GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

Summary Page

Name of Facility Tyson Poultry, Inc. - River Valley Ingredients

LAS Permit No. GAJ010572

This permit is a reissuance of a LAS permit for Tyson Poultry, Inc. - River Valley Ingredients. The facility land applies, via a spray irrigation system, a monthly average of 0.90 MGD of wastewater in the summer and 0.48 MGD in the winter from a poultry processing facility.

The permit was placed on public notice from February 5 to March 7, 2025.

Please Note The Following Changes to the Proposed LAS Permit From The Existing Permit

Part I.B.1. – Effluent Limitations and Monitoring Requirements

- Added monthly monitoring for total nitrogen (mg/L) to be consistent with current LAS permit reissuances.

Part I.B.2. – Groundwater Monitoring Requirements

- Added monthly monitoring for total phosphorus and *Escherichia coli* to be consistent with current LAS permit reissuances.
- Clarified that the Maximum Contaminant Level for *Escherichia coli* is 0 CFU/100mL.

Part I.B.4. – Surface Water Monitoring

- Added monthly monitoring for *Escherichia coli* to be consistent with current LAS permit reissuances.

Part II.C.

- Added requirement that within 6 months from the effective date of this permit, the permittee shall implement the Groundwater Monitoring Well Replacement Plan dated May 13, 2020 to replace downgradient well D4; and, submit a completion report, including lithologic logs and documentation of the well installation and documentation of abandonment activities.
- Added requirement that within 12 months from the effective date of this permit, the permittee shall submit to EPD an evaluation of the groundwater monitoring well network to determine if more monitoring wells are needed, including an updated groundwater potentiometric surface map that shows the locations and designations of the monitoring wells.

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Summary Page

Standard Conditions & Boilerplate Modifications

The permit boilerplate includes modified language or added language consistent with other LAS permits.

Final Permit Determinations and Public Comments

☐ Final issued permit did not change from the draft permit placed on public notice.
☒ Public comments were received during public notice period.
☐ Public hearing was held.
☒ Final permit includes changes from the draft permit placed on public notice. See attached permit revisions and/or permit fact sheet revisions document(s).

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ENVIRONMENTAL PROTECTION DIVISION

Revisions to Draft Fact Sheet

Name of Facility Tyson Poultry, Inc. - River Valley Ingredients

LAS Permit No. GAJ010572

Were there any revisions between the draft proposed LAS permit fact sheet placed on public notice and the final proposed LAS permit fact sheet? If yes, specify:

☒ Yes ☐ No

Section 4.2 The fact sheet that was placed on public notice stated that a TMDL for Lake Lanier was in development. The fact sheet has been updated to state that Lake Lanier was given a TMDL in 2017.

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

Jeffrey W. Cown, Director

EPD Director's Office
2 Martin Luther King, Jr. Drive
Suite 1456, East Tower
Atlanta, Georgia 30334
404-656-4713

02/02/2026

Mr. Zachary Schnoke, Plant Manager
Tyson Poultry, Inc. - River Valley Ingredients
4990 Leland Drive
Cumming, Georgia, 30041

RE: Permit Issuance
Tyson Poultry, Inc. – River Valley Ingredients
LAS Permit No. GAJ010572
Forsyth County, Chattahoochee River Basin

Dear Mr. Schnoke:

Pursuant to the Georgia Water Quality Control Act, as amended, and the Rules and Regulations promulgated thereunder, we have issued the attached permit for the above-referenced facility.

Your facility has been assigned to the following EPD office for reporting and compliance. Signed copies of all required reports shall be submitted to the following address:

Georgia Environmental Protection Division
Watershed Compliance Program
2 Martin Luther King Jr. Drive
Suite 1462 East
Atlanta, Georgia 30334

Please be advised that on and after the effective date indicated in the permit, the permittee must comply with all terms, conditions, and limitations of the permit. If you have questions concerning this correspondence, please contact Jeff Hopper at 470-524-0746 or *jeff.hopper@dnr.ga.gov*.

Sincerely,

Jeffrey W. Cown

Jeffrey W. Cown
Director

Enclosure(s): Permit, Permit Fact Sheet with Appendices
CC: EPD Industrial Compliance Unit – Eric Anderson (e-mail)
Zachary Schnoke, Tyson (via e-mail: zachary.schnoke@tyson.com)

Response to Comments

Tyson Poultry, Inc. - River Valley Ingredients
LAS Permit No. GAJ010572
Forsyth County, Chattahoochee River Basin

Comment	EPD Response
Leakage from effluent ponds should be assessed as part of the evaluation of the groundwater monitoring well network. The facility's Nitrate Remediation Plan (dated Sept 11, 2001) refers to seepage from the cooling pond and Spray irrigation lagoon into ground water. As part of the evaluation of the ground well network (Draft NPDES Permit No. GAJ010572, Part II.C) the degree of leakage from the ponds into groundwater should be assessed. If leakage is still impacting the groundwater, a plan for lining or replacing leaking ponds should be required.	In accordance with Part I.C.1. and Part II.A.1. of the permit, the permittee is required to operate and maintain the facility in good working order. This requirement includes the treatment and storage ponds. The permittee shall notify EPD if there is evidence of leakage from any of the ponds into the groundwater. The facility has an ongoing nitrate remediation plan (dating back to 2001, before Tyson owned the facility) incorporated into the permit. That said, there have been no recent documented nitrate exceedances in downgradient monitoring wells.

The draft permit should consider the "Final Total Maximum Daily Load Evaluation for Lake Lanier in the Chattahoochee River Basin for Chlorophyll *a*," and require the permittee to estimate the load of Nitrogen and Phosphorus contributed to Lake Lanier. To fully assess the impact of nutrient contributions to the overall impairment of Lake Lanier, sites contributing significant nutrients to the watershed should attempt to quantify the nutrient load leaving the site.	The permit requires that surface waters adjacent to or traversing the land treatment system be monitored. All surface waters that meet these criteria for this facility are included in the permit monitoring requirements.
Contrary to the statement in Section 4.2 of the fact sheet, a TMDL for Lake Lanier was completed in 2017. The fact sheet states that the Lake Lanier TMDL is under development. This should be corrected to reflect the completion of the TMDL.	The fact sheet has been revised.

Permit No. GAJ010572
Issuance Date: 02/02/2026

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

Land Treatment System Permit

In accordance with the provisions of the Georgia Water Quality Control Act (Georgia Laws 1964, p. 416, as amended), and the Rules and Regulations promulgated pursuant thereto, this permit is issued to the following:

Tyson Poultry, Inc. - River Valley Ingredients
4990 Leland Drive
Cumming, Georgia, 30041

to operate the land treatment system located at

Tyson Poultry, Inc. - River Valley Ingredients
4990 Leland Drive
Cumming, Georgia 30041
Forsyth County
In the Chattahoochee River Basin

in accordance with effluent limitations, monitoring requirements and other conditions set forth in the permit.

This permit is issued in reliance upon the permit application signed on November 22, 2023, any other applications upon which this permit is based, supporting data entered therein or attached thereto, and any subsequent submittal of supporting data.

This permit shall become effective on February 1, 2026.

This permit and the authorization to discharge shall expire at midnight on January 31, 2031.

STATE OF GEORGIA
CONSTITUTION
WISDOM
JUSTICE
MODERATION
1776

Jeffrey W. Cown

Jeffrey W. Cown, Director
Environmental Protection Division

Table of Contents

PART I.

A. CONDITIONS

1. DEFINITIONS

a. **"Composite Sample"** means a combination of at least 8 discrete sample aliquots of at least 100 milliliters, collected over periodic intervals from the same location, during the operating hours of a facility over a 24 hour period. The composite must be flow proportional.

b. **"Daily Discharge"** means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day.

c. **"DMR"** means Discharge Monitoring Report.

d. **"EPD"** means the Environmental Protection Division of the Department of Natural Resources.

e. **"Effluent"** means wastewater that is discharged (treated or partially treated).

f. **"Grab Sample"** means an individual sample collected over a period of time not exceeding 15 minutes.

g. **"Drip Irrigation Field"** means the wetted application area or irrigation of the land treatment system or land disposal system where treated wastes, treated effluent from industrial processes, agricultural or domestic wastewater, domestic sewage sludge, industrial sludge or other sources is applied to the land using drip emitters, excluding the buffer zone.

h. **"Geometric Mean"** means the nth root of the product of n numbers.

i. **"Hydraulic Loading Rate"** means the rate at which wastes or wastewaters are discharged to a land disposal or land treatment system, expressed in volume per unit area per unit time or depth of water per unit area per unit.

j. **"Indirect Discharger**" means a nondomestic discharger introducing "pollutants" to a "publicly owned treatment works."

k. "**Industrial Wastes**" means any liquid, solid, or gaseous substance, or combination thereof, resulting from a process of industry, manufacture, or business or from the development of any natural resources.

l. **"Influent"** means wastewater, treated or untreated, that flows into a treatment plant.

m. **"Instantaneous**" means a single reading, observation, or measurement.

