

Mark E. Dolan

**School of Chemical Biological and Environmental Engineering
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Education:

Ph.D. Environmental Engineering and Science, Dept. of Civil Engineering, Stanford University, 1996. Faculty advisor Perry L. McCarty.

M.S. Civil Engineering, Environmental Engineering, Oregon State University, 1987.

B.S. Civil Engineering, Oregon State University, with highest scholarship (GPA: 3.89/4.0), 1986.

Research Interests:

Application of molecular techniques to biological processes for the treatment of contaminated soils, water, and gas streams. Monitoring and control of microbial systems used for remediation and waste treatment. Remediation of recalcitrant hazardous wastes from industrial and public works. Mathematical modeling of physical and biological processes for estimation and evaluation of remediation options. Development of engineering systems to implement remediation.

Experience:

June 2007 – present Associate Professor in the School of Chemical, Biological, and Environmental Engineering; Oregon State University.

Nov. 2001 – June 2007 Assistant Professor in the Department of Civil, Construction, and Environmental Engineering; Oregon State University. Taught graduate level course entitled “Microbial Processes in Environmental Systems,” undergraduate/graduate level course entitled “Transport and Fate of Organic Chemicals in Environmental Systems,” and junior level “Environmental Engineering Fundamentals” course.

Research Topics: Investigation of the genomic response of *Nitrosomonas europaea* when exposed to various inhibiting and potentially toxic compounds. Protein and transcriptional responses are evaluated through 2-D protein gels and DNA microarrays with the goal of identifying sentinel genes, significantly up- or down-regulated gene products that occur as a result of inhibitor stress. Studies of aerobic VC-degrading microorganisms and anaerobic reductive dehalogenation of chlorinated ethenes are also underway.

Sept. 1997 – Nov. 2000 Instructor in the Department of Civil, Construction, and Environmental Engineering; Oregon State University. Taught classes and participated in research projects. Research Topics: Demonstration of cometabolic air sparging with propane for the remediation of a chloroethene and chloroethane co-contaminated aquifer at McClellan Air Force Base, CA. Molecular characterization of a butane-utilizing mixed culture with the goal of tracking the dominant organisms through aqueous and aquifer solids sampling after introduction into the subsurface at Moffett Federal Airfield, CA.

June 1996 - Sept. 1997 Post-doc in Environmental Engineering and Science, Dept. of Civil Engineering, Stanford University. On-site manager of a full-scale cometabolic bioremediation demonstration site at Edwards Air Force Base, CA. Responsibilities included daily operation and maintenance of an Automated Sampling and Analysis Platform (ASAP; AR&T Inc., Milpitas, CA) used for the 24 hr/day collection of field samples with near-real time analysis for VOCs, inorganic anions, DO, and pH. Responsible for sample acquisition, analysis, and maintenance of a master database. Also responsible for operation and maintenance of treatment and sample pumps, periodic manual sampling, continuous subsurface chemical augmentation, supervision of a site maintenance crew, and interaction with Air Force personnel.

March 1987 - June 1996 Environmental Engineering and Science, Dept. of Civil Engineering, Stanford University. Research Assistant to Perry L. McCarty.

May 1995 – Feb. 1996 Operated the Moffett Federal Airfield Bioremediation Demonstration Site investigating the efficiency of subsurface cometabolic TCE degradation through bioaugmentation with the mutant *Burkholderia cepacia* G4 PR1₃₀₁, which constitutively expressed the toluene ortho-monooxygenase (TOM) enzyme system. Responsibilities included field site operation and maintenance, sample acquisition and chemical analysis (rep-PCR analysis conducted at Michigan State University), chemical and biological augmentation, and data analysis.

March 1987 – May 1995 Investigation of methanotrophic biotransformation of vinyl chloride in aquifer samples obtained from Moffett Field Naval Air Station and the St. Joseph, Michigan Superfund site. Design of small-column microcosm to evaluate the potential for in-situ biotransformation using aquifer samples.

Thesis: Methanotrophic Cometabolic Transformation of Vinyl Chloride and Other Chloroethenes in Aquifer Microcosms. Primarily experimental work with mathematical modeling of results for analysis.

Teaching Assistant to Perry L. McCarty in biological wastewater treatment process laboratory for graduate students, with excellent evaluations by students.

Member of Laboratory Oversight Committee. Student/faculty committee organized to oversee management and maintenance of Environmental Engineering and Science laboratories.

