

PPPA 6066: U.S. Environmental Policy Section 10, Fall 2023

Instructor: Peter Linquti, PhD (he/him/Peter)

Class Meetings: Wednesdays, 6:10-8:00pm, Tompkins 303

Office Hours: Wednesdays, 12:30-2:30pm in MPA610. Make an appointment at linquti.youcanbook.me; we can meet in person or via Zoom. For quick questions, feel free to email me at linquti@gwu.edu; in general, I will respond within 24 hours (except on weekends).

WHY SHOULD YOU CARE ABOUT ENVIRONMENTAL POLICY?

Even before the 2016 election, it wasn't hard to find a heated debate about how to manage some part of the world's natural and environmental resources: climate change, oil pipelines, GMOs, de-forestation, biodiversity, sea level rise, lead in drinking water, fracking, dead zones and oil spills in the Gulf of Mexico, contaminated stormwater, and 'green' everything – buildings, products, companies, and lifestyles. The list appears endless and the stakes – the fate of our grandchildren, the economy's ability to create jobs, our duty as planetary stewards, and billions of people facing poverty – seem sky high.

What's more, President Trump's inauguration marked the start of a tumultuous time for U.S. environmental policy. The U.S. withdrew from the global Paris climate accords, and regulatory rollbacks were seen in many environmental programs. While environmental groups saw Trump's policies in apocalyptic terms, business groups celebrated the prospect of freedom from regulators.

Then President Biden came on board. He promptly rejoined the Paris climate accord and began reversing many of his predecessor's environmental actions. Congress – on a bipartisan basis! – then passed the Inflation Reduction Act, the most important U.S. climate legislation ever. Simply figuring out what's going on – let alone deciding which environmental policies make sense and which do not – can be head-spinning! Claims and counterclaims made by contestants in environmental debates rarely clarify matters. At best, the path forward is obscured and at worst, we become too confused to do anything.

WHY MIGHT YOU WANT TO TAKE THIS CLASS?

My aim is to give you the tools you need to dissect such debates and develop your own expertise about environmental issues and policies that matter to you. In turn, you will be better prepared to contribute to the design and implementation of effective environmental policies that operate at the intersection of the world's human and natural systems. One thing you will **not** get is definitive answers to tough environmental questions. But you will get the tools to come up with your own answers. More specifically, this course – which focuses on U.S. environmental policy – will improve your ability to:

- Simultaneously apply multiple analytic lenses to an environmental challenge, and appreciate the insights afforded by each lens (and the likely tensions among them). By taking a panoptic view, you'll likely see important factors you otherwise might miss.
- Characterize the pros and cons of various environmental process and policy tools: Process tools include Regulatory Impact Analysis and Environmental Impact Statements, while policy tools include command-and-control regulations, market-based instruments, and public-private partnerships. Understanding the strengths



and weaknesses of these tools will enhance your ability to design and implement effective environmental policies in dynamic, complex, coupled human-natural systems.

- *Understand illustrative environmental policies*: We can't cover all U.S. environmental programs – there are dozens – in any meaningful detail. We will, however, look closely at about a half-dozen environmental policy regimes, so can develop a pragmatic understanding of how such programs operate in the real world. In addition, through your choice of topics for various course assignments, you will be able to focus on environmental issues that are of personal interest to you.
- *Reconstruct environmental policy debates* using an integrated analytic framework driven by evidence and logic to facilitate the careful design and successful implementation of environmental policy. During your career, you will almost certainly witness an endless procession of environmental issues. Accordingly, you need to learn how to identify, analyze, and address new and emerging environmental policy issues on an ongoing basis.

HOW DO THE PIECES OF THIS COURSE FIT TOGETHER?

- ✓ The first part of the course comprises *five* class sessions which provide the *foundations for analyzing environmental policy*. We'll start by asking just what it is that we hope to accomplish with environmental policy. We will then review the process of looking at environmental debates through multiple lenses to clarify what's important (and what's not), quickly consider some important concepts from environmental economics, wade into the debate about the meaning of environmental sustainability, and conclude with a review of systems thinking.
- ✓ The second part of the course comprises *four* sessions which lay out *aspects of environmental policymaking applicable across most environmental issues*. In particular, we'll investigate shared responsibility across branches and levels of government, and touch on the connection between environmental science and policy. We will also explore processes such as risk assessment, cost-benefit analysis, and environmental impact assessment that apply to most U.S. environmental policies. Finally, we conclude Part II by looking at a menu of specific policy tools.
- ✓ The third part of the course comprises *five* class sessions, *each of which focuses on a single environmental policy domain*. In Part III, we will study clean air policy, clean water policy, environmental justice, endangered species and federal land management policy, and climate policy. In each case, we'll look at some of the unresolved issues that are currently under debate.

HOW WILL YOU (AND I) ASSESS YOUR ATTAINMENT OF THESE OBJECTIVES?

- *Reflection Memo (30% of grade)*: Write a short memo (< 2,000 words¹) that reflects on your personal 'takeaways' from Part I of the course. Your memo should include five sections. In the first, give your own definition of environmental policy and explain its goals and objectives. The second, illustrated with specific examples, should address the pros *and* cons of a panoptic perspective on environmental policy. In the third section, reflect on the role that economics should (or should not) play in environmental policymaking. For the fourth section, provide and defend your personal definition of 'sustainability.' Reflect on whether sustainability is a useful construct when it comes to environmental policymaking. In the fifth section, reflect on the role of systems thinking in environmental policy and include a small (< 10 elements) system map of an environmental issue in which you're interested. Draw your system map based on your current under-

¹ Include the word count on the final page of your memo.

standing of the issue. (A neat, hand-drawn map is fine.) No research beyond the course readings is needed. Bear in mind that unsupported assertions are rarely persuasive. Make sure your memo reflects critical thinking, is well-reasoned, and cites relevant course readings.

