REDEVELOPING OHIO LANDFILLS

Photo credit: Cleveland Metroparks | West Creek Reservation was developed on a large portion of a former landfill · Parma, Ohio

February 2023

CUYAHOGA LAND BANK

WEST CREEK CONSERVANCY

EPA

PARTNERS

Mannik Smith GROUP

PREFACE

Landfills of any type can knowingly or unknowingly be a burden to the communities in which they exist. They often present environmental, human health and associated infrastructure hazards. They may also create nuisances by attracting unwanted or otherwise illicit activities in addition to their generally unappealing aesthetic presence. Ensuring that human health and the environment is protected from such facilities should be a top priority and finding a way to accomplish that while providing a benefit to the community is a win for the environment and the region; understanding them is the first hurdle. This document is intended to present information to help communities and other stakeholders understand regulatory obligations tied to these facilities and provide some insight into what these facilities could become with some creative thinking and community support.

Together, the Cuyahoga County Land Reutilization Corporation (Cuyahoga Land Bank) and West Creek Conservancy (West Creek) hope that this document will serve as a model for landfill re-use planning and predevelopment across the State of Ohio.

Simultaneously to preparing this guide, we chose one particular Ohio-based site, the 42-acre Schaaf Road Landfill in Brooklyn Heights, and took it through the steps that would be required to consider a redevelopment project. We looked at what information was already publicly available from the Ohio EPA, conducted an ALTA survey, developed cost estimates for repairing and maintaining the site, and imagined future uses based on our findings. We then developed checklists that would help guide the redevelopment process. All of the relevant documents are linked electronically and can be accessed at www.westcreek.org/projects/eastschaaflandfill or https://cuyahogalandbank.org/about/news-reports/

We wish to thank all those who participated in this process:
The US EPA, the Ohio EPA, Northeast Ohio Regional Sewer District, Partners Environmental, The Mannik & Smith Group, Inc., and the Village of Brooklyn Heights.

Cuyahoga Land Bank and West Creek Conservancy
December, 2022

CONTENTS

LIST OF ACRONYMS

513 Authorization.....procedure for obtaining authorization from Ohio EPA to fill, grade, excavate, build, drill or mine on land where a hazardous waste or solid waste facility was operated (formerly known as Rule 13).

C&DD .....Construction and Demolition Debris

CE.....Categorical Exclusion

CFR.....Code of Federal Regulations

EA.....Environmental Assessment

EIS.....Environmental Impact Study

FAA .....Federal Aviation Administration

FCC.....Federal Communication Commission

FEMA.....Federal Emergency Management Agency

FONSI .....Finding of No Significant Impact

ISW .....Industrial Solid Waste

MSW.....Municipal Solid Waste

NEPA .....National Environmental Policy Act

NHPA .....National Historic Preservation Act

NOI.....Notice of Intent

NPA.....Nationwide Programmatic Agreement

OAC.....Ohio Administrative Code

ODH .....Ohio Department of Health

RSW.....Residual Solid Waste

Section 401 .....Under Section 401 of the Clean Water Act (CWA), a federal agency may not issue a permit or license to conduct any activity that may result in any discharge into waters of the United States unless a Section 401 water quality certification is issued, or certification is waived.

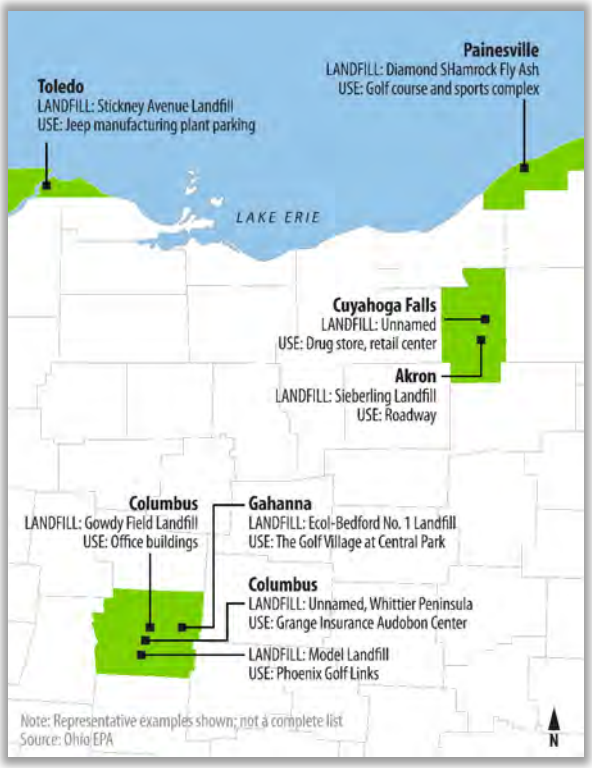
Section 404 .....Anyone who wishes to discharge dredged or fill material into the waters of the U.S., regardless of whether on private or public property, must obtain a Section 404 permit from the U.S. Army Corps of Engineers (Corps) and a Section 401 Water Quality Certification (WQC) from the state.

VAP .....Voluntary Action Program

BACKGROUND AND INTRODUCTION

Brief History of Solid Waste Regulation in Ohio

Old, pre-regulation dumps were often located on the edge of town near creeks or streams or a wooded area where the garbage was out of sight and out of mind. As solid waste regulation began to take form in the 1960s, these dumps became illegal and were phased out. Some of them were closed with a soil cover intended to separate the waste from the public but many were simply abandoned with minimal cover or even with exposed waste.



Many landfills have been redeveloped for other uses throughout Ohio.

Some of the old dumps became licensed solid waste landfills. In 1968, the Ohio Department of Health (ODH) began regulating solid waste landfills and issued licenses to facilities that met the newly adopted standards. The ODH rules prohibited landfills from being located in areas where waste disposal would constitute a hazard to groundwater or surface water resources, or create a health hazard. These included areas near rivers, streams, lakes, flood plains, and in abandoned quarries directly connected to ground water resources. With the closure of many dumps, these newly licensed facilities began to grow.

In October 1972 the Ohio Environmental Protection Agency (Ohio EPA) was created and took over the management of solid waste facilities from ODH. In 1976 OEPA issued new rules that replaced the ODH Rules. Ohio EPA's 1976 rules established more stringent siting criteria, including providing protection of groundwater resources by prohibiting new solid waste landfills from being located within sand and gravel pits, limestone or sandstone quarries, 1,000 feet of water supply wells, and five feet of seasonal high groundwater tables.

In 1988, the Ohio Legislature passed House Bill (HB) 592, which directed Ohio EPA to revise and improve the 1976 solid waste landfill rules. As part of this effort, Ohio EPA developed siting criteria to better protect groundwater resources, and incorporated these criteria into the solid waste rules effective March 1, 1990.

Throughout the 1990s Ohio EPA introduced rules that added new construction and operational requirements for landfills. Geosynthetic liners were added to the requirements to create a composite liner system; additional landfill gas monitoring

requirements were introduced; as were design analyses to assess the stability of the landfills. These and other rule requirements increased the construction and operation costs of the facilities. For some landfill owners and operators the increase was enough to force them to close.

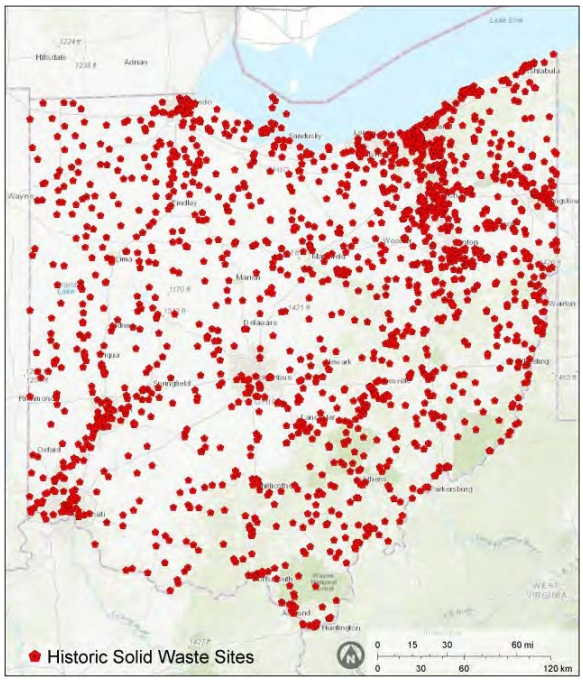
Because of the various regulations that existed from the mid-1960s through the 1990s and even into the 2020s the landfills that have closed have varied requirements based on the applicable regulations at the time the facility was closed.

- The pre-regulation dumps had no closure requirements and in some cases have the potential to pose the greatest risk to human health and the environment. Because there were no regulations governing the operation of dumps, anything and everything could have been and was disposed of in them. These dumps were often precariously located near creeks and streams and have the potential to pollute surface waters as well as groundwater.
- The early landfills, licensed by ODH and Ohio EPA prior to 1994, had minimal closure requirements. A soil cover or 'cap' was likely required and some financial assurance to cover a three-year post closure period. Once that three-year period had passed many of the landfills that were privately owned became abandoned properties. Continued upkeep at the facilities was not required and the minimal cover that was placed likely started to erode away. Many of these abandoned facilities attracted trespassers that might congregate there because of the remote area, or possibly even use the terrain for recreational purposes. These activities, such as use of motorized vehicles and bicycles, also tended to cause additional damage to the minimal cap.
- The modern landfills, licensed and permitted by Ohio EPA after 1994, provide the most protection to human health and the environment. Facilities that had been operating prior to 1994 were required to upgrade to the new standard which included installation of a clay liner, a geosynthetic liner, leachate collection, landfill gas control, and implementation of 30 years of post-closure care. These facilities continue to be regulated through the post-closure care period and are most likely to still have a responsible party for their care and maintenance.

Licensed Facilities

C&DD . 45
ISW 5
MSW.... 39
RSW 9

Ohio Environmental Protection Agency



Ohio's Solid Waste Sites GIS mapping tool web link:
https://oepa.maps.arcgis.com/apps/webappviewer/index.html?id=99b5e58b41fc4b7d8f66de597ec75509

In addition to the facilities described above, which would all be considered Municipal Solid Waste (MSW) Landfills, there are Residual Solid Waste (RSW) Landfills and Industrial Solid Waste (ISW) Landfills that are usually affiliated with a manufacturing facility or industrial plant and Construction & Demolition Debris (C&DD) Landfills that are limited to accepting debris from the construction or demolition of structures. The items generally accepted at C&DD Landfills consists of any waste material from construction as well as the resulting material from the demolition of a structure, but not the contents of the structure. RSW, ISW and C&DD landfills are all regulated by Ohio EPA.

