

MEMORANDUM

TO: PROFESSOR VERGARA
FROM: LOGAN ZAMPA
SUBJECT: ARCATA WASTEWATER TREATMENT FACILITY TRIP
DATE: OCTOBER 2, 2022

Purpose

The purpose of the lab was to get familiar with the Arcata wastewater treatment plant as well as get used to the wastewater treatment stages and how they function and work.

Discussion

During the field trip we were taken around the facility and showed around at the different steps of the water treatment stages and were told how they worked. We first looked at the headworks and were told that the headworks can pump up to 5 MGD but they crank it down to 1 MGD to not overwork the machines and equipment. After the headworks we were shown the clarifier and we were told that there were a lot of solids floating on the top of the water because it has been warmer recently but we were also told in the winter it will clear up. After the clarifier we were shown the digester and we were told they heat the digester to anywhere between 95-98 degrees and that is the optimum temp to get what needs to get done. The tour guide also showed us the sludge that settles off on the bottom of the digester and it was very thick and gross. We were then shown the oxidation ponds and we were told that they just recently added a plastic wall so the water does not take shortcuts and stays there for the recommended time. They are also planning on adding 25-30 aeration pods in each oxidation pond to speed up the process. It was kinda hard to see the treatment wetlands as there were a lot of plants covering them and I thought that was very cool. The last part of the experience was cool because we were told the water comes in with a BOD of somewhere between 125-150 and when they are done treating it it is all the way down to a BOD of 5. That was really cool and I can't wait until our next field trip to the recycling center.

Conclusion

The field trip allowed us to further expand our knowledge on the types of treatment and the steps it takes to keep our oceans healthy and not damage our wildlife such as fish and other creatures that live in the ocean.