- ***Policy Review (30% of grade)***: This assignment asks you to conduct independent research to demonstrate your understanding of the specific elements of U.S. environmental policymaking. Select an existing U.S. *Federal* environmental policy. Please send me a 1-2 sentence description of the policy you'd like to review prior to Class #7. The policy should be in final form, rather than only proposed. More details will be on Blackboard, but in essence, after succinctly characterizing the policy, you will investigate and report on how the policy has been shaped by issues discussed in Part II of the course, such as environmental Federalism, the interplay of the branches of government, ex-ante reviews like cost-benefit analyses, environmental impact statements, or risk assessments, judicial review, and changes in Presidential Administrations. Finally, you should locate the specific policy instruments embedded in the policy within the menu of policy tools discussed in class. Specific, step-by-step, instructions for preparing your review are on Blackboard. The final product should be no more than 2,000 words.
- ***Final Policy Analysis (30% of grade)***: This assignment invites you to think prospectively about an existing environmental problem and to evaluate the merits of potential policy options to address it. Your paper should follow the standard policy analysis paradigm: problem definition, selection of criteria, identification of policy alternatives, and a review of pros and cons of alternative means of addressing the problem. More detail is provided on Blackboard. Your paper should be no more than 2,500 words. You are encouraged, but not required, to consult with me about your choice of topic and proposed approach for this assignment.
- ***Class Participation/Engagement/Reading Preparation (10% of grade)***: Policy analysis is a collective activity that benefits from discussion and debate. And, as more art than science, learning to do policy analysis depends on active student engagement. Students are expected to attend class, do the readings, and contribute to class discussions with critical thinking, creative suggestions, substantive questions, and a command of the readings. It's fine if you don't understand something in the readings; just come to class prepared to talk about it. Students can expect to be called on by name if class discussion bogs down or only a narrow range of perspectives is being heard. You can also engage the course by contributing to the Blackboard discussion board; feel free to start a new thread on any environmental topic of interest to you. Completion of the end-of-course evaluation will count toward your engagement grade. Engagement will be graded halfway through the semester and then again at the end of the semester. You will self-assess your level of engagement with a short in-class survey at the start of classes 7 and 14, and I will consider your self-assessment in assigning your engagement grades.

WHAT PEDAGOGICAL APPROACH WILL BE USED IN THIS CLASS?

This course is premised on the belief – backed by much evidence – that learning is most effective when it is active. Therefore, traditional lectures will be limited, discussion and collaborative work will be serious endeavors, and I will act more as a “guide on the side” rather than a “sage on the stage.” In some weeks during the semester, you will be asked to view one to three pre-recorded video lectures and/or video clips. It's also important that you do the assigned readings prior to class. This will give you the opportunity to shape the course as it unfolds but you should in turn expect to take some responsibility for its success. In short, *we will co-create the course together.*

Many class sessions will entail an in-class activity in which you work with classmates on a particular challenge. Reviewing the materials in advance will help you get more out of such activities, and also help you be a better team member when working with fellow students.

One of the ways in which you will shape the class is through the use of “Minute Memos.” At the end of each class session, you will be given a couple of minutes to jot down (on a Post-It Note) any especially interesting take-aways from the class, anything you found confusing, any questions you didn’t get a chance to ask, or anything you’d like to let me know about the class from a student’s perspective. I will incorporate your Minute Memo feedback into subsequent class sessions.

WRITTEN WORK

Policy writing is different from academic writing. Getting good at it takes practice. If you want examples of strong policy writing, take a look at the many assigned readings produced by the Congressional Research Service. Well-written policy analyses are concise, to-the-point, and written in language that your audience understands the first time they read or hear it. Language that is plain to one set of readers may not be plain to others.

Written material is in plain language if your audience can find what they need, understand what they find, and use what they find to meet their needs.² Before submitting written work for this class, please consult the “Writing Resources” on Blackboard. In particular, make sure that your writing meets the 2011 Federal Plain Language Guidelines.

READINGS

There is one required book: Goodstein and Polasky, *Economics and the Environment*, 9th Edition, 2020 (G&P). For all G&P readings, you can skip the “Applications” at the end of each chapter, although I do recommend you review the “Key Ideas” section. And, because the G&P book is an economics book and this is a policy class, we will skip some parts of G&P that dive into specific economics topics.

A new copy of the printed book is about \$88 on Amazon. The e-version and semester-long rentals are considerably cheaper. You can also use the 8th edition; there are some minor changes and the page numbers don’t align, but if you’re willing to work around these constraints, feel free to use the earlier edition. Finally, copies of the book will be placed on reserve at both Gelman Library and the TSPPPA Book Share.

Don’t let the large number of readings in some weeks intimidate you; many are only 2 or 3 pages. For many readings, I’ve provided a comment about what’s most important about a particular reading; such notes can help you read the material more efficiently. Moreover, the readings within each week are listed in the order in which you should do them; items listed later build on those listed earlier.

Not all readings in the syllabus are required; some are marked as recommended or optional in case you want to take a deeper dive into a particular topic. In addition, some readings are longer or more technical than others; in most cases, you only need to scan such readings. *One of the skills you need to develop as a professional policy analyst is the ability to quickly extract key themes from dense text. You don’t have to slog through every word in the text. Make sure you understand the broad themes of these readings rather than trying to master all the details.*

You should also try to follow the environmental news as reported by sources like the Wall Street Journal, New York Times, and Washington Post. As environmental news breaks over the course of the

² <http://www.plainlanguage.gov/whatisPL/index.cfm>

semester, ad hoc readings will likely be assigned from one or more of these three papers. They all have paywalls, but the good news is that is that GW students are entitled to free digital access. I suggest you sign up at the beginning of the semester, so that you don't have to deal with the administrivia when trying to find an assigned reading. Instructions for signup are on the Gelman Library [website](#).

Another great resource is Energy & Environment News, which reports daily on a wide range of environmental issues. Access is a little clunky, but worth the effort. If you're on campus and connected to GW's wi-fi, go [here](#). But if you're off-campus, you need to be on GW's VPN to get access. Instructions for setting up VPN are [here](#).

For many environmental policy topics, there is no definitive source of information. Important issues often don't make their way into textbooks, and if they do, it may take a couple years. Specialized media outlets, government documents, and court cases are often the best way to figure out an evolving issue. *The problem is that you usually must read a series of different sources and then figure out how they fit together.* You will observe this phenomenon in the assigned readings.

