

Water Law, Policy and Institutions  
CRN 21896  
AREC 342, Spring 2019  
Colorado State University  
T and R, 8:00 – 9:15 a.m.  
Clark A-206

Instructor: Dr. Marie Leigh Livingston

Email: [marie.livingston@colostate.edu](mailto:marie.livingston@colostate.edu)

Office Hours: Office hours are **by appointment only** between 9:30-11:00 Tuesday and Thursday. I do not have an on campus office but will have access to the DARE conference room B-302. You must have a CONFIRMED appointment (in person or by email) in order for me to meet you in the conference room. Feel free to email me at [marie.livingston@colostate.edu](mailto:marie.livingston@colostate.edu) any time and I will respond within one business day.

**Course Overview:** The purpose of this course is to provide students with an introduction to the nature of water rights in Colorado and the southwestern United States. The economic framework for understanding water use and allocation will be studied. Distinctions, similarities, and interactions between surface water and groundwater rights will be presented. Students will be introduced to water rights administration principles and the history and evolution of the prior appropriations doctrine, as well as the key water entities at the regional, state, and local levels. Numerous other contemporary issues will be covered, including environmental and non-consumptive uses of water, federal water issues such as the Colorado River and the economics of water.

**Course Objectives:** The objective of this course is to help each student develop an understanding of the following:

1. The nature of a water right 1) in Colorado and 2) one other state in the United States.
2. The framework economists use to evaluate the allocation of water between uses and the value of water in various uses.
3. The roles of Colorado water entities including Water Court, the State Engineer's Office and mutual ditch companies, as well as key federal water entities.
4. How water rights are transferred between uses and the economic consequences of water transfers.
5. Non-consumptive uses of water, including hydropower and instream flows.
6. A basic understanding of the laws surrounding water quality protection.

**Student Learning Outcomes:** The Department of Agricultural and Resource economics has the following overall objectives for students in DARE.

1. Professional Development: Students will embody a general awareness of issues in agricultural and natural resource management and their implications in a larger societal context. Students will begin to develop a network of personal and professional connections which will foster an understanding of the culture surrounding professional expectations and conduct.
2. Problem-solving Skills: Students will demonstrate the ability to solve real-world problems beyond the context of the classroom. Students will be able to identify a problem and its scope, evaluate resources available to address the problem, formulate alternative solutions, and select the solution(s) most consistent with a stated objective.
3. Communication Skills: Students will demonstrate proficiency in oral and written communication in terms of substance, organization, mechanics, documentation, and synthesis. Proficient students will have the ability to clearly communicate findings, critically and analytically, at a professional level within their chosen career.

### Course Material and Texts

1. **The primary source materials for this course are in class lectures.** You are responsible for everything covered in class. A significant fraction of the material (especially regarding economics and guest speakers) will only be available in class (not contained in the texts below.) If you must miss class, it is your responsibility to get notes from another student in class. I will not teach the material a second time to individuals personally during office hours. Find a study partner to work with.
2. *Required Text:* Jones, P.A. and T. Cech. 2009. Colorado Water Law for Non-Lawyers. University Press of Colorado.
3. In addition to the required text, we will also rely on Cech, Thomas V. 2010. Principles of Water Resources, 3rd ed. John Wiley & Sons, Inc. I will provide you the required chapters via the Canvas course site.
4. Other required course material will be posted to the Canvas course site. These “other readings” are required and the material in these readings will be covered on exams.

**Student Evaluation:** Student grades will be determined based on performance in the following:

Midterm	200 Points	Exam approximately March 14
Research Paper	100 Points	Due in class March 28
Final Exam (cumulative)	200 Points	May 14, 9:40 – 11:40 a.m.

\*Students are required to attend and report on a campus event of their choice related to water in lieu of attending class on April 2 and 4. Completion carries 0 points but will affect borderline grades.

**TOTAL** **500 Points**

**Grading Scale:** Grading will be based on an absolute scale (rather than curved) so you are not competing with each other for grades. Exams will be formally announced at least a week prior to being held. Failure to attend exams without prior permission will result in a score of zero. Absences will be excused ONLY when 1) you initiate a conversation regarding an up-coming absence in advance, 2) you send me an email stating the particulars of your absence, summarizing our agreement and 3) you receive an email from me confirming that the absence is excused.

A	450-500	(90-100%)
B	400-449	(80-89%)
C	350-399	(70-79%)
D	300-349	(60-69%)
F	299 and below	

Pluses and minuses will be awarded at the instructor's discretion.

