

MAYA A. NORMAN

Ph.D. Candidate in Sustainable Development, Columbia University
mayaanorman.github.io | man2185@columbia.edu | (650) 208-0155

EDUCATION

Columbia University Ph.D. in Sustainable Development	Expected 2027
Bowdoin College B.A. in Economics, <i>Phi Beta Kappa, cum laude</i>	2017

RESEARCH FIELDS

Primary: Environmental Economics	Secondary: Industrial Organization, Public Economics
---	---

REFERENCES

Bernard Salanié Professor of Economics Columbia University bs2237@columbia.edu	Wolfram Schlenker Professor of the Global Food System Harvard Kennedy School wolfram_schlenker@hks.harvard.edu
Jeffrey Shrader Professor of International and Public Affairs Columbia University jgs2103@columbia.edu	Pietro Tebaldi Professor of Economics Columbia University pt2571@columbia.edu

JOB MARKET PAPER

Economic Tradeoffs and Institutional Guidance in Public Resource Allocation: Evidence from U.S. Public Lands

Draft available upon request

Abstract. The US federal government owns nearly half of the Western United States, one of the least developed contiguous landscapes in the world. Public agencies, rather than markets, allocate these lands between development and conservation. The Bureau of Land Management (BLM) is the primary agency making this tradeoff, deciding where mineral extraction that generates billions in public revenue should proceed and where it should be forgone for conservation. Despite the importance of the BLM's allocation decisions, the mechanisms underlying them have never been studied. Federal law requires the BLM to maximize the land's market and non-market resource values and publicly justify its choices to stakeholders. But the law does not specify how to value non-market resources or reconcile competing demands from pro-conservation and pro-industry stakeholders. As a result, roughly 150 local offices retain wide discretion over these judgments. Until now, systematically studying how offices exercise that discretion has been infeasible because the evidence is scattered across sprawling planning records and maps. I develop a framework using AI agents to transform these records into a form suitable for discrete-choice econometric methods. I then apply this framework to 11 local offices and roughly 90,000 pages of planning records, recovering how much revenue each office would forgo to (i) conserve non-market resources and (ii) follow established conservation standards rather than justify departing from them to stakeholders. I find that the median office is willing to forgo roughly \$60,000 in annual revenue to conserve one acre. I also find that in seven out of ten decisions, the median office passes up the resource-value-maximizing choice to remain closer to an established standard. This tendency to follow standard practice matters for policy. I compare two ways BLM headquarters can steer local offices. One is to recommend a specific conservation practice, such as a one-mile no-drilling buffer around birds' nests. The other is to use a price-like instrument that specifies the value of conserving a resource. Counterfactuals show that the recommended practice can be as cost-effective as the price-like instrument in achieving the same conservation gains.

WORKING PAPERS

An Empirical Test of the Green Paradox for Climate Legislation

with Wolfram Schlenker · *Revise & resubmit, Journal of Public Economics*

Abstract. The Green Paradox posits that fossil fuel markets respond to evolving expectations about climate legislation, intended to limit future consumption, by shifting consumption to the present, lowering present-day prices. We demonstrate that oil futures reacted negatively to daily changes in prediction market expectations regarding the Waxman-Markey

bill—the U.S. climate bill discussed in 2009–2010. This effect is observed across various maturities, with an even larger impact on more distant maturities; consistent with the Green Paradox prediction that the proposed legislation would have reset the *entire* price and consumption path temporary supply or demand shocks would phase out over time. The decrease in oil prices is accompanied by a decrease in storage levels as consumption accelerates while it takes time for new production to come online. Furthermore, two unexpected court rulings that implied limited future fossil fuel use were also associated with negative abnormal oil future returns. Taken together, these findings confirm that restricting future fossil fuel use accelerates current-day consumption. The passage of the Waxmann-Markey bill would have increased current global oil consumption by 2%.

The Importance of Earnings from Recycling

Abstract. Recycling—collecting discarded items and redeeming their scrap value—channels income to marginalized populations. This paper evaluates the importance and prevalence of these earnings throughout the US. Specifically, this paper shows that positive shocks in recycling earnings increase household food expenditures and improve birth outcomes. Bottle bills—a policy requiring refundable deposits on beverage containers—boost food expenditures by approximately 10.2%, increasing recycling earnings by roughly \$1400/year (in 2015 dollars)—an amount achievable by collecting 38 containers per day during the sample period. The effect is concentrated among low-income, able-bodied households—a population likely to recycle for cash. Moreover, increases in recycling earnings improve birth outcomes—a proxy for economic well-being in low-income populations. Back-of-the-envelope calculations imply that informal recycling markets are 50% as effective as food stamps at reducing the incidence of low birth weight. The striking comparability between recycling earnings and a targeted welfare program can be explained by both the size of recycling-generated income and the distinct populations each income source reaches.

SELECTED WORK IN PROGRESS

Tracing the Formation and Origins of Standards in Environmental Review

with Simon Greenhill

AWARDS & GRANTS

CEEP Student Research Grant, Columbia University	2024, 2026
Dean's Fellow, Columbia University	2021–2026
Wu Fellow, Columbia University	2021–2022
Hughes Family Fellow in Environmental Studies, Bowdoin College	2016

RESEARCH POSITIONS

Graduate Fellow, New York City Department of Sanitation (DSNY)	2023–2024
Forecast organic waste generation; forecasts set the basis for the city's compost-processing auctions.	
Research Assistant to Wolfram Schlenker, Columbia University	2022–2024
Pre-Doctoral Fellow, Climate Impact Lab	2018–2020

TEACHING

Teaching Assistant, Columbia University

Environmental Science for Sustainable Development (Ph.D.)	Fall 2024, 2025, 2026
Microeconomics for Public Policy II (MPA)	Spring 2025

CONFERENCES, SERVICE & LANGUAGES

Conferences: AERE Summer Conference (2024), AERE@OSWEET (2024), Heartland Workshop (2025)

Service: Sustainable Development Colloquium Organizer (Fall 2022, Spring 2023, Fall 2025)

Languages: English (native), Spanish (proficient)