WEEK-BY-WEEK PLAN

This plan is subject to revision. Given the recent pace of change in U.S. environmental policy, topics and readings may be changed to ensure that our focus is as relevant as possible. There are two folders on Blackboard to check each week, one labeled "Readings" and the other labeled "Slides & Clips." The content of these folders will change over the course of the semester.

PART I: FOUNDATIONS

1. Framing the Discussion (Aug 30)

- ❖ Key Topics
 - ✓ Course Logistics, Syllabus, Introductions
 - ✓ Core Concepts: The "environment," public policy, policy analysis, tradeoffs
 - ✓ The Open Access Problem
- ❖ Readings
 - ✓ G&P, Ch 1 (while climate change is used as an example in this chapter, think about how these concepts also apply to air pollution and water pollution).
 - ✓ Hindin, The Environmental Forum, "The Root Causes We Ignore," Sep/Oct 2022 (root causes often defy easy policy solutions).
 - ✓ Folke et al., *Ambio*, "Our Future in the Anthropocene Biosphere," 2021, pp 834-838 only; Achenbach, Washington Post, "Spaceship Earth: A New View of Environmentalism," 1/2/12; Earthfirstjournal.org, "No Compromise in Defense of Mother Earth," 8/9/21. (Read these three pieces as a group, thinking about the purpose of environmental policy. The Achenbach piece is 10+ years old, but it's still a great summary of the issue. And, as you read Folke et al., think about what it means to live – and make policy – during the Anthropocene.)
 - ✓ "The Open Access Problem" and Bagehot Column, *The Economist*, "The Parable of the Clyde," 8/31/13. (Read these two pieces as a pair. The first describes the theory while the second provides a real-world example.)
- ❖ Application: Fisheries

2. Thinking Critically about Environmental Policy Debates (Sep 6)

❖ Key Topics

- ✓ Environmental Policy in a Politically Tumultuous Era
- ✓ Panoptic Environmental Policy Analysis
- ✓ Analysis as Inquiry vs. Policy Analysis as Advocacy

❖ Readings

- ✓ G&P, §12.3 to §12.6
- ✓ Fiorino, Journal of Environmental Studies & Sciences, “Teaching Environmental Policy in an Era of Polarization and Misrepresentation,” April 2018 (I’m not sure I agree with all of Fiorino’s claims, but his calls for critical thinking and integrity seem spot-on. And even though President Trump is no longer in office, many of his views motivate current environmental discourse).
- ✓ Eilperin, Dennis, & Muyskens, Washington Post, “Tracking Biden’s Environmental Actions,” (This website is continuously updated; [scan](#) the latest [version](#) to get a sense of the dynamic nature of U.S. environmental policy).
- ✓ Waldman, ClimateWire, “Conservatives Have Already Written a Climate Plan for Trump’s Second Term,” 7/26/23 (we’re still a long way from a second Trump term, but this piece gives a preview of what it might look like).
- ✓ Linquiti, Rebooting Policy Analysis, Section 3.3.2, “Confusing Policy Analysis as Inquiry with Policy Analysis as Advocacy,” 2022.
- ✓ In preparation for an in-class exercise:
 - Watch³ the 2022 [Chesapeake Bay Summit](#)
 - Read Linquiti, “Panoptic Analysis of Environmental Policy Issues,” June 2022, CRS, “Status of Efforts to Restore Chesapeake Bay Water Quality,” 6/30/23, the first nine pages of CRS, Chesapeake Bay Restoration,” 8/3/18, and [scan](#) the Chesapeake Bay Foundation’s 2022 State of the Blueprint.

❖ Application: Panoptic Analysis of Water Quality in the Chesapeake Bay

3. Environmental Economics – A Brief Primer (Sep 13)

❖ Key Topics

- ✓ Externalities & Public Goods
- ✓ The Efficiency & Safety Standards
- ✓ Discounting & the Social Cost of Carbon

❖ Readings

- ✓ G&P: Ch 3, Ch 4, Ch 5 (skip §5.4 thru §5.7 and App 5A), Ch 6, Ch 7 (skip §7.5 and §7.6), Chapter 8 (§8.3 and §8.4 only).
- ✓ Acemoglu, Laibson, & List, Economics, 2nd Edition, “Present Value and Discounting,” pp 407-409 (*optional*: if you had trouble following the discussion of discounting and present values in G&P §8.3 and §8.4 – which is a bit opaque – please read this three-pager. Without an understanding of discounting, our discussion of the social cost of carbon won’t make sense.)
- ✓ McKinsey & Company, “Pathways to a Low-Carbon Economy,” 2009 (pp 5-12, and especially Exhibit 1, are the key parts of this reading).

³ This video is a one-hour special on Maryland Public Television from April 2022. You may want to experiment with increasing the playback speed; I often find that I can still follow a video at 1.5 or 1.75 times the regular playback speed.

