

Student Evaluation

Students will be evaluated on the basis of attendance and participation (20%), submission of a reading reflection (350-500 words in length) through the course website in advance of each class (20%), a keywords and processes exam (20%), Mississippi River group-project (20%), and a final poster project (20%).

The exam will test student understanding of key watershed terms, institutions and ecological processes. For the group project, we will be preparing group case studies on Twin Cities Mississippi river development. The final project will involve preparing a “Biography of a River”. For this assignment, you will prepare a poster formatted using Powerpoint software. The poster will be presented in class and will be peer evaluated.

In addition to the above assignments, students are expected to:

- Attend each class meeting on-time
- Be respectful to your instructor and peers
- Visit the course website regularly for assignment updates

If you submit an assignment late, you WILL be graded down one full step for each day past the deadline. For example, an assignment handed in one day late will begin with a B+; two days late a C+. Late reading reflections will not be accepted.

Academic Integrity: It is assumed that all members of the class will act with academic integrity and will not engage in behavior such as plagiarism, academic dishonesty, misrepresentation, or cheating. Please refer to the college’s policy on academic honesty.

Becoming an Expert Reader

You will encounter many different kinds of texts in this course, including memoirs, textbooks, fiction and scholarly articles. Each of these genres should be approached with different reading comprehension goals.

- Scholarly books and articles: Learn to gut the text and re-read for comprehension. Understand the contours of the methodology, argument, evidence and conclusion.
- Memoirs: Read for emotive value, writing style and lessons learned
- Textbooks: Watch for keywords, processes and disciplinary approaches.
- Fiction: Play attention to the narrative, character development and sense of purpose.

Upcoming Opportunities – if you want to pursue this topic after Fall 2007

January in Jamaica – a chance to study water resources issues with UMN faculty for credit

January Cypress Trip - sponsored by the Geology Department

Three Rivers Center – See the Three Rivers Center website for internship and research opportunities

Required Books

Most of the readings are on library electronic reserves. You will be required to purchase the following titles.

- E. C. Pielou. 1998. *Fresh Water*. Chicago: University of Chicago Press.
- Marq de Villiers. 2000. *Water: The Fate of Our Most Precious Resource*. Boston: Mariner Books.

Summary of Topics and Readings

Part I: Water Management – Science, Technologies and Institutions

Thurs Sept 6: Course Introduction

- M. Specter. 2006. “The Last Drop,” *New Yorker Magazine*. October 23: 61-71.

Tues Sept 11: Is water scarce in the world?

- M. de Villiers. 2000. “Chapter 1: Water in Peril” (Pp 3-26) and “Chapter 2: The Natural Dispensation” in *Water: The Fate of Our Most Precious Resource*. NY: Mariner Books. Pp. 27-45. (This book is required for purchase)
- F. Rijsberman. 2004. “Water Scarcity: Fact or Fiction” Colombo: IWMI.
- SIDA, IFPRI, IUCN, IWMI. 2005. “Let it Reign: The New Water Paradigm for Global Food Security”. Final Report to the CSD-13. Stockholm International Water Institute. Pp 1-17.

Thurs Sept 13: Ecology and Economy of Watersheds

- S. Postel and B. Richter. 2003. “Chapter 1: Where Have All the Rivers Gone?” and “Chapter 2: How Much Water Does a River Need?” in *Rivers of Life*. Washington, DC: Island Press. Pp. 3-41; 42-78.

Tues Sept 18: Dams and Reservoirs

- J. L. Wescoat, and G. F. White. 2003. “Chapter 9: Impounded Rivers and Reservoirs,” in *Water for Life: Water Management and Environmental Policy*. Cambridge: Cambridge Univ. Press. Pp.160-185.
- R. Goodland. 1997. “Environmental Sustainability in the Hydro Industry” in *Large Dams*. Washington DC: World Bank. Pp. 69-102.

Thurs Sept 20: Riparian Morphology with Kelly MacGregor, Geology Department

- E. C. Pielou. 1998. “Chapter 5: Flowing Water”, “Chapter 6: Rivers at Work” and “Chapter 9: Dams, Diversions and Reservoirs” in *Fresh Water*. Chicago: Univ of Chicago Press. Pp. 80-148; 205-213. (You are required to buy this book)



Tues Sept 25: Local water supply with Chris Elvrum, Met Council

- Metropolitan Council. 2005. *Water Supply*. Pp. 13 -20.
- St. Paul Water Quality Report. 2006. Pp 1-2.

Optional - Wednesday Sept 26: Children's Water Festival - State Fairgrounds

They need volunteers for all programs.
<http://www.metrocwf.org/>



Thurs Sept 27: Bottled Water Battles

Presentation from Dillon Teske '09

- F. H. Chapelle 2005. "Chapter 1: Water from the Market" and "Chapter 7: Paying Dues" in *Wellsprings: A Natural History of Bottled Spring Waters*. Rutgers Press. Pp. 3-18; 116-134.
- "The Bottled Water Lie", *DEMOCRACY NOW* Transcript from Wednesday, August 1st, 2007

*In class mini-assignment - commodity analysis on your assigned label

Tues Oct 2: Water Law, Commissions and Corporations

Visit selected pages from websites of US BuRec, US Army Corps, World Bank, World Water Council, American Rivers and International Rivers Network

Thurs Oct 4: In Class Exam on Keywords, Processes and Institutions

*** *Mississippi Project groups to be assigned***

Friday October 5: Summer Research Poster Presentations in Smail Gallery of Olin Rice from 3:30-6:00pm
This is a great chance to study different poster designs.

