

## Academics for Land Protection in New England

### Case study: teaching the art and practice of land protection to college students

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College students interested in conservation have traditionally studied a diverse combination of subjects. Basic sciences (e.g., biology, chemistry, ecology) provide a baseline from which to understand the natural world. More technical courses enable students to measure, estimate, and analyze aspects of nature (e.g., forest measurements or mensuration, geographic information systems, applied plant ecology, various applied wildlife and fishery coursework). Policy, economics, and communications coursework are also included. Courses in management are often designed to provide a capstone, synthetic experience knitting together basic and applied concepts into an ecosystem-based management paradigm. This suite of basic and applied concepts and experiences can work well in landscapes dominated by large public agency ownership and influence. In terms of land ownership, cover, and use, these are relatively stable. Landscapes dominated by a multitude of private owners are socioecologically complex and subject to changes in ownership and land use. In many parts of the United States significant portions of these landscapes have been lost or compromised by the often randomized effects of development. Students graduating with the intent to be involved in conservation need an awareness of the importance of land protection, and a knowledge of the various legal and financial tools and approaches that can be applied to maintain intact ecosystems, or to at least minimize the effects of development and ensure continued provision of ecosystem services. In these privately dominated landscapes subject to changes in ownership and land use it is no longer sufficient to merely apply various conservation and management approaches without an awareness of land protection and how it can be strategically applied. All the best management principles based on the latest conservation science don't matter if the landscape is eroded by land use conversion.

In 2005 I offered a new course to address the lack of awareness and information on land protection at the University of Massachusetts in the Department of Environmental Conservation. The original idea was to make conservation students aware of the techniques and application of conservation / land protection tools such as easements, bargain sales, life estates, gifts, limited development, zoning, estate planning, and other methods. They also learn about a wide variety environmental organizations that work with private owners of land to protect and conserve habitat at scales larger than individual properties.

I am not aware of a singular text that adequately covers this material. As a result, the course relies heavily on outside speakers from a wide variety of organizations who describe in detail various case studies in land protection. Invited speakers represent the spectrum of organizational size and type, including small, private non-profit all-volunteer local land trusts, regional land trusts, state and national organizations, as well as municipalities and state agencies in the public sector. In addition to the diversity of organizational roles, I seek diversity of speakers by age and gender, as well. The class syllabus (supplemental materials, below) provides more detail on organizations, speakers, and topics.

The class meets twice weekly. Outside speakers form the basis of the 75-minute class on Tuesday afternoon. The class meets from 4:00 – 5:15 pm to make it easiest for outside speakers coming from a distance, and mesh best with their workday. Thursday classes are an opportunity to provide other relevant content (e.g., Land Trust Alliance standards and practices; land trust accreditation, easement insurance,) as well as to clarify topics covered by the preceding speaker, and make integrative connections between multiple previous speakers.

In terms of assignments and deliverables, students submit narrative summaries of each outside speaker's presentation. There is a take-home mid-term exam, where students are presented with a real-life scenario of a family that owns land, and the assignment is to outline as many possible alternative outcomes for how to pass assets on to three children (see below, supplemental material). Finally, on the basis of what they learn from outside presentations and associated discussion, students find a specific case and study it in detail, collaborating with an organization or landowner. The semester-long assignment results in the development of a case that is posted on-line, on the UMass Extension website for private woodland owners: Masswoods.net. See: <http://masswoods.net/future-my-land/cases>

This development of an online case outlining a land protection story (illustrated with maps and photos) represents a unique interface between classroom teaching and outreach to landowners.

After several semesters, the number of cases developed by students available on masswoods exceeded 30, and they began to be duplicative of tools, tactics, and situations. I re-oriented the semester project and instead developed an expectation for a Professional Practicum Experience (see supplemental materials, below, for a complete description of the assignment). Students are responsible to make contact with a land trust or conservation organization and in some way engage for a minimum of 8 hours of contact time. Students are then responsible to submit a 5-page paper at the end of the semester summarizing their experience, relating it to class content, and describing lessons learned. These practicum experiences vary widely, ranging from assisting on easement monitoring, organizing records and preparing a land trust for accreditation, planning and implementing a public outreach event, getting a land trust started with social media, or assisting in other ways.

