

# Appendix F

## Pump Station

### Inspection Logs



**WASTEWATER PUMP STATION SITE VISIT FORM**

Pump Station Identification			
Name:	Lakeview		
Construction:	2016		
General		Utility/O&M	
Date:	4/30/19	Owner:	Enfield, NH
Time:	8:00 AM	O&M Division:	Wastewater
Observer:	AMD/JLS	Number of Staff:	1.25-1.5
Site and Emergency Readiness			
Access:	Off Road via gravel driveway	Emergency Power:	60 kW propane generator
Flooding:	None	Bypass Header:	Yes, also functions as pig launcher
Security:	Locked access covers inside unlocked fence. electrical building (locked)	Other:	Underground propane tank
Configuration		Pumping System	
Type:	Wet well with valve vault	Type:	Submersible
Building:	Electrical Support Building	Manufacturer:	Barnes
Wetwell:	9'x6' Concrete	Quantity:	2
Drywell:	8'x6' Concrete	Motor:	25 hp
Other:	Force main discharge valve/flow meter vault with sump pump	Level Control:	Radar level sensor, High/Low Alarm Floats
Electrical		Controls	
Voltage:	480 V	Flow Meter:	Yes, mag-meter
Phase:	3-phase	Pump Controls:	Level sensor setpoints
Condition:		SCADA:	Alarms via Mission radio system
Comments			
<ul style="list-style-type: none"><li>- Interconnected with Shaker Landing PS (owned by Lebanon) so that only one operates (terminate at same manhole)</li><li>- 50-gallon drum of Carusol 20 (sodium permanganate) and Chem-Tech peristaltic metering pump present to feed directly into wet well for odor control during warmer months (approx. 10 gal/year)</li><li>- Metered water service with backflow preventer to serve slop sink (served by the condo water system)</li><li>- Active ventilation of wet well provided by external fan</li><li>- Trash basket installed on influent pipe to wet well (cleaned 3x/wk)</li><li>- 200-amp electrical service</li><li>- No safety grating under access hatches</li></ul>			



**WASTEWATER PUMP STATION SITE VISIT FORM**

Pump Station Identification			
Name:	McConnell Road		
Construction:	2013		
General		Utility/O&M	
Date:	4/30/19	Owner:	Enfield, NH
Time:	9:55 AM	O&M Division:	Wastewater
Observer:	AMD/JLS	Number of Staff:	1.25-1.5
Site and Emergency Readiness			
Access:	Off Road	Emergency Power:	Propane generator
Flooding:	Located directly adjacent to 100-yr floodplain, mag-meter vault floods	Bypass Header:	None
Security:	Locked access covers	Other:	Underground propane tank
Configuration		Pumping System	
Type:	Submersible	Type:	Submersible
Building:	Pre-Cast Concrete Electrical Building	Manufacturer:	
Wetwell:		Quantity:	2
Drywell:		Motor:	20 hp
Other:		Level Control:	Radar level sensor, High/Low Alarm Floats
Electrical		Controls	
Voltage:	480 V	Flow Meter:	Yes, mag-meter
Phase:	3-phase	Pump Controls:	Level sensor setpoints
Condition:		SCADA:	Alarms via Mission radio system
Comments			
<ul style="list-style-type: none"><li>- 225 amp service</li><li>- Poor concrete/snow plow damage to lip of top slab of wet well in driveway</li><li>- Mag-meter vault floods and needs to be pumped (mainly in spring/high groundwater- infiltration source not apparent)</li><li>- Active ventilation of wet well provided by external fan</li><li>- Metered water service with backflow preventer to serve slop sink</li></ul>			



**WASTEWATER PUMP STATION SITE VISIT FORM**

Pump Station Identification			
Name:	Route 4A Enfield		
Construction:	1986		
General		Utility/O&M	
Date:	4/30/19	Owner:	Enfield, NH
Time:	9:20 AM	O&M Division:	Wastewater
Observer:	AMD/JLS	Number of Staff:	1.25-1.5
Site and Emergency Readiness			
Access:	Off Road in grass shoulder	Emergency Power:	None
Flooding:	None	Bypass Header:	Yes
Security:	Locked access covers	Other:	
Configuration		Pumping System	
Type:	Wet well with valve vault	Type:	Submersible
Building:	None	Manufacturer:	
Wetwell:	6'x6' Concrete	Quantity:	2
Drywell:	6'x8' Concrete	Motor:	
Other:	Sump pump in valve vault	Level Control:	Radar level sensor, High/Low Alarm Floats
Electrical		Controls	
Voltage:		Flow Meter:	Yes, mag-meter
Phase:	3-phase	Pump Controls:	Level sensor setpoints
Condition:		SCADA:	Alarms via Mission radio system
Comments			
<ul style="list-style-type: none"><li>- Appears that station was originally installed with trash basket- has been removed</li><li>- Signs of infiltration from precast sections of wet well</li><li>- No safety grating under access hatches</li><li>- Flow meter controls are only electronics that remain in valve vault- rest has been brought above-grade</li><li>- Severe concrete degradation of at-grade portion of valve vault- rebar exposed</li></ul>			



