FW 868 Water Policy and Management
Fall 2009
Tues & Thurs 2:40 - 4:00 PM
Room S135 South Kedzie

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Office Hours: By appointment

Course Description
Broadly speaking, the purpose of this course is to learn about water policy and management from the perspective of a scientist. You will learn about major US environmental laws related to water, such as the Clean Water Act, the Safe Drinking Water Act, and the Wild and Scenic Rivers Act among others. However, water policy and management is more than just memorizing a set of laws. You will learn about the policy cycle, how agencies make regulations, how property rights and common law affect water management, how the courts have shaped water law and policy, and how science and policy interact (or don’t). Many of you will go into careers in which you will interact with policymakers, this course is designed to give you a basic understanding of water policy and management as well as provide you with skills and knowledge that you can use in the future.

We will use case studies to learn about water policy and management and to achieve the goals of the course. We will start each case study with an introduction and discussion about what we know and what we need to know to evaluate the particular policy problem. We will move into discussions of the relevant laws and policies, the management or regulatory agencies that are the major players, and finally science-policy interactions. We will finish each case study with a summary and I will challenge you with a new case study to evaluate and apply what you have learned.

Goals for the Course
There are three main things I want you to be able to do by the end of this class:

- Evaluate water policy problems by asking appropriate questions, collecting data, analyzing relevant policies and laws, analyzing observations and data, making interpretations, and making recommendations.
- Make an informed decision about a controversial issue, other than those covered in class, involving a water policy and management topic.
- Design and carry out a project involving collection, analysis, and synthesis of data to solve a complex, open-ended problem.

Course Readings
This course relies on readings from a variety of sources, ranging from scientific literature to agency reports, rather than a single text book. All readings and other relevant course material will be posted on the course ANGEL site. It is your responsibility to read all materials before the relevant class meetings. Please familiarize yourself with the ANGEL site for this course.
**Expectations**

If you haven’t had a course from me before, you might be surprised by the structure of the class. I expect a lot, and I place a great deal of responsibility on you. After all, I can’t do your learning for you! I care very much that you learn in this course, and having me stand in front of you and talk at you for hours at a time allows me to present material but doesn’t do much to help you learn. So, I have designed class sessions and assignments around having you gain experience with water policy and management, rather than having me talk at you about it. There will be lectures, but there will also be a lot of class activities that require participation and interaction. My goal is that you will come away from this course with skills and knowledge in water policy that you can use in the future, not just some material that you can spit back at me on a test.

I expect you to:
- take responsibility for your own learning
- come prepared for class and be an enthusiastic participant during class
- treat others with tolerance and respect
- act responsibly and reliably in group work
- set high standards for your work
- teach me something

You can expect me to:
- create interesting and challenging ways for you to learn about water policy and management and its connections with science, rather than just talking at you about my knowledge
- set high standards for the class
- treat you with fairness and respect
- take an interest in you and learn something from you
- be excited and knowledgeable about course material

**Grades and Evaluation**

Final grades will be based on the following assignments. To receive a passing grade, you must successfully complete all assignments. Keep in mind that ‘A’ (4) and ‘B’ (3) work is above average work. Merely completing an assignment in a perfunctory way is average (2) work. Complete details about the assignments will be provided in separate handouts, discussed in class, and posted on ANGEL. Your grade will be based on the following:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>% of Final Grade</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-class and homework assignments</td>
<td>10%</td>
<td>50</td>
</tr>
<tr>
<td>Case study challenge: Water quality</td>
<td>10%</td>
<td>50</td>
</tr>
<tr>
<td>Case study challenge: Water quantity</td>
<td>10%</td>
<td>50</td>
</tr>
<tr>
<td>Case study challenge: Water as habitat</td>
<td>10%</td>
<td>50</td>
</tr>
<tr>
<td>Service learning project:</td>
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<td></td>
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<tr>
<td>Work plan</td>
<td>10%</td>
<td>50</td>
</tr>
<tr>
<td>Draft</td>
<td>15%</td>
<td>75</td>
</tr>
<tr>
<td>Presentation</td>
<td>15%</td>
<td>75</td>
</tr>
<tr>
<td>Final report</td>
<td>20%</td>
<td>100</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td><strong>500</strong></td>
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**Service Learning**

As a part of this course, students will participate and complete a service learning project. Some students may be familiar with service learning in the form of internships and community service; however, there are several types of service learning. The form used in this class is academic service learning. The MSU Center for Service-Learning and Civic Engagement defines academic service learning as:

“A teaching method that combines community service with academic instructions as it focuses on critical, reflective thinking and civic responsibility. Service-learning programs involve students in organized community service that addresses local needs, while developing their academic skills, sense of civic responsibility and commitment to the community.”

