

Reviews of science research have become increasingly easy as more journals publish research articles on-line. UND subscribes to “Scopus”, which is a for-profit web-based search engine developed by Elsevier Publishers. It accesses about 13,000 journals and can bring up more than 30 million abstracts. It can often link directly to the full paper in digital format, if available and UND has a digital subscription. Abstracts come with a list of citations, and most of these have links and the number of times cited in the Scopus database. Therefore, you can quickly identify papers that have had the greatest impact on the science/research field.

Assignment: Choose one of the following topics or one of your own:

How does mowing and herbicide treatment of aquatic macrophytes affect water quality and biodiversity of lakes?

What are some methods used to estimate groundwater recharge in watersheds?

What are some ways that remote sensing can be used to estimate a watershed's water budget?

How do forest fires affect the water quality of runoff?

What are some methods used to determine the groundwater component of a lake's water budget?

How does snow influence the water budget of prairie potholes?

Do chemical contaminants in snow adversely affect the environment?

Historically, how has El Nino / Southern Oscillation affected weather conditions in the US?

What are some methods to determine the age of groundwater?

What are the characteristics of forest damage by acid precipitation?

Can remote sensing (airborne or satellite) be used to estimate the regional variation of evapotranspiration?

How will climate change affect groundwater resources? What recommendations do researchers give for dealing with potential future changes?

What are the best ways of estimating wetland evapotranspiration?

How much does hydraulic conductivity vary in peat-rich bogs and wetlands? What causes the variation?

What are some ways to measure or otherwise estimate groundwater recharge?

How do gradients of soil moisture affect plant communities?

What controls the type and concentration of dissolved minerals in precipitation?

How do fish respond to changes in stream water temperature due to logging?

How deep in the Earth's crust does groundwater flow and circulate?

What kinds of organisms live in terrestrial hot springs?

Find at least *four* peer-reviewed journal articles and write a report (typewritten, double-spaced, 10- or 12-point font, no more than two pages) that *integrates* research results revealed in the papers. Use scientific writing style for your report, including citations and a list of complete references provided on a separate third page at the end. Use the *Journal of Hydrological Processes* style (scroll down the page to "Reference Style"):

<http://www3.interscience.wiley.com/cgi-bin/jabout/4125/ForAuthors.html>

The report will be worth 50 points with scores based on (1) adequacy of citations – do the papers answer the question? (2) how well the research papers are integrated in your write-up, (3) use of correct style for the citations, (4) writing style, format, organization, and (5) thoroughness of the oral and written presentation.