The course has been taught for ten semesters, and class size ranges from 20 to 45. Composition of the class is a diverse mix of undergraduates and graduate students, spanning disciplines of wildlife biology, fisheries, forestry, resources economics, regional planning, geography, and environmental studies. Students have evaluated the course highly, and when asked: "*What do you like most about the course and/or the instructor's teaching of it?*" had this to say:

- The formatting with guests coming in every week. Learning through their experience and stories is great.
- I really appreciate the speakers that come into class. Professor Kittredge chose a variety of professionals from varying fields giving us an understanding of how many different roles of conservation there are!
- Balance between guest speakers and content provided by the professor. Everything that I've learned I plan to use in my future career. I have also been successful in narrowing down my desired career- I am extremely interested in working for a land trust. Enjoyed variety of speakers from different sectors.

- I have really enjoyed the visitors coming to the class. And also the Professional Practicum Experience assignment. I'm glad you made us go out and make connections! I've found it is going to help me a lot in my job search.
- Personal experience with course objectives / interesting to hear actual testimony from workers in job fields.
- It is also more interesting / inspiring learning from someone with real world experience/ knowledge with stories to tell.
- The variety of different presenters allowed for explanation / understanding of conservation through a variety of different perspectives.
- This class is a unique way to see what I could potentially be doing in the future.
- I liked how there was a different visitor every week and now I know what land trusts are!
- Professional Practicum Experience was a great way to get engaged with what we have been learning in the class/ involved in our field.
- Having the guest speakers come in was good insight for the future. I enjoyed each one.
- Practical knowledge for important problems. The guest speakers were enjoyable and informative

And more generally,

- Thank you for organizing this course. It is the most relevant NRC class I've taken at UMass.
- Professor Kittredge thought thoroughly about who he decided would speak to the class and was very helpful in teaching us about the ins and outs of specific case study technicalities
- This class opened my eyes to conservation on a whole new level, and helped me realize that I would like to get into land protection.

In one semester, with 10 or 11 outside speakers, the class cannot turn students into land protection specialists upon graduation. An important goal of the course, however, is to generate an appreciation for the importance of land protection, and an eye for potential projects, opportunities or deals. When students graduate and become professionally involved in conservation, do they have the understanding of the importance of private land protection from development, and the awareness of alternatives? In addition, do they understand the role of the non-profit conservation community in protecting land? Students of a one-semester class on land protection will likely not graduate and "do deals", but they may recognize potential land protection opportunities, and know how to be that catalyst, or bridge between a family and a successful deal.

Lessons learned:

- Students with an interest in the environment and conservation benefit from an introduction to land protection, in addition to other coursework preparing them for careers in conservation.
- Students like a variety of speakers in class, as well as the opportunity for out-of-class engagement with land protection.

- Incorporating small practicum elements into a class exposes students to the ways that conservation works beyond the classroom, and can also serve as a springboard to more longer term practicum or independent study opportunities.
- Conservation non-profits can benefit by engaging with the energy, creativity, and enthusiasm of students for certain well-defined tasks through admittedly small within-class practica. These smaller doses via short practica are a means to introduce a student to an organization in a low-risk way. If the student: organization match is a good, mutual fit, more formal, longer term arrangements can be made in subsequent semesters. Land trusts agreeing to “take on” a student for a short 8 hours represents a modest amount of commitment and is more palatable.
- Land protection practitioners enjoy coming to a class, presenting one or several case studies of their work, and engaging with students. They see it as an investment in the next generation of people working in the conservation arena.

Supplemental materials:

- a. Mid-term take-home exam,
- b. syllabus,
- c. professional practicum experience assignment

**Natural Resources Conservation 575: Case Studies in Conservation**  
**Fall 2016 Midterm Examination**

This is a take-home examination. It must be *submitted through the class Moodle site by 11:55 PM, Tuesday, November 1.* **NO EXCEPTIONS. NO LATE EXAMINATIONS WILL BE ACCEPTED.**

You may consult any books, references, written or online information, or other sources of knowledge, HOWEVER, YOU **MAY NOT DISCUSS THE EXAMINATION WITH FELLOW STUDENTS IN THE CLASS OR ANY OTHER PEOPLE - either in person verbally, over the phone, or via email.** Completion of the exam and returning it to the Instructor implies agreement and compliance with this limitation.

