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Scientific Process ISC 3120
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Annotated Bibliography

Research Question: How does new-building construction affect the water quality of freshwater ponds at Florida Gulf Coast University?

Johnson Engineering. (2007). *Forty-Ninth Quarterly Water Level Monitoring Report Florida Gulf Coast University*. Prepared by Johnson Engineering, Fort Myers, FL.

Grey Literature – For methods and sample size:

This reference is a report that is generated specifically for Florida Gulf Coast University, the U.S. Army Corps of Engineers and the South Florida Water Management District to fulfill specific conditions of the University's surface water permit. Johnson Engineering has been hired by the University to monitor groundwater levels to determine the success of water restoration on campus. This paper was helpful in determining the exact number of piezometers, as well as the materials used to construct the piezometers. It also included a very helpful GIS map of the campus that pinpointed the wells across the campus.

Keith, L.H. (1991). *Environmental Sampling and Analysis: A Practical Guide*. Lewis Publishers: Boca Raton, FL.

Secondary Literature – For methods (techniques):

This book outlines environmental sampling and environmental analysis. One particular section, chapter 3, concerning sampling water matrices was most helpful. It describes surface water variations that one may encounter, such as stratification of lakes. It also gives information about groundwater variations, such as contamination, temporal issues, and the need to purge a well before sampling. Most importantly, the author describes the types of sampling devices, and the inadvertent contamination that may occur because of the type of material used. It was found that Teflon® or polypropylene tubing would be best for sampling groundwater.

McCormick, P.V. & Laing, J.A. (2003). Effects of Increased Phosphorus Loading on Dissolved Oxygen in a Subtropical Wetland, the Florida Everglades. *Wetlands Ecology and Management*, Vol. 11, no. 3, 199-215, retrieved on September 5, 2008 from www.springerlink.com.

Primary Literature – For introduction:

This article discusses the increase eutrophication of the Florida Everglades. It offers specific levels for total phosphorous, total nitrogen, and dissolved oxygen. The study focused on two sites in the northern Everglades that are receiving runoff from the Everglades Agricultural Area. It helped to bring the concept of increased nutrient levels into a local context.