

Law, Science and Environment
LAW 6048 3 hours
Spring 2008, 2:00-3:15 pm, MW
Room 201

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Robert H. Bean Professor of Law

Course Description:

This is an interdisciplinary course which will involve the examination of the role of science and scientists in formulating environmental law and policy, and in the legal practice context of mediation to litigation. The environmental attorney will frequently work with scientific experts and this course will provide the student with an understanding of basic scientific concepts, and explore how scientific knowledge can improve an attorney's effectiveness. The course will include reading and analyzing scientific papers on topics of toxicology, epidemiology, hurricanes, global climate change, hydrology, engineering and other environmental science fields, as well as cases involving environmental science.

The course grade will be based on class participation, exercises and a final examination.

Requirements:

Regular class attendance and preparation, class participation, projects and a final examination are required. Your grade will be comprised of 20% class participation, 10% midterm, 10% Murck completion and 60% final examination.

TEXTS:

American Bar Association, Global Climate Change and U.S. Law (2007) ISBN 13:978-1-59031-816-4, www.ababooks.org .

Bruce Wyman, & L.Harold Stevenson, The Facts on File Dictionary of Environmental Science, 3rd ed. (2007), ISBN 13:978-0-8160-6437-3 www.factsonfile.com .

Raymund C. King, American Bar Association, Toxic Mold Litigation (2003), ISBN 1-59031-229-5. www.ababooks.org or you can wait for the 2008 edition to be released in the spring.

Barbara Murck, Environmental Science, A Self-Teaching Guide (2005) ISBN 13 978-0-471-26988-5 www.wiley.com .

Frank R. Spellman, Biology for Nonbiologists, (2007), ISBN 13:978-0-86587-421-3 www.govinstpress.com .(optional)

Kirkpatrick Sale, The Green Movement, The American Environmental Movement, 1962-1992, Hill and Wang (1992). (optional. www.amazon.com , is the best place to buy this book, used or new.)

Electronic Environment and Energy Newsletter EMAIL ALERTS:

You need to sign up for the daily news for Energy and Environment for the duration of the course by following these steps:

1. be on a computer here at the law school (so that the ip address is authorized)
2. open browser
3. go to law school home page (<http://www.law.ttu.edu/>)

4. click on Library & Technology on the left
5. click on Electronic Databases at the bottom
6. click on Alphabetically
7. click on “E” in the alphabet
8. click on E & E News PM
9. scroll down to E & E Services and click on Receive E-mail Alerts
10. select the e-mail alerts, select format, select referred by a subscriber, be sure to select “I have IP Access” for the Account Type, then fill out the appropriate email contact info.
11. Click the Sign up now button.

Course Objectives/Learning Outcomes.

At the completion of this course, you should expect to be able to:

1. Understand scientific principles of environmental science underlying selected cases and case studies.
2. Describe how science contributes to the development of law and regulation; and how law contributes to the development of environmental science.
3. Understand judicial decisionmaking and the use of science and engineering.
4. Analyze environmental law in the context of environmental science.
5. Identify science issues important to environmental law and environmental science including identifying potential “junkscience” and flawed scientific research.

Assessing Learning Outcomes:

The final examination and class participation in the context of science and technology and law require the student to apply class lectures, casebook readings and specific legal and scientific research to public policy and legal issues. The student must master these learning outcomes in order to be successful in these assessment methods.

Accommodations for Disabilities. Students with disabilities requiring accommodations should contact the Dean’s Office (if accommodations need to remain confidential) or me (if the accommodations need not remain confidential). See TTU OP 34.22.

Observance of a Religious Holy Day. Students are excused from attending classes or other required activities, including examinations, for the observance of a religious holy day. The student shall also be excused for time necessary to travel. An institution may not penalize the student for the absence and allows for the student to take an examination or complete an assignment from which the student is excused. No prior notification to the professor is required. See TTU OP 34.19.