Hazardous Waste facilities may also be considered for redevelopment. Hazardous waste facilities are regulated by the USEPA, but in Ohio the USEPA has delegated the program administration to the state.

Table 1 below provides a list of potential permits and authorizations that may be necessary for the redevelopment of a closed facility. It also provides the name of the regulatory agency that administers the specific permitting program.

Table 1 - Potentially Applicable Regulatory Programs and Responsible Regulatory Agency

Types of Landfill Facilities	513 Authorization - Ohio EPA (see Guidance Document #631; Appendix D)	Voluntary Action Program - Ohio EPA	401/404 Permitting - Ohio EPA - US Army Corps of Engineers	Air Pollution Permitting - Ohio EPA	NEPA - Lead agency determined by project	OAC Rule 3745-54 through 57 - Ohio EPA	OAC Rule 3745-27 - Ohio EPA	OAC Rule 3745-29 - Ohio EPA	OAC Rule 3745-30 - Ohio EPA	OAC Rule 3745-400 - Ohio EPA
Municipal Solid Waste Facilities	X	X	X	X	X		X			
Industrial Solid Waste Facilities	X	X	X	X	X			X		
Residual Solid Waste Facilities	X	X	X	X	X				X	
Construction & Demolition Debris Facilities	X	X	X	X	X					X
Hazardous Waste Treatment, Storage or Disposal Facilities	X	X	X	X	X	X				

Photos/Exhibit Credit: MyBoca.us · City of Boca Raton, FL and Keith & Schnars, A Division of KSI · Hillsboro El Rio Park

While closed landfills can pose problems for a community, they can also provide opportunity for redevelopment. Ensuring human health and protecting the environment at these facilities should be first priority. Second is finding a reuse that can both serve the community and provide sufficient revenue to maintain the site. Examples include:

- Leveraging the height of the landfill for digital billboards or cell towers (if footer depth and zoning permit)
- Capturing energy by Installing solar panels or wind turbines if feasible
- Using buildable border areas for new office space, parking canopies, or storage units
- Combining the above with low-impact green space or play areas (picnic areas, ballfields, trails)

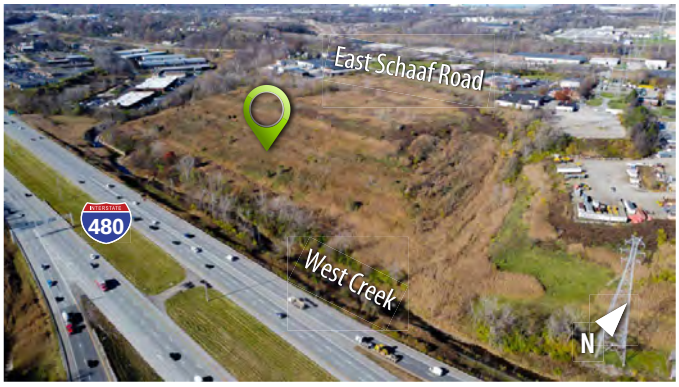
The following discussion looks at one example site, the Schaaf Road Landfill in Brooklyn Heights, Ohio, to give community leaders some insight into what considerations precede any attempt at redevelopment. Afterward, we offer a step by step guide to the pre--planning process, useful checklists, and Appendices documenting all of the work that was done on the Schaaf Road site to date.

CONSIDERATIONS AFFECTING LANDFILL REDEVELOPMENT – THE SCHAAF ROAD EXAMPLE

Throughout the process of creating a guide to re-develop/re-use former landfill properties, we closely analyzed the Schaaf Road landfill, which is located in the Village of Brooklyn Heights. It quickly became clear that a variety of 'considerations' needed to be understood or further researched before any planning could commence. Understanding the basics, the background and any history would be imperative to proceeding with the next steps for any landfill redevelopment project. In no particular order, the following were considered:

Basics

What kind of landfill is it? What is its history? Where is it in the closure process?



In the case of Schaaf Road Landfill, we had a solid waste landfill that was operated from 1980 through 1994. Closure proceedings were started in 1995, but due to deficiencies and violations, the Ohio EPA did not approve closure until 2000. It didn't appear to be in compliance, nor under any sort of management or even relatively maintained. The closure process will not be complete for 8 more years. The site is visible from a multitude of roadways making it a perceived eyesore until it can be cleaned up and maintained.

Ownership

Who owns the land and is it possible to get access to do the necessary investigations?

Landfill ownership includes the physical and financial responsibilities for complying with the applicable regulatory requirements associated with the facility. This fact needs to be considered early and often throughout the process of investigating a landfill for a reuse or development project. If it is determined that a change in ownership is appropriate, in Ohio the proposed new owner must also pass a background check to be eligible to own the landfill (See Ohio EPA Guidance Document #1003 in Appendix D).

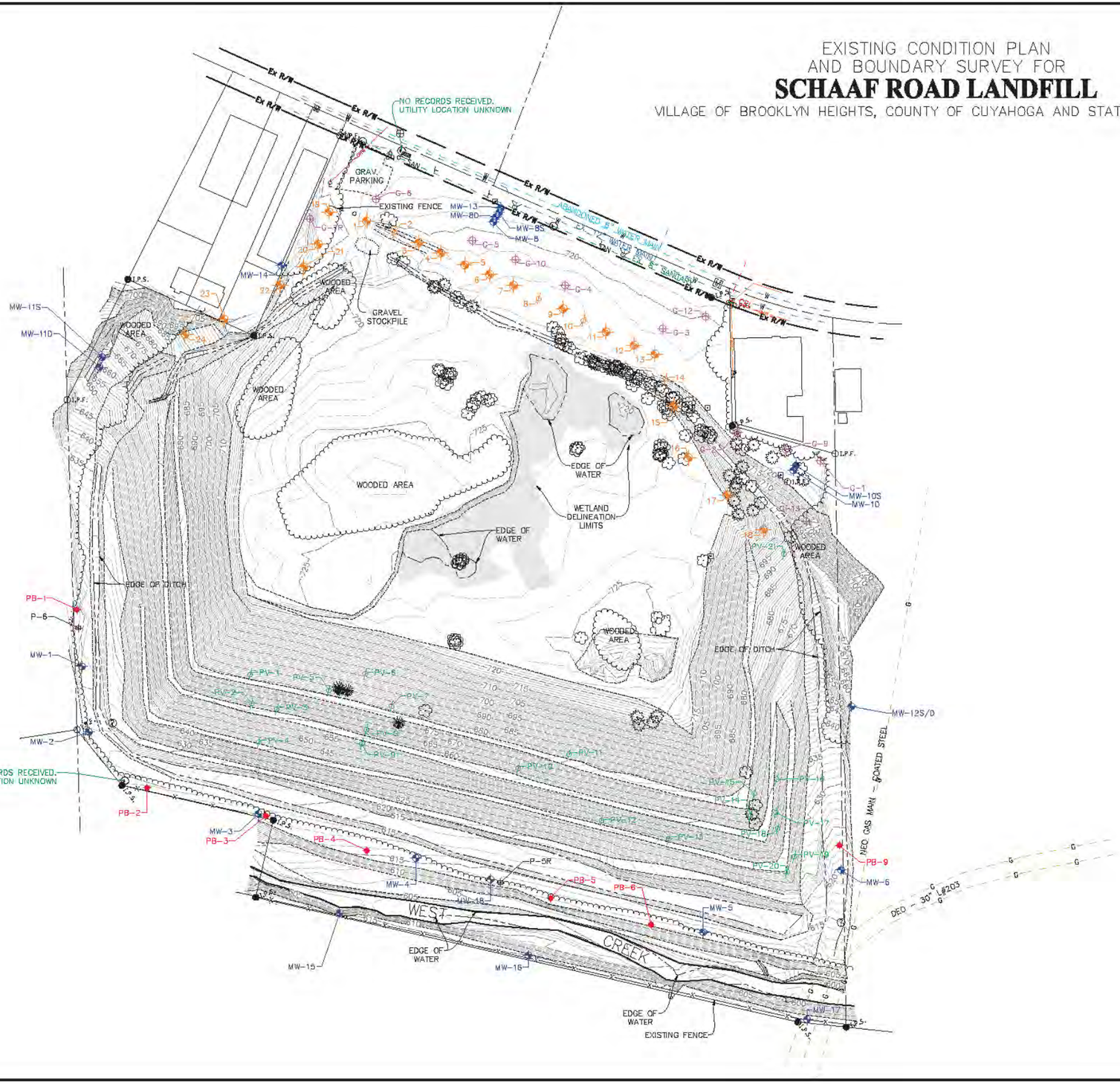
The Schaaf Road property was forfeited to the State of Ohio in 2008 and was purchased in 2015 by a private citizen who did not at first understand the dynamics and cost of managing a landfill. Each type of owner (individual, municipal, corporate, etc.) will create different circumstances; individuals may not have the financial resources to fund large projects, however corporations may have bureaucratic processes that could create inefficiencies. For organizations looking to redevelop a landfill, creating a positive relationship with the owner early on will help to facilitate the process, the timing and a positive end result.

EXISTING CONDITION PLAN AND BOUNDARY SURVEY FOR SCHAAF ROAD LANDFILL

VILLAGE OF BROOKLYN HEIGHTS, COUNTY OF CUYAHOGA AND STATE OF OHIO

SYMBOL LEGEND

- HUB SET
- I.P.F. — IRON PIN FOUND AS NOTED (I.P.F.)
- C.I.P.F. — CAPPED IRON PIN FOUND AS NOTED
- I.P.S. — "PARTNERS" CAPPED 5/8" IRON PIN SET
- CATCH BASIN
- FIRE HYDRANT
- WATER GATE VALVE
- SANITARY MANHOLE
- STORM MANHOLE
- UNDERGROUND PEDESTAL FOR CABLE, TELE, OR ELECTRIC (UTP, UEP OR UCP)
- GUY WIRE ANCHOR
- CENTERLINE
- PROPERTY LINE
- ELECTRIC MANHOLE
- ELECTRIC METER
- ELECTRIC BOX—TRANSFORMER
- GAS METER
- BOLLARD
- GAS LINE MARKER
- OHW — OVERHEAD UTILITY WIRES
- Ex R/W — R/W
- PASSIVE VENT
- PIEZOMETER
- GAS EXTRACTION WELL
- GAS MONITORING WELL
- GROUND WATER MONITORING WELL
- PUNCH BAR WELL
- CALC — CALCULATED
- REC — RECORD
- UMH — UNKNOWN SEWER MANHOLE
- MONUMENT BOX



SURVEY NOTES:

BASIS OF VERTICAL DATUM:
BASIS OF BEARING IS STATE PLANE GRID NORTH, NAD83, OHIO NORTH ZONE, NAVD88

GEOID:
GEOID12B

SCALE FACTOR:
1.0000719

NOTE 1:
WETLAND LOCATION IS APPROXIMATE BASED OFF OF WETLAND AND WATERCOURSE DELINEATION REPORT PREPARED BY HZW ENVIRONMENTAL CONSULTANTS, DATED APRIL 2021.

