

STATE and NPDES PERMIT

**issued to**

Hyponex Corporation  
14111 Scottslawn Road  
Marysville, Ohio 43041

**Location Address:**  
Hyponex Corporation  
20 Industrial Park Road  
Lebanon, CT 06249

**Facility ID:** 071-019

**Permit ID:** CT0030431

**Permit Expires:** February 9, 2011

**Watershed:** Shetucket River

**Basin Code:** 3800

**SECTION 1: GENERAL PROVISIONS**

- (A) This permit is issued in accordance with section 22a-430 of Chapter 446k, Connecticut General Statutes ("CGS"), and Regulations of Connecticut State Agencies ("RCSA") adopted thereunder, as amended, and section 402(b) of the Clean Water Act, as amended, 33 USC 1251, et. seq., and pursuant to an approval dated September 26, 1973, by the Administrator of the United States Environmental Protection Agency for the State of Connecticut to administer an N.P.D.E.S. permit program.
- (B) Hyponex Corporation, ("Permittee"), shall comply with all conditions of this permit including the following sections of the RCSA which have been adopted pursuant to Section 22a-430 of the CGS and are hereby incorporated into this permit. Your attention is especially drawn to the notification requirements of subsection (i)(2), (i)(3), (j)(1), (j)(6), (j)(8), (j)(9)(C), (j)(11)(C), (D), (E), and (F), (k)(3) and (4) and (l)(2) of section 22a-430-3.

Section 22a-430-3 General Conditions

- (a)Definitions
- (b)General
- (c)Inspection and Entry
- (d)Effect of a Permit
- (e)Duty
- (f)Proper Operation and Maintenance
- (g)Sludge Disposal
- (h)Duty to Mitigate
- (i)Facility Modifications; Notification
- (j)Monitoring, Records and Reporting Requirements
- (k)Bypass
- (l)Conditions Applicable to POTWs
- (m)Effluent Limitation Violations (Upsets)
- (n)Enforcement
- (o)Resource Conservation
- (p)Spill Prevention and Control
- (q)Instrumentation, Alarms, Flow Recorders
- (r)Equalization

22a-430-4 Procedures and Criteria

- (a) Duty to Apply
- (b) Duty to Reapply
- (c) Application Requirements
- (d) Preliminary Review
- (e) Tentative Determination
- (f) Draft Permits, Fact Sheets
- (g) Public Notice, Notice of Hearing
- (h) Public Comments
- (i) Final Determination
- (j) Public Hearings
- (k) Submission of Plans and Specifications. Approval.
- (l) Establishing Effluent Limitations and Conditions
- (m) Case by Case Determinations
- (n) Permit issuance or renewal
- (o) Permit Transfer
- (p) Permit revocation, denial or modification
- (q) Variances
- (r) Secondary Treatment Requirements
- (s) Treatment Requirements for Metals and Cyanide
- (t) Discharges to POTWs - Prohibitions

- (C) Violations of any of the terms, conditions, or limitations contained in this permit may subject the permittee to enforcement action, including but not limited to, seeking penalties, injunctions and/or forfeitures pursuant to applicable sections of the CGS and RCSA.
- (D) Any false statement in any information submitted pursuant to this permit may be punishable as a criminal offense under section 22a-438 or 22a-131a of the CGS or in accordance with section 22a-6, under section 53a-157 of the CGS.
- (E) No provision of this permit and no action or inaction by the Commissioner shall be construed to constitute an assurance by the Commissioner that the actions taken by the permittee pursuant to this permit will result in compliance or prevent or abate pollution.
- (F) The authorization to discharge under this permit may not be transferred without prior written approval of the Commissioner. To request such approval, the permittee and proposed transferee shall register such proposed transfer with the Commissioner, at least 30 days prior to the transferee becoming legally responsible for creating or maintaining any discharge which is the subject of the permit transfer. Failure, by the transferee, to obtain the Commissioner's approval prior to commencing such discharge(s) may subject the transferee to enforcement action for discharging without a permit pursuant to applicable sections of the CGS and RCSA.
- (G) Nothing in this permit shall relieve the permittee of other obligations under applicable federal, state and local law.
- (H) An annual fee shall be paid for each year this permit is in effect as set forth in section 22a-430-7 of the Regulations of Connecticut State Agencies.
- (I) The permittee shall, within seven days of the issuance of this permit, record a copy thereof on the land records, in the Town of Lebanon.

## SECTION 2: DEFINITIONS

(A) The definitions of the terms used in this permit shall be the same as the definitions contained in section 22a-423 of the CGS and section 22a-430-3(a) and 22a-430-6 of the RCSA.