Academic Honesty [excerpt from TTU OP 34.12 below]:

It is the aim of the faculty of Texas Tech University to foster a spirit of complete honesty and high standard of integrity. The attempt of students to present as their own any work not honestly performed is regarded by the faculty and administration as a most serious offense and renders the offenders liable to serious consequences, possibly suspension.

“Scholastic dishonesty” includes, but is not limited to, cheating, plagiarism, collusion, falsifying academic records, misrepresenting facts, and any act designed to give unfair academic advantage to the student (such as, but not limited to, submission of essentially the same written assignment for two courses without the prior permission of the instructor) or the attempt to commit such an act.

a. “Cheating” includes, but is not limited to:

(1) Copying from another student’s test paper;

- (2) *Using during a test materials not authorized by the person giving the test;*
 - (3) *Failing to comply with instructions given by the person administering the test;*
 - (4) *Possession during a test of materials that are not authorized by the person giving the test, such as class notes or specifically designed “crib notes.” The presence of textbooks constitutes a violation only if they have been specifically prohibited by the person administering the test;*
 - (5) *Using, buying, stealing, transporting, or soliciting in whole or in part the contents of an unadministered test, test key, homework solution, or computer program;*
 - (6) *Collaborating with or seeking aid or receiving assistance from another student or individual during a test or in conjunction with other assignment without authority;*
 - (7) *Discussing the contents of an examination with another student who will take the examination; March 31, 2005 Page 3 OP 34.12*
 - (8) *Divulging the contents of an examination, for the purpose of preserving questions for use by another, when the instructor has designated that the examination is not to be removed from the examination room or not to be returned to or kept by the student;*
 - (9) *Substituting for another person, or permitting another person to substitute for oneself to take a course, a test, or any course-related assignment;*
 - (10) *Paying or offering money or other valuable thing to, or coercing another person to obtain an unadministered test, test key, homework solution, or computer program, or information about an unadministered test, test key, homework solution, or computer program;*
 - (11) *Falsifying research data, laboratory reports, and/or other academic work offered for credit; and*
 - (12) *Taking, keeping, misplacing, or damaging the property of the university, or of another, if the student knows or reasonably should know that an unfair academic advantage would be gained by such conduct.*
- b. *“Plagiarism” includes, but is not limited to, the appropriation of, buying, receiving as a gift, or obtaining by any means material that is attributable in whole or in part to another source, including words, ideas, illustrations, structure, computer code, other expression and media, and presenting that material as one’s own academic work being offered for credit.*
 - c. *“Collusion” includes, but is not limited to, the unauthorized collaboration with another person in preparing academic assignments offered for credit or collaboration with another person to commit a violation of any section of the rules on scholastic dishonesty.*
 - d. *“Falsifying academic records” includes, but is not limited to, altering or assisting in the altering of any official record of the university, and/or submitting false information or omitting requested information that is required for or related to any academic record of the university. Academic records include, but are not limited to, applications for admission, the awarding of a degree, grade reports, test papers, registration materials, grade change forms, and reporting forms used by the Office of the Registrar. A former student who engages in such conduct is subject to a bar against readmission, revocation of a degree, and withdrawal of a diploma.*
 - e. *“Misrepresenting facts” to the university or an agent of the university includes, but is not limited to, providing false grades or resumes; providing false or misleading information in an effort to receive a postponement or an extension on a test, quiz, or other assignment for the purpose of obtaining an academic or financial benefit for oneself or another individual; or providing false or misleading information in an effort to injure another student academically or financially.*

Dates to remember

Midterm 3/12

UNIT 1. Law, Science and the Environment

Week 1

1/9 W

Introduction

First Class Assignment: Frederick A. Veitch III, BREWING UP A STORM: THE POTENTIALLY CATAclysmic EFFECTS OF INDUSTRIALLY GROWN COFFEE, 13 Colo. J. Int'l Env'tl. L. & Pol'y 211 (2002).

http://web2.westlaw.com/find/default.wl?fn=_top&rs=WLW7.11&rp=%2ffind%2fdfault.wl&mt=LawSchoolPractitioner&vr=2.0&sv=Split&cite=13+Colo.+J.+Int'l+Envtl.+L.+%26+Pol'y+211

Loureiro and Lotade, "Do fair trade and eco-labels in coffee wake up the consumer conscience?" *Ecological Economics* 53 (2005) 129-138.

