ROBERT J. TURNER

Teaching Professor Interdisciplinary Arts and Sciences University of Washington Bothell Box 358530, 11136 N.E. 180th St. Bothell, WA 98011 3000 Russet Rd. Brier, WA 98036 W: (425) 352-3616 Fax: (425) 352-3462 RTurner1@uw.edu

EDUCATION

Ph.D. Marine Sciences
University of North Carolina, Chapel Hill, NC

M.S. Geology
Western Washington University, Bellingham, WA

B.S. Geology
Allegheny College, Meadville, PA

PROFESSIONAL EXPERIENCE

University of North Carolina, Chapel Hill, NC

Teaching Professor, Interdisciplinary Arts and Sciences Senior Lecturer, Interdisciplinary Arts and Sciences	2020 - Present 2012 - 2020
Assistant Professor, Interdisciplinary Arts and Sciences University of Washington Bothell, Bothell, WA	2006 - 2012
Assistant Professor of Geology C.W. Post Campus of Long Island University, Brookville, NY	2005 - 2006
Assistant Professor of Environmental and Marine Sciences Southampton College of Long Island University, Southampton, NY	1999 - 2005
Instructor AustraLearn (now GlobalLinks Learning Abroad), Westminster, CO Instructor of record for month-long Tropical Marine Ecology field course in Queensland, Australia	Summer 2002
Visiting Scholar United States Geological Survey, Sacramento, CA	Summer 2001
Research Assistant, Teaching Assistant, and Instructor	1994 - 1999

Hydrogeologist 1990 - 1993

North Carolina Department of Environment, Health and Natural Resources Division of Environmental Management, Groundwater Section, Raleigh, NC

Director of North Carolina's Underground Injection Control Program. Authored and managed three \$100,000+ grants, supervised technicians, and conducted field investigations and modeling of groundwater contamination.

U.S. Environmental Protection Agency – Region II Environmental Impacts Branch, New York, NY

Project Monitor for the review of federal environmental impact statements and Superfund remedial actions.

SELECTED PROJECTS AND AWARDS

Awardee - Exemplary Status for Online Teaching Modules "What is Sustainability in the Context of Water?" and "Water Footprints"

Awarded by the National Association of Geoscience Teachers On the Cutting Edge program

Co-Principal Investigator - Development of Methods for Remediation of a 2020 - 2022 Wetland Contaminated by Antibiotic Resistant Bacteria, Impacting the North Creek Co-PI on a \$44,000 grant from the WaterWorks Program of King County, WA

Husky Green Award

2019

Awarded by the UW Environmental Stewardship Committee to staff for demonstrating leadership, initiative and dedication to environmental stewardship and sustainability at UW

Co-Principal Investigator - Streams, Trees and Salmon: Kokanee 2018 – 2020 Restoration in North Lake Washington Small Streams

Collaborator on a \$37,500 grant from the WaterWorks Program of King County, WA

Awardee - Exemplary Status for Online Course Activity "Mapping 2018 Stormwater Runoff Infrastructure for the City of Bothell"

Awarded by the National Association of Geoscience Teachers On the Cutting Edge program

Co-Principal Investigator - Investigation on the Use of Mycoremediation to Reduce Loading of Pathogenic Bacteria to North Creek Lead PI on a \$45,903 grant from the WaterWorks Program of King County, WA

Principal Investigator - Developing Best Management Practices for 2016 - 2017 Campus Stormwater

Lead PI on a \$62,586 Green Seed Grant from the University of Washington

Awardee - Exemplary Status for Online Course Activity "Quantifying 2017 Greenhouse Gas Emissions at the County Level: A Collaborative Term Project to Enhance Understanding of Climate Modeling and Quantitative Reasoning"

Awarded by the National Association of Geoscience Teachers On the Cutting Edge program

Team Leader - Engaging Students in Grand Challenges in an 2013 - 2016 Interdisciplinary Water Sustainability Course

Recipient of \$10,000 to develop a <u>teaching module</u> on the Science Education Resource Center web site with 3 collaborators for the NSF-funded <u>InTeGrate Project</u>.

Team Member – Carbon Challenge: Footprint Reduction through Curricular Development and Community Building

2015 - 2016

Participating faculty member on a \$48,959 Green Seed Grant from the University of Washington

Project Director - Assessing the Impacts of Crows on Water Quality on the UWB Campus, Wetlands, and Reach of North Creek

Project director of water quality study conducted by IAS students. Funding from UWB Facilities Services.

Resource Faculty Member - Washington Campus Compact "Sustainability 2012 - 2013 and Service-Learning" Project

One of 6 faculty members selected to assist other faculty in the region merge sustainability learning objectives with service-learning pedagogies. Provided support for the Sustainability and Service-Learning Institute and published a <u>model course activity</u> on the Science Education Resource Center web site. Project co-sponsored by Washington Campus Compact and the Curriculum for the Bioregion Initiative.

Member - Sustainability Learning Outcomes Working Group

2012 - 2013

One of 5 faculty members selected to address the linkage between workforce needs, learning outcomes and assessments related to sustainability education. Sponsored by the InTeGrate project and the Science Education Resource Center of Carleton College.

Member - Curriculum for the Bioregion Sustainability 101 Courses Faculty 2011 - 2012 **Learning Community**

One of 18 faculty members in the region selected to evaluate, develop, and publish models for introductory sustainability courses.

Project Director - Investigation of Nitrate Concentrations in the Mileta Creek Watershed of Maury Island

Project director of water quality monitoring study conducted by UWB students on behalf of King County.

Project Director - Collaborative Undergraduate Research Project Grant

2011 - 2012

Project director on \$2,920 Collaborative Undergraduate Research Project Grant: Assessing the Effectiveness of the Town of Coupeville's Stormwater Phytoremediation System.

Project Director - Water Quality Monitoring of the North Restoration Area 2010 –2011 of the Brightwater Sewage Treatment Facility

Regional Faculty Fellow - Northwest Sustainability Initiative

2010 - 2011

One of eight faculty members in the region selected to advance the application of service learning in STEM courses. Initiative funded by a Learn and Serve America grant awarded to the Washington Campus Compact and the Oregon Campus Compact.