(B) In addition to the above the following definitions shall apply to this permit:

“5-year, 24-hour rainfall event” means the maximum 24-hour precipitation event with a probable recurrence interval of once in 5 years, as defined, as of the date on which this permit is issued, by the National Weather Service in Technical Paper Number 40, “Rainfall Frequency Atlas of the United States”, May 1961, and subsequent amendments, or equivalent regional or state rainfall probability information developed therefrom.

“25-year, 24-hour rainfall event” means the maximum 24-hour precipitation event with a probable recurrence interval of once in 25 years, as defined, as of the date on which this permit is issued, by the National Weather Service in Technical Paper Number 40, “Rainfall Frequency Atlas of the United States”, May 1961, and subsequent amendments, or equivalent regional or state rainfall probability information developed therefrom.

“Annual” in the context of a sampling frequency, shall mean the sample must be taken in the month of May.

“Design rainfall event” is equivalent to a 5-year, 24-hour rainfall event. Design events also include tornadoes, hurricanes, or other conditions that would cause an overflow from the retention structures that are designed, constructed, operated, and maintained to meet all the requirements of this permit.

“Chronic rainfall” means a series of wet weather events that prevent the dewatering of properly maintained retention structures.

“Quarterly”, in the context of a sampling frequency, shall mean sampling is required in the months of February, May, August and November.

“Land application”, means the application of stormwater discharges associated with a commercial composting facility from a commercial composting operation onto, or incorporation into, the soil.

“Land application area” means any land owned, leased or otherwise controlled by the owner/operator for the purpose of land applying stormwater discharges associated with a commercial composting facility from the commercial composting operation.

“Stormwater discharges associated with a commercial composting facility” means any water directly or indirectly used in, or resulting from, the operation of the commercial composting operation, including any of the following:

- Spillage or overflow from compost watering systems
- Dust control
- Leachate from compost
- Wastewater generated in the production or storage of intermediate or final products
- Stormwater that comes into contact with any production area, raw materials, or products or byproducts of the operation.

“Production area” means the raw materials storage areas, the compost and alum fields with associated road networks, and finished product storage and processing areas.

“Retention facility or retention structures” means all ditches, conduits, swales, basins, ponds, and lagoons used to collect and store stormwater discharges associated with a commercial composting facility.

### SECTION 3: COMMISSIONER'S DECISION

- (A) The Commissioner of Environmental Protection (hereinafter "the Commissioner") has made a final determination and found that the system installed for the treatment of the discharge, will protect the waters of the state from pollution. The Commissioner's decision is based on **application #200000061** for permit issuance, received on January 7, 2000 and the administrative record established in the processing of that application.
- (B) The Commissioner hereby authorizes the Permittee to discharge under a design rainfall event or chronic rainfall conditions from facilities designed, constructed and operated to hold stormwater discharges associated with a commercial composting facility, and the runoff from at least a 5-year, 24-hour rainfall event; and land application of stormwater discharges associated with a commercial composting facility in accordance with the provisions of this permit, the above referenced application, and all approvals issued by the Commissioner or his authorized agent for the discharges and/or activities authorized by, or associated with, this permit.
- (C) The Commissioner reserves the right to make appropriate revisions to the permit in order to establish any appropriate effluent limitations, schedules of compliance, or other provisions which may be authorized under the Connecticut General Statutes or regulations adopted thereunder, as amended. The permit as modified or renewed under this paragraph may also contain any other requirements of the Connecticut General Statutes or regulations adopted thereunder which are then applicable.

### SECTION 4: EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

- (A) The Permittee shall assure that groundwater affected by the subject discharge shall conform to the Connecticut Water Quality Standards.
- (B) Any limits imposed on the discharges listed in this permit take effect on the issuance date of this permit, hence any sample taken after this date which, upon analysis, shows an exceedance of permit limits will be considered non-compliance.

The monitoring requirements of this permit begin on the date of issuance of this permit if the issuance date is on or before the 12th day of a month. For permits issued on or after the 13th day of a month, monitoring requirements begin the 1st day of the following month.

- (C) The discharges shall not exceed and shall otherwise conform to specific terms and conditions listed below. The discharges are restricted by, and shall be monitored in accordance with, the tables below.

NOTE: Lagoons, when empty would have capacity to store runoff generated from a 25-year, 24-hour event.

