

# Good essay about environmental studies

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## **Water Quality: Wastewater Management**

### Introduction

Water is one of the most important things that people need to survive in this planet. Water is very important for life. People need it for everyday use.

However, in order to have clean water that can be discharged to watercourses in a safe way; there are processes in which wastewaters goes through a treatment process so as to remove the harmful contaminants present in the wastewater. In this writing, process in water waste treatment will be described such as the preliminary, secondary as well as the tertiary water treatment methods. Comparison between the secondary and the tertiary treatment will also be analyzed in order to come up with a recommendation in terms of its use as a drinking water.

### **Process of Waste Water Treatment**

Primary or preliminary waste water treatment is the process of the extraction of grit and coarse solids using screens or other filters (unep. or. jp). This process normally involves sedimentation of filtered wastewater in order to remove settled solids. On the other hand, secondary wastewater treatment is being done in a biological process. This method removes ecological or biodegradable material. Microorganisms are being used to consume suspended and dissolved organic matters, which are needed to provide nutrients to maintain microorganism communities.

The advanced or tertiary process of wastewater treatment is used for very high quality overflow is required (unep. or. jp). This is used for direct discharge to the source of drinking water. In this process, the solid residuals

are being collected using tertiary treatment, which consists of chemicals as supplement to ensure the cleanliness of the final water effluent. This effluent is will be reclaimed before the discharge, which therefore not integrated into biosolids.

In comparison, both secondary and tertiary treatments remove solids and dissolved solids which were not removed during the primary treatment process. They both aim to remove those larger solid materials present in the wastewater. However, in contrast with their process, if the secondary wastewater treatment removes suspended and dissolved solids, the tertiary or the advanced wastewater treatment uses chemical to remove the remaining materials that were not removed during the secondary treatment such as phosphorus, nitrogen, refractory organics and even other heavy metals (fao. org).

Reclaimed water can be used for agricultural irrigation, landscape irrigation, and industrial use (kingcounty. gov). Reclaimed water for agricultural irrigation is when the water is used for growing crops, pastures and sod farms. Landscape irrigation is when the water is used for cemeteries, golf courses school yards or parks. Industrial use of reclaimed water is when it is used as cooling water, wash water and process water (ufl. edu).

Based on the comparison between the secondary and the tertiary or advanced wastewater treatment process, I would recommend the tertiary treatment process in terms of water ending up as a drinking water. That is because the advanced or final treatment not only ensures that there are no tiny solids left in the water, but it also ensures that there are no other

components left undone by the secondary treatment process such as phosphorus and nitrogen.

## **Conclusion**

Water treatment processes are good ways not only to preserve water supply, but also to ensure that clean water will flow as it reaches its destination so it can be reused accordingly. Having these treatment processes will somehow save a big amount of water as they convert water as a reusable matter in a safe and ecological way.

## **References**

Food and Agriculture Organization of the United Nations (n. d.). 3.

Wastewater treatment. Retrieved December 23, 2013, from <http://www.fao.org/docrep/t0551e/t0551e05.htm>

Reclaimed Water Applications, Impacts and Mitigation Measures. (n. d.).

Retrieved December 23, 2013, from <http://your.kingcounty.gov/dnrp/library/wastewater/wtd/construction/Planning/RWSP/FEIS/chap09.pdf>

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United Nations Environment Programme (n. d.). Wastewater Treatment: The

Municipal Sludge production Process. Retrieved December 23, 2013, from

<http://www.unep.or.jp/ietc/publications/freshwater/fms1/2.asp>