## 1. Pump Stations – Description

<table>
<thead>
<tr>
<th>a. How many pump stations are included in this project?</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. Type of pumps/pump station (check as many as apply):</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>c. Type of wastewater to be pumped:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>*Source of industrial waste:</td>
</tr>
<tr>
<td>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?</td>
</tr>
</tbody>
</table>

## 2. Flood Protection for Pump Stations

<table>
<thead>
<tr>
<th>a. Flood elevations (GLUMRB Section 41.1) 100-year, MSL 25-year, MSL</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. Is the site subject to flooding?</td>
</tr>
<tr>
<td>c. Is the pump station site accessible at all times? (GLUMRB Section 41.2)</td>
</tr>
<tr>
<td>d. Is the site graded to lead surface drainage away from the station?</td>
</tr>
<tr>
<td>e. Is the site protected to prevent vandalism and unauthorized entry? (GLUMRB Section 41.2)</td>
</tr>
<tr>
<td>f. Distance to nearest residence:</td>
</tr>
<tr>
<td>g. Distance to nearest building:</td>
</tr>
</tbody>
</table>

## 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.

<table>
<thead>
<tr>
<th>Average Daily Flow</th>
<th>Peak Hourly Flow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start-Up Flows (based on immediate area served)</td>
<td></td>
</tr>
<tr>
<td>Design Flows (based on planned area served)</td>
<td></td>
</tr>
<tr>
<td>Hydraulic Capacity of Sewer</td>
<td></td>
</tr>
</tbody>
</table>

**Assumptions used to calculate above flows:** (check all that apply)

<table>
<thead>
<tr>
<th>Start-Up</th>
<th>Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential Population at: * gal/home homes</td>
<td></td>
</tr>
<tr>
<td>Residential Population at: gal/cap/day people</td>
<td></td>
</tr>
<tr>
<td>Non-Residential Flows (for example commercial, industrial, etc.): MGD MGD</td>
<td></td>
</tr>
<tr>
<td>Computer Flow Modeling Results (attach explanation and data)</td>
<td></td>
</tr>
</tbody>
</table>

*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.

<table>
<thead>
<tr>
<th>All Pumps</th>
<th>Pump 1</th>
<th>Pump 2</th>
<th>Pump 3</th>
<th>Pump 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing or proposed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pump type</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Casing material</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impeller type</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motor type (variable or constant speed)</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

Are high/premium efficiency motors specified?

Operating conditions

<table>
<thead>
<tr>
<th>Rate:</th>
<th>gpm</th>
<th>gpm</th>
<th>gpm</th>
<th>gpm</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDH:</td>
<td>ft</td>
<td>ft</td>
<td>ft</td>
<td>ft</td>
</tr>
</tbody>
</table>

| Speed range | rpm | rpm | rpm | rpm |

Dry Pit Pumps Only

<table>
<thead>
<tr>
<th>Will the pump pass a 3&quot; sphere? (GLUMRB Section 42.33)</th>
<th>Yes</th>
<th>No</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diameter of suction openings (GLUMRB Section 42.33) in</td>
<td>in</td>
<td>in</td>
<td>in</td>
<td>in</td>
</tr>
<tr>
<td>Diameter of discharge opening (GLUMRB Section 42.33) in</td>
<td>in</td>
<td>in</td>
<td>in</td>
<td>in</td>
</tr>
<tr>
<td>Is the water seal unit air gapped? (OAC 3745-95) Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Does the pump have its own intake? (GLUMRB Section 42.36) Yes | No | Yes | No | Yes | No |

Does the pump have its own discharge line check valve? (GLUMRB Section 42.52) Yes | No | Yes | No | Yes | No |

Does the pump have its own suction line shutoff valve? (GLUMRB Section 42.51) Yes | No | Yes | No | Yes | No |

Does the pump have its own discharge line shutoff valve? (GLUMRB Section 42.52) Yes | No | Yes | No | Yes | No |