NOTE 2:
"HOW." REFERS TO A PROPERTY SURVEY PREPARED BY STEPHEN HOVANCSEK & ASSOCIATES IN MARCH, 1993.

NOTE 3:
UTILITIES WERE NOT MARKED IN FIELD. ALL UTILITIES ARE DRAWN PER RECORD AND ARE APPROXIMATE.

HORIZONTAL SCALE 1"=100'

REVISIONS

PARTNERS
31100 Solon Road, Suite G
Solon, Ohio 44139
PH: 800-783-1383

EXISTING CONDITIONS PLAN AND BOUNDARY SURVEY
SCHAAF ROAD LANDFILL
SITUATED IN BROOKLYN HEIGHTS
CUYAHOGA COUNTY, OHIO
CUYAHOGA COUNTY LAND REUTILIZATION CORP

DRAWN BY: DCS
CHECKED BY: RMG
DATE 2/9/2021
SHEET 1 OF 1
PROJ# 896.114A

P:\Project Files\896 Cuyahoga County Land Reutilization Corp\896.114A Landfill Post Dep Analysis\Survey\School Road BE-FIGURES.dwg 5/7/2021

While local governments may be disinclined to assume ownership of landfills, they could be in a better position to work with Ohio EPA and prospective developers to resolve maintenance issues. Land Banks for example have tools in their bylaws that allow them to facilitate the reuse of underutilized property.

Publicly available info

What information can be obtained from simple public records that would help set the stage?

Project partners sought as much information as possible from public agencies, particularly Ohio EPA. Not surprisingly, there was a plethora of history, information, data, etc. – all of which needed to be analyzed and synthesized into a digestible document that would provide a breakdown of current conditions and relevant history. Data gaps resulted in the need to collect additional information, and ultimately identify a level of risk that is tolerable.

Site and Maintenance Issues

The Schaaf Road Landfill requires maintenance for 8 more years before the closure period is complete. As can be seen in the photographs, the cap has been severely compromised by the growth of trees and the ponding of water at the surface. The slope appears to be holding, but any subsidence would endanger the flow of West Creek that runs along the toe of the landfill. The cost to re-establish the top and side cap is estimated to be close to $1.5M. Virtually all of the gas and groundwater monitoring wells have fallen into disrepair. Cost to repair will be about $475K. Even after the 8 year period, the slope, cap and methane release will need to be monitored.

Pending Litigation or Violations

Publicly available information may reveal additional layers of complexities.

Through publicly available information, it was soon discovered that a lack of post-closure care at Schaaf Road Landfill resulted in repeated notices of violation for environmental and human hazards. These violations persisted after the new owner purchased the property. This property demonstrates inherent risks of ownership, again relating back to who owns it now and how such ownership might help/hinder the process.

Interested Parties

Who has an interest in the site in its present condition? Who would be involved in its future plans?

Understanding the 'stakeholders' within the community is imperative to any end-result or adaptive reuse. All of the stakeholders must come together with a common vision that incorporates regulatory compliance and an end use that is achievable and maintainable.

Because Schaaf Road Landfill is located within the Village of Brooklyn Heights, the Village has an inherent and vested interest to protect its citizens and businesses. Additionally, Schaaf Road Landfill is located along a Scenic Byway, a heavily traveled and populated corridor that is visible from a multitude of viewpoints. Because of this location the Village would like to see improved optics and functionality within the site.

For 25 years, the West Creek Conservancy, with its partners has diligently worked to preserve and protect the integrity of West Creek (a tributary to the Cuyahoga River). The Schaaf Road Landfill is directly adjacent to, and drains toward, West Creek causing the Conservancy to have a mission-based concern.

Photo Credit: Cleveland Metroparks | West Creek Reservation was developed on a large portion of a former landfill · Parma, Ohio

Similar, yet distinct, to West Creek Conservancy's interest, the Northeast Ohio Regional Sewer District has been making plans to restore a significant reach of West Creek which runs along the toe of the landfill (protecting infrastructure, restoring ecology and biological function). If the landfill slope were to fail, it would destroy the NEORSD's restoration efforts and further damage public infrastructure.

Though there are most likely more stakeholders than listed above, it is imperative to understand the importance of each – and also, how to leverage public/private resources in order to properly maintain and in this case adaptively reuse such a site.

Are there private/business stakeholders – developers that should be considered? Theoretically, other stakeholders would reveal themselves throughout the planning process as well.

Funding

What funding sources may/may not be eligible for the opportunity?

Funding, of course, may be the make it or break it opportunity for such a project. However, at the start of the Schaaf Road landfill investigation, funding was not THE lead consideration. It was rather community health/safety and associated environmental conditions. Once those conditions were understood, the funding question was inherently framed.

During our analysis of the Schaaf Road Landfill, we quickly understood the critical need to improve the maintenance of the facility and return the landfill to compliance with the applicable regulations. This included the repair and reinstallation of monitoring wells, cap maintenance, erosion repair, vegetation control, etc. The cost to accomplish all of these items was estimated to be almost two million dollars. If redevelopment were to occur, investors would need to explore funding opportunities and continue discussions with the owner.

In order to successfully redevelop a landfill, the project team needs to diligently look for funding opportunities. These could be grant opportunities, government funding, private funding, etc. End uses may also allow for the generation of funds that could help to support the project. These uses include but are not limited to cell tower leases, billboard rental, office space, and solar fields. A team that can think creatively will be best to find appropriate funding.

Photo Credit: Cleveland Metroparks | West Creek Reservation was developed on a large portion of a former landfill · Parma, Ohio

Visioning

What could/should the site be following its life as a landfill?

There are many examples of what landfills could be throughout our region, and though they will each have their own peculiarity the process of planning for their reuse or development should include ideas of what each site could be, as well as considerations about what each site needs from a regulatory viewpoint.

If, through discovery, you determine the landfill you are looking at is maintained and in compliance with applicable regulations, your options for reuse and development may be greater. If, through discovery, you determine the landfill you are interested in has not been maintained and is not in compliance with applicable regulations, your options will be directly affected by the costs associated with required maintenance and bringing the facility into compliance.

As part of your project, are you looking to re-develop the property to create jobs, a park, green space, or some combination? Maybe you are simply looking to bring a landfill into compliance in order to avoid larger problems and potential adverse impacts to human health and the environment.

STEPS TOWARD LANDFILL REDEVELOPMENT PLANNING

1. OHIO EPA FILE REVIEW

An excellent source of information for closed and some abandoned landfills is the Ohio EPA. Information contained in the public record will be helpful to determine the types of waste disposed of in the facility, what to expect during a field investigation, how to model the stability of the facility, etc. Conducting a file review will also help to formulate questions and spark discussion with Ohio EPA. A solid working relationship with Ohio EPA can go a long way to make your project proceed smoothly.

Appendix D contains helpful guidance documents from Ohio EPA that will steer you in the right direction and answer some initial questions.

2. AMERICAN LAND TITLE ASSOCIATION/NATIONAL SOCIETY OF PROFESSIONAL SURVEYORS

An American Land Title Association (ALTA)/National Society of Professional Surveyors (NSPS) survey should be prepared to document and identify existing conditions. ALTA surveys include identification of monuments, the property's address, gross land area, vertical relief, improvements, location of utilities, adjoining property owners, evidence of recent earth work or building construction observed during fieldwork, proposed changes in street right-of-way, the location of delineated wetlands, current zoning classification, setback requirements, height and floor space restrictions, and parking requirements. In addition to the ALTA survey, a title commitment should be provided and would add information such as encumbrances, easements, and zoning.

3. MONITORING SYSTEMS

As discussed in the Background Information, depending on the type and age of the landfill facility there will be varying degrees of regulatory requirements. Monitoring systems to be aware of include:

- Groundwater monitoring networks;
- Explosive gas monitoring networks;
- Explosive gas control systems (may be active or passive);
- Surface water management structures (ditches and sedimentation ponds);
- Site-specific monitoring plans that may be required by a Facility Closure/Post-Closure Plan; and,
- Closure/Post-Closure plans (5 to 30 years of post-closure monitoring).

Any monitoring systems that remain in place should be evaluated to determine the usability of the devices A field investigation should include locating gas monitoring probes, gas extraction wells, groundwater monitoring wells, and surface water structures and evaluating the condition of each based on as-built documentation that may be available.

If the condition of the monitoring systems is suspect or failing, the cost of upgrades and replacement must be included in the project budget.

4. NATIONAL ENVIRONMENTAL POLICY ACT

The National Environmental Policy Act (NEPA) is not specific to landfills. As you are looking at redeveloping a landfill, NEPA may become applicable depending on the end use you choose, or if you need any federal authorizations, or if you want to use any federal money (grants).

The NEPA process begins when a federal agency develops a proposal for a major federal action per Code of Federal Regulations (CFR) 1508.1. A major federal action includes approval of specific projects, such as construction or management activities with actions approved by permit or other regulatory decision as well as federal, federally-assisted activities, or federally-funded projects. Federal agencies have developed specific requirements that vary based on the relationship to the federal action. The NEPA regulations assess the environmental effect of proposed actions, including making decisions on permit applications, adopting federal land management plans, and constructing highways or publicly owned facilities. For example, NEPA studies are required for cell tower projects and may be required for digital billboard construction projects. Federal funding for a solar array would also likely trigger the NEPA process. A list of federal agencies and their associated NEPA procedures is included in **Appendix B**.

A NEPA review may involve three different levels of analysis. First, a federal action may be "categorically excluded (CE)" from NEPA requirements if the action normally does not have a significant effect on the human environment. If it is determined that the proposed action may significantly affect the environment, the action requires an Environmental Assessment (EA). An EA, which is the second level of analysis, will determine if the leading federal agency can issue a Finding of No Significant Impact (FONSI) or whether an Environmental Impact Statement (EIS) is necessary. The EIS process, which is the third level of analysis and can be quite time-consuming, includes publishing a public Notice of Intent (NOI) in the Federal Register and public review of the study. EA or EIS studies may include the analysis of environmental justice, cultural resources, floodplain studies, wetland delineations, air quality studies, water quality studies, and/or endangered species surveys.