- ✓ Resources for the Future [video explainer](#) on the social cost of carbon; CRS, “Social Cost of Greenhouse Gases: Issues for Congress,” 6/7/21; Chemnick, EENews, “How Pausing the Social Cost of Carbon Affected Regulation,” 5/26/22; Farah & Clark, EENews, “EPA Floats Sharply Increased Social Cost of Carbon,” 11/21/22 (a 3-minute video & 4 short readings).
 - ✓ Boardman et al., Cost-Benefit Analysis Concepts and Practices, 2011, pp 421-431 (*scan* to get a sense of how economists think about putting a price tag on environmental amenities).
 - ✓ Polasky & Binder, Issues in Science & Technology, “Valuing the Environment for Decisionmaking,” Summer 2012 (*optional*: scan only if you want a deeper dive into some of the tough issues associated with valuing environmental amenities).
 - ❖ Application: What is the optimal level of GHG emissions?
4. Sustainability (Sep 20)
- ❖ Key Topics
 - ✓ The Ecological Sustainability Standard & the Precautionary Principle
 - ✓ Sustainability as Ideology, Economics, and/or Science
 - ✓ Stocks (Natural, Manufactured, Human, Social); Flows (including Ecosystem Services)
 - ❖ Readings
 - ✓ G&P, Ch 8 (skip §8.3 thru §8.7), Ch 9 (skip §9.8), Ch 10 (read only §10.1 and §10.8).
 - ✓ Linquiti, Rebooting Policy Analysis, Section 11.2, “The Sustainability Lens,” 2021.
 - ✓ Bierman et al., Nature Sustainability, “Scientific Evidence on the Political Impact of the SDGs,” Sep 2022 (having SDGs on the books only changes the world if they are actually operationalized in the form of new public policy and/or behavioral change).
 - ✓ ArcadisGlobal, “Sustainable Cities Index,” 2022 (read pp 9-12 and the list of indicators at the bottom of page 43 only; *scan* the rest if you’re interested) and Yale Center for Environmental Law & Policy, “Environmental Performance Indicators, 2022 (focus on the EPI Framework on the bottom of page XI). (Maybe sustainability is nothing more than a list of indicators.)
 - ✓ Clark & Harley, Annual Review of Environment & Resources, “Sustainability Science: Toward a Synthesis,” August 2020 (all students should read §§1, 2, & 9; students will be divided into 6 groups with each group responsible for reading and reporting on one additional section).
 - ❖ Application: Developing a Working Definition of Sustainability
5. Environmental Policy in Complex Systems (Sep 27)
- ❖ Key Topics
 - ✓ Systems-Oriented Thinking
 - ✓ Coupled Human and Environmental Systems
 - ✓ Wrapping Up Part I of the Course
 - ❖ Readings
 - ✓ G&P, *scan* Ch 19 (provides an illustration of the complex systems in which issues of poverty, population, and environmental degradation arise; no need to master the details).
 - ✓ Linquiti, Rebooting Policy Analysis, Ch 12, “Incorporating Systems Thinking in Policy Analysis,” 2022 (skip the example of violence in the drug trade on pp 451-454 and instead focus on the example of traffic congestion in the next reading.)
 - ✓ Serman, Business Dynamics, Section 5.6, “Explaining Policy Resistance: Traffic Congestion,” 2000.
 - ✓ UK Office of Science, “Land Use Futures: Making the Most of Land in the 21st Century,” 2010 (*scan*: this reading is *not* meant to make you an expert in U.K. land use, but to familiarize you with different types of systems thinking. Carefully ponder if and how the system maps on pp 9-12 can be used to design and implement more effective policies)

- ✓ Knudson, Sacramento Bee, “Shifting the Pain: World’s Resources Feed California’s Growing Appetite,” 2003 (the boundary of your system can have a big impact on your conclusions).
- ✓ Brundiers, et al., Sustainability Science, “Key Competencies in Sustainability in Higher Education – Toward an Agreed-Upon Reference Framework,” 2021 (this reading may help you think broadly about the takeaways from Part I of the course).
- ❖ Application: Water Quality in the Chesapeake Bay. Re-visit the readings from Class 2. You will work in small groups to build a causal loop diagram of the system in which water quality issues in the Bay arise. Think about the guidelines for systems thinking in the Linquiti reading, the traffic congestion example in the Sterman reading, and the clips from Climate Interactive (links on Blackboard). It would be a good idea to come to class with a rough draft of your causal loop diagram (not to turn in, but to use in the group exercise).

PART II: U.S. ENVIRONMENTAL POLICYMAKING

6. Overview of Environmental Policymaking in the United States – Part 1 (Oct 4)

- ❖ Key Topics
 - ✓ Drivers of Modern U.S. Environmental Policy
 - ✓ Federal Policy: Statute → Regulation ⇔ Legal Review ⇔ Implementation
 - ✓ Regulatory Impact Analysis
- ❖ Readings
 - ✓ G&P, §§12.1, 12.2, 12.7, 12.8, 13.1
 - ✓ EPA Alumni Association, “Protecting the Environment: A Half Century of Progress,” April 2017 (note the source – not entirely unbiased, but able to offer a first-hand account).
 - ✓ CRS, “Federal Regulations & Rulemaking Process,” 3/19/21 (2-pager that hits the highlights).
 - ✓ Raso, Brookings, “Biden’s Recent Regulatory Review and Analysis Changes,” 5/18/23.
 - ✓ Farber, The Environmental Forum, “Staying within the Guardrails,” Mar/Apr 2022 (be sure to read the sidebars for additional perspectives).
 - ✓ Look at the NYU Law School [tracker](#) of environmental litigation under the Biden administration. (As of 8/8/23, Biden has a 90% win rate; Trump’s 4-year win rate was 23%.)
 - ✓ Meiburg & Schang, The Environmental Forum, “Is WV v EPA a Landmark?” Mar/Apr 2023 (the Supreme Court has had a profound effect on U.S. climate policy in recent years).
 - ✓ Dudley et al., Journal of Benefit-Cost Analysis, “Consumer’s Guide to Regulatory Impact Analysis,” Summer 2017 (*optional*: scan if you want a deeper dive on the nuances of RIAs).
 - ✓ O’Leary, “Environmental Policy in the Courts,” in Vig & Kraft, Environmental Policy, 2016 (*optional*: scan if you need a refresher on how the U.S. legal system works).
- ❖ Application: Tracing a Drinking Water Standard from the halls of Congress to your kitchen tap.
 - ✓ CRS, “Regulating Contaminants under the Safe Drinking Water Act,” 1/5/22 (a comprehensive overview of the SDWA).
 - ✓ Read the following items, each about two pages, for contaminant-specific SDWA issues:
 - CRS, “Controlling Lead in Public Drinking Water Supplies,” 2/3/22.
 - CRS, “Regulating Drinking Water Contaminants: EPA PFAS Actions,” 8/2/23.
- ❖ Due: Part I Reflection Memo, by 6pm, uploaded to Blackboard.

