

HOURS OF OPERATION

7:30 a.m.-3:30 p.m.

Monday-Friday

Closed Saturday and Sunday

GENEVA LANDFILL and Disposal Facility

WM's Geneva Landfill and Disposal Facility is an integral piece of the greater Ashtabula area as the leading provider of waste services for commercial customers as well as community members since the 1970s. Collecting from various neighboring Ohio counties, Geneva Landfill works to create cleaner Ohio communities, featuring modern technology, a renewable energy plant, and a Wildlife Habitat Certified space.

The landfill is a Type II solid waste disposal facility that also creates renewable energy. Geneva Landfill is owned and operated by WM, the leading provider of comprehensive waste and recycling services in North America.

Containment Design

The entire site has been constructed with an engineered liner and leachate collection system. The double composite liner system at Geneva is comprised of a 3-foot thick re-compacted clay liner, a 60-mil high density polyethylene liner, a geo-composite drainage layer, and a 1-foot thick sand protective cover layer as part of the leachate collection system.

Leachate Collection and Treatment

Leachate is a liquid, primarily precipitation, that passes through the waste. The leachate collects in a combination of granular soil layers, geosynthetic drainage layers and a network of pipes that direct the liquid to sumps for removal. The sumps are fitted with pumps with automatic controls that pump the liquid from the landfill. The leachate is then pumped to the sanitary sewer system for treatment at a wastewater treatment plant.

Groundwater Monitoring

In accordance with OEPA and ACHD (Ashtabula County Health Department), the facility monitors surface water, groundwater and air emissions. There are 29 groundwater monitoring wells around the site that monitor the groundwater that flows below the landfill. The wells are sampled annually by a third-party consultant.

Landfill Gas Management

The gas collection system is expanded regularly and is currently comprised of approximately 90 extraction wells. The methane gas is then transferred to a renewable energy plant on-site, which is designed to generate 4 megawatts of electricity, enough to power 3,200 homes. The electricity generated at the landfill goes into the electrical power grid.

Security

Site security is ensured by controlled, limited access to the facility through the gatehouse as well as perimeter fencing and natural barriers.



**YEAR OPENED**

1969

FACILITY ACREAGE

436.5 acres

PERMITTED FOOTPRINT

118 acres

REMAINING PERMITTED CAPACITY

11,307,885 cubic yards

APPROXIMATE TONS PROCESSED ANNUALLY

Approximately 150,000 tons

OWNERSHIP

Waste Management of Michigan, Inc.

PERMIT TYPE & PERMIT #

Solid waste PTI (permit to install) issued in 2023
PTI-768895

REGULATORY AGENCIES

Geneva is regulated by the OEPA division of solid waste, air, groundwater, and surface water, as well as the ACHD (Ashtabula County Health Department).

EMPLOYEES

9

ACCEPTABLE MATERIAL

- Asbestos-Non-Friable
- Auto Shredder Fluff
- Biosolids
- Construction & Demolition Debris
- Municipal Solid Waste
- NORM/TENORM (Naturally Occurring Radioactive Material)
- Oilfield Wastes (E&P Exempt and Non E&P Exempt)
- Sludges - Industrial (Non regulated/Non RCRA)
- Soils - Clean
- Soils - Contaminated (Non Haz)
- Treated Wood

UNACCEPTABLE MATERIAL

- Hazardous Waste

RISK MITIGATION

WM provides the highest level of services, backed with state-of-the-art site design and management systems, to help minimize risks and reduce liabilities.

COMMUNITIES SERVED

WM believes in making a strong commitment to the local community. Each year, Geneva participates in several programs and organizations that encourage a vital community.

VICKERY ENVIRONMENTAL, INC.

WM's Vickery Environmental Inc. is a state-of-the art deepwell injection facility, utilizing advanced technology to safely and permanently dispose of hazardous liquid waste in compliance with all local, State, and Federal USEPA regulations. The site has been operating since 1958, providing a critical disposal resource for hazardous liquid waste material. Before deepwell disposal, liquid wastes are first analyzed, then stored in large aboveground tanks, then treated and filtered. Next, they are transferred to one of four fully permitted Class I Injection Wells, each of which is constructed of solid fiberglass tubing surrounded by four to six encasement layers of steel and concrete.

The treated wastes are injected approximately 3,000 feet below ground level into a 520 million year-old sandstone formation (Mt. Simon formation) that is between layers of impermeable rock. The wastes are safely contained there indefinitely, isolated from people, animals, plants and drinking water resources.