<b>TABLE A</b>			
Discharge Serial No. 101-1		Monitoring Location: J: Lagoon 3	
Wastewater Description: Stormwater discharges associated with a commercial composting facility			
Monitoring Location Description: At pumping inlet Lagoon 3			
<b>PARAMETER</b>	<b>INSTANTANEOUS MONITORING</b>		
	Sample Type	Maximum Concentration	Sample Frequency
BOD <sub>5</sub>	Grab	30 mg/l	Quarterly
Aluminum	Grab		Annually
Barium	Grab		Annually
Chromium	Grab		Annually
Copper	Grab		Annually
Zinc	Grab		Annually

- (D) The treatment facilities shall be monitored, inspected and maintained in accordance with the following schedule:

<b>TABLE B</b>		
<b><u>INSPECTION, MONITORING, or MAINTENANCE</u></b>	<b><u>DISCHARGE SERIAL NO.</u></b>	<b><u>MINIMUM FREQUENCY</u></b>
Mechanical inspection of pump station	101-1	Monthly
Mechanical inspection of gross particle separator		Annually
Visual inspection of collection swales	101-1	Monthly
Visual inspection of settling lagoons and basins	101-1	Monthly
Visual inspection of diversion structures	101-1	Monthly
Visual inspection of catch basins		Quarterly
Visual inspection of riprapped waterways	101-1	Monthly
Visual inspection of spillways and discharge	101-1	Monthly
Visual inspection of clean water diversion system		Quarterly
Remove sedimentation from settling basins	101-1	At least twice a year
Clean out water diversion structures	101-1	Annually or as needed
Clean out catch basins		Annually or as needed
Clean out gross particle separator		Annually
Repair collection swales	101-1	As needed
Depth of liquid in lagoons	101-1	Monthly
Depth of sediment in lagoons	101-1	Annually
Dredging of lagoons	101-1	As needed
Mow grassed swales and lagoon embankments	101-1	At least once a year

- (E) The permittee shall perform the following ground and surface water monitoring in accordance with the monitoring plan approved by the Commissioner:

<b>TABLE C (GROUNDWATER MONITORING)</b>			
<b>DISCHARGE SERIAL NO.</b> 101A, 101B, 101C, 101D, 101E, 101F		<b>MONITORING LOCATION:</b> (W-downgradient)	
<b>GROUND WATER MONITORING WELL NO.:</b> B2*, B3, B4, B5, and I1, I2		<b>DESCRIPTION:</b> (monitoring wells downgradient of composting activities and of irrigation field )	
Average Daily Flow: 1.5 acre ft./day or 477,900 gpd		Maximum Daily Flow: 2.2 acre ft./day or 716,800 gpd	
<b>PARAMETER</b>	<b>UNITS</b>	<b>MINIMUM FREQUENCY OF SAMPLING</b>	<b>SAMPLE TYPE</b>
Groundwater Depth	Ft, in	Quarterly	Instantaneous
Nitrogen, Ammonia	mg/l	Quarterly	Grab
Nitrogen, Nitrate	mg/l	Quarterly	Grab
Nitrogen, Nitrite	mg/l	Quarterly	Grab
Nitrogen, Total Kjeldahl	mg/l	Quarterly	Grab
Nitrogen, Total	mg/l	Quarterly	Grab
Phosphorus, Total	mg/l	Quarterly	Grab
Aluminum**	mg/l	Annually	Grab
Copper**	mg/l	Annually	Grab
Zinc**	mg/l	Annually	Grab
pH	S.U.	Quarterly	Instantaneous
BOD	mg/l	Quarterly	Grab
Color		Quarterly	Grab

\*Note: B2 to be sampled quarterly only for Nitrate and Total Phosphorus.

\*\*Only monitoring wells downgradient of irrigation field are to be monitored annually for Aluminum, Copper and Zinc (I1 and I2).

<b>TABLE D (SURFACE WATER MONITORING)</b>			
<b>DISCHARGE SERIAL NO.</b> 101A		<b>MONITORING LOCATION:</b> (W-downgradient )	
<b>SURFACE WATER SAMPLING POINT:</b> SW5		<b>DESCRIPTION:</b>	
<b>PARAMETER</b>	<b>UNITS</b>	<b>MINIMUM FREQUENCY OF SAMPLING</b>	<b>SAMPLE TYPE</b>
Color		Quarterly	Grab
Nitrogen, Ammonia	mg/l	Quarterly	Grab
Nitrogen, Nitrate	mg/l	Quarterly	Grab
Nitrogen, Nitrite	mg/l	Quarterly	Grab
Nitrogen, Total Kjeldahl	mg/l	Quarterly	Grab
Nitrogen, Total	mg/l	Quarterly	Grab
pH	S.U.	Quarterly	Instantaneous
Phosphorus, Total	mg/l	Quarterly	Grab
BOD5	mg/l	Quarterly	Grab

TSS	mg/l	Quarterly	Grab
Aluminum	mg/l	Annually	Grab
Copper	mg/l	Annually	Grab
Zinc	mg/l	Annually	Grab

- (F) The permittee shall perform annual monitoring of the discharge at the diversion structure at the south end of lagoon #3 and analyzing such sample for the parameters listed above in Table D.