There is no correct or incorrect answer to this exam. Rather, it is designed as an exercise to stimulate thought and apply acquired knowledge about land protection and conservation.

Please answer the following question in an essay/short report format of ***no longer than a total of 5 pages, and no shorter than two pages.*** Give thought to your answer. Present it in an organized and professional manner- not random thoughts on land protection. *Your answer will be graded both on the basis of substance and content, as well as clarity of organization and professional presentation.* Recall from the syllabus that your grade on this mid-term represents 10% of your overall final grade in the course. Therefore, really give serious and meaningful thought to your answer, and craft a well prepared, thoughtful, and professional response. I intentionally provide plenty of time for thought, analysis, and preparation, and not have you complete the exam in a rush. If it is obvious that the answers have not been proof-read, they will be returned un-graded for your revision. Subsequent grading will begin with a 10-point deduction.

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You've been contacted by an old family friend, Sarah Walsh Jones, about her family's property in [Chester, Massachusetts](#). She knows you have experience in natural resources and planning, and seeks your advice.

Background:

Landowner[s]:

**Margaret Walsh:** mother of Sarah, Tom, and Kevin; 80 year old widow. Lives in [Greenwich, Connecticut](#). Visits the land when she is in Chester once or twice a year.

**Sarah Walsh Jones:** 49 years old, married and mother of 3. Lives in Chester but not on the land. Sarah fell in love with the area as a child, and is married and raises her family in Chester, not far from the land.

**Tom Walsh:** 47 years old, married, father of 4. Lives in the greater Chicago area; last visited the property 10 years ago, kids have never seen it.

**Kevin Walsh:** 45 years old, divorced, father of two kids. Lives in Los Angeles. Hasn't visited the property in 21 years.

**Phillip Walsh:** purchased the property originally in the 1950s to provide a secluded summer retreat and access to an excellent trout fishery. Phillip died in 1989, and per his wishes, is buried on the property overlooking the Westfield River.

#### Land:

682 acres in Chester, Massachusetts. The property is heavily wooded, and has been in the family since the 1950s. It borders on several hundred feet of the [West branch of the Westfield River](#) (a high-quality cold water trout fishery, designated National Scenic River, and river that is stocked with Atlantic salmon annually as part of the federal recovery program). This property had one modest timber sale 27 years ago, but otherwise has had no management or other form of forestry activity. It was purchased originally as a summer retreat to provide privacy, and access to an excellent trout fishery. The property has several hundred feet of road frontage making it quite accessible and giving it high development potential. There is a rather nice three-season (i.e., not winterized) cabin on the property near the river where Phillip and the family could stay during visits, and he could tie flies on rainy days, as well as a shed and barn storage structure where Philip kept his canoe. The Walsh property abuts several thousand acres of state land managed by the state [Division of Fish and Game](#), and has been identified as having habitat of several rare species.

#### Situation:

Margaret has a strong feeling for the land, since it is where she and her husband Phillip spent many happy moments together. Indeed, Phillip is buried there. Margaret would like to see the land stay in forest as a tribute to Philip and to contribute to conservation in the area that he loved so much. Margaret is in failing health, and knows she needs to plan for her assets and how they will be distributed to her children after she passes away. An important part of her assets is the land in Chester, which she knows is quite valuable, but she does not have an accurate or up-to-date estimate of the assessed value. Margaret is the sole owner of the land at this point, having taken possession upon Philip's death.

Tom Walsh doesn't feel all that close to the land, and has 4 kids either in or nearing college. He has a pretty good job, but he is staring at some pretty serious college tuition investments in the near future. The cost of living in the Chicago area is also relatively high.

Kevin is supporting his two kids via child support, his ex-wife through their divorce settlement, and his fairly expensive Los Angeles lifestyle. He also knows college tuitions are in his future. He has little attachment to the land.

Sarah loves the land, as do her kids and husband who visit it almost every weekend. She and her husband Bob are both very concerned about what will happen to the land after Margaret passes away, because they perceive Tom and Kevin value money more than the land, and the land could be sold to generate funds.

