

## **Spray Irrigation Construction Permit**

Issued by: Groundwater Discharges Section  
Division of Water  
Department of Natural Resources  
and Environmental Control  
89 Kings Highway  
Dover Delaware 19901  
302-739-9948

State Permit DEN Number: 359288-01  
Effective Date: October 15, 2013  
Amended Date: November 3, 2017  
Amended Date: August 22, 2018  
Amended Date: August 15, 2019  
Amended Date: August 27, 2020  
Expiration Date: October 14, 2021



AUTHORIZATION TO CONSTRUCT  
UNDER THE LAWS OF THE  
STATE OF DELAWARE

**PERMITTEE: Artesian Wastewater Management, Inc.**  
664 Churchmans Road  
Newark, DE 19702

**FACILITY: Artesian Northern Sussex Regional Water Recharge Facility  
(ANSRWRF)**

1. Pursuant to the provisions of 7 Del. C., 6003, **Artesian Wastewater Management, Inc.** is herein authorized to construct **Phase I** of the ANSRWRF:

**Wastewater Treatment Plant Site:** The Phase I treatment plant components are to be constructed on Sussex County Tax Map/Parcel Number: 2-35 6.00 28.09 along Route 30 approximately 4,000' north of the intersection of Route 16 and Route 30.

**Spray Irrigation Sites:** Sussex County Tax Map/Parcel Numbers listed in Part I.A of this permit.

2. **The construction requirements, and other permit conditions are set forth herein.**

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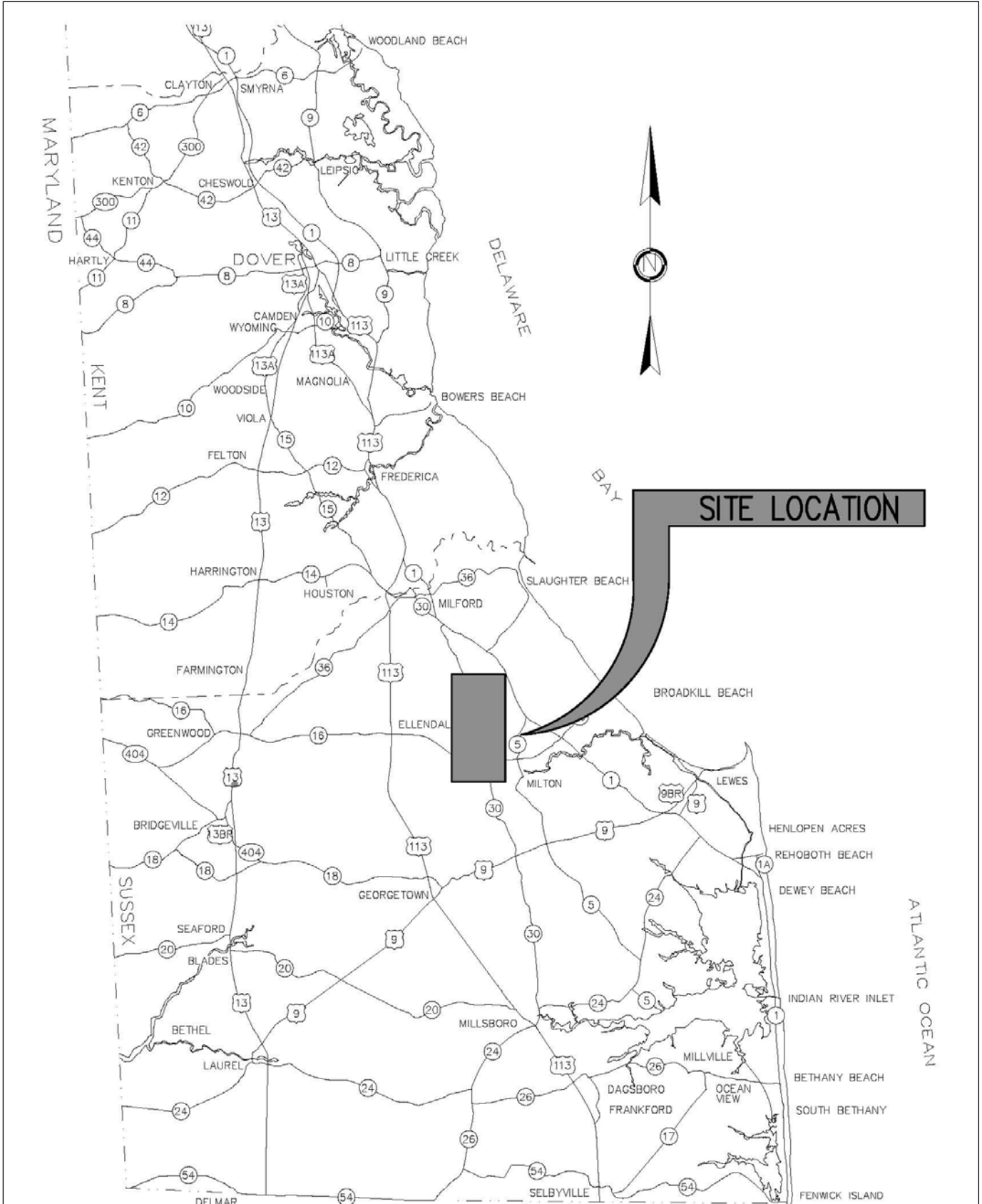
John J. Rebar, Jr.  
Environmental Program Manager I  
Groundwater Discharges Section  
Division of Water  
Delaware Department of Natural Resources  
and Environmental Control

