

Hugh S. Gorman

Department of Social Sciences
Michigan Technological University
Houghton, Michigan 49931

Academic Positions

Chair, Department of Social Sciences Michigan Technological University	2015 - present
Professor of Environmental History and Policy Michigan Technological University	2013 - present
Associate Researcher (Sabbatical, Fulbright Scholar) Centro Internacional Para el Desarrollo Sostenible, Panamá	2011
Associate Professor of Environmental History and Policy Michigan Technological University	2003 - 2012
John C. Haas Environmental Fellow (Sabbatical) Beckman Center for the History of Chemistry, Chemical Heritage Foundation	2003 - 2004
Assistant Professor of Environmental History and Policy Michigan Technological University	1996 – 2002

Education

Ph.D., History and Policy, Carnegie Mellon University, 1996
M.S., Applied History, Carnegie Mellon University, 1992
M.A., Professional Writing, Carnegie Mellon University, 1985
B.S., Electric Power Engineering, Rensselaer Polytechnic Institute, 1979

Research Interests

Using history as a lens through which to examine the interaction of technological innovation, uses of the environment, and policy choices, with the goal being to inform efforts to construct policies that reward innovations in support of sustainable practices.

Publications

Monographs

Hugh S. Gorman. *The Story of N: A Social History of the Nitrogen Cycle and the Challenge of Sustainability*. Piscataway, N.J.: Rutgers University Press, 2013.
Hugh S. Gorman, *Redefining Efficiency: Pollution Concerns, Regulatory Mechanisms, and Technological Change in the U.S. Petroleum Industry*. Akron: University of Akron Press, 2001.

Journal Articles and Book Chapters

Hugh S. Gorman, Valoree S. Gagnon, Amanda Giang, Judith A. Perlinger, and Noel R. Urban, "Policy, Science, and Transdisciplinary Research: When Will it Be Safe to Eat as Much Fish as Desired?" in *A Research Agenda for Environmental Management*, ed. Kathleen E.

- Halvorsen, Chelsea Schelly, Robert Handler, and Jessie L. Knowlton. Edward Elgar Publishing, 2019, 93-106.
- Judith A. Perlinger, Noel R. Urban, Amanda Giang, Noelle E. Selin, A. N. Hendricks, H. Zhang, H., Aditya Kumar, Shiliang Wu, Valoree S. Gagnon, Hugh S. Gorman, Emma S. Norman, “Responses of deposition and bioaccumulation in the Great Lakes region to policy and other largescale drivers of mercury emissions,” *Environmental Science: Processes and Impacts* 20 (2018): 195-209.
- Valoree S. Gagnon, Hugh S. Gorman, and Emma S. Norman, “Power and Politics in Research Design and Practice: Opening Space for Social Equity in Interdisciplinary, Multi-Jurisdictional, and Community-Based Research,” *Gateways: Journal of Community Research and Engagement* 10 (2017): 164-184.
- Hugh S. Gorman, “The Role of Businesses in Constructing Systems of Environmental Governance,” in *Green Capitalism? Business and the Environment in the Twentieth Century*, ed. Hartmut Berghoff and Adam Rome (University of Pennsylvania Press, 2017), 33-50.
- Hugh S. Gorman, Valoree S. Gagnon, and Emma S. Norman, “Local Impacts, Global Sources: The Governance of Boundary-Crossing Chemicals,” *History of Science* 54 (2016): 443-459.
- Judith A. Perlinger, Hugh S. Gorman, Emma S. Norman, Daniel Obrist, Noelle E. Selin, Noel Urban, and Shilang Wu, “Measurement and Modeling of Atmosphere-Surface Exchangeable Pollutants (ASEPs) to Better Understand their Environmental Cycling and Planetary Boundaries,” *Environmental Science and Technology* 50 (2016): 8392-8394.
- Hugh S. Gorman, “Thinking in Cycles: Flows of Nitrogen and Sustainable Uses of the Environment” in *Managing the Unknown*, ed. Frank Uekotter and Uwe Lübken (New York: Berghahn, 2014), 32-52.
- Hugh S. Gorman, “Learning from 100 Years of Ammonia Synthesis: Establishing Human-Defined Limits through Adaptive Systems of Governance,” *GAIA: Ecological Perspectives for Science and Society* 22 (2013): 263-270.
- Meredith Ballard Lebeau, Hugh S. Gorman, Alex S. Mayer, David Dempsey, and Alicia Sherrin, “Phosphorus Monitoring in the U.S. Portion of the Laurentian Great Lake Basin: Drivers and Challenges,” *Journal of Great Lakes Research*, 39 (2013): 569-577.
- Laura Pavlot and Hugh S. Gorman, “Public Participation and Smart Growth in Silver Spring, Maryland,” *Environmental Practice* 15 (2013): 156-168.
- Hugh S. Gorman and Betsy Mendelsohn, “Where Does Nature End and Culture Begin? Converging Themes in the History of Technology and Environmental History” in *The Illusionary Boundary: Historical Research at the Intersection of Technology and the Environment*, ed. Stephen H. Cutcliffe and Martin Reuss (University of Virginia Press, 2010), 265-301.
- Samir Qadir and Hugh S. Gorman, “The Use of ISO 14001 in India: More Than a Certificate on the Wall?” *Environmental Practice* 10 (2008): 53-65.
- Hugh S. Gorman, “The Houston Ship Channel and the Changing Landscape of Industrial Pollution” in *An Environmental History Of Houston and the Gulf Coast*, ed. Martin V. Melosi and Joseph Pratt (University of Pittsburgh Press, 2007): 52-68.
- Hugh S. Gorman and Kathleen E. Halvorsen, “The Regulation of Alternative Onsite Wastewater Technologies in the Great Lakes Region,” *Small Flows Quarterly* 7 (2006): 23-37.
- Kathleen E. Halvorsen and Hugh S. Gorman, “Onsite Wastewater Treatment along the Great Lakes and the USEPA 'Homeowner Awareness' Model,” *Environmental Management* 37 (2006): 395-409.

