
MEMORANDUM

TO: MARGARET LANG AND KRISTEN RADECSKY
FROM: SAMANTHA ORTEGA
SUBJECT: REVIEW OF THE ARCATA MARSH AND WILDLIFE SANCTUARY TRIP
DATE: NOVEMBER 30, 2012

Purpose

The purpose of this memo is to summarize the importance of the Arcata Marsh field trip held on November 16, 2012 at 2pm in Arcata, CA. Brief descriptions of the plant, various machinery uses and their purpose, management, processes, and water quality standards are included.

Discussion

The trip began at the headworks, where typical solids are collected. Large bar racks are used to trap these solids. Typically in the fall, about 1.5 million gallons of wastewater a day is collected. Before the water goes to the primary clarifier, it must pass through the grit chamber, where smaller solids are removed. At the primary clarifier, the water is slowed down and through a rotating sludge raking system solids are removed. Solids that sit on the surface of the water are simply skimmed off. The solids go to digesters in order for the waste to be managed and make it non-hazardous. After the primary clarifier, the water is disposed to the oxidation, the bacteria functions from the oxygen that comes from the algae and the sun's energy. In the treatment wetlands, the total suspended solids can be reduced by blocking out the sun in order to kill the algae. BOD decreases as well. Once the water passes the enhancement marshes it can be released into the bay. These enhancement marshes meet the regulated requirements, making it a sanctuary place for the wildlife.

Conclusion

This field trip helped me understand the importance of treating our water and how complex it is to achieve it. I learned that San Diego cut corners with their wastewater treatment and now some of the water in Baja California is unsafe. As tedious wastewater treatment can get, it is still crucial to get it done right. The Arcata marsh is a good example of getting the job done in a reasonable manner.