

ENVS 6200 Bioregional Analysis & Planning
T-R - 1:30 - 4:20, NR 353
W - 10:30-11:20, NR 353
Dept. of Environment & Society

UTAH STATE UNIVERSITY
CNR – Fall 2009
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THE BEAR RIVER REGION: its role in maintaining the Bear River Migratory Bird Refuge BRR-BRMBR

GOALS

The studio will emphasize three major goals for the student. The first goal is to examine the concepts of “methodology” and “analysis” in order to know how to approach, research and understand a project and region of this size and complexity.

The second goal will focus on developing an understanding of the interrelationships and interdependencies between the physical, biological and cultural components of the region and how they contribute to key patterns, and consequently, the fitness of future land use activities to those patterns.

The third goal is the recognition and acknowledgment of the strengths and weaknesses of a range of disciplines in relationship to such a complex project while at the same time being cognizant of the fact that their area of specialization is one which is critical and essential to the resolution of landscape planning issues at this scale.

Secondary goals of the studio contain more analytical and technical procedures of large scale landscape planning and design. The first of these is a method of problem examination evidenced by the various phases of work. Each phase in turn has sub-processes of analysis to be executed in the studio. These will be supplemented by guest lectures, readings, case studies, and seminars. The technical aspects are integrated into the analytical so as not to distort their use or place in problem solving.

The BRR study will allow students and faculty to:

- Direct research and interdisciplinary studies to enhance data and knowledge needed for informed decision making within the BRR-BRMBR
- Engage faculty, students, and stakeholders in a comprehensive learning/research environment.
- Assemble a group of university faculty and environmental scientists who are able to work in interdisciplinary teams to address natural resources planning, management and policy issues.

OBJECTIVES

In order to meet the goals noted above, the study has the following objectives: 1) define criteria by which regionally-significant critical lands can be identified and evaluated with respect to future development, 2) resolve various boundary conditions with adjacent political jurisdictions in order to ensure that important cultural and ecological characteristics are integrated and protected in future growth and development of the BRR- BRMBR, 3) Produce a geographic-based information system that will organize data on the watershed to support informed decision making in the future 5) research and recommend various public and private implementation strategies to protect regionally-significant critical lands from future development, within the BRR-BRMBR

PROCEDURES AND PHASES: (see Studio Calendar, also reference Summary, pages 6, 7. & 8)

Assume that we have been called upon to develop an approach which will allow us to analyze the salient biophysical and cultural features of the region and state their interdependencies with the BRMBR as the major environmental component. The approach should also address future population projections and the 3 drivers on the region.

The study will contain eight major phases of work. Although these will be expanded on in greater detail in class, they are:

1. Pre-analysis/problem formulation/case studies/site visit
2. Summary of surveys and the identification of issues and setting of priorities
3. Definition of data, inventory and file
4. Full scale analysis - Function & Structure (linkages and new data)
5. Evaluation Criteria, Land Use & Environmental Assessment Models
6. Concept development-Future Scenarios and regional open space recommendations
7. Concept evaluation, mitigation strategies and new issues
8. Documentation and draft interim report

Each major phase of work will have a number of sub-phases. The activities and objectives of each sub-phase will be brought forward at the appropriate time in studio. However, a brief outline of each at this time would be helpful.

PRE-ANALYSIS

Introduction to the Study Area, Surveys, Site Visits, Methodology, and Case Studies

The first five weeks of the study will contain four basic areas of work. The first activity will consist in reviewing a number of past planning case studies in order to determine how they may assist or contribute to our understanding of the project. The methodology, issues, data, modeling techniques, and conclusions of each case study will be documented and presented in class in order to identify appropriate precedents for future use and reference.

The second will consist of both on the ground site visits and air flights (?) over the area in order to come forth with a preliminary assessment of the study region. The intent of the visits is to help the study team identify major planning, landscape, and wildlife issues to be addressed with respect to future development. Individual perceptions will be presented in Project Opinion Papers and then summarized as a final team document. Study boundaries will be revisited at this time.

The third area of activity will consist of a review and summary of past land use and policy issues in the region. This summary will include a number of planning priorities as defined by area stakeholders. These priorities will establish a partial base for several future growth scenarios and evaluation models which will be developed and tested in phase 6.

The fourth area will consist of researching each of the major planning/design issues identified from the site visits and surveys in order to briefly document their physical and spatial characteristics. This work will help to establish a preliminary set of data which will be utilized in future modeling purposes.

DATA INVENTORY/BASE MAP PREPARATION

Data search, Acquisition, and GIS Mapping

Based upon the results of the pre-analysis, this portion of the study will consist of the tedious, but necessary task of data acquisition and mapping. Questions relating to the type, scale, and mapping compatibility of data will also be addressed at this time.

FULL SCALE ANALYSIS - FUNCTION AND STRUCTURE:

This phase of work will contain two major areas of investigation. The first will be the research and analysis of the biophysical phenomena which are responsible for a description and understanding of the natural setting of the study area. Briefly, this will include the geology, soils, water, climate, vegetation, and wildlife of the region. The second area of research and analysis will cover those cultural phenomena which utilize and change in varying degrees those systems or processes in the biophysical setting. This work will address a range of land use activities (stressors) such as agriculture, housing, tourism, and recreation and how they impact various critical wildlife lands in the future. Issues tied to the capital infrastructure servicing those uses will also be examined at this time. Each of these two analyses will result in the mapping and documentation of the function and structure of the phenomena and its interaction and linkages with other components in both areas of investigation.

