

**NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION  
DIVISION OF WATER QUALITY  
FORM R CATEGORY D - CLASS B LAND APPLICATION**

**Refer to Appropriate Completeness Checklist and Instructions and N.J.A.C. 7:14A-20.  
Provide All Applicable Information. Please Print or Type. Attach additional sheets if necessary.  
If you need assistance in completing Form R, contact the Bureau of Pretreatment and Residuals at (609) 633-3823.**

**SUPPLEMENTAL APPLICATION FORM TO NJPDES-1 FOR NJPDES RESIDUAL PERMITS**

**PART A. GENERAL INFORMATION**

**A1. Facility Information**

- a. Name of Facility: \_\_\_\_\_
- b. Facility Contact: Name: \_\_\_\_\_  
Title: \_\_\_\_\_ E-Mail: \_\_\_\_\_  
Phone #: \_\_\_\_\_ Cell #: \_\_\_\_\_
- c. Facility Location: Street or Route #: \_\_\_\_\_  
County: \_\_\_\_\_  
City or town: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_
- d. Facility Mailing: Street or Route #: \_\_\_\_\_  
City or town: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_
- e. Are any residual related operational or maintenance aspects of this facility the responsibility of a contractor?  
 Yes  No

If yes, provide the following for each contactor (attach additional pages if necessary).

Name: \_\_\_\_\_

Street or P.O. Box: \_\_\_\_\_

City or Town: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Email: \_\_\_\_\_

Responsibilities of contractor:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**PART B: ENVIRONMENTAL ASSESSMENT**

**All applicants for a permit for residual use or disposal must submit an environmental assessment (EA) for the location where residual will be prepared to be applied to the land. The magnitude and detail of the EA shall be determined by the Department and shall be relative to the nature, scale and location of the proposed facility. Where the permitted activity shall not require the construction of additional infrastructure the Department shall waive this requirement. At a minimum, the EA shall conform to the EA requirements of the Department's applicable NJPDES Permit Technical Manual in effect at the time of submission and shall, at a minimum, address the following requirements:**

**B1. Environmental Impact Evaluation**

At a minimum, provide an analysis of the impact that the proposed operation will have on each of the following (refer to Section 2 of BPR's Technical Manual for an explanation of each bulleted item):

- Local transportation patterns;
- Drainage and soil characteristics;
- Surface and ground water quality;
- Endangered or threatened wildlife and vegetation;
- Storm water and wastewater collection/treatment capability;
- Water supply capability;
- Ambient acoustical conditions; and
- Air quality

**B2. Local Land Use Evaluation**

Attach a description of how the proposed operation will conform or conflict with the objectives of any applicable Federal, State, or local land use and/or environmental requirements for areas within two miles of the perimeter of a proposed large facility (residual production equal to or greater than 15,000 metric tons per 365 day period), or within one mile of the perimeter of a proposed small facility (residual production less than 15,000 metric tons per 365 day period). At a minimum the following areas must be identified and evaluated:

- Floodway and flood fringe areas of the flood hazard areas as identified by the Department pursuant to State Flood Hazard Area Control Act, N.J.S.A. 58:16A-50 et seq., or areas identified under flood insurance studies prepared by the Federal Emergency Management Agency (FEMA);
- Areas designated as wild, scenic, recreational or developed recreational rivers pursuant to the Natural Wild and Scenic Rivers Act, 16 U.S.C.A. 1271 or the New Jersey Wild and Scenic River Act, N.J.S.A. 13:8-45;
- Critical habitat of endangered or threatened species of plants, fish or wildlife as defined by the Federal Endangered Species Act of 1973, P.L. 93-205, or the New Jersey Endangered and Non-game Species Conservation Act, N.J.S.A. 23:2A-1 et seq.;

