

## QUESTIONS TO EVALUATE TECHNOLOGY SELECTION FOR LEWES WWTF

### DESIGN PARAMETERS

Average Daily Flow: 1.75 mgd

Existing Site: 6 acres, MBR Process

Discharge: Lewes-Rehoboth Canal?

Influent: Primarily household

Parameter	Existing WWTF Performance [Sep '20 to Sep '21]			Permit Limit
	Min.	Ave.	Max.	
pH	7.1	7.3	7.5	6 - 9
Total Nitrogen (mg/L)	3.5	5.6	7.7	8 (daily av.)
Total Phosphorous (mg/L)	0.05	0.59	1.66	2 (daily av.)
Enterococcus (cfu/100 mL)	0.50	0.89	2.0	10 (daily av.); 104 (daily max)
Total Suspended Solids (TSS, mg/L)	0.25	0.33	0.40	15 (daily av.); 23 (daily max)
Biochemical Oxygen Demand (BOD, mg/L)	1.2	1.2	1.3	15 (daily av.); 23 (daily max)
Average Daily Flow (mgd)	0.39	0.89	1.69	-

### QUESTIONS

Nereda Technology:

1. To meet or exceed these parameters consistently, what components besides the Nereda technology would be recommended?
2. Minimum space requirement / lot size - for full system
3. Lead time on design and build
4. Chemicals used – for full process train
5. ~~Number of operators to run the plant for all the above~~
6. Cost to build, including control systems **and ancillary systems (e.g., headworks, polishing equipment, sludge dewatering)**
7. Cost to operate
8. Headworks design (vs, e.g., for MBR system)
9. Number, configuration and size of tanks recommended
10. Disinfection system
11. Sludge management recommendations / options
12. Energy use
13. Loading of reactors: must we grow our own AGS? Pros and cons, **is it more time consuming? Meeting permit limits in the interim period.**
14. Polishing steps
15. Odour **control**

16. How many operators to run the full plant and how many need to be onsite versus remote?  
(Does the Delaware Code require more operators?)
17. Qualifications for operators
18. Training provided (vs assumed knowledge/qualifications) – and where and when
19. Other support provided
20. Resiliency to storms and to shock loading
21. Impact of saltwater intrusion into systems during high water events
22. What are the Alabama plant permit limits? Permit limits at other US Aqua-Nereda sites?
23. Utilization of existing equipment?

Advantages and disadvantages / compare to Sequencing Batch Reactor System for all the above

Questions for Sussex County:

24. Does Sussex County have the ability to take granular (i.e., Nereda) sludge?
25. What process technology do they intend to install at Wolfe Neck?
26. What are their current permit limits?
27. Update on how much of the leased property will remain off limits, or when they will know
28. Update on GHD study for ocean outfall