08/27/2020

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Date Signed

### LOCATION MAP



**Part I**

**A. GENERAL DESCRIPTION:**

Artesian Northern Sussex Regional Water Recharge Facility (ANSRWRF) will serve as a regional facility meeting existing and future wastewater needs within the Artesian Wastewater service territories in Sussex County, Delaware.

The effluent is proposed to be utilized for spray irrigation of privately owned agricultural land, under a lease held in perpetuity by Artesian as the wastewater utility provider. Irrigation Sites are listed below.

The wastewater treatment facility is to be constructed on Sussex County Parcel Number: 2-35 6.00 28.09; located on a 75 acre site south of Reynolds Pond Road, east of Route 30, north of Ingram Branch and Route 16, and west of Cedar Creek Road, Sussex County, Delaware.

The facility will be built in three phases. This Permit authorizes the construction of Phase I only. Phase I of the project is to construct a storage lagoon and disposal spray fields, and to accept treated wastewater from Allen Harim Foods, LLC (Allen Harim). The design average daily flow is 1.5 MGD with a peak daily flow of 2.0 MGD. The customers for Phase I consists of a single food processing source, Allen Harim.

**Phase I Spray Irrigation Sites:**

| Field | Sussex County Tax Map ID  | Gross Area <sup>1</sup> (Acres) | Existing Crop Spray Area (Acres) | Proposed Crop Spray Area (Acres) | Proposed Woods Spray Area (Acres) | Total Spray Area (Acres) | Percent Spray (%) |
|-------|---|---------------------------------|----------------------------------|----------------------------------|-----------------------------------|--------------------------|-------------------|
| D     | 235-6.00-11.00<br>235-6.00-11.01 <sup>1</sup><br>235-6.00-11.02<br>235-7.00-1.00<br>235-7.00-164.00 | 125.1                           | 45.3                             | 12.7                             | 32.7                              | 90.7                     | 72.5%             |
| E     | 235-6.00-21.00  | 119.0                           | 83.2                             | 7.3                              | 0                                 | 90.5                     | 76.0%             |
| F     | 235-7.00-7.00   | 126.5                           | 110.5                            | 0                                | 0                                 | 110.5                    | 87.3%             |
| G     | 235-13.00-6.05<br>235-13.00-6.06  | 590.5                           | 241.9                            | 34.2                             | 195.0                             | 471.0                    | 79.8%             |
| Total |   | 961.1                           | 480.9                            | 54.2                             | 227.7                             | 762.7                    |                   |

<sup>1</sup>One parcel from Field D (2-35-6-11.01) is not included in the current Conditional Use Ordinance 1923, adopted July 31, 2007. Spray will not permitted on this parcel until it has been added to an approved Conditional Use.

## **B. DOCUMENTATION:**

Construction shall be in accordance with the following documents:

1. The State of Delaware, Department of Natural Resources and Environmental Control, Regulations Governing the Design, Installation and Operation of On-Site Wastewater Treatment and Disposal Systems (Regulations).
2. Secretary's Order No. 2012-W-0052 issued and effective March 12, 2013.
3. May 5, 2017 Application Package for an Amended Construction Permit for the Artesian Northern Sussex Regional Water Recharge Facility (ANSRWRF) Phase 1 submitted by Artesian Wastewater Management, Inc. Application Package includes: Application Form, Amended Design Development Report (DDR), Drawings and Specifications.
4. August 18, 2017 Amended DDR Addendum 1 submitted by Artesian Wastewater Management, Inc. providing additional information requested.
5. Secretary's Order No. 2017-W-0029 issued and effective November 2, 2017.
6. August 17, 2018 Application for a Construction Permit Extension.
7. Any other correspondence, documentation and/or reports related to the ANSRWRF received and approved by the Department's Groundwater Discharges Section and/or sent by the Department's Groundwater Discharges Section.