Optional references:

[EPA Environmental Labeling Issues, Policies and Practices Worldwide \(1998\)](#)

Week 2

1/14 M

Introduction to Environmental Law, Environmental Ethics

Aldo Leopold, "The Land Ethic," *A Sand County Almanac* (1949, 1966), excerpt

Kirkpatrick Sale, *The Green Movement, The American Environmental Movement, 1962-1992*, Hill and Wang (1992), excerpt pp. intro – 28.

1/16 W

Introduction to Environmental Science

Murck, pp. 1-17

[Hardin, "The Tragedy of the Commons," *Science*, Vol. 162, No. 3859 \(Dec. 13, 1968\), 1243-1248.](#)

[Hardin, "Revisiting the Tragedy of the Commons," *Science* 1 May 1998: Vol. 280. no. 5364, pp. 682 - 683](#)

Edward O. Wilson, *Consilience: The Unity of Knowledge*, Random House (1998), pp. 3-14.

[Science of Ozone Depletion](#)

UNIT 2.

DDT, Environment and Science

Week 3

1/21 M

HOLIDAY

1/23 W

Rachel Carson, Silent Spring, excerpt, pp. 15-37, 104-127

[Fisher v. Ciba Specialty Chemicals Corp., No. 03-0566-WS-B, 2007 WL 2302470 \(S.D. Ala. Aug. 8, 2007\).](#)

Cliff Hutchison, *Toxicology Law: DDT Experts Allowed in Alabama* (Aug 25,

2007)

Henry I. Miller, Op ed, "DDT for Health," *Wall Street Journal* (Aug 17, 2007)
(Pro-DDT argument)

Donald Roberts, *A New Home for DDT*, NYT, (Aug 20, 2007)
(Pro-DDT argument)

[DDT's Resurrection, Env't S&T Online News, \(Aug 29, 2007\)](#)

["WHO gives indoor use of DDT a clean bill of health for controlling malaria," \(Sept 15, 2006\).](#)

Week 4
1/28 M

Science of DDT

Guest Lecturer, Dr. Michael Hooper

Cassarett & Doull's, Toxicology, pp. 763-774

[Pesticide Action Network, *DDT & Malaria: Setting the Record Straight*, \(April 2007\)](#) (Anti-DDT argument)

J. Gordon Edwards, "DDT: A Case Study in Scientific Fraud," *Journal of Physicians and Surgeons*, 9:83 (Fall 2004).

UNIT 3.

Alternative Energy Resources

1/30 W

Murck, Chap 10, pp. 179-194, Mineral resources

Chap. 11, pp. 195-217, Energy

[Science of Wind Energy](#)

Week 5

2/4 M

Nutshell, *Energy Law*, Alternative Energy Sources, pp. 354-384.

Wind Energy

[Sutton and Tomich, *Harnessing Wind is Not \(By Nature\) Environmentally Friendly*, 22 Pace Envtl. L. Rev. 91-121 \(2005\)](#)

[Sutton, *Wind and Wisdom*, 1 Houston Journal of Energy and Environment 345-371 \(2006\)](#)

[Center for Biological Diversity, Inc. v. FPG Group, Inc., RG04-183113 \(Superior Ct., Alameda Co., Calif.\) \(Oct 12, 2006\)](#)