**B2. Local Land Use Evaluation (cont.)**

- Wetlands, tidelands and coastal zone areas identified by the Department pursuant to the Wetlands and Coastal Resource and Development Policies, N.J.A.C. 7:7E and as identified on the U.S. Fish and Wildlife Services National Wetlands Inventory Maps;
- The Preservation and Protection Areas established by N.J.S.A. 13:18A-11 of the Pinelands Protection Act;
- Lands that have been duly certified by the State Agriculture Development Committee as agriculture development areas pursuant to the Agricultural Retention and Development Act, N.J.S.A. 4:1C-11 et seq;
- Watershed areas for water classified by the Department as FW-1 waters or FW-2 Trout Production Waters pursuant to the Surface Water Quality Standards, N.J.A.C. 7:9-4;
- Areas over a sole source aquifer designated pursuant to Section 1424(e) of the Safe Drinking Water Act of 1974, P.L. 93-523;
- Areas within the critical supply areas as defined by the Water Supply Management Act, N.J.S.A. 58:1A-1 et seq.;
- Areas which will encroach upon, damage or destroy any area, site, structure or object included in the National or State register of Historic Places established by N.J.S.A. 13:1B-15.128;
- Areas within 10,000 feet of any airport runway which is equal to or greater than 3,000 feet in length or within 5,000 feet of any airport runway which is less than 3,000 feet in length;
- Areas dedicated to recreational or open space use including, but not limited to, national parks, national recreation areas, national forests, national wildlife refuges, state wildlife management areas, state parks, state forests, state designated natural areas and county or local parks, wildlife sanctuaries and recreational facilities.
- Areas within the Highlands Preservation Area established by N.J.S.A. 13:20-1 et seq.

**Where a potential conflict with the objectives of land use and/or environmental requirements is identified above, a description of the mitigation efforts to be undertaken to minimize any such conflict must be provided as part of the environmental assessment.**

## **PART C. Preparer Information**

### **C1. Site Information**

- a. Identify the type of zoning for the facility from among the following:
- Residential                       Industrial  
 Commercial                       Other (Specify: \_\_\_\_\_)
- b. Is the facility located within the Pinelands Area (designated as such by Section 10(a) of the Pinelands Protection Act)?     Yes (proceed to b.1)     No (skip to c.)
1. If yes, submit either a:
- Certificate of Filing (COF) for the activity issued by the Pinelands Commission  
**or**  
 A written determination from the Pinelands Commission that a COF is not required

**Questions regarding Pinelands applicability shall be directed to the Pinelands Commission at (609) 894-7300. Further information may be obtained at [www.state.nj.us/pinelands/](http://www.state.nj.us/pinelands/).**

- c. Is the facility located within the Highlands Preservation Area (a map of the area may be viewed at [www.nj.gov/dep/highlands/highlands\\_map.pdf](http://www.nj.gov/dep/highlands/highlands_map.pdf))?     Yes (proceed to c.1)     No (skip to d.)
1. If yes, and the facility is proposing “development” as defined by N.J.A.C. 7:38, submit a Highlands Applicability Determination from the Division of Watershed Management - Bureau of Watershed Regulation for the facility.

**Questions regarding Highlands applicability shall be directed to the Bureau of Watershed Regulation at (609) 984-6888. Further information may be obtained at [www.nj.gov/dep/highlands/](http://www.nj.gov/dep/highlands/).**

- d. Attach an original or clear copy of a 1:24,000 scale (7.5 minute Quadrangle) United States Geological Survey Topographic Map showing the exact location of the facility and indicating the sheet name from which the map portion was taken.
- e. Attach an original or clear copy of the municipal tax map showing the location of the facility and indicating the sheet name from which the map portion was taken.
- f. Attach a clear copy of an aerial photograph depicting the boundaries of the facility and the location of all residual storage units and associated appurtenances.

**Aerial photos may be obtained by using NJDEP’s interactive mapping tool at [www.nj.gov/dep/gis/newmapping.htm](http://www.nj.gov/dep/gis/newmapping.htm).**

- g. Attach an up-to-date, detailed site plan map, prepared, signed and sealed by a licensed professional engineer or other professional qualified in accordance with the State Board of Professional Engineers and Land Surveyors rules, *N.J.A.C. 13:40*, which identifies (plots) the placement of all equipment, buildings, activities and areas related to the receipt, storage, processing and transferring of all residuals.

**C2. Residual Amount Generated On Site**

- a. Is residual to be prepared for land application generated on-site?  
 Yes       No
  
- b. If yes, is there any industrial flow included in the influent to the domestic wastewater treatment plant?  
 Yes       No      (If yes, percent of total influent flow: \_\_\_\_\_%)
  
- c. Volume and types of residual and/or grit and screenings generated on-site:  
 Sewage sludge (dry metric tons per 365-day period): \_\_\_\_\_  
 Other (describe \_\_\_\_\_): (dry metric tons per 365-day period): \_\_\_\_\_

**C3. Types of Residual Received from Off Site**

- a. Please indicate if your facility receives, or will receive, the following types of residuals from another facility for treatment, use, or disposal.

