



WATER LAWS, RULES, AND POLICY (WATR 3312/5312)

General Information

Spring 2026

Monday 05:30 p.m.- 07:15 p.m.

Web-based (Zoom)

Instructor Information

Gabriela Sosa, Ph.D.

Honorary Research Assistant Professor

E-mail: gsosa@tamusa.edu

Office Hours (Zoom): Wednesday 04:00 p.m.-05:15 p.m.

Course Overview

The course provides an introduction to local, state, and federal laws, rules, regulations and policies relevant to the science and management of water and associated water resources, with an emphasis on learning about practical application and professional practice through lectures by and discussion with practicing professionals in water-related industries. Students will receive an introduction to the history and function of water laws, rules, and policies and how they are created, including the roles of the three branches of government and the public. Relevant U.S. and Texas laws, rules, and policies governing water resources will be reviewed and evaluated in detail, including the Clean Water Act, Safe Drinking Water Act, and the National Environmental Policy Act.

Students will examine federal, state and local approaches to water allocation, water rights, pollution control and water resource management. Students will explore the challenges of law making and regulatory processes, and may discuss alternative strategies for water pollution control and resources management, water ownership, water sustainability, voluntary approaches, real-time information feedback, application of new technologies applications, and economic incentives and other market-based mechanisms. Students will become familiar with the political environment within which water laws and public policy are created, including the roles of advocates, consumers, elected officials, water-related boards and commissions, shareholders, and other influencers.

This course provides for study of the theory, science, rules and requirements, and practice of environmental impact assessment on aquatic ecosystems and watershed function. Students will have the opportunity to conduct example environmental impact reviews and ecological assessments of water resources and produce sample environmental impact statements and reports. Practicing professionals in the field of environmental impact review will address the class.

Students will participate in a small-group cooperative research project from which a scientific report will be written. Results of the research will be orally presented by the group to the class as a scientific report/paper.

Student Learning Outcomes

The course will familiarize students with the basic principles of federal, state, and local water laws, rules, and policies as described in assigned reading materials. The course will expand on that knowledge by inviting federal, state, and local water agency officials, and water law and policy experts from non-governmental institutions to provide guest lectures and invite discussion with students on current events and job-related experience in the subject area.

Specifically:

- a. Students will demonstrate the ability to communicate information about federal, state, and local water laws, rules, and policies through oral and written formats.
- b. Students will be able to use and understand the literature of federal, state, and local water laws, rules, and policies.
- c. Students will gain a familiarity with core concepts of federal, state, and local water laws, rules, and policies.
- d. Students will meet and have discussions with practicing professionals, gain experience in current topics and understandings, and complete research and investigations on topics associated with federal, state, and local water laws, rules, and policies.

Required Course Materials

- Christian-Smith, J., Gleick, P. H., Cooley, H., Allen, L., Vanderwarker, A., & Berry, K. A. (2012). *A twenty-first century US water policy*. Oxford University Press. (ISBN: 978-0190490874)

Instructor Policies

CLASSROOM ETIQUETTE

Be respectful of others and avoid tardiness. Stay for the entire class period and keep camera on. Avoid distractions and participate fully in the course. Prepare and read ahead of time.

ATTENDANCE

Role will be checked at the beginning of the semester to account for everyone on the roster. Thereafter role WILL NOT be taken EXCEPT when outside speakers make presentations to the class. Absence from or early departure from a presentation by an outside speaker, without an adequate excuse, will result in a percent reduction in your total attendance points for the semester (up to 10 percent of final grade).

MAKE-UP EXAMINATION

If you do not complete a regularly scheduled examination, only excused absences will be accepted as a pass to take a make-up examination. An excused absence means that illness or some other problems beyond your control prevented you from preparing for, or being present at, a scheduled exam. You must register your excused absence within 7 days of the missed exam.