Submersible Pumps Only

<table>
<thead>
<tr>
<th>Will the pump pass a 3&quot; sphere? (GLUMRB Section 42.33)</th>
<th>Yes</th>
<th>No</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diameter of discharge opening (GLUMRB Section 42.33)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Can the pump be removed without dewatering the wet well? (GLUMRB Section 44.2) Yes | No | Yes | No | Yes | No |

Is the power cable provided with strain relief? (GLUMRB Section 44.33) Yes | No | Yes | No | Yes | No |

Is a separate lifting chain/cable provided? (GLUMRB Section 44.2) Yes | No | Yes | No | Yes | No |

Screw Pumps Only

<table>
<thead>
<tr>
<th>Does the pump have its own wet well and slide gate? Yes</th>
<th>No</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have provisions been provided for starting the pump when the wet well is frozen? Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
### 5. Dry Well Construction

- **a.** Is the dry well completely separated from the wet well? (GLUMRB Section 42.21)  
  - [ ] Yes  
  - [ ] No

- **b.** Is a sump pump provided for dewatering the dry well? (GLUMRB Section 42.37)  
  - [ ] Yes  
  - [ ] No

- **c.** Is the sump pump discharge line air gapped above the high water alarm elevation?  
  - [ ] Yes  
  - [ ] No

- **d.** Has the stairway/access ladder been provided with non-slip treads?  
  - [ ] Yes  
  - [ ] 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)  
  - [ ] Yes  
  - [ ] No

- **f.** What type of ventilation has been provided? (GLUMRB Sections 42.71 and 42.76)  
  - [ ] Yes  
  - [ ] 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)  
  - [ ] Inside  
  - [ ] Outside

- **i.** Is the dry well ventilation system separate from the wet well system? (GLUMRB Section 42.71)  
  - [ ] Yes  
  - [ ] No

- **j.** Is automatic heating and dehumidification equipment provided for the protection of motors and control systems? (GLUMRB Section 42.74)  
  - [ ] Yes  
  - [ ] No

- **k.** Are the lights, fan wheels, etc., designed for NEC Class I, Group D, Division 1 locations? (GLUMRB Section 42.35)  
  - [ ] Yes  
  - [ ] No

### 6. Wet Well Construction

- **a.** Is a separate or divided wet well provided? (GLUMRB Section 42.61)  
  - [ ] Divided  
  - [ ] 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?  
  - [ ] Yes  
  - [ ] No

- **d.** Is there a bypass or overflow from the wet well?  
  - [ ] Yes  
  - [ ] No
  - **i.** What is the elevation of the overflow invert?  
  - [ ] Yes  
  - [ ] No
  - **ii.** Is treatment of the bypass/overflow provided?  
  - [ ] Yes  
  - [ ] No
  - **iii.** Are there provisions for retaining waste on site?  
  - [ ] Yes  
  - [ ] No

- **e.** What type of ventilation has been provided? (GLUMRB Sections 42.71 and 42.75)  
  - [ ] Continuous  
  - [ ] Intermittent  
  - [ ] 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)  
  - [ ] Inside  
  - [ ] Outside

- **h.** Is all equipment located in the wet well suitable for use under corrosive conditions? (GLUMRB Section 42.35)  
  - [ ] Yes  
  - [ ] No

### 7. Pump Controls and Flow Measurement

- **a.** Wet Well Elevations  
  - Suction Line Invert: _______  
  - Discharge Line Invert: _______  
  - Bottom of Wet Well: _______  
  - Low Shut Off: _______  
  - Pump No. 1 Start: _______  
  - Pump No. 2 Start: _______  
  - Pump No. 3 Start: _______  
  - High Water Alarm: _______

- **b.** Flow Measurement (indicate which type of flow measurement)  
  - [ ] Indicating, totalizing, and recording device  
  - (design peak hourly flow > 1,200 gpm)  
  - [ ] Elapsed time meters  
  - (design peak hourly flow < 1,200 gpm)

### 8. Protection of Water Supplies

- **Is potable water provided at the pump station?**  
  - [ ] Yes  
  - [ ] No

- **If Yes,** is a minimum air gap of six inches, break tank, and booster pump provided? (GLUMRB Section 42.9)  
  - [ ] Yes  
  - [ ] 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):