Liquid Sewage Sludge	<input type="checkbox"/> Yes <input type="checkbox"/> No	Grease	<input type="checkbox"/> Yes <input type="checkbox"/> No
Dewatered Sewage Sludge	<input type="checkbox"/> Yes <input type="checkbox"/> No	Industrial Sludge	<input type="checkbox"/> Yes <input type="checkbox"/> No
Domestic Septage	<input type="checkbox"/> Yes <input type="checkbox"/> No	Other: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No

- b. Describe the location(s) where customer residuals are added and indicate on line drawing required in C7(e) below (attach additional pages if necessary).

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- c. Provide the following information for each facility from which residual is received that is known at the time of permit application. If you receive, or will receive, residual from more than one facility, attach additional pages as necessary.

1. Facility Name: \_\_\_\_\_
2. Contact Person: \_\_\_\_\_ Phone #: \_\_\_\_\_
3. Mailing Address: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
4. Facility Address: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
5. Total dry metric tons per 365-day period received from this facility: \_\_\_\_\_







**C7. Process and Product Information**

- a. Attach a descriptive statement of the process used and operation of the proposed facility. Within this format, provide a description and detailed specifications of all process steps (including but not limited to residual delivery, storage, mixing, stabilization method, curing, and screening) and the related equipment, pollution control systems, instrumentation and monitoring mechanisms. Within the context of the system description, identify the mix ratio of additives to residual.
- b. Attach a description of all process additives, including quantity required, source, trade names, and chemical analysis where available (for example, wood chips, oil, alkaline source etc.).
- c. Provide a dated analysis of the residual product proposed to be applied and of each additive on a mg/kg dry weight basis (or other unit as specified), at a minimum, for the following constituents:

Ammonia-Nitrogen	Nitrate-Nitrogen	Total Kjeldahl Nitrogen
Phosphorus	Potassium	Total Solids (% by weight)
Arsenic	Cadmium	Calcium
Copper	Lead	Mercury
Molybdenum	Nickel	Selenium
Zinc	pH (standard units)	
Radium 226 (pCi/g)	Radium 228 (pCi/g)	Water Extractable Phosphorus (residual product only)

Note: All monitoring shall be performed by a laboratory certified by the Department for the analysis of those specific parameters in accordance with N.J.A.C. 7:18.

- d. Provide the design capacity for the facility that details the maximum amount of residual that will be received, processed and produced in dry metric tons per day.
- e. Attach a detailed line drawing of residual flow through the facility that identifies all units where residual is generated and all residual treatment units, including all processes used for collecting, dewatering, storing, or treating residual, and the destination(s) of all liquids and solids leaving each unit (include on the line drawing the point where any chemicals are added and the type of chemical that is added).
- f. Attach a narrative description of the line drawing required above, including information on any blending, treatment, or other activities that change the quality of the residual (attach additional sheets as necessary).
- g. Describe optimal marketable residual product characteristics as applicable, including but not limited to temperature, total solids, pH, nutrient content, hardness, and odor characteristics. Include a listing of existing operational facilities of the type proposed.

### **C8. New Residual Stabilization Process**

**Applicants for any new residual stabilization process or technology not previously permitted in the State are required to complete the following section. For questions regarding applicability of this section please contact the BPR at (609) 633-3823.**

In addition to the requirements above, applicants shall demonstrate, at a minimum, the following:

- That the land application of the residual will benefit soil physical properties, soil fertility and/or cover vegetation;
- An understanding of the impacts of the residual on soil fertility, soil physical properties and plant growth;
- That the land application of a particular residual has a scientific basis and has been successfully tested or demonstrated in a field application or pilot program;
- That the new residual stabilization process or technology has been successfully tested or demonstrated in a pilot program to achieve the standards applicable to the intended use of residual processed; and
- Control of the stabilization process, and of product maintenance and handling, in a manner that prevents air contamination (including, but not limited to, particulates or odors) subsequent to achievement of a marketable residual product;

### **C9. Residual Storage**

- a. Attach a detailed description of each residual storage area (including temporary receiving areas). Each area shall be delineated on the site plan map required in C1.g above and the maximum storage quantity shall be indicated (i.e., gallons or cubic yards). Provide a narrative description that the design of the residual storage structure conforms to the requirements of N.J.A.C. 7:14A-23.32.

