

CONSERVATION IN A CHANGING CLIMATE
SYLLABUS UW Madison
Professor Adena Rissman
Assistant Instructor Menka Bihari
Spring 2011

Meets 2:25-3:40 Tuesdays and Thursdays, Russell Labs A121

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Course Description: Adapting to the many changes associated with climate change is an increasingly important issue and nowhere more so than in the field of private land conservation. In this interdisciplinary seminar, we will look at how conservation organizations and tools adapt to dynamic landscape change such as climate change. Focusing on several landscapes across the State of Wisconsin, we will examine climate change impacts and adaptation related to biodiversity and ecosystem processes. We will investigate whether our current land conservation laws and institutions are up to the task, and how those institutions can be improved. We will work together to compare Wisconsin landscapes and the organizations using conservation easements to protect them. The seminar is open to graduate students and law and planning students.

The seminar will provide experience and training with diverse research methods. Student teams will examine regions of the state relying on surveys, interviews, mapping, and document analysis. Each student will incorporate the information they have collected into an online database, prepare a research and analysis paper, and contribute to a collective research or outreach effort.

We are not alone. This seminar is part of a network of six seminars across the United States considering this issue and adding information on regions, organizations, and conservation easements to the online database. The universities and states represented in the research include California—Stanford University; Colorado—Denver University; Indiana—Indiana University; New York—SUNY Buffalo; South Carolina—University of South Carolina; and Wisconsin—us. We have a wiki and listserv to communicate with each other and refine the process of investigation, collection and evaluation of information as we go forward.

While you are out discovering what is happening on the ground, we will be spending class time discussing the nuts and bolts of land conservation, its relation to other forms of landscape preservation and management, and the tools available to predict the impacts of climate change and address adaptive responses. Our job is to give you the tools you need to talk effectively and intelligently with land trust professionals, decode the documents and information you receive,

help you examine climate change impacts on conservation goals and strategies, and understand how organizations are responding to climate and other landscape changes.

Grades:

55% percent of your grade in this course will be based on the quality and quantity of the information you add to the database:

- 10% - Survey 1: The Region (completed once per team)
- 15% - Survey 2: The Organization Online (completed once per land trust/government agency)
- 15% - Survey 3: The Conservation Easement (completed once per conservation easement)
- 15% - Survey 4: The Interview (completed once per land trust/government agency)

Two-thirds of the grade for each of these will be assigned when you complete the first draft, and the other third when you submit the final draft of these at the end of the semester.

You are also responsible for a report and class presentation on your findings, and for contributing to either the academic paper our class will write together, or to developing education and outreach materials on the project.

- 20% - Participation in class, contribution to group presentation and report on your region, organizations, and conservation easements
- 25% - Contribution to either an academic paper or education/outreach materials

Learn@UW: To view readings and assignments for our course.

Wiki:

<http://ccce.pbworks.com/w/page/31460898/Climate%20Change%20and%20Conservation%20Easements%20-%20Teaching%20and%20Research%20Project>

Contains lots of resources, ArcGIS Explorer maps

JANUARY 18 (CLASS 1) – Introduction to the Conservation in a Changing Climate Research Project

JANUARY 20 (CLASS 2) – Introduction to Conservation Easements and Organizations; Discussion of the Research Questions

Merenlender et al. 2005. Land trusts and conservation easements: who is conserving what for whom? *Conservation Biology*.

David Ottawa and Joe Stephens, Landing a Big One: Preservation, Private Development, Washington Post, May 6, 2003 (excerpts).

Bergquist, Lee. Boost in Stewardship Fund helping Wisconsin open up 24,922 acres. Milwaukee Journal Sentinel. June 22, 2010 <http://www.jsonline.com/news/wisconsin/96855034.html>

JANUARY 25 (CLASS 3) – Introduction to Case Study, Data Collection, and Qualtrics; Matching Teams to Landscapes; Review “Survey 1: The Region” Questions; Qualtrics ppt

Fairfax, S. K., L. Gwin, M. A. King, L. Raymond, and L. A. Watt. 2005. *Buying nature: the limits of land acquisition as a conservation strategy, 1780-2004*. Cambridge, MA: The MIT Press.

Rissman, A. R., L. Lozier, T. Comendant, P. Kareiva, J. M. Kiesecker, M. R. Shaw, and A. M. Merenlender. 2007. Conservation easements: biodiversity protection and private use. *Conservation Biology* 21 (3):709-718.

Yin, Robert K. 2009. *Case study research: design and methods, 4th ed.* Pages 2-5, 16-21, 40-45, and 60-64.

Babbie, Earl. 2007. *The practice of social research, 11th ed.* “Survey research” PDF. Pages 244-251, 264-269

JANUARY 27 (CLASS 4) – Climate Change Impacts and Adaptation; Place-Based Research and Spatial Analysis as a Research Method; ArcGIS Explorer Training; ArcGIS ppt

Understanding and Responding to Climate Change – Highlights of the National Academies Report http://dels-old.nas.edu/dels/rpt_briefs/climate_change_2008_final.pdf

Adger, Neil et al. 2005. Successful adaptation to climate change across scales. *Global Environmental Change*. 15: 77-86.

