



## Permit-to-Install/Plan Approval Application

### Attachment: Sewer Pumping Stations

#### 1. Pump Stations – Description

a. How many pump stations are included in this project? \_\_\_\_\_

b. Type of pumps/pump station (check as many as apply):

<input type="checkbox"/> Concrete	<input type="checkbox"/> Metal	<input type="checkbox"/> Fiberglass	<input type="checkbox"/> Factory Built
<input type="checkbox"/> Built In Place	<input type="checkbox"/> Submersible	<input type="checkbox"/> Suction Lift	<input type="checkbox"/> Screw Pump

c. Type of wastewater to be pumped:

<input type="checkbox"/> Sanitary	<input type="checkbox"/> Combined (sanitary/storm)	<input type="checkbox"/> Commercial	<input type="checkbox"/> Industrial*
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\*Source of industrial waste: \_\_\_\_\_

d. Does the existing pump station and sewer downstream of the pump station have the capacity to handle design flow from the new sewer without creating or worsening (existing CSOs only) any overflows, bypasses or other operational problems downstream of the pump station discharge?  Yes  No

#### 2. Flood Protection for Pump Stations

a. Flood elevations (GLUMRB Section 41.1) \_\_\_\_\_ 100-year, MSL \_\_\_\_\_ 25-year, MSL

b. Is the site subject to flooding?  Yes  No

c. Is the pump station site accessible at all times? (GLUMRB Section 41.2)  Yes  No

d. Is the site graded to lead surface drainage away from the station?  Yes  No

e. Is the site protected to prevent vandalism and unauthorized entry? (GLUMRB Section 41.2)  Yes  No

f. Distance to nearest residence: \_\_\_\_\_ feet

g. Distance to nearest building: \_\_\_\_\_ feet

#### 3. Design Flow in Proposed Sewer

Identify flows expected at start-up (for example, currently existing flows plus design flow for this project) and the flows expected at design (for example, start-up flows plus flows from future phases of development) at terminus of proposed sewer.

	Average Daily Flow	Peak Hourly Flow
Start-Up Flows (based on immediate area served)	_____ MGD	_____ MGD
Design Flows (based on planned area served)	_____ MGD	_____ MGD
Hydraulic Capacity of Sewer	_____ MGD	_____ MGD

  

Assumptions used to calculate above flows: (check all that apply)	Start-Up	Design
<input type="checkbox"/> Residential Population at: _____ * gal/home	_____ homes	_____ homes
<input type="checkbox"/> Residential Population at: _____ gal/cap/day	_____ people	_____ people
<input type="checkbox"/> Non-Residential Flows (for example commercial, industrial, etc.): _____ MGD	_____ MGD	_____ MGD
<input type="checkbox"/> Computer Flow Modeling Results (attach explanation and data)		

\*120 gallon/bedroom in accordance w/ OAC 3745-42-05 unless additional information is submitted

4. Pump Specifications				
Include all pumps in the pump station (existing or proposed) when completing these tables.				
All Pumps	Pump 1	Pump 2	Pump 3	Pump 4
Existing or proposed				
Pump type				
Casing material				
Impeller type				
Motor type (variable or constant speed)				
Are high/premium efficiency motors specified?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Operating conditions				
Rate:	gpm	gpm	gpm	gpm
TDH:	ft	ft	ft	ft
Speed range	rpm	rpm	rpm	rpm
Dry Pit Pumps Only <input type="checkbox"/> N/A	Pump 1	Pump 2	Pump 3	Pump 4
Will the pump pass a 3" sphere? (GLUMRB Section 42.33)	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Diameter of suction openings (GLUMRB Section 42.33)	in	in	in	in
Diameter of discharge opening (GLUMRB Section 42.33)	in	in	in	in
Is the water seal unit air gapped? (OAC 3745-95)	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Does the pump have its own intake? (GLUMRB Section 42.36)	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Does the pump have its own discharge line check valve? (GLUMRB Section 42.52)	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Does the pump have its own suction line shutoff valve? (GLUMRB Section 42.51)	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Does the pump have its own discharge line shutoff valve? (GLUMRB Section 42.52)	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Submersible Pumps Only <input type="checkbox"/> N/A	Pump 1	Pump 2	Pump 3	Pump 4
Will the pump pass a 3" sphere? (GLUMRB Section 42.33)	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Diameter of discharge opening (GLUMRB Section 42.33)				
Can the pump be removed without dewatering the wet well? (GLUMRB Section 44.2)	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Is the power cable provided with strain relief? (GLUMRB Section 44.33)	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Is a separate lifting chain/cable provided? (GLUMRB Section 44.2)	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Screw Pumps Only <input type="checkbox"/> N/A	Pump 1	Pump 2	Pump 3	Pump 4
Does the pump have its own wet well and slide gate?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Have provisions been provided for starting the pump when the wet well is frozen?	<input type="checkbox"/> Yes <input type="checkbox"/> No			