Over the course of the semester, you will be working on water policy projects proposed by local stakeholder groups and agencies. You will work in teams on this project. Complete details about the service learning project will be provided in a separate handout, discussed in class, and posted on ANGEL.

**Class Policies**

*Attendance*: One of your responsibilities is to come to class (and to come on time). I do not take attendance, but I expect you to come to every class and participate. We will be doing in-class activities that will be graded; if you are not in class to participate you will not receive credit for the exercise. Should you miss a class, I do expect that you will make up *all* work before the next class session so that you don’t hold yourself or anyone else back. **It is your responsibility to find out what you need to do to catch up.**

*Work Expectations*: You are expected to be an active participant in class, complete all assignments, and to prepare for class by completing reading and/or written assignments. You are responsible for your own work.

You will be working in a team for several class activities and assignments. I expect everyone to pull their own weight- do not expect your group to do work for you! Groups will write work expectations for each member at the beginning of the larger group assignments so that everyone knows who is responsible for each component of an assignment. I will create discussion boards and team sites on the course ANGEL site to facilitate group work. If there are any problems with group dynamics, please bring them to my attention so we can work them out. When working in a group, others depend on you. Be professional and responsible- do not let your fellow team members down!

*Discussions*: We will be discussing policy and politics in this class and I encourage you to share your thoughts, questions, and opinions with the class. I expect students to respect each others’ opinions no matter what their personal political views may be. Keep in mind President Simon’s statements on inclusion:

“At MSU we welcome a full spectrum of experiences, viewpoints and intellectual approaches because it enriches the conversation and benefits everyone, even as it challenges us to grow and think differently.”

*Academic Honesty*: Article 2.3.3 of the Academic Freedom Report states: “The student shares with the faculty the responsibility for maintaining the integrity of scholarship, grades, and professional standards.” The Department of Fisheries and Wildlife adheres to the policies on academic honesty specified in General Student Regulation 1.0, *Protection of Scholarship and Grades*; the all-University Policy on *Integrity of Scholarship and Grades*; and Ordinance 17.00, Examinations. (See *Spartan Life: Student Handbook and Resource Guide* and/or the MSU Web site www.msu.edu/unit/ombud/RegsOrdsPolicies.html)

You are expected to develop original work for this course. You are expected to complete all course assignments without assistance from any outside sources. Also, you are not authorized to use the www.allmsu.com web site or similar sites to complete any course work in this course. Your work must be your
own. Students who violate MSU rules may receive a penalty grade, including but not limited to a failing grade on the assignment or in the course.

**Cell Phones**: Please turn off all cell phones and personal electronic devices before class begins!

**Late Assignments**: Late assignments will not be accepted without a valid University excuse (see Attendance Policy, Excused Absences, and Make-up Work www.msu.edu/unit/ombud/excuses.html). I do not give or accept make-up work.

**Changes to the Syllabus**: This syllabus is subject to change; any changes will be discussed in class and posted on ANGEL.

**How to Succeed in this Class**
I want all of you to succeed in this class. I will do my best to work with you to help you achieve the goals of this class; however, a lot of the responsibility lies with you. Keep in mind that **I do not give grades, you earn them**.

For many of my assignments, there is no “right” answer, but there are answers that are better than others. “Better” in this case means that the answer shows greater grasp of the material, more detail, more care in crafting a response, more organization which demonstrates you understand how things fit together. I want to see that you have gone that extra step in understanding the material in some depth. You will do much better in this course if you push yourself to dig deep into the material.

Here are some more tips for succeeding in this class:

- **Proof your work**. Don’t ever turn in a first draft (this one goes for any class). Do not rely on spell and grammar check. Proof read all of your writing assignments before turning them in and, if possible, have someone else proof it too.
- **Pay attention to details**. Sloppy work is a sign of sloppy thinking. If you were reading a report and someone had multiple grammar and spelling errors, would you have faith in their work? Would you think “If they can’t even get the spelling right, how do I know they actually did the work and got the analysis right?”
- **Ask questions**. We’ve all heard the old phrase that the only stupid question is the one you don’t ask. Curiosity is a wonderful thing; do not be afraid to ask questions.
- **Keep an open mind and be willing to learn**. Many people get frustrated (or already are frustrated) about environmental laws and policies- they don’t seem to work, they don’t make sense, why can’t we just write a law that protects it all?, etc. Don’t let this stop you from exploring the world of water policy and management.
- **Be an active participant in class activities**. Just being in class is not participating!
**Class Schedule**
This schedule is subject to change; any changes will be discussed in class and posted on ANGEL.

