



DNREC Virtual Public Hearing

ARTESIAN PERMITS FOR THE SUSSEX REGIONAL RECHARGE FACILITY (Docket #2022-P-W-0004)

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Comments will be accepted using the DNREC Comment form, via email, or by USPS mail as noted on the hearing event page (de.gov/dnrechearings)

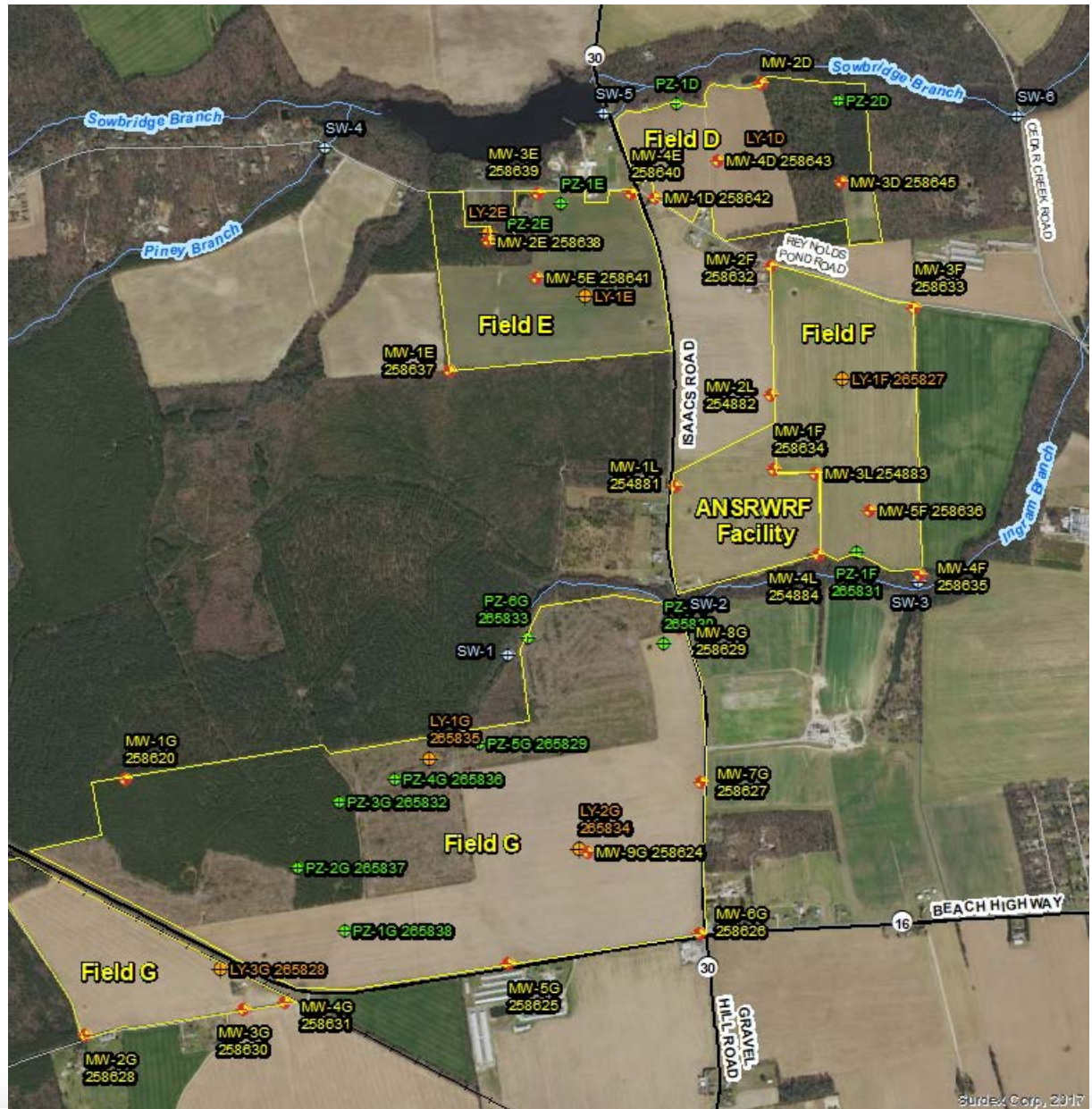
INTRODUCTION

- Artesian Wastewater Management, Inc. is currently authorized to operate and maintain the Artesian Northern Sussex Regional Water Recharge Facility (ANSRWRF), under State Permit 359288-02
- The facility has been renamed the Sussex Regional Recharge Facility (SRRF)
- Artesian envisioned a multiple phased approach to the Construction and Operations of this onsite wastewater treatment and disposal facility
 - Construction and Operation of ANSRWRF was Phase 1
- DNREC has now received the Application for Phase 2 Construction of a new wastewater treatment system
- The purpose of this presentation is to provide an overview of the Application, and if approved, the proposed Construction and Amended Operations Permits