## **C. Facility Specific Conditions:**

1. In accordance with Secretary's Order No. 2012-W-0052 Issued and Effective March 12, 2013, Permittee shall:
  - a. Design the treatment plant to look like an agricultural building and have landscaping to screen it from view from its neighbors.
  - b. Ensure that the storage ponds shall not become a breeding ground for mosquitos.
  - c. Maintain all required buffers for the spray fields as set by both the Department and Sussex County.
    - i. Maintain a 100 foot buffer from the wetted field area to the north-west corner of the Sylvan Acres Development.
2. The permittee shall comply with all applicable Sussex county ordinances and conditional use requirements placed on this facility.
3. Wastewater spray irrigation will not be permitted on Field D parcel (2-35-6-11.01) until it is added to an approved Conditional Use. Parcel 2-35-6-11.01 is not included in the current Conditional Use Ordinance 1923, adopted July 31, 2007. Once this parcel has been added to an approved Conditional Use, Permittee must provide a copy of the approved Conditional Use to the Groundwater Discharges Section for approval. Written approval from the Groundwater Discharges Section must be acquired by the permittee prior to wastewater spray irrigation on this parcel.

4. The Department reserves the right to increase required separation/buffer and/or isolation distances at any time for reasons including the following:
  - a. Objection by an adjacent property owner due to aerosol migration onto their property;
  - b. Change in ownership of adjacent property;
  - c. Change in land use of adjacent property.
5. The additional 23 MG storage capacity may not be utilized during Phase I unless under the written authorization of the GWDS or in response to an emergency situation outside the Permittee's control (Force Majeure).
6. The Permittee shall ensure the facility meets the following design criteria:

**Table 3-1: Revised Design Summary Table**

| <i>General Information</i>    |   |                     |
|-------------------------------|---|---------------------|
| Applicant                     | Artesian Wastewater Management, Inc.                                |                     |
| Facility Name                 | Artesian Northern Sussex Regional Water Recharge Facility (ANSRWRF) |                     |
| Facility Location             | Sussex County, Delaware   |                     |
| Responsible Official          | Rodney Wyatt  |                     |
| Activities (Phase 1)          | Storage & disposal of treated wastewater                            |                     |
| Activities (Future Phases)    | Treatment, storage, and disposal                                    |                     |
| Type of Waste (Phase 1)       | Treated food processing   |                     |
| Type of Waste (Future Phases) | Treated food processing and raw sanitary                            |                     |
| Disposal Method               | Spray irrigation to woods and crops                                 |                     |
| Type of Spray System          | Pivot and Solid Set   |                     |
| Public Access Level           | Unlimited Public Access   |                     |
| Nearest Weather Station       | Georgetown 5 SW   |                     |
| Watersheds                    | Broadkill River and Cedar Creek                                     |                     |
| <b>Tax Parcel</b>             | <b>Location</b>   | <b>Area (Acres)</b> |
| 235-6.00-28.09                | ANSRWRF   | 74.62               |
| 230-22.00-1.00                | Spray Field A   | 182.87              |
| 230-21.00-35.00               | Spray Field B   | 77.93               |
| 230-21.00-35.01               | Spray Field B   | 113.69              |
| 230-21.00-13.00               | Spray Field B   | 221.14              |
| 235-7.00-27.00                | Spray Field C   | 157.53              |
| 235-6.00-11.00                | Spray Field D   | 56.78               |
| 235-6.00-11.01 <sup>1</sup>   | Spray Field D   | 6.22                |
| 235-6.00-11.02                | Spray Field D   | 10.46               |
| 235-7.00-164.00               | Spray Field D   | 32.45               |
| 235-7.00-1.00                 | Spray Field D   | 19.23               |
| 235-6.00-21.00                | Spray Field E   | 118.96              |
| 235-7.00-7.00                 | Spray Field F   | 126.51              |
| 235-13.00-6.05                | Spray Field G   | 515.6               |
| 235-13.00-6.06                | Spray Field G   | 74.9                |

