

DR. GREGORY ROWANGOULD

Civil, Construction and Environmental Engineering, MSC01 1070
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EDUCATION

- PhD **University of California**, Davis (2010)
Civil and Environmental Engineering: concentration in Transportation
Dissertation: “A Spatially Detailed Locomotive Emission Model and Goods Movement Data Constraints on Public Policy and Planning”
- MS **University of Maine**, Orono (2006)
Resource Economics and Policy: concentration in Environmental Economics
Thesis: “A Spatial Analysis of Passenger Vehicle Attributes, Environmental Impact and Policy”
- BS **University of Maine**, Orono (2003)
Chemical Engineering

PROFESSIONAL EXPERIENCE

- University of New Mexico**, Albuquerque, NM (8/2012 – current)
Assistant Professor, Department of Civil Engineering
Director of the New Mexico Local Technical Assistance Program
- Sustainable Systems Research, LLC**, Davis, CA (5/2017 – current)
Principle
- Natural Resources Defense Council**, Santa Monica, CA (7/2010 – 7/2012)
Transportation and Air Quality Science Fellow
- University of California**, Davis, CA (9/2006 – 7/2010)
Research Assistant, Department of Civil & Environmental Engineering
- University of California**, Davis, CA (3/2009 – 6/2009)
Teaching Assistant, Department of Civil & Environmental Engineering
- University of Maine**, Orono, ME (9/2004 – 8/2006)
Research Assistant, Department of Resource Economics & Policy and the Margaret Chase Smith Policy Center
- National Semiconductor**, South Portland, ME (5/2000 – 9/2000)
Process Engineer, co-op program (5/2001 – 8/2001)
(3/2004 – 8/2004)
- Fairchild Semiconductor**, South Portland, ME (5/2002 – 1/2003)

CONSULTING EXPERIENCE

- Freedman Boyd Hollander Goldberg Urias & Ward P.A.**, Albuquerque, NM (5/2016 – 8/2016)
- ICF Incorporated, LLC**, Fairfax, VA (5/2014 – 12/2014)
Provided consulting services to ICF for a Federal Highway Administration and Centers for Disease Control project to develop a community health risk tool. Project website and tool available at <http://www.transportation.gov/transportation-health-tool/indicators>
- United States Environmental Protection Agency**, Anne Arbor, MI. (11/2013 – 12/2013)
Provided a scientific review of a US EPA sponsored air quality research project
- Communities for a Better Environment**, Huntington Park, CA. (11/2011 – 8/2012)
Provided transportation planning and air quality consulting services to Communities for a Better Environment

- The Ride for Roswell**, Buffalo, NY (4/2011 – 6/2011)
Pro bono consulting, bicycle traffic modeling and planning for a charitable community bicycle ride
- Pew Center on Global Climate Change**, Washington, D.C. (12/2008 – 8/2009)
Consultant, developed a research report investigating the GHG mitigation potential for domestic and international marine shipping and aviation

NATIONAL/REGIONAL/LOCAL SERVICE

- 2017 International Cycling Safety Conference**, University of California, Davis, CA
Member of the Scientific Committee and Session Chair (9/20/2017-9/23/2017)
- Transportation and Air Quality Committee (ADC20)**, Transportation Research Board of the National Academies, Washington, D.C.
Committee Member & Research Subcommittee Vice Chair (5/2017 – current)
Committee Member & Paper Review Co-Chair (4/2014 – 4/2017)
- Transportation Research Part D: Transport and Environment (TRD)**, Elsevier Ltd.
Member of the Editorial Board (1/2017 – current)
- Transportation Research Board Annual Meeting Workshop**, Integrated Land-use, Travel Demand, Air Quality & Exposure Modeling: The Future of Regional Transportation Planning? (1/11/2015)
Organizer, Co-Chair and Moderator
- National Cooperative Highway Research Program**, Transportation Research Board of the National Academies, Washington D.C. (10/2014 – current)
Panel Member, NCHRP Project 08-102 – Bicycle Facility Preferences and Effects on Increasing Bicycle Trips
- Sustainable Cities and Society (SCS)**, Elsevier Ltd. (10/2014 – 2/2018)
Member of the Editorial Board
Editor of Special Edition on Transportation (2/1/2016 – 8/2017)
- Central New Mexico Climate Change Scenario Planning Project**, US Department of Transportation & Mid-Region Council of Governments (11/2013 – 6/2014)
Member, Mitigation Technical Committee
- Statewide Public Health, Safety, and Security Working Group**, New Mexico Department of Transportation (11/2013 – 10/2015)
Working Group Member
- Land-Use Transportation Integration Committee**, Mid-Region Council of Governments, Albuquerque, NM
Committee Member (12/2012 – 6/2014)