n. **"Land Disposal System"** means any method of disposing of pollutants in which the pollutants are applied to the surface or beneath the surface of a parcel of land and which results in the pollutants percolating, infiltrating, or being absorbed into the soil and then into the waters of the State. Land disposal systems exclude landfills and sanitary landfills but include ponds, basins, or lagoons used for disposal of wastes or wastewaters, where evaporation and/or percolation of the wastes or wastewaters are used or intended to be used to prevent point discharge of pollutants into waters of the State. Septic tanks or sewage treatment systems, as defined in Chapter 511-3-1-.02 (formally in Chapter 270-5-25-.01) and as approved by appropriate County Boards of Public Health, are not considered land disposal systems for purposes of Chapter 391-3-6-.11.

o. **"Land Treatment System"** means any land disposal system in which vegetation on the site is used for additional treatment of wastewater to remove some of the pollutants applied.

p. **"MGD"** means **million gallons per day.**

q. **"Monthly Average Limit"** means the highest allowable average of daily discharges over a calendar month, unless otherwise stated, calculated as an arithmetic mean of the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during the same calendar month.

r. **"OMR"** means Operating Monitoring Report.

s. **"Point Source"** means any discernible, confined, or discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

t. **"Pollutant"** means dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, industrial wastes, municipal waste, and agricultural waste discharged into the waters of the state.

u. **"Quarter"** means the first three calendar months beginning with January and each group of three calendar months thereafter (also known as calendar quarters).

v. **"Quarterly Average"** means the arithmetic mean of values obtained for samples collected during a calendar quarter.

w. **"Rule(s)"** means the Georgia Rules and Regulations for Water Quality Control.

x. **"Spray Field"** means the wetted area of the land treatment system or land disposal system where treated wastes, treated effluent from industrial processes, agricultural or domestic wastewater, domestic sewage sludge, industrial sludge or other sources is applied to the land via spray, excluding the buffer zone.

y. **"Sewage"** means the water carried waste products or discharges from human beings or from the rendering of animal products, or chemicals or other wastes from residences, public or private buildings, or industrial establishments, together with such ground, surface, or storm water as may be present.

z. **"Sewage Sludge"** means solid, semi-solid, or liquid residue generated during the treatment of domestic sewage or a combination of domestic sewage and industrial wastewater in a treatment works. Sewage sludge includes, but is not limited to scum or solids removed in primary, secondary, or advanced wastewater treatment processes. Sewage sludge does not include ash generated during the firing of sewage sludge incinerator, grit and screenings generated during preliminary treatment of domestic sewage in a treatment works, treated effluent, or materials excluded from definition of "sewage sludge" by O.C.G.A. § 12-5-30-.3(a)(1).

aa. **"Sewage system"** means sewage treatment works, pipelines or conduits, pumping stations, and force mains, and all other constructions, devices, and appliances appurtenant thereto, used for conducting sewage or industrial wastes or other wastes to the point of ultimate disposal.

bb. **"Sludge"** means any solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility exclusive of the effluent from a wastewater treatment plant.

cc. **"State Act"** means the Georgia Water Quality Control Act, as amended (Official Code of Georgia Annotated; Title 12, Chapter 5, Article 2).

dd. **"Treatment System"** means the wastewater treatment facility which reduces high strength organic waste to low levels prior to the application to the spray field.

ee. **"Treatment Requirement"** means any restriction or prohibition established under the (State) Act on quantities, rates, or concentrations, or a combination thereof, of chemical, physical, biological, or other constituents which are discharged into a land disposal or land treatment system and then into the waters of the State, including but not limited to schedules of compliance.

ff. **"Water**" or **"Waters of the State"** means any and all rivers, streams, creeks, branches, lakes, reservoirs, ponds, drainage systems, springs, wells, and all other bodies of surface or subsurface water, natural or artificial, lying within or forming a part of the boundaries of the State which are not entirely confined and retained completely upon the property of a single individual, partnership, or corporation.

gg. **"Weekly Average Limit"** means the highest allowable average of daily discharges over a consecutive calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week. The calendar week begins on Sunday at 12:00 a.m. and ends on Saturday at 11:59 p.m. A week that starts in a month and ends in another month shall be considered part of the second month.

2. MONITORING

a. REPRESENTATIVE SAMPLING

Samples and measurements taken for the purpose of monitoring shall be representative of the volume and nature of the monitored waste stream. The permittee shall maintain an updated written sampling plan and monitoring schedule.

b. SAMPLING PERIOD

1. Unless otherwise specified in this permit, quarterly samples shall be taken during the periods January-March, April-June, July-September, and October-December.

2. Unless otherwise specified in this permit, semiannual samples shall be taken during the periods January-June and July-December.

3. Unless otherwise specified in this permit, annual samples shall be taken during the period of January-December.

c. MONITORING AND ANALYZING PROCEDURES

1. All analytical methods, sample containers, sample preservation techniques, and sample holding times must be consistent with the techniques and methods listed in 40 CFR Part 136, as amended. The analytical method used shall be sufficiently sensitive. Parameters must be analyzed to the detection limits. The parameters will be reported as "not detected" or "ND" when they are below the detection limit and will then be considered in compliance with the effluent limit. The detection limit will also be reported on the DMR or OMR in accordance with Part I.A.3 of this permit.

2. In accordance with 40 CFR Part 136, as amended and as applicable, all analyses shall be made in accordance with the latest edition of Standard Methods for the Examination of Water and Wastewater, Methods for Chemical Analysis of Water and Wastes, or other approved methods.

d. ADDITIONAL MONITORING BY PERMITTEE

If the permittee monitors required parameters at the locations designated in Part I.B of this permit more frequently than required, the permittee shall analyze all samples using approved analytical methods. The results of this additional monitoring shall be included in calculating and reporting the values on the DMR and OMR. The permittee shall indicate the monitoring frequency on the report. EPD may require in writing more frequent monitoring, or monitoring of other pollutants not specified in this permit.

e. FLOW MONITORING

1. Measurements shall be conducted using the flow measuring device(s) in accordance with the approved design of the facility. If secondary flow measurement device(s) are installed, calibration shall be maintained to ± 10% of the actual flow. Flow shall be measured manually to check the flow meter calibration at a frequency of once a month. If secondary flow instruments are in use and malfunction or fail to maintain calibration as required, the flow shall be computed from manual measurements or by other method(s) approved by EPD until such time as the secondary flow instrument is repaired.

2. For facilities which utilize approved alternate technologies for measuring flow, the flow measurement device must be calibrated semi-annually by qualified personnel.

3. Records of the calibration checks shall be maintained on site in accordance with the requirements of Part. I.A.2.f. of the permit.

f. RECORDING OF RESULTS

For each measurement of sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

1. The exact place, date, and time of sampling, and the person(s) collecting the samples;
2. The dates and times the analyses were performed;
3. The person(s) who performed the analyses;
4. The analytical procedures or methods used; and
5. The results of all required analyses.

g. RECORDS RETENTION

1. The permittee shall retain records of:

   a. All laboratory analyses performed including sample data, quality control data, and standard curves;
   b. Calibration and maintenance records of laboratory instruments;
   c. Calibration and maintenance records and recordings from continuous recording instruments;
   d. Process control monitoring records;
   e. Facility operation and maintenance records;
   f. Copies of all reports required by this permit;
   g. All data and information used to complete the permit application; and
   h. All monitoring data related to sludge use and disposal.

2. All records and information resulting from the monitoring activities and record keeping requirements required by this permit and the Rules shall be retained by the permittee for a minimum of three (3) years, whereas records pertaining to sludge shall be retained for five (5) years, or longer if requested by EPD.

3. REPORTING

a. Monitoring results obtained during the calendar month shall be summarized for each month and reported on the DMR. The results of each sampling event shall be reported on an OMR and submitted as an attachment to the DMR.

a. The permittee shall submit the DMR, OMR and additional monitoring data to EPD. The required submittals shall be postmarked no later than the 15th day of the month following the reporting period.

b. All other reports required herein, unless otherwise stated, shall be submitted to the EPD Office listed on the permit issuance letter signed by the Director of EPD.

b. However, upon final approval from EPD to use the online web based NetDMR application for the submittals of DMRs and OMRs required by this permit, the permittee shall submit the DMRs and OMRs to EPD utilizing the online NetDMR submittal process. The permittee shall submit the required reports no later than 11:59 p.m. on the 15th day of the month following the reporting period.

c. All other reports required in this permit not listed above in Part I.A.3 or unless otherwise stated, shall be submitted to the EPD Office listed on the permit issuance letter signed by the Director of EPD.

