Erica J. Wygonik, PhD, P.E., RSP$_1$

Professional Experience

2025-present Safety & Transportation Engineer, METHODS Consulting, Salt Lake City, Utah
- Lead the Northeast Region transportation practice
- Manage projects including developing and enacting work plans, schedules, and budgets
- Provide analysis and technical leadership to projects in the traffic operations, transportation planning, and safety practices

2021-present Vice President, Wall Consultant Group, Salt Lake City, Utah
- Lead the Northeast Region transportation practice
- Manage projects including developing and enacting work plans, schedules, and budgets
- Provide analysis and technical leadership to projects in the traffic operations, transportation planning, and safety practices

2014-2021 Senior Consultant/Director, Resource Systems Group**,** White River Junction, Vermont
- Lead the traffic operations and freight practices
- Manage 3-5 direct reports, responsible for balancing workload for up to 12 staff, conduct twice-weekly staff meetings for two teams
- Develop and implement business plans for freight, traffic operations, transportation planning, and strategic modeling practices
- Manage projects including developing and enacting scopes, schedules, and budgets
- Provide technical leadership and oversight to projects in the freight, traffic operations, transportation planning, safety, and strategic modeling practices

2009-2014 Graduate Research Assistant, University of Washington, Seattle, Washington
- Oregon Department of Transportation, Capturing Multimodal Comparisons in Freight Prioritization
- National Cooperative Freight Research Program, 32 - Impact of Smart Growth on Metropolitan Goods Movement
- Oregon Department of Transportation, Emissions Reduction in Urban Pickup and Delivery Systems
- Federal Highway Administration, Developing a Framework for Collecting and Sharing Data and Information

2007-2008 Senior Associate, Resource Systems Group**,** White River Junction, Vermont
- Led the Traffic Operations and Traffic Microsimulation practice areas.
- Developed new staff.
- Continued to develop new business and manage client relationships, develop budgets, provide expert testimony, and develop microsimulation models and conceptual designs.

2000-2007 Associate I/II/III, Resource Systems Group**,** White River Junction, Vermont
- Led the Traffic Microsimulation practice area, developing budgets and scopes of work.
- Provided expert testimony.
- Developed microsimulation models
- Developed preliminary and conceptual designs and mitigation measures using analyzed traffic data.
- Completed traffic studies.
- Managed the traffic count program.

Education

Ph.D. University of Washington, Civil & Environmental Engineering (Transportation), 2014
Dissertation title: *Moving Goods in Urban Areas: A Metaheuristic Addressing Logistics, Density & Emissions*

M.S.E. University of Washington, Civil & Environmental Engineering (Transportation), 2010
Thesis title: *Using a GIS-based Emissions Minimization Vehicle Routing Problem with Time Windows(EVRPTW) Model to Evaluate CO_2 Emissions and Costs: Two Case Studies Comparing Changes Within and Between Fleets*
Certificate in Global Trade, Transportation, and Logistics, 2010

B.E. Thayer School of Engineering at Dartmouth College, Engineering, 2007

B.A. Dartmouth College, Cognitive Science, 2000

Licensure

Professional Engineer, NH #12551
Road Safety Professional 1 #898

Selected Peer-Reviewed Publications

A. Goodchild, E. Wygonik, and N. Mayes. (2018) "An analytical model for vehicle miles traveled and carbon emissions for goods delivery scenarios." *European Transport Research Review*. 10:8. https://doi.org/10.1007/s12544-017-0280-6

Wygonik, E. and A. Goodchild. (2017) "Evaluating the Impacts of Density on Urban Goods Movement Externalities." *Journal of Urbanism: International Research on Placemaking and Urban Sustainability*. Vol 10: Iss. 4. Pages 487-499 DOI: 10.1080/17549175.2017.1310745

Wygonik, E. and A. Goodchild. (2016) "Urban Form and Last-Mile Goods Movement: Factors affecting vehicle miles travelled and emissions". *Transportation Research Part D: Transport and Environment*. DOI: 10.1016/j.trd.2016.09.015