Exams will be formally announced at least a week prior to being held. Failure to attend exams without prior permission will result in a score of zero. Absences will be excused ONLY when 1) you initiate a conversation regarding an up-coming absence in advance, 2) you send me an email stating the particulars of your absence, summarizing our agreement and 3) you receive an email from me confirming that the absence is excused.

Failure to submit the required research paper in hard copy in class on March 28 will result in a zero score for this assignment. Any extenuating circumstances must be communicated prior to the due date, documented as outlined for exams above, and may result in a grade reduction.

**Research Paper Requirement:** Your assignment is to work with another student (groups of 2) to research a water resource problem in a particular state (other than Colorado) in the context of law and economics. Students must sign up for particular state in a first come, first serve basis. In brief, you will select a current (not past) water issue and explain the following:

1) What is the problem? What dimension(s) of scarcity are relevant? Use some of the physical water hydrology concepts introduced in class,

2) What decision/choice among alternatives can be analyzed? Specify two or more options that could be investigated 2) Who are the stakeholders? Who are the competing water interests in the controversy? Are there any future stakeholders that are, or are not, being represented?

3) What current water laws in the state will govern the decision? Are surface or groundwater laws involved? What government agencies will likely be involved?

The paper must be submitted on March 28<sup>th</sup> in hard copy in class. The paper must be 8-10 pages in length. APA format is required (no headers or abstract is required but please use

section headings). Structure, organization, spelling and grammar will be evaluated. Further explanation of the paper requirements will be provided in class.

**Tentative Course Outline:**

- I. Introduction
  - a. Interdisciplinary Study of Water Resources
  - b. Physical, Economic and Legal Aspects
- II. The Basics of Water Resource Problem
  - a. Supply: Dimensions of Scarcity – Spaceship Earth
  - b. Demand: Stakeholder Groups and Approaches to Meet Demand
  - c. Economics as the Science of Choice = Highest Value Resource Allocation
  - d. Tradeoffs/ Benefits and Costs of Alternatives
- III. The Physical Nature of Water
  - a. Elementary Hydrology
  - b. Terms
  - c. Colorado Climate, Geology and Hydrology – Chapter 1
- IV. Water Institutions and Law
  - a. Role of institutions in Economics
  - b. Formal and informal
  - c. Institutional Change over Time - Conceptual View and Time Dependence
  - d. Early Water Use and Development of Water Law in Colorado – Chapter 2
- V. The Economic Framework
  - a. The Economic Objective
  - b. Conditions for Competitive Markets
  - c. Market Failure and Government Failure
  - d. Competition for Water and Reallocation Among Uses
  - e. Externalities in Water Use: Quantity (Transboundary) and Quality (Nitrates)
- VI. Basic Water Law – Chapter 3
- VII. Federal and Interstate Law in the West – Chapter 4
- VIII. Tributary Water Law
- IX. Non-Tributary and Not Non-Tributary Groundwater
- X. Designated Groundwater
- XI. Economics Extended
  - a. Benefit Cost Analysis – Dams

- b. Valuing Water in Alternative Uses – Consumptive and Non-Consumptive
- XII. River Administration
- XIII. Water Entities

**AREC 342 Ground Rules:**

1. Please respectful of your classmates. If water is anything, it is controversial. I expect you to challenge your beliefs about water and try to view issues from another perspective. Disrespect towards your classmates or guest lecturers will not be tolerated and may result in removal from the course.
2. Cheating of any kind will NOT be tolerated. Cheating will result in a zero score on the exam/assignment, a failing grade in the course, and potential disciplinary action by the University.
3. Please silence your cell phones. If you must take a call, step outside the room.
4. \*\*I plan to have several guest lecturers present to the class on various topics. You are responsible for attending these class sessions – the material presented by the guest lecturers will be on the exams.
5. If you fall behind, see me before it is too late. We are here to help you.

**Principles of Community:** Colorado State University espouses the following principles:

The Principles of Community support the Colorado State University mission and vision of access, research, teaching, service and engagement. A collaborative and vibrant community is a foundation for learning, critical inquiry, and discovery. Therefore, each member of the CSU community has a responsibility to uphold these principles when engaging with one another and acting on behalf of the University

**Inclusion:** We create and nurture inclusive environments and welcome, value and affirm all members of our community, including their various identities, skills, ideas, talents, and contributions.

