
MEMORANDUM

TO: DR. EILEEN CASHMAN
FROM: MELISSA SAVAGE
SUBJECT: ARCATA MARSH
DATE: OCTOBER 7, 2016

Purpose

The purpose of this memo is to review the tour of the Arcata Wastewater Treatment Plant, Marshes, and Wetlands on September 30, 2016 at 2:30 pm in Arcata, California. The treatment plant and marshes were toured and the treatment processes were discussed.

Discussion

The tour began at the drying beds, which are used to dry the sludge before being transported to the composting area. The headworks, where large debris is screened through gates as part of the primary treatment process, was viewed next. The wastewater entering the headworks has a BOD of approximately 200 mg/L. The purpose of the sump is maintaining the water level, which generally increases during the Fall and Winter from increased rainfall and an influx of students. The water level decreases during the Summer with the reduced rainfall and exodus of students. The two Archimedes screw pumps then move the water through the racks.

The clarifier, which allows smaller solids to settle as the last part of the primary treatment process was viewed. The water exiting this stage of treatment has a BOD of approximately 60 mg/L. The sludge removed from the clarifier is transported to the composting area, which may later be used in city projects.

As part of the secondary treatment process, the oxidation ponds and treatment wetlands were observed. One of the treatment marshes was installed with “blue frogs” which were not running at the time, possibly from the power outage in Arcata. These are designed to remove sludge accumulation, which has plagued some of the marshes. The water, once achieving the monthly average of 30 mg/L of BOD, exits into Humboldt Bay.

Conclusion

The Arcata Wastewater Treatment Plants and Marshes were toured, highlighting the treatment processes from the input of wastewater to the output into Humboldt Bay.