4. SIGNATORY REQUIREMENTS

All reports, certifications, data or information submitted in compliance with this permit or requested by EPD must be signed and certified as follows:

a. Any State or NPDES Permit Application form submitted to the EPD shall be signed as follows in accordance with the Federal Regulations, 40 C.F.R. 122.22:

1. For a corporation, by a responsible corporate officer. A responsible corporate officer means:

   i. a president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision making functions for the corporation, or

   ii. the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

2. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or

3. For a municipality, State, Federal, or other public facility, by either a principal executive officer or ranking elected official.

b. All other reports or requests for information required by the permit issuing authority shall be signed by a person designated in (a) above or a duly authorized representative of such person, if:

1. The representative so authorized is responsible for the overall operation of the facility from which the discharge originates, e.g., a plant manager, superintendent or person of equivalent responsibility;

2. The authorization is made in writing by the person designated under (a) above; and

3. The written authorization is submitted to the Director.

c. Any changes in written authorization submitted to the permitting authority under (b) above which occur after the issuance of a permit shall be reported to the permitting authority by submitting a copy of a new written authorization which meets the requirements of (b) and (b.1) and (b.2) above.

d. Any person signing any document under (a) or (b) above shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

5. SEWAGE SLUDGE AND SLUDGE DISPOSAL AND MONITORING

a. Sewage sludge, sludge and industrial wastes (herein referred to as "sludge" in Part I.A.4 of this permit) shall be disposed of according to the regulations and guidelines established by the EPD and the Federal Clean Water Act section 405(d) and (e), and the Resource Conservation and Recovery Act (RCRA). In land applying nonhazardous sludge, the permittee shall comply with the general criteria outlined in the most current version of EPD's "Guidelines for Land Application of Sewage Sludge (Biosolids) At Agronomic Rates" and with the State Rules, Chapter 391-3-6-.17.

Before disposing of sludge by land application or any method other than co-disposal in a permitted landfill, the permittee shall submit a Sludge Management Plan (SMP) to EPD for written approval. This plan will become a part of the Land Treatment System Permit upon issuance and/ or modification of the permit. The permittee shall notify EPD, and if applicable obtain written approval, of any changes to an approved Sludge Management Plan.

If an applicable management practice or numerical limitation for pollutants in sludge is promulgated under Section 405(d) of the Clean Water Act after approval of the SMP, then the SMP shall be modified to conform with the new regulations.

b. The permittee shall develop and implement procedures to ensure adequate year-round sludge disposal. The permittee shall monitor and maintain records documenting the quantity of sludge generated and removed from the facility.

c. The total quantity of sludge removed from the facility shall be reported on the DMR in accordance with Part I.A.3 of this permit. The total quantity shall be reported on a dry weight basis as total pounds per month.

B.1. TREATMENT REQUIREMENTS, LIMITATIONS AND MONITORING

a. The effluent shall refer to the discharge from the treatment facility to the spray fields and shall be limited and monitored as follows:

Parameter (units)	Discharge Limitation Monthly Average (unless otherwise stated)	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow (MGD)	April – September: 0.90 October – March: 0.48	Daily	Continuous	Effluent
Biochemical Oxygen Demand- 5-day (mg/L)	Report	Monthly	Grab	Effluent
Total Suspended Solids (mg/L)	Report	Monthly	Grab	Effluent
Nitrate-Nitrogen (mg/L)	Report	Monthly	Grab	Effluent
Total Kjeldahl Nitrogen (mg/L)	Report	Monthly	Grab	Effluent
Ammonia Nitrogen (mg/L)	Report	Monthly	Grab	Effluent
Total Nitrogen (mg/L)	Report	Monthly	Grab	Effluent
Total Nitrogen (lbs/acre/quarter) (1)	April – September: 257.8 October – March: 137.5	Monthly	Calculated	Effluent
Total Phosphorus (mg/L)	Report	Monthly	Grab	Effluent
pH (standard units)	6.0 – 9.0	Monthly	Grab	Effluent

(1) The permittee must not exceed a cumulative quarterly maximum total nitrogen load of 257.8 lbs/acre/quarter for April – September and 137.5 lbs/acre/quarter for October – March.
For reporting purposes, quarterly maximum quantity refers to the total amount of total nitrogen (lb/acre/quarter) discharged between the first day of the month to the last day of the month at the end of the quarter, starting with the effective date of the permit.
On a monthly basis, the permittee shall calculate and report the monthly loading of total nitrogen (lb/acre/month), as well as the cumulative quantity in the current quarterly reporting period.

b. The spray field of the land treatment system shall consist of 160.12 acres. The hydraulic wastewater loading to the spray fields must not exceed the seasonal rates listed below:

January – March	1.7 inches per week
April – September	2.5 inches per week
October – December	2.0 inches per week

The instantaneous application rate for the site must not exceed 0.20 inches/hour. The hydraulic loading rates for each spray field shall be monitored daily and submitted to EPD in accordance with Part I.A.3 of this permit.

c. A daily log will be kept by the land treatment system operator of the gallons of wastewater sprayed on each spray field for each day and shall be submitted to EPD in accordance with Part I.A.3 of this permit.

d. A daily log will be kept by the land treatment system operator of the amount of rainfall received each day within 0.5 miles of the permitted land treatment system and shall be submitted to EPD in accordance with Part I.A.3 of this permit.

e. A written summary of pertinent maintenance for the land treatment system such as planting, cutting vegetation, harvesting, resurfacing areas, etc. shall also be included in the report and submitted in accordance with Part I.A.3 of this permit.

B.2. GROUNDWATER MONITORING REQUIREMENTS

a. Groundwater leaving the land treatment system boundary (as defined in this permit as the spray field) must not exceed the primary maximum contaminant levels for drinking water, as amended in the Safe Drinking Water Rules and Regulations. Samples of the groundwater shall be monitored from each groundwater monitoring well(s) by the permittee for the parameters and at the frequency listed below:

Parameter (units)	**Measurement Frequency**	**Sample Type**
Depth to Groundwater (feet)	Monthly	Measured
Nitrate-Nitrogen (mg/L)[1]	Monthly	Grab
pH (standard units)	Monthly	Grab
Biochemical Oxygen Demand 5-Day (mg/L)	Monthly	Grab
Total Phosphorus (mg/L)	Monthly	Grab
Specific Conductance (µmhos/cm)	Monthly	Grab
Escherichia coli (CFU/100mL)[2]	Monthly	Grab

[1] Maximum Contaminant Level for NO_3-N is 10 mg/L.
[2] Maximum Contaminant Level for *E. coli* is zero positive samples.

b. Monitoring wells shall be identified in all reports submitted to EPD as upgradient, midfield, and downgradient, as referenced below. The downgradient groundwater monitoring wells shall be considered the compliance wells. The monitoring wells are identified as follows:

Monitoring Well I.D.	Gradient
U1	Upgradient
M3	Midfield
D2	Downgradient
D4	Downgradient

c. As per Part I.B.2 and Part II.A.8-9 of this permit, upon written notification to EPD, additional up-gradient, mid-gradient and down-gradient monitoring wells may be added in accordance with EPD's Manual for Groundwater Monitoring, September 1991, as amended, the Environmental Protection Agency Guidance Design and Installation of Monitoring Wells, or other approved guidance without EPD approval and without modification to this permit. The additional wells are subject to the sampling parameters and sampling frequency(s) in Part I.B.2 of this permit, Groundwater Monitoring Requirements. The sampling analysis of additional wells shall be reported in accordance with Part I.A.3 of this permit.

B.3. SOIL MONITORING REQUIREMENTS

a. A Soil Fertility Test(s) shall be performed annually in the fourth (4^{th}) calendar quarter in accordance with the latest edition of Methods of Soil Analysis (published by the American Society of Agronomy, Madison, Wisconsin) or other methods approved by EPD. Representative soil samples shall be collected from the land treatment system using the Mehlich-1 extraction procedure. Results of the Soil Fertility Test(s) shall be utilized by the permittee in the continuing operation and maintenance of the land treatment system. The sampling analysis shall be reported in accordance with Part I.A.3 of this permit.

b. If the Soil Fertility Test(s) indicates a change in the pH value of one standard unit from the previous year's pH value, the permittee shall immediately perform a Cation Exchange Capacity and Percent Base Saturation analysis for the land treatment system. The monitoring results of the Cation Exchange Capacity and Percent Base Saturation analysis shall be submitted to EPD in accordance with Part I.A.3 of this permit.

B.4. SURFACE WATER MONITORING

Surface water(s)[1] adjacent to or traversing the land treatment system shall be monitored. Unless otherwise stated and or approved by EPD, samples will be collected at a maximum of 100 feet upstream and a maximum 100 feet downstream of the land treatment system and the surface water shall be monitored for the parameters and at the frequency listed below:

Parameter (units)	**Measurement Frequency**	**Sample Type**
Nitrate-Nitrogen (mg/L)	Monthly	Grab
Ammonia Nitrogen (mg/L)	Monthly	Grab
Biochemical Oxygen Demand-5 Day (mg/L)	Monthly	Grab
Specific Conductivity (µmhos/cm)	Monthly	Grab
pH (standard units)	Monthly	Grab
Total Kjeldahl Nitrogen (mg/L)	Monthly	Grab
Total Phosphorus (mg/L)	Monthly	Grab
Temperature (°C)	Monthly	Grab
Dissolved Oxygen (mg/L)	Monthly	Grab
Escherichia coli (CFU/100mL)	Monthly	Grab

[1] Surface waters as identified in the Design Development Report and permit application are:

a. Stream A originating between Fields 2 and 3;
b. Stream B originating near Fields 2 and 4;
c. Stream C originating between Fields 1 and 5;
d. Stream at Georgia Highway 306.