7. Overview of Environmental Policymaking in the United States – Part 2 (Oct 11)

- ❖ Key Topics
 - ✓ Risk Assessment
 - ✓ The National Environmental Policy Act (NEPA)
 - ✓ Environmental Federalism

- ❖ Readings
 - ✓ G&P, §5.4
 - ✓ Human Health Risk Assessment, extracted from EPA website.
 - ✓ CRS, “Judicial Review and the National Environmental Policy Act of 1969,” 8/4/22.
 - ✓ In 2020, the Trump Administration finalized regulations that were the first major overhaul of NEPA regs since they were adopted in 1978. The Biden Administration then reversed several of these changes in 2022 and proposed more changes in July 2023. We’ll address the second round of changes in our discussion of permitting reform in Part III of the course.
 - Brugger, EE News, “Biden Restores Climate to NEPA, Undoing Trump Efforts,” 4/19/22 (the first part of Biden’s NEPA revisions).
 - Brugger, EE News, “Oakland Mayor: NEPA Hurts Affordable Housing,” 5/2/22 (sometimes NEPA gets used as a political weapon).
 - ✓ Environmental Law Institute (ELI), “NEPA Success Stories,” August 2010, pp 1-8 only.
 - ✓ GAO, “Little Information Exists on NEPA Analyses,” April 2014 (if the ELI reading seems a bit ad hoc, this one-pager from GAO explains why).
 - ✓ Dominici et al., Science, “Particulate Matter Matters,” 4/18/14 (*optional*: scan if you’re interested in the methodological challenges of establishing a valid dose-response function).
 - ✓ Scheberle, Environmental Federalism and the Role of State & Local Governments, 2013. (*optional*: scan for a refresher on shared authority among the Feds, states, and localities).
- ❖ Application: Risk Management Exercise
- ❖ In-class engagement self-assessment
- ❖ Due: 1-2 sentence description of proposed topic for Policy Review, by email

8. Environmental Policy Tools – Part 1 (Oct 18)

- ❖ Key Topics
 - ✓ Command & Control Instruments
 - ✓ Market-Based Instruments
 - ✓ Payments for Environmental Services
- ❖ Readings
 - ✓ G&P, Ch 14, 15 (skip appendices)
 - ✓ U.S. EPA, Guidelines for Preparing Economic Analyses, “Ch 4 – Regulatory and Non-Regulatory Approaches to Pollution Control,” December 2010 (updated May 2014).
 - ✓ C2ES, “Market Mechanisms: Understanding the Options,” April 2015 (scan the examples of market-based programs on pp 2-9; focus on the Appendix).
 - ✓ Barbanell, World Resources Institute, “Summary of Climate & Energy Provisions of the Inflation Reduction Act,” 10/28/22 and CRS, “Inflation Reduction Act Methane Emissions Charge,” 8/29/22 (two readings summarizing market-based mechanisms in the IRA).
 - ✓ World Wildlife Foundation, “Design and Implementation of PES Schemes,” undated
 - ✓ Chemnick, EENews, “Four Things to Know About Biden’s Plan to Value Nature,” 8/2/23 (a proposal to incorporate ecosystem service values in cost-benefit analysis).
- ❖ Application: Role playing polluters & regulator under different policy regimes

9. Environmental Policy Tools – Part 2 (Oct 25)

- ❖ Key Topics
 - ✓ Public Private Partnerships
 - ✓ Limits of Market-Based Instruments
 - ✓ “Next-Generation” Environmental Policy

- ❖ Readings
 - ✓ G&P, Ch 16
 - ✓ Hiltzik, Los Angeles Times, “Big Oil’s Greed Sinks Plan,” 3/26/17 (describes the demise of a market-based instrument and its replacement by a command & control approach).
 - ✓ Coglianese & Nash, “Are Voluntary Environmental Programs the Answer?” 4/28/14.
 - ✓ Fiorino, “Regulating for the Future: A New Approach to Environmental Governance,” in *Toward Sustainable Communities*, 2nd edition, 2009.
 - ✓ Sterner, et al., *Nature Sustainability*, “Policy Design for the Anthropocene,” January 2019.
 - ✓ Hsu, *The Environmental Forum*, “We Need Capitalism to Save our Planet,” May/June 2023.
 - ✓ Raimi, RFF, “The Shale Revolution & Water Quality,” April 2018 and ProCon.org, “Fracking – Top Three Pros and Cons,” 2/17/21 (basis of in-class exercise).
- ❖ Application: What policy tools make sense to address the potential environmental consequences of fracking for oil and gas?

PART III: KEY ELEMENTS OF U.S. ENVIRONMENTAL POLICY

10. Clean Air Policy (Nov 1)

- ❖ Key Topics
 - ✓ National Ambient Air Quality Standards (NAAQS)
 - ✓ National Emissions Standards for Hazardous Air Pollutants (NESHAPs)
 - ✓ Air Quality Hotspots
- ❖ Readings (this looks like a lot of readings, but most are only one or two pages!)
 - ✓ G&P, §13.2.
 - ✓ CRS, “Clean Air Act: A Summary of the Act & its Major Requirements,” 9/13/22 (scan to get the big picture of what CAA is all about; no need to master details of each of its elements).
 - ✓ NAAQS Readings
 - CRS, “Ozone & Particulate Matter Air Standards: EPA Review,” 12/23/20.
 - Reilly, EENews, “EPA Panel Backs Tighter Soot Standards,” 3/22/22.
 - Reilly, EENews, “White House Panel Urges Stronger Soot & Smog Standards,” 7/24/23.
 - WHEJAC, Letter to CEQ re NAAQS and EJ, 6/27/23.
 - Carlson, UCLA Law Review, “The Clean Air Act’s Blind Spot: Microclimates and Hotspot Pollution,” 2018 (only pp 1040-1049 are required; scan the rest if you’re interested).
 - ✓ NESHAPs Readings
 - Reilly, EENews, “EPA Undoes Trump-Era Power Plant Rollback,” 2/17/23 (the circuitous history of the Mercury & Air Toxics (MATS) rule for power plants).
 - Reilly, EENews, “EPA Proposes Slashing Hazardous Chemical Plant Emissions,” 4/6/23 (proposed new NESHAPs for chemical plants, with a heavy focus on environmental justice).
 - ✓ Schmalensee & Stavins, *Journal of Economic Perspectives*, “Policy Evolution under the Clean Air Act,” Fall 2019 (optional: provides an interesting historical overview).
- ❖ Application: Air quality and attainment status in your hometown
- ❖ Due: Policy Review, by 6pm, uploaded to Blackboard.

