

THE RIDGE AT LAKE MARTIN, AL WASTEWATER TREATMENT PLANT

Distributed Infrastructure Community System Protects State Treasure

October 18, 2016



DESIGN CHARACTERISTICS

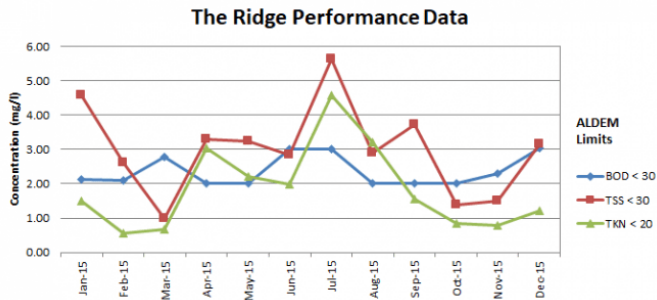
	Influent	Effluent
DESIGN FLOW (MGD)	0.1	0.1
DESIGN TEMP (C)	13	–
BOD5 (mg/l)	300	< 30
TSS (mg/l)	300	< 30
TKN (mg/l)	65	< 20
AMMONIA?N (mg/l)	50	< 10
FECAL (MPN/100ml)	–	< 200

OVERVIEW

Ten miles south of Alexander City, Alabama is The Ridge on Lake Martin a 206 home upscale lakeside community. With over 44,000 acres of clear blue water and 750 miles of pristine shore line, Lake Martin is an Alabama state treasure worth enjoying and preserving. The developer of this community sought to do just that with expansive open space design and sustainable wastewater infrastructure built to accommodate nutrient discharge standards. The community's wastewater is collected and pumped to a 100,000 gallon per day AquaPoint, AquaCELL™ moving bed biofilm reactor (MBBR) treatment system. The process was designed with the flexibility to operate at low flows during the early phases of development and easily expand to accommodate future growth.

The development company and its engineer selected an AquaPoint AquaCELL™ moving bed biofilm reactor (MBBR) treatment system for its proven performance capability, ease of operation and small footprint. The system incorporates primary screening, flow equalization, a dual or three stage MBBR configuration, secondary clarification, sludge digestion, UV disinfection and state of the art PLC controls. Effluent from the plant is discharged through a drip irrigation system.

PERFORMANCE DATA



- System Commissioned: 2009
- Detectable Limit for BOD & TSS: 4 & <1 mg/l respectively
- Data Source: AL DEM Records

DATE	BOD5 (mg/l)	TSS (mg/l)	TKN (mg/l)
JAN. 2015	2.14	4.57	1.50
FEB. 2015	2.09	2.60	0.56
MAR. 2015	2.77	1.00	0.66
APR. 2015	2.00	3.31	3.04
MAY 2015	2.00	3.25	2.22
JUN. 2015	3.00	2.84	1.98
JUL. 2015	3.00	5.64	4.57
AUG. 2015	2.00	2.90	3.20
SEP. 2015	2.00	3.73	1.56
OCT. 2015	2.00	1.39	0.85
NOV. 2015	2.31	1.50	0.78
DEC. 2015	3.03	3.16	1.21
AVG.	2.36	2.99	1.84

SYSTEM DIAGRAM

