to. In 3.d – k, you only need to provide benchmark monitoring data for one of the discharge points if it is substantially identical.

For any discharge point for which there was no discharge during the monitoring period, check the box in 3.c.

In 3.d, identify the type of monitoring using the specified codes, in parentheses, below:

- (IM) – Indicator monitoring
- (BM) – Benchmark monitoring
- (ELG) – Annual effluent limitations guidelines monitoring;
- (S/T) – State- or Tribal-specific monitoring;
- (I) – Impaired waters monitoring; or
- (O) – Other monitoring as required by EPA.

In 3.e, enter each "parameter" (or "pollutant") monitored. For BM and ELG monitoring, use the same parameter name as in Part 8 of the permit.

In 3.f., enter a sample measurement value for each parameter analyzed and required to be reported. Enter "ND" (i.e., not detected) for any sample results below the method detection limit or "BQL" (i.e., below quantitation limit) for sample results above the detection limit but below the quantitation limit.

In 3.g., enter the units for sample measurement values (i.e., "mg/L" for milligrams per liter) for each parameter analyzed and required to be reported. For monitoring results reported as ND or BQL this space will be left blank and the units will be reported in Column 3.f.

3.h. must be completed for any monitoring results reported as ND or BQL in the "Quality or Concentration" column. For ND, report the laboratory detection level and units in this column. For BQL, report the laboratory quantitation limit and units in this column.

In 3.i. identify the sampling date for each parameter monitoring result reported on this form.

3.j. *Exceedance solely attributable to natural background pollutant levels:* Check box if following the first 4 quarters of benchmark monitoring (or sooner if the exceedance is triggered by less than 4 quarters of data) you have determined that the exceedance of the benchmark is attributable solely to the presence of that pollutant in the natural background for that discharge point and any substantially identical discharge points, or for impaired waters monitoring, the presence of the pollutant is caused solely by natural background, provided that all of the conditions in Part 5.2.6.1 are met.

3.k *Exceedance due to run-on:* Check box if you can demonstrate and obtain EPA agreement that run-on from a neighboring source (e.g., a source external to your facility) is the cause of the exceedance, provided that the conditions in Part 5.2.6.2 are met.

3.l. *Exceedance due to an abnormal event:* Check box if one single sampling event is abnormal and you have immediately documented per Part 5.3 that the single event was abnormal and met all other conditions in Part 5.2.6.3.

3.m. *Exceedance but discharge does not result in any exceedance of water quality standards per Part 5.2.6.5: Check box if you can* demonstrate through an analysis that an exceedance triggering AIM requirements does not result in any exceedance of applicable water quality standards, *provided that all the conditions in Part 5.2.6.5 are met.*

3.n *Aluminum exceedance demonstrated to not result in an exceedance of your facility-specific criteria per Part 5.2.6.4.a:* Check box if you can demonstrate through an analysis that an aluminum exceedance does not result in an exceedance of your facility-specific criteria using the national recommended water quality criteria in-lieu of the applicable MSGP benchmark threshold.

3.o *Copper exceedance demonstrated to not result in an exceedance of your facility-specific criteria per Part 5.2.6.4.b:* Check box if you can demonstrate through an analysis that a copper exceedance does not result in an exceedance of your facility-specific criteria using the national recommended water quality criteria in-lieu of the applicable MSGP benchmark threshold.

Where violations of the permit requirements are reported, include a brief explanation to describe the cause and corrective actions taken, and reference each violation by date. Also, this section should include any additional comments such as are required when changing site status from inactive and unstaffed to active or vice versa. Attach additional pages if you need more space.

Attach additional copies of Section F as necessary to address all discharge points and parameters.

Section G. Certification Information

DMRs must be signed by a person described below, or by a duly authorized representative of that person.

For a corporation: By a responsible corporate officer. For the purpose of this Section, a responsible corporate officer means:

(i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated

NPDES CORRECTIVE ACTION FORM

If an inspection item triggers a Corrective Action, then complete this for, file with the original inspection and place the report number on the appropriate inspection sheet.

Corrective Action Report Number: _____

Person Completing Report: _____

Inspection That Triggered need for Corrective Action:

- ☐ Quarterly Visual Monitoring Inspection
- ☐ Routine Facility Inspection
- ☐ Annual Comprehensive Site Inspection
- ☐ Other: _____

Condition that Triggered the Need for a Corrective Action:
Description of the Problem:
Date the need for a Corrective Action was identified:
Summary of the Corrective Action taken:
Does the SWPPP need to be modified? ☐ No ☐ Yes
Date Corrective Action initiated:
Date Corrective Action Completed: **or Date Corrective Action expected to be completed:**

COVANTA HAVERHILL FACILITY
MULTI-SECTOR GENERAL PERMIT
STORMWATER DISCHARGE VISUAL ASSESSMENT REPORT

Name and Signature of Inspector(s):				
Weather Conditions (Rain, snow, sleet, temperature, wind, etc):				
Total Duration of Storm Event (hours):	**Total Storm Event Precipitation Amount (0.0 inches):**			
Date & Time When Site Received Measureable Storm Event Amount (>0.1 inches):				
Date & Time of Last Measureable Storm Event (>0.1 inches) and number of days between events:				
	Eastern Sedimentation Basin Outfall 001	**North East Sedimentation Basin Outfall 002**	**Northern Infiltration Basin Emergency Outfall**	**Southern Infiltration Basin Emergency Outfall**
Is there visible Discharge from the outfall?	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No
If basin has discharge, answer the following questions.				
Nature of the Discharge:	Runoff \ Snowmelt	Runoff \ Snowmelt	Runoff \ Snowmelt	Runoff \ Snowmelt
Date and Time of Sampling:				
Was sampling within first 30 minutes? If not, explain in comments below.	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No
Date and Time of Visual Assessment:				
Colored water?	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No
Odor? (oily, musty, sulfur, chemical, gasoline, soap, etc.)	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No
Murky?	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No
Clear Water?	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No
Floating solids?	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No
Settled solids?	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No
Suspended solids?	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No
Foam/Scum?	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No
Oily sheen?	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No
Describe any other indicators of stormwater pollution:				
Comments (List any probable sources for observed contamination and any recommended corrective actions):				

