



Division of Water  
Commercial and Government Services Section

Department of Natural Resources  
and Environmental Control

89 Kings Hwy  
Dover, DE 19901  
dnrec.delaware.gov

Phone: (302) 739-9946  
Fax: (302) 739-8369

## INSTRUCTIONS FOR COMPLETING THE PERMIT APPLICATION FOR THE CONSTRUCTION OF WASTEWATER COLLECTION AND CONVEYANCE SYSTEMS

The following items must accompany the application. **Please note that incomplete application packages will be returned in their entirety and not reviewed until such time as all required information is received.**

- 1. A narrative summary of the intended purpose and design of the proposed facilities.
- 2. One (1) set of final construction plans and specifications, if applicable, signed and sealed by a Delaware-registered Professional Engineer, or a Delaware-registered Professional Land Surveyor for gravity systems only. One (1) electronic copy of final Plans.
- 3. One (1) electronic copy of final Plans.
- 4. The final plans must be drawn to scale showing slopes, invert, pipe types and sizes, existing and proposed ground surfaces, tops of manholes, water lines, stormwater and stream crossings, encasements shown in plan and profile, and other information if pertinent or requested.
- 5. For pump/lift stations and force mains, include all calculations and pump/performance curves.
- 6. A check made payable to the State of Delaware for eight hundred twenty-five dollars (\$825.00), the non-refundable permit review fee. This fee covers the initial review and one follow-up review of any corrections or changes made to address the Division's comments. An additional eight hundred twenty-five dollars (\$825.00) non-refundable review fee must be submitted for resubmission of the plans if changes are made to the project which trigger a complete review of the permit application.
- 7. Your permit will have a public notice requirement if your system includes force mains or pump/lift stations. Include a check made payable to the State of Delaware for three hundred dollars (\$300.00) for the reimbursement of legal notices if the system has a force main connection or a pump/lift station.
- Please submit the completed application package, as outlined above, to DE DNREC, Division of Water, Commercial and Government Services Section, 89 Kings Highway, Dover, DE 19901. Please note, a new application, including the review fee, must be submitted if the Division's comments are not addressed or if requested supplemental information is not provided within one (1) year of the comment or request date.
- The following items must be submitted prior to permit issuance:
- 8. Verification from the appropriate county or municipal planning authority that the project has the proper zoning approval.
- 9. A letter from the owner/operator of the wastewater facilities to which the proposed collection and conveyance facilities connect. The letter must include confirmation that the owner/operator has approved the project, that the owner/operator will take responsibility for treating and disposing of the wastewater to be conveyed and that the downstream facilities have the capacity to manage the additional flows without causing or contributing to violations of Delaware's Environmental Protection Act (7 Del. C., Chapter 60) and the regulations promulgated thereafter. This includes, but is not limited to, unauthorized discharges such as overflows at manholes and violations of the treatment system's operating permit (for example, the National Pollutant Discharge Elimination System (NPDES) permit).
  - Visit us on the web at: <https://dnrec.alpha.delaware.gov/water/surface-water/>

**APPLICATION FOR THE CONSTRUCTION OF  
WASTEWATER COLLECTION AND CONVEYANCE SYSTEMS**  
Application must be complete, typewritten or clearly printed