**For each new structure used to store marketable residual product at the processing facility, complete Section C10 below (Engineer's Certification of Proper Design for Residual Storage Installations). Note: Storage installations used to store residual which has not been processed, or which is not a marketable residual product are required to receive a Treatment Works Approval pursuant to N.J.A.C. 7:14A-22 and 23. Questions regarding TWA's shall be directed to the Bureau of Financing and Construction Permits at (609) 984-6840. Further information may be obtained via the TWA web page at [www.state.nj.us/dep/dwq/twa.htm](http://www.state.nj.us/dep/dwq/twa.htm)**

- b. How long will the final product be stored on-site prior to ultimate management?

Average operation: \_\_\_\_\_ days

Peak operation: \_\_\_\_\_ days

**C10. Engineer's Certification of Proper Design for Residual Storage Installations**

**Complete this section for each marketable residual product storage structure that does not have a TWA. This page shall bear the signature and raised seal of a New Jersey Licensed Professional Engineer. Make additional copies as necessary.**

Storage ID/Name: \_\_\_\_\_

The plans and specifications for the residual storage installation and appurtenances to be constructed provide for protection against:

1. Leakage (more than 0.05 gallons/hour) and/or bursting;
2. Improper or inadequate mixing;
3. Odors;
4. Overflow and/or spills;
5. Corrosivity;
6. Soil bearing deficiencies; and/or
7. Fire and/or combustion

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment (N.J.A.C. 7:14A-2.4(d)).

Name (print): \_\_\_\_\_ Seal:

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

### **C11. Identification of Land Application Sites**

**Identify each land application site known at the time of permit application below (attach additional pages if necessary). In addition a Letter of Land Application Management Approval (LLAMA) application must be submitted for each residual land application site.**

1. Site name: \_\_\_\_\_

Street or Route Number: \_\_\_\_\_

County: \_\_\_\_\_ Lot: \_\_\_\_\_ Block: \_\_\_\_\_

City or Town: \_\_\_\_\_ State: New Jersey Zip: \_\_\_\_\_

2. Site name: \_\_\_\_\_

Street or Route Number: \_\_\_\_\_

County: \_\_\_\_\_ Lot: \_\_\_\_\_ Block: \_\_\_\_\_

City or Town: \_\_\_\_\_ State: New Jersey Zip: \_\_\_\_\_

3. Site name: \_\_\_\_\_

Street or Route Number: \_\_\_\_\_

County: \_\_\_\_\_ Lot: \_\_\_\_\_ Block: \_\_\_\_\_

City or Town: \_\_\_\_\_ State: New Jersey Zip: \_\_\_\_\_

4. Site name: \_\_\_\_\_

Street or Route Number: \_\_\_\_\_

County: \_\_\_\_\_ Lot: \_\_\_\_\_ Block: \_\_\_\_\_

City or Town: \_\_\_\_\_ State: New Jersey Zip: \_\_\_\_\_

### **C12. Notification Plan**

**Where proposed residual land application sites are not identified at the time of permit application, the applicant shall submit a notification plan for the Department's approval that, at a minimum:**

- a. Describes the geographical area covered by the plan; and
- b. Describes the form of advance public notice which, at a minimum, will be supplied to all landowners and occupants adjacent to or abutting a proposed residual land application site. This requirement may be satisfied through public notice in a newspaper of local circulation. Notice shall include, at a minimum, the name and address of the permittee, the name and address of the proposed residual land application site, a description of the activities that are proposed to occur at the residual land application site, and the name and address of the Bureau within the Department to which the permittee must submit an application for a LLAMA.

**C13. Residual Sampling Plan**

**A residuals sampling plan shall be developed and maintained that details all measurements, sampling and analytical procedures. The plan shall include, but not be limited to the following:**