NEPA Checklist Review

As an example of the NEPA process, a NEPA Checklist Review used by the Federal Communication Commission (FCC), outlined in 47 CFR Part 1.1307(a), for the installation of a communications tower would include the following information:

- The applicability of the Nationwide Programmatic Agreement (NPA) per Section 106 of the National Historic Preservation Act (NHPA) and the NPA for the Collocation of Wireless Antennas.
- An example of a NEPA procedure, developed by the FCC, is included in **Appendix C** and is an example of a preliminary assessment used to assist in identifying potential environmental issues and serve as guidance for project requirements.
- Conduct a database search of federal wilderness areas; federal wildlife preserves; county/state threatened or endangered species; listed or eligible National Register historic sites, places and/or Indian religious sites; Federal Emergency Management Agency (FEMA) 100-year floodplains; registered FCC antenna/towers and AM radio towers; and Federal Aviation Administration (FAA) sites within one mile of the property.

5. 513 AUTHORIZATION

Redevelopment of any closed landfill will likely require a 513 Authorization from Ohio EPA. A 513 Authorization is required for any filling, grading, excavating, building, drilling or mining on land where a hazardous waste facility or solid waste facility was operated. The intent of this authorization is to ensure that the activities planned to take place on a closed landfill are done with care and thought so as not to cause harm to human health or the environment.

For more information, refer to Ohio EPA Guidance Document in Appendix D.

Contact a consultant that specializes in landfill regulation and design for assistance with the preparation of a 513 Authorization request.

6. WETLAND DELINEATION

Depending on the potential land uses for the facility, a wetland delineation should be completed in the areas outside of the limits of waste. The presence of wetlands will have an impact on the ability to use these areas as part of the redevelopment of the property.

Any areas within the limits of waste that have been neglected and exhibit ponding water or suspected wetland vegetation should be managed through a cap maintenance program or 513 authorization through Ohio EPA depending on the level of effort needed to repair the engineered component. Open dialogue with Ohio EPA will help facilitate the necessary actions.

Contact a consultant that specializes in ecological projects for assistance with wetland delineations and associated studies.

7. PRELIMINARY GEOTECHNICAL INVESTIGATION

Depending on the configuration of the facility and the potential reuse plans, varying degrees of geotechnical investigation may be necessary. At a minimum any cap should be evaluated to ensure the engineered component is competent. For more complex redevelopments geotechnical investigations could include an evaluation of the waste material and the potential for settlement. Landfills will need to be individually evaluated and a unique geotechnical investigation planned based on each facility's characteristics.

For assistance with a geotechnical investigation contact an engineering consultant that specializes in landfills and geotechnical engineering.

8. LAND USE ASSESSMENT

When looking to redevelop a landfill, the priority goal should be to maintain regulatory compliance to ensure public health and the environment are protected. In addition to establishing regulatory requirements and identifying the existing conditions for a facility, determining the best use or combination of uses requires planning. The presumption is that an end user may desire or require a use that generates a revenue stream to fund the landfill maintenance and/or ongoing monitoring activities. The land use assessment should include the identification of the surrounding land uses, evaluation of land use regulations, local zoning, specialty zones, local master plans, incentive land use planning, infrastructure serving the property, and a real estate market study.

Examples of Land Use Assessments

- **Redevelopment (max revenue)** – focuses on revenue-generating reuses that include commercial/light industrial space, solar arrays, telecommunication towers, and digital billboards. Although limited redevelopment is intended to generate income, public access via trails or other limited methods could also be incorporated.
- **Green spaces (limited revenue)** – focuses on recreational reuses that include ballfields, trails, and playscapes. Green space development replaces office space with sufficient parking to accommodate public use of ballfields and trails. Potential revenue-generating uses that could be incorporated along with the green space could include telecommunication towers, limited solar arrays, and digital billboards.

Photo: Spectrum/Time Warner Regional Headquarters on former Gowdy Field Landfill · Columbus, Ohio

Photo: Cardina and Urbanski Fields, built in 1984 on land donated by the former Diamond Shamrock Company · Fairport Harbor, Ohio

- **Mixed use** – Mixed use presents a balance between redevelopment and green space. Potential uses could include ample parking to support publicly accessible trails, ball fields, etc., while increasing the solar arrays and including telecommunication towers, and digital billboards. Depending on the size of the property small buildings could be incorporated as well.

Photo Credit: IGS Energy · Cuyahoga County Landfill Solar Array · Brooklyn, OH

New Office/Industrial Construction

A cursory evaluation of revenue that may be generated through commercial office/light industrial space ranges between $3.50 to $9.50/sq. ft./year according to Cityfeet.com.

Photo Credit: Image Media Advertising Digital Billboard

Billboards

Fitssmallbusiness.com notes the installation of a digital billboard ranges between $20,000 and $30,000 per billboard. Cost of digital billboard advertising averages $1,600 per month. Billboard earnings range between 40 to 60% of the net revenue yielded. A digital billboard may earn $39K to $91K/year for the billboard owner x 20% for landlord yields $7,800-$18,200/year for the ground lease.

Photo: Communications Tower

Cell Towers

According to Towergenius.com cell tower lease rates range between $19,200 to $36,000 yearly and is based on location. According to landmarkdividend.com, cell tower leases could pay out anything from $10 per month for small niche carriers to more than $10,000 a month with the larger companies.

Photo Credit: Mannik Smith Group | Overland Industrial Park Solar Farm · Toledo, Ohio

Solar Farms

Strategicsolargroup.com Solar Farm Land Lease ranges between $300 to $2,000 per acre per year and is subject to location and market demand.

9. ENVIRONMENTAL/REGULATORY ASSISTANCE

Regulations associated with each landfill vary with respect to licensing, operation, operational monitoring, closure, and post-closure care. The technical and regulatory aspects of a landfill redevelopment project can be complex and confusing. An environmental consultant that specializes in landfill regulation and compliance should be retained to assist potential owners/redevelopers with the project.

Appendix A contains Land Development and Landfill Regulatory checklists that are intended as a starting point for you and your consultant to determine what may be necessary for your redevelopment project.

Photos/Exhibit Credit: NTH Consultants, Ltd. and Grissim Metz Andriese Associates · Fairlane Green Ford Allen Park Clay Mine Landfill, Allen Park, MI

These checklists were prepared to identify general due diligence that may be necessary when considering redevelopment of a landfill. They are not exhaustive.

APPENDIX A

Environmental and Redevelopment Checklists

LAND DEVELOPMENT CHECKLIST

General Information

Project Title: _____

Site Address: _____

Township: _____ County: _____

Parcel Number: _____

Current Use: _____

Current Owner(s): _____

Address: _____

Telephone: _____ Email: _____

Prior Owner(s): _____

Area: _____ ____ Square Feet ____ Acres

Zoning District(s): _____ Code /Ordinance Section: _____

Adjacent Street(s): _____

Corner Lot? _____ Yes _____ No

Adjacent Properties: ____ East ____ West ____ Rear ____ Across Street

Parcel Numbers: _____

Current Uses: _____

Area: _____ ____ Square Feet ____ Acres

Zoning District(s): _____

Development Restrictions

Potential Wetlands?*	____ Yes	____ No	Delineated?	_____
Oil / Gas Wells?	____ Yes	____ No	Closed/Sealed?	_____
Earthquake /Sink Holes?	____ Yes	____ No		
Steep Slopes?	____ Yes	____ No		
Utility / Highway Easements?	____ Yes	____ No		

*Note: Ponding atop a capped landfill may be exempt.

Authorities Having Jurisdiction

Municipality / Township: _____

Address: _____

Telephone: _____ Email _____

Planning / Zoning Official: _____ Email _____

Planning Commission Clerk: _____ Email _____

Engineer: _____ Email _____

Other: _____ Email _____

Soil & Water Conservation District: _____

USACE / State Dept of Natural Resources: _____

Due Diligence

Phase I Environmental Site Assessment:	____ Yes	Date:	_____	____ No
Phase II Environmental Site Assessment:	____ Yes	Date:	_____	____ No
Traffic Study:	____ Yes	Date:	_____	____ No
Wetlands Delineation:	____ Yes	Date:	_____	____ No
US Army Corps of Engineers Permit	____ Yes			
Ohio EPA Isolated Wetlands Permit	____ Yes			
Geotechnical Investigation:	____ Yes	Date:	_____	

Land Survey

Boundary Survey

Existing Available? ____ Yes ____ No

Date: _____ Surveyor: _____

Topographic & Location Survey

Existing Available? ____ Yes ____ No

Date: _____ Surveyor: _____

ALTA Survey (Note items required on Table A from Minimum Standard Details for ALTA Land Title Surveys)

Existing Available? ____ Yes ____ No

Date: _____ Surveyor: _____

Title Commitment Available? ____ Yes ____ No Issued by: _____

Effective Date: _____

_____ On Order

Lot Split/Consolidation: ____ Yes ____ No Planning Code Section: _____

Authority Having Jurisdiction: _____

Review Process: _____

Subdivision Plat: ____ Yes ____ No Planning Code Section: _____

Authority Having Jurisdiction: _____

Review Process: _____

Preliminary Plan Available? ____ Yes ____ No Author: _____

Desired Number of Sublots: _____

Minimum Lot Size: _____

Mortgage Location Survey ____ Yes ____ No Date Needed: _____

Mortgage Identification Survey ____ Yes ____ No Date Needed: _____

Construction Phase Surveys

Rough Grading Stakeout	____ Yes	____ No	Approx. Start Date: _____
Utilities Stakeout	____ Yes	____ No	Approx. Start Date: _____
Building Stakeout	____ Yes	____ No	Approx. Start Date: _____
Foundation Survey	____ Yes	____ No	Approx. Start Date: _____
Pavement Stakeout	____ Yes	____ No	Approx. Start Date: _____
Pavement Stakeout	____ Yes	____ No	Approx. Start Date: _____
As-Built Survey	____ Yes	____ No	Approx. Start Date: _____
Other	____ Yes	____ No	Approx. Start Date: _____

Planning & Zoning

Code / Ordinance Title: _____

Effective Date: _____

Last Revised: _____

Available On-line at: _____

Permitted Uses: Code Section _____

Site: _____

Suitable for Intended Development? ____ Yes ____ No (See process below)

