

Potential to Impact Groundwater Evaluation Form (Wastewater Effluent, Sludge and Septage Land Application)

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| Name of Project and any existing NPDES or ND Permit Numbers? | | | |
| Report the type(s) of Land Application: | <u>Effluent</u> | <u>Septage</u> | <u>Sludge</u> |
| Are there currently Groundwater Monitoring Wells at the site? | Yes | | No |
| <p>THE FOLLOWING QUESTIONS ARE INTENDED TO ASSESS THE RELATIVE POTENTIAL FOR LAND APPLICATION TO IMPACT THE ENVIRONMENT OR PUBLIC HEALTH.</p> <p>Check the box with the highest potential for impact if such conditions are present at any land application site covered under this permit or proposed.</p> <p>Provide comments or attach justification for any question not answered.</p> | | | |
| POTENTIAL TO IMPACT | LOWER | HIGHER | HIGHEST |
| Compliance History (if none, select this box) | No Notice of Violation(s) (NOV) related to wastewater effluent application or sludge/septage land application since permit effective date | NOV (related to a wastewater or sludge or septage land application) issued since permit effective date OR New site | Under a Consent order specifically related to an effluent, septage, or sludge land application site, or a wastewater treatment system processing wastewater, septage, or sludge. |
| Nitrate Nitrogen level detected in existing monitoring well network (if "No wells", select this box.) | Less than two (2) mg/L for all wells | Between two (2) to seven and one half (7 1/2) mg/L for any well | Greater than seven and one half (7 1/2)mg/L OR a rapidly increasing trend which may exceed seven and one half (7 1/2)mg/L in future. |
| Site(s) distance to potable drinking water wells (for multiple application sites, report for the site with the closest potable drinking water wells). | Greater than 200 Feet | 100 to 200 feet | Less than 100 feet |
| Geologic setting | Confining unit above surficial aquifer (Cooper Marl) | Piedmont / Lower Coastal Plain | Upper Coastal Plain / Sand Hills |
| Plant Available Nitrogen in upper 12 inches of Soil | Less than 50 lb/ac | 50-150 lb/ac | More than 150 lb/ac |
| Total Nitrogen in wastewater effluent, septage, or sludge material (Nitrate-Nitrogen + Ammonia-Nitrogen + Organic-Nitrogen) | Less than 10 mg/l for last two (2) years or the last twelve (12) samples OR equivalent using a dry weight basis | Between 10 mg/l and 20 mg/l for last two (2) years or the last twelve (12) samples OR equivalent using a dry weight basis | Greater than 20 mg/l for last two (2) years or the last twelve (12) samples OR equivalent using a dry weight basis |
| Consistency of Nitrogen content in the wastewater effluent, septage, or sludge (using statistical methods) | Variance of less than 10 for last two (2) years or the last twelve (12) samples | Variance 10 to 19 for last 2 years or the last twelve (12) samples or no data available (e.g. a new facility) | Variance of 20 or greater for the last two (2) years or the last twelve (12) samples |
| Are PAHs, PCBs, BTEX, Dioxin, Trihalomethanes, or Chlorinated Solvents present in the wastewater effluent or process water. | Not known to be present in any stage of the treatment works | Known to be present in the influent but not the effluent / sludge | Known to be present in effluent / sludge |
| Percent of recommended Plant Available Nitrogen (PAN) Applied Annually | Thirty-three (33%) or less | Thirty four (34%) to sixty-six(66%) | More than sixty-six (66%) |
| Year round crop/cover on site (for golf course effluent irrigation, report N/A) | Yes | N/A | No |

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| Seasonal High Water Table (SHWT) | Greater than 10 feet | Between five(5) and ten (10) feet | Less than five (5) feet |
| Inorganic Nitrogen Fertilizer Applied | None | 100 lb/ac or less | Greater than 100 lb/ac |
| Application frequency | Every fourth year or greater | Every other OR third year | Every year |
| Application occurs immediately prior to planting or during periods of high growth(nutrient uptake) | Always | Sometimes | Never |
| Irrigation (For sludge sites only, select this box for any other type.) | No | | Yes |
| Application Timing (For "golf course" land application sites, select this box) | Split in order to maximize uptake, no winter application | Spread One-time OR at variable spray rates by season | Constant |
| Distance to nearest surface water (including intermittent streams) as defined by R.61-69 (Classified Waters). | Greater than 200 feet | Between 100 and 200 feet | Less than 100 feet |
| Flood Plain (note if the flood plain identification is due to Coastal Zone Classification) For effluent irrigation, select this box, unless the site does not meet R61-9.505.41(p), then answer question. | Above the 500 year FEMA flood level. (Zone C) | Between the 100 year and 500 year FEMA flood level. (Zone B) | Inside the 100 year FEMA flood zone. |
| Vegetative buffer | All buffers are multiple zone riparian buffers with slopes less than 3% | Some vegetation or features which impair the flow of water | No vegetation or flow reduction measures in setback area |
| Site Slope | All fields less than 3% | 3 to 10% | Greater than 10 % in any field |
| Crop fate (where/how is the harvested crop (e.g. grass, hay, etc.) taken off the land application site used) | To market or used for onsite energy production | Given away | To landfill or burned |
| Nutrient Source Acquisition (where/how is the current source of nitrogen for the land application site being acquired or planned to be acquired (for new projects/sites). | Paid for/Purchased (e.g. commercial fertilizer) | Given/ Own/Transfer from another location | The applicant is paid to take the nitrogen source |

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| Based on the information above, propose an overall risk ranking for the land application project (sludge, effluent or both). Low or High. | Select this box for Low Risk | Select this box for High Risk |
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Provide supplemental comments here or include an attachment:

Regulatio 61-9 505.41(o) Misrepresentation of Information. (1) Any person making application for a Land Application permit or State permit or filing any record, report, or other document pursuant to a regulation of the Department, shall certify that all information contained in such document is true. All application facts certified to by the applicant shall be considered valid conditions of the permit issued pursuant to the application. (2) Any person who knowingly makes any false statement, representation, or certification in any application, record, report, or other documents filed with the Department pursuant to the State law, and the rules and regulations pursuant to that law, shall be deemed to have violated a permit condition and shall be subject to the penalties provided for pursuant to 48-1-320 or 48-1-330.