CHAIN OF CUSTODY

ALPHA ANALYTICAL — World Class Chemistry

Westborough, MA
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA
TEL: 508-822-9300
FAX: 508-822-3288

Date Rec'd in Lab:

ALPHA Job #:

Client Information

Client: Covanta Haverhill

Address: 100 Recovery Way

Haverhill, MA 01835

Phone: 978-241-3015

Fax: 978-521-1359

Email: dcotter@covanta.com

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: Haverhill NPDES MSGP Sampling

Project Location: Haverhill, MA

Project #:

Project Manager: David Cotterf

ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Other Project Specific Requirements/Comments/Detection Limits:

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☐ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limit

State/Fed Program	Criteria
NPDES	

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☐ Yes ☒ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Total Iron	Total Suspended Solids (TSS)											Sample Specific Comments	TOTAL # BOTTLES
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		

PLEASE ANSWER QUESTIONS ABOVE!

Container Type	P	P	-	-	-	-	-	-	-	-	-	-
Preservative	O	A	-	-	-	-	-	-	-	-	-	-

Relinquished By:	Date/Time	Received By:	Date/Time

IS YOUR PROJECT MA MCP *or* CT RCP?

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

FORM NO: 01-01(I)
(rev 5-JAN-12)

COVANTA HAVERHILL FACILITY
MULTI-SECTOR GENERAL PERMIT
STORMWATER DISCHARGE VISUAL ASSESSMENT REPORT

Name and Signature of Inspector(s):				
Weather Conditions (Rain, snow, sleet, temperature, wind, etc):				
Total Duration of Storm Event (hours):	**Total Storm Event Precipitation Amount (0.0 inches):**			
Date & Time When Site Received Measureable Storm Event Amount (>0.1 inches):				
Date & Time of Last Measureable Storm Event (>0.1 inches) and number of days between events:				
	Eastern Sedimentation Basin Outfall 001	**North East Sedimentation Basin Outfall 002**	**Northern Infiltration Basin Emergency Outfall**	**Southern Infiltration Basin Emergency Outfall**
Is there visible Discharge from the outfall?	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No
If basin has discharge, answer the following questions.				
Nature of the Discharge:	Runoff \ Snowmelt	Runoff \ Snowmelt	Runoff \ Snowmelt	Runoff \ Snowmelt
Date and Time of Sampling:				
Was sampling within first 30 minutes? If not, explain in comments below.	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No
Date and Time of Visual Assessment:				
Colored water?	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No
Odor? (oily, musty, sulfur, chemical, gasoline, soap, etc.)	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No
Murky?	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No
Clear Water?	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No
Floating solids?	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No
Settled solids?	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No
Suspended solids?	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No
Foam/Scum?	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No
Oily sheen?	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No	☐Yes ☐No
Describe any other indicators of stormwater pollution:				
Comments (List any probable sources for observed contamination and any recommended corrective actions):				

National Pollutant Discharge

Elimination System (NPDES)
MSGP Visual Assessment Reports

When to Conduct a Storm Water Visual Assessment:

- Visual assessments of storm water discharges must be completed each quarter. At least one examination must be performed during January-March, April-June, July-September, and October-December. For exceptions to MSGP Quarterly Visual Assessment requirement, see **section 6.3 of the SWPPP**.

- At the beginning of each quarter, begin tracking the weather forecasts to predict when the next measureable storm event (0.1inch or greater) might occur at the site;

- Once a measureable event is predicted, establish that it will occur at least 72 hours since the last measurable storm event (0.1inch or greater) using the site's local rain gage historical data or the website or equivalent:
  - NOAA Lawrence Municipal Airport weather past 3 days

- At the beginning of the precipitation event, begin tracking the precipitation accumulation amount using the website or equivalent:
  NOAA Lawrence Municipal Airport weather past 3 days

- Once accumulation is 0.1 inches or more, check the basins for discharge.

- If discharge is occurring, take grab samples of the water using the procedure below. Sample must be collected within the 1st thirty (30) minutes of basin discharge after the measureable amount (0.1) has occurred in order to sample the 1st flush. If a sample can not be taken during the 1st 30 minutes, document on the report the reasons why it wasn't possible.

- At least one quarterly assessment must be captured from snowmelt. In the case of snowmelt, samples must be taken during a period with a measurable discharge from your site.

- Any time a discharge sample is sent out for analytical testing, a visual assessment report must be completed as well.

- To ensure safety of sampling personnel, Quarterly Visual Assessment samples should be taken during daylight hours. Samples should not be taken during *Adverse Weather Conditions* such as local flooding, high winds, or electrical storms, or situations that otherwise make sampling unsafe.

- Whenever practicable, the monitoring should be conducted by the same individual.

How to Conduct a Storm Water Visual Assessment

- Collect a grab sample in a clean, clear glass or plastic container from the moving stream discharging from the outfall.
- Examine the grab sample in a well-lit area and record a visual description of the sample on the MSGP Visual Assessment Report. Fill out the visual monitoring report as completely as possible.
- If deficiencies are observed, inspect the site for possible sources and make note on the report.
- Submit the completed Visual Assessment reports to the facility's environmental compliance specialist, or the designated SWPP alternate by the next business day. Highlight any deficiencies as soon as possible.