Principle Investigator - Investigation of Water Quality in Penn Cove and Coupeville Runoff

Lead principal investigator on \$5,049 grant from the Island County Marine Resources Committee.

Member - Curriculum for the Bioregion Geoscience Learning Community 2010 - 2011

One of 26 faculty members in the region selected to develop and publish curricular ideas related to sustainability for use in introductory and general education courses in earth sciences. Honorarium, meetings, etc. funded by a grant to the Washington Center from the U.S. Department of Education's Fund for the Improvement of Post-Secondary Education.

Co-Principal Investigator - Nitrate Concentrations in Puget Sound on the Tribal Journey Route 2010

Co-Principal investigator on 2-day research cruise in South Puget Sound supported by the U.S. Geological Survey.

Faculty Fellow - Initiative for Community-Based Learning and Scholarship 2009 - 2010 University of Washington Bothell

Principal Investigator - Stream Nitrate Concentrations in the Southern 2009 - 2010 Hood Canal Watershed and their relationship to Geology

Principal investigator on research supported by the WA State Department of Natural Resources.

Team Leader - Sustainability Across the Curriculum Institute Award 2008 - 2009

Proposal author and Team Leader for participation in Sustainability Across the Curriculum Institute hosted by the Washington Center. Awarded \$4,500 seed grant for use in planning and conducting sustainability initiatives at UWB (a.k.a., Growing Sustainability at UWB).

Project Director - Collaborative Undergraduate Research Project Grants Project Director on two consecutive University of Washington Bothell Collaborative 2007 - 2008

Undergraduate Research Project grants to study local runoff water quality. \$2,000 per year.

Principal Investigator - Impact of Mosquito Spraying on Salt Marsh Biota 2004 - 2005

Lead Principal Investigator with Christopher Gobler on \$26,000 subcontract to SUNY Stony Brook portion of a larger study (Assessment of the Potential Effects of Mosquito Spraying on Local Organisms – Caging Study – Saltwater Assessment) for the Suffolk County Vector Control and Wetlands Management Long Term Plan and Generic Environmental Impact Statement.

Co-Principal Investigator - Physical, Sedimentary, and Hydrologic Impacts 2004 - 2005 of Barrier Island Breach Events on Long Island Estuaries

Co-Principal Investigator with Joseph Warren on \$50,000 grant awarded by N.Y. Sea Grant.

Project Director - Southampton College Initiative to Improve Peconic Estuary Water Quality 2004 - 2005

Project Director on a \$2000 Peconic Estuary Program grant.

Host Scientist - Hamptons Airborne Laser Terrain Mapping Project

2002

Research collaboration between Southampton College, Florida International University, and The Eastern Long Island Coastal Conservation Alliance.

Principal Investigator - Environmental Monitoring and Assessment of 2001 - 2003 Trout Pond and Associated Surface and Ground Waters Down-gradient of the Golf at the Bridge Development, Town of Southampton, NY

Principal Investigator on \$6,441 grant awarded by the Town of Southampton Board of Trustees.

Co-Principal Investigator - Morphodynamic Investigation of Beachrock 1996 - 1998 Impacts on Littoral Zone Processes and Coastal Evolution

Proposal author and Co-Principal Investigator with John T. Wells on \$74,193 grant awarded by the National Science Foundation. Dissertation project at University of North Carolina Chapel Hill.

Rapid Cementation of Coastal Sand Deposits: Causes and Impacts on Coastal Evolution 1995

Principal Investigator on \$4,435 grant awarded by the PADI Foundation.

SCHOLARLY OUTPUT

Peer Reviewed Articles

- Sen, K, Shepherd, V, Berglund, T, Quintana, A, Puim, S, Tadmori, R, Turner, R, Khalil, L and Soares, M 2020. American Crows as Carriers of Extra Intestinal Pathogenic E. coli and Avian Pathogenic-Like E. coli and Their Potential Impact on a Constructed Wetland. *Microorganisms*, 8(10). https://www.mdpi.com/2076-2607/8/10/1595
- Sen, K, Berglund, T, Soares, MA, Taheri, B, Ma, Y, Khalil, LN, Lu, J, Turner, R, 2019. Antibiotic Resistance of *E. coli* Isolated from a Constructed Wetland Dominated by a Crow Roost, with Emphasis on ESBL and AmpC Containing *E. coli*.. *Frontiers in Microbiology*, 10:1034. https://doi.org/10.3389/fmicb.2019.01034
- Turner, RJ, 2018. <u>Beachrock</u>, *in* Finkl, C and Makowski, C, eds., Encyclopedia of Coastal Science, 2nd ed. Springer Nature, Switzerland.
- Roberts, MR, No, DB, Marzluff, JM, Delap, JH and Turner, R, 2016. Vancomycin Resistant *Enterococcus* spp. from Crows and their Environment in Metropolitan Washington State, USA: Is There a Correlation between VRE positive Crows and the Environment? *Veterinary Microbiology*, 194: 48-54.
- Turner, RJ, 2005. Beachrock, *in* Schwartz, ML, ed., Encyclopedia of Coastal Science. Kluwer Academic Publishers, The Netherlands.
- Turner, RJ, 1990. The Effects of a Mid-foreshore Groundwater Effluent Zone on Tidal-cycle Sediment Distribution in Puget Sound, Washington. *Jour. of Coastal Research*, v. 6(3), p. 597-610.

Posters, Technical Reports, and Other Papers Not Peer Reviewed

- Sen, K, Berglund, T, Soares, M, Khalil, L, Ma, Y, and Turner, R, 2018. Antibiotic Resistant *E. coli*, Including ESBL Containing Strains, from a Wetland Dominated by Crows. Poster presented at the 2018 American Society for Microbiology conference. Atlanta, GA.
- Maloney, K, Jackson, D, Conejo Morales, S, and Turner, R, 2016. Investigating the Ability of Mushroom Mycelium to Reduce Fecal Coliform Bacteria Contamination in Surface Water. <u>Poster</u> for the 2016 Annual Meeting of the Washington Lakes Protection Association. Bellingham, WA.
- Sen, K, Ton, J, Alemida, M, Guimaraes, T, Van Valkenburg, P, and Turner, R, 2015. Contribution of Human Commensal American Crows of Microbial Pathogens to Surface Water. Poster for the 2015 Water Quality Technology Conference of the American Water Works Association. Salt Lake City, UT.
- Turner, R, 2011. Summary of UWB Student Nitrate Sampling in the Mileta Creek Watershed. Submitted to King County Groundwater Protection Program.