Scheller, R. M., and D. J. Mladenoff. 2008. Simulated effects of climate change, fragmentation, and inter-specific competition on tree species migration in northern Wisconsin, USA. *Climate Research* 36:191-202.

FEBRUARY 1 (CLASS 5) – Adaptation, Vulnerability, and Permanence; David Mladenoff guest speaker on climate change impacts

U.S. Fish and Wildlife Service Draft Climate Adaptation Strategy. <http://www.fws.gov/nfwcas.html>

Heller, Nicole E. & Erika S. Zavaleta. 2009. Biodiversity management in the face of climate change: A review of 22 years of recommendations. *Biological Conservation*. 142:14-32.

Halpin, P.N. 1997. Global climate change and natural-area protection: management responses and research directions. *Ecological Applications*. 7:828-843.

Craig, R. K. 2010. "Stationarity is dead" -- Long live transformation: five principles for climate change adaptation law *Harvard Environmental Law Review* 34 (1):9-73.

FEBRUARY 3 (CLASS 6) – Adaptive Land Management; Discuss Seminar Manuscript Ideas; Finalize organization selection and contacts; Hand out “Survey 2: The Organization”

DUE: First Draft of “Survey 1: The Region” by your team

(DO NOT hit SUBMIT in Qualtrics)

Presentations by teams on the easement holders and easements they will study – in which they present and justify their choices.

Langston, Nancy. 2003. Pragmatic Adaptive Management, Chapter 6 in *Where Land and Water Meet: A Western Landscape Transformed*. University of Washington Press: Seattle, WA.

AFTER THIS CLASS TEAMS MAY BEGIN TO CONTACT EASEMENT HOLDERS

FEBRUARY 8 (CLASS 7) – Land Trusts and Government Agencies; Review “Survey 2: The Organization”

Land Trust Alliance, LAND TRUST STANDARDS AND PRACTICES (2004)
<http://www.landtrustalliance.org/training/sp/lt-standards-practices07.pdf>

Land Trust Accreditation Commission – Requires Policies for Accreditation
<http://www.landtrustaccreditation.org/pdf/PoliciesGuidanceDocument.pdf>

Ohm, Brian W. 2000. The purchase of scenic easements and Wisconsin's Great River Road: a progress report on perpetuity. *Journal of the American Planning Association* 66 (2):177-188.

FEBRUARY 10 (CLASS 8) – Social and Institutional Aspects of Conservation

Brechin et al. 2002. Beyond the square wheel: toward a more comprehensive understanding of biodiversity conservation as a social and political process. *Society and Natural Resources*. 15:41-64.

Rissman and Sayre, in press. Conservation outcomes and social relations: a comparative case study of rangeland conservation easements. *Society and Natural Resources*.

FEBRUARY 15 (CLASS 9) – Organizational Capacity; Introduction to Defense and Enforcement

Rissman, Adena and Van Butsic. 2010. Land Trust Defense and Enforcement of Conserved Areas. *Conservation Letters*

Fredericksen, P., and R. London. 2000. Disconnect in the hollow state: The pivotal role of organizational capacity in community-based development organizations. *Public Administration Review* 60:230-239.

FEBRUARY 17 (CLASS 11) – Outlining the Seminar Manuscript

Margules, C. R., and R. L. Pressey. 2000. Systematic conservation planning. *Nature* 405 (6783): 243-253.

DUE: First Draft of “Survey 2: The Organization” for each organization you are researching (DO NOT hit SUBMIT on Qualtrics)

FEBRUARY 22 (CLASS 12) – Rules and Legal Limitations on Conservation Easements; Legal Perspectives on Conservation

Cheever, Federico. 1996. Public good and private magic in the law of land trusts and conservation easements, *University of Denver Law Review* 73: 1077

Thompson, Barton H. 2004. The trouble with time: influencing the conservation choices of future generations, *Natural Resources Journal* 44: 601

26 U.S.C. § 170(a), (d) & (h)

26 C.F.R. § 1.170A-14 Qualified Conservation Contributions.

FEBRUARY 24 (CLASS 13) – Conservation Easement Amendment, Termination, and Litigation

Nancy A. McLaughlin, *Amending Perpetual Conservation Easements: A Case Study of the Myrtle Grove Community*, 40 U. Rich. L. Rev. 1031 (2006)

Review LTA Conservation Defense Website --
<http://www.landtrustalliance.org/conservation/conservation-defense>

Hicks v Dowd case and settlement documents.