Containment Design

The injection wells include a multi-layer design of steel and concrete casings to ensure proper performance and environmental protection. Wells are also designed with an annular space filled with fluid at a higher pressure than the pressure in the injection tubing.

Groundwater Monitoring

In accordance with the OEPA and USEPA, the site features a network of 31 groundwater monitoring wells, 8 of which are sampled bi-annually.

Security

Site security is ensured by controlled, limited access to the facility through the gatehouse as well as 6-foot perimeter fencing and natural barriers. During non business hours this facility is monitored by 24-hour electronic surveillance with closed-circuit cameras at select locations.

Typical Industry Waste Types

Galvanizers	Acid Tanks, Quench Water, Pre-flux Solutions, Sump Pit Waters
Metal Platers	Chrome Plating, Electroplating, Electroless Nickel/Zinc Plating
Steel Manufacturers	Hydrochloric/Sulfuric Pickle Liquors, HF/nitric Acids from Stainless Steel Pickling
Landfills	Hazardous and Non-Hazardous Leachate
Chemical Manufacturers	By-Product Wastewaters, Scrubber Solutions
TSDP's	Scrubber Waters, Bulking Materials, Trans Shipped Waste
Site Cleanup Contractors/EPA Contractors	Groundwater, Spill Cleanups, Facility Closures, Tank Cleanouts

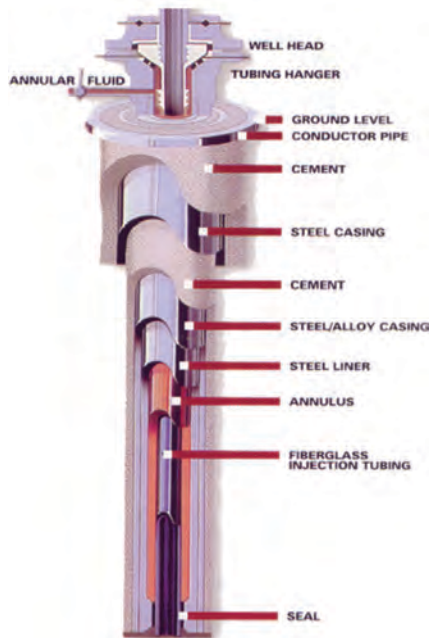
Vickery Environmental Inc.

4956 State Route 412
Vickery, OH 43464
419.547.7791

HOURS OF OPERATION

7:00 a.m.-4:00 p.m.
Monday-Friday
Closed Saturday and Sunday





After treatment, the waste is transferred to an injection well, where the multi-layer design of the well (pictured to the left) protects the environment from effects of the waste.



YEAR OPENED

1958

PROJECTED LIFE REMAINING

40+ years

FACILITY ACREAGE

588 acres

ACTIVE ACREAGE

88 acres

APPROXIMATE TONS PROCESSED ANNUALLY

Approximately 110,000 tons

OWNERSHIP

Vickery Environmental Inc., a subsidiary of Waste Management of Ohio Inc.

PERMIT TYPE & PERMIT

US EPA ID: OHDO20273819
RCRA, UIC, NPDES,
Land Ban Exempt
Renewed in 2015 by US EPA

REGULATORY AGENCIES

The OEPA and US EPA

EMPLOYEES

22

ACCEPTABLE MATERIAL

- Hydrochloric Acid
- Sulfuric Acid
- Chromic Acid
- Nitric Acid
- Hydrofluoric Acid
- Phosphoric Acid
- Ammonium Wastes
- Brines
- CERCLA Wastes
- Landfill Leachate (non-haz and FO39)
- Lean Waters (<5% VOC's)
- Caustics
- Haz and Non-Haz Wastewaters
- Mixed Acids
- Boiler/Tank Cleanouts
- All Waste Codes except FO20-23, FO26-28

LIMITATIONS

- Reactive cyanides must be less than 250 ppm
- Reactive sulfides must be less than 500 ppm
- Flashpoint must be greater than 550 °F
- Volatile Organic Compounds must be less than 5%
- PCB's must be less than 25 ppm and non-TSCA
- Oil content must be less than 10%