**SECTION 5: SAMPLE COLLECTION, HANDLING and ANALYTICAL TECHNIQUES AND REPORTING REQUIREMENTS**

- (A) Chemical analyses to determine compliance with effluent limits and conditions established in this permit shall employ methods approved by the Environmental Protection Agency pursuant to 40 CFR 136 unless an alternative method has been approved in writing in accordance with 40CFR 136.4.
- (B) The results of chemical analysis and treatment facilities monitoring required by Section 4 shall be entered on the Discharge Monitoring Report (DMR), provided by this office, and reported to the Water Management Bureau, at the following address, by the end of the month following the month in which the samples are taken.

Bureau of Water Management (Attn: DMR Processing)  
Connecticut Department of Environmental Protection  
79 Elm Street  
Hartford, CT 06106-5127

- (C) All metals analyses identified in this permit shall refer to analyses for Total Recoverable Metal as defined in 40CFR136 unless otherwise specified.
- (D) If any sample analysis indicates that an effluent limitation specified in Section 4 of this permit has been exceeded, a second sample of the effluent shall be collected and analyzed for the parameter(s) in question and the results reported to the Commissioner within 30 days of the exceedance.
- (E) The permittee shall, within 2 hours of becoming aware of the circumstances, and at the start of the next business day if he or she becomes aware of the circumstances outside normal business hours, notify the commissioner of any actual or anticipated noncompliance with the terms and conditions of this permit and shall submit a written report to the commissioner within five days thereafter. Such report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue, and steps taken or planned to reduce, eliminate and prevent recurrence of the noncompliance. Actual or anticipated noncompliance may include, but not be limited to, a leak, breach, overflow or other structural failure of a retention facility not caused by a design event but due to improper operation, maintenance or design; or a discharge due to the improper handling of stormwater discharges associated with a commercial composting facility.
- (F) The permittee shall maintain records of standpipe readings prior to and during land application activities.

**SECTION 6: FACILITY REQUIREMENTS**

- (A) The land application area shall be operated at all times in accordance with the following limits:

- (1) The groundwater table shall not rise closer than one foot to the ground surface in the irrigation area as a result of land application.
  - (2) No spray irrigation shall be conducted when air temperature is below 10 degrees F or when groundwater is within one foot of the ground surface or when runoff is occurring.
  - (3) The actual maximum hourly rate of application of stormwater discharges associated with a commercial composting facility shall not exceed 0.20 inches per hour.
  - (4) There shall be a minimum 12-hour rest period between spray applications for any spray area.
  - (5) Spray irrigation shall be conducted during daylight hours only.
  - (6) No spray irrigation shall be conducted during precipitation events.
  - (7) Standpipes SP-1 through SP-4, located within the land application area, shall be monitored for groundwater depth monthly during the spray irrigation season and during spray irrigation events.
- (B) Should a significant change in operations occur (i.e., new waste streams are introduced at the facility) or if odor complaints related to lagoon operation occur, a review of facility operations shall be undertaken immediately by the owner/operator to determine if a one-time condition exists or if conditions have changed at the facility which would be expected to have the potential to produce odors on a sustained basis. Should the latter be the case, and it is determined that the odors are caused by lagoon conditions, aerators in the lagoons shall be placed into service at once and the need for installation of the floating baffles shall be evaluated. Details regarding the incident(s) that trigger(s) use of the lagoon aerators as well as recommendations for installation of the floating baffles shall be reported in writing to the Water Management Bureau within 48 hours of such incident(s).

This permit is hereby issued on the 10<sup>TH</sup> DAY OF FEB, 2006.

GINA MCCARTHY  
Gina McCarthy  
Commissioner

cc: Local Health Dept.