C. ADDITIONAL REQUIREMENTS

1. LAS OPERATIONS

The land treatment system will be operated and maintained in accordance with the design criteria as presented in the approved engineering reports, operation and maintenance manuals, the permit application and/or other written agreements between EPD and the permittee. This includes, but is not limited to, the following:

a. A vegetative cover must be maintained at all times on the land treatment site and must be managed according to design criteria;

b. All treatment units are to be maintained and operated for maximum efficiency;

c. Hydraulic and nitrogen loading is to be maintained within design criteria;

d. Unless otherwise approved, no wastewater shall be applied when conditions are such that the applied wastewater will not be absorbed into the soil. In addition, no wastewater shall be applied via spray or drip irrigation when it's raining; and

e. If the hydraulic application rate(s) cannot satisfactorily be handled by the approved land treatment system, corrective actions shall immediately be taken by the permittee, which could include curtailing or ceasing operation.

f. The land treatment system may not result in a point source discharge to surface waters, as mandated in the Rules. The land treatment system must be designed, operated, and maintained to ensure there is no point source discharge(s) of pollutants to surface waters of the State.

2. CHANGE IN WASTEWATER INFLUENT

The influent to the system is authorized as long as it is consistent with the design criteria specified in the approved Design Development Report and application. Any anticipated facility expansions, production increases, or process modifications which will result in new, different, or increased pollutants or flow to the system must be approved by EPD prior to implementation. Submittal of a new permit application and reissuance of the Land Application System permit, as well as upgrading of the system, may be required in the process of obtaining EPD approval.

PART II.

A. MANAGEMENT REQUIREMENTS

1. FACILITY OPERATION

The permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities (and related appurtenances) which are installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. Proper operation of the land treatment system also includes the best management practice of establishing and maintaining a vegetative cover on the land treatment system.

2. NONCOMPLIANCE NOTIFICATION

If, for any reason the permittee does not comply with, or will be unable to comply with any limitations specified in the permit, the permittee shall provide EPD with an oral report within 24 hours from the time the permittee becomes aware of the circumstances followed by a written report within five (5) days of becoming aware of such condition. The written submission shall contain the following information:

a. A description of the noncompliance and its cause;

b. The period of noncompliance, including the exact date and times; or, if not corrected, the anticipated time the noncompliance is expected to continue; and

c. The steps taken to reduce, eliminate, and prevent recurrence of the non-complying discharge.

3. ANTICIPATED NONCOMPLIANCE NOTIFICATION

The permittee shall give written notice to the EPD at least 10 days before:

a. Any planned changes in the permitted facility; or

b. Any activity which may result in noncompliance with the permit.

4. OTHER NONCOMPLIANCE

The permittee must report all instances of noncompliance not reported under other specific reporting requirements, at the time monitoring reports are submitted. The reports shall contain the information required in Part II.A.2, Noncompliance Notification, of this permit.
The permittee shall notify EPD immediately if mechanical failure, inclement weather or other factors cause a discharge of contaminated runoff from the fields or an overflow from a pond, or if any other problems occur which could cause an adverse effect on the environment.

5. OPERATOR CERTIFICATION REQUIREMENTS

The permittee shall ensure that, when required, the person in responsible charge of the daily operation of this land treatment system shall be certified in accordance with the Georgia Certification of Water and Wastewater Plant Operators and Laboratory Analysts Act, as amended, and specified by Subparagraph 391-3-6-.12 of the Georgia Rules and Regulations for Water Quality Control.

6. LABORATORY ANALYST CERTIFICATION REQUIREMENTS

The permittee shall ensure that, when required, the person(s) performing the laboratory analyses for this land treatment system is a Certified Laboratory Analyst in accordance with the Georgia Certification of Water and Wastewater Treatment Plant Operators and Laboratory Analysts Act, as amended, and the Rules promulgated thereunder.

7. POWER FAILURES

If the primary source of power to this facility is reduced or lost, the permittee shall use an alternative source of power to reduce or control all discharges to maintain permit compliance.

8. GROUNDWATER MONITORING REQUIREMENTS

a. If any groundwater samples taken from any groundwater monitoring well at the land treatment system are above the primary maximum contaminant levels for drinking water the permittee shall develop and submit a plan within 14 days of receiving sample analysis to EPD for approval which will ensure that the primary maximum contaminant levels for drinking water are not exceeded in groundwater leaving the land treatment system.

b. The permittee, upon written notification from the EPD, may be required to install groundwater monitoring wells at the existing land treatment system. This requirement may apply if monitoring wells were not included in the original design of the facility or if the EPD determines the existing groundwater monitoring wells are not adequate to assess the quality of groundwater at the facility.

c. If any pollutants which are being discharged to the land treatment system are detected in the groundwater samples taken from the compliance monitoring wells at the land treatment system pursuant to this permit in amounts or concentrations which could be toxic or otherwise harmful to humans or biota if those pollutants mingle with waters of the State, then the permittee shall immediately develop a plan which will reduce the amounts or concentrations of the pollutants to ensure they are not toxic or otherwise harmful to humans or biota if those pollutants mingle with waters of the State.

The plan(s) will be implemented by the permittee upon EPD approval.

9. NO POINT SOURCE DISCHARGE(S) OF A POLLUTANT TO SURFACE WATERS OF THE STATE.

Land treatment system permits are not point source discharge permits to surface water regulated under the CWA, but nonpoint source permits regulated under State law. The land treatment system must be designed, operated, and maintained to ensure there is no point source discharge(s) of pollutants to surface waters of the State.

10. NOTICE CONCERNING ENDANGERING WATERS OF THE STATE

Whenever, because of an accident or otherwise, any toxic or taste and color producing substance, or any other substance which would endanger downstream users of the waters of the State or would damage property, is discharged into such waters, or is so placed that it might flow, be washed, or fall into them, it shall be the duty of the person in charge of such substances at the time to forthwith notify EPD in person or by telephone of the location and nature of the danger, and it shall be such person's further duty to immediately take all reasonable and necessary steps to prevent injury to property and downstream users of said water.

B. RESPONSIBILITIES

1. COMPLIANCE

The permittee must comply with this permit. Any permit noncompliance is a violation of the State Act, and the Rules, and is grounds for:

a. Enforcement action;

b. Permit termination, revocation and reissuance, or modification; or

c. Denial of a permit renewal application.

It shall not be a defense of the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this permit.

2. RIGHT OF ENTRY

The permittee shall allow the Director of EPD and/or their authorized representatives, agents, or employees, upon presentation of credentials:

a. To enter upon the permittee's premises where a regulated activity or facility is located or conducted, in which any records are required to be kept under the terms and conditions of this permit; and

b. At reasonable times, to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and to sample any substance or parameters at any location.

3. SUBMITTAL OF INFORMATION

The permittee shall furnish to the EPD Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish upon request copies of records required to be kept by this permit. When the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or any report to the Director, it shall promptly submit such facts and information.

4. TRANSFER OF OWNERSHIP OR CONTROL

A permit may be transferred to another person by a permittee if:

a. The permittee notifies the Director in writing of the proposed transfer at least thirty (30) days in advance of the proposed transfer;

b. A written agreement containing a specific date for transfer of permit responsibility and coverage between the current and new permittee (including acknowledgment that the existing permittee is liable for violations up to that date, and that the new permittee is liable for violations from that date on) is submitted to the Director at least thirty (30) days in advance of the proposed transfer; and

c. The Director, within thirty (30) days, does not notify the current permittee and the new permittee of EPD's intent to modify, revoke and reissue, or terminate the permit and to require that a new application be filed rather than agreeing to the transfer of the permit.

5. PERMIT MODIFICATION

This permit may be modified, terminated, or revoked and reissued in whole or part during its term for cause including, but not limited to, the following:

a. Violation of any condition of this permit;

b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or

c. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted activity.

The filing of a request by the permittee for a permit modification, termination, revocation and reissuance, or a notification of planned changes or anticipated noncompliance does not stay any permit conditions.

6. PENALTIES

The State Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit, makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine or by imprisonment, or by both. The State Act also provides procedures for imposing civil penalties which may be levied for violations of the State Act, any permit condition or limitation established pursuant to the Act, or negligently or intentionally failing or refusing to comply with any final or emergency order of the Director of EPD.

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

7. CIVIL AND CRIMINAL LIABILITIES

The permittee is liable for civil or criminal penalties for noncompliance with this permit and must comply with applicable State laws, rules, and regulations. The permit cannot be interpreted to relieve the permittee of this liability even if it has not been modified to incorporate new requirements.

8. EXPIRATION OF PERMIT

The permittee shall not operate the system after the expiration date of the permit. In order to receive authorization to operate beyond the expiration date, the permittee shall submit such information, forms, and fees as are required by the EPD no later than 180 days prior to the expiration date.