UNACCEPTABLE MATERIALS

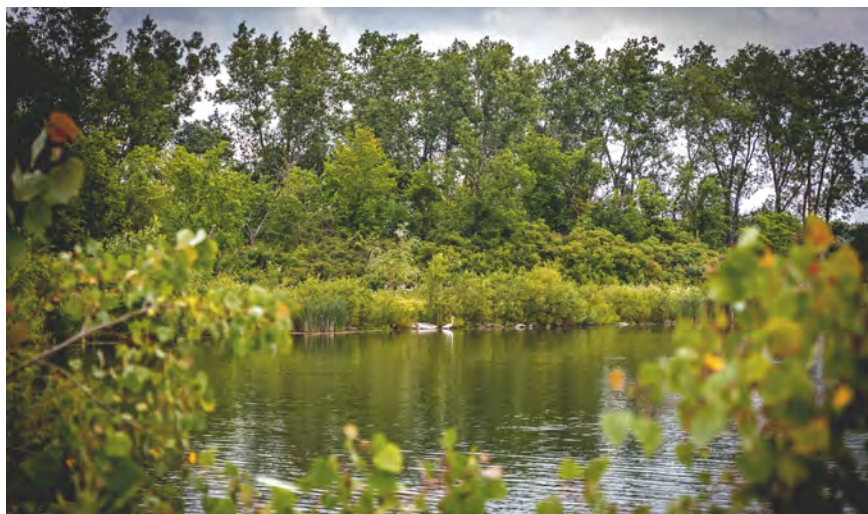
- Radioactive Wastes
- Shock Sensitive Wastes
- Infectious Wastes

RISK MITIGATION

WM provides the highest level of services, backed with state-of-the-art site design and management systems, to help minimize risks and reduce liabilities.

COMMUNITIES SERVED

WM believes in making a strong commitment to the local community. Each year, Vickery Environmental participates in several programs and organizations that encourage a vital community.



PINE TREE ACRES LANDFILL

Pine Tree Acres Landfill is a regional facility that provides safe and convenient disposal services for communities, businesses and industries. The only active landfill in Macomb County, Pine Tree Acres Landfill provides services for communities located primarily in southeast Michigan. For more than 20 years, WM has partnered with Wildlife Habitat Council (WHC) to promote sustainability, wildlife preservation, biodiversity and environmental education at the company's WHC-certified sites.

At Pine Tree Acres Landfill, employees actively manage 100 acres for conservation projects focused on birds, awareness and community engagement, landscaping and wetlands. The conservation program at Pine Tree Acres Landfill has been WHC-certified since 2010.

Containment Design

Pine Tree Acres Landfill is constructed predominantly with a composite liner system comprised of a 2-foot thick re-compacted clay liner (or equivalent) overlaying a 10-foot thick natural clay soil barrier, followed by a 60-mil high density polyethylene liner and a 1-foot thick granular leachate collection layer to ensure that waste and leachate are contained and isolated from soil and groundwater.

Leachate Collection and Treatment

Leachate is a combination of precipitation mixed with the liquid generated by waste as it decomposes. A majority of leachate is directly discharged to the local sewer system where it is treated at a publicly owned water treatment facility.

Groundwater Monitoring

The site implements an Environmental Monitoring Program consisting of 20 groundwater monitoring wells, five surface water monitoring points, and 19-gas monitoring probes. All locations are monitored by an independent third party a minimum of once per quarter.

Landfill Gas Management

The gas collection system is expanded regularly at the site and is currently comprised of over 700 wells that are monitored routinely. There are 19 gas probes that surround the site to test for any migration of landfill gas. Pine Tree Acres produces enough renewable energy to power over 19,000 homes.

Security

Site security is ensured by controlled, limited access to the facility through the scalehouse as well as perimeter fencing and natural barriers. During non-business hours this facility is monitored by 24-hour electronic surveillance.