Adjacent East: _____

Adjacent West: _____

Adjacent Rear: _____

Across Street _____

Area Requirements: Code Sections _____

Minimum Lot Area: _____

Front Yard Setback: _____ Building: _____ Parking/Drives: _____

Side Yard Setback: _____ Building: _____ Parking/Drives: _____

Rear Yard Setback: _____ Building: _____ Parking/Drives: _____

Maximum Coverage (Density) Building: _____ Impervious Area: _____

Minimum Landscaped / Green Space Area: _____

Variance(s) Required: ____ Yes ____ No (See process below)

Parking Requirements: Code Sections _____

Number Required: _____ How Calculated? _____

Number Accessible: _____ Van Accessible: _____

Location: _____

Size: Length: _____ Width: _____ Drive Aisle: _____

Angle: _____ 90 _____ 60 _____ 45 _____ 0

Variance(s) Required: ____ Yes ____ No (See process below)

Loading Requirements: Code Sections _____

Number Required: _____ How Calculated? _____

Location: _____

Setbacks / Special Considerations: _____

Variance(s) Required: ____ Yes ____ No (See process below)

Variance Process

Lead Authority having Jurisdiction

Name: _____ Title: _____

Address: _____

Phone: _____ Email: _____

Use Variances

Allowed? ____ Yes ____ No Code Reference _____

Referendum? ____ Yes ____ No Code Reference _____

Election Schedule: _____

Public Hearing? ____ Yes ____ No

Area Variances

Allowed? ____ Yes ____ No Code Reference _____

Referendum? ____ Yes ____ No Code Reference _____

Election Schedule: _____

Public Hearing? ____ Yes ____ No

Variances Needed

Use ____ Yes ____ No Describe _____

Area ____ Yes ____ No

Lot Size: ____ Yes ____ No

Building Area: ____ Yes ____ No

Setback: ____ Front ____ Side ____ Rear

Parking: ____ Front ____ Side ____ Rear ____ Count

Drives/Dimensions: ____ Yes ____ No

Loading: ____ Yes ____ No

Describe Variances: _____

_____

_____

Pre-Submittal Conference Required? ____ Yes ____ No

Board of Zoning Appeals

Meeting Schedule: _____ Time: _____

Clerk/Chairperson Name: _____ Title: _____

Submittal Deadline: _____

Electronic Submittals: ____ Yes ____ No Email: _____

Who should attend? _____

Approval Process

Zoning / Site Plan Reviews / Approvals

Pre-Submittal Conference: _____ Yes _____ No

Who should attend? _____

Planning / Zoning Commission Meetings

Meeting Schedule: _____

Submittal Deadline: _____

Electronic Submittals: _____ Yes _____ No Email Address: _____

Who should attend? _____

Council / Trustees Meetings

Meeting Schedule: _____

Submittal Deadline: _____

Electronic Submittals: _____ Yes _____ No Email Address: _____

Who should attend? _____

Typical approval timeline? _____

Building Permit Review / Approval

Chief Building Official: _____ Title: _____

Phone: _____ Email: _____

Electronic Submittals: _____ Yes _____ No

Submittal Portal: _____

Typical Review Timeline: _____

Utilities

Water: _____ ___ Public ___ Franchise

Sanitary Sewer: _____ ___ Public ___ Franchise

Storm Drains: _____ ___ Public ___ Franchise

Detention/Retention? ___ Yes ___ No Code Reference: _____

Natural Gas: _____ ___ Public ___ Franchise

Electricity: _____ ___ Public ___ Franchise

Telephone: _____ ___ Public ___ Franchise

CATV/Internet: _____ ___ Public ___ Franchise

Other: _____ ___ Public ___ Franchise

Notes/Comments: _____

_____

_____

_____

LANDFILL REGULATORY CHECKLISTS

General Information

Proposed Reuse: _____

Address: _____

Name: _____

Alias: _____

Current Owner(s): _____

Prior Owner(s): _____

Acreage: _____

Active Facility: ____ Yes ____ No

Closed Facility: ____ Yes ____ No

Date of Closure: _____

What is the permitted landfill type?

OAC 3745-27 Solid and Infectious Waste	____ Yes	____ No
OAC 3745-29 Industrial Solid Waste	____ Yes	____ No
OAC 3745-30 Residual Solid Waste	____ Yes	____ No
OAC 3745-400 Construction and Demolition Debris	____ Yes	____ No
OAC 3745-560 Composting Program	____ Yes	____ No

Municipal Solid Waste - OAC 3745-27

Sanitary landfill facility or solid waste landfill means an engineered facility where the final deposition of solid waste on or into the ground is practiced in accordance with OAC 3745-27, 3745-29 or 3745-30 as appropriate and OAC 3745- 37 and includes the units within the limits of waste placement, all ground water monitoring and control system structures, buildings, explosive gas monitoring, control, and extraction system structures, surface water run-on and runoff control structures, sedimentation ponds, liner systems, and leachate management system structures. The sanitary landfill facility includes all portions of the facility described above and those areas within three hundred feet of the limits of waste placement unless an alternate setback is deemed acceptable by the director.

Does the facility have a permit to install per OAC 3745-27-02/06?	___ Yes	___ No
Does the facility have an operating record per OAC 3745-27-09?	___ Yes	___ No
Is there an explosive gas management system per OAC 3745-27-11(B)(4)?	___ Yes	___ No
Is there an explosive gas monitoring system per OAC 3745-27-11(B)(8)?	___ Yes	___ No
Erosion control measures implemented per OAC 3745-27-11(B)(9)?	___ Yes	___ No
Is there a final cap system per OAC 3745-27-11(G)?	___ Yes	___ No
Is there a surface water management program per OAC 3745-27-11(H)(2)?	___ Yes	___ No
Is there a groundwater monitoring system per OAC 3745-27-11(H)(3)?	___ Yes	___ No

Post Closure Care Activities per OAC 3745-27-14(A)(1)

Have the Leachate, Surface Water, Explosive Gas Extraction, Explosive Gas Monitoring and Ground Water Monitoring Systems been operating and maintained per OAC 3745-27-14(A)(1)?	___ Yes	___ No
Has the cap system been maintained per OAC 3745-27-14(A)(2)?	___ Yes	___ No
Have any leachate outbreaks occurred and repaired per OAC 3745-27-14(A)(3)(a)-(c)?	___ Yes	___ No
Have quarterly inspections of the landfill been conducted per OAC 3745-27-14(A)(4)?	___ Yes	___ No
Have the ground water, explosive gas, landfill emissions, monitoring and reporting been conducted per OAC 3745- 27-14(A)(5)?	___ Yes	___ No

Has a post closure care cost estimate been prepared per OAC 3745-27-14(A)(6)?

___ Yes Amount: _____

___ No ___ N/A

Industrial Solid Waste - OAC 3745-29

An Industrial solid waste or industrial waste is a type of solid waste generated by manufacturing or industrial operations and includes, but is not limited to, solid waste resulting from electric power generation; fertilizer/agricultural chemicals; food and food-related products/by-products; inorganic chemicals; iron and steel manufacturing; leather and leather products; nonferrous metals manufacturing; plastics and resins manufacturing; pulp and paper industry; rubber and miscellaneous plastic products; stone, glass, clay and concrete products; textile manufacturing; and transportation equipment. Industrial solid waste does not include solid wastes generated by commercial, agricultural, or community operations. An industrial solid waste landfill facility or industrial waste landfill facility means a sanitary landfill facility where one or any combination of industrial solid wastes are exclusively disposed, and which has not during its operating life, disposed of significant amounts of municipal solid waste. Nontoxic fly ash, nontoxic bottom ash, nontoxic spent foundry sand, slag, or construction and demolition debris may also be disposed at a residual waste facility.

Is a permit to install available per OAC 3745-29-06(A)?	___ Yes	___ No	
Does the permit to install establish the facility's construction per OAC 3745-29-08?	___ Yes	___ No	
Was there additional criteria per OAC 3745-29-07 for approval of the industrial solid waste landfill?	___ Yes	___ No	
Has a Final Closure/Post-Closure Plan per OAC 3745-29-11 been prepared for the facility?	___ Yes	___ No	
Is the Final Closure/Post Closure Plan available?	___ Yes	___ No	
Have Post-Closure care activities been implemented?	___ Yes	___ No	
Operation/maintenance of leachate management system?	___ Yes	___ No	___ N/A
Maintaining the integrity and effectiveness of cap system?	___ Yes	___ No	
Have quarterly inspections of been conducted?	___ Yes	___ No	
Have annual reports been prepared/submitted to Ohio EPA?	___ Yes	___ No	
Are the records and reports kept at one location?	___ Yes	___ No	
Does the facility have a ground water monitoring program per OAC 3745-30-08?	___ Yes	___ No	
Are the monitoring reports available?	___ Yes	___ No	
Has a Post-Closure Care Certification report per OAC 3745-29-14(B) been prepared?	___ Yes	___ No	
Is the Post-Closure Care Certification report available?	___ Yes	___ No	

Residual Solid Waste - OAC 3745-30

Residual solid waste or residual waste is a type of solid waste and includes wastes generated by:

- Fuel burning operations such as coal, foundry operations such as air pollution control dust, wastewater treatment plant sludge, unspent foundry sand, spent foundry sand;
- Pulp and papermaking operations such as wastewater treatment plant sludges, lime mud, lime grit, sawdust, wood chips, bark, hydropulper rejects:
- Steelmaking operations such as air pollution control dust, wastewater treatment plant sludges, dust from steel processing and finishing operations, water softening sludge, flux material;
- Gypsum processing plant operations such as gypsum wallboard waste, paper surface preparation dust, wastewater treatment plant sludge;
- Lime processing operations such as air pollution control dust and/or sludge; and
- Portland cement operations such as air pollution control dust.

A residual waste landfill facility or residual waste landfill is a sanitary landfill facility where one or any combination of residual solid wastes described above are exclusively disposed. Residual waste landfill facilities include four classifications: Class I, Class II, Class III, and Class IV and are based on the levels of contaminants in the leachate. Each class of landfill can accept only those wastes that do not exceed contaminant limits for that class. For example Class II residual waste landfill can accept waste that can also go to a Class III or Class IV residual waste landfill.