**Integrity:** We are accountable for our actions and will act ethically and honestly in all our interactions.

**Respect:** We honor the inherent dignity of all people within an environment where we are committed to freedom of expression, critical discourse, and the advancement of knowledge.

**Service:** We are responsible, individually and collectively, to give of our time, talents, and resources to promote the well-being of each other and the development of our local, regional, and global communities.

**Social Justice:** We have the right to be treated and the responsibility to treat others with fairness and equity, the duty to challenge prejudice, and to uphold the laws, policies and procedures that promote justice in all respects.

**CSU Resources for Disabled Students**

If you are a student who will need accommodations in this class due to a disability or chronic health condition, please make an appointment with me to discuss your individual needs. Any

accommodation must be discussed in a timely manner prior to implementation. A verifying accommodation letter from Resources for Disabled Students is required before any accommodation is provided. Student Disability Center <https://disabilitycenter.colostate.edu/> located in TILT, room 121 or via phone 970-491-6385.

### **Academic Integrity:**

We take academic integrity seriously. At minimum, academic integrity means that no one will use another's work as their own. The CSU writing center defines plagiarism this way: Plagiarism is the unauthorized or unacknowledged use of another person's academic or scholarly work. Done on purpose, it is cheating. Done accidentally, it is no less serious. Regardless of how it occurs, plagiarism is a theft of intellectual property and a violation of an ironclad rule demanding "credit be given where credit is due." Source: (Writing Guides: Understanding Plagiarism. <https://writing.colostate.edu/guides/page.cfm?pageid=311&guideid=17> Accessed, August 15, 2018)

If you plagiarize in your work you will lose credit for the plagiarized work, fail the assignment, or fail the course. Plagiarism can result in expulsion from the university. Each instance of plagiarism, classroom cheating, and academic dishonesty in general will be addressed according to CSU published policies. (See <http://catalog.colostate.edu/general-catalog/policies/students-responsibilities/>)

Of course, academic integrity means more than just avoiding plagiarism. It also involves doing your own reading and studying. This includes regular class attendance, careful consideration of all class materials, and engagement with the class and your fellow students. Academic integrity lies at the core of our common goal: to create an intellectually honest and rigorous community. Because academic integrity, and the personal and social integrity of which academic integrity is an integral part, is so central to our mission as students, teachers, scholars, and citizens, we will ask to you sign the CSU Honor Pledge as part of completing all of our major assignments. You will be prompted to write and sign the following statement on all of your graded assignments, and exams:

"I have not given, received, or used any unauthorized assistance."

You can visit <https://tilt.colostate.edu/integrity/resourcesFaculty/pledge/> to read more about CSU's Honor Pledge as well as finding links to a number of other resources that address academic integrity.

### **Mental Health: Need Help?**

CSU is a community that cares for you. If you are struggling with drugs or alcohol and/or experiencing depression, anxiety, overwhelming stress or thoughts of hurting yourself or others please know there is help available. Counseling Services has trained professionals who can help. Contact 970.491.6053 or go to <http://health.colostate.edu>. If you are concerned about a friend or peer, tell someone at by calling 970.491.1350 to discuss your concerns with a professional who can discreetly connect the distressed individual with the proper resources (<http://supportandsafety.colostate.edu/tellsomeone>). Rams take care of Rams. Reach out and ask for help if you or someone you know is having a difficult time.

## **Sexual Assault and Violence Elimination**

CSU's Student Sexual Harassment and Violence policy, following national guidance from the Office of Civil Rights, requires that professors follow CSU policy as a "mandatory reporter" of any personal disclosure of sexual harassment, abuse, and/or violence related experiences or incidents shared with the professor in person, via email, and/or in classroom papers or homework exercises. These disclosures include but are not limited to reports of personal relational abuse, relational/domestic violence, and stalking. While professors are often able to help students locate appropriate channels of assistance on campus (e.g., see the CSU Health Network link below), disclosure by the student to the professor requires that the professor inform appropriate CSU channels to help ensure that the student's safety and welfare is being addressed, even if the student requests that the disclosure not be shared.

For counseling support and assistance, please see The CSU HEALTH NETWORK, which includes a variety of counseling services that can be accessed at: <http://www.health.colostate.edu/>. And, The Sexual Assault Victim Assistance Team is a confidential resource for students which does not have a reporting requirement and that can be of great help to students who have experienced sexual assault. The web address is <http://www.wgac.colostate.edu/need-help-support>.