- a. Describe all intended sampling location(s) and the rationale for choosing such location(s). Residual samples used to measure compliance shall be collected at locations representative of the quality of residual immediately prior to use or disposal. Process parameter monitoring must be performed at the location which best reflects achievement of the pathogen reduction and/or vector attraction reduction requirements.
- b. Describe the sampling equipment to be used (sampling device, container type and size, and container cover).
- c. Describe the procedure to be used for cleaning/decontamination of sample containers and sampling equipment.
- d. Describe in detail the procedure to be used for collecting the sample(s) to ensure the sample obtained for analysis is representative of the residual removed for use or disposal, include a schedule for days and times of sample collection, the procedures to be used to obtain a representative sample from the chosen sampling point, and the procedures to be used to mix composite samples (See *New Jersey Sludge Sampling and Analytical Guidance Document*, Appendix E).
- e. Describe the sampling method(s) (that is, Grab v. Composite), the number of samples to be taken per sampling event and the interval between grabs (include sample size by weight or volume.), and the frequency of the sampling event(s). (Note, different parameters or groups of parameters may require different sampling methods and/or locations.).
- f. Provide the name of the person who will take the sample(s) and his/her qualifications.
- g. Provide the name and address of all laboratories to be employed, including sub-contracting laboratories (if multiple labs, indicate which groups of parameters each lab is responsible for).
- h. Describe the post-collection sample handling procedures employed to maintain sample integrity. This description should explain how the samples will be preserved and transported, how the holding times will be met, and whether a chain-of-custody is required (See *New Jersey Sludge Sampling and Analytical Guidance Document*, Appendix E).
- i. Describe sample documentation procedures, specifically, describe those elements to be included in a field logbook (see *New Jersey Sludge Sampling and Analytical Guidance Document*, Appendix F).
- j. Describe how the following elements of the sampling event will be reported to the certified laboratory:
  - Chemicals added during sludge processing (alum, ferric chloride, lime, organic polymer etc.)
  - analytical methods and target reporting limits (see below)
  - treatment process conditions or deviations
- k. Provide a description of record-keeping procedures. The description should explain what information will be retained and for how long, and how the information will be stored.
- l. Provide the frequency of analysis and the analytical methods requested for the following parameters. Process parameter monitoring necessary to demonstrate whether pathogen reduction or vector attraction reduction requirements are met must be performed each day that the process(es) intended to meet the requirements is operated and as often each day as is necessary. Sample holding times are indicated for use with your certified laboratory (see *New Jersey Sludge Sampling and Analytical Guidance Document*, Appendix A, for additional information, including information on Target Reporting Levels):

PARAMETER	FREQUENCY OF ANALYSIS	ANALYTICAL METHOD	HOLDING TIME
Total Solids, (% by weight)		SM Method 2540G	7 days
Arsenic, Total			6 months
Cadmium, Total			6 months
Chromium, Total			6 months
Copper, Total			6 months
Fecal Coliform			See Notes 1 & 2
Lead, Total			6 months
Mercury, Total		SW-846 Method 7471	28 days
Molybdenum, Total			6 months
Nickel, Total			6 months
Nitrogen, Total Kjeldahl (TKN)			28 days
Nitrogen, Ammonia (NH <sub>3</sub> -N)			28 days
Nitrogen, Nitrate (NO <sub>3</sub> -N)		SW-846 Method 9056	48 hours
pH			Immediate
Phosphorous, Total			28 days
Potassium, Total			6 months
Salmonella			See Note 1
Selenium, Total			6 months
Temperature		SM-18 <sup>th</sup> Method 2550B	Immediate
Zinc, Total			6 months
<i>Radium 226</i>		<i>SW-846 Method 9315</i>	<i>6 months</i>
<i>Radium 228</i>		<i>SW-846 Method 9320</i>	<i>6 months</i>
<i>Water Extractable Phosphorus</i>		<i>Universal Water Extractable P Test for Manure and Biosolids (adapted from Kleinman et al. 2007)</i>	<i>3 weeks</i>

<sup>1</sup>Samples analysis should begin immediately, preferably within 2 hours of collection. The maximum transport time to laboratory is 6 hours, and samples should be processed within 2 hours of receipt at the laboratory.

<sup>2</sup>40 CFR Part 136, Table II. Fecal coliform for sewage sludge, the holding time is extended to 24 hours for the following sample types using either EPA Method 1680 or 1681: Class A composted, Class B anaerobically digested, or Class B aerobically digested.

**PART D: CERTIFICATION**

**Read and submit the following certification statement with this application:**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with the 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 purposely, knowingly, recklessly, or negligently submitting false information.

Signature of Officer: \_\_\_\_\_

Name of Officer: \_\_\_\_\_  
(type or print)

Official Title: \_\_\_\_\_

Telephone Number: (\_\_\_\_) \_\_\_\_\_

Date Signed: \_\_\_\_\_