<table>
<thead>
<tr>
<th>Date</th>
<th>Unit</th>
<th>Topic</th>
<th>Reading*</th>
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</thead>
<tbody>
<tr>
<td>3-Sep</td>
<td>Introduction</td>
<td>Syllabus, introduction to course</td>
<td>Syllabus; Pielke, The Honest Broker, Ch. 1-3; Batie 2008</td>
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<tr>
<td>8-Sep</td>
<td>Water Quality</td>
<td>Policy question &amp; intro to case study</td>
<td>Vig and Kraft, Environmental Policy: New Directions for the Twenty-First Century, Ch 1; Ferrey, Environmental Law Examples and Explanations, Ch. 1</td>
</tr>
<tr>
<td>10-Sep</td>
<td>Relevant laws: Clean Water Act</td>
<td>EPA Introduction to the CWA</td>
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<tr>
<td>15-Sep</td>
<td>Clean Water Act</td>
<td>Ferrey, Environmental Law Examples and Explanations, Ch. 6</td>
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<tr>
<td>17-Sep</td>
<td>Safe Drinking Water Act</td>
<td>EPA Introduction to the SDWA</td>
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<tr>
<td>22-Sep</td>
<td>The Major Players</td>
<td>Vig and Kraft, Environmental Policy: New Directions for the Twenty-First Century, Ch 5-7</td>
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<tr>
<td>24-Sep</td>
<td>Science-policy interactions</td>
<td>Nelson and Vucetich 2009</td>
<td></td>
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<tr>
<td>29-Sep</td>
<td>Case study summary &amp; new case challenge</td>
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<tr>
<td>1-Oct</td>
<td>Project Work Day (no lecture)</td>
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<tr>
<td>6-Oct</td>
<td>Water Quantity</td>
<td>Policy question &amp; intro to case study</td>
<td>Case study materials on Angel</td>
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<tr>
<td>8-Oct</td>
<td>Relevant laws: water rights</td>
<td>Cech, Principles of Water Resources, Ch. 8</td>
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<tr>
<td>13-Oct</td>
<td>Riparian rights &amp; prior appropriation</td>
<td>Ferrey, Environmental Law Examples and Explanations, Ch. 7</td>
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<tr>
<td>20-Oct</td>
<td>The Major Players</td>
<td>Postel and Richter, Rivers for Life, Ch. 3; Cech, Principles of Water Resources, Chapter 10</td>
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<tr>
<td>22-Oct</td>
<td>Science-policy interactions</td>
<td>Pielke, The Honest Broker, Ch. 6, 8-9</td>
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<tr>
<td>27-Oct</td>
<td>Case study summary</td>
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<tr>
<td>29-Oct</td>
<td>New case challenge</td>
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<td>Date</td>
<td>Unit</td>
<td>Topic</td>
<td>Reading*</td>
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<tr>
<td>3-Nov</td>
<td>Water as Habitat: Aquatic ecosystems</td>
<td>Policy question &amp; intro to case study</td>
<td>Case study materials on Angel</td>
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<tr>
<td>5-Nov</td>
<td></td>
<td>Relevant laws: ESA</td>
<td>Ferrey, Environmental Law Examples and Explanations, Ch. 13</td>
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<td>10-Nov</td>
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<td>CZMA, Wild &amp; Scenic Rivers, others</td>
<td>Ferrey, Environmental Law Examples and Explanations, Ch. 10; Cech, Principles of Water Resources, Chapter 12</td>
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<td>12-Nov</td>
<td></td>
<td>The Major Players</td>
<td>USFWS, Interagency Policy to Incorporate Ecosystem Considerations in the Endangered Species Act</td>
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<tr>
<td>19-Nov</td>
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<td>Science-policy interactions</td>
<td>Cortner 2000; Pielke 2004; Sarewitz 2004</td>
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<td>24-Nov</td>
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<td>Case study summary, draft projects due</td>
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<td>26-Nov</td>
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<td>No class- Thanksgiving Break</td>
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<td>1-Dec</td>
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<td>New case challenge</td>
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<tr>
<td>3-Dec</td>
<td>Service Learning</td>
<td>Presentation rehearsals, review of drafts</td>
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<tr>
<td>8-Dec</td>
<td>Project Presentations</td>
<td>Presentations to service learning client</td>
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<tr>
<td>10-Dec</td>
<td>Conclusion</td>
<td>Conclusions, review, evaluations</td>
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<tr>
<td>15-Dec</td>
<td>Final exams</td>
<td>Final projects due</td>
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* Read before coming to class.