Complaint, Center for Biological Diversity

[Center for Biological Diversity website on Altamont Pass Windfarm](#)

http://xahlee.org/Whirlwheel_dir/livermore.html

<http://www.powerworks.com/environment.asp>

2/6 W

Hydrogen, Biofuels

www.hydrogen.gov/regulations

UNIT 4. Global Change, Environment and Law

Week 6

2/11 M Cancelled

2/13 W Michael Gerrard, ed., *Global Climate Change and U.S. Law* (2007), pp. 3-25
[CEQ Edits to Climate Change Report](#)

Week 7

2/18 M Michael Gerrard, ed., *Global Climate Change and U.S. Law* (2007), pp. 31-56
http://unfccc.int/kyoto_protocol/mechanisms/items/1673.php
Kyoto Protocol Mechanisms

Petition of the Inuits to the Inter American Commission on Human Rights, Dec 2005

Gerrard, pp. 221-224

2/19 T MAKE UP Class

The Supreme Court speaks on the science of global climate change, and using the Clean Air Act to control GHGs:

Massachusetts v. EPA, 127 S. Ct. 1438 (2007)

Clean Air Act provision used to control greenhouse gases:

[Section 209 of the Clean Air Act](#)

Gerrard, pp. 133-147, 191-193, 154

Scientific reliability questioned by the court:

[Re Xstrata Coal Queensland Pty Ltd & Ors \[2007\] QLRT 33 \(Australia\)](#)

<http://www.envlaw.com.au/newlands.html> All documents in litigation

http://www.xstrata.com/reports/doc/xca_brochure_031107_en.pdf Xtrata brochure

2/20 W

Science of climate change

Murck, Chap 2., pp. 19-41 objective: understand carbon cycle and nitrogen cycle

Chap 3, pp. 42-65 objective: understand greenhouse gas actions

Chap 16, pp. 297-326 objective: understand the dynamics of global climate change science

[IPCC Working Group 1 Report http://www.ipcc.ch/](http://www.ipcc.ch/)

Read, "Summary for Policymakers"

Guest Lecturer, Katherine Hayhoe

Week 8

Assign'd cases:	Exclusion of scientific expert testimony: <u><i>Green Mountain Chrysler Plymouth Dodge Jeep v. Crombie</i></u> , Case No. 2:05-cv-302, Sept. 12, 2007 (D.Vt)
Adams	Gerrard, pp. 165
Franks	The preemption doctrine and state action to control GHGs: <u><i>Central Valley Chrysler-Jeep Inc. v. Goldstone</i></u> Gerrard, pp. 161
Rice	Using the Clean Water Act as an approach to controlling greenhouse gases: <u>PETITION FOR REVISED pH WATER QUALITY CRITERIA UNDER SECTION 304 OF THE CLEAN WATER ACT, 33 U.S.C. § 1314, TO ADDRESS OCEAN ACIDIFICATION</u>
Adams	Using NEPA to control GHGs: <u><i>Friends of the Earth v. Mosbacher</i>, No. C 02-04106 JSW (N.D. Calif.), March 30, 2007</u> Plaintiff's Motion for Summary Judgment, excerpt Defendant's Motion for Summary Judgment, excerpt
Franks	Using the U.S. Global Climate Research Program Act of 1990 to address climate change: <u><i>Center for Biological Diversity v. Brennan</i>, 4:06-cv-07062-SBA (D. N.Calif) (Aug 21, 2007)</u>
	Using false advertising in regulating greenhouse gases: <u><i>Friends of the Earth v. Shell Europe Oil Products Ltd.</i>, A07-33778 (2007)</u>
2/27 W Week 9 3 /4 T	Cancelled MAKEUP CLASS Using the Endangered Species Act to control GHGs: ESA Listing of the Polar Bear <u>USGS Science Report supporting the ESA listing of the Polar Bear</u> (Full report at this link; excerpts only, in materials) List of all USGS reports: <u>http://www.usgs.gov/newsroom/special/polar_bears/http://alaska.fws.gov/fisheries/mmm/polarbear/issues.htm</u> <u>Sarah Polin, Gov. of Alaska, Op ed, <i>The New York Times</i>, "Bearing Up," (Jan 5, 2008)</u> <u>Felicity Barringer and Andrew Revkin, "Agency Proposes to List Polar Threatened," <i>The Science Sec., The New York Times</i> (Dec. 28, 2007).</u>
3/5 W	Patrick Michaels, ed., <i>Shattered Consensus: The True State of Global Warming</i> , (2005) excerpt, pp. 1-19 <u>Bjorn Lomborg, "Chill Out," <i>The Wall Street Journal</i> (Sept 13, 2007)</u>