11. Clean Water Policy (Nov 8)

- ❖ Key Topics
 - ✓ Point Sources: National Pollutant Discharge Elimination System (NPDES)
 - ✓ Nonpoint Sources: Urban Areas & Agriculture
 - ✓ Water Pollutants of Emerging Concern

- ❖ Readings
 - ✓ G&P, §13.3.
 - ✓ CRS, “Clean Water Act: A Summary of the Law,” 10/18/16.
 - ✓ Read the following as a group to get the full picture on WOTUS:
 - McElfish, ELI, “What Comes Next for Clean Water?” 5/26/23.
 - CRS, “Supreme Court Narrows Federal Jurisdiction under Clean Water Act,” 6/21/23.
 - CRS, “Waters of the United States: FAQs,” 6/22/23.
 - ✓ Royer, Science, “Time to Amend the U.S. Clean Water Act,” 6/18/21 (a short letter to the editor that identifies gaps in the Clean Water Act when it comes to nonpoint pollution).
 - ✓ EPA, “National Nonpoint Source Program,” October 2016.
 - ✓ EPA, “Nonpoint Source News-Notes,” #101 (May 2017) & #102 (March 2018), (scan the last two issues of this defunct EPA newsletter to get a sense of how Federal, state, and local governments tackle nonpoint source water pollution.)
 - ✓ Hawkins, The Environmental Forum, “The Clean Water Bill,” Sep/Oct 2022.
 - ✓ CRS, “Regulating PFAS Under the Clean Water Act,” 6/28/22.
- ❖ Application: Water quality in your hometown

12. Environmental Justice (Nov 15)

- ❖ Key Topics
 - ✓ Federal Environmental Justice Policy
 - ✓ Newer Understandings of Environmental Justice
 - ✓ Three Cases: Flint, DAPL, I-710 (~1/3 of class to read/study each)
- ❖ Readings
 - ✓ G&P, §7.5 and §7.6.
 - ✓ Soloway, Environmental Law Reporter, “Measuring Environmental Justice: Analysis of Progress Under Presidents Bush, Obama, and Trump,” 2021 (read for the history of EJ in the U.S., not so much for the application of Keuhn’s taxonomy of EJ).
 - ✓ National People of Color Environmental Leadership Summit, “The Principles of Environmental Justice,” October 1991 (arguably the founding document of the U.S. EJ Movement).
 - ✓ Irving, RAND, “Environmental Racism: How Historic Redlining Continues Affect Communities,” 6/27/22 (note the connection to the Color of Law reading from TSPPPA orientation).
 - ✓ Crunden, EENews, “EPA Launches Civil Rights Probe over Calif. Water Fight,” 8/11/23 (the 1964 Civil Rights Act can be used to pursue environmental justice; this is one example).
 - ✓ Readings about Biden’s Justice40 Initiative
 - White House Fact Sheet, Justice40, 2023.
 - UCLA Luskin Center for Innovation, “Making Justice40 a Reality for Frontline Communities,” Sep 2021.
 - EPA EJ Scorecard (under the Justice40 initiative, Federal agencies report on progress).
 - ✓ Readings about Biden’s April 2023 Executive Order on EJ
 - Biden, “Executive Order 14096: Revitalizing our Nation’s Commitment to Environmental Justice for All (4/21/23)
 - Crunden & Dumain, EENews, “Biden Order Tackles Environmental Justice,” 4/21/23, Brugger, EENews, “How Republicans are Trying to Redefine the EJ Movement,” 6/23/23, and King, EENews, “Supreme Cour Ruling Entangles Biden’s EJ Efforts,” 6/29/23.
 - ✓ Oglesby, Grist, “The Generational Rift over ‘Intersectional Environmentalism,’” 2/10/21.
 - ✓ Hernandez, The Breakthrough Journal, “Green Jim Crow: How California’s Climate Policies Undermine Civil Rights and Racial Equity,” Summer 2021 (read the Introduction and §§1, 6, 7, and 8; scan the rest if interested; note connection to Class 5’s reading from Knudson).

Students will be divided into three reading groups, with each responsible for one of the following case studies of environmental justice issues.

- ✓ I-710: Caprara, University of Southern California Neighborhood Data for Social Change, “Community Health in the I-710 Corridor,” Sep 2019 (not on Blackboard; available [here](#)); Cone, Scientific American, “U.S. Neighborhoods Struggle with Health Threats from Traffic Pollution,” 10/11/11; Fonseca, LAist, “LA Metro has Scrapped its 710 Freeway Widening Plan. Here’s What’s Next for the ‘Diesel Death Zone,’” 5/27/22; watch this [video](#) and this [video](#) to better understand what it’s like to live in the I-710 corridor.
- ✓ DAPL: CRS, “Dakota Access Pipeline Siting Controversy,” 6/15/17; news coverage of Dakota Access Pipeline (total of 8 pages); CRS, “Court Rules Dakota Access Pipeline Needs Further Environmental Review,” 2/2/21; Farah & King, EENews, “Supreme Court Rejects Dakota Access Battle, 2/22/22; watch this [video](#) and this [video](#) to get a sense of the communities affected by the pipeline.
- ✓ Flint: Associated Press, “A Timeline of the Water Crisis in Flint, Michigan,” 6/14/17; Yale Environment360, “Five Questions for Robert Bullard,” 2/3/16; Wittenberg & Bogardus, “IG Urges Stronger Oversight after Flint Crisis,” 7/19/18; and Northey, EENews, “Crying out for Help: Inside an EPA Water Crisis, 6/23/22; watch this [video](#) and this [video](#) for a better sense of how the water crisis affected the Flint community. (Also, take a look back at the readings for Class #6 for more information on EPA’s regulation of drinking water).
- ❖ Applications: Use both [EPA’s EJ tool](#) and [CEQ’s EJ tool](#) to evaluate environmental justice issues at the specific location associated with your assigned EJ case study (i.e., the I-710 corridor, the Standing Rock Reservation, or Flint, Michigan). Bring your results to class, not to turn in, but to discuss in the context of your case study location.