MARCH 1 (CLASS 14) – Charitable Gift Deduction; Introduce “Survey 3: The Conservation Easement”

Nancy McLaughlin, *Increasing Tax Incentives for Conservation Easements – A Responsible Approach*, 31 Ecology L. Q. 1 (2004) (excerpts). Pages 1-32 (TWEN excerpt pagination)

Eagle, J. 2011. Notional generosity. *Harvard Environmental Law Review* 35 (1) (in press)

MARCH 3 (CLASS 15) – Alternative Proposals for CEs and Adaptation

Jessica Owley Lippman, *Changing Property in a Changing World: A Call for the End of Perpetual Conservation Easements* (draft)

Julia D. Mahoney, *Perpetual Restrictions on Land and the Problem of the Future*, 88 Va. L. Rev. 739 (2002) (excerpts)

Korngold, Gerald. 2007. Solving the contentious issues of private conservation easements: promoting flexibility for the future and engaging the public land use process. *Utah Law Review*. 1039-1084. (excerpts)

MARCH 8 (CLASS 15) –Comparative Case Studies

Hardy, Scott D. and Tomas M. Koontz. 2010. Collaborative watershed partnerships in urban and rural areas: Different pathways to success? *Landscape and Urban Planning*. 95:79-90.

Poteete, Amy R. and Elinor Ostrom. 2008. Fifteen years of empirical research on collective action in natural resource management: struggling to build large-N databases based on qualitative research. *World Development*. 36:176-195.

MARCH 10 (CLASS 16) – Interviewing and Mock Interviews; Discuss CE responses; Review Survey 4: The Interviews

**DUE: First Drafts of Your First 2 Conservation Easements in Qualtrics
(DO NOT hit SUBMIT in Qualtrics)**

Rossmann, G. and Rallis, S. 2003. *Learning in the Field: An Introduction to Qualitative Research*. Sage Publications, Inc. (excerpt)

MARCH 15 and 17: Spring Break

MARCH 22 (CLASS 17) Interview Methods Continued; updating Seminar Manuscript outline

Babbie 2007 “Interviewing” PDF

Babbie 2007 “How to conduct interviews” PDF

Berg, Bruce B. A dramaturgical look at interviewing. Chapter 4 in *Qualitative research methods for the social sciences*.

MARCH 24 (CLASS 18) – Revisiting Ecosystem Management

Kofinas, Gary P. 2009. Adaptive co-management in social-ecological governance. Chapter 4 *in* Chapin, Principles of ecosystem stewardship.

Swanson, Frederick J. and F. Stuart Chapin, III. 2009. Forest systems: living with long-term change. Chapter 7 *in* Chapin, Principles of ecosystem stewardship.

Rissman, Adena R. 2010. Designing perpetual conservation agreements for land management, Rangeland Ecology and Management.

MARCH 29 (CLASS 19) – Revisiting Climate Change Impacts and Adaptation

Report of the Interagency Climate Change Adaptation Task Force, October 2010.

<http://www.whitehouse.gov/sites/default/files/microsites/ceq/Interagency-Climate-Change-Adaptation-Progress-Report.pdf>

Millar, C. I., N. L. Stephenson, and S. L. Stephens. 2007. Climate change and forests of the future: managing in the face of uncertainty. *Ecological Applications* 17 (8):2145-2151.

Additional reading TBA

MARCH 31 (CLASS 20) – Revisiting Climate Change Impacts and Adaptation

**DUE: First Drafts of All Conservation Easements in Qualtrics
(DO NOT hit SUBMIT in Qualtrics)**

Hagerman, S., H. Dowlatabadi, K. Chan, and T. Satterfield. 2010. Integrative propositions for adapting conservation policy to the impacts of climate change. *Global Environmental Change* 20 (2):351-362.

Gallopín, G. C. 2006. Linkages between vulnerability, resilience, and adaptive capacity. *Global Environmental Change* 16 (3):293-303.

APRIL 5 (CLASS 21) – Broadening Our View: Conservation Effectiveness

DUE: First Draft of “Survey 4: The interview” (must complete a practice interview in advance of the interview) (DO NOT hit SUBMIT in Qualtrics)

Hockings, Marc. 2003. Systems for assessing the effectiveness of management in protected areas. *Bioscience*. 53:823-832.

Ferraro and Pattanayak. 2006. Money for nothing? A call for empirical evaluation of biodiversity conservation investments. *PlosBiology*. 4 (4):482-488.

APRIL 7 (CLASS 22) – Toward Solutions and Deeper Structural Problems

Doremus, Holly. 2003. Policy portfolio approach to biodiversity protection on private lands. *Environmental Science and Policy*. 6 (3):217-232.

Additional readings TBA

APRIL 12 (Class 23) – Group Presentations

APRIL 14 (Class 24) – Group Presentations

Due: First draft of Group Case Study Report

APRIL 19 (Class 25) – Synthesis and Manuscript Development

APRIL 21 (Class 26) – Synthesis and Manuscript Development

Due: First Draft of Manuscript and Final Project Materials

APRIL 26 (Class 27) – Synthesis and Manuscript Development

APRIL 28 (Class 28) – Synthesis and Manuscript Development

MAY 3 (Class 29) – Synthesis and Manuscript Development

MAY 5 (Class 30, Last Class) – Synthesis and Manuscript Development

Due: SUBMIT Final Draft of All Surveys on Qualtrics

MAY 9 Final Case Study Reports and Manuscript Due by 5pm