1986 to 1987 Environmental Engineering and Science, Dept. of Civil Engineering, Oregon State University.

Research Assistant to Dr. Kenneth Williamson.

Master's Thesis: The Effect of Organic Sorbent Concentration On Sorption Kinetics. Primarily experimental work with mathematical modeling of results for analysis.

Passed the FE exam.

1985 (summer) Oregon State Dept. of Transportation

Engineering Assistant - Performed land surveying, field work, asphalt inspection and process control for highway interchange construction.

Professional Activities:

Publications:

- Luis A. Sayavedra-Soto, Barbara Gvakharia, Peter J. Bottomley, Daniel J. Arp, Mark E. Dolan. "Nitrification and degradation of halogenated hydrocarbons – a tenuous balance for ammonia-oxidizing bacteria." *Appl Microbiol Biotechnol*, 2010, 86, 435-444.
- Jae-Hyuk Lee, Mark E. Dolan, Jennifer Field, Jonathan Istok. "Monitoring Bioaugmentation with Single-Well Push-Pull Tests in Sediment Systems Contaminated with Trichloroethene." *Environ. Sci. Technol.*, 2010, 44, 1085-1092.
- Tyler S. Radniecki, Lewis Semprini, Mark Dolan. "Expression of *merA*, *trxA*, *amoA*, and *hao* in continuously cultured *Nitrosomonas europaea* cells exposed to cadmium sulfate additions." *Biotechnology and Bioengineering*, 2009, 104, 1004-1011.
- Lewis Semprini, Mark E. Dolan, Gary Hopkins, Perry L. McCarty. "Bioaugmentation with butane-utilizing microorganisms to promote *in situ* cometabolic treatment of 1,1,1-trichloroethane and 1,1-dichloroethene." *J of Contaminant Hydrology*, 2009, 103, 157-167.
- Tyler S. Radniecki, Lewis Semprini, Mark Dolan. "Expression of *merA*, *amoA*, and *hao* in continuously cultured *Nitrosomonas europaea* cells exposed to zinc chloride additions." *Biotechnology and Bioengineering*, 2009, 102, 546-553.
- Mohammad Azizian, Sebastian Behrens, Andy Sabalowsky, Mark E. Dolan, Alfred Spormann, Lewis Semprini. "Continuous-flow column study of reductive dehalogenation of PCE upon bioaugmentation with the Evanite enrichment culture." *J of Contaminant Hydrology*, 2008, 100, 11-21.
- Sebastian Behrens, Mohammad Azizian, Paul J. McMurdie, Andy Sabalowsky, Mark E. Dolan, Lewis Semprini, Alfred Spormann. "Monitoring abundance and expression of "*Dehalococcoides*" species chloroethene-reductive dehalogenases in a tetrachloroethene-dechlorinating flow column." *Applied and Environ Microbiol.*, 2008, 74, 5695-5703.
- T. Radniecki, M. E. Dolan, and L. Semprini, "Physiological and Transcriptional Responses of *Nitrosomonas europaea* to Toluene and Benzene Inhibition." *Environ. Sci. Technol.* 2008, 42 4093-4098.
- Lewis Semprini, Mark E. Dolan, Maureen A. Mathias, Gary D. Hopkins, Perry L. McCarty. "Laboratory, field and modeling studies of bioaugmentation of butane-utilizing microorganisms for the *in situ* cometabolic treatment of 1,1-dichloroethene, 1,1-dichloroethane, and 1,1,1-trichloroethane." *Advances in Water Resources* 2007, 30 1528-1546.
- Anne E. Taylor, Mark E. Dolan, Peter J. Bottomley, and Lewis Semprini. "Utilization of Fluoroethene as a Surrogate for Aerobic Vinyl Chloride Transformation." *Environ. Sci. Technol.* 2007, 41 6378-6383.
- Lewis Semprini, Mark E. Dolan, Maureen A. Mathias, Gary D. Hopkins, Perry L. McCarty. "Bioaugmentation of Butane-Utilizing Microorganisms for the *In-situ* Cometabolic Treatment of 1,1-Dichloroethene, 1,1-Dichloroethane, and 1,1,1-Trichloroethane." *European Journal of Soil Biology* 2007, 43 322-327.
- Elliot Ennis, Ralph Reed, Mark E. Dolan, Lewis Semprini, Jonathan Istok, Jennifer Field. (2005). "Reductive Dechlorination of the Vinyl Chloride Surrogate Chlorofluoroethene in TCE-Contaminated Groundwater." *Environmental Science and Technology* 2005, 39:6777-6785.