9. SEVERABILITY

The provisions of this permit are severable; and, 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.

C. SPECIAL CONDITIONS

1. The permittee shall operate and maintain the system as described in the 2008 approved Design Development Report (DDR) and the 2019 approved DDR Addendum.

2. EPD's determination of the permittees compliance for nitrate nitrogen in the downgradient monitoring well(s) D2, D4, and any new downgradient monitoring wells will be based upon the requirements of the approved corrective action plan.

3. The facility has an ongoing Nitrate Remediation Action Plan (Reid Engineering Company letters of July 13, 2001 and September 11, 2001), to reduce/eliminate nitrate nitrogen levels in Six Mile Creek. As a part of the Plan, the facility must prepare and submit a report to EPD on the progress toward reducing nitrate nitrogen in the groundwater leaving the facility site annually on January 21st, including recommendations, if any, for system modification or upgrades.

4. Within 6 months from the effective date of this permit, the permittee shall implement the Groundwater Monitoring Well Replacement Plan dated May 13, 2020 to replace downgradient well D4. A report, including lithologic logs and documentation of the well installation and abandonment activities, must be submitted to EPD within 30 days of the replacement completion.

5. Within 12 months from the effective date of this permit, the permittee shall submit to EPD an evaluation of the groundwater monitoring well network to determine if more monitoring wells are needed. The report shall illustrate that the requirement for one midfield well and two downgradient wells for each drainage basin intersected by the land treatment site has been met, and/or where such wells will be added and a timeline for completion to attain compliance. This evaluation must include an updated groundwater potentiometric surface map that shows the locations and designations of the monitoring wells.

D. APPROVED SLUDGE MANAGEMENT PLAN

1. The permittee's approved 2019 Sludge Management Plan allows for sewage sludge generated at the facility to be sent to an off-site preparer for further treatment and ultimate disposal.

2. The permittee will report on an annual basis the amount of sewage sludge sent to the off-site preparer during the most recent calendar year. The annual report shall be submitted to EPD no later than January 31 of the following year.

3. The permittee will maintain sludge handling records in accordance with Part I.A.2.g of the permit.

4. The permittee will notify EPD in writing of any planned changes to the permittee's sewage sludge use or disposal practices.

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

The Georgia Environmental Protection Division proposes to issue a Land Treatment System permit to the applicant identified below. The draft permit places conditions on the discharge of pollutants from the wastewater treatment plant to a Land Application System (LAS).

Technical Contact: Jeff Hopper (jeff.hopper@dnr.ga.gov)
470-524-0746

Draft permit:

- ☐ first issuance
- ☐ reissuance with no or minor modifications from previous permit
- ☒ reissuance with substantial modifications from previous permit
- ☐ modification of existing permit
- ☐ requires EPA review

1.0 FACILITY INFORMATION

1.1 LAS Permit No.: GAJ010572

1.2 Name and Address of Owner/Applicant

Zachary Schnoke
Tyson Poultry, Inc. - River Valley Ingredients
4990 Leland Drive
Cumming, Georgia, 30041
(Forsyth County)

1.3 Name and Address of Facility

Tyson Poultry, Inc. - River Valley Ingredients
4990 Leland Drive
Cumming, Georgia, 30041
(Forsyth County)

1.4 Location and Description of the Land Treatment System (as reported by applicant)

Average Flow	River Basin	Latitude	Longitude
0.36 MGD[1]	Chattahoochee	34° 16' 54.5" N (34.281806)	84° 03' 27" W (-84.057389)

[1]Actual average flow according to permit application.

1.6 Production Capacity

0.55 Million Gallons per Day (MGD)

1.7 SIC Code & Description

SIC 2077 – Animal and Marine Fats and Oils
SIC 2048 – Prepared Feed and Feed Ingredients for Animals

1.7 Design Development Report and Corrective Action Plan Approval Dates

The Design Development Report (DDR) was first approved by the EPD in August 2008. In July 2001 and September 2001, the facility submitted a Nitrate Remediation Action Plan. A 2019 DDR Addendum was approved with the previous permit issuance.

1.8 Description of Industrial Processes

The facility consists of a poultry byproducts processing plant and wastewater treatment facility. The plant receives poultry offal, feathers, bones, and other poultry byproducts from poultry processing plants and renders the material into poultry meals, pet food meals, feather meal, poultry fat and other animal feed ingredients.

1.9 Description of the Wastewater Treatment Facility

The wastewater treatment facility consists of pre-screening and rotary screen, flow equalization basin, dissolved air floatation unit, anaerobic lagoons, sequencing batch reactors (SBRs), and several aerobic and storage ponds. Sludge is pumped from the SBRs to two waste ponds. The process wastewater is then routed to one of five spray fields for treatment by land application at a rate not exceeding the seasonal rates listed below:

January – March	1.7 inches per week
April – September	2.5 inches per week
October – December	2.0 inches per week

The instantaneous application rate for the site must not exceed 0.20 inches per hour. See Appendix A of this Fact Sheet for the locations of the spray fields.

The facility has a surface water capture system that has been operational since 2001 and is covered under Permit No. A02-058-0015. The captured surface water is used for facility washdown operations, emergency firefighting storage, and is ultimately land applied. The system captured and returned an average of 124,039 gallons per day in 2023. The surface water collection pump is downstream of surface water monitoring locations for Streams B and C (see Appendix B for location).

1.10 Type of Wastewater Discharge

☒ process wastewater ☒ stormwater

☒ domestic wastewater ☒ combined (describe)

(Contact and non-contact cooling water, boiler blow-down, process wastewater, sanitary wastewater, air pollution control wastewater, equipment wash-down wastewater, and captured stormwater)

2.0 APPLICABLE REGULATIONS

2.1 State Regulations

Chapter 391-3-6 of the Georgia Rules and Regulations for Water Quality Control.

3.0 DISCHARGE LIMITS AND PERMIT CONDITIONS

The discharge limits in the permit are based on the design values reported in the permit application, the EPD Guidelines, and the approved Design Development Report. See calculations below.

3.1 Total Nitrogen Loading / Plant Uptake Calculation:

The net nitrogen loading (lb/acre/year) requiring uptake is based on the flow times the concentration for the irrigation area.

The net nitrogen loading requiring uptake is compared to the net plant uptake of 600 lb/acre/year for Coastal Bermudagrass and Annual Ryegrass, in accordance with 2016- 2018 tissue analysis and crop yield data (2019 DDR Addendum). The calculations are split into a warm season from April through September and a cool season from October through March.

The percolate nitrogen shall not exceed the drinking water primary maximum contaminant level of 10.0 mg/L in the groundwater monitoring wells for nitrate nitrogen in accordance with Part I.B.2 of the permit. The percolate nitrogen flow weighted average calculation is listed below.

3.2 Total Nitrogen Loading Calculation Prior to Plant Uptake, Denitrification and Ammonia Volatilization

The nitrogen loading prior to plant uptake, denitrification and ammonia volatilization is based on the flow times the nitrogen concentration times the conversion factor times the numbers of days per year divide by the acreage spray area.

April – September:

Nitrogen Loading

$$= \frac{Flow\ (MGD) \times\ N_{eff.} \left(\frac{mg}{L}\right) \times 8.34 \left(\frac{lb}{gal}\right) \times\ 156 \left(\frac{day}{season}\right)}{Wetted\ Area\ (acre)}$$

$$= \frac{0.90\ (MGD) \times\ 70.5 \left(\frac{mg}{L}\right) \times 8.34 \left(\frac{lb}{gal}\right) \times\ 156 \left(\frac{day}{season}\right)}{160.12\ (acre)}$$

$$= 515.56 \frac{lb}{acre \cdot season}$$

Total Nitrogen loading

$$= 515.56 \frac{lb}{acre \cdot season} + 2.5 \frac{lb}{acre \cdot season}$$

$$= 518.06 \frac{lb}{acre \cdot season}$$

October – March:

Nitrogen Loading

$$= \frac{Flow\ (MGD) \times\ N_{eff.} \left(\frac{mg}{L}\right) \times 8.34 \left(\frac{lb}{gal}\right) \times\ 156 \left(\frac{day}{season}\right)}{Wetted\ Area\ (acre)}$$

$$= \frac{0.48\ (MGD) \times\ 70.5 \left(\frac{mg}{L}\right) \times 8.34 \left(\frac{lb}{gal}\right) \times\ 156 \left(\frac{day}{season}\right)}{160.12\ (acre)}$$

$$= 274.96 \frac{lb}{acre \cdot season}$$

Total Nitrogen Loading

$$= 274.96 \frac{lb}{acre \cdot season} + 2.5 \frac{lb}{acre \cdot season}$$

$$= 277.46 \frac{lb}{acre \cdot season}$$

3.3 Ammonia Volatilized

April – September:

$$\text{Volatilization} = \frac{Flow\ (MGD) \times NH_{3_{eff.}}\left(\frac{mg}{L}\right) \times 8.34\left(\frac{lb}{gal}\right) \times\ 156\left(\frac{day}{seas.}\right) \times Rate_{volat.}}{Wetted\ Area\ (acre)}$$

$$= \frac{0.90\ (MGD) \times 53.2\left(\frac{mg}{L}\right) \times 8.34\left(\frac{lb}{gal}\right) \times\ 156\left(\frac{day}{seas.}\right) \times 0.05}{160.12\ (acre)}$$

$$= 19.45\ \frac{lb}{acre \cdot season}$$

October – March:

$$\text{Volatilization} = \frac{Flow\ (MGD) \times NH_{3_{eff.}}\left(\frac{mg}{L}\right) \times 8.34\left(\frac{lb}{gal}\right) \times\ 156\left(\frac{day}{seas.}\right) \times Rate_{volat.}}{Wetted\ Area\ (acre)}$$

$$= \frac{0.48\ (MGD) \times 53.2\left(\frac{mg}{L}\right) \times 8.34\left(\frac{lb}{gal}\right) \times\ 156\left(\frac{day}{seas.}\right) \times 0.05}{160.12\ (acre)}$$

$$= 10.37\ \frac{lb}{acre \cdot season}$$

3.4 Nitrate Denitrified

April – September:

$$\text{Denitrification} = (N_{Load\ \frac{lb}{acre \cdot seas.}} - NH_{3_{volat.}\ \frac{lb}{acre \cdot seas.}}) \times Rate_{denit.}$$

$$= (518.06\ \frac{lb}{acre \cdot season} - 19.45\ \frac{lb}{acre \cdot season}) \times 0.10$$

$$= 49.86\ \frac{lb}{acre \cdot season}$$

October – March:

$$\text{Denitrification} = (N_{Load\ \frac{lb}{acre \cdot seas.}} - NH_{3_{volat.}\ \frac{lb}{acre \cdot seas.}}) \times Rate_{denit.}$$

$$= (277.46\ \frac{lb}{acre \cdot season} - 10.37\ \frac{lb}{acre \cdot season}) \times 0.10$$

$$= 26.71\ \frac{lb}{acre \cdot season}$$

3.5 Net Nitrogen Requiring Uptake Calculation

April – September:

Plant Nitrogen uptake = 400 lb/acre/season

Net Nitrogen requiring uptake

$$= N_{Load}\left(\frac{lb}{acre \cdot seas.}\right) - N_{denit.}\left(\frac{lb}{acre \cdot seas.}\right) - N_{volat.}\left(\frac{lb}{acre \cdot seas.}\right)$$

$$= 518.05\left(\frac{lb}{acre \cdot seas.}\right) - 49.86\left(\frac{lb}{acre \cdot seas.}\right) - 19.45\left(\frac{lb}{acre \cdot seas.}\right)$$

$$= 448.74\left(\frac{lb}{acre \cdot season}\right)$$

Nitrogen leached = Net Nitrogen requiring uptake – Plant uptake

$$= 448.74\left(\frac{lb}{acre \cdot season}\right) - 400\left(\frac{lb}{acre \cdot season}\right)$$

$$= 48.74\left(\frac{lb}{acre \cdot season}\right)$$

October – March:

Plant Nitrogen uptake = 200 lb/acre/season

Net Nitrogen requiring uptake

$$= N_{Load}\left(\frac{lb}{acre \cdot seas.}\right) - N_{denit.}\left(\frac{lb}{acre \cdot seas.}\right) - N_{volat.}\left(\frac{lb}{acre \cdot seas.}\right)$$

$$= 277.46\left(\frac{lb}{acre \cdot seas.}\right) - 26.71\left(\frac{lb}{acre \cdot seas.}\right) - 10.37\left(\frac{lb}{acre \cdot seas.}\right)$$

$$= 240.38\left(\frac{lb}{acre \cdot season}\right)$$

Nitrogen leached = Net Nitrogen requiring uptake – Plant uptake

$$= 240.38\left(\frac{lb}{acre \cdot season}\right) - 200\left(\frac{lb}{acre \cdot season}\right)$$

$$= 40.38\left(\frac{lb}{acre \cdot season}\right)$$

3.6 Total Nitrogen Loading Rate Per Quarter

April – September:

$$\text{Total Nitrogen loading} = \frac{515.56 \frac{lb}{acre \cdot season}}{2 \frac{quarter}{season}}$$

$$= 257.8 \left(\frac{lb}{acre \cdot qtr}\right)$$

October – March:

$$\text{Total Nitrogen loading} = \frac{274.96 \frac{lb}{acre \cdot season}}{2 \frac{quarter}{season}}$$

$$= 137.5 \left(\frac{lb}{acre \cdot qtr}\right)$$

3.7 Percolate Nitrogen / Nitrogen Balance Calculation

In accordance with Part I.B.5 of the permit, the groundwater monitoring wells shall not exceed the drinking water primary maximum contaminant level of 10.0 mg/L for nitrate nitrogen.

The calculated flow weighted average nitrogen percolate is less than the drinking water primary maximum contaminant level of 10.0 mg/L for nitrate nitrogen. See calculation below.

April – September:

Nitrogen Leached (N_{leach}): 48.74 lb/acre-season

Percolate (Perc): 29.34 in/season

$$\text{Percolate Nitrogen Concentration (mg/L)} = \frac{N_{leach} \frac{lb}{acre \cdot season} \times 453{,}600 \frac{mg}{lb}}{Perc \frac{in}{season} \times 102{,}750 \frac{L}{acre \cdot in}}$$

$$= \frac{48.74 \frac{lb}{acre \cdot season} \times 453{,}600 \frac{mg}{lb}}{29.34 \frac{in}{season} \times 102{,}750 \frac{L}{acre \cdot in}}$$

$$= 7.3 \text{ mg/L}$$

Flow Weighted Average Nitrogen Percolate $= 7.3 < 10$ mg/L

October – March:

Nitrogen Leached (N_{leach}): 40.38 lb/acre-season

Percolate (Perc): 39.56 in/season

Percolate Nitrogen Concentration (mg/L) $= \frac{N_{leach}\ \frac{lb}{acre \cdot season} \times 453{,}600\ \frac{mg}{lb}}{Perc\ \frac{in}{season} \times 102{,}750\ \frac{L}{acre \cdot in}}$

$$= = \frac{40.38\ \frac{lb}{acre \cdot season} \times 453{,}600\ \frac{mg}{lb}}{39.56\ \frac{in}{season} \times 102{,}750\ \frac{L}{acre \cdot in}}$$

$$= 4.5 \text{ mg/L}$$

Flow Weighted Average Nitrogen Percolate $= 4.5 < 10$ mg/L

3.8 Application Rate and Wetted Area

The wetted area and the application rate in the draft permit are in accordance with the hydrologic budget in the 2019 DDR. Treated effluent is disposed of via spray (or drip) irrigation:

April – September:

Wetted Area (A_{site}): 160.12 acres

Application Rate: 2.5 in/week

The maximum allowable flow to the spray field is as follows:

Site Capacity (gal/week) $= \frac{A_{site}\ (acres) \times WLR\left(\frac{in}{week}\right) \times 43{,}560\ \frac{ft^2}{acre} \times 7.48\ \frac{gal}{ft^3}}{12\ \frac{in}{ft}}$

$$= \frac{160.12\ acre \times 2.5\ \frac{in}{week} \times 43{,}560\ \frac{ft^2}{acre} \times 7.48\ \frac{gal}{ft^3}}{12\ \frac{in}{ft}}$$

= 10,870,000 gal/week maximum
or 1.55 MGD (7-day average)

October – December:

Wetted Area (A_{site}): 160.12 acres

Application Rate: 2.0 in/week

The maximum allowable flow to the spray field is as follows:

$$\text{Site Capacity (gal/week)} = \frac{A_{site}\,(acres) \times WLR\left(\frac{in}{week}\right) \times 43{,}560\,\frac{ft^2}{acre} \times 7.48\,\frac{gal}{ft^3}}{12\,\frac{in}{ft}}$$

$$= \frac{160.12\,acre \times 2.0\,\frac{in}{week} \times 43{,}560\,\frac{ft^2}{acre} \times 7.48\,\frac{gal}{ft^3}}{12\,\frac{in}{ft}}$$

= 8,700,000 gal/week maximum
or 1.24 MGD (7-day average)

January – March:

Wetted Area (A_{site}): 160.12 acres

Application Rate: 1.7 in/week

The maximum allowable flow to the spray field is as follows:

$$\text{Site Capacity (gal/week)} = \frac{A_{site}\,(acres) \times WLR\left(\frac{in}{week}\right) \times 43{,}560\,\frac{ft^2}{acre} \times 7.48\,\frac{gal}{ft^3}}{12\,\frac{in}{ft}}$$

$$= \frac{160.12\,acre \times 1.7\,\frac{in}{week} \times 43{,}560\,\frac{ft^2}{acre} \times 7.48\,\frac{gal}{ft^3}}{12\,\frac{in}{ft}}$$

= 7,391,000 gal/week maximum
or 1.06 MGD (7-day average)

3.9 Biochemical Oxygen Demand and Total Suspended Solids

Biochemical Oxygen Demand Five-Day and Total Suspended Solids have been retained from the previous permit.