Date Application Submitted \_\_\_\_\_

PROJECT INFORMATION			
<p>Project Name and Location/ Address</p> <p style="color: red;"><b>Kent County Regional Resource Recovery Facility Biosolids Capacity Expansion Project 139 Milford Neck Road, Milford, DE 19963</b></p>			
<p>Tax Parcel Number(s) <b>5-00-14200-01-5500-000; 5-00-14200-01-2000-000</b></p>			
<p>County  <input checked="" type="checkbox"/> Kent <input type="checkbox"/> New Castle <input type="checkbox"/> Sussex</p>		<p>Watershed (<a href="http://www.dnrec.delaware.gov/swc/wa/Pages/WatershedAssessment.aspx">www.dnrec.delaware.gov/swc/wa/Pages/WatershedAssessment.aspx</a>)  <input type="checkbox"/> Chesapeake Bay <input checked="" type="checkbox"/> DE Bay/Estuary <input type="checkbox"/> Inland Bays/Atl Ocean <input type="checkbox"/> Piedmont</p>	
<p>Sewer District or Interceptor</p>		<p>Wastewater Treatment/Disposal Facility Name  <b>Kent County Regional Resource Recovery Facility (KC RRRF)</b></p>	
<p>Anticipated Construction Start Date  <b>February 1, 2026</b></p>		<p>Treatment/Disposal Facility Owner and Operating Permit Number  <b>DE 0020338</b></p>	
<p>Please note, construction permits expire three (3) years from the date of permit issuance.</p>			
<p>Are you requesting plan review and comment or <del>WPCC Construction Permit issuance?</del> (circle one)</p>			
<p>Design Flow (gallons/day)            Average <b>20,000,000</b></p>		<p>Peak Factor</p>	<p>Basis of Design  <b>Existing RRRF capacity</b></p>
<p>Description  <b>This project is for improvements to biosolids handling at the existing wastewater treatment facility. Overall capacity of the facility or discharge to receiving waters will not change.</b></p>			
OWNER/DEVELOPER			
<p>Company Name <b>Kent County Levy Court</b></p>			
<p>Mailing Address <b>555 Bay Rd.</b></p>			
<p>City <b>Dover</b></p>		<p>State <b>Delaware</b></p>	<p>Zip <b>19901</b></p>
<p>Contact Name <b>Andy Riggi</b></p>			
<p>E-Mail Address <b>andy.riggi@kentcountyde.gov</b></p>			
<p>Telephone <b>302-744-2430</b></p>	<p>Cell</p>	<p>Fax</p>	

<b>ENGINEER</b>					
Company Name <b>Rummel, Klepper &amp; Kahl</b>					
Mailing Address <b>700 East Pratt St</b>					
City <b>Baltimore</b>			State <b>Maryland</b>	Zip <b>21202</b>	
Contact Name <b>Maia Tatinclaux</b>					
E-Mail Address <b>mtatinclaux@rkk.com</b>					
Telephone <b>410-462-9260</b>		Cell		Fax	
<b>GRAVITY SEWER INFORMATION</b>					
Ownership <input checked="" type="checkbox"/> Public <input type="checkbox"/> Private	Type of Sewer System <input type="checkbox"/> Residential <input type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Other?			If Other, list below <b>Process drains from sludge dewatering and drying</b>	
Type of Pipe <b>epoxy-lined DIP</b>	Length (ft) <b>200</b>	Diameter (in) <b>12</b>	Joint Specification <b>restrained mechanical</b>	Min. Slope (ft/ft) <b>.02</b>	Min. Velocity (ft/sec) <b>2</b>
Minimum Pipe Cover (ft) <b>3.5</b>	Number of Manholes <b>2</b>	Drop manholes provided? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Maximum Distance Between Manholes (ft) <b>30</b>	
Minimum ten foot (10') horizontal & eighteen inch (18") vertical separation from water lines maintained? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			If not, explain provisions to prevent cross-contamination:		
Explain any special challenges (for example, stream, highway and/or railroad crossings, directional drilling, elevated sewers, etc.)					
Comments <b>The gravity sewer included in this project is to convey process drains from the new sludge dewatering and drying equipment to the filtrate and condensate pump station. See attached plans for location.</b>					