1) See discussion in Section 4.3 **Error! Reference source not found.**

**Table 3-1: Revised Design Summary Table (Continued)**

| Parameter  | Value     | Units      |
|--|-----------|------------|
| <i>Influent to Lagoon<sup>1</sup></i>                                  |           |            |
| Daily Flow <sup>2</sup>  | 1.5       | MGD        |
| Peak Daily Flow <sup>2</sup>   | 2.0       | MGD        |
| BOD <sub>5</sub>   | 10        | mg/L       |
| Total Suspended Solids   | 10        | mg/L       |
| Chlorine Residual  | 0.5 – 4   | mg/L       |
| Turbidity  | 5         | NTU        |
| Fecal Coliform   | 20        | col/100 mL |
| Total Nitrogen (as N)  | 30        | mg/L       |
| Ammonia (as N)   | 0         | mg/L       |
| Nitrate/Nitrite (as N)   | 28        | mg/L       |
| Total Phosphorus   | 1.0       | mg/L       |
| Lead   | 0.001     | mg/L       |
| Zinc   | 0.039     | mg/L       |
| Copper   | 0.0072    | mg/L       |
| Nickel   | 0.005     | mg/L       |
| Cadmium  | 0.0005    | mg/L       |
| Aluminum   | 0.2       | mg/L       |
| pH   | 6.0 - 9.0 | S.U.       |
| <i>Effluent to Spray</i>   |           |            |
| <i>No further treatment is proposed after the lagoons for Phase 1.</i> |           |            |
| <i>Storage Volume</i>  |           |            |
| Recommended Minimum Storage (45 day)                                   | 67.5      | MG         |
| Minimum Required Storage (storage calcs.)                              | 69.0      | MG         |
| Phase 1 Available Storage (w/o freeboard) <sup>2</sup>                 | 92        | MG         |
| Phase 1 Available Storage <sup>2</sup>                                 | 61        | days       |
| Surface Area (top of lagoon)   | 19.4      | acres      |
| Surface Area (high water level)  | 18.8      | acres      |
| Surface Area (low water level)   | 1.6       | acres      |
| Freeboard  | 3         | ft         |
| Top Elevation  | 46.0      | ft         |
| High Water Level   | 43.0      | ft         |
| Low Water Level  | 26.0      | ft         |
| Sidewall Slope   | 2.5:1     |            |

- 1) Influent values are average daily unless listed otherwise.
- 2) Design flow is 2 MGD 5 days per week, with an average weekly flow of 1.5 MGD.
- 3) See discussion in Section 4.7.

**Table 3:1: Revised Design Summary Table (Continued)**

| Parameter   | Value                            | Units            |
|---|----------------------------------|------------------|
| <i>Spray Area</i>   |                                  |                  |
| Total Available Spray Area (gross acreage)                | 1,714                            | acres            |
| Phase 1 Wetted Area (initial construction) <sup>1</sup>   | 471                              | acres            |
| Phase 1 Wetted Area (total to be permitted) <sup>1</sup>  | 763                              | acres            |
| Treatment Site Buffer Distance (property line)            | 30                               | ft               |
| Treatment Site Buffer Distance (dwelling)                 | 100                              | ft               |
| Spray Buffer Distance (watercourse)                       | 100                              | ft               |
| Spray Buffer Distance (upgradient well)                   | 100                              | ft               |
| Spray Buffer Distance (downgradient well)                 | 150                              | ft               |
| <i>Spray Irrigation Nitrogen Balance</i>                  |                                  |                  |
| Design Percolate Total N                                  | 10                               | mg/L             |
| Available Crop Area (initial construction) <sup>1</sup>   | 276                              | acres            |
| Available Woods Area (initial construction) <sup>1</sup>  | 195                              | acres            |
| Available Crop Area (total to be permitted) <sup>1</sup>  | 535                              | acres            |
| Available Woods Area (total to be permitted) <sup>1</sup> | 228                              | acres            |
| Crop Plan   | Corn-Wheat-Soybean-Cover         |                  |
| Crop Plan (alternate option)                              | Corn-Barley-Soybean-Cover        |                  |
| Corn Annual N Removal                                     | 155                              | lbs/acre/year    |
| Wheat Annual N Removal                                    | 89                               | lbs/acre/year    |
| Barley Annual N Removal                                   | 65                               | lbs/acre/year    |
| Soybean Annual N Removal                                  | 189                              | lbs/acre/year    |
| Cover Annual N Removal                                    | 0                                | lbs/acre/year    |
| Loblolly Pine Annual N Removal                            | 200                              | lbs/acre/year    |
| Soybean Fixation  | 40%                              | % Annual Removal |
| Precipitation Deposition of N                             | 5                                | lbs/acre/year    |
| Ammonia Volatilization                                    | 5%                               | % Ammonia        |
| Denitrification   | 15%                              | % Total Nitrogen |
| Max Hydraulic Loading                                     | 1.65                             | in/week          |
| <i>Phosphorus Loading</i>                                 |                                  |                  |
| Phosphorus Limited  | Crop Areas of Fields D, F, and G |                  |
| Design Percolate Total Phosphorus                         | 8.0                              | mg/L             |
| Maximum Annual Spray Volume <sup>2</sup>                  | 3.5                              | MG/acre-year     |
| Maximum Phosphorus Loading <sup>2</sup>                   | 29.5                             | lbs/acre-year    |
| Average Annual Crop Removal                               | 31.2                             | lbs/acre-year    |
| <i>Heavy Metals Loading</i>                               |                                  |                  |
| Soil Cation Exchange                                      | 0 - 5                            | meq/100g         |
| Soil Density  | 1.55                             | g/cc             |
| Existing Lead in Soil                                     | 92.0                             | mg/kg            |
| Existing Zinc in Soil                                     | 34.0                             | mg/kg            |
| Existing Copper in Soil                                   | 13.0                             | mg/kg            |
| Existing Nickel in Soil                                   | 13.0                             | mg/kg            |
| Existing Cadmium in Soil                                  | 0.121                            | mg/kg            |
| Land Limiting Constituent (LLC)                           | Zinc                             |                  |
| Site Life based on LLC                                    | 93                               | years            |

1) See discussion in Section 4.3.