Is the facility:

Class I?	____ Yes	____ No
Class II?	____ Yes	____ No
Class III?	____ Yes	____ No
Class IV?	____ Yes	____ No

Has a permit to install been prepared for the facility per OAC 3745-30-05?	____ Yes	____ No	
Does the facility have a ground water monitoring program per OAC 3745-30-08?	____ Yes	____ No	
Are ground water monitoring reports available?	____ Yes	____ No	
Has a Final Closure/Post-Closure Plan been prepared per OAC 3745-30-09?	____ Yes	____ No	
Operation/maintenance of leachate management system?	____ Yes	____ No	____ N/A
Maintaining the integrity and effectiveness of cap system?	____ Yes	____ No	
Have quarterly inspections of been conducted?	____ Yes	____ No	
Have annual reports been prepared/submitted to Ohio EPA?	____ Yes	____ No	
Are the records and reports kept at one location?	____ Yes	____ No	
Have Post-Closure care activities been implemented per OAC 3745-30-10	____ Yes	____ No	
Is a certification of post closure activities been submitted to the Ohio EPA per 3745-30-10(D)?	____ Yes	____ No	

Construction and Demolition Debris - OAC 3745-400

Construction and demolition debris or debris means those materials resulting from the alteration, construction, destruction, rehabilitation, or repair of any manmade physical structure, including, without limitation, houses, buildings, industrial or commercial facilities, or roadways. Construction and demolition debris does not include materials identified or listed as solid wastes, infectious wastes, or hazardous wastes pursuant to Ohio Revised Code 3734 or materials from mining operations, nontoxic fly ash, spent nontoxic foundry sand, and slag; or reinforced or non-reinforced concrete, asphalt, building or paving brick, or building or paving stone.

For the purpose of this definition, materials resulting from the alteration, construction, destruction, rehabilitation, or repair of any manmade physical structure, are those structural and functional materials comprising the structure and surrounding site improvements, such as brick, concrete and other masonry materials, stone, glass, wall coverings, plaster, drywall, framing and finishing lumber, roofing materials, plumbing fixtures, heating equipment, electrical wiring and components containing no hazardous fluids or refrigerants, insulation, wall-to-wall carpeting, asphaltic substances, metals incidental to any of the above, and weathered railroad ties and utility poles. Materials resulting from the alteration, construction, destruction, rehabilitation, or repair" do not include materials whose removal has been required prior to demolition, and materials which are otherwise contained within or exist outside the structure such as solid wastes, yard wastes, furniture, and appliances. Also excluded in all cases are liquids including containerized or bulk liquids, fuel tanks, drums and other closed or filled containers, tires, and batteries.

Does the facility have a valid license that contains the facility's construction and monitoring plans per OAC 3745-400-11(C)?	____ Yes	____ No
Has a Cap System per OAC 3745-400-07(G) been completed?	____ Yes	____ No
Have leachate outbreaks occurred at the facility and have they been managed per OAC 3745-400-11(O)?	____ Yes	____ No
Does the facility contain a leachate management system per OAC 3745-400-11(P)?	____ Yes	____ No
Have there been any surface water management issues per OAC 3745-400-11(Q)?	____ Yes	____ No
Is the facility subject to ground water and/or leachate monitoring per OAC 3745-400-11(R)?	____ Yes	____ No
Has the owner/operator established and maintained financial assurance per OAC 3745-400-11(S)?	____ Yes	____ No

Composting Program - OAC 3745-560

Class I Composting Facility

Class I: The owner/operator of a Class I solid waste composting facility may accept yard waste, agricultural plant materials, dead animals, raw rendering material, animal waste, food scraps, mixed solid waste, bulking agents, additives, and authorized alternative materials.

Is the facility Class I? ____ Yes ____ No

Is the Permit to Install per OAC 3745-560-100(B) available? ____ Yes ____ No

Has a Class I facility been established per OAC 3745-560-100? ____ Yes ____ No

Are the applicable documents for establishment available? ____ Yes ____ No

Composting – Log of Operations and Annual Report Forms per OAC 3745-560-04/OAC 3745-560-115

Log of Operations per OAC 3745-560-04(A)? ____ Yes ____ No

Annual Report per OAC 3745-560-04(B)? ____ Yes ____ No

Self-Inspection Checklist Class II per OAC 3745-300-110? ____ Yes ____ No ____ N/A

Composting – Closure Cost Estimate per OAC 3745-300-05: The owner or operator of a Class I composting facility shall determine the closure cost estimate.

Is a Class I closure cost estimate available? ____ Yes Amount: _____

____ No ____ N/A

Operational Requirements Class I Composting per OAC 3745-560-110: The owner or operator shall operate the facility in accordance with applicable authorizing documents including but not limited to maintaining the design and operational capacities specified in the plan view drawing. The owner or operator shall have a copy of applicable authorizing documents available for inspection.

Is a plan view drawing available? ____ Yes ____ No

Closure and Termination Class I Composting Facility per OAC 3745-560-135(A)-(D)

Is a letter from the Ohio EPA or approved Board of Health stating the facility is in compliance with the closure requirements? ____ Yes ____ No

Composting Program - OAC 3745-560

Class II Composting Facility

Class II: The owner/operator of a Class II solid waste composting facility may accept yard waste, agricultural plant materials, dead animals, raw rendering material, animal waste, food scraps, bulking agents, additives, and authorized alternative materials.

Is the facility Class II? ____ Yes ____ No

Is the Solid Waste License per OAC 3745-560-200(B) available? ____ Yes ____ No

Is the Registration Application per OAC 3745-560-200(C) available? ____ Yes ____ No

Has a Class II facility been established per OAC 3745-560-200? ____ Yes ____ No

Are the applicable documents for establishment available? ____ Yes ____ No

Composting – Log of Operations and Annual Report Forms per OAC 3745-560-04/OAC 3745-560-215

Log of Operations per OAC 3745-560-04(A)? ____ Yes ____ No

Annual Report per OAC 3745-560-04(B)? ____ Yes ____ No

Self-Inspection Checklist Class II per OAC 3745-300-210? ____ Yes ____ No ____ N/A

Composting – Closure Cost Estimate per OAC 3745-300-05: The owner or operator of a Class II composting facility shall determine the closure cost estimate.

Is a Class II closure cost estimate available? ____ Yes Amount: _____

____ No ____ N/A

Closure and Termination Class II Composting Facility per OAC 3745-560-235(A)-(D)

Is a letter from the Ohio EPA or approved Board of Health stating the facility is in compliance with the closure requirements? ____ Yes ____ No

Composting Program - OAC 3745-560

Class III Composting Facility

Class III: The owner/operator of a Class III solid waste composting facility may accept yard waste, agricultural plant materials, dead animals, raw rendering material, animal waste, bulking agents, additives, and authorized alternative materials. The material placement area is limited to a maximum of one hundred thirty-five thousand square feet.

Is the facility Class III? ____ Yes ____ No

Class III Composting Facility Establishment OAC 3745-560-300

Is a registration form/application available? ____ Yes ____ No

Composting – Log of Operations and Annual Report Forms per OAC 3745-560-04/OAC 3745-560-315

Log of Operations per OAC 3745-560-04(A)? ____ Yes ____ No

Annual Report per OAC 3745-560-04(B)? ____ Yes ____ No

Operational Requirements for Class III facility OAC 3745-300-310

Has the Ohio EPA or the approved board of health requested the owner/operator to submit a written narrative describing the current or planned management practices for any/all of the areas of management under paragraphs per OAC 3745-300-310(C) to (Q)? ____ Yes ____ No ____ N/A

Closure and Termination Requirements Class III Composting Facility OAC 3745-560-335

Did the owner/operator submit a written notification to the Ohio EPA, the approved board of health, and the solid waste management district of the last date of waste material acceptance? ____ Yes ____ No

Did the Ohio EPA provide a letter of concurrence regarding closure per OAC 3745-560-335(D)? ____ Yes ____ No

Did the owner/operator, after closure, request authorization for a Class I or II facility OAC 3745-560-335(E)? ____ Yes ____ No

Did the owner/operator, after closure, request authorization for a Class III or IV, or change to yard waste only transfer facility per OAC 3745-560-335(F)? ____ Yes ____ No

Did the owner/operator submit written notification to Ohio EPA the approved board of health and the solid waste management district and is a copy available? ____ Yes ____ No

Composting Program - OAC 3745-560

Class IV Composting Facility

Class IV: The owner/operator of a Class IV solid waste composting facility may accept only yard waste, agricultural plant materials, bulking agents, additives limited to source-separated spent coffee and tea grounds, urea, and bacterial or fungal inoculum, and authorized alternative materials.

Is the facility Class IV? _____ Yes _____ No

Class IV Composting Facility Establishment OAC 3745-560-400

Is a registration form/application available per OAC 3745-560-400(B)? _____ Yes _____ No

Are the letters of intent to establish a Class IV facility available per OAC 3745-560-400(D)? _____ Yes _____ No

Operational Requirements for Class IV facility OAC 3745-300-410

Has the Ohio EPA or the approved board of health requested the owner/operator to submit a written narrative describing the current or planned management practices for any or all of the areas of management under paragraphs per OAC 3745-300-410(O)? _____ Yes _____ No

Closure and Termination Class IV facility per OAC 3745-560-435

Has closure been completed per OAC 3745-560-435 (B)? _____ Yes _____ No

Did the owner/operator submit a written notification to the Ohio EPA, the approved board of health, and the solid waste management district of the last date of waste material acceptance? _____ Yes _____ No

Did the Ohio EPA provide a letter of concurrence regarding closure per OAC 3745-560-335(D) _____ Yes _____ No

APPENDIX B

National Environmental Protection Act Procedures

Federal Agency NEPA Implementing Procedures

Revised January 27, 2023

Executive Departments and Sub-agencies

- Agriculture
  - Agricultural Research Service
  - Animal and Plant Health Inspection Service
  - Farm Service Agency
  - Forest Service
  - Natural Resources Conservation Service
  - Rural Development *(Rural Business-Cooperative Service, Rural Housing Service, Rural Utilities Service)*
- Commerce
  - Economic Development Administration
  - FirstNet
  - National Oceanic and Atmospheric Administration
- Defense
  - Defense Logistics Agency
  - Defense Threat Reduction Agency
  - Department of the Air Force
  - Department of the Army
    - U.S. Army Corps of Engineers
      - U.S. Army Corps of Engineers - Regulatory
  - Department of the Navy
  - Missile Defense Agency
- Energy
- Health and Human Services
  - Food and Drug Administration
  - Indian Health Service
  - National Institutes of Health
- Homeland Security
- Housing and Urban Development
  - Community Development Block Grant Program
- Interior
  - Bureau of Indian Affairs
  - Bureau of Land Management
  - Bureau of Reclamation
  - Minerals Management Service *(Bureau of Ocean Energy Management / Bureau of Safety and Environmental Enforcement / Office of Natural Resources Revenue)*
  - National Park Service
  - Office of Native Hawaiian Relations
  - Office of Surface Mining
  - U.S. Fish and Wildlife Service
  - U.S. Geological Survey
- Justice
  - Bureau of Prisons
  - Drug Enforcement Agency
  - Federal Bureau of Investigation
  - Office of Justice Assistance, Research, and Statistics
  - U.S. Marshals Service

