

2015
NRSM 215: Field Studies in Conservation

March 5-8, 2015. 1 credit

Instructors: Jill Belsky, Professor, Dept. of Society and Conservation (jill.belsky@umontana.edu); (UM) Steve Siebert, Professor, Dept. of Forest Management (steve.siebert@umontana.edu) ; and from NwC: Melanie Parker, Andrea Stephens, Adam Liebig and Rebekah Rafferty.

Description: Field-based learning about conservation exposes students to real-world settings and challenges related to the sustainable use of natural resources for the interrelated benefits of people and ecosystem services. The Upper Swan region of western Montana, located about 1 ½ hour from the University of Montana, is our field laboratory. The course is taught through a partnership between faculty from UM's College of Forestry and Conservation's Resource Conservation Program and Northwest Connections (NwC), a Community Forestry Education Center in Condon. Through a combination of field activities, discussions and readings, students will learn about the ecological and social characteristics of the region, especially its history of land use, livelihoods and key socioecological changes, and the current challenges and community-based responses to managing and enhancing working landscapes. The latter will be examined through a case study involving a current controversial project (Colt Summit Restoration and Fuels Reduction Project).

Learning outcomes:

At the conclusion of this field course students will:

- Be familiar with general vegetation/forest types in the Upper Swan Valley and their habitat values;
- Have a basic understanding of land use, livelihood history and socioecological changes associated with different groups using the region over time (e.g., Salish Indians, early white settlers, industrial timber harvesters, and contemporary ecological restoration efforts).
- Be familiar with several landscape-level community-based/collaborative conservation efforts.
- Understand opportunities and constraints to developing economically viable livelihoods for local residents including those that contribute to restoring and protecting ecosystem services.
- How conditions in the Upper Swan reflect challenges and opportunities in the wider field of resource conservation.

Assessment (traditional letter grade):

Engaged Participation	20%	throughout the field course
Quiz	20%	during field course
Group Stakeholder Exercise (Colt Summit Project)	60%	to be discussed

Students are expected to attend all activities and complete all readings and assignments. The final grade is based on the quality in which students engage with the material, the group, and their surroundings in a way that promotes their own learning as well as that of the group.

Course Readings (note only portions of some article are required)

Arno, S., D. Parsons, R. Keane. 2000. Mixed-severity fire regimes in the northern Rocky Mountains: Consequences of fire exclusion and options for the future. *USDA Forest Service Proc. RNRS-P-15-5:225-232 (abstract & pp. 228-230).*

Colt Summit Restoration and Fuels Reduction Project fact sheet. Download from:
http://billingsgazette.com/news/state-and-regional/montana/colt-summit-restoration-and-fuels-reduction-project-fact-sheet/pdf_e28ed7e7-dedf-5e71-bd2a-a13d3ceff28d.html#ixzz3TFHlsGKn

Colt Summit - assorted articles.

Diekmann, L., L. Panich, and Chuck Striplen. 2007. Native American Management and Legacy of Working Landscapes in California. *Rangelands* 29(3): 46-50.

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

Mori, A. 2011. Ecosystem management based on natural disturbances: hierarchical context and non-equilibrium paradigm. *J. of Applied Ecology* 48:280-292. **(abstract)**

Parker, M. 2010. nd. Oversight hearing: “Locally grown: creating rural jobs with America’s public lands” Statement to the U.S. House of Representatives Subcommittee on National parks, Forests and Public Lands.

Parker, M. 2014. Swan Story. In: *Stitching the West Back Together: Conservation of Working Landscapes.* S. Charnley, T.E. Sheridan, G. P. Nabhan (eds). Univ. of Chicago Press, Chapter 7, 123-135.

Salish – oral history & fire science (review on line) at http://www.cskt.org/fire_history.swf

Wilderness Society, 2014. Collaboration at a Crossroads around National Forest System Lands in Montana. Download from:
http://wilderness.org/sites/default/files/Collaboration%20at%20a%20Crossroads_FINAL2%5B1%5D.pdf

Additional References:

Keiter, R. 2002. Biodiversity Conservation and the Intermixed Ownership Problem: From Nature Reserves to Collaborative Processes. *Idaho Law Review* 38:301-324.

Upper Swan Valley Landscape Assessment. 2004. Swan Ecosystem Center.
<http://www.swanecosystemcenter.org/landscapeassessment.html>

Swan Valley oral histories: <http://www.swanecosystemcenter.org/oralhistories.html>

Schedule

THURSDAY, MARCH 5

- 4 PM Meet/depart from Fleet Garage/Facility Services (east of Grizzly Stadium)
- 6 PM Arrive NwC, Condon - Facility intro & risk management and get settled in Lynn Wilson
- 6:30 PM Dinner
- 8 PM Introductory lecture/discussion – Jill & Steve

FRIDAY, MARCH 6

- 7:30 AM Breakfast
- 9-11 AM Overview of Swan history: changes over time to land-use, livelihoods; vision of the valley/region and implications for restoration and conservation; future potential for the economy – Melanie
- 11 AM Discussion and walk - Melanie
- 12 Lunch
- 1-5 PM Forest cover/type, historical land uses/ecological disturbances & changes over time, impacts on wildlife - Adam & Rebekah
- 6:30 PM Dinner
- 8 PM Discussion

SATURDAY, MARCH 7

- 7:30 AM Breakfast
- 9 AM – 5 PM History of water-scape & human development; Salish (cultural value of aquatic resources, bull trout); history of hydroelectric development and corporate logging/roads, fragmentation, dams and culverts and effects on stream networks and aquatic species.
Field Tour – Cold Creek or Swan River, stream habitat, interactions between Streams, forested watershed and a timber economy – Andrea & Sara
- 6:30 Dinner
- 8 PM Discussion/Quiz

SUNDAY, MARCH 8

7:30 AM	Breakfast, clean up and pack all gear in cars
9 AM – 2 PM	Colt Summit Field Tour – project goals & litigation history - Rebekah & Adam (assign “stakeholder” positions for final project; discuss final project)
2 PM	Depart
4 PM	Return UM