

Pine Mountain POA (Wastewater Summary)

Facility Information:

Wastewater System: NPDES# NC0036935

Connelly Springs, Burke County, NC

~35 Service connections

Assets: Extended Aeration Plant, Polish Pond, Influent Pump Station, Manual Bar Screen, Equalization Tank with Airlift Geyser Pump, Flow Control Box, Aeration Basin, Dual Hopper Clarifiers, Aerobic Digester, Tablet Chlorinator, Chlorine Contact Tank, Concrete Junction Box, Polish Pond & Collection System

Compliance History:

The Pine Mountain Lakes WWTP system has had civil penalty actions, all in 2020. These cases stem from limits violations that occurred in late 2019 for Coliform, BOD and TSS. The total assessed amount for these three cases is \$3,009.35 (\$2,600 in penalties). The permittee has also had eight NOVs and one NOD over the permit term for limit and frequency violations for TSS, Flow, TN, BOD and Fecal Coliform. Half of these violations have been in 2019 and 2020 indicating that the operational issues that the regional office has highlighted should be closely watched.

Description of need:

Pine Mountain Lake wastewater treatment plant system is a wastewater system serving 35 service connection in Ashe County, NC. The tankage is in generally poor condition, however much of the aeration equipment is in poor condition. Corrosion and signs of deterioration are present around the plant. The tanks will require inspection and repairs to ensure structural stability and all yard piping is in need of replacement. Backup generator needs to be inspected since it appears to be non-operational. Security fence has completely collapsed and excessive vegetation have grown along remaining fence line. All equipment and tanks are in poor condition and will require evaluation and repair.

Proposed Improvements:

In order to ensure the longevity and performance of the Pine Mountain Wastewater Treatment Plant, Red Bird Water Utility Operating Company plans to make improvements to the system. In order to ensure that operations can effectively respond to abnormal operating conditions and ensure proper operations, the existing equipment must be evaluated and repaired. The aeration system will be inspected and repaired by addressing what needs to be replaced as needed. Fencing will need to be installed to secure the facility. The clarifier will be inspected and repaired as needed. Tablet chlorinator and Chlorine Contact Tank will be repaired, if necessary. Mission remote monitoring will be installed. These improvements will ensure the system can provide safe and reliable service to customers and will bring the facilities into a maintainable condition moving forward.

Pine Mountain (Sewer)					
No.	Description	QTY	Unit	Unit Price	Cost
1	Replace Walkways & Stairs	1	LS	\$20,000	\$20,000
2	Install Static Screen	1	EA	\$60,000	\$60,000
3	Replace Suction Lift Pump Station & Enclosure	1	EA	\$100,000	\$100,000
4	Dechlorination Basin & Feed System	1	LS	\$50,000	\$50,000
5	New 12-inch Outfall Pipe	300	LF	\$150	\$45,000
7	Armor Banks of White Oak Creek & Unnamed Tributary	50	LF	\$1,200	\$60,000
8	Replace Existing Electrical Service & Distribution Equipment	1	EA	\$40,000	\$40,000
9	Replace Standby Generator	1	EA	\$50,000	\$50,000
10	Replace Surge-Protective Device	1	EA	\$7,500	\$7,500
11	Install SCADA System	1	LS	\$20,000	\$20,000
12	Install New Gravel Access Road	600	SF	\$15	\$9,000
13	Install New Security Fencing	1500	LF	\$30	\$45,000
14	Rehabilitate Package Plant Exterior Steel Surfaces	700	SF	\$15	\$10,500
15	Clean Concrete Measurement Flume	1	LS	\$5,000	\$5,000
Total					\$522,000