- Labor
- State
- Transportation
  - Federal Aviation Administration
  - Federal Highway Administration
  - Federal Motor Carrier Safety Administration
  - Federal Railroad Administration
  - Federal Transit Administration
  - Maritime Administration
  - National Highway Traffic Safety Administration
  - Saint Lawrence Seaway Development Corporation
- Treasury
  - Community Development Financial Institutions Fund
- Veterans Affairs

Other Agencies:

- Advisory Council on Historic Preservation
- Agency for International Development
- Armed Forces Retirement Home
- Committee for Purchase from Persons who are Blind or Severely Disabled
- Consumer Product Safety Commission
- Denali Commission
- Environmental Protection Agency
- Export-Import Bank of the U.S.
- Federal Communications Commission
- Federal Deposit Insurance Corporation
- Federal Energy Regulatory Commission
- Federal Maritime Commission
- Federal Trade Commission
- General Services Administration
- Gulf Coast Ecosystem Restoration Council (RESTORE Council)
- International Boundary and Water Commission
- Marine Mammal Commission
- National Aeronautics and Space Administration
- National Capital Planning Commission
- National Endowment for the Humanities
- National Indian Gaming Commission
- National Science Foundation
- Nuclear Regulatory Commission
- Presidio Trust
- Securities and Exchange Commission
- Small Business Administration
- Surface Transportation Board
- Tennessee Valley Authority
- U.S. Postal Service

APPENDIX C

FCC NEPA Procedure

FCC Desktop NEPA Checklist

Schaaf Road Landfill			
1329 East Schaaf Road, Brooklyn Heights, Cuyahoga County, Ohio			
FCC Rule	**Rule Summary**	**Yes**	**No**
47 CFR 1.1307 (a)(1)	Is the Facility located in an officially designated wilderness area?		X
47 CFR 1.1307 (a)(2)	Is the Facility located in an officially designated wildlife preserve?		X
47 CFR 1.1307 (a)(3)	Does the Facility likely affect listed threatened or endangered species or designated critical habitats; or likely jeopardize the continued existence of any proposed endangered or threatened species; or likely result in the destruction or adverse modification of proposed critical habitats?	X	
47 CFR 1.1307 (a)(4)	Does the Facility likely affect districts, sites, buildings, structures, objects, or other significant American history, architecture, archeology, engineering or culture, that are listed, or eligible for listing, in the National Register of Historic Places?		X
47 CFR 1.1307 (a)(5)	Does the Facility affect Indian religious sites?		X
47 CFR 1.1307 (a)(6)	Is the Facility located in a 100-year floodplain?	X	
47 CFR 1.1307 (a)(7)	Will the planned collocation/construction involve significant change in surface features (e.g., wetland fill, deforestation and/or water diversion)?	X	
47 CFR 1.1307 (a)(8)	Is the proposed Facility located in a residential neighborhood and required to be equipped with high intensity white lights?	NA	
47 CFR 1.1307 (b)	Does the proposed Facility fall within the categories listed in Table 1 of Section 1.1307(b) and cause exposure of workers or general public to levels of radio-frequency radiation in excess of the limits in Section 1.1310 and 2.1093?	NA	

APPENDIX D

Ohio EPA Guidance Documents

Division of Materials and Waste Management
January 2020

Guidance Document #631

Implementation of Chapter 513
[OAC Chapter 3745-513]

Purpose

This educational guideline presents frequently asked questions about implementation of Ohio Administrative Code (OAC) Chapter 3745-513 (Chapter 513), formerly known as Rule 13 (OAC Rule 3745-27-13). Chapter 513 establishes the procedure for obtaining authorization from the director to fill, grade, excavate, build, drill or mine on land where a hazardous waste or solid waste facility was operated.

Frequently Asked Questions

Does Chapter 513 apply to an unpermitted, unlicensed solid waste or hazardous waste facility?

Yes, these are referred to as 'historic' sites. However, it does not apply to sites of indiscriminate roadside dumping or littering.

Does Chapter 513 apply to just the limits of waste placement or area of hazardous waste treatment, storage and disposal?

No. For the purposes of the chapter, Ohio EPA defined *facility* in OAC Rule 3745-513-02(F), to also include any areas within 300 horizontal feet of the limits of waste placement if the filling, grading, excavating, building, drilling or mining might impact the integrity of the waste placement or the ancillary structures associated with the monitoring and operation of the facility. Ohio EPA is concerned about hazards associated with explosive gases generated by landfills, potential stability issues of the landfill, release of contaminated leachate to surface and ground water, and potential contact with waste materials previously disposed at the facility.

Thus, if your proposed activity is either within the limits of waste placement, or within 300 feet of the limits of waste placement and it may impact the limits of waste placement, slope stability, or other ancillary structures such as the leachate collection, ground water monitoring, gas extraction systems, etc., then you are required to obtain a Chapter 513 authorization unless the proposed activity meets the exception criteria outlined in OAC Rule 3745-513-05.

What is routine maintenance?

Ohio EPA considers routine maintenance to be any activity necessary to maintain the performance of the cap system, pollution control systems, and monitoring systems at the site. For example, mowing the grass to maintain vegetative cover, replacing a ground water monitoring well that is no longer serviceable, or placing soil on the landfill in select areas to correct settlement problems or leachate outbreaks would be considered routine maintenance.

However, activities such as installing a perimeter leachate collection system, installing an explosive gas control system, or covering the entire landfill with soil, are not considered routine maintenance and would require a Chapter 513 authorization unless the proposed activity meets the exception criteria outlined in OAC Rule 3745-513-05. These are only a few examples of the rule's application. If you believe your proposed activity may be considered routine maintenance, we recommend that you contact your district office to confirm this before initiating work activities.

Does Chapter 513 apply to a facility in which all waste has been removed (for instance, a clean-closed hazardous waste facility or a solid waste facility where all waste was removed)?

No. If the facility meets the criteria established in OAC Rule 3745-513-05(A)(1)(a), then Chapter 513 does not apply.

Does Chapter 513 apply to a site which is in post-closure care?

Yes, if the activity is not authorized through the permit, license, plan approval, judicial order or other authorization that is a final action of the director. Authorizations that are not a final action of the director (for example alterations, authorizations by rule), cannot replace the need for a Chapter 513 authorization.

epa.ohio.gov • 50 W. Town St., Ste. 700 • P.O. Box 1049 • Columbus, OH 43216-1049 • (614) 644-3020 • (614) 644-2737 (fax)

Does Chapter 513 apply to a site which is out of its post-closure care period?

Yes. Unless the proposed activity meets the exception criteria outlined in OAC Rule 3745-513-05, a Chapter 513 authorization will be required for any activity at a solid or hazardous waste facility that has completed its post-closure care period.

Does Chapter 513 apply to RCRA treatment or storage facilities?

It does not apply if the site has either (1) been clean-closed and no residual contamination exists on the property, or (2) been clean-closed by demonstrating successful decontamination through a human health-based risk assessment, under an unrestricted (residential) future land use scenario.

Chapter 513 may apply if the site has been clean closed to risk-based standards and residual contamination exists, and the activity does not meet the exception criteria outlined in OAC Rule 3745-513-05. Chapter 513 may also apply if a site under deed restrictions or other restricted future land use scenario where human health risk assessment was employed (for instance, an industrial scenario) and the activity meets the exception criteria outlined in OAC Rule 3745-513-05. It is recommended that you contact your local district office regarding any facility with one or more units under evaluation by the risk assessment process prior to proceeding with the proposed activity.

Does Chapter 513 apply to sites eligible for the Voluntary Action Program (VAP)?

Yes, if the site accepted solid, hazardous, residual or industrial wastes, as they are defined in rule, and if activities that do not meet the exception criteria outlined in OAC Rule 3745-513-05 are proposed for the site. Participation in the VAP does not exempt or preclude a site from the requirements of Chapter 513. A Chapter 513 authorization is required prior to initiating the work. If the operations and maintenance agreement doesn't contain a Chapter 513 authorization for activities such as periodic sampling to confirm remedial progress, then Chapter 513 authorization is required each time such work is performed.

Does Chapter 513 apply if the facility's permit application indicated that the site will be utilized for development following the closure of the facility?

Yes. Ohio EPA must have adequate information to determine that the proposed activity will not create a nuisance and is unlikely to adversely affect public safety, health or the environment. Therefore, unless the proposed activity meets the exception criteria outlined in OAC Rule 3745-513-05, authorization pursuant to Chapter 513 is required.

Does Chapter 513 apply to open dumps?

Yes. However, it is expected that all the illegally disposed waste on the property you control will be removed and disposed at a permitted disposal facility. If not, enforcement may be taken to clean up the dump.

What facilities does Chapter 513 not apply to?

Chapter 513 does not apply to sites which have solely accepted wastes that are excluded from the definition of solid waste. The definition of solid waste is found in OAC Rule 3745-500-02(S) and excludes the following materials: earth or material from construction, mining or demolition operations, nontoxic fly ash and bottom ash, spent nontoxic foundry sand and slag. It is important to note, however, that if a facility disposed of this material with industrial solid waste, residual solid waste or municipal solid waste, the facility is subject to Chapter 513 unless the proposed activity meets the exception criteria outlined in OAC Rule 3745-513-05.

Chapter 513 does not apply to facilities exempted from regulation as solid waste facilities. These exemptions are found in OAC Rule 3745-27-03 and include: solid wastes generated within a single-family residence and disposed on the premises, junk yards, lime sludge and sewage sludge disposal approved under ORC Chapter 6111, and sites approved under ORC Chapter 6111 where certain wastes were land applied.

Although these facilities are not required to obtain a Chapter 513 authorization prior to initiating work, they may be subject to requirements of ORC Chapter 6111. Contact a Division of Surface Water representative at your local district office to determine the type of authorization needed.

If the activity is in an area with a history of dumping, but it's not certain that waste will be encountered, does Chapter 513 apply?

Ohio EPA recommends the applicant take advantage of the provisions for sampling, testing, or delineating the limits of waste placement (OAC Rules 3745-513-400 to -470). If waste is encountered, the applicant can proceed with obtaining a Chapter 513 authorization prior to conducting the planned activity.

What happens if waste is discovered while filling, grading, excavating, building, drilling or mining on a site not known to be a solid or hazardous waste facility?