- Turner, R, 2010. Water Quality Results of the 2010 BES 303 Investigation of the T-Mobile Contamination Site. Submitted to The City of Bothell and T-Mobile, Inc. 2p.
- Turner, R, 2010. Results of the 2010 BES 303 Study of Soil Characteristics at 21 Acres. Submitted to 21 Acres. 2p.
- Turner, R, Cherrier, C, Piekarski, E, and Christy, S, 2008. Assessment of the Quality of Groundwater Discharging from the University of Washington Bothell Stormwater System. Report submitted to the UWB Teaching and Learning Center, 20p.
- McElroy, A, Gobler, C, Turner, R, 2005. Assessment of the Potential Effects of Mosquito Spraying on Local Organisms Caging Study Saltwater Assessment. Final report submitted for inclusion in Suffolk County Vector Control and Wetlands Management Long Term Plan and Generic Environmental Impact Statement.
- Turner, RJ, 2005. Final Report Southampton College Initiative to Improve Peconic Estuary Water Quality. Report submitted to the Peconic Estuary Program, 12p + attachments.
- Warren, J and Turner, RJ, 2005. R/CCP-10: Physical, Sedimentary, and Hydrologic Impacts of Barrier Island Breach Events on Long Island Estuaries. NY Sea Grant Completion Report, 23p + appendices.
- Warren, J and Turner, RJ, 2004. R/CCP-10: Physical, Sedimentary, and Hydrologic Impacts of Barrier Island Breach Events on Long Island Estuaries. NY Sea Grant Progress Report, 6p + slideshow.
- Turner, RJ, 2003. Bathymetric Map of Quantuck Bay. Report submitted to the Town of Southampton Board of Trustees, 5 p + map.
- Turner, RJ, 2001. Geomorphology, *in* Schaffner, I and Feldman, M, eds., About the Bayberry Bush. The Parrish Art Museum, Southampton, NY, 116p.
- Turner, RJ, 1999. Morphodynamic Relationship Between Beachrock Exposure and Littoral Zone Processes on the West Coast of Puerto Rico. Dissertation, University of North Carolina at Chapel Hill, 400p.
- Turner, RJ, 1993. 15A NCAC 2C .0200 Well Construction Standards Applicable to Injection Wells. North Carolina Dept. of Environment, Health, and Natural Resources, 5 p.
- Turner, RJ, 1993. Best Management Practices for the Collection, Storage and Disposal of Automobile Service Station Wastes. North Carolina Dept. of Environment, Health, and Natural Resources, 32 p.
- Turner, RJ and Walton, RO, 1993. Delineation of Hydrologic Capture Zones and Injection Well/Pollution Source Inventory Around Shallow Public Water Supply Wells on Hatteras Island, North Carolina. Report submitted to U.S. Environmental Protection Agency, 19 p.

Online Teaching Modules, Activities and Web Sites

- Turner, R, 2021. Bibliography of Literature Relevant to Our Future Sustainability. University of Washington Bothell web site. http://faculty.washington.edu/rturner1/Sustainability/Bibliography/Index.htm
- Turner, R, Wertz, S, Biting, K and Romulo, C, 2021. Fostering Sustainability Out of a Pandemic: Pathways for Higher Education to Create a More Resilient Institution and Society. Web site of resources associated with a session at the Annual Meeting of the American Association of Colleges and Universities. http://faculty.washington.edu/rturner1/Sustainability/Bibliography/AAC&U_Session_Resources.htm
- Turner, R, Sinton, C, Davi, N and Plake, T, 2017. Water, Agriculture, and Sustainability Teaching Module, *in* the InTeGrate Teaching Materials. Science Education Research Center at Carleton College. https://serc.carleton.edu/integrate/teaching materials/water sustainability/index.html

- Turner, R, 2013. Mapping Stormwater Runoff Infrastructure for the City of Bothell. Activity on the Washington Center Curriculum for the Bioregion Geoscience Learning Community. Science Education Research Center at Carleton College. http://serc.carleton.edu/bioregion/examples/68954.html
- Turner, R, 2012. Using Debates to Engage Students in Sustainability Controversies and Conundrums. Activity on the Washington Center Curriculum for the Bioregion Geoscience Learning Community. Science Education Research Center at Carleton College. http://serc.carleton.edu/bioregion/examples/62205.html.
- Turner, R, 2012. Quantifying Greenhouse Gas Emissions at the County Level: A Collaborative Term Project to Enhance Understanding of Climate Modeling and Quantitative Reasoning. Activity on the Washington Center Curriculum for the Bioregion Geoscience Learning Community. Science Education Research Center at Carleton College. http://serc.carleton.edu/bioregion/examples/51308.html
- Turner, R, 2012. The University of Washington Bothell Programs Relevant to Geoscience and Sustainability, *in* Programs that Bring Together Geoscience and Sustainability. InTeGrate and the Science Education Research Center at Carleton College. https://serc.carleton.edu/integrate/workshops/programs2012/essays/turner.html
- Turner, R, 2011. Big Ideas, Learning Outcomes, Skills, and References Relevant to a Sustainability Course or Curriculum. Web site. 19 pages. http://faculty.washington.edu/rturner1/Sustainability/Big_Ideas01.htm
- Turner, R, 2011. Water and Sustainability. Course Overview published by the Washington Center Curriculum for the Bioregion. Science Education Research Center at Carleton College. https://serc.carleton.edu/bioregion/courses/54914.html