2) This is a conservative estimate based on regulatory maximum spray rate of 2.5 in/wk.

## Part II

### A. CONSTRUCTION REQUIREMENTS:

1. **This permit authorizes the construction of Phase I only. Wastewater may not be discharged to the storage lagoons or spray irrigation system under the terms of this construction permit.** Upon final approval of construction, the permittee may apply for an operation permit. At that time, additional fees may be required.
2. The permittee shall notify the Department's Groundwater Discharges Section in writing of the intent to initiate construction activities at least fifteen days prior to the commencement of construction. The written notification shall include a draft construction schedule.  
  
The permittee must provide updated construction schedules if the schedule changes as construction progresses.
3. The permittee shall notify the Department's Groundwater Discharges Section of scheduled construction progress report meetings. The Department's Groundwater Discharges Section staff may attend these meetings.
4. Prior to initiating construction of a large on-site wastewater treatment and disposal system, a pre-construction meeting shall be held on-site and attended by the following individuals: DNREC Soil Scientist, DNREC Environmental Engineer, DNREC Hydrologist, Class D.3 Soil Scientist, Professional Geologist, Project Design Engineer, General Site Contractor, Class E.4 System Contractor and other necessary parties.
5. All systems must be installed by a DNREC licensed Class E.4 system contractor. Proper construction of the treatment plant and/or spray system must be certified in writing by the design engineer and the manufacturer's representative prior to startup of the wastewater treatment plant.
6. The Class E.4 system contractor must notify the Department's Groundwater Discharges Section 72 hours prior to construction startup.
7. The Class E.4 system contractor must obtain an authorization number from the Department's Groundwater Discharges Section prior to initiating construction.
8. Upon receipt of the authorization number, the Class E.4 system contractor shall provide an installation timeline to the Department's Groundwater Discharges Section. Upon receipt of the timeline, the Department's Groundwater Discharges Section may request weekly status reports (verbal) or monthly progress reports (written) be submitted.
9. The Class E.4 system contractor must have a copy of all valid, required and approved permits on site during construction.
10. The design engineer or his/her designee must periodically review the construction of the disposal system to ensure compliance with design specifications.
11. All system components must be surveyed to a common datum point.



12. Soil disturbance to the disposal areas must be limited to the minimum required for installation. A protective barrier must be placed around the disposal areas, including spare area, prior to the initiation of any construction activities. The soils may be rendered unsuitable should unnecessary soil disturbance occur near or within the disposal area. Particular care should be taken when clearing wooded lots so as not to remove the surface soil material (see Lot Clearing Guidelines).
13. If well pointing is required during construction, the wells must be installed by a licensed well driller, and a permit to construct such wells must first be obtained from the Department.
14. All construction activities must be approved by the Department and must comply with all other applicable local utility construction specifications and standards; and must be in accordance with Ten States Standards.
15. Connections and/or additions to the wastewater treatment and disposal system, other than those indicated on the approved plans and specifications, will not be allowed without prior written approval from the Department's Groundwater Discharges Section.
16. Any anticipated facility expansions, production increases, or process modifications that will result in new, different, or increased discharges of pollutants must be reported in writing to the Department's Groundwater Discharges Section for approval. A new permit may be required.
17. Facility and Construction Changes  
The permittee must submit a written report to the Department's Groundwater Discharges Section for review and approval of any changes to the facility or construction of the system within the following time periods:
  - a. Thirty days before any planned activity, physical alteration to the permitted facility or addition to the permitted facility if that activity, alteration or addition would result in a change in information that was previously submitted to the Department's Groundwater Discharges Section; or
  - b. Thirty days before any anticipated change which would result in noncompliance with any permit condition or the regulations; or
  - c. Immediately after the permittee becomes aware of relevant facts omitted from, or incorrect information submitted in, a permit application or report to the Department's Groundwater Discharges Section.
18. The permittee must supply the Department's Groundwater Discharges Section with testing procedures and results conducted on the force main/collection/distribution system (including any lift stations).
19. A construction permit issued by the Department does not relieve the permittee from complying with any local, municipal, county, or state requirement.