Grover, D., E. Wygonik, S. Bucossi, A. Bell, S. Piper, and K. Brewer-Colie (2016). "Estimating Current and Potential Bicycle Usage for Statewide Planning." *Transportation Research Record: Journal of the Transportation Research Board. DOI*: 10.3141/2587-13

Wygonik, E., A. Bassok, A. Goodchild, E. McCormack, and D. Carlson. (2016). "Forecasting Tools for Analyzing Urban Land Use Patterns and Truck Movements: A case study and discussion." *Transportation Research Record: Journal of the Transportation Research Board*. DOI: 10.3141/2547-11

Wygonik, E. and A. Goodchild. (2014) Comparison of Vehicle Miles Travelled and Pollution from Three Goods Movement Strategies. *Sustainable Logistics (Volume 6 in the Transport and Sustainability series)*.

Wygonik, E., E. McCormack, and D. Rowe. Bike-Share Planning in Cities with Varied Terrain. (2014) *ITE Journal*.

Wygonik, E., D. Holder, B.S. McMullen, and A. Goodchild. The Current State of Multimodal Freight Project Impacts Estimation. (2014) *Transportation Research Record*.

Wygonik, E. A. Bassok, A. Goodchild, E. McCormack, and D. Carlson. Smart Growth and Goods Movement: Emerging Research Agendas. *Journal of Urbanism: International Research on Placemaking and Urban Sustainability*. (2014) DOI:10.1080/17549175.2013.875058

Wygonik, E. and A. Goodchild. Evaluating the Efficacy of Shared-use Vehicles for Reducing Greenhouse Gas Emissions: A Case Study of Grocery Delivery in Seattle. *Journal of the Transportation Research Forum*, Vol 51. No. 2 (2012), 111-126.

Service, Leadership & Community Involvement

City of Portsmouth, New Hampshire, Parking & Traffic Safety Committee (Alt. 2019-2023, Member 2023+, Vice Chair 2024+)

Urban Freight Transportation, Chair (2022-2025), Transportation Research Board (TRB) of the National Academy of Sciences AT025 (member: 2015-2025)

Freight Transportation Planning and Logistics, TRB of the National Academy of Sciences AT015 (2013-2022)

Secretary & Chair of the Website Committee, Seattle Section Younger Member Forum (2009-2011); Fundraising co-chair, Seattle Section Centennial Committee (2011-2013), American Society of Civil Engineers

President, University of Washington Chapter, Chi Epsilon (2009-2011) – Chapter won Susan C. Brown Outstanding Performance Award under my leadership

Microsimulation Joint Subcommittee, TRB of the National Academy of Sciences AHB45(1) (2005-2008)

Board of Directors, Upper Valley Transportation Management Association (2001-2008), Past Chair, under my leadership won New Hampshire Planners Association Project of the Year (2008) for the Transportation Friendly Development Checklist

Development Board of Review, Town of Norwich, VT (2003-2004)

Honors & Awards

NH ACEC Silver Award, "Your Guide to Promoting Walking and Bicycling Accommodations in New Hampshire" (2017)

YPT Young Professionals Excellence in Innovation/Research of the Year Award (with Sam Piper & David Grover) (2016)

Chi Epsilon Graduate Fellowship Award (2013)

Henry L. Gray Memorial Fellowship (2011-2012)

Michael Kyte Region X Outstanding Student of the Year (2011)

TransNow University Transportation Center Outstanding Student of the Year (2011)

Eno Leadership Development Conference Fellowship (2011)

Western Region ASCE Outstanding Young Civil Engineer in the Public Sector (2011)

National AICP Student Project Award, Seattle Bike-Share Feasibility Study (2011)

Helene M. Overly Memorial Scholarship, Puget Sound Chapter, Women's Transportation Seminar (2010)

Dwight David Eisenhower Transportation Fellowship Travel Award (2009-2010)

Graduate Student Scholarship, Washington State Section, Institute of Transportation Engineers (2009)

Valle Scholar, University of Washington (2008-2009)

Faculty Award for Academic Excellence, Thayer School of Engineering at Dartmouth College (2007)

Tau Beta Pi, Engineering Honor Society

Chi Epsilon, Civil Engineering Honor Society