4.0 OTHER PERMIT REQUIREMENTS AND CONSIDERATIONS

4.1 Groundwater Monitoring

The intent of monitoring is to determine the influence of the land treatment system on the quality of the groundwater. Groundwater leaving the spray field boundaries must meet drinking water maximum contaminant levels (MCLs).

The groundwater leaving the land disposal system boundary, as defined for the purposes of the Groundwater Monitoring Requirements as the spray field, in which the groundwater in the wells must not exceed the primary maximum contaminant levels for drinking water. The maximum contaminant level is 10.0 mg/L for nitrate nitrogen and 0 CFU/100mL for *Escherichia coli,* as amended in the Safe Drinking Water Rules and Regulations.

Monitoring of the groundwater under the LAS permit requires measurements of the following parameters:

Parameter (units)
Depth to Groundwater (feet)
Nitrate Nitrogen (mg/L)[1]
pH (standard units)
Biochemical Oxygen Demand 5-Day (mg/L)
Total Phosphorus (mg/L)
Specific Conductance (µmhos/cm)
Escherichia coli (CFU/100mL)[2]

(1) Maximum Contaminant Level for NO_3-N is 10 mg/L.
(2) Maximum Contaminant Level for *Escherichia coli* is zero positive samples.

The parameters included in the permit monitoring requirements and the sampling frequency for those parameters is dependent on-site conditions.

Current groundwater monitoring wells are the following:

Monitoring Well	Gradient
U1	Upgradient
M3	Midfield
D2	Downgradient
D4	Downgradient

4.2 Surface Water Monitoring

The surface waters at the facility originate on-site as springs and form the headwaters of Six Mile Creek, a tributary to Lake Sidney Lanier. Six Mile Creek was given a Total Maximum Daily Load (TMDL) in 1998, and is currently classified as impaired on the Georgia EPD 2016 Integrated 305(b)/303(d) List. Lake Lanier is a part of Georgia's List of Priority Waters for the 303(d) Program and was given a TMDL in 2017. Several water quality studies have been performed on the Six Mile Creek and its tributaries with respect to their elevated nitrate nitrogen levels, by Georgia EPD and by third parties.

This permit does not allow for the discharge to surface waters, but surface water monitoring has been included in the permit to ensure that the facility does not have an impact on perennial surface water adjacent to or traversing the land treatment system. Monitoring of the surface water under the LAS permit requires measurements of the following parameters:

Parameter (units)
Nitrate-Nitrogen (mg/L)
Ammonia Nitrogen (mg/L)
Biochemical Oxygen Demand-5 Day (mg/L)
Specific Conductivity (µmhos/cm)
pH (standard units)
Total Kjeldahl Nitrogen (mg/L)
Total Phosphorus (mg/L)
Temperature (°C)
Dissolved Oxygen (mg/L)
Escherichia coli (CFU/100mL)

Surface waters are identified in the Design Development Report and application as:

a. Stream A originating between Fields 2 and 3;

b. Stream B originating near Fields 2 and 4;

c. Stream C originating between Fields 1 and 5;

d. Stream at Georgia Highway 306.

See Appendix B of this Fact Sheet for surface water monitoring locations.

4.3 Soil Monitoring

The intent of monitoring is to determine the influence of the treated wastewater on the soil chemistry/composition. It will also aid the permittee with operation and maintenance of the land treatment system.

Representative soil samples from each major soil series within the wetted field area must be taken and analyzed, at a minimum, once per year. In particular, soil pH is an indicator of changes in soil chemistry. If the soil pH changes significantly, additional analyses may be required. Land treatment systems receiving industrial process wastes may be required to monitor metals, salts, and priority pollutants in site soils and possibly vegetation. The parameters and frequencies will be determined on a case-by-case basis.

4.4 Spray Fields and Wetted Acreage

The land application fields are cropped with Coastal Bermudagrass overseeded with Annual Ryegrass. The growing season for Coastal Bermudagrass is approximately April through September. During October through March, Coastal Bermuda is largely dormant with Annual Ryegrass as the active cover crop.

Field	*Acreage*
Field 1	16.07
Field 2	66.98
Field 3	62.87
Field 4	9.0
Field 5	5.2
Total	160.12

See Appendix A of this Fact Sheet for the locations of the spray fields.

4.5 Nitrate Remediation Action Plan

The facility has an ongoing Nitrate Remediation Action Plan (Reid Engineering Company letters of July 13, 2001 and September 11, 2001), to reduce/eliminate nitrate nitrogen levels in Six Mile Creek. As a part of the Plan, the facility must prepare and submit a report to EPD on the progress toward reducing nitrate nitrogen in the groundwater leaving the facility site annually on January 21st, including recommendations, if any, for system modification or upgrades.

4.6 Downgradient Monitoring Well D4 Replacement

The previous permit included a special condition that the permittee develop a plan to replace downgradient monitoring well D4 due to being dry year-round. The permittee submitted the Groundwater Monitoring Well Replacement Plan dated May 13, 2020. The plan is approved with the issuance of this permit, and the permittee must implement the plan within 6 months of the permit effective date.

4.7 Monitoring Well Network Evaluation

Within 12 months from the effective date of this permit, the permittee shall submit to EPD an evaluation of the groundwater monitoring well network to determine if more monitoring wells are needed. The report shall illustrate that the requirement for one midfield well and two downgradient wells for each drainage basin intersected by the land treatment site has been met, and/or where such wells will be added and a timeline for completion to attain compliance. This evaluation must include an updated groundwater potentiometric surface map that shows the locations and designations of the monitoring wells.

4.8 Approved Sludge Management Plan

The permittee's approved 2019 Sludge Management Plan allows for sludge generated at the facility to be sent to an off-site preparer for further treatment and ultimate disposal. The sludge is registered as a soil amendment through the Department of Agriculture.

4.9 Compliance Schedules

The permittee shall attain compliance with all limits on the effective date of the permit.

5.0 REPORTING

The facility has been assigned to the following EPD office for reporting, compliance and enforcement.

Georgia Environmental Protection Division
Watershed Compliance Program
2 Martin Luther King Jr. Drive,
Suite 1462 East Tower
Atlanta, Georgia 30334

6.0 PERMIT EXPIRATION

The permit will expire five years from the effective date.

7.0 PROCEDURES FOR THE FORMULATION OF FINAL DETERMINATIONS

7.1 Comment Period

The Georgia Environmental Protection Division (EPD) proposes to issue a permit to this applicant subject to the discharge limitations and special conditions outlined above. These determinations are tentative.

Georgia Environmental Protection Division
Wastewater Regulatory Program
2 Martin Luther King Jr. Drive,
Suite 1470A
Atlanta, Georgia 30334

The permit application, draft permit, and other information are available for review at 2 Martin Luther King Jr. Drive, Suite 1470A, Atlanta, Georgia 30334, between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday. For additional information, you can contact 404-463-1511.

7.2 Public Comments

Persons wishing to comment upon or object to the proposed determinations are invited to submit same in writing to the EPD address above, or via e-mail at EPDcomments@dnr.ga.gov within 30 days of the initiation of the public comment period. All comments received prior to that date will be considered in the formulation of final determinations regarding the application. The permit number should be placed on the top of the first page of comments to ensure that your comments will be forwarded to the appropriate staff.

7.3 Public Hearing

The Director shall hold a hearing if he determines that there is sufficient public interest in holding such a hearing. If a public hearing is held, notice of same shall be provided at least thirty (30) days in advance of the hearing date.

In the event that a public hearing is held, both oral and written comments will be accepted; however, for the accuracy of the record, written comments are encouraged. The Director or a designee reserves the right to fix reasonable limits on the time allowed for oral statements and such other procedural requirements, as deemed appropriate.

Following a public hearing, the Director, unless it is decided to deny the permit, may make such modifications in the terms and conditions of the proposed permit as may be appropriate and shall issue the permit.

If no public hearing is held, and, after review of the written comments received, the Director determines that a permit should be issued and that the determinations as set forth in the proposed permit are substantially unchanged, the permit will be issued and will become final in the absence of a request for a contested hearing. Notice of issuance or denial will be made available to all interested persons and those persons that submitted written comments to the Director on the proposed permit.

If no public hearing is held, but the Director determines, after a review of the written comments received, that a permit should be issued but that substantial changes in the proposed permit are warranted, public notice of the revised determinations will be given and written comments accepted in the same manner as the initial notice of application was given and written comments accepted pursuant to EPD Rules, Water Quality Control, subparagraph 391-3-6-.11(6)(b). The Director shall provide an opportunity for public hearing on the revised determinations. Such opportunity for public hearing and the issuance or denial of a permit thereafter shall be in accordance with the procedures as are set forth above.