Abstracts, Presentations, and Workshops

- Romulo, C, Biting, K, Turner, R and Wertz, S, 2021. Fostering Sustainable Institutions: Engaging Our Universities in the Movement for Change. Round Table Discussion, Earth Educators Rendezvous 2021. https://serc.carleton.edu/earth_rendezvous/2021/program/roundtable/r4.html
- Biting, K, Romulo, C, Turner, R and Wertz, S, 2021. Fostering Institutional Sustainability Out of the Pandemic: The Role of Teaching Centers and Faculty Developers. Webinar for the Earth-Centered Special Interest Group, The Professional and Organizational Development (POD) Network in Higher Education. https://kaltura.elon.edu/media/Fostering+Institutional+Sustainability+Out+of+the+PandemicA+The+Role+of+Teaching+Centers+and+Faculty+Developers/1 vynlb621?ed=1560
- Wertz, S, Biting, K, Romulo, C and Turner, R, 2021. Fostering Sustainability Out of a Pandemic: Pathways for Higher Education to Create a More Resilient Institution and Society. Annual Meeting of the American Association of Colleges and Universities. http://faculty.washington.edu/rturner1/Sustainability/Bibliography/AAC&U_Session_Resources.htm
- Turner, R, Berger, D, Foote, R, Kurian, A, Lee, J, Lerum, K, Stokes, D, Vinyard, D, Cram, S, Pederson, A and Price, R, 2020. The Pedagogies & Syllabification of Student Engagement and Participation. Interdisciplinary Arts and Sciences Workshop, University of Washington Bothell.
- Turner, R, Atkinson, J, and Groom, M, 2019. From Progressive Paradise to Dystopian Persistence: How Are We Discussing the Goalposts of Sustainability with Our Students and Peers? Session at the 2019 Washington and Oregon Higher Education Sustainability Conference, University of Washington, Seattle.
- Sen, K, Berglund, T, Soares, MA, Taheri, B, Ma, Y, Khalil, LN, Lu, J, Mayer, R, Turner, R, 2019. Use of the Fungus *Stropharia rugosoannulata* in Mycoremediation of Wetland Water Contaminated by Crow Feces. Abstract submitted to the 2019 American Society for Microbiology conference. San Francisco, CA.
- Sen, K, Berglund, T, Soares, MA, Khalil, LN, Ma, Y, Turner, R, 2018. Antibiotic Resistant *E. coli*, Including ESBL Containing Strains, from a Wetland Dominated by Crows. Abstract presented at the 2018 American Society for Microbiology conference. Atlanta, GA.

- Berglund, T, Sen, K, Almeida Soares, M, Turner, R, 2017. Antibiotic Resistance of *E. coli* Isolated from a Constructed Wetland Dominated by a Crow Roost. Abstract presented at the 2017 Water Quality Technology Conference & Exposition. Portland, OR.
- Turner, R, Loch, A and Adman, E, 2017. The Story of Our Water. UW Bothell Campus Research Connections talk, City of Bothell, WA
- Turner, R, 2017. The Flint Water Crisis and Lessons for Puget Sound. 6th Annual North Puget Sound Conference on Race, Communities of Color Coalition. Everett Community College, Everett, WA
- Turner, R, Lambacher, J and MacGregor, J, 2017. How do We Address the Political Ecology of Education for Sustainability? Session at the 2017 Washington Higher Education Sustainability Conference, Gonzaga University, Spokane.
- Turner, R, 2016. The Hydrologic Value of Trees. City of Lake Forest Park Council Meeting. Lake Forest Park, WA.
- Turner, R, Koontz, T and Begley, N, 2016. Pedagogy for Change: Effects of Sustainability Engagement on Student Attitudes, Values and Beliefs. Just Sustainability Conference, Seattle University.
- Roberts, M, No, D, Marzluff, J and Turner, R, 2015. Vancomycin-Resistant Enterococci in North American Crows and their Environment in a Metropolitan Area. Presentation at the 6th Symposium on Antimicrobial Resistance in Animals and the Environment. Tours Val de Loire, France.
- Sen, K, Ton, T, Almeida, M, Guimares, T, Van Valkenburg, P and Turner, R, 2015. Contribution of Human Commensal American Crow of Microbial Pathogens to Surface Water. Poster for the 2015 Water Quality Technology Conference & Exposition. Salt Lake City, Utah.
- Turner, R, 2015. Input on Developing a Water Science and Management Curriculum at UW Bothell. American Public Works Association Stormwater Managers Committee, Federal Way, WA.
- Turner, R, 2014. Fecal Coliform and Nutrient Dynamics in North Creek, the Wetland and the Campus Runoff. Research in Progress Series, University of Washington Bothell.
- Turner, R, 2014. The Purposes and Pedagogies of Engaging Students in the Controversies of Sustainability. Presented in the Interdisciplinary Pedagogies of Sustainability workshop of the Washington Higher Education Sustainability Conference, Bellingham, WA.
- Turner, R, 2012. Engaging Students in Environmental Monitoring. Discussion leader at the Sustainability and Service-Learning Faculty Institute. Washington Campus Compact Network Meeting. Seattle, WA.
- Turner, R, Cole, R, Fackler-Adams, B, MacGregor, J, Remington, S, 2012. Designing Introductory Courses in Sustainability for Undergraduate Learners. Coordinator of a 4 hour workshop at the 2012 Annual Conference of the Association for Advancement of Sustainability in Higher Education. Los Angeles, CA.
- Turner, R, Cole, R, Fackler-Adams, B, MacGregor, J, Remington, S, Rivera, R, Sherman, D, Svendsen, C and Whitman, J, 2012. Developing Models for Sustainability 101: Eighteen Faculty Members Collaborate on a New Foundation for Sustainability Teaching and Learning. 1.5 hour workshop at the Eighth International Conference on Environmental, Cultural, Economic and Social Sustainability. Vancouver, BC.
- Murphy, T, Fergusson-Kolmes, LA, Flynn, C, Hoynacki, D, Pasilis, S, Phung, TM, Polozov, SA, Turner, RJ, and Broker, L, 2011. Integrating Service-Learning into STEM Disciplines. 3.5 hour pre-conference session at the 14th Annual Continuums of Service Conference. San Diego, CA.
- Turner, R, 2011. Applications of 3-D High Resolution Measurements of Nitrate Concentrations In and Around Puget Sound. University of Washington Bothell Research in Progress Seminar Series. Bothell, WA.