- Stephen J. Rooklidge, Joelle L. Bennett, Mark E. Dolan. "Antimicrobial Contaminant Behavior in Slow Sand Filter Schmutzdecke Mixed Cultures." *Research Journal of Chemistry and Environment* 2005, 9, 5-11.
- Seungho Yu, Mark E. Dolan, Lewis Semprini. "Kinetics and Inhibition of Reductive Dechlorination of Chlorinated Ethylenes by Two Different Mixed Cultures." *Environmental Science and Technology* 2005, 39, 195-205.
- Stephanie A. Connon, Adisorn Tovanabootr, Mark Dolan, Kevin Vergin, Stephen J. Giovannoni, Lewis Semprini. "Bacterial community composition determined by culture-independent and -dependent methods during propane-stimulated bioremediation in trichloroethene-contaminated groundwater." *Environmental Microbiology* 2005, 7:165-178.
- Frascardi, D., Kim, Y., Dolan, M.E., and L. Semprini. "A Kinetic Study of Aerobic Propane Uptake and Cometabolic Degradation of Chloroform, cis-Dichloroethylene and Trichloroethylene in Microcosms with groundwater/Aquifer Solids." *Water, Air, and Soil Poll.* 2003, 3, 285-298.
- Adisorn Tovanabootr, Dolan, M.E., Semprini, L., Magar, V.S., Leeson, A., Lightner, A., "Cometabolic Air Sparging Field Demonstration With Propane to Remediate a Chloroethene and Chloroethane Co-Contaminated Aquifer." In: *Physical and Thermal Technologies: Remediation of Chlorinated and recalcitrant Compounds*, Eds. Wickramanayake, G.B. and Gavaskar, A.R. Battelle Press, Columbus, OH, 2000; pp 67-74.
- Perry L. McCarty, Mark N. Goltz, Gary D. Hopkins, Mark E. Dolan, et al., "Full-Scale Evaluation of *In Situ* Cometabolic Degradation of Trichloroethylene in Groundwater through Toluene Injection." *Environmental Science and Technology* 1998, 32 (1), 88-100.
- Perry L. McCarty, Gary D. Hopkins, Junko Munakata-Marr, Grace Matheson, Mark E. Dolan, et al., "Bioaugmentation with *Burkholderia cepacia* G4 PR1₃₀₁ for In-Situ Bioremediation of Trichloroethylene Contaminated Groundwater." EPA final report 1997 (Cooperative Agreement CR822029)
- Mark E. Dolan and Perry L. McCarty, "Small-Column Microcosm For Assessing Methane-Stimulated Vinyl Chloride Transformation in Aquifer Samples." *Environmental Science and Technology* 1995, 29 (8), 1892-1897.
- Mark E. Dolan and Perry L. McCarty, "Methanotrophic Chloroethene Transformation Capacities and 1,1-Dichloroethene Transformation Product Toxicity." *Environmental Science and Technology* 1995, 29 (11), 2741-2747..
- Mark E. Dolan and Perry L. McCarty, "Factors Affecting Transformation of Chlorinated Aliphatic Hydrocarbons by Methanotrophs," In: *Bioremediation of Chlorinated and Polycyclic Aromatic Hydrocarbon Compounds*, Eds. R. E. Hinchee, A. Leeson, L. Semprini, and S.K. Ong. Lewis Publishers, Chelsea, MI, 1994; pp 187-192.
- McCarty, P.L., Semprini, L., Dolan, M.E., Harmon, T.C., Tiedeman, C., and Gorelick S.M., "In Situ Methanotrophic Bioremediation for Contaminated Groundwater at St. Joseph, Michigan," In: *On-Site Bioreclamation*, Eds. Hinchee, R.E. and Olfenbuttel, R.G., Butterworth-Heinemann: Boston, 1991; pp 16-40.