Your task:

Generate a broad list of specific alternative options for the Walsh family - **and Margaret in particular** - to consider as they contemplate the future of the land. Like lots of things in life, you do not have a complete set of information about the land or family finances; there are some unknowns for which you need additional information. Be as specific as you can be in your framing of a broad suite of alternatives, and include the additional information you suggest they seek (and where / how they might acquire such information). Based on the lack of specifics here, you obviously cannot generate the one, perfect answer or suggestion, but **give the Walsh family as many potential alternative pathways as possible for their consideration**. Don't be limited by what you don't know - state as many alternatives as you can conceive of, and let the Walsh family decide if they meet their needs. **Let them know where to go for more information** to make an informed decision.

## NRC 575: Case Studies in Conservation [3 credits]

Fall 2016 semester [SPIRE # 80008]

Tuesday/Thursday, 4:00 – 5:15 pm, 211 Holdsworth Hall

**Instructor:** David Kittredge. 327 Holdsworth Hall. 545-2943; [dbk@eco.umass.edu](mailto:dbk@eco.umass.edu)

**Background:** Landscapes dominated by private ownerships have pressing conservation needs. Stakes are high in many places as conservation options are lost due to land conversion and development. Massachusetts Audubon estimates that in the recent past the Commonwealth has lost as much as 40 acres of open space to development on a daily basis. One strategy is for the state or federal government to buy land in fee, and this has been done successfully, resulting in the creation of the White Mountain National Forest, various wildlife refuges, national seashores, and state and national parks. Alternatively, there are many examples of conservation and land protection in a parcelized or fragmented landscape dominated by private ownership which are *not* the result of federal or state fee simple acquisition. In many cases, towns, non-governmental organizations, partnerships, and individuals respond to need and act at a smaller spatial and financial scale but with significant conservation results. Indeed, these groups and individuals can often act with greater speed and local credibility than larger public entities.

This course will review real-world actual case studies in conservation and land protection, with a focus on locally initiated, small-scale success stories, described by outside speakers. This course has been offered since 2005 as NRC 597C, and is now being offered as NRC 575. The course is intended for the dual audiences of:

- Currently enrolled **graduate and undergraduate students** in natural resource disciplines (e.g., fisheries, wildlife, forestry) and other relevant areas (e.g., resource economics, geosciences, regional planning). These future resource managers and stewards need to have an understanding of tools and tactics that can be applied in different circumstances to conserve land; and
- **Practicing natural resource managers** in private and public sectors, as well as **locally-based conservation volunteers** who are active in land trusts, Conservation Commissions, and other groups. These people are currently involved at the front lines of conservation, often at the local level, and would benefit from knowing what has been successful in other places.

### Requirements:

**Visitor summaries.** A 1-2-page summary of presentations made by guests is required. A minimum of 9 summaries is the baseline expectation. Please see the additional 1-page description of this assignment for more information on format, deadlines, and overall expectation. Summaries are due 2 weeks following the presentation, but may be submitted later and suffer a 10-point deduction. **No Summary may be submitted after Thursday, 22 December, 11:55 pm.**



**Professional Practicum Experience.** This is designed to provide the student with an opportunity to acquire professionally relevant experience in land protection and conservation by *working with* people in land trusts, agencies, and other conservation organizations. The expectation is that students will spend a minimum of eight hours with conservation professionals, and prepare a final summary describing your activities and what you learned. **Important: The student is responsible for designing the Professional Practicum Experience** (i.e., select the organization and people; contact and make arrangements; travel to and participate in the organization and its activities; prepare a synthesis summary of the activities). This is an opportunity to design an experience that meets the needs and interests of individual students. The synthesis summary (4-5 pages describing the Professional Practicum Experience and lessons learned) is due Thursday, 22 December, 5:00 pm. Please see the 1-page description of this course requirement for a more thorough explanation of the assignment and deliverable. Note: No grade of INC will be issued due to a failure to complete the Professional Practicum Experience or any other required elements of the course on time.

**PPE commitment:** by no later than Tuesday, 4 October, 5:00 pm, submit a 1-page description of your proposed PPE, including your contact and organization.