November 22: Thanksgiving Break – No Class

13. Land Management Policy (Nov 29)

- ❖ Key Topics
 - ✓ Public Lands
 - ✓ Endangered Species Act
 - ✓ Permitting Reform
- ❖ Readings (Again, many readings, but most are only two or three pages long.)
 - ✓ G&P, §§13.7 & 13.8.
 - ✓ Lands
 - CRS, “Federal Lands & Resources: Overview and Issues for the 117th Congress,” 4/21/21 (read the summary and introduction; scan the rest).
 - Biden, EO14008, Tackling the Climate Crisis at Home & Abroad, Section 216, “Conserving Our Nation’s Lands and Waters,” p 7627 only, 1/27/21 (the basis of the 30x30 program).
 - ✓ Species
 - CRS, “The Endangered Species Act: Overview & Implementation,” 3/4/21 (only the Summary and pp 1-4 are required; scan the rest if you want a deeper dive into the ESA).
 - Cornwall, Science, “Should it Be Saved?” 9/7/18 (asks very profound questions about which species should be helped to thrive and which should be left for extinction).
 - Simmons et al, BU Global Development Policy Center, “Delivering on Biden’s 2030 Conservation Commitment,” Jan 2021 ([focus](#) on Figure 2, which depicts the study’s key results).
 - Stokstad, Science, “Species? Climate? Cost? Ambitious Goal Means Tradeoffs,” 2/5/21.
 - Bleich, et al., Science, “Green Energy Projects at Odds with Conservation,” 6/9/23.
 - Doyle, EENews, “Biden Admin to Strengthen Endangered Species Protections, 6/21/23.

- ✓ Permitting
 - Sud & Patnaik, Brookings, “How Does Permitting for Clean Energy Infrastructure Work?” 9/28/22.
 - Baker Botts, “CEQ Proposes Extensive Re-write of NEPA Regs,” 8/1/23, Beveridge & Diamond, “White House Proposes to Again Overhaul NEPA Regs,” 8/3/23, and Dumain & Bravender, EENews, “Republicans Slam Biden NEPA Revamp,” 7/31/23 (these readings focus on the second phase of Biden’s NEPA changes; we covered the first phase in Class #7).
 - CRS, “Mountain Valley Pipeline Congressional Authorization,” 7/27/23 (Senator Manchin had the political muscle to get permitting regs statutorily waived for a pet project).
 - Tankersley et al., NY Times, “Clean Energy Future Roiling Friends & Foes,” 8/12/23.
- ❖ Application: Debate about the four policy options for implementing the 30 x 30 plan (see the Stokstad reading and Figure 2 of the Simmons et al reading for relevant background).

14. Climate Policy (Dec 6)

- ❖ Key Topics
 - ✓ U.S. Climate Policy
 - ✓ International Climate Policy
- ❖ Readings
 - ✓ G&P, Ch 21
 - ✓ IPCC, 6th Assessment Report, “Climate Change 2023 Synthesis Report: Summary for Policy-makers.” (IPCC reports are produced every five to seven years by teams of several hundred scientists who synthesize the climate-related, peer-reviewed, literature.)
 - ✓ Voosen, Science, “Studies Tying Weather Extremes to Global Warming Gain Rigor,” 6/17/22 (improved attribution science will increase political pressure for climate policy).
 - ✓ U.S. Climate Policy
 - Resources for the Future, “The Federal Climate Policy Toolkit,” Summer 2021 (*skim quickly*; applies several policy tools discussed in Part II of the course to climate change).
 - 4th National Climate Assessment, “Reducing Risks Through Adaptation Actions,” pp 1310-1315, 2018 (with significant warming all but guaranteed, adaptation will be key)
 - EPA, National Greenhouse Gas Inventory: Data Highlights, 2023 (a great all-in-one reference document; *skim quickly*, no need to master the details).
 - ✓ International Climate Policy
 - C2ES International Climate Factsheets: “Paris Climate Agreement Q&A,” Feb 2021, “Nationally Determined Contributions under the Paris Agreement,” Feb 2021, “Designing a Meaningful Global Stocktake,” Jan 2022, and “Outcomes of the U.N. Climate Conference in Sharm El-Sheikh,” Jan 2023.
 - UNEP, The Closing Window: Emissions Gap Report (Executive Summary), 2022.
 - Rogelj, et al., Science, “Credibility Gap in Net-Zero Climate Targets Leaves World at High Risk,” 6/9/23 (no need to master the details but be sure to ponder the difference between aspirational goals and binding public policy).
 - ✓ Lempert & Gilmore, RAND Corporation, “Climate Change will Transform How We Live, but Tech and Policy Experts See Reason for Optimism,” 4/18/22 (it’s not all doom and gloom!)
- ❖ Application: Global climate negotiations. Please take a look at the [model](#) before class and think about how you'd approach the negotiation depending on whether you represent: the U.S., the E.U., China, India, other developed countries, or other developing countries. Be sure to read the background material on your specific region.
- ❖ In-class engagement self-assessment
- ❖ Due: Final Paper due by 6pm, Friday, December 15, uploaded to Blackboard

ACKNOWLEDGING HISTORICAL REALITIES ABOUT GW

GW & Native American Lands

“George Washington University's Foggy Bottom Campus in downtown Washington, D.C. ... resides on the traditional and ancestral homelands of the Piscataway and Anacostan peoples. ... The District borders the confluence of the Anacostia and Potomac Rivers, a historic center of trade and cultural exchange between several tribal nations. For generations, the Piscataway and Anacostan Peoples have resided in this region and served as stewards of the local land and waterways” (cipp.cps.gwu.edu/land-acknowledgement).

GW & Slavery

“Although additional work remains to be done, initial research into Columbian College [GW's predecessor] clearly shows that the practice of slavery influenced the school from the president down to enslaved servants. The college was located in a slave-owning city, financed and led by slave owners and men who profited from the slave economy, educated pro-slavery students, and depended on the labor of enslaved people” (library.gwu.edu/slavery-columbian-college).

