
MEMORANDUM

TO: DR. CASHMAN
FROM: JORDAN HUBER
SUBJECT: ARCATA MARSH WASTE WATER TREATMENT PLANT FIELD TRIP
DATE: SEPTEMBER 29, 2016

Purpose

The purpose of this memorandum is to show what I learned about the Arcata Marsh Waste Water Treatment Plant and what knowledge I took away from the trip that can help me be a better engineer.

Discussion

This field trip was the first time I have ever been to a waste water treatment plant and I can honestly say I underestimated the wave of odor that hits you when you enter the plant. However, I found the trip very interesting and the process was very intriguing to me. Learning about the way that oxidation ponds and natural processes can be manipulated and used for our advantage while at the same time helping the environment was something that I would love to do when I become an engineer.

What I also learned was how design conflicts with the actual day-to-day operations of the plant. I think being able to understand how someone will have to work with what you design them benefits both sides greatly as the engineers are able to make more user-friendly designs while the operators are able to improve their ability to work and their efficiency. This is something I had not really ever considered before because I assumed that engineers worked closer with operators and contractors to help build and create plans for the structures they build, so the process helped clear up some misunderstandings I had.

Another thing the trip opened my eyes to was the amount of machinery it takes to run a waste water treatment plant. When we discussed the different stages of treatment in class it seems so simple and straightforward but actually going out there and seeing the amount of machinery and the different processes that have to all be in sync in order for the plant to function is incredible.

What also drew my interest were the “blue frogs” being used in the treatment marshes to help distribute the sludge. I thought the motion that they did was strange but seemed to be effective in dispersing the sludge around the pond. The operator giving the tour sounded skeptical in their actual ability to help the process so only time and lots of monitoring will tell.

The most important part of the trip in my opinion is the fact that are able to use land that was once an eye-sore and turned it into a staple in the community and abroad. I would have never pictured a waste water treatment plant to look as beautiful as it did, at least where the oxidation ponds were. The amount of ducks, vegetation, and people that were using the area for various purposes stood out to me the most and I believe is the highest level an engineer can achieve when designing a plant like the Arcata Marsh.

Conclusion

My trip the treatment plant definitely gave me ideas on what I should be considering moving forward in my career as an engineer. It taught me a lot about design, consulting workers and being connected with who you are working for, the way machinery works and the beautiful projects environmental resources engineers can help design. Visiting places like the Arcata Marsh give me the desire to go out and make projects similar to the impact it has had on its community.