**Take-home mid-term examination.** This is an open-book, take-home exam. It will be distributed in class on Tuesday, 25 October, and due on Tuesday, 1 November, 5:00 pm. You may consult any written materials (hard copy or online), **but not other students**. This must be your own, original and independent work.

**Attendance:** taken every day.

**Quizzes-** 6 scheduled on Thursdays throughout the semester. See the calendar for dates. You can drop the lowest grade.

**Basis for grading:**

Visitor summaries (minimum of 9)	35%
Mid-term take-home exam (distributed October 25; <u>Due Tuesday, 1 November</u> ):	10%
Professional Practicum Experience (final summary is <u>Due Thursday, 22 December</u> ):	25%
Professional Practicum Experience commitment. <u>Due 4 October</u> :	5%
Attendance	10%
Quizzes	15%

**Incomplete:** No grade of INC will be issued due to a failure to complete the Professional Practicum Experience or any other required elements of the course on time.

**1-credit option:** as an alternative to taking the course for three credits and meeting all requirements, students may enroll for 1 credit of independent study (e.g., NRC 596), and meet the requirements of: attendance at weekly seminar presentations, and Professional Practicum Experience project.

**0-credit option:** The Tuesday afternoon seminars are free and open to the public. *Just come and learn* about conservation organizations, practices, and success stories.

**Prerequisites:** Ability and willingness to *travel on your own [or with one other student]* to actually visit the site of your Professional Practicum Experience (*one or more times, as needed*).

**Waiver:**

Students will be required to make independent trips to visit the site of a case study, and hereby release and agree to hold blameless the University, Department, and Instructor from any and all liability or loss resulting from acts of omissions.

**ACADEMIC HONESTY:** Academic dishonesty is a violation of the spirit and regulations of the University, and will not be tolerated. Examples of academic dishonesty include cheating, plagiarism, and fabrication. Any student found to be in violation of University Academic Honesty regulations will automatically receive a failing grade for the course. For further information on academic honesty regulations, please consult:

[http://www.umass.edu/dean\\_students/codeofconduct/](http://www.umass.edu/dean_students/codeofconduct/)

**Attendance:** A major portion of the learning from this class will come from the presentations made by guests who visit with us on Tuesdays. Summaries of their presentations represent 35% of the final grade. It will not be acceptable to submit a summary of a presentation for which a student was not present. **You must be present for the presentation in order to prepare and submit a summary.** Attendance will be taken on Tuesdays. Please make every effort to attend the presentations made by our visiting guests. They give up their time and drive in some

cases considerable distance to make an investment in your education. I am unable to compensate them for their time, effort, or transportation. Their "payoff" or return on investment is a room with an engaged, inquisitive audience that actively participates, asks questions, and learns.

**Course schedule:** The class meets every Tuesday and Thursday, from 4 – 5:15 pm in 211 Holdsworth Hall. Seminar presentations of cases by outside speakers will be each Tuesday, and class discussion will be on Thursdays. See the schedule below for a list of speakers and topics.

## Case Studies in Conservation Seminar Schedule. 2016.

September 20	<b>Kara Campbell.</b> Community Preservation Act specialist, Trust for Public Land; and conservation specialist town of Weston.
September 27	<b>Mark Wamsley.</b> Kestrel Trust. Land protection examples from Amherst's regional land trust.
October 4	<b>Wayne Feiden.</b> Director of Planning and Development, City of Northampton Land protection through zoning, municipal acquisition, easement, and limited development
October 18	<b>Bob Wilber.</b> Director of Land Protection, Massachusetts Audubon Society Land protection by a statewide conservation organization
October 25	<b>Keith Ross.</b> LandVest. Appraising the value of conservation transactions.
November 1	<b>Tom Lautzenheiser.</b> Board member, <a href="#">Pascommuck Land Trust</a> . Local land protection and outreach examples of an all-volunteer land trust
November 8	<b>Sarah Wells.</b> Land Conservation Associate. Mount Grace Land Conservation Trust. Community involvement and conservation outreach.
November 15	<b>Emily Boss.</b> Land Protection Specialist, Franklin Land Trust Regional land trust land protection examples with a focus on agriculture.
November 29	<b>Susie and Ben Feldman.</b> Landowners who have protected their land.
December 6	<b>Sally Naser</b> – CR Program Manager <b>Andrew Bentley</b> – CR Stewardship Specialist The Trustees of Reservations. Defense of conservation restrictions.
December 13	<b>Christina Petersen.</b> Land protection specialist, Mass Wildlife. Land protection from the perspective of a state conservation agency