This work will culminate in a preliminary outline and presentation to stakeholders for review and feedback.

EVALUATION CRITERIA, ACTIVITY & ENVIRONMENTAL ASSESSMENT MODELS

Preliminary Activity Allocation Models - A.A.M./ Land Use

During this phase of the study there will be several activities taking place. The first will consist of research into those land uses and other issues noted above in Full Scale Analysis – Function and Structure. This will be done in order to refine their functional and spatial characteristics which will then be represented in diagrammatic models. If time permits each model will be printed out and verified in the field for its accuracy. Second and third iterations may be necessary in order to fine tune the objectives of each model. These models will act as the basis for the construction of future scenarios and evaluation models.

Preliminary Environmental Evaluation Models - E.E.M.

The format for the second activity will closely follow that of the first. The primary difference is that the research in this area will cover the identification, description, and construction of those models which are considered important to the continued functional operation of the biophysical base while at the same time allowing new uses to occur. These models will also act as part of the basis for future open space wildlife evaluation. Mitigation strategies, if appropriate, will also be tied to the performance of these models. In like manner, this work will take into account those issues noted above in Full Scale Analysis – Function and Structure. This work will culminate in a preliminary outline and be presented to stakeholders for review and feedback.

Critical Refuge Lands and Alternative Futures - CLRF

Based upon priorities from stakeholders a set of objectives and criteria will be established for several distinct conservation programs including a definition of critical lands in the maintenance of various objectives. The research, analysis and definition of each program will be documented as a specific model which can be converted into spatial display. Individual programs and/or their combinations will be printed for field

verification. This work will also culminate in a preliminary outline and be presented to stakeholders for review, feedback, and revisions as necessary.

Spring Semester – A Brief Outline

CONCEPT DEVELOPMENT- ALTERNATIVE FUTURES/CRITICLE REFUGE LANDS

Following from the program and objectives for the study area set out in the fall studio, the study group will be formed into teams, each having distinct and well articulated strategies for the resolution of future growth scenarios. These physical plans will be submitted for evaluation, first with respect to their accommodation of refuge needs and projections, and second, with regard to:

- a. Resolution of objectives and stakeholder priorities
 - Feasibility of strategies
 - Feasibility of implementation
- b. Ramifications of implementation & strategies
 - New issue created
 - New implementation tools needed

CONCEPT EVALUATION/DOCUMENTATION

In the final phase of work a documentation of the performance of proposed scenarios will be made utilizing the full range of activity allocation and environmental evaluation models. This documentation will include broad recommendations for mitigation strategies to overcome identified shortcomings. There are three important aspects to be considered at this time.

1. New strategies and/or alternatives defined & developed
2. New tools of implementation defined & developed
3. New land use activities and evaluation models over and above those identified in the analysis phase will also be documented at this time for future consideration.

Documentation and production of final report (Fall and Spring Semesters)

Presentation of all phases to various stakeholders within the region

Documentation, Draft Report and Studio Environment

All papers and reports are to be as brief as possible, commensurate with adequate communication and explanation, and written in clear and grammatical English. They should be outlined carefully using a simple hierarchy of letters and numbers, decimals or other system for emphasis of ideas; and typed on one side of 8 1/2" x 11" paper. We will use a standard journal entry which will be announced in class. Proofread your paper before you hand it in! Keep copies of all papers. Special attention must be given to "credits" for quotations and ideas from whatever source.

The studio approach to learning is perceived by many educators as one of the most effective, dynamic and productive learning environments in education. The primary academic objective is to provide a heuristic environment so that the student can discover and develop knowledge, skills, and intellectual strategies for the resolution of a given planning issue. The studio should act as a critical link between teaching and

research in that it should encourage creative problem solving, interdisciplinary collaboration, critical thinking, a tolerance for ambiguity, and experiential learning.

The intellectual activities which dominate the studio atmosphere are research (problem definition), analysis (understanding the problem), synthesis (providing alternative solutions to the problem), and evaluation (the formulation of criteria for assessment). A range of creative problem solving techniques are applied to the activity ranging from brainstorming, delphi, interactive matrices, modeling, morphological analysis, and synectics.

The methods of instruction cover a broad range of learning strategies which emphasize the need for an interdisciplinary approach to the resolution of environmental problems. A typical studio will include formal lectures, seminars, recitations, critiques, visiting lecturers from related disciplines, field trips, and independent research. Four major instructional techniques integrate these more traditional learning strategies into a comprehensive learning environment. The predominant themes include the case study method, simulation techniques, apprenticeship, and the team approach. These procedures help the student to analyze and clarify the problem, assemble the data that bears upon it and to design and document alternative strategies for solution, including the identification of risks and probable outcomes of each alternative. A meaningful, learning atmosphere is created by this organization since it allows each student to confront their own problems and encourages openness of response, allowing them to acknowledge prejudices and other mental blocks to learning which clears the way for more productive and cognitive inquiry.

Additional Studio Activities

On Tuesday from 1:30-3:00 p.m., a series of lectures and/or visitor presentations may take place. The remaining time, and class time and Thursday (1:30-4:20), should be reserved for studio research and production activities. The class should also be prepared for guest lecturers on Wednesdays from 10:30-11:30 a.m. Any changes to this schedule will be announced in class. In addition, you may also be required to attend special lectures and/or workshops which develop during the semester on or off campus. It will also be necessary on several occasions to be on all-day field trips and over flights of the region. These are noted on the studio calendar and please seek an excused absence from appropriate faculty.

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But try to work around Tuesday, Wednesday 8:30-9:30, NR 336

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