Depending on the circumstances, you may be required to cease work and to obtain authorization pursuant to Chapter 513 before undertaking any additional activities. Ohio EPA may also take enforcement action. If any liquid is released from the waste, pursuant to ORC Section 3750.06 Emergency Planning, you may be required to immediately call Ohio EPA's emergency spill hotline at (800) 282-9378 (see *epa.ohio.gov/derie/*). Regarding the excavation of potentially solid or hazardous waste, you should immediately contact the appropriate Ohio EPA district office and local health department.

As part of authorized Chapter 513 activities, do contaminated soils have to be managed as a solid waste?

Contaminated soil associated with a Chapter 513 authorization is a waste. The issue of whether contaminated soil is a waste is addressed through Ohio EPA Fact Sheet #610 *Frequently Asked Questions About the Management of Soils*. This fact sheet is available at *epa.ohio.gov/portals/34/document/guidance/gd_610.pdf.*

As part of authorized Chapter 513 activities, can waste be reconsolidated or does it have to be removed and disposed at a permitted disposal facility?

Illegally disposed waste should be removed and not reconsolidated. Otherwise, the waste may be reconsolidated in accordance with OAC Rule 3745-513-350(C)(1)(a). It must be placed within previously existing horizontal limits of waste placement. Waste cannot be used to backfill any excavated areas outside the limits of waste placement as per OAC Rule 3745-513-350(C)(4).

Previously existing limits are established by the cap/closure certification report. If a certification report does not exist, the previously existing limits are established by the approved limits of waste placement. However, if the facility closed without reaching the approved limits, the previously existing limits are what are in existence when the Chapter 513 authorization is requested (or notification sent).

My project involves multiple properties where waste was disposed. Are separate requests for each property required, or can one request be submitted to address all of them?

The Division of Materials and Waste Management (DMWM) recommends submitting one Chapter 513 request showing the entire project with a discussion of proposed procedures for identification, management and closure. This saves you time by enabling you to follow the approved plan if waste is encountered rather than having to stop work while awaiting approval.

If a new solid waste, infectious waste or construction and demolition debris facility is to be established on an old facility, are the authorizations for the new activity enough, or is a Chapter 513 authorization also necessary?

A Chapter 513 authorization is required. However, if the authorization for the activity is granted through an action of the director (for example, a permit or license, but not a registration), you have the option of either obtaining two separate actions, one for the new facility and one for the Chapter 513 activities, or addressing the Chapter 513 issues in the new facility application, thus combining the two actions into one.

Contact

If you have questions regarding this document or would like more information, please contact the appropriate DMWM supervisor or the Central Office Authorizing Actions and Engineering Unit at (614) 644-2621.
Central District Office (614) 728-3778
Northeast District Office (330) 963-1200
Northwest District Office (419) 352-8461
Southeast District Office (740) 385-8501
Southwest District Office (937) 285-6357

Disclaimer

The procedures set out in this document are intended solely for guidance of government personnel. The procedures are not intended and cannot be relied upon to create rights, substantive or procedural, enforceable by any party against Ohio EPA. While this guidance document is not legally binding, all statutes and rules referenced herein are binding and enforceable. Ohio EPA reserves the right to vary this guidance or to change it at any time without public notice and also reserves the right to deviate from this guidance on a case-by-case basis.

Ohio Environmental Protection Agency

Guidance Document 1003
March 2010

Considerations for Development On or Adjacent To a Closed Solid Waste Landfill

Introduction

Over the past decade, Ohio has seen a significant increase in development on closed solid waste landfills. The purpose of this document is to provide developers, as well as planning and development agencies, an outline of the general requirements and expectations of Ohio EPA when development is proposed on or adjacent to a closed solid waste landfill.

The primary authorization required from Ohio EPA to proceed with construction on, and in some cases adjacent to, a closed landfill is prescribed by Ohio Revised Code (ORC) Section 3734.02(H) and Ohio Administrative Code (OAC) Rule 3745-27-13. This is often referred to as a "Rule 13" authorization. In addition, other authorizations may be required from Ohio EPA to move forward with the project, including permits for air pollution control, installation of a public drinking water system, and surface water and storm water management. Authorizations may also be required from local and federal agencies, including the U.S. Army Corps of Engineers, the local Soil and Water Conservation district, and other agencies. It is also important to note that every landfill and every proposed development activity is unique. The local Ohio EPA office should be contacted early in the planning process to discuss the specifics of the project. The contact number for the Ohio EPA District Offices can be found at www.epa.ohio.gov/Directions.aspx.

Where Do I Start?

When a landfill is being proposed for redevelopment, a number of items must be considered. These include: age of the landfill, depth and height of waste, type of waste disposed, the need to relocate waste, any unique post closure issues or environmental impacts, and the actual redevelopment activities proposed. Ohio EPA's experience has shown that for landfill redevelopments to be protective of human health, public safety, and the environment, engineering enhancements and administrative controls are necessary.

These may include the installation and operation of a final cover system meeting or exceeding current design standards, vapor barrier systems, a perimeter leachate collection system, an explosive gas management system, and activity and use limitations enacted through recorded environmental covenants. In addition, adequate financial assurance for a landfill construction project will likely be required prior to the time when waste will first be disturbed.

Ohio EPA, Division of Solid and Infectious Waste Management
P.O. Box 1049
Columbus, Ohio 43216-1049
(614) 644-2621

OhioEPA

It is also important that the design of all utility systems (gas, electric, drinking water, telecommunications, storm water, and sanitary sewer) be constructed in a manner protective of human health, public safety, and the environment. Ohio EPA permitting requirements will likely apply to the construction of storm and sanitary sewer lines and public water supply lines.

Below is a broad list of additional items which must be considered when there is a proposed construction project on or adjacent to a closed solid waste landfill. This is not an exhaustive list and further items may need to be considered based on site specific conditions.

Environmental Considerations when Developing on or Near a Closed Landfill

Solid Waste

- Authorization under Rule 13 is necessary for all environmental and geotechnical investigatory work.
- Engineering controls and gas monitoring may be necessary to ensure there is no vapor intrusion or gas migration into buildings or leaving the project area through utility trenches.
- Construction of buildings on a landfill may require buildings to be constructed on pilings or other specialized support systems. This geotechnical design needs to be considered in the Rule 13 application.
- Settlement of the landfill throughout the life of the redevelopment needs to be considered for building, parking lot, and utility maintenance. Significant settlement should be anticipated if waste is to be relocated and recompacted as a part of the project.
- Leachate management may be necessary as part of the project. Leachate is any liquid which comes in contact with waste. Added weight on the landfill may cause leachate outbreaks.
- Relocation of waste presents a number of concerns that must be addressed. These include operational issues, odor control concerns, engineering challenges, and potential for future settlement. Any waste or leachate which is removed from the site must be characterized in accordance with OAC Rule 3745-52-11 to determine if the waste is a hazardous waste.
- Any public and private entities that may become part of the chain of title as new property owners are subject to background check requirements in ORC Sections 3734.41 through 47.
- Construction on a landfill will likely require financial assurance for closure and post closure care. Post closure care can be extended by the director of Ohio EPA. It is not uncommon for Ohio EPA to require financial assurance for 30 years of post-closure care. The financial assurance provides Ohio EPA insurance that if a project is started but not completed, Ohio EPA has the financial resources to adequately close and monitor the site.

Surface Water

- A general NPDES construction site storm water permit is required for any construction project disturbing one or more acres of land. The permit requires the applicant to develop a pollution prevention plan and ensure that storm water run-off from the site is properly controlled during and after construction.
- Any impact to "waters of the state" such as wetlands or streams on the property requires a 401 Water Quality Certification from Ohio EPA and may also require a 404 permit from the U. S. Army Corps of Engineers.
- A permit to install (PTI) is required from the Ohio EPA Division of Surface Water for the installation of a sanitary sewer, on-site septic system or package treatment system, holding tank, or other wastewater treatment system.

Drinking Water

Waterline alignments must avoid sources of contamination. Waterlines cannot be located in liquid waste or in waste located within soil subject to seasonal or permanent ground water. There will likely be special construction techniques, such as clay backfill, plugged hydrant weep holes, plastic pipe restrictions, and alternate alignments for routing of waterlines around areas of known or suspected areas of contamination. Applicants are required to submit detailed plans for public water supplies to Ohio EPA Division of Drinking and Ground Waters before construction can begin. The plans must be prepared and submitted by a professional engineer registered in the State of Ohio. The plans and supporting information must include the following:

- A site development map which clearly shows the following items within the project limits:
  - the proposed waterline(s) and all existing waterline(s);
  - buildings, roads, railroad tracks, and easements;
  - all underground utilities, including sanitary and storm sewers, storm ditches and outfalls, and surface water drainage ways;
  - all on-site ground water wells (private and public potable, non-potable, monitoring, test, and geotechnical);
  - all potential sources of sanitary risk, including known or suspected limits of waste placement (vertical and horizontal limits), underground storage tanks, etc.
- Environmental sampling/boring data collected along the waterline alignment. The data must include the following, at a minimum:
  - depth to ground water and direction of flow;
  - information regarding any perched water table(s);
  - information regarding high ground water levels, including seasonal variations;
  - boring material characterization (boring logs);
  - chemical analysis results for contaminants of concern along the waterline alignment (generally from the boring holes).
- Ownership information for the waterline. This includes identifying who the owner will be, who will bill for the water supplied, and who will maintain/repair the waterline(s).

Air Pollution

- Development on closed landfills and waste relocation projects will require reasonably available control measures (RACM) for fugitive emissions from the construction activities.
- Contingencies in the event that regulated asbestos materials are discovered should be considered.

Conclusions and Recommendations

Redeveloping on or adjacent to a closed landfill can be challenging and complex, from both a technical and regulatory perspective. That is why it is very important that any prospective developer or planning agency interested in a landfill property contact Ohio EPA early in the planning process to help determine the feasibility of redeveloping the landfill and to help ensure that all parties have a clear understanding of the scope of the project, regulatory requirements, and typical time frames for processing various authorizations for the project. Early and up front communication can help avoid costly mistakes and set the stage for successfully moving a project through redevelopment.

As a starting point, anyone interested in knowing more about landfill redevelopment should contact their local Ohio EPA district office, Division of Solid & Infectious Waste Management. The contact number for the Ohio EPA District Offices can be found at www.epa.ohio.gov/Directions.aspx. For additional guidance regarding Rule 13 please see Ohio EPA Guidance Document #631, Implementation of Rule 13 [OAC 3745-27-13].