FILTRATE AND CONDENSATE PUMP/LIFT STATION INFORMATION				
Ownership <input checked="" type="checkbox"/> Public <input type="checkbox"/> Private	Type of Wastewater <input type="checkbox"/> Residential <input type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Other?			If Other, list below <b>Process drainage from sludge dewatering and drying</b>
Pump Station Flows (gallons/day) Design <b>3,888,000</b>	Average <b>1,908,000</b>	Peak <b>3,888,000</b>	Peak Factor	<b>Based on max. conditions of sludge processing operation</b>
Basis of Design <b>Hidrostal F6K-M4 FE4T4</b>		Pump Type <b>Submersible Screw Impeller</b>		
Will peak flows be accommodated if largest unit fails? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Pump calc's and pump curves attached? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Cycle Time (minutes) <b>min of 10</b>	Wet Well Detention Time (minutes) <b>min of 2.6</b>	
Check valves provided on discharge line? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Gate valves provided on discharge line? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
If not, explain alternate procedure:				
Ventilation provided in wet well? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Dry Well? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is an alarm system included? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Alternate source of power? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
What other provisions for emergency operations? <b>Sludge dewatering and drying can be stopped if there is a failure at the pump station.</b>				
Height of Influent Above Pump (suction head) (ft) <b>8 ft</b>	Height of Effluent Above Pump (discharge head) (ft) <b>19.5</b>	Friction Loss (ft) <b>66</b>		
Pump Design Point <b>1,350 gpm</b>	Pump Operating Point <b>1,350 gpm</b>	Static Head (ft) <b>19.5</b>	Total Head (ft) <b>70</b>	Required Motor Horsepower (hp) <b>50</b>
FORCE MAIN INFORMATION				
Type of Pipe <b>Epoxy lined ductile iron</b>	Length (ft) <b>1226</b>	Diameter (in) <b>12</b>		
Hazen-Williams "C" Design Factor <b>150 (new)</b>	Type of Joints <b>Restrained mechanical</b>	Velocity Under Design Conditions (ft/sec) <b>3.76</b>	Minimum Pipe Cover (ft) <b>3.5 ft</b>	
Air relief valves specified? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Clean-outs provided? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Maximum distance between clean-outs (ft) <b>NA</b>		
Minimum ten foot (10') horizontal & eighteen inch (18") vertical separation from water lines maintained? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If not, explain provisions to prevent cross-contamination:			
Comments	<b>See attached condensate and filtrate pump station design documents including calculations, drawings, system and pump curves.</b>			

PLANT WATER PUMP/LIFT STATION INFORMATION				
Ownership <input checked="" type="checkbox"/> Public <input type="checkbox"/> Private	Type of Wastewater <input type="checkbox"/> Residential <input type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Other?			If Other, list below <b>Treated plant effluent water</b>
Pump Station Flows (gallons/day) Design <b>2,800,000</b>	Average <b>1,400,000</b>	Peak <b>2,800,000</b>	Peak Factor	<b>Based on max. water demand during sludge processing operation</b>
Basis of Design <b>KSB K 100-401</b>		Pump Type <b>Submersible Closed Impeller</b>		
Will peak flows be accommodated if largest unit fails? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Pump calc's and pump curves attached? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Cycle Time (minutes) <b>min of 10</b>	Wet Well Detention Time (minutes) <b>2, but wet well connected to plant effluent piping - level should not drop even with both pumps in operation</b>	
Check valves provided on discharge line? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Gate valves provided on discharge line? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
If not, explain alternate procedure:				
Ventilation provided in wet well? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Dry Well? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is an alarm system included? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Alternate source of power? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
What other provisions for emergency operations? <b>Water tower provides some storage capacity and existing plant water pump station will remain in-service as backup.</b>				
Height of Influent Above Pump (suction head) (ft) <b>3.5 ft</b>	Height of Effluent Above Pump (discharge head) (ft) <b>128 (water tower el.)</b>		Friction Loss (ft) <b>10</b>	
Pump Design Point <b>972 gpm</b>	Pump Operating Point <b>1,020 gpm</b>	Static Head (ft) <b>128</b>	Total Head (ft) <b>141</b>	Required Motor Horsepower (hp) <b>56</b>
FORCE MAIN INFORMATION				
Type of Pipe <b>Cement lined ductile iron</b>	Length (ft) <b>995 112</b>	Diameter (in) <b>12 16</b>		
Hazen-Williams "C" Design Factor <b>120</b>	Type of Joints <b>Restrained mechanical</b>	Velocity Under Design Conditions (ft/sec) <b>2.6 - 5.5</b>	Minimum Pipe Cover (ft) <b>3.5 ft</b>	
Air relief valves specified? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Clean-outs provided? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Maximum distance between clean-outs (ft) <b>NA</b>		
Minimum ten foot (10') horizontal & eighteen inch (18") vertical separation from water lines maintained? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If not, explain provisions to prevent cross-contamination:			
Comments <b>See attached plant water pump station design documents including calculations, drawings, system and pump curves. 16" piping is between plant effluent box and plant water pump station wet well - the pipe will always be full/under pressure.</b>				