GW & Integration

Cloyd Heck Marvin was President of GW from 1927 to 1959 and a segregationist who resisted integration at GW. The University refused to admit black students until after the 1954 Brown v Board of Education decision and was the last university in DC to do so. By one account, dormitories at GW remained segregated until 1961 (Novak, 2012).

WHAT RESOURCES ARE AVAILABLE TO SUPPORT YOU DURING THE SEMESTER?

- ❖ Students with Disabilities: If you know you will need accommodation due to a disability, let me know in the first week of the class. The [Disability Support Services](#) office will establish eligibility and coordinate reasonable accommodations.
- ❖ Sustaining Class Engagement: I recognize that formally documented disabilities are not the only impediments to learning. If, during the semester, a situation arises that impedes your meaningful participation in the class, please let me know so that we can work out a suitable solution.
- ❖ English for Academic Purposes Writing Support Program: If English is not your first language, or if you're having trouble adapting your writing style to meet course requirements, you can take advantage of GW's Writing Support [Program](#) which offers free, one on one service.
- ❖ Support: [GW's Student Health Center](#) (202-994-5300) offers 24/7 assistance to address students' personal, social, career, and study skills concerns, including crisis and emergency mental health consultations, confidential assessment, counseling services, and referrals to other providers.

WHAT NORMS WILL GUIDE THE CLASS?

- ❖ Civility: Higher education works best when it is a vigorous and lively marketplace of ideas where all points of view are heard. Free expression is an integral part of this process. Higher education also demands that all of us approach the enterprise with empathy and respect for others, irrespective of their ideology, political views, or identity. Listen to understand others, not to judge them.
- ❖ Class Decorum: Texting, checking your phone, or using your laptop for anything other than participating in class activities or notetaking is inappropriate. Those who do these things may think their

actions are unobtrusive, but they are actually quite conspicuous. It's distracting, both to me and to your classmates, and will result in a significant decrease in your class engagement grade.

- ❖ **Attendance:** Please try to attend all class meetings. If you need to miss class, let me know in advance, watch the course recording, and turn in assignments on time. It's fine to miss class for a religious holiday, but please tell me in advance.

WHAT ELSE DO YOU NEED TO KNOW ABOUT THE CLASS?

- ❖ **Recording of Class Sessions:** Unless GW changes its policy during the semester, all classes will be conducted in person, rather than virtually. In other words, classes will not be available in real time through Zoom or a similar platform. All class sessions will, however, be recorded so that if you do need to miss class, you can watch the recording (available on Blackboard) to see what you missed.
- ❖ **Word Limits:** Do not exceed the word count for written assignments. Brevity is the hallmark of strong policy analysis. If you feel you need to use more words, your prose is almost certainly too verbose. If an assignment specifies a word limit, insert the total wordcount on the last page.
- ❖ **Blackboard:** I will use Blackboard to communicate with students. Be sure to regularly check for announcements, new readings, and other important information. If needed, contact the Helpdesk at 202-994-5530 or helpdesk.gwu.edu.
- ❖ **Turning Things In:** Submit assignments via Blackboard. Include your name in the filename and in the text of the file. Submit one file per assignment (i.e., embed graphics in the pdf or doc file).
- ❖ **Late Work:** Unless you've made arrangements in advance, late work will be penalized with a one grade step reduction (e.g., from an A- to a B+) per day.
- ❖ **Intellectual Property:** Lecture slides and course materials (e.g., readings, workbook exercises) are for your personal use. Please don't distribute them to others (e.g., you may not download files from Blackboard and then post them to another site, like CourseHero).
- ❖ **Academic Honesty:** All examinations, papers, and other graded assignments are to be completed in conformance with the George Washington University [Code](#) of Academic Integrity. All assignments will be checked for plagiarism using GW's online SafeAssign software. Your submission of assignments will be interpreted as your affirmation of compliance with these requirements. Artificial Intelligence (AI) tools may not be used to prepare any materials for this course; use of such tools would violate the Code of Academic Integrity.
- ❖ **Grading:** No grade changes can be made after the end of the semester, except for clerical error. If you can't finish the class and want to take an incomplete, you must talk to me before the last day of class. Consult the TSPPPA Student Handbook for the relevant policy. All assignments in the course will be graded using the narrative letter-based criteria shown below. We will not use a point system (e.g., a 100-point scale). Course grades will be computed as the weighted average of grades received on assignments, with final grades determined by rounding (up or down) to the nearest letter grade.
 - **A Excellent (4.0):** Exceptional work for a graduate student. Work is unusually thorough, well-reasoned, creative, methodologically sophisticated, and well written. Work is of exceptional, professional quality.
 - **A- Very Good (3.7):** Very strong work for a graduate student. Shows signs of creativity and a strong understanding of appropriate analytical approaches, is thorough and well-reasoned, and meets professional standards.

- B+ Good (3.3): Sound work for a graduate student; well-reasoned and thorough, without serious analytical shortcomings. Indicates the student has fully accomplished the basic objectives of this graduate course.
 - B Adequate (3.0): Competent work for a graduate student with some evident weaknesses. Demonstrates competency in the key course objectives but the understanding or application of some important issues is less than complete.
 - B- Borderline: (2.7) Weak work for a graduate student but meets minimal expectations. Understanding of key issues is incomplete. (Note that a B- average in all courses is not sufficient to sustain 'good standing.')
 - C Deficient (2.0): Inadequate work for a graduate student; rarely meets minimal expectations. Work is poorly developed or flawed by numerous errors and misunderstandings of important issues.
 - F Unacceptable (0.0): Work fails to meet minimal expectations for a graduate student. Performance has consistently failed to meet minimum course requirements. Weaknesses and limitations are pervasive.
- ❖ Course Effort: Federal regulations and the Middle States Commission on Higher Education require 112.5 hours of work for a 3-credit course. We will meet 14 times for two hours (28 hours). You should expect to spend at least 4 hours per week preparing for class (56 hours) and at least 28.5 hours outside of class on graded assignments.