Evaluation (Assignments, Projects, Exams, Attendance)

- Homework and Discussion (25%)
 - o A total of 3 homework assignments will be given throughout the course.
- Cooperative research project, report, and presentation (25%)
- Mid-term Exams (30%)
 - o Written exam that includes content covered in the first half of the course.
- Final Exam (30%)
 - o A comprehensive final exam will be given during the final week of class.
- Attendance (10%)
 - o Absence from or early departure from a presentation by an outside speaker, without an adequate excuse, will result in a percent reduction in your total attendance points for the semester.
- Course grades will be based on the percentage of points earned from a 300 point total (90%+ = A, 80%-89% = B, 70%-79% = C, 60%-69% = D)

COURSE OUTLINE

Monday	January 19	HOLIDAY – NO Class
Monday	January 26	Introduction to the Course, Assignments, Expectations, and Opportunities. The Basics of Making Laws, Rules, Regulations, Policies, Treaties, and Significant Events
Monday	February 2	Overview: Federal and Texas State Water Laws, Policies, and Doctrines. The Clean Water Act (CWA)
Monday	February 9	CWA: Water Conservation and Wetlands Protection: Local Application for Urban Watershed
Monday	February 16	Waters of the U.S. (WOTUS), Safe Drinking Water Act: National Pollution Discharge Elimination System (NPDES) Title IV, Section 420 CWA
Monday	February 23	National Environmental Policy Act (NEPA): Water Pollution, Case Study
Monday	March 2	Mid-Term Exam (Web-based, due by 11:00 p.m.)

Monday	March 9	SPRING BREAK
Monday	March 16	Texas Groundwater Laws/Rules/Policies. Endangered Species Act (ESA): Edwards Aquifer Recovery Implementation Program
Monday	March 23	Texas Surface Water Quality Standards. Texas Water Development Board in Practice: The Regional Planning Process
Monday	March 30	Water Rights in Practice: Groundwater Conservation Districts, the Constitution, and the Courts. International Boundary and Water Commission
Monday	April 6	Texas Commission on Environmental Quality in Practice: Keeping Water Clean in a Dry State
Monday	April 13	San Antonio River Authority in Practice: Managing Flood, Drought, Agriculture, and Growth
Monday	April 20	Defense Department Water Rules/Policy Requirements. Tribes and Water
Monday	April 27	Fracking/Energy Development and Environmental Issues, Laws, Regulations
Monday	May 4	Class Project Presentations, Last Day of Classes
Monday	May 11	Final (Web-based, due by 11:59 p.m.)

QUALIFICATIONS/LIMITATIONS

This course will focus on natural resource aspects of environmental assessment methods for water quality, hazards, wetlands and aquatic biological impacts.

Will not deal with whether or not environmental laws are appropriate, fair, reasonable, etc. We will accept that they exist and our objective is to assess the environment in the context of existing laws and regulation, and become familiar with the permitting process.

Environmental assessment is not a fixed subject – Science, Technology, Methodology, Laws, and Regulations keep changing and you must constantly make adjustments to those changes.

AMERICANS WITH DISABILITIES ACT (ADA) POLICY STATEMENT

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Disability Services, currently located in the Disability Services building at the Student Services at White Creek complex on west campus or call 979-845-1637. For additional information, visit <http://disability.tamu.edu>.

ACADEMIC INTEGRITY

As a member in an academic community, students at Texas A&M University- San Antonio are expected to exhibit a high level of honesty and integrity in their pursuit of higher education, be mature, be self-directed and be able to manage their own affairs. Student who are unwilling to abide by these basic expectations will find themselves facing academic and/or disciplinary sanctions. Student are expected to share in the responsibility and authority with faculty and staff to challenge and make known acts that violate the Texas A&M University- San Antonio Code of Conduct.

Texas A&M University- San Antonio faculty has the discretion to impose grade penalties as deemed necessary. Faculty members are required to report such serious breaches of academic honesty to their chair, their dean and the Office of Student Rights and Responsibilities. In cases of academic misconduct, students may be subject not only to grade sanctions in courses but to disciplinary action. Grade sanctions may be imposed only by faculty members, but suspension or expulsion may be imposed only by the Vice President for Student Affairs.

According to the Student Code of Conduct, the following are violations of Academic misconduct: Cheating, Plagiarism, Multiple Submissions, Collusion, Lying, and Bribery.