Current Phase 1 Operations Permit State Permit 359288-02



- The facility is currently permitted to receive treated wastewater from Allen Harim Foods Harbeson Processing Facility's wastewater treatment system for storage prior to spray irrigation
- The average daily flow of treated effluent received at the current facility is 1.5 million gallons per day (MGD) with a peak flow of 2.0 MGD
- Treated effluent is stored in a synthetically lined lagoon prior to being discharged via spray irrigation to approximately 1,714 acres of agricultural fields located in Sussex County, Delaware
- The spray fields are privately owned agricultural land, under a lease held in perpetuity by Artesian
- The spray fields have been permanently placed in an Agricultural Preservation Easement by the Delaware Agricultural Lands Preservation Foundation
- Currently, treated effluent is authorized to be discharged via spray irrigation to Fields F and G
- Fields D and E are not yet permitted but are planned to receive treated effluent in the future



Legend

-  Monitoring Wells
-  Piezometers
-  Lysimeters
-  Surface Water Monitoring Locations



Application for Phase 2 Construction Permit

- Application is for the proposed construction of a wastewater treatment system located on the same 75-acre site as the existing facility which is located 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 treatment system is designed to treat up to 625,000 gallons per day (GPD) of wastewater received from Artesian's wastewater service territories in Sussex County
- Construction would include:
 - 3 million gallon (MG) combined equalization and off-spec water diversion lagoon
 - Headworks consisting of screen and grit removal equipment
 - Hybrid Bardenpho process treatment system
 - Two Cloth Media Filters and Ultra-Violet Disinfection System
- Treated effluent from the new treatment system is proposed to be mixed with the treated effluent from Allen Harim's treatment system in the existing storage lagoon and discharged (via spray irrigation) to the agricultural fields previously permitted under Phase I

Draft Phase 2 Construction Permit AND Draft Operations Permit Amendment

- If approved, the proposed Construction Permit and Operations Permit Amendment would be issued in accordance with the provisions of 7 Del. C. §6003 and 7 Del. Admin. C. §7101 Regulations Governing the Design, Installation, and Operation of On-Site Wastewater Treatment and Disposal Systems
- The permits would include effluent limitations, monitoring and reporting requirements, and other conditions designed to ensure the protection of public health and the environment

Draft Construction Permit

- The draft Construction Permit proposes the following requirements:
 - The Permittee is required to notify the Department of the intent to initiate construction at least fifteen days prior to commencement
 - All systems shall be constructed/installed by a DNREC licensed Class E.4 system contractor
 - Proper construction or installation of the components of the treatment and disposal system shall be certified in writing by the design engineer and the manufacturer's representative prior to startup of the wastewater treatment and disposal system

Draft Construction Permit

- The design engineer shall periodically review the construction work to ensure compliance with design specifications
- The Class E.4 system contractor shall contact the design Engineer, licensed operator and the Department's Groundwater Discharges Section to schedule an inspection prior to completion of construction
- Upon completion of construction, the Permittee shall provide the Department's Groundwater Discharges Section with the following items:
 - Design Engineer Inspection Report certifying the system has been constructed in accordance with the approved Design Engineer Report, Plans and Technical Specifications
 - Wastewater Treatment System As-Builts
 - Amended Operation and Maintenance (O&M) Plan

Draft Operations Permit Amendment

- Upon completion of the proposed wastewater treatment system authorized by Construction Permit, submission of all required reports and other documentation, and upon receiving written approval from the Department, SRRF would be authorized to receive and treat wastewater from within AWWMI's service territories in Sussex County, Delaware
- This requires the current Operations Permit to be amended to delineate operational requirements during Phase 1 as well as Phase 2

Draft Operations Permit Amendment

- Influent Volume Limitations:
 - Allen Harim Foods, LLC (Allen Harim)
 - Average daily flow 1.5 MGD
 - Peak daily flow of 2.0 MGD
 - SRRF wastewater treatment system
 - Average daily flow 0.625 MGD
 - Peak Daily Treatment Capacity: 1.25 MGD
 - Combined capacity
 - Combined Average daily flow 2.125 MGD
 - Combined Peak Daily Flow: 3.25 MGD