20. The Class E.4 system contractor must contact the design Engineer, licensed operator and the Department's Groundwater Discharges Section to schedule an inspection prior to completion of construction.
21. Prior to the issuance of an operation permit the design Engineer shall provide the Department's Groundwater Discharges Section with an approved engineer inspection report(s) demonstrating that system has been constructed in accordance with the approved Design Engineer Report, Plans and Technical Specifications prior to the operation permit being issued.
22. The permittee is responsible for supplying the Department's Groundwater Discharges Section with a certificate or letter of completion/approval from the wastewater treatment plant manufacturer upon construction completion of the wastewater treatment plant, if applicable.
23. Construction activities within spray fields must be minimized. Excessive compaction of surface soils by construction equipment must be avoided. Re-grading of pipeline trenches must match original contours. Settlement of trench backfill must be repaired.
24. In forested systems, it is necessary to only grub the pipe centerline. Excessive clearing and grubbing must be avoided. Clearing for above-ground piping systems shall involve only vegetation that will interfere with operation of the system.
25. All areas disturbed by construction must be re-vegetated prior to initiation of irrigation activities.
26. Sloped areas require protection from erosion.
27. Pressure testing of the irrigation force mains and laterals shall be conducted during installation to avoid damage to spray fields from re-excavation and repair. Flushing is necessary to clear distribution system pipes of construction debris which will clog sprinkler nozzles. Care should be exercised to prevent erosion or flooding of the spray fields during pipeline flushing. Every effort should be made to keep trash and debris out of the distribution systems. Sprinklers and drain valves shall be checked for proper operation prior to installation.
28. Wastewater irrigation on bare soil is not allowed beyond what is necessary for germination to establish a vegetative cover. Wastewater application, at the design rate, may begin only after a uniform vegetative cover has been established.
29. Spray fields should be constructed early in the project so a vegetative cover can be re-established on disturbed areas before wastewater irrigation begins.
30. Potable, ground or surface water must be used for distribution system testing unless authorized in writing by the Department's Groundwater Discharges Section.
31. One growing season may be necessary before new spray fields will accept the design wastewater loading. This start-up period must be considered in the design and operation of these systems.

32. If testing of the system is required prior to construction completion that will require the operation of the system or the discharge of treated wastewater, the permittee must request approval in writing from the Department's Groundwater Discharges Section and must notify the Groundwater Discharges Section of the scheduled testing so that Groundwater Discharges Section staff may be present during the testing of the system.
33. No industrial or commercial discharges may be connected to the facility without prior written approval from the Department's Groundwater Discharges Section.
34. The permittee shall take all reasonable steps to minimize any adverse impact to waters of the state resulting from construction under this permit. Such steps shall include, but not be limited to, accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge or reasonable mitigation of such impacts.
35. The Permittee must obtain appropriate state permits for the collection and distribution system.
36. Information for each monitoring well and piezometer shall be reported using the State of Delaware Well Identification Tag Number that is required on all wells in accordance with the Delaware Regulations Governing the Construction and Use of Wells, Section 10, A.

## **B. MONITORING REQUIREMENTS**

1. The permittee must have a licensed well driller install all required monitoring wells, piezometers and lysimeters at the locations approved by the Department's Groundwater Discharges Section and identified on the Drawings submitted as referenced on Part I.B of this permit. The permittee shall contact the Department's Groundwater Discharges Section at least 24 hours prior to the installation of the monitoring wells. All monitoring wells must be installed by a licensed well driller, and a permit to construct the wells must first be obtained from the Department.
2. After installation, the permittee must have all monitoring wells globally positioned. The GPS information must be submitted to the Department's Groundwater Discharges Section with the locations of the wells delineated on the As-Built Drawings. The GPS information must be in either Delaware State Plane, North American Datum 1983 meters; or Latitude and Longitude decimal degrees.
3. Prior to well purging and groundwater sampling, the elevation of a reference marking on the upper terminus of each monitoring well casing (TOC) shall be surveyed by a Delaware-licensed PLS to the nearest 0.01 ft relative to a common mean sea level datum. The elevation of the ground surface immediately adjacent to each monitoring well shall also be surveyed as previously prescribed. All elevation data pertaining to monitoring wells shall be indicated on "as-built" plans and summarized in a report. Provide a permanent mark, etch, or fixture to be used to specify the survey point where the TOC elevations were read. Ensure that the water levels are consistently taken directly below the points where the TOC elevations were read.

4. The permittee shall conduct a background groundwater quality sampling program prior to initiation of disposal activities. The sampling program shall be sufficient to establish representative groundwater quality at each well prior to initiation of disposal activities. A minimum of three samples shall be collected at least one month apart and analyzed prior to the initiation of disposal activities. A summary report which includes all analyses must be submitted to the Department's Groundwater Discharges Section. Analyses must include, the parameters listed in Section 6.8.1.8.
5. Sampling parameters and frequencies will be outlined in the operation permit.