7.4 Final Determination

At the time that any final permit decision is made, the Director shall issue a response to comments. The issued permit and responses to comments can be found at the following address:

http://epd.georgia.gov/watershed-protection-branch-permit-and-public-comments-clearinghouse-0

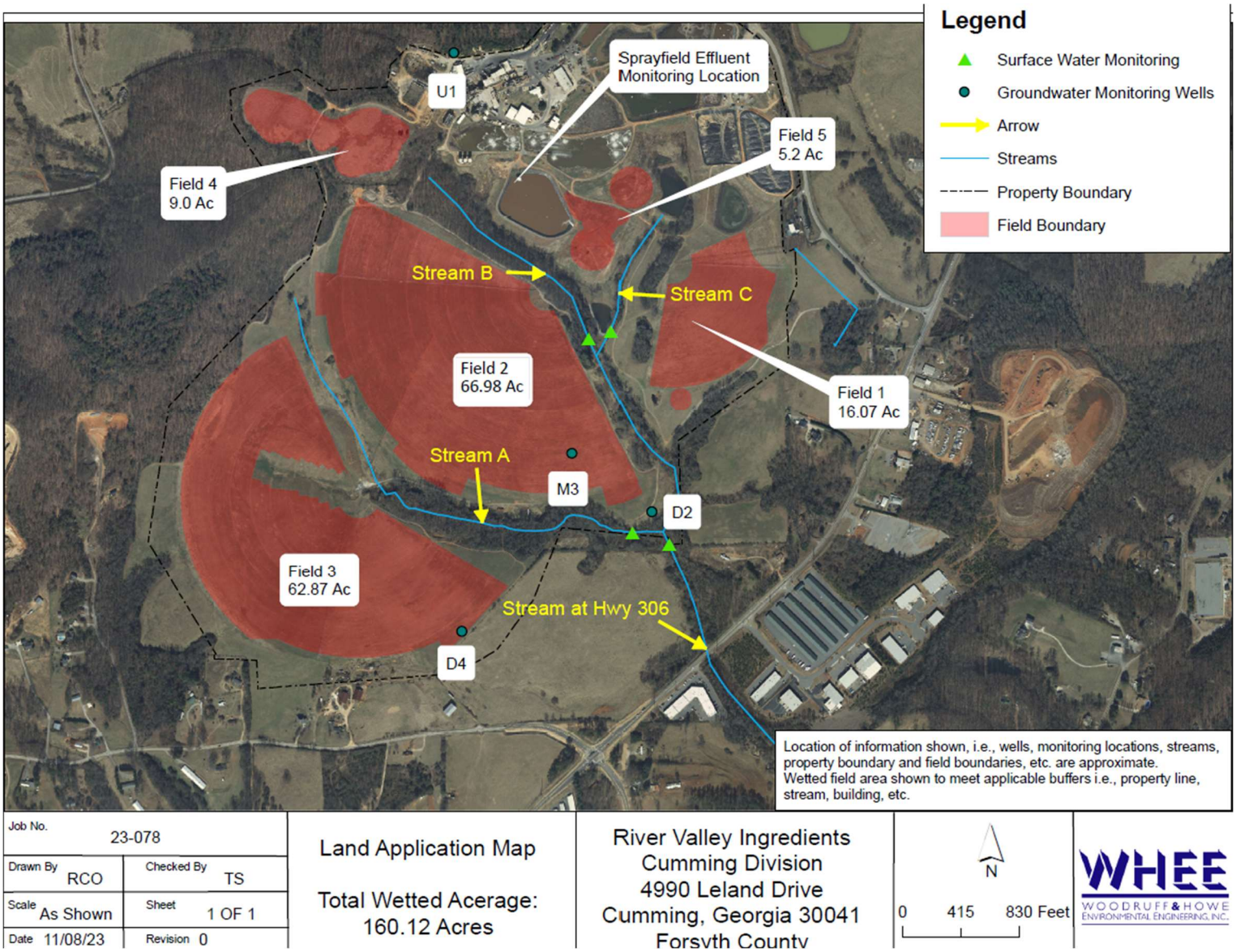
7.5 Contested Hearings

Any person who is aggrieved or adversely affected by the issuance or denial of a permit by the Director of EPD may petition the Director for a hearing if such petition is filed in the office of the Director within thirty (30) days from the date of notice of such permit issuance or denial. Such hearing shall be held in accordance with the EPD Rules, Water Quality Control, subparagraph 391-3-6-.01.

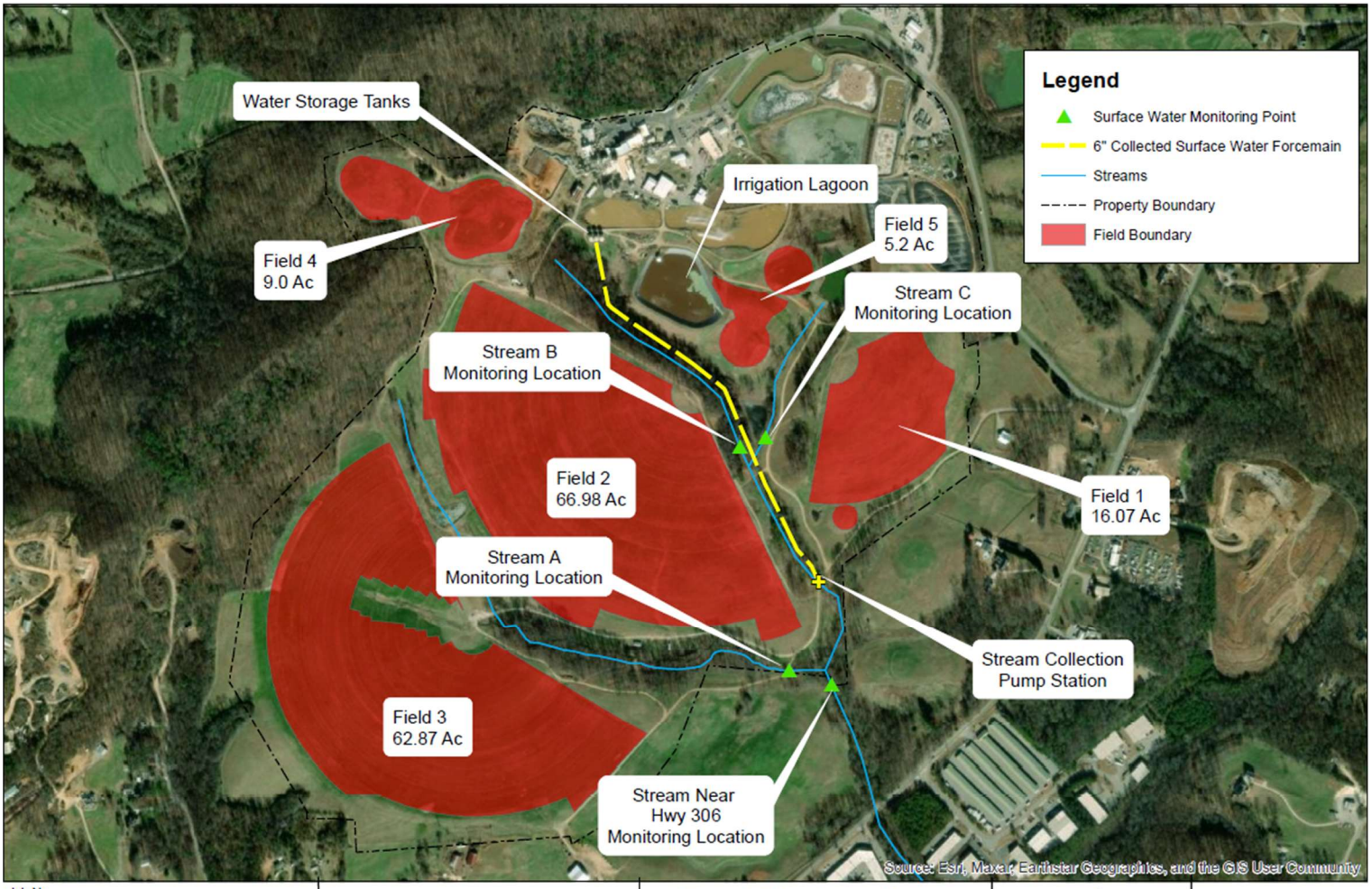
Petitions for a contested hearing must include the following:

1. The name and address of the petitioner;
2. The grounds under which petitioner alleges to be aggrieved or adversely affected by the issuance or denial of a permit;
3. The reason or reasons why petitioner takes issue with the action of the Director;
4. All other matters asserted by petitioner which are relevant to the action in question.

APPENDIX A – Spray Field and Monitoring Well Locations and Names



APPENDIX B – Surface Water Monitoring and Capture System Locations



Job No.		Surface Water Collection System	River Valley Ingredients Cumming Division 4990 Leland Drive Cumming, Georgia 30041 Forsyth County
Drawn By RCO	Checked By TTS		
Scale As Shown	Sheet		
Date	Revision		

N

0 400 800 Feet

WHEE
WOODRUFF & HOWE ENVIRONMENTAL ENGINEERING, INC.