<b>5. Dry Well Construction</b> <input type="checkbox"/> N/A (skip to Item 6)	
a. Is the dry well completely separated from the wet well? (GLUMRB Section 42.21)	<input type="checkbox"/> Yes <input type="checkbox"/> No
b. Is a sump pump provided for dewatering the dry well? (GLUMRB Section 42.37)	<input type="checkbox"/> Yes <input type="checkbox"/> No
c. Is the sump pump discharge line air gapped above the high water alarm elevation?	<input type="checkbox"/> Yes <input type="checkbox"/> No
d. Has the stairway/access ladder been provided with non-slip treads?	<input type="checkbox"/> Yes <input type="checkbox"/> No
e. Has a rigidly fixed landing been provided every 10 vertical feet for factory built pump stations or every 12 vertical feet for built-in-place pump stations? (GLUMRB Section 42.232)	<input type="checkbox"/> Yes <input type="checkbox"/> No
f. What type of ventilation has been provided? (GLUMRB Sections 42.71 and 42.76)	<input type="checkbox"/> Yes <input type="checkbox"/> No
g. Number of air changes per hour (GLUMRB Section 42.76): _____ at _____ cfm	
h. Where are the controls for the ventilation equipment located? (GLUMRB Section 42.73)	<input type="checkbox"/> Inside <input type="checkbox"/> Outside
i. Is the dry well ventilation system separate from the wet well system? (GLUMRB Section 42.71)	<input type="checkbox"/> Yes <input type="checkbox"/> No
j. Is automatic heating and dehumidification equipment provided for the protection of motors and control systems? (GLUMRB Section 42.74)	<input type="checkbox"/> Yes <input type="checkbox"/> No
k. Are the lights, fan wheels, etc., designed for NEC Class I, Group D, Division 1 locations? (GLUMRB Section 42.35)	<input type="checkbox"/> Yes <input type="checkbox"/> No

<b>6. Wet Well Construction</b> <input type="checkbox"/> N/A (Skip to Item 7)	
a. Is a separate or divided wet well provided? (GLUMRB Section 42.61)	<input type="checkbox"/> Divided <input type="checkbox"/> Separate
b. Wet well effective volume (GLUMRB Section 42.62) Effective volume calculated between shutoff and first level on.	_____ gallons
c. Are inlets to the wet well provided below the minimum water surface to prevent turbulence and subsequent odors?	<input type="checkbox"/> Yes <input type="checkbox"/> No
d. Is there a bypass or overflow from the wet well?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>If Yes,</b>	
i. What is the elevation of the overflow invert?	_____
ii. Is treatment of the bypass/overflow provided?	<input type="checkbox"/> Yes <input type="checkbox"/> No
iii. Are there provisions for retaining waste on site?	<input type="checkbox"/> Yes <input type="checkbox"/> No
e. What type of ventilation has been provided? (GLUMRB Sections 42.71 and 42.75)	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent <input type="checkbox"/> Portable
f. Number of air changes per hour (GLUMRB Section 42.75) _____ at _____ cfm	
g. Where are the controls for the ventilation equipment located? (GLUMRB Section 42.73)	<input type="checkbox"/> Inside <input type="checkbox"/> Outside
h. Is all equipment located in the wet well suitable for use under corrosive conditions? (GLUMRB Section 42.35)	<input type="checkbox"/> Yes <input type="checkbox"/> No

<b>7. Pump Controls and Flow Measurement</b>	
a. Wet Well Elevations	
Suction Line Invert _____	Pump No. 1 Start _____
Discharge Line Invert _____	Pump No. 2 Start _____
Bottom of Wet Well _____	Pump No. 3 Start _____
Low Shut Off _____	High Water Alarm _____
b. Flow Measurement (indicate which type of flow measurement)	
<input type="checkbox"/> Indicating, totalizing, and recording device (design peak hourly flow > 1,200 gpm)	<input type="checkbox"/> Elapsed time meters (design peak hourly flow < 1,200 gpm)

<b>8. Protection of Water Supplies</b>	
Is potable water provided at the pump station?	<input type="checkbox"/> Yes <input type="checkbox"/> No
If Yes, is a minimum air gap of six inches, break tank, and booster pump provided? (GLUMRB Section 42.9)	<input type="checkbox"/> Yes <input type="checkbox"/> No

## 9. Emergency Operations

a. Type of emergency pumping capability provided? (GLUMRB Section 47.2)

Dual substations    Portable generator    Permanent generator    Portable pump    None\*

\*If None, please explain:

b. Regardless of type of emergency pumping capability provided, does the standby system have sufficient capacity to start up and maintain the total rated running capacity of the pump station? (GLUMRB Section 47.2)  Yes    No

c. Is the portable generator or portable pump used to provide stand-by operations at multiple locations? If **Yes**, how many?  Yes    No    N/A

d. Is an electrical hookup for a portable generator provided?  Yes    No    N/A

e. Is a hookup to the force main for portable pumps provided? (GLUMRB Section 47.2)  Yes    No

f. Does the owner/operator of the pump station have any portable pumps to use when needed? (GLUMRB Section 47.2)  Yes    No

g. What type of alarm is provided? (GLUMRB Section 46)

Telemetered    Audio visual, battery operated    Other (please specify): \_\_\_\_\_