- Hugh S. Gorman, "Laying the Foundation for the Control of Industrial Pollution, 1930-1970: Two Canals, a Refinery, and Clarence W. Klassen," *J. of Illinois History* 8 (2005): 182-208.
- Hugh S. Gorman and Erik Conway, "Monitoring the Environment: Taking a Historical Perspective," *Environmental Management and Assessment* 106 (2005): 1-10.
- Hugh S. Gorman, "Urban Areas, Environmental Decision Making, and Uses of History to Inform Public Choices" in *Public History and the Environment*, Martin V. Melosi and Philip V. Scarpino (Krieger, 2004): 207-224.
- Hugh S. Gorman, "Brownfields in Historical Context," *Environmental Practice* 5 (2003): 21-24.
- J.W. Sutherland, V. Kumar, J.C. Crittenden, M. H. Durfee, J. K. Gershenson, H.S. Gorman, D. R. Hokanson, N.J. Hutzler, D.J. Michalek, J.R. Mihelcic, D.R. Shonnard, B.D. Solomon, and S. Sorby, "An Education Program in Support of a Sustainable Future," Proc. of ASME/IMECE, MED Vol. 14, 2003, pp. 611-618, (IMECE2003-43422).
- Hugh S. Gorman and Barry D. Solomon, "The Origins and Practice of Emissions Trading," *Journal of Policy History* 14 (2002): 293-320.
- Hugh S. Gorman, "Conflicting Goals: Superfund, Risk Assessment, and Community Participation in Decision-Making," *Environmental Practice* 3 (2001): 27-37.
- Hugh S. Gorman, "Efficiency, Environmental Quality, and Oil Field Brines: The Success and Failure of Pollution Control by Self-Regulation," *Business History Review* 73 (1999): 601-640.
- Barry D. Solomon and Hugh S. Gorman, "State-Level Air Emissions Trading: The Michigan and Illinois Models," *J. of the Air and Waste Management Association* 48 (1998): 1156-1165.
- Hugh S. Gorman, "Manufacturing Brownfields: The Case of Neville Township, Pennsylvania, 1899-1989," *Technology and Culture* 38 (1997): 539-574.