AWARDS AND RECOGNITION

- Young Professional Runner-Up Best Paper Award**, Environmental Management Group, Air & Waste Management Association 108th Annual Conference, Raleigh, NC, June 25, 2015
- Best Paper Award**, Civil Engineering Department, University of New Mexico, Spring 2015 & Fall 2017
- Young Professional Best Paper Award**, Environmental Management Group, Air & Waste Management Association 107th Annual Conference, Long Beach, CA, June 25, 2014

PEER REVIEWED JOURNAL PAPERS

- Rowangould, G., R. Nadafianshamabadi***, and A. Poorfakhraei*.(2018). *Programming Flexible Congestion Mitigation and Air Quality Program Funds: Best Practices for State DOTs*. Transportation Research Record: Journal of the Transportation Research Board of the National Academies.

- Dana, R., **G. Rowangould**, and D. Niemeier. (2018). *Evaluation of the Health Impacts of Rolling Back a Port Clean Trucks Program*. Transportation Research Record: Journal of the Transportation Research Board of the National Academies.
- Tayarani*, M., Nadafianshahamabadi*, R., Poorfakhraei*, A., **Rowangould, G.** (2018). *Evaluating the cumulative impacts of a long range regional transportation plan: Particulate matter exposure, greenhouse gas emissions, and transportation system performance*. Transportation Research Part D: Transport and Environment 63, 261–275. doi.org/10.1016/j.trd.2018.05.014
- Tayarani*, M., Poorfakhraei*, A., Nadafianshahamabadi*, R., **Rowangould, G.** (2018). *Can regional transportation and land-use planning achieve deep reductions in GHG emissions from vehicles?* Transportation Research Part D: Transport and Environment 63, 222–235. doi.org/10.1016/j.trd.2018.05.010
- Poorfakhraei, A*, M. Tayarani*, and **G. Rowangould.** (2017). *Evaluating Health Outcomes from Vehicle Emissions Exposure in the Long Range Regional Transportation Planning Process*. Journal of Transport & Health. 6: 501-515.
- Nadafianshahamabadi, R*, M. Tayarani*, and **G. Rowangould.** (2017). *Differences in Expertise and Values: Comparing Community and Expert Assessments of a Transportation Project*. Sustainable Cities and Society. doi:10.1016/j.scs.2016.08.027
- Tayarani, M*, A. Poorfakhraei*, R. Nadafianshahamabadi*, and **G. Rowangould.** (2016). *Evaluating unintended outcomes of regional smart-growth strategies: Environmental justice and public health concerns*. Transportation Research Part D: Transport and Environment 49, 280–290. doi:10.1016/j.trd.2016.10.011
- Rowangould, G.** and M. Tayarani* (2016). *The Effect of Bicycle Facilities on Travel Mode Choice Decisions*. ASCE Journal of Urban Planning and Development. doi: 10.1061/(ASCE)UP.1943-5444.0000341
- Poorfakhraei, A.* and **G. Rowangould** (2015). *Estimating Welfare Change Associated with Improvements in Urban Bicycling Facilities*. ASCE Journal of Transportation Engineering. 141(11): 04015025.
- Rowangould, G.** (2015). *A New Approach for Evaluating Regional Exposure to Particulate Matter Emissions from Motor Vehicles*. Transportation Research Part D: Transport and Environment. 34: 307-317.
- Rowangould, G.** (2013). *Public Financing of Private Freight Rail Infrastructure to Reduce Highway Congestion: A Case Study of Public Policy and Decision Making in the United States*. Transportation Research Part A: Policy and Practice. 57: 25-36.
- Rowangould, G.** (2013). *A Census of the United States Near-Roadway Population: Public Health and Environmental Justice Considerations*. Transportation Research Part D: Transport and Environment. 2: 59-67.
- Gould, G.** and D. Niemeier (2011). *Assignment of Emissions Using a New Locomotive Emissions Model*. Environmental Science and Technology. 45(13): 5846- 5852.
- Gould, G.** and A. Karner (2009). *Modeling Bicycle Facility Operation: a Cellular Automaton Approach*. Transportation Research Record: Journal of the Transportation Research Board of National Academies. 2140: 157-164.
- Gould, G.** and D. Niemeier (2009). *Review of Regional Locomotive Emission Modeling and the Constraints Posed by Activity Data*. Transportation Research Record: Journal of the Transportation Research Board of the National Academies. 2117: 24-32.
- Niemeier, D., **G. Gould**, A. Karner, M. Hixson, B. Bachmann, C. Okma, Z. Lang and D. Heres Del Valle (2008). *Rethinking downstream regulation: California's opportunity to engage households in reducing greenhouse gases*. Energy Policy, 36(9)