Abstracts and Presentations:

- Mohammad Azizian, Mark E. Dolan, James D. Ingle, Lewis Semprini. "Effect of pre-reduction of aquifer material on PCE reductive dechlorination in a continuous-flow column study." Submitted to the Division of Environmental Chemistry for the 233rd ACS National Meeting, Chicago, IL, March 25-29, 2007.
- Mohammad Azizian, Mark E. Dolan, James D. Ingle, Lewis Semprini. "Continuous-Flow Bioreactor Study of Reductive Dehalogenation of PCE upon Bioaugmentation with Evanite Culture." Submitted to the Division of Environmental Chemistry for the 233rd ACS National Meeting, Chicago, IL, March 25-29, 2007.
- Mark E. Dolan, Jun Li, Lewis Semprini, Perry L. McCarty, Gary Hopkins. "Molecular Analysis of In Situ Cometabolic transformation of a Chlorinated Solvent Mixture by Bioaugmented Butane-Utilizing Microorganisms." Presented at The Joint International Symposia for Subsurface Microbiology (ISSM 2005) and Environmental Biogeochemistry (ISEB XVII), Jackson Hole, Wyoming, August 14-19, 2005.
- Cecelia Razzetti, Mark E. Dolan, Lewis Semprini. "Cometabolic Degradation of 1,1,1-Trichloroethane and 1,1-Dichloroethane by a *Rhodococcus* Species: Kinetic Studies and Model Simulations." Presented at the 10th International Conference on Chemistry and Environment organized by the European Association for Chemical and Molecular Science, Bologna, Italy, Sept 4-7, 2005.
- Cecelia Razzetti, Mark E. Dolan, Lewis Semprini. "Cometabolic Degradation of 1,1,1-Trichloroethane and 1,1-Dichloroethane by a *Rhodococcus* Species in a Soil Column Reactor." Presented at the 10th International Conference on Chemistry and Environment organized by the European Association for Chemical and Molecular Science, Bologna, Italy, Sept 4-7, 2005.
- Mark E. Dolan, Jun Li, Lewis Semprini, Perry L. McCarty, Gary Hopkins. "In Situ Subsurface Cometabolic Transformation of Chlorinated Solvent Mixtures by Native and Bioaugmented Butane Utilizing Microorganisms." Presented at the American Geophysical Union Fall General Meeting, Dec 14, 2004.
- Mark E. Dolan, Giovannoni, S.J., Semprini, L., "Use of Molecular Methods for Characterizing and Tracking the Dominant Members of a Chlorinated Solvent Cometabolizing Mixed Culture." Presented at the 221st American Chemical Society National Meeting, San Diego, CA, April 1, 2001.
- Adisorn Tovanabootr, Semprini, L., Dolan, M.E., Azizian, M., Magar, V.S., DeBacker, D., Leeson, A., Kempisty, D., "Cometabolic Air Sparging Field Demonstration With Propane to Remediate Trichloroethylene and cis-Dichloroethylene," abstract for the 221st American Chemical Society National Meeting, San Diego, CA, 2001.
- Mark E. Dolan, Semprini, L., Giovannoni, S., Rungkamol, D., Lim, H., Connon, S., "Bioaugmentation of a Butane-Utilizing Mixed Culture for the In-Situ Transformation of Problematic Chlorinated Solvent Mixtures." Presented at the American Geophysical Union Fall Meeting, San Francisco, CA, Dec. 15, 2000.
- Lewis Semprini, Dolan, M.E., McCarty, P.L., Hopkins, G., "Development of Effective Aerobic Cometabolic Systems for the In-Situ Transformation of Problematic Chlorinated Solvent Mixtures," SERDP and ESTCP Symposium, Crystal City, VA Dec., 2000.
- Mark E. Dolan, Semprini, L. et al., "Aerobic Cometabolic Chlorinated Solvent Transformation in Propane-Fed Aquifer Microcosms." Presented at the 2nd International Conference on remediation of Chlorinated and recalcitrant Compounds, Monterey, CA, May 25, 2000.
- Lewis Semprini, Dolan, M.E., et al. "Microcosm Protocol for Evaluating the Potential of Aerobic Cometabolism of Chlorinated Aliphatic Hydrocarbon using Gaseous Substrates," SERDP and ESTCP Symposium, Crystal City, VA Nov. 30 - Dec 3, 1999.