Draft Operations Permit Amendment

- Design Effluent Nitrogen Concentration
 - Allen Harim waste stream:
 - SRRF is designed to receive an effluent Total Nitrogen concentration of 30 mg/L from Allen Harim's wastewater treatment system
 - Phase 2 SRRF wastewater treatment system
 - SRRF's new wastewater treatment system is designed to treat wastewater effluent to a daily average Total Nitrogen concentration of 10 mg/L
 - Phase 2 SRRF combined blended effluent
 - The Phase II operation is designed to combine and blend the SRRF treated wastewater with the Allen Harim treated wastewater within the storage lagoon
 - For a combined effluent daily average Total Nitrogen concentration of 24.1 mg/L which will be reduced further via plant uptake

Draft Operations Permit Amendment

- Facility Classification
 - In accordance with the *Regulations Licensing Operators of Wastewater Facilities*
 - The facility classification has been increased from a Class I to a Class IV
 - The SRRF would therefore be required to be under the direction of a Class IV Licensed Operator in Direct Responsible Charge of the Facility

Draft Operations Permit Amendment

- Contingency Plans for the Phase 2 Wastewater Treatment System
 - Total Nitrogen
 - If duplicate analysis determines the effluent Total Nitrogen exceeds 10 mg/L, the Permittee will perform the following actions
 - Submit Notification to the Department
 - Department will determine if diversion is required
 - Increase Monitoring Frequency
 - Perform a System Evaluation
 - If contingency plan is enacted more than 3 times in a 12-month period, the Permittee will submit an Engineer Report with proposed corrective actions and system upgrades

Draft Operations Permit Amendment

- Contingency Plans for the Phase 2 Wastewater Treatment System
 - Fecal Coliform Bacteria and Turbidity
 - If three analytical results within a 24-hour period documents the effluent Fecal Coliform Bacteria or Turbidity concentrations exceeds the permit limitations
 - Notification of the Department
 - Diversion is required
 - Increased monitoring frequency and filtration
 - Perform system analysis
 - If contingency plan is enacted more than 3 times in a 12-month period, the Permittee will submit an Engineer Report with proposed corrective actions and system upgrades

Draft Operations Permit Amendment

- Influent Monitoring Requirements
 - Phase I Allen Harim treated effluent entering the storage lagoon
 - Phase II SRRF treatment system influent
- Effluent Monitoring Requirements
 - Phase I Allen Harim treated effluent discharged from the storage lagoon
 - Phase II SRRF treated effluent (two points of compliance)
 - Wastewater Treatment System
 - Post-Storage Discharge of Blended Treated Effluent
- Soil Monitoring
 - Metals testing is now required Annually
- Vegetative Monitoring
 - Vegetative Analysis is now required Annually

Conclusion

- Phase 2 Application received by the Department
- If approved, the Department would issue a Construction Permit and an Operations Permit Amendment
- The permits have been drafted to include operational requirements, monitoring and requirements and contingency plans designed to protect public health and the environment

Public Hearing Exhibits

- Exhibit 1: DNREC On-Site Regulations and Guidance Documents – January 11, 2014
- Exhibit 2-8: Artesian February 2021 Application Package
- Exhibit 9: DNREC Draft Construction Permit 359288-03 – AWTMI
- Exhibit 10: DNREC Draft Amended Operations Permit 359288-02 – AWTMI
- Exhibit 11: December 9, 2021, AWTMI Letter Commenting on Pre-Hearing Draft Amended Operations Permit
- Exhibit 12: Public Meeting Calendar Notice of the Public Hearing

Public Hearing Exhibits

- Exhibit 13: Virtual Public Hearing Event Page
- Exhibit 14: DNREC Website Public Notice of the Public Hearing
- Exhibit 15: Public Notice of the Public Hearing in the Delaware State News
- Exhibit 16: Public Notice of the Public Hearing in the News Journal
- Exhibit 17: DNREC Construction Permit 359288-01 – AWWMI -SRRF Phase 1
- Exhibit 18: DNREC Operations Permit 359288-02 – AWWMI - SRRF Phase 1
- Exhibit 19: DNREC Presentation



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ARTESIAN PERMITS FOR THE SUSSEX REGIONAL RECLAMATION FACILITY (Docket #2022-P-W-0004)

Thank you for joining us. We will accept comments on this matter through March 10, 2022.

Comments may be submitted in writing

via [DNREC Comment form](https://dnrec.alpha.delaware.gov/public-hearings/comment-form/) - <https://dnrec.alpha.delaware.gov/public-hearings/comment-form/>

via [email](mailto:DNRECHearingComments@delaware.gov)- DNRECHearingComments@delaware.gov

or by USPS mail:

Lisa A. Vest, Hearing Officer

DNREC – Office of the Secretary

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The full verbatim transcript will be posted when it becomes available.

For more information, find the event page for this hearing on the DNREC Public Hearings page

dnrec.alpha.delaware.gov/public-hearings/