*Students advised by Dr. Rowangould

PEER REVIEWED CONFERENCE PAPERS

- Montano, S*. and **G. Rowangould**. (January 9th, 2018). *Evaluating the Role of Federal Transportation Funding Flexibility and Investments in Bicycle and Pedestrian Infrastructure*. Presentation at the Transportation Research Board 97th Annual Meeting, Washington, D.C.
- Mohammad, T*, R. Nadafianshahamabadi*, A. Poorfakhraei* and **G. Rowangould**. (January 9th, 2018). *Evaluating the Cumulative Air Quality Impacts of a Long Range Regional Transportation Plan*. Presentation at the Transportation Research Board 97th Annual Meeting, Washington, D.C.
- Rowangould, G.**, R. Nadafianshahamabadi*, and A. Poorfakhraei*. (January 9th, 2018). *Programming Flexible Congestion Mitigation and Air Quality Program Funds: Best Practices for State DOTs*. Presentation at the Transportation Research Board 97th Annual Meeting, Washington, D.C.
- Dana, R., **G. Rowangould**, and D. Niemeier. (January 8th, 2018). *Evaluation of the Health Impacts of Rolling Back a Port Clean Trucks Program*. Presentation at the Transportation Research Board 97th Annual Meeting, Washington, D.C.
- Nadafianshahamabadi, R.* and **G. Rowangould** (January 10, 2017). *Evaluating Sustainability in Transportation Plans: Review of Long-Range Transportation Plans in the United States*. Presentation at the Transportation Research Board 96th Annual Meeting, Washington, D.C.
- Tayarani. M*, A. Poorfakhraei* and **G. Rowangould** (January 10, 2017). *Can Regional Transportation and Land-Use Planning Reduce GHG Emissions?* Presentation at the Transportation Research Board 96th Annual Meeting, Washington, D.C.
- Rodriguez, M.* and **G. Rowangould** (January 11, 2017). *The Current State of Sidewalk ADA Compliance and Alternative Funding Methods for Albuquerque, NM*. Presentation at the Transportation Research Board 96th Annual Meeting, Washington, D.C.
- Tayarani. M*, A. Poorfakhraei*, and **Rowangould, G.** (August 4, 2016). *Can Regional Transportation and Land-Use Planning Reduce GHG Emissions?* Presented at the Transportation Research Board Summer Conference on Transportation Planning and Air Quality, Minneapolis, MN.
- Tayarani. M*, A. Poorfakhraei*, and **Rowangould, G.** (August 5, 2016). *Quantifying the Air Quality & Congestion Benefits of Bicycle Facilities*. Presented at the Transportation Research Board Summer Conference on Transportation Planning and Air Quality, Minneapolis, MN.
- Nadafianshahamabadi, R.*, M. Tayarani*, and **G. Rowangould** (January 12, 2016). *Differences in Expertise and Values: Comparing Community and Expert Assessments of a Transportation Project*. Presentation at the Transportation Research Board 95th Annual Meeting, Washington, D.C.
- Moreno, S. A.*, R. R. Gade*, and **G. Rowangould** (January 13, 2016). *Investigating Pedestrian Crash Risk in Albuquerque, New Mexico*. Presentation at the Transportation Research Board 95th Annual Meeting, Washington, D.C.
- Tayarani, M.*, A. Poorfakhraei*, R. Nadafianshahamabadi*, and **G. Rowangould** (January 13, 2016). *Large-Scale, High-Resolution Air Quality Modeling Framework to Evaluate Environmental Justice in Long-Range Transportation Planning*. Presentation at the Transportation Research Board 95th Annual Meeting, Washington, D.C.
- Poorfakhraei, A.*, and **G. Rowangould** (January 11, 2016) *Evaluating Mobile-Source Air Pollution Exposure, Equity, and Health Risks in Long-Range Regional Transportation Plans*. Presentation at the Transportation Research Board 95th Annual Meeting, Washington, D.C.
- Rowangould, G.**, A. Poorfakhraei*, and M. Tayarani* (June 24, 2015). *A New Approach for Evaluating Regional Exposure to Particulate Matter Emissions from Motor Vehicles*. Presented at the Air & Waste Management Association Annual Conference, Raleigh, NC
- Poorfakhraei, A.* and **G. Rowangould** (January 14, 2015). *Economic Valuation of Improvements in Urban Cycling Facilities*. Presented at the Transportation Research Board 94th Annual Meeting, Washington, D.C.