Part II: The American Case – Politics and Environmental History

Tues Oct 9: The Making of the American West: Building the Colorado River

- M. Reisner. 1986. "Chapter Four: An American Nile (I)" and "Chapter Eight: An American Nile (II)" in *Cadillac Desert*. NY: Penguin Books. Pp 120-144; 286-303.
- A. Martin. 1989. "Chapter 11: A Century After Emma Dean" in *A Story that Stands Like a Dam*. New York: Henry Holt Press. Pp. 280-297.

Thurs Oct 11: NO CLASS – Professor Phadke at a conference

INSTEAD ATTEND....12pm EnviroThursday with Wang Ping

Presentation: "The railroad on "the roof of the world" and its impact on Asian water

Tues Oct 16: The Columbia Basin: Demands of Conservation and Development

- Harden, B. 1996. "Introduction", "Chapter Four: The Biggest Thing", and "Chapter Eleven: River Game" in *A River Lost*. New York: W. W. Norton. Pp. 11-19; 76-99; 213-238.
- F. Montaigne. 2001. "A River Dammed" *National Geographic*. April. The photos from the original piece can be seen at <http://www.nationalgeographic.com/ngm/0104/feature1/index.html>

Oct 18 - Nov 1: Special Project: Reclaiming the Mississippi

Thurs Oct 18: Visit from Patrick Nunnally, Telling River Stories Project and Mississippi River Design Initiative (UMN)

- MN Planning Commission. 2002. *Connecting with Minnesota's Urban Rivers*. Pp. 1-54.

Tues Oct 23: Fieldtrip to the Mississippi River Visitor Center with John Anfinson, National Park Service

- J. O. Anfinson. 2003. "Introduction" and "Epilogue" in *The River We have Wrought: A History of the Upper Mississippi*. Minneapolis: Univ of Minn Press. Pp. ix-xxi; 275-292.

Thurs Oct 25: NO CLASS FALL BREAK

Tues Oct 30: TBA: Either Mississippi River tour or time for group projects

Thurs Nov 1: Mississippi Reports: In-class presentations

Part III: International Experiences – Connecting Theory and Narrative

Tues Nov 6: Water Wars or Water Peace – with British journalist Fred Pearce

Reading TBA

***Required: 7pm Fred Pearce Public Lecture in Chapel**

Thurs Nov 8: China's Three Gorges Project

- D. Worster. 1985. "The Local Subsistence Mode" in *Rivers of Empire*. London: Oxford University Press. Pp. 30-48.
- M. de Villiers. 2003. "The Three Rivers," in B. McDonald and D. Jelh (eds) *Whose Water is it?* Washington, DC: National Geographic. Pp. 41-54.
- Also visit Professor Wang Ping's virtual art exhibit at <http://www.behindthegateexhibit.org/>

Tues Nov 13: Water Activism: A Look at India's NGO sector with Guest Anna Goldberg '08

- A. Roy. 1999. "The Greater Common Good," *Frontline*, Vol 16 (11). June 4.
- R. Phadke. 2005. "People's Science in Action," *Society & Natural Resources*. Vol 18: 363-375.

Thurs Nov 15: Women, Health and Development in South Africa with Bill Moseley, Geography Department

- M. Goldman. 2005. "Chapter 6: Privatizing Water" in *Imperial Nature*. New Haven: Yale Univ Press. Pp. 222-271.
- "Whose Hand on the Tap? Water Privatization in South Africa" CBC Radio Documentary. Transcript from February 2003. Pp. 1-11.

Tues Nov 20: Manitoba Hydro with invited guests Ken Bradley, Energy Justice Campaign, Fresh Energy & Steve Hoffman, Political Science, Univ of St. Thomas

- S. Hoffman. 2002. "Powering Injustice – Hydroelectric Development in Northern Manitoba" in *Environmental Justice - Discourses in International Political Economy. Energy and Environmental Policy*. New Brunswick, NJ Transaction Publishers. Pp. 147-170.

*** Poster project proposal due on Moodle by 5pm**

Thurs Nov 22: NO CLASS THANKSGIVING BREAK

Part IV: Forging Ahead: The Future of Water Development

Tues Nov 27: Making More Water?

- M. de Villiers. 2000. "Chapter 16: Solutions and Manifestos" in *Water: The Fate of Our Most Precious Resource*. NY: Mariner Books. Pp. 275-313.
- F. Pearce. 2004. "Chapter Seventeen: Making Water from Thin Air" in *Keepers of the Spring*. Washington, DC: Island Press. Pp. 195-205.
- P. Dickie. 2007. "Making Water". WWF Global Freshwater Program. Pp. 1-53.

Thurs Nov 29: Deluge or Drought: Climate Change Scenarios guest Dave Dempsey, Conservation Minnesota

- D. Dempsey and J. Elder. 2007. *Great Lakes Restoration in the Face of Global Climate Change*. Healing Our Waters Coalition Report.

Tues Dec 4: Small Scale Solutions: Water Pumps and Rain Harvesting

- P. McCully. 2001. Chapter 7: "Wise Use of Watersheds" in *Silenced Rivers*. London: Zed Books. Pp. 188-216.
- F. Pearce. 2004. "Chapter Fourteen: How to Catch the Rain" in *Keepers of the Spring*. Washington, DC: Island Press. Pp. 161-172.
- A. Roddick. 2004. "Chapter 14: Watering the Grassroots" in *Troubled Waters*. White River Junction, VT: Chelsea Green Publishing. Pp. 122-129.

Thurs Dec 6: Wrap Up Discussion – Water as a Human Right

- P. H. Gleick. 2007. "The Human Right to Water". Oakland: Pacific Institute. Pp. 1-5.

Tues Dec 11: Poster Presentations in class

Thurs Dec 13: Poster Presentations in class

FINAL Posters due by email or in ES Dept on disk by Monday Dec 17th at 4pm