PINE TREE ACRES LANDFILL

36600 29 Mile Rd

Lenox, MI 48048

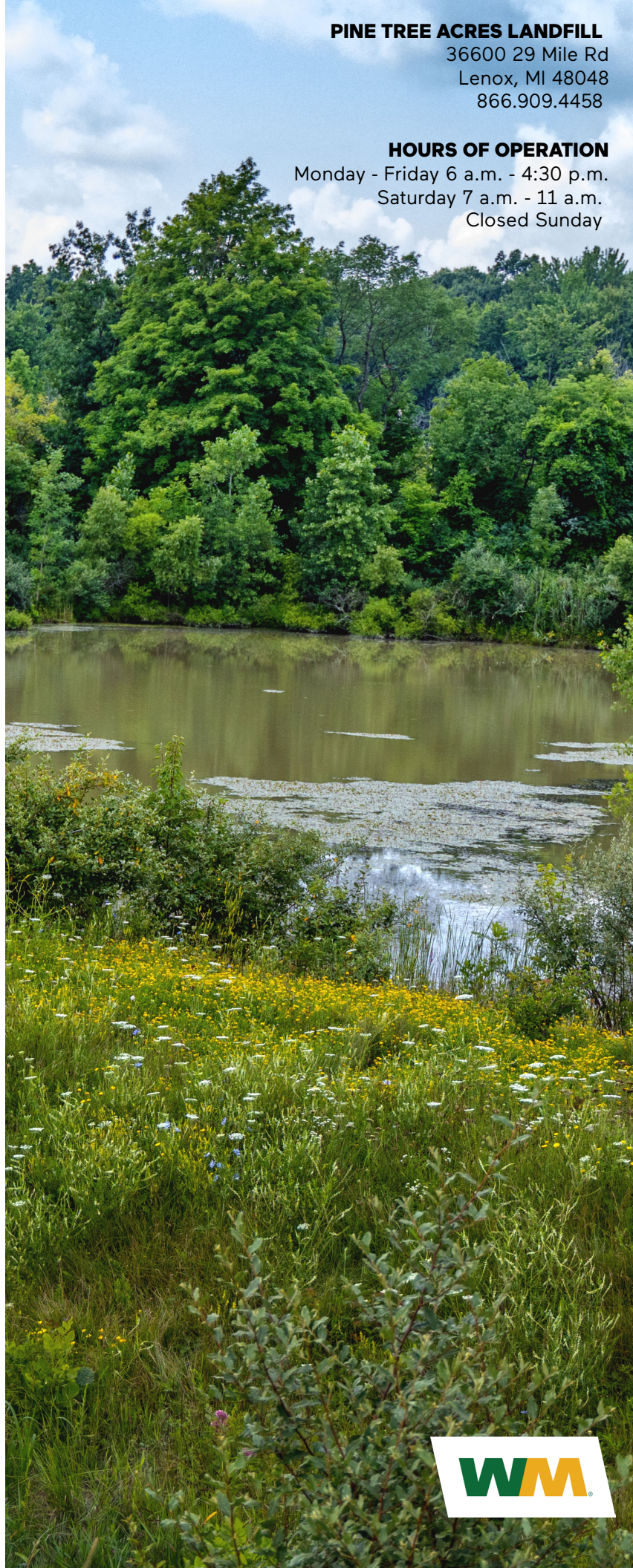
866.909.4458

HOURS OF OPERATION

Monday - Friday 6 a.m. - 4:30 p.m.

Saturday 7 a.m. - 11 a.m.

Closed Sunday





YEAR OPENED

1987

FACILITY ACREAGE

742 acres

PERMITTED FOOTPRINT

377 acres

APPROXIMATE TONS PROCESSED ANNUALLY

3 million tons

OWNERSHIP

WM of Michigan, Inc.

PERMIT TYPE & PERMIT

Solid Waste Disposal Area Operating License #9539

REGULATORY AGENCIES

Pine Tree Acres is regulated by the Michigan Department of Environment, Great Lakes, and Energy (EGLE) and works closely with its host community, Lenox Township, to ensure compliance with all state and federal regulations.

EMPLOYEES

32

ACCEPTABLE MATERIAL

- Asbestos - Friable/Non Friable
- Auto Shredder Fluff
- Construction & Demolition (C&D) Debris
- Drum Management - Solids
- Industrial & Special Wastes
- Municipal Solid Wastes (MSW)
- NORM (Naturally Occurring Radioactive Material)
- Tires - Halved/Shredded

UNACCEPTABLE MATERIAL

- Beverage Containers
- Freon Containing Appliances
- Hazardous Waste
- Liquids
- Uncrushed Empty Drums
- Whole Tires
- Yard Waste

RISK MITIGATION

WM provides the highest level of services, backed with state-of-the-art site design and management systems, to help minimize risks and reduce liabilities.

COMMUNITIES SERVED

Pine Tree Acres Landfill is proud to be an active supporter of community events and programs that make Macomb County and its surrounding cities a strong and healthy place to live, work and play.