- Rowangould, G.** and M. Tayarani* (January 12, 2015). *The Effect of Bicycle Paths on the Decision to Commute by Bicycle*. Presented at the Transportation Research Board 94th Annual Meeting, Washington, D.C.
- Tayarani, M.* and **G. Rowangould** (January 12, 2015). *Quantifying the Air Quality and Congestion Benefits of Bicycle Facilities: A Case Study from Albuquerque New Mexico*. Presented at the Transportation Research Board 94th Annual Meeting, Washington, D.C.
- Rowangould, G.** (March 3, 2014). *Using AERMOD for Regional Transportation Planning: Exposure Analysis, Environmental Justice, and Pro-Active Hot-spot Analysis*. Presented at the Transportation, Land Use Planning, and Air Quality Conference, Charlotte, NC
- Rowangould, G.** (June 25, 2014). *Regional Long Range Transportation Plan Air Quality and Exposure Analysis*. Presented at the Air & Waste Management Association 107th Annual Conference, Long Beach, CA
- Rowangould, G.** and J. Luna (January 2014). *Does Dedicated Bicycle Infrastructure Reduce Motorized Vehicle Trips? Results from the Albuquerque Bicycle Travel Study*. Presented at the Transportation Research Board 93rd Annual Meeting, Washington, D.C.
- Gould, G.** and S. Contreras* (January 15, 2013). *Regional Scale Dispersion Modeling and Analysis of Directly Emitted Fine Particulate Matter from Highway Vehicles Using AERMOD*. Presented at the Transportation Research Board 92nd Annual Meeting, Washington, D.C.
- Gould, G.** (January 15, 2013). *A Census of the U.S. Near Roadway Population: Particulate Matter Exposure, Environmental Justice, and Coverage of the Air Quality Monitoring Network*. Presented at the transportation Research Board 92nd Annual Meeting, Washington, D.C.
- Gould, G.** and D. Niemeier (January 12, 2010). *A Geographically Detailed Locomotive Emission Model*. Presented at the Transportation Research Board 89th Annual Meeting, Washington, D.C.
- Gould, G.** and A. Karner (January 14, 2009). *Modeling Bicycle Facility Operation: a Cellular Automaton Approach*. Presented at the Transportation Research Board 88th Annual Meeting, Washington, D.C.
- Gould, G.** and D. Niemeier (January 12, 2009). *Review of Regional Locomotive Emission Modeling and the Constraints Posed by Activity Data*. Presented at the Transportation Research Board 88th Annual Meeting, Washington, D.C.