### C. REQUIREMENTS PRIOR TO ISSUANCE OF AN OPERATING PERMIT

1. The Permittee shall notify the Department's Groundwater Discharges Section in writing prior to the completion of construction and request a Construction Completion Inspection to be performed by the Department's Groundwater Discharges Section staff. The Design Engineer, Class E.4 system contractor, licensed operator and the Permittee must be present during the inspection. During the inspection, all mechanical parts are to be tested.
2. A classification shall be performed on the facility in accordance with Regulations Licensing Operators of Wastewater Facilities. The class of operator required for the facility will be determined by the Board of Certification for Licensed Wastewater Operators in accordance with the Regulations Licensing Operators of Wastewater Facilities. All large systems must be under the direction of a licensed operator. The licensed operator must be available at all times. The licensed operator shall be on-site at the time the system is put into operation and is to receive all training as necessary to properly operate the system.
3. Upon completion of construction, an operation permit must be obtained from the Department's Groundwater Discharges Section prior to system operation. The permittee must submit to the Department's Groundwater Discharges Section the following applicable items in application for an operations permit. The items must be combined in one package and must include an electronic copy of all items where possible. Failure to submit all required information constitutes grounds for denial of the operation permit.
  - a. A Department application form.
  - b. Applicable Departmental fees.
  - c. Design Engineer Inspection Report(s) certifying the facility has been constructed in accordance with approved plans and specifications.
  - d. Copies of any other applicable State/County inspection reports.
  - e. Contractor's Certificate of Completion.
  - f. A certificate or letter of completion/approval from the wastewater treatment plant manufacturer.
  - g. A copy of the agreement with a licensed operator and license certification.
  - h. A copy of the agreement with a regulated wastewater utility in the State of Delaware that the treatment facility will be operated under.
  - i. A set of "as-built" drawings of the facility bearing the seal and signature of a licensed Professional Engineer registered in the State of Delaware.

The "as-built" drawings must include:

    - i. Site map showing the location of all structures, piping and appurtenances, disposal areas and buffers.
    - ii. A full equipment list and technical specifications for all equipment used, if different than submitted in the permit application.

- iii. The new topography elevations of the system.
- iv. Monitoring/Observation well elevations at the top of the casing (TOC) and at the ground surface, GPS coordinates (State Plane), and local topography tied to a common benchmark.
- v. The location and screen depth, length of stick up, and well ID's must be provided for each monitor well.
- j. A copy of all Collection System Permit(s)
- k. Inspection Reports demonstrating collection system has been installed and inspected by Design Engineer
- l. If the collection system does not require county approval, the permittee must supply the Department's Groundwater Discharges Section with all testing procedures conducted on the collection system, force main(s) and lift station(s).
- m. An Operation and Maintenance (O&M) Plan in accordance with Section 6.7 of the Regulations.
- n. Spreadsheet summary of groundwater monitoring well information.
  - i. GPS information detailing the northings and eastings; the local well ID number; and the DNREC Well ID/Well Permit Number. The GPS information must be in either Delaware State Plane, North American Datum 1983 meters; or Latitude and Longitude decimal degrees.
  - ii. TOC elevations survey results for all monitoring wells to be utilized for groundwater monitoring. Provide the length of the well stickup and the well survey information to the closest 0.01 feet. Provide a permanent mark, etch, or fixture to be used to specify the survey point where the TOC elevations were read.
- o. A summary report detailing the analyses of the background groundwater quality sampling program that was conducted consisting of at least three (3) samples one (1) month apart and analyzed prior to the initiation of disposal activities (see Section 6.6.3.16 of the Regulations).
- p. Biosolids Management Plan. A copy of a biosolids management contract if a third party will be utilized to manage the biosolids. If the Permittee is not contracting out sludge management, the Permittee must obtain any necessary permits for land application of biosolids from the Department and provide a copy to the Groundwater Discharges Section.
- q. Legal documents (see Section 6.4 of the Regulations)
- r. Material Safety Data Sheets for all chemicals to be used by the facility staff/operator.

### **Part III**

#### **A. MANAGEMENT REQUIREMENTS AND RESPONSIBILITIES**

##### **1. Right of Entry**

The permittee shall allow the Department entry and access, consistent with 7 Del.C. Ch. 60, to:

- a. Enter the permitted facility.
- b. Inspect any records that must be kept under the conditions of the permit.
- c. Inspect any facility, equipment, practice, or operation permitted or required by the permit.
- d. Sample or monitor for the purpose of assuring permit compliance of any substance or any parameter at the facility.

##### **2. Permit Transferability**

Permits may be transferred to a new owner or operator. The permittee must notify the Department's Groundwater Discharges Section by requesting a change of ownership of the permit before the date of transfer. The transfer must be consistent with any notarized legal documents and/or CPCN required by the Regulations. The legal documentation must be provided with the application. The application must be received 30 days before the transfer.

