

Memorandum

TO: Eileen Cashman

FROM: Alexis Clemente

SUBJECT: Arcata Marsh Wastewater Treatment Plant Memo

DATE: October 7, 2016

Purpose:

The purpose of this memorandum is to discuss what I learned on the field trip to the Arcata Marsh Wastewater Treatment Plant. On September 29, 2016, our Engineering 115 lab went on a field trip to the AMWWTP to learn about the different stages of treatment of wastewater and observe how the process actually works. In this memorandum I will discuss what I learned and what interested me about the field trip.

Discussion:

I really enjoyed our field trip to the Arcata Marsh Wastewater Treatment Plant. I had been to the Marsh before and I continuously wondered how it worked. It was really fascinating to get to see the process firsthand.

While I did not enjoy the smell of the Primary Treatment, it was still interesting to see the treatment in action and the structures as they were operating. While I was there, I learned about how putting certain items in the toilet can affect the treatment plant because it can clog the system. I also thought it was interesting how there is a seasonal variation of effluent volume and how the tank has to be big enough to hold all of the water at the highest level of effluent. This made me think of the engineering behind it because you have to figure out how big the tank has to be to hold all of the water and also the velocity of the water coming into the tank versus the velocity of the water leaving the tank.

Seeing and learning about the Treatment Wetlands was the part of the trip that I liked the most. Not only was it more scenic, but the concept was most interesting and surprised me the most. As I said I had been to the Marsh before, I had seen the agriculture, but I did not realize it was planted there on purpose. This was new information to me and it interested me how plants could treat wastewater. However, I am still not quite clear on how exactly it works. I understand that it slows down the flow of water and also filters out some of the sludge, but I am not sure how it treats the water. I am interested in learning more about this process and also how the treatment wetlands are built.

Another thing that I learned on this field trip was how the birds are dangerous at the wastewater treatment plant. I thought it was interesting learning about all of the different methods to try to keep the birds away from the waste water, such as the different noises to try to scare the birds off. I was surprised that the method that actually worked was tying the fishing lines above the clarifier to keep the birds out of it. I did not realize how birds at the treatment plant would affect the quality of the oysters in Arcata.

Conclusion:

I enjoyed this field trip because it put a visual in my head to what we had been learning in class and made me understand the process a lot better. I learned a lot of interesting things while on this field trip such as the different methods of treatment and how they work, along with other issues that may come along and how they were fixed.