Reviews, Reports, and Other Publications

- Hugh Gorman, "Technology, Policy, and the Environment," in *The Handbook of the History of Technology*, ed. W. Bernard Carlson, (Oxford University Press, in review).
- Review of Allen Dieterich-Ward, *Beyond Rust: Metropolitan Pittsburgh and the Fate of Industrial America*. In *Industrial Archaeology*, 42 (2016): 77-78.
- Valoree S. Gagnon, Hugh S. Gorman, and Emma S. Norman, "Eliminating the Need for Fish Consumption Advisories: A Policy Primer," contribution no. 50, Great Lakes Research Center, Michigan Technological University, 2018.
- Review of Geoffrey Jones, *Profits and Sustainability: A History of Green Entrepreneurship*. In *Business History Review* 92 (2018): 173-175.
- Review of David J. Hess, *Undone Science: Social Movements, Mobilized Publics, and Industrial Transitions*. In *Social Science Journal* 55 (2018): 208-209
- Review of Carl Zimring. *Aluminum Upcycled: Sustainable Design in Historical Perspective*. In *American History Review* 123 (2018): 269-269.
- Review of Robert Lifeset, *American Energy Policy in the 1970s*. In *Technology and Culture* 58 (2017): 890-891.
- Review of Otis L. Graham, Jr., "Presidents and the American Environment." In *Choice* 53 (Feb 2016), review no. 53-2642.
- Review of Gregory T. Cushman, *Guano and the Opening of the Pacific World: A Global Ecological History*. In *H-Environment Roundtable Reviews* 6 (2016): 4-8.
- Hugh S. Gorman, "Petroleum and Petrochemicals Production and Products." In *The Oxford Encyclopedia of the History of American Science, Medicine, and Technology*, ed. Hugh Richard Slotten (Oxford University Press, 2015).

- Review of Jason P. Theriot, *American Energy: Imperiled Coast*. In *Choice* 52 (2014), review no. 52-1454.
- Review of Christopher J. Castaneda and Lee M.A. Simpson, eds., *River City and Valley life: An Environmental History of the Sacramento Region*. In *Choice* 51 (2014), review no. 51-6146.
- Review of Paul W. Hirt, *The Wired Northwest: the History of Electric Power, 1870s-1970s*. In *Choice* 50 (2013). review no. 50-5020.
- Hugh S. Gorman, "Invention of Nitrogen Fixing Techniques, 1913." Notable events in global environmental history. *Global Environment* 6 (2013): 199-200.
- Review of Brian Black, *Crude Reality: Petroleum in World History*. In *Business History Review* 87 (2013) 813-14.
- Valoree S. Gagnon, Hugh S. Gorman, Maggie Morrison, Emma S. Norman, and Judith Perlinger, "Community and Partner Workshop Proceedings: Managing Impacts Of Global Transport Of Atmosphere-Surface Exchangeable Pollutants (ASEPs) in the Context Of Global Change," contribution no. 7, Great Lakes Research Center, Mich. Technological Univ., 2013.
- Review of Daniel Schneider, *Hybrid Nature: Sewage Treatment and the Contradictions of the Industrial Ecosystem*. In *History and Philosophy of Life Sciences* 35 (2013): 295-296.
- Review of *Dangerous Trade: Histories of Industrial Hazard Across a Globalizing World*, ed. Christopher Sellers and Joseph Melling. In *Business History Review* 87 (2013): 173-174.
- Review of David Kinkela, *DDT & the American Century: Global Health, Environmental Politics, and the Pesticide that Changed the World*. In *Technology and Culture* 53 (2012): 945-947
- Review of Andrew Karvonen, *Politics of Urban Runoff: Nature, Technology, and the Sustainable City*. In *Choice* 49 (2012), review no. 49-3830.
- Hugh S. Gorman, "Oil and Some Very Troubled Waters," *Times Higher Education* 6 (2011): 48-49.
- Hugh S. Gorman, "The Dissemination of Photovoltaics in Panama: Opportunities, Barriers, and Policy Choices," Centro Internacional Para el Desarrollo Sostenible, 2011.
- Hugh S. Gorman, "Nitrogen Cycle." In *Encyclopedia of Geography* (Los Angeles: Sage Reference Publications, 2010), pp. 2028-29.
- Review of Steffen Hertog, *Princes, Brokers, and Bureaucrats: Oil and the State in Saudi Arabia*. In *Business History Review* 84 (2010): 369-370.
- Review of Sing C. Chew, *Ecological Futures: What History Can Teach Us*. In *Environmental History* 14 (2009): 594-595.
- Hugh Gorman, "What Cap and Trade Programs Are Really About" For History News Network, June 29, 2009.
- Review of Kerry Emanuel, *What We Know About Climate Change and Climate Change: What It Means for Us, Our Children, and Our Grandchildren*, ed. Joseph F. C. Dimento and Patricia Doughman. In *Chemical Heritage* 26 (2008): 42-43.
- Review of Bruce A. Beaubouef, *The Strategic Petroleum Reserve: U.S. Energy Security and Oil Politics, 1975-2005*. In *Business History Review* 82 (2008): 405-406.
- Review of Peter Thorsheim, *Inventing Pollution: Coal, Smoke, and Culture in Britain since 1800*. In *Business History Review* 81 (2007): 832-834.
- Review of William R. Childs, *The Texas Railroad Commission: Understanding Regulation in America to the Mid-Twentieth Century*. In *Journal of Economic History* 66 (2006): 529-531.
- Review of Paul Sabin, *Crude Politics: The California Oil Market, 1900-1940*. In *Business History Review* 79 (2005): 640.
- Review of *Smoke and Mirrors: The Culture and Politics of Air Pollution*, ed. Melanie Depuis. In *American History Review* 110 (2005): 1493-94.