- a. No person shall transfer a permit from one person to another unless 30 days written notice is given to the Department's Groundwater Discharges Section, indicating the transfer is agreeable to both persons, and approval of such transfer is obtained in writing from the Department's Groundwater Discharges Section, and any conditions of the approval of such transfer is obtained in writing from the Department's Groundwater Discharges Section, and any conditions of the transfer approved by the Department's Groundwater Discharges Section are complied with by the transferor and the transferee.
- b. The notice to the Department's Groundwater Discharges Section shall contain a written agreement between the transferor and the transferee, indicating the specific date of proposed transfer of permit coverage and acknowledging responsibilities of current and new permittees for compliance with and liability for the terms and conditions of this permit. The notice shall be signed by both the transferor and the transferee.

3. Availability of Reports

All reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department of Natural Resources and Environmental Control. Monitoring data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in 7 Del. C., §6013.

4. Non-compliance Notification

The Permittee shall report to the Department's Enforcement Section at (800) 662-8802 any unpermitted release or discharge of any contaminant into the air, or a pollutant, including petroleum substances, into surface waters, groundwater, or onto land as soon as the Permittee has knowledge of, or should have had knowledge of, the release or discharge.

The Permittee shall report to the Department's Groundwater Discharges Section orally within 24 hours from the time the Permittee became aware of any noncompliance that may endanger the public health or the environment by contacting the Department at the telephone numbers cited below.

If for any reason the Permittee does not comply with, or will be unable to comply with, any effluent limitations or other conditions specified in this permit, the Permittee shall provide the Department's Groundwater Discharges Section with the following information in writing within five days of becoming aware of any actual or potential non-compliance:

- a. A description and cause of the non-compliance with any limitation or condition;
- b. The period of non-compliance including exact dates and times; or, if not yet corrected, the anticipated time the non-compliance is expected to continue; and
- c. The steps being taken or planned to reduce eliminate and/or prevent recurrence of the non-compliant condition.

The notification shall be submitted to the Department at the following address:

Groundwater Discharges Section  
Division of Water  
Department of Natural Resources and Environmental Control  
89 Kings Hwy  
Dover DE 19901  
Telephone: (302) 739-9948 Office  
(302) 542-9735 Cell



## 5. Construction Permit Expiration

- a. If construction has not been initiated prior to the expiration of the construction permit, and there are proposed changes to the approved design, the applicant must submit a new or updated Design Engineer Report and construction plans as outlined in Sections 6.2.3, 6.5.1.4 and 6.5.1.5 for project re-evaluation. This will require public notification.
- b. If construction has been initiated prior to the expiration of the construction permit, and construction has not been completed prior to the expiration of the permit, the permittee may apply for a one year extension of the construction permit.
- c. If construction has not been initiated or construction has not been completed prior to the expiration of the one year extension, provided, the SIR is valid, and there are no changes to the approved design prior to the expiration of the construction permit, the applicant must submit a construction permit application along with applicable fees, and a construction schedule.

## 6. Construction Permit Extension

The application for extension must include the following:

- a. A Department extension form
- b. Applicable Departmental fees
- c. Construction schedule

## **PART IV**

### **A. PROVISIONS**

#### **1. Permit Revocation**

The Department may revoke a permit if, among other things, the permittee violates any permit condition, these regulations, fails to pay applicable Departmental fees, obtains the permit by misrepresentation or fails to fully disclose all relevant facts.

Except in cases of emergency, the Department shall issue a written notice of intent to revoke to the permittee prior to final revocation. Revocation shall become final within 20 days of receipt of the notice by the permittee, unless within that time the permittee requests an administrative hearing in writing.

The Department shall notify the permittee in writing of any revocation hearing at least 20 days prior to the date set for such hearing.

If the Department finds the public health, safety or welfare requires emergency action, the Department shall incorporate findings in support of such action in a written notice of emergency revocation issued to the permittee. Emergency revocation shall be effective upon receipt by the permittee. Thereafter, if requested by the permittee in writing, the Department shall provide the permittee a revocation hearing.

#### **2. Permit Modifications/Amendments**

In consultation with the permittee, the Department may modify or amend an existing permit provided that the modifications would not result in an increased impact or risk to the environment or to public health.

#### **3. State Laws**

This permit shall not be construed to preclude the institution of any legal action or relieve the Permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation.

#### **4. Property Rights**

The issuance of this permit does not convey any property rights of either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

#### **5. Severability**

The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit, to any circumstances is held invalid; the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

State Permit DEN Number: 359288-01  
Effective Date: October 15, 2013  
Amended Date: November 3, 2017  
Amended Date: August 22, 2018  
Amended Date: August 15, 2019  
Amended Date: August 27, 2020  
Expiration Date: October 14, 2021  
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6. This permit does not relieve the Permittee of complying with any other applicable Federal, State or local regulations.
7. In the event that the Regulations Governing the Design, Installation and Operation of On-Site Wastewater Treatment and Disposal Systems or applicable federal regulations are revised, this permit may be opened and modified accordingly after notice and opportunity for a public hearing.