Global Climate Change litigation

Week 10

3/10 M Critically review the documentary, *An Inconvenient Truth*, and Review for Mid-Term

3/12 W MID-TERM

Week 11

3/17 M SPRING BREAK

3/19 W SPRING BREAK

Week 12

3/24 M DAY OF NO CLASSES

UNIT 5. Wetlands and Environmental Law

Week 13

3/26 W Sutton, [Wetlands --- A Goal Without a Statute](#), 7 S.C.Env't. L.J. 179 (Fall 1998).

[United States v. Riverside Bayview Homes, Inc.](#), 474 U.S. 121 (1985) (*excerpt*)
Amici curae for National Federation of Wildlife, et al

Week 14

3/31 M [Rapanos v. United States](#), 126 S.Ct. 2208 (2006) (*excerpt*)

[SWANCC v. U.S. Army Corps of Engineers](#), 531 U.S. 159 (2001)

~~“The Story of SWANCC: Federalism and the Politics of Locally Unwanted Land Uses, Thomas Merrill, excerpt, *Environmental Law Stories* (2005). Pp. 283-320~~

~~[[Legal reference: 160 A.L.R. Fed. 585](#), What are “Navigable Waters”?]~~

NAS Report, *Wetlands* (*excerpt*)

Biology for Non-biologists (*excerpt*)

Murck, pp. 66-99 objective: understand role of wetlands in an ecosystem

pp. 218-234 objective: understand wetlands in the context of water resources

Edward O. Wilson, ed., "The Current State of Biological Diversity," *Biodiversity*, National Academy Press (1988), pp. 3-18.

Murck: Chap 8, pp. 139-158 objective: understand how deforestation impacts the environment

Chap 9, pp. 159-178 objective: understand how farming impacts the environment

UNIT 6. Environmental Risk, Uncertainty and Environmental Regulation

Week 15

4/2 W

"The Story of the Benzene Case: Judicially Imposed Regulatory Reform through Risk Assessment," Thomas O. McGarity, excerpt from *Environmental Law Stories* (2005). Pp. 141-169

Week 16

4/7 M

NO CLASS

4/9 W

[Indus. Union Dep't, AFL-CIO v. American Petroleum Inst., 448 U.S. 607 \(1980\).](#)

Week 17

4/14 M

"The Story of Reserve Mining: Managing Scientific Uncertainty in Environmental Regulation," John S. Applegate, excerpt, *Environmental Law Stories* (2005), pp. 43-76.

4/16 W

[U.S. EPA v. Reserve Mining Co., 514 F.2d 492 \(8th Cir. 1975\) \(en banc\).](#)

UNIT 7. Public Health and Environmental Law: Toxic Mold

Week 18

4/21 M

Toxic Mold Litigation,
King, *Toxic Mold Litigation*, ABA (2003), pp. 9-40

4/23 W

Understanding Medical Issues in Toxic Mold
Guest Lecturer, David C. Straus, Ph.D., Professor
Phone: 806-743-2523
Email: david.straus@ttuhsc.edu

King, *Toxic Mold Litigation*, ABA (2008), Chapter 4, The Science Behind Mold Litigation, pp. 41-66

FINAL EXAMINATION:

When you come for your final examination, BRING YOUR COMPLETED MURCK BOOK, WITH YOUR NAME ON IT, and turn it in to the proctor before you begin your examination.