- Mark E Dolan and Perry L. McCarty , “*In Situ* Biodegradation of Chlorinated Solvent Contaminants in Groundwater.” Presented at the 4th USA/CIS Joint Conference on Environmental Hydrology and Hydrogeology, San Francisco, CA, Nov.10, 1999.
- Adisorn Tovanabootr, Dolan, M.E., Kim, Y., Semprini, L., “Cometabolism of Chlorinated Aliphatic Hydrocarbon Using Propane and Butane Utilizing Microorganisms,” abstract at the 4th USA/CIS Joint Conference on Environmental Hydrology and Hydrogeology, San Francisco, CA, Nov. 1999.
- Mark E. Dolan and Lewis Semprini. “Aerobic Cometabolic TCE Transformation in Propane-fed Aquifer Microcosms.” Presented at the International Symposium on Subsurface Microbiology, Vail, CO, Aug. 26, 1999.
- Mark E. Dolan and Perry L. McCarty, “Factors Affecting Transformation of Chlorinated Aliphatic Hydrocarbons by Methanotrophs.” Presented at the Second International Symposium on In Situ and On-Site Bioreclamation, San Diego, CA, 1993.

Invited Speaker:

- January 27, 2005. Montana State University, Center for Biofilm Engineering Winter Seminar Series. Field Bioaugmentation of a Butane-Utilizing Culture to Co-metabolize of a Mixture of Problematic Chlorinated Solvents.
- December 15, 2004. EPA Region 9 Headquarters, San Francisco, CA. Bioaugmentation of a Mixed Butane-Utilizing Culture for the Remediation of Problematic Chlorinated Solvent Mixtures.
- May 4, 2004. Oregon State University, Crop and Soil Science Spring Seminar Series. Bioaugmentation of an Aquifer Zone for the Cometabolic Transformation of Problematic Chlorinated Solvents.
- University of Missouri, Rolla, Feb. 1996.

Professional Societies:

- Association of Environmental Engineering and Science Professors (AEESP)
- American Chemical Society (ACS)
- American Society for Microbiology (ASM)
- American Geophysical Union (AGU)
- Sigma Xi Scientific Research Society

Reviewer:

- Environmental Science and Technology
- Biotechnology and Bioengineering
- Biodegradation
- Journal of the American Water Resources Association
- Water Resources Research
- Water Research

University Service:

- College of Engineering Promotion and Tenure Committee
- Departmental:
 - Leadership Team, School of CBEE
 - Curriculum Committee, School of CBEE
 - Undergraduate and graduate student advisor

Awards:

Top Prof award from the Oregon State University Mortar Board Senior Honor Society, 2005.
Certificate of Merit from the American Chemical Society (213th National Meeting, April, 1997) for the co-authorship of the paper “Full Scale In-Situ Cometabolic Biodegradation of Trichloroethene-Contaminated Groundwater Through Toluene Injection.”

Classes Taught:

General Description: All classes taught were part of the Environmental Engineering curriculum at Oregon State University, Department of Civil, Construction, and Environmental Engineering.

EnvE 321: Environmental Engineering Fundamentals – Junior level course providing an overview of environmental engineering and issues associated with the environment. This was a writing intensive class.

EnvE 421: Water and Wastewater Characterization – Senior level course covering water characterization and overview of treatment unit operations applicable for different aqueous constituents.

EnvE 431/531: Transport and Fate of Organic chemicals in Environmental Systems – Senior/Graduate level course concerned with (modeling) the chemical and physical fate of organic compounds in the environment.

EnvE 541: Microbial Processes in Environmental Systems – Graduate level course reviewing basic microbiology and covering biotically-mediated oxidation/reduction reactions in some detail.

EnvE 542: Design of Biological Municipal and Hazardous Waste Treatment Systems – Graduate level course covering the design of activated sludge systems, anaerobic reactors, nitrification/denitrification systems, aerobic lagoons, and natural wetlands.

CE 407: Reading and Conference – Three senior EnvE students with strong interests in green building design and construction undertook a senior project of conducting a CBEE Building LEED Platinum Certification Feasibility Study. A report detailing the LEED credits required to attain Platinum rating, the feasibility of attaining each point in the new building design, and evaluation of credits available for specific potential design elements was produced. In depth analyses of green roof designs and wastewater treatment via a living machine were also included. In addition, an eco-charrette was arranged by the students and conducted by Ralph DiNola, from Green Building Services, Portland, OR, to produce ideas and goals for the new building design. The results of the eco-charrette were presented in a summary report.