**DATA TRACKING AND TECHNICAL FACT SHEET**

**PERMIT #:CT0030431      APPLICATION #:200000061**  
**DEP/WPC#: 071-019**

**DISCHARGER NAME AND ADDRESS DATA**

**Permittee: Hyponex Corporation**

**Mailing Address:**

**Location Address:**

Street: Route 207, P.O.B. 143

Street: 20 Industrial Park Road

City: Lebanon      ST: CT Zip 06249

City: Lebanon      St. CT Zip: 06249

**Contact Name:**      Mark W. Kulling

**Contact Name:**      Mark W. Kulling

**PERMIT DURATION**

5 YEAR  10 YEAR  30 YEAR

**DISCHARGE CATEGORIZATION**

POINT      NON-POINT      GIS # \_\_\_\_\_

NPDES    PRETREAT    GROUND WATER(UIC)    GROUND WATER  
(OTHER)

MAJOR      SIGNIFICANT MINOR      MINOR

**COMPLIANCE SCHEDULE**    YES \_\_\_\_\_    NO

POLLUTION PREVENTION    TREATMENT REQUIREMENT    WATER  
CONSERVATION

PERMIT STEPS       WATER QUALITY REQUIREMENT      REMEDIATION  
OTHER

**OWNERSHIP CODE**

Private     Federal     State     Municipal(town only)     Other public

Industry: Commercial Composting

Waste Stream: Stormwater discharge associated with a commercial composting facility

**PERMIT FEES**

DISCHARGE CODE 7220000 REPRESENTING DSN 101-1 ANNUAL FEE \$1,770

**DEP STAFF ENGINEER/ANALYST**

Joe Wettemann/Joe Faryniarz

**PERMIT TYPE**

New  Reissuance  Modification  Subsection-e

**NATURE OF BUSINESS GENERATING DISCHARGE**

The volume reduction facility composts grass, leaves and yard waste in outdoor windrows and recycles residuals from the treatment of drinking water in fields and on earthen and concrete pads on approximately 35 acres of a 166 acre site. The facility was originally established by Earthgro, Inc., which was a wholly owned subsidiary of the Hyponex Corporation. In 2003, Earthgro was merged into Hyponex which assumed all of Earthgro's rights and obligations as part of the merger. At present, Hyponex can compost a maximum 120,000 tons per year of material and amendments. The facility is situated on the eastern side of Lebanon off of Route 207, near a rail line and the junction of Route 32. The property is located in a rural area.

**PROCESS AND TREATMENT DESCRIPTION (by DSN)**

Stormwater discharges associated with the commercial composting facility are collected in one of three lagoons, and then are treated and reused (sprayed onto windrows of yard waste for moisture control or applied to unpaved roadways for dust control) or discharged by the treatment system. Water collected and treated via the lagoon system is land applied (DSN 101-1) by means of irrigation for the purpose of infiltration into the ground. The non-point source discharge meets drinking water quality standards prior to reaching the downgradient wetlands.

**RESOURCES USED TO DRAFT PERMIT**

- Department File Information
- Connecticut Water Quality Standards

**OTHER COMMENTS**

The facility has been used to compost certain waste materials to create a marketable compost product since the mid-1980s. In the late 1980s, the facility had operational problems that violated environmental laws and were the subject of numerous complaints about odors, dust and noise. Additionally, the facility failed to control stormwater discharges in a manner that prevented pollution to the waters of the state. As a result of these problems, the Department issued Consent Order #1256A in 1992, requiring that Earthgro submit an application for a solid waste volume

reduction facility for composting and requiring that the facility comply with applicable laws and regulations of the water, waste and air bureaus of DEP. With regard to the Bureau of Water Management, this consent order required that Earthgro demonstrate compliance with Connecticut's water quality standards.

The Commissioner published notice of a hearing, along with his tentative determination to issue permits to construct and operate, on April 5, 1993 in the Norwich Bulletin and on April 6, 1993 in the Willimantic Chronicle. The tentative determination to issue permits for a volume reduction facility and the water discharge resulted in a multi media hearing spanning many weeks in May of 1993 and was later reconvened in September 1995 to receive additional evidence. In the proposed decision issued on January 8, 1997, the hearing officer in the case recommended that Earthgro be issued a solid waste permit to operate once all water quality issues at the facility are addressed and the discharge permit is issued under CGS sec. 22a-430. The Commissioner adopted this recommendation in a final decision dated March 10, 1997.

As Earthgro, now Hyponex, is currently in compliance with the requirements of the consent order and has completed all water quality improvements on site, the Water Management Bureau is now ready to issue the discharge permit.

On October 6, 2005 the Department published a public notice of tentative determination to issue a 22a-430 discharge permit. The Department received minor written comments on permit wording from Hyponex's counsel. This permit reflects the appropriate changes that were incorporated.