**WASTEWATER PUMP STATION SITE VISIT FORM**

Pump Station Identification			
Name:	Shaker Bridge		
Construction:	1986		
General		Utility/O&M	
Date:	4/30/19	Owner:	Enfield, NH
Time:	8:50 AM	O&M Division:	Wastewater
Observer:	AMD/JLS	Number of Staff:	1.25-1.5
Site and Emergency Readiness			
Access:	Off Road via gravel driveway	Emergency Power:	80 kW diesel generator
Flooding:	Zone AE – no issues	Bypass Header:	None
Security:	Locked access covers	Other:	Diesel day tank in bldg. (50 gal. = 24 hrs)
Configuration		Pumping System	
Type:	Wetpit/Drypit	Type:	Suction-Lift
Building:	Bedeviled red cedar siding exterior	Manufacturer:	Barnes Crown
Wetwell:	12'x25' CIP Concrete	Quantity:	2
Drywell:	12'x16' CIP Concrete	Motor:	25 hp
Other:	Sump pump in lower pump floor	Level Control:	Radar level sensor, High/Low Alarm Floats
Electrical		Controls	
Voltage:	208	Flow Meter:	Yes , mag-meter
Phase:	3-phase	Pump Controls:	Level sensor setpoints
Condition:		SCADA:	Alarms via Mission radio system
Comments			
<ul style="list-style-type: none"><li>- Both pumps original to station, have both been rebuilt</li><li>- 5-gallon buckets of potassium permanganate sitting in small chemical storage building (old sodium hydroxide storage/feed)- metering pump brought in to feed to wet well for odor control during warmer months (approx. 30-40 gal/year). Town would like new building for permanganate feed.</li><li>- Emergency eyewash in top floor of control/pump side of station</li><li>- Grit tank prior to flow entering wet well (cleaned out every 2 years)</li><li>- Pump issues- lose prime once/year, air release lines clog once/year</li><li>- Wet well sits directly under floor of the pump room. One instance was noted where wet well backed up and came up through pipe suction penetrations. Access to wet well very limited given configuration.</li><li>- Panels installed in station for operation of bridge lighting</li><li>- Gas sensor installed in lower pump area</li><li>- Metered water service with backflow prevention</li><li>- No safety grating under access hatches</li></ul>			



**WASTEWATER PUMP STATION SITE VISIT FORM**

Pump Station Identification			
Name:	Wells Street		
Construction:	1986		
General		Utility/O&M	
Date:	4/30/19	Owner:	Enfield, NH
Time:	9:40 AM	O&M Division:	Wastewater
Observer:	AMD/JLS	Number of Staff:	1.25-1.5
Site and Emergency Readiness			
Access:	Off Road in grass area	Emergency Power:	None
Flooding:	None	Bypass Header:	Yes
Security:	Locked access covers	Other:	
Configuration		Pumping System	
Type:	Wetwell with valve vault	Type:	Submersible
Building:	None	Manufacturer:	
Wetwell:	6'x6' Concrete	Quantity:	2
Drywell:	6'x6' Concrete	Motor:	
Other:	Sump pump, dehumidifier, heater in valve vault	Level Control:	Radar level sensor, High/Low Alarm Floats
Electrical		Controls	
Voltage:	230 V	Flow Meter:	No, use runtime hours
Phase:	Single-phase	Pump Controls:	Level sensor setpoints
Condition:		SCADA:	Alarms via Mission radio system
Comments			
<ul style="list-style-type: none"><li>- Yard hydrant served by Town Water</li><li>- Last remaining Town station with controls/electronics down in valve vault</li><li>- Trash basket installed on inlet pipe to wet well- was full at time of inspection</li><li>- Wells Street manholes appear to be buried or off-road</li><li>- Severe concrete degradation of at-grade portion of vaults- rebar exposed</li></ul>			



**WASTEWATER PUMP STATION SITE VISIT FORM**

Pump Station Identification			
Name:	Lower Shaker Village		
Construction:	1987		
General		Utility/O&M	
Date:	4/30/19	Owner:	Enfield, NH
Time:	7:15 AM	O&M Division:	Wastewater
Observer:	AMD/JLS	Number of Staff:	1.25-1.5
Site and Emergency Readiness			
Access:	Off Road via paved driveway	Emergency Power:	36 kW propane generator
Flooding:	None	Bypass Header:	None
Security:	Site fence (locked) & electrical building (locked)	Other:	Above-ground propane tank
Configuration		Pumping System	
Type:	Wetpit/Drypit	Type:	Drypit
Building:	Electrical Support Building	Manufacturer:	Crown
Wetwell:	10'x5'-6" Concrete	Quantity:	2
Drywell:	Steel Prefabricated Pump Station	Motor:	20 hp
Other:		Level Control:	Radar level sensor, High/Low Alarm Floats
Electrical		Controls	
Voltage:	480 V	Flow Meter:	Panel present but no readings
Phase:	3-phase	Pump Controls:	Level sensor setpoints
Condition:		SCADA:	Alarms via Mission radio system
Comments			
<ul style="list-style-type: none"><li>- Handles approximately 20% of system flows. Oversized station- designed for 300-400 units (~190 currently)</li><li>- Interconnected with Shaker Bridge PS so only one operates as to not back up flows at common discharge</li><li>- Issues with rags, handling via public education (mailers)</li><li>- Original pumps (rebuilt recently)</li><li>- Town has safety concern with entry into can station</li><li>- Split wet well- gate between normally open to equalize level, level sensing equipment only in one side</li><li>- Other equipment present: carbon odor control drum/fan (not used), manual bar rack (cleaned 3x/wk), H<sub>2</sub>S sensor (not working), 3 storage tanks (on high wet well, flow would divert here then flow back to wet well)</li><li>- Yard hydrant served by private water system from nearby development</li><li>- 100-amp electrical service, 70-amp to pumps</li><li>- No fall protection in steel can or safety grating under access hatches</li></ul>			