Curriculum Innovation:

Revised ENVE undergraduate curriculum as part of a move into the new School of Chemical, Biological, and Environmental Engineering and edited the Undergraduate Advising Guide in a joint effort with ChE and BioE. One goal was to increase the rigor of the program and to make the freshman and sophomore years as similar as possible for the three disciplines (EnvE, ChE, and BioE). This was accomplished by the addition of a second term of organic chemistry and thermodynamics and by replacing technical electives with proscribed engineering coursework. Although it has made the program more rigid, it has also eliminated the considerable problem of students juggling limited elective coursework offerings to provide Engineering Science and Design credits that were acceptable to ABET. Of 44 courses in the program (excluding perspectives, synthesis, writing, and communication), 25 courses are common with ChE and BioE and of those, 11 are delivered by the CBEE faculty. An additional course, Bioreactors, is common to BioE and EnvE, but not ChE. To my knowledge, this is one of the few national programs to fully integrate ChE, BioE, and EnvE programs into a shared curricula.

Most Recent Student Evaluations:

ABET reports for each class are available on the Office drive.

Graduate and Undergraduate Students and Advisees:

Graduate Students:

Major Professor:		Graduation Date (expected)
Sean Sandborgh	Ph.D.	3-15-11
Jeff Hart	M.S.	(3-2012)
Morgan Shearer	M.S.	9-21-09
Kristen Mathis	M.Eng.	5-5-09
Natalie Grenz	M.S.	9-18-08
Tyson Glock	M.Eng.	12/19/07
Kevin Farthing	M.S.	3/10/06
Jun Li	M.S.	6/3/04
Joelle Bennett	M.S.	9/21/04
Chakkrid Sattayatewa	M.S.	3/19/04
Mathew Zentner	M.S.	2/27/04
Ju Yong Jeong	M.S.	6/30/03
Kyungik Gil	Post-doc	2003
Saravanan Shanmuganathan	M.S.	8/29/03
Co-advising:		
Nathan Fulton	M.S.	(2012)
Ryan Armstrong	Ph.D.	(2013)
Tyler Radniecki	Post-doc	n/a
Gaurav Saini	Ph.D.	(2010)
Nixar Mustafa	Ph.D.	09
Anne Taylor	Ph.D.	9-26-08
Andrew Sabalowsky	Ph.D.	12-11-08
Jae-Hyuk Lee	Ph.D.	5/26/06
Tina Blatchford	M.S.	9/22/05
Bhargavi Maremanda	M.S.	6/8/2004
Minor Professor:		
Carl Issacson, CH	M.S.	12/12/07
Sergio Almonacid, BRE	Ph.D.	7/15/05
Elliot Ennis, MT	M.S.	6/3/2005
Ahmad Al Dhubabian, CHE	M.S.	3/16/2005
Graduate Committees:		
Erin Gray (Botany; GCR)	M.S.	5-23-2011
Alex Brewer (Tox – Field)	Ph.D.	(2014)
Jing Sun (MB – Giov.)	Ph.D.	(2012)
Shoutao Xu (BEE) (grad rep)	Ph.D.	(2011)
Dusty Berggren	Ph.D.	(2012)
Hongqing Hu (BEE)	Ph.D.	12-9-09
Jeff Gobi	Ph.D.	12-4-09
Ellen Swogger	Ph.D.	(2012)
Jed Eberly (BEE)	Ph.D.	(2009)
Olivia Mason (Grad Council Rep)	Ph.D.	5-27-08
Danelle Bertrand	M.S.	3-18-09
Andrew Sabalowsky	Ph.D.	12-11-08
Angela Bice	Ph.D.	?????

Sun Hwa Park	Ph.D.	12-12-07
Mandy Sapp	Ph.D.	3-2-07
David Doughty, MB	Ph.D.	6/15/07
Rich Peevers	M.Eng.	11-16-06
Kylee Dewis	M.Eng.	9-15-06
Zhihua Xu	M.S.	6-16-06
Chiathanya Vuppala	M.S.	6-13-06
Gaurav Saini	M.S.	8/29/05
William Wells	M.S.	6/14/2005
Stephanie Harrington	M.S.	9/24/2004
John (Chris) Orum, MTH	Ph.D.	6/11/2004
David Doughty	M.S.	1/6/2004
George Pon	Ph.D.	12/16/2003
Seungho Yu	Ph.D.	12/15/2003
Hee Kyong Lim	M.S.	2/25/2003
Shawn McKone	M.S.	11