**NRC 575: Case Studies in Conservation. Fall 2016.****Professional Practicum Experience**

There is enormous value in learning about local conservation and land protection through osmosis and experience with people engaged in these activities. There honestly are not good text books on this subject. This is one of the reasons we bring in guests from various aspects of the real world of conservation to speak in class. Another way to learn is through associating with these people **outside** the confines of the classroom.

Part of the required activities for this class will involve a **Professional Practicum Experience**. You must spend a **minimum** of 8 hours in a professional setting shadowing someone, assisting with something, participating in a meeting, or in other ways engaging meaningfully in a **professional** conservation-oriented activity similar or relevant to the things we learned about in class this semester. This could include *but not be limited to* things such as: attend meetings of an organization's board of directors; attend meetings of a local Conservation Commission, Community Preservation Act committee, or Open Space Committee; participate in baseline or annual easement monitoring of a property; "shadow" or "ride shotgun" as someone makes a visit to a property or landowner; attend or - even better yet! - assist with preparation of a public event designed to feature a conservation success (woods walk?); attend and/or volunteer at a conference; assist with deed research at the local registry of deeds. *Do not be constrained by this list. If you have an idea you wish to pursue, please discuss it with the Instructor.*

**Importantly, things like sampling rivers for aquatic invertebrates, spending a day helping a biologist delineate wetlands, or shadowing a state forester while he manages a state forest might be both interesting and environmental, but are pretty distant from or tangential to the topics of land protection and conservation we study in this class. This kind of activity would not be relevant for this assignment. If you have a question about whether an idea might be relevant for this assignment, please ask.**

**A 1-page description of your PPE commitment, describing your activity, the organization, and contact person is due Tuesday, 4 October, 5:00 pm.**

The intent of the **Professional** Practicum Experience is to provide you with an opportunity to experience some of the things we talk about in action. **The practicum experience, though, needs to have professional relevance.** Please do not engage in the following kinds of activities, which may be helpful or worthwhile, but not educational or professional: stuff envelopes; wash windows at the local land trust office; cut brush or clear trails; participate in river-clean-up or trash pick-up activities

The requisite *minimum* 8 hours of contact for the Professional Practicum Experience can come in several formats: one 8-hour day; two 4-hour afternoons; four 2-hour meetings. Of course this can't be monitored to the nearest minute, but I expect that if you choose to meet the expectation of this requirement with meetings, it will involve 4. If you choose to do field work, it will involve the equivalent of roughly one 8-hour day or two 4-hour half days.

Importantly, and as part of this professional practicum experience, **YOU must make these arrangements with a person, group, committee, or organization.** You can do this in your hometown, or here in the general Amherst or western Massachusetts area. An excellent place to look for contacts or ideas is <http://masswoods.net/>. Click on the map or enter your zip code, and you will find a list of agencies and local organizations that operate in that community. Please do not wait until the final two weeks of the semester and tell the instructor that you cannot find any Professional Practicum Experience opportunities or make any connections. Please do not tell the instructor that "they" haven't returned your email. This is an indication that you have not tried hard enough. Reach out, be proactive, and **create an opportunity that YOU will learn from!** This assignment intentionally has tremendous flexibility for you to make it what you want it to be! Last year, some of these Professional Practicum Experiences evolved into summer internships!

**Deliverable:** Due no later than Thursday, 22 December, 5:00 pm. A 4-5-page description of your Professional Practicum Experience. **Please include the following elements in this description:**

- Description of the organization;

- Identification of the people you associated with;
- Dates, times, locations of your experience;
- Description of activities;
- Description of what you learned from participation in and observation of these activities;
- Reference to or comparison with experiences or organizations we learned about in class.

**Please make this an *integrative* summary of your Professional Practicum Experience, not merely a description of what you did and who you talked to. *What did you learn, what does it mean, and how does it compare to other groups, experiences, or situations?***