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PEER REVIEWED REPORTS AND OTHER PUBLICATIONS

McCollum, D., **G. Gould**, and D. Greene (2009). *Greenhouse Gas Emissions from Aviation and Marine Transportation: Mitigation Potential and Policies*. Report prepared for the Pew Center on Global Climate Change, Washington D.C.

OTHER REPORTS AND PUBLICATIONS

- Rowangould, G.**, R. Nadafianshahamabadi*, and J. Seymour* (March 2018). *National Performance Management Research Data Set (NPMRDS) Best Practices Scan*, Report prepared by the University of New Mexico for the New Mexico Department of Transportation, Santa Fe, NM.
- Rowangould, G.**, R. Nadafianshahamabadi*, A. Poorfakhraei*, S. Bogus Halter (May 2017) *Congestion Mitigation and Air Quality Program Best Practices Scan, Final Report*. Report prepared by the University of New Mexico for the New Mexico Department of Transportation, Santa Fe, NM.
- Futures 2040: Metropolitan Transportation Plan*, Mid Region Council of Governments, Albuquerque, NM. (**G. Rowangould** was one of many contributors and co-authors)
- Rowangould, G.**, M. Tayarani*, and A. Poorafakhraei* (April, 2015). *Futures 2040: Metropolitan Transportation Plan - Appendix F: GHG Emissions Reduction Strategies*, Mid Region Council of Governments, Albuquerque, NM.

Curriculum Vitae • Dr. Gregory Rowangould

Lee, S., Tremble, M. Vaivai, J., **Rowangould, G.**, Tayarani, M.*, Poorfakhraei, A.* (March, 2015). *Central New Mexico climate change scenario planning project: final report*. Report prepared for the U.S. Department of Transportation, U.S. Federal Highway Administration and Mid Region Council of Governments.

Lee, S., M. Tremble, J. Vaivai, Herrington, C., R. Gonzalez-Pinzon, M. Stone, and **G. Rowangould** (December, 2014). *Climate Change Effects on Central New Mexico's Land Use, Transportation System and Key Natural Resources*. Report prepared by Ecosystem Management Inc. and the University of New Mexico for the U.S. Department of Transportation VOLPE Center, Cambridge, MA

Rowangould, G., M. Tayarani*, and A. Poorafakhraei* (November, 2014) *Central New Mexico Climate Change Scenario Planning Project: Analysis of Additional Greenhouse Gas Mitigation Strategies*. Report prepared by the University of New Mexico for the U.S. Department of Transportation VOLPE Center, Cambridge, MA

Lee, S., M. Tremble, J. Vaivai, Herrington, C., R. Gonzalez-Pinzon, M. Stone, and **G. Rowangould** (May 2014) *Climate Change Resilience of Land Use, Transportation and Key Natural Resources in Central New Mexico*. Report prepared by Ecosystem Management Inc., Sustainable Systems Research LLC. and the University of New Mexico for the U.S. Department of Transportation VOLPE Center, Cambridge, MA

Gould, G. (2012) *Analysis of Greenhouse Gas Emission Estimates for the Interstate 710 Corridor Project*. Report Prepared for Communities for a Better Environment, Huntington Park, CA.

Gould, G. (2012) *Analysis of the Alternatives Selection Process for the Interstate 710 Corridor Project*. Report Prepared for Communities for a Better Environment, Huntington Park, CA.

Gould, G. (2012) *Physical Separation of the Chicago Area Waterway System: The Economic and Environmental Impact of Barge Traffic Disruption*. NRDC Working Paper.

C. Noblet, **G. Gould**, J. Rubin, D. Innis, and C. Morris (2006). *Sustainable Transportation Funding for Maine's Future*. Report prepared for the Maine Department of Transportation, Augusta, ME.

*Students advised by Dr. Rowangould