
ARCATA WASTERWATER TREATMENT PLANT FIELD TRIP MEMO

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SUBJECT: ARCATA WASTEWATER TREATMENT FACILITY
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INTRODUCTION

On November 17th our Engineering 115 lab took a field trip to the Arcata Wastewater Treatment facility. This was a beneficial trip because it introduced the class to an actual treatment plant. It is trips like these that really orient the students with possible career paths that can be followed with an environmental engineering degree.

DISCUSSION

When we arrived, the current operator of the plant gave us a brief history of how the wastewater treatment had developed over time from 1949 till present. He explained how at the start, in 1949, the only treatment being done to the wastewater was just a primary clarifier and it wasn't till state treatment standards were in place that the facility began using oxidation ponds. After this talk we were taken to the headworks, where roughly 2.2 million gallons of wastewater enter the plant every day. Our next destination was the digester and the drying beds. After the wastewater goes through its primary treatment the sludge removed is pumped into the digester where it is heated up so that water can be removed from the sludge. Once going through the digesters the sludge is placed in drying beds where it stays for a period of time, somewhere around 6 months, until it's ready to be used for things such as fertilizer.

After a short walk, we arrived at a site near one of the oxidation ponds. At these ponds, explained the operator, the water enters the ponds at a BOD of about 100 so the wastewater still has a lot to change till it's down to regulation BOD. Oxidation ponds collect large amounts of bacteria that settles at the bottom of the pond which would lead to the ponds needed to be cleaned out once in a while. However, even though the oxidation ponds at the plant were put in over 60 years ago, they have not been cleaned and actually it looks like they will be fine for a few more years. Once the wastewater has passed through all the ponds it's sent through a chlorination process then possibly sent to the enhancement wetlands for further treatment. Once the tour of the facility was done, we took a walk through the trails around the wetlands.

CONCLUSION

The most interesting part of the trip for me was realizing how much wastewater that this area produces and how it is dependent on a lot of variables. For example, during the winter months the rate of influent can reach all the way up to 14 million gallons per day because of all the rain and also the fact that HSU is in session which just means more people using water, something that never occurred to me when figuring out how much wastewater we produce.