- Review of Spencer Weart, *The Discovery of Global Warming*. In *Chemical Heritage* 23 (2005): 42-44.
- Kathleen E. Halvorsen, Hugh S. Gorman, and Kristine Bradof. "Strengths and Weakness of Great Lakes Onsite Sewage System Regulatory Programs," report funded by the Joyce Foundation, Aug. 2004.
- Review of Jonathon W. Singer, *Broken Trusts: The Texas Attorney General Versus the Oil Industry, 1889-1909*. In *Business History Review* 78 (2004): 526-528.
- Review of Vaclav Smil, *Enriching the Earth: Fritz Haber, Carl Bosch, and the Transformation of World Food Production*. In *Chemical Heritage* 22 (Fall 2004): 48-49.
- Review of Gerald Markowitz and David Rosner, *Deceit and Denial: The Deadly Politics of Industrial Pollution*. In *Technology and Culture* 45 (2004): 219-221.
- Review of Frederick Buell, *From Apocalypse to Way of Life: Environmental Crisis in the American Century*. In *Technology and Culture* 45 (2004): 638-639.
- Review of Paul Hendrix, *Sir Henri Deterding and Royal Dutch-Shell: Changing Control of World Oil, 1900-1940*. In *Business History Review* 77 (2003): 638-639.
- Hugh S. Gorman, "Petroleum and the Early Oil Industry (1860-1920)." In *Atlas of U.S. and Canadian Environmental History*, ed. Char Miller (Moschovitis Group, 2003).
- Review of Christian Warren, *Brush with Death: A Social History of Lead Poisoning*. In *Business History Review* 76 (2002): 396-397.
- Review of Kenneth Warren, *Wealth, Waste, and Alienation: Growth and Decline in The Connellsville Coke Industry*. In *Ohio Valley Review* 2 (Fall 2002): 39-40.
- Review of *Voice of the Marketplace: A History of the National Petroleum Council*, ed. Joseph A. Pratt, William H. Becker, and William M. McClenahan, Jr. In *Business History Review* (Spring 2003): 141-142.
- Report: "The Management of Onsite Wastewater Systems in Houghton County: Overview and Assessment," prepared with students in 2003 Environmental Decision Making class.
- Review of Brian Black, *Petrolia: The Landscape of America's First Oil Boom*. In *Historical Geography* 30 (2002): 201-202.
- Report, "Recycling and Waste Reduction Programs in Hancock, Michigan: Review and Recommendations," prepared with students in 2002 Environmental Decision Making class.
- Review of Craig E. Colten, ed., *New Orleans and Its Environs: Centuries of Change*. In *Technology and Culture* 43 (2002): 617-618.
- Barry D. Solomon and Hugh S. Gorman, "State-Level Air Emissions Trading: The Michigan and Illinois Models" in Thomas H. Tietenberg, *Emissions Trading Programs: Implementation and Evolution* (Ashgate, 2001), 333-344. (Previously published in *The Journal of the Air and Waste Management Association*.)
- Review of Charles David Jacobson, *Ties that Bind: Economic and Political Dilemmas of Urban Utility Networks*. For EH Net (Economic History Association), Dec. 6., 2001.
- Review of David Stradling, *Smokestacks and Progressives: Environmentalists, Engineers, and Air Quality in America, 1881-1951*. In *Technology and Culture* 42 (2001): 149-150.
- Review of Roger M. Olien and Dianna Davids Olien, *Oil and Ideology: The Cultural Creation of the American Petroleum Industry*. In *Business History Review* 74 (2000): 504-506.
- Report, "Community Guide to the Regulated Uses of the Shared Environment by the Murphy Oil Refinery," prepared with students in 2000 Environmental Decision Making class.
- Review of Allan Mazur, *A Hazardous Inquiry: The Rashomon Effect at Love Canal in Environmental History* 4 (October 1999): 596-597.
- Review of Alan Derickson, *Black Lung: Anatomy of a Public Health Disaster*. In *Environmental*

History 4 (July 1999): 449-450.

Review of Samuel P. Hays, *Explorations in Environmental History: Essays by Samuel P. Hays*. In *Pennsylvania History* 66 (Spring 1999): 249-250.

Hugh S. Gorman, "Do Public Advisory Councils (PACs) Work?" *Focus* 23 (March 1998): 11-12.

Review of John Wargo, *Our Children's Toxic Legacy: How Science and Law Fail to Protect Us from Pesticides*. In *Technology and Culture* 39 (January 1997): 175-176.

Hugh S. Gorman, "Acid Rain." In *Dictionary of American History* (New York: American Reference Publishing Company, Inc., 1996).

Report, "Pittsburgh Environmental Profile: Historical Trends," 1994. Drafted one section of this consulting study conducted by Carnegie Mellon University for The Howard Heinz Endowment.

Edited Volume

Hugh S. Gorman and Alex Farrell, guest eds., *Monitoring the Environment: Taking a Historical Perspective*, special issue of *Env. Monitoring and Assessment*, v. 106 (2005).

Research Grants and Fellowships

Co-PI, "CNH: Managing Impacts of Global Transport of Atmosphere-surface Exchangeable Pollutants in the Context of Global Change," J. Perlinger, Principal Investigator. (2013-2016)

Fulbright Scholarship, Council for the Exchange of International Scholars, hosted by the Centro Internacional para el Desarrollo Sostenible, Panama (2011)

John Haas Environmental Fellowship, Chemical Heritage Foundation, Philadelphia, (2003-2004)

Co-PI, Joyce Foundation, Great Lakes Septic Standards and Enforcement: A Comparison across Jurisdictions. (2002-2003)

PI, NSF "Monitoring Technology: An Examination of the Regulatory Interface in the Implementation of Pollution Control Regulations." (1999-2001)

Oil and Gas Institute, Educational Initiative, funds for attending workshop. (1998)

Faculty Development Grant, travel funds for archival research, Michigan Tech (1997)

National Science Foundation, Dissertation Improvement Grant. (1995)

Society for the History of Technology, travel support for annual conference. (1995)

Herbert Hoover Pres. Library Research Fellowship, travel funds for archival research. 1995.

Hagley Museum and Library Travel Grant, travel funds for archival research. 1995.

Carnegie Mellon University, Departmental Fellowship. 1994.

Courses Taught

Undergraduate

SS3801 Science, Technology, and Society: Interactions and Interrelationships

SS3520 U.S. Environmental History

UN2002 Institutions: Capitalism, Democracy, and Globalization

SS3511 History of Science in America

SS3580 History of Science and Technology

SS3820 Social, Ethical, and Legal Implications of Nanotechnology

SS3630 U.S. Environmental Policy and Politics

SS120 Western Civilization

Graduate

SS5551 Global Industrial History

SS5200 Environmental Decision Making

SS5550 Global Environmental History

SS5300 Environmental and Energy Policy