- Turner, R and Warner, S, 2011. Active Learning Pedagogy Workshop. Interdisciplinary Arts and Science Project for Interdisciplinary Pedagogy Workshop Series. Bothell, WA.
- Turner, R, and Schubert, M, 2010. Penn Cove Research: Summary of Data Collected 2009-2010. Presentation to the Island County Marine Resources Committee. Coupeville, WA.
- Turner, R, 2010. Low Impact Development and Runoff Pollution in the Puget Sound Region. People for Puget Sound Education Series: Advocates for Puget Sound. REI Flagship Store, Seattle, WA.
- Turner, R, 2009. The Counties of Your State Climate Change Comparison Mapping Project. Abstract presented at the National Numeracy Network Annual Conference, Bothell, WA.
- Turner, R, McElroy, A, Gobler, C, Brownawell, B, Barnes, R, Terriciano, S, and Gibbins, B, 2006. Investigations of the Acute Effects of Mosquito Spraying on Water Quality, Fish, and Shrimp in the Salt Marshes Suffolk County, NY. Abstract presented at the American Chemical Society 10th Annual Frances Sterrett Environmental Chemistry Symposium, Hofstra University.
- McElroy, A, Gobler, C, Turner, R, Barnes, R, and Gibbins, B, 2005. A Caging Study to Evaluate Acute Effects of Aerial Application of Scourge® and Altosid® on Salt Marsh Organisms. Abstract presented at the 2005 Annual Meeting of the American Mosquito Control Association, Charlotte, NC.
- Warren, J and Turner, RJ, 2005. R/CCP-10: Physical, Sedimentary, and Hydrologic Impacts of Barrier Island Breach Events on Long Island Estuaries. NY Sea Grant Completion Report. CW Post, Long Island Univ.
- Turner, R, 2000. <u>Investigations on Ridge and Runnel Topography and its Influence on Beach</u> <u>Morphodynamics</u>, *in* Hanson, G, ed., 7th Conference on Geology of Long Island and Metropolitan NY.
- Turner, R, 1999. The Evolution of Beachrock Morphology and its Influence on Beach Morphodynamics, *in* Fletcher, CH and Matthews, JV, eds., The Non-steady State of the Inner Shelf and Shoreline: Coastal Change on the Time Scale of Decades to Millenia in the Late Quaternary. Abstr. with Prog., IGCP Project #437 "Coastal Environmental Change During Sea Level Highstands," Univ. of Hawaii, Honolulu, 249p.
- Turner, R, 1997. The Legacy of Beachrock Exposure: Intensified Longshore Transport and Beaches Out of Synch with the Wave Regime. EOS, Trans., Amer. Geophys. Union, Fall Meeting Suppl., 78: F352.
- Turner, R, 1996. Warm Beaches Turn to Stone: Are Human Wastes Speeding the Process? Abstract in 1996 Graduate Student Mini-Symposium Proceedings, Duke Univ. Marine Lab., p. 7.
- Turner, R, 1995. Bacteria & Algae-mediated Precipitation of Calcium Carbonate in Puerto Rico Sand & Seawater Suggests that Nutrient-rich Ground Water Discharges Enhance Coastal Sand Cementation. Geological Society of America, Abstracts with Programs, 27(6): A-346.

Professional Reviews

- Turner, R, 2017. Peer review of draft journal article: Cole, JR and Rosen, P, 2017. The Campus Wells Program: Preserving and Re-tasking Monitoring Wells from Campus Construction for Educational Purposes. Case Studies in the Environment.
- Turner, R, 2007. National Sea Grant Proposal Evaluation of: Martinez-Colon, M, 2007. Pollutants and Foraminiferal Assemblages in Jobos Bay and Torrecilla Lagoon: An Environmental Micropaleontological Approach.
- Turner, R, 2007. National Sea Grant Proposal Evaluation of: Pyrtle, A, 2007. Assessing Effects of Land use on Estuaries in Puerto Rico: An Integrative Approach.
- Turner, R, 2003. Peer review of draft journal article: Rey, d, Rubio, B, Bernabeu, A, and Vilas, F, 2003. Formation, Exposure and Evolution of a Beachrock in the Intertidal Zone of the Corrubedo Complex (Ria of Arousa). Journal of Sedimentary Geology.

WORKSHOP AND CONFERENCE PARTICIPATION

Earth Educators Rendezvous, National Association of Geoscience Teachers. Online roundtable. Earth-Centered Special Interest Group, The Professional and Organizational Development (POD)	2021
Network in Higher Education. Online webinar.	2021
Annual Meeting of the American Association of Colleges and Universities. Online session.	2021
Earth Education for Sustainable Societies. Workshop. Carleton College, Northfield, MN	2019 2019
Washington & Oregon Higher Education Sustainability Conference. Session. UW, Seattle, WA Portland State University Community Engagement Workshop. Workshop sponsored by the UWB	2019
Community Engagement Council and Portland State Univ. Portland, OR	2019
Community Based Learning and Research in IAS. Workshop co-facilitated with Kristin Gustafson,	2017
IAS Fall Faculty Retreat, Brightwater Center, Woodinville, WA	2017
6 th Annual North Puget Sound Conference on Race. Everett Community College, Everett, WA	2017
Washington Higher Education Sustainability Conference. Gonzaga University, Spokane, WA	2017
Washington Lakes Protection Association Annual Meeting. Bellingham, WA	2016
Just Sustainability Conference. Seattle University, Seattle, WA	2016
Curriculum for the Bioregion Fostering an Ethic of Place Conference. Tacoma WA	2015
American Public Works Association Stormwater Managers Committee. Federal Way, WA	2015
Washington Higher Education Sustainability Conference. Bellingham, WA	2014
InTeGrate Teaching Module Development workshop. Carleton College, Minnesota.	2013
Integrated Water Management and Curriculum Development Workshop, King County, Seattle, WA	2012
Sustainability and Service-Learning Faculty Institute Washington Campus Compact Network Meeting. Seattle, WA	2012
2012 Annual Meeting of the Annual Conference of the Association for Advancement of Sustainability	2012
in Higher Education. Los Angeles, CA	2012
In TeGrate workshop on Programs that Bring Together Geoscience and Sustainability. Stanford Univ.	2012
Eighth International Conference on Environmental, Cultural, Economic and Social Sustainability. Vancouver, BC (workshop coordinator)	2012
Pre-conference session at the 14 th Annual Continuums of Service Conference. San Diego, CA	2011
Sustainability 101 Courses Faculty Learning Community Workshop, The Washington Center.	2011
Tacoma, WA	2011
Curriculum for the Bioregion Strengthening Sustainability-Across-the-Curriculum Workshop,	2011
The Washington Center. Tacoma, WA	
Sustainability 101 Courses Faculty Learning Community Workshop, The Washington Center.	2011
Bothell, WA	2011
Sustainability 101 Courses Faculty Learning Community Workshop, The Washington Center. Seattle, WA	2011
The Role of Academia in the Environmental Monitoring Community. Academic Roundtable	2011
Discussion, The 27 th Annual National Environmental Monitoring Conference. Bellevue, WA	2011
Geoscience Faculty Learning Community Workshop, The Washington Center. Bothell, WA	2011
Geoscience Faculty Learning Community Workshop, The Washington Center. Eatonville, WA Regional Faculty Fellows Retreat, Northwest Sustainability Initiative, WA Campus Compact.	2010 2010
Clinton, WA	
Project for Interdisciplinary Pedagogy Workshop, Interdisciplinary Arts and Sciences, UW Bothell Bothell, WA	2010
Recreating Place: Between Environmental Arts and Environmental Science, Site Visit Workshop	2010
of the Imagining America Conference. Bothell, WA (Coordinator)	2010
Learning What Sustains Us Seminar, Imagining America Conference. Seattle, WA	2010
Faculty Fellows Retreat, UW Bothell Initiative for Community Based Learning. Bothell, WA. What is Sustainability Symposium. Graying Sustainability at LIWB. Bothell, WA. (Coordinator)	2010 2009
What is Sustainability Symposium, Growing Sustainability at UWB. Bothell, WA. (Coordinator) Curriculum for the Bioregion Works in Progress, The Washington Center. Tacoma, WA	2009
Currection for the Diviegion works in Frogress, The Washington Center. Tacoma, WA	∠ 007

UWB/CCC Library Sustainability Research Workshop, Growing Sustainability at UWB.	2009
Bothell, WA. (Coordinator) The 95 th Annual Meeting of the Association of American Colleges and Universities. Seattle, WA	2009
Sustainability: Place, Responsibilities, and the Curriculum, AAC&U Symposium. Seattle, WA	2009
Sustainability Across the Curriculum Summer Institute, The Washington Center. Tacoma, WA	2008
University of Washington Bothell Community Partnership Fair. Bothell, WA	2008
University of Washington Bothell CUSP Summer Workshop. Edmonds, WA	2007
Geological Society of America, Cordilleran Section Meeting. Bellingham, WA	2007
Building Bioregional Literacy, The Washington Center. Tacoma, WA	2007
Teaching for a Sustainable Future, The Washington Center. Tacoma, WA	2006
10 th Frances Sterrett Environmental Chemistry Symposium, Hofstra University, Hempstead, NY	2006
4 th National Conference on Science, Policy and the Environment: Water for a Sustainable and	2004
Secure Future, National Council for Science and the Environment. Washington, DC	
1 st Annual Environmental Community Conference, Southampton College. Southampton, NY	2002
Community, Culture, and Environmental Training Workshop, USEPA, Bridgehampton, NY	2002
Soft Solutions for Hard Choices: Exploring Non-structural Storm Damage Reduction	2000
Options for Suffolk County's South Shore, The Nature Conservancy. Smithtown, NY	1000
Coastal Change - Future Directions and New Ideas, University of Hawaii. Honolulu, HI	1999 1998
Nearshore Research Workshop, U.S. Geological Survey. St. Petersburg, FL	1998
PROFESSIONAL DEVELOPMENT	
Learning Community participant - Developing a Cross-Campus Minor in Climate Change	
Studies (UWB Teaching and Learning Center)	2021 - 2022
Learning Community participant – Equity and Inclusion in Environmental and Climate	2020 - 2021
Education (UWB Teaching and Learning Center)	2010 2020
Learning Community Facilitator - Promoting the Curricular Integration of Climate Change	2019 - 2020
Topics at UWB (UWB Teaching and Learning Center) Learning Community participant – UWB Field Teaching (UWB Teaching and Learning Center)	2018 - 2019
Learning Community participant – Owb Field Teaching (Owb Teaching and Learning Center) Learning Community participant – Developing a UWB Model for Cross-Disciplinary Project	2017 - 2018
Based Courses (UWB Teaching and Learning Center)	
Learning Community participant – Interdisciplinary Inquiry (UWB Teaching and Learning Center)	2017 - 2018
Hybrid Course Development Institute participant (10 week course - UW Bothell)	2011
Initiative for Community-Based Learning and Scholarship (Faculty Fellow - UW Bothell)	2009 - 2010
Research Circle Participant (UW Bothell Interdisciplinary Arts & Sciences Program) 2006 - 2007	
Puget Sound Summer Course, The Washington Center. Various locations, WA.	2009
New Faculty Research Support (UWB Office of Research Support)	2007 2007
Performance and Pedagogy (10 hour course – UW Simpson Center for the Humanities) Using an Audience Response System to Discuss Controversial Topics (UWB Teaching & Learning	
Faculty Fellows Program (40 hour course – UW Teaching Academy)	2006
American Academy of Underwater Sciences (AAUS) scientific diving certification	1995 - 1998
College Teaching (graduate level course at University of North Carolina Chapel Hill)	1998
National Association of Underwater Instructors (NAUI) Open Water I SCUBA certification	1994
Ground Water Hydrogeology (40 hour course - N.C. Division of Environmental Management)	1992
Basic Ground Water Modeling (24 hour course - National Ground Water Association)	1991
Hazardous Materials Incident Response Operations (40 hour course - U.S. EPA)	1989
CERCLA/SARA Environmental Review (24 hour course - U.S. Environmental Protection Agency)	1989

CRUISE EXPERIENCE

R/V Meteor (piston coring of deep sea sediments on Puerto Rico to Bermuda leg)	1996
R/V La Gaviota (Chief Scientist on reef coring expedition on NW coast of Puerto)	1995
R/V Cape Hatteras (piston coring on continental slope off the Carolinas)	1993

TEACHING EXPERIENCE

Senior Lecturer of Environmental Science

Interdisciplinary Arts and Sciences Program, University of Washington Bothell

Water and Sustainability	F 2006 - 2012 & 2015, W 2020, S 2013 - 2020
Environmental Monitoring Practicum I	T 2009 - 2018, W 2009, 2016, 2020 & 2021, S 2014 - 2018
Hydrogeology	W 2010 - 2021
Introduction to Sustainability	F 2019 - 2021
Environmental Systems Thinking	F 2019 - 2021
Natural Hazards and Human Disasters W 20	007, 2008, 2014, 2017, 2018, S 2019, 2020, Summer 2008
Principles and Controversies of Sustainability	F 2013 - 2017, W 2013 & 2019
Interdisciplinary Inquiry	F 2012 & 2018, W 2008, 2009 & 2011, S 2007
Water Quality	W 2015, S 2011, 2012 & 2016
Independent Fieldwork – Environmental Education	in the Homewaters Program each quarter 2012 - 2014
Geomorphology	S 2012 - 2014
Estuaries in Trouble	Summer 2011 - 2013
Environmental Geography: Maps and Climatology	W 2009, 2010 & 2012
Senior Seminar:	S 2010
Interdisciplinary Forum	F 2008, W 2009, S 2009 & 2010
Discovery Core III: Environmental Science Practicu	m + Portfolio Assessment S 2007 & 2008
Introduction to Environmental Issues (co-taught wit	h David Stokes) F 2007
Special Topics: Estuaries and Coastlines	Summer 2007

Assistant Professor of Geology

Department of Earth and Environmental Science, CW Post Campus of Long Island University

Ground Water Geology (graduate level)	S 2006
Earth Science II (w/ lab)	F 2005, S 2006
Earth Science I	F 2005

Assistant Professor of Environmental and Marine Sciences

Division of Natural Science, Southampton College of Long Island University

Environmental Geology (w/ lab)	F 1999, S 2001 – 2005
Introduction to Environmental Science	F 2000 – 2004, S 2001 & 2005
Environmental Chemistry Laboratory	S 2000 – 2005
Introduction to Interdisciplinary Studies (coordinator and instructor)	F 2004
Estuaries and Coastal Ecosystems (w/ lab) (coordinator)	F 2003 & 2004
Current Topics in Environmental Science	S 2001, 2002 & 2004
Hydrology (w/ lab)	F 1999 – 2003
Coastal Processes (w/ lab)	F 2000, Summer 2002 & 2003
College 101	F 2001 & 2002
AustraLearn: Tropical Marine Ecology (travel course in Queensland)	Summer 2002
Oceanography (for Southampton College Center for Creative Retirement)	F 2001 & S 2002
The Oceans (w/ lab)	S 2000

Instructor

Department of Marine Sciences, University of North Carolina at Chapel Hill

Oceanography Summer 1998 & 1999

Laboratory Instructor

Department of Geology, University of North Carolina at Chapel Hill

Introductory Geology S 1999

Department of Geology, Western Washington University

Physical Geology Summer 1987

Teaching Assistant

Department of Marine Sciences, University of North Carolina at Chapel Hill

 Marine Environments
 F 1993, S 1994, F 1994, 1997 & 1998

 Chemical Oceanography
 S 1995

 Oceanography
 S 1993

Department of Geology, Western Washington University

Earth Science Summer Workshop for Secondary Teachers Summer 1986 & 1987

COMMUNITY SERVICE

Member, Steering Committee of the Curriculum for the Bioregion	2015 - 2019
Member, Cascadia College Sustainable Practices Advisory Committee	2014 - 2019
Leader, Cub Scout Pack 76 Service Project Day at University of Washington Bothe	July 2018
Invited Speaker, 6 th Annual North Puget Sound Conference on Race. Communities	September 2017
of Color Coalition, Everett	
Panelist, The Hydrologic Value of Trees, Lake Forest Park City Council Meeting	November 2016
Member, Parent Council of Cub Scout Pack 76	2014 - 2016
Member, Integrated Water Management Education and Training for Workforce	2014 - 2015
Development Task Force	
Workshop Instructor, iURBAN Teen Summit	2014
Workshop Instructor, Sally Ride Science Festival	2014
Presenter, City of Bothell Ecotober Event at Brightwater	October 2013
Volunteer, Madrona Elementary School	2012 - 2013
Member, Environmental Task Force, Seattle CityClub	2007 - 2012
Panelist, Faculty Careers Panel at University of Washington, Seattle	April 2007, 2008 & 2012
Instructor, Brightwater Earth Day Event	April 2011
Invited Speaker, People for Puget Sound Education Series, REI, Seattle	October 2010
Guest Speaker, Bothell Cub Scout Troop	November 2006
Guest Speaker, Third House Nature Center, Montauk, NY	July 2004
Guest Speaker, Peconic Landing, Greenport, NY	May 2004
Member, Suffolk County Vector Control Citizen Advisory Committee	2002-2003
Member, Sag Harbor Village Harbor Committee	2002-2003
Guest Speaker, Long Island Mineral and Geological Society	March 2002

COLLEGE SERVICE

University of Washington Bothell

Co-Chair, Chancellor's Advisory Committee on Environmental Sustainability	2021 - present
Chair, School of IAS Curriculum Committee	2011 - present 2019 - present
Member, Earth System Science Program, Academic Oversight Committee	2019 - present 2019 - present
Member, Campus Council on Academic Standards and Curriculum	2019 - present
Member, Conservation and Restoration Science Curriculum Area Working Group	2019 - present 2019 - present
Affiliate Member, M.A. in Policy Studies Curriculum Area Working Group	2012 - present
Member, Environmental Studies Curriculum Area Working Group	2012 - present 2007 - present
Member, Promotion Review Committee for Kristin Gustafson	2007 present 2021
Member, Promotion Review Committee for Julie Masura (UW Tacoma)	2021
Member, Chancellor's Advisory Committee on Environmental Sustainability	2012 - 2021
Member, IAS Strategic Budget and Planning Task Force	2020
Chair, Promotion Review Committee for Amy Lambert	2019
Member, Environmental Science Curriculum Area Working Group	2007 - 2019
Member, The Cascadia College and University of Washington Bothell Campus	
Design Review Team	2018 - 2019
Member, School of IAS Curriculum Committee	2012 - 2019
Member, STEM/IAS Task Force on Earth Sciences	2015 - 2018
Member, Promotion Review Committee for Raissa DeSmet	2018
Coordinator, Environmental Science Curriculum Area Working Group	2012 - 2017
Nominee, UWB Faculty Mentor Award	2017
Mentor, 2017 UWB Hackathon Series – Garden Innovation Challenge	2017
Teaching Subject, In-Class Review of Use of InTeGrate Teaching Module in a Cou	
Member, Hiring Committee for Sustainability Coordinator position	2015 - 2016
Member, Hiring Committee for UW Bothell Pest Control Vendor	2016
Interim Advisor, UWB Wetlands	2015
Steering Committee Member, Initiative for Community-Based Learning and Schol	arship 2011 - 2015
Member, Environmental Science Position Hiring Committee	2014 - 2015
Coordinator, The Poster Workshop for the Institute for Community Based Learning	g and Research 2014
Member, Campus Council on Academic Standards and Curriculum	2013 - 2014
Member, UWB 3 Environmental Science Equipment User Group	2013 - 2014
Member, UWB Emergency Preparedness Committee	2012 - 2014
Member, UW Bothell Honors and Ceremonies Committee	2011 - 2013
Member, IAS Program Gray Area Application Files Review Committee	2006 – 2009, 2011 - 2013
Guest Instructor, Rebeca Rivera's DC I course	November 2013
Affiliate Member, M.A. in Cultural Studies Curriculum Area Working Group	2007 - 2012
Panelist, Faculty Careers Panel at University of Washington, Seattle	April 2007, 2008 & 2012
Guest Instructor, David Stokes' BIS 243 course	November 2012
Observer, Jennifer Atkinson's BIS 345 class	May 2012
Observer, Santiago Lopez's BIS 342 class	October 2011
Guest Instructor, David Stokes' BIS 243 course	October 2011
Mentor, IAS Project for Interdisciplinary Pedagogy	2010 - 2011
Advisor, UWB Ping Pong Student Group	2010 - 2011
Contributor, Meetings on Design of UW3	2009 - 2011
Observer, Sally Warner's BIS 293D Class	October 2010
Guest Instructor, David Stokes' BIS 243 course	October 2010
Participant, UWB/CCC Meeting with King County Wastewater Division and Friend	
the Hidden River at Brightwater Wastewater Treatment Plant	September 2010
Attendee, UW Bothell Community Partners Luncheon	2010

Guest Instructor, David Stokes' BIS 243 course P.I. for the Growing Sustainability at UWB grant from the Washington Center Author, Draft Proposal (Renovation and Expansion of the Interdisciplinary Environmental Research Laboratories at the University of Washington Bothell) for National Science Foundation Academic Research Infrastructure Program: Recovery	
and Investment Grant	May 2009
Coordinator of Interdisciplinary Research Forum seminar series	2008 - 2009
Organizer and Moderator, The UWB/CCC Library Sustainability Research Workshop	January 2009
Affiliate Member, Science, Technology and Society Curriculum Area Working Group	
Advisor, UWB Campus Sustainability Group (student club)	2007 - 2008
Guest Instructor, Bruce Burgett and Ron Krabill's BCULST 500 course	December 2008
Guest Instructor, Martha Groom's BIS 300 course	December 2008
Guest Instructor, David Stokes' BIS 243 course	November 2008
Member, UWB Sustainability Task Force	Fall 2008
Primary Organizer, UW Bothell Campus Sustainability Day	October 2008
Team Leader and Proposal Author, UWB Team Participating in Sustainability Across	2008
the Curriculum Institute hosted by the Washington Center at Evergreen State College	
Speaker, CUSP Summer Workshop Affiliate Member, Science, Technology and the Environment	June 2007 and 2008 2007 - 2008
Curriculum Area Working Group	2007 - 2006
Guest Instructor, David Goldstein's BIS 300 course	May 2008
Guest Instructor, Day In Goldstein's BIS 300 course Guest Instructor, Dan Jaffe's BES 311 course	April 2008
Host, Focus the Nation Teach-In: The 2% Solution	January 2008
Participant, Salmon Safe Certification Review of UWB	October 2007
Co-Author, Proposals for B.S. Environmental Science and	Summer 2007
B.A. Environmental Studies Degree Programs	
Member, Natural Science and Math Disappearing Task Force	2006 - 2007
Member, Staging Collaborations Between Science and Performance Committee	2006 - 2007
Member, Interdisciplinary Research Assessment Committee	2006 - 2007
1	October 2006 and 2007
Guest Instructor, Martha Groom's BIS 322 course	April 2007
Guest Instructor, Peter Littig's BIS 300 course	April 2007
IAS Representative, Spotlight on UW Bothell Programs	January 2007
Respondent, Dan Jaffe's Sabbatical Talk	January 2007
Guest Instructor, Michael Goldberg's BCUSP 108 course	October 2006
Guest Instructor, Dan Jaffe's BES 301 course	October 2006
CW Post Campus of Long Island University	
Member, Student Affairs-Faculty Partnership Initiative	2006
Advisor, Southampton College Honors Program Students	2005 - 2006
Advisor, Southampton Conege Honors Program Students	2003 - 2000
Southampton College of Long Island University	
Secretary, Union Executive Committee of the Southampton College Federation of Tea	chers 2004 - 2005
Coordinator, Environmental Science and Studies Program	2002 - 2005
Co-Director, Honors Program	2001 - 2005
Member, Honors Program Committee	1999 - 2005
Member, Marine Science Committee	1999 - 2005
Acting Director, Division of Natural Science Member, Environmental Leadership Awards Committee	spring 2004 2002 - 2004
Member, Bayberry Property Committee	2002 - 2004
Member, Greenprint Committee	2002 - 2004
Member, Core Curriculum Committee	2003
Member, Coastal Resource Management Program Committee	1999 - 2000