

NR 205 - Ecosystem Management

(Spring 2008, Tues., May 6, 8:00 am)

Potential Essay Questions for the Final Exam

- 1.** You have been hired as a staff assistant to one of our Presidential candidates and asked to analyze the legal mandates for ecosystem management in the United States. This candidate is interested in proposing a new law to facilitate ecosystem management across the country. As a first step in this analysis, discuss what opportunities and challenges currently exist within federal laws and agency mandates. Then, outline the specific things that should be written into a new law in order to make ecosystem management a reality. Make sure you explain **why** each provision of your draft law is needed.
- 2.** Discuss the issues you must weigh to develop an appropriate ecosystem management boundary. First discuss some of the issues from an ecological perspective. Second, discuss the issues that must be considered from a policy and social perspective. Finally, how can you balance the ecological and social concerns to settle on a boundary that might work? You may give examples from any of the ecosystems we have discussed this semester to illustrate your points.
- 3.** For the Greater Yellowstone Ecosystem, present and discuss a management goal and two objectives designed to help achieve that goal. Your goal and related objectives should address a central management concern for that ecosystem and be written according to the criteria we discussed in class (obviously, you will make up the specifics, but they should be reasonable fantasies). Once you write your goal and objective, explain your rationale and how your objectives would take you closer to your goal. See the back of this page for examples of good goals and corresponding objectives.
- 4.** One of the most significant threats to ecological integrity and perhaps to our way of life is global climate change. Discuss how the elements of an ecosystem management approach could be used to address global climate change in the New England region. Specifically, discuss (1) the information that would be needed to incorporate climate change into an ecosystem management approach, and (2) how you might address climate change using an adaptive management approach. Make sure you think about both the social and ecological contexts of this issue.
- 5.** How can pressure, state and response indicators be linked in order to demonstrate the effectiveness of a management program? Be prepared to give an example of linked indicators that could be used to evaluate the effectiveness of a management action for a scenario that I will present on the final exam.

Goal – Provide a diversity of hiking trails in the Green Mountain Forest such that hikers of all abilities can enjoy the unique scenic wonders of the forest.

Objectives:

Identify 3 appropriate locations for handicapped-accessible hiking trails within the National Forest by May 31, 2009.

Allocate up to \$50,000 in the federal fiscal year 2008 budget to build a one-quarter mile trail at one of these sites by September 30, 2010.

Goal – Reduce phosphorus inputs to Lake Champlain to promote a healthy and diverse ecosystem and provide for substantial human use and enjoyment of the Lake.

Objectives:

Plant buffer strips along 5 miles of eroding shoreline on Otter Creek by September 30, 2009. The Otter Creek Watershed Association will work with the NRCS to purchase the plants using the Streambank Conservation Fund, and will coordinate volunteer labor from willing workers to do the field work.

Upgrade the sewage treatment plant in Vergennes, Vermont to provide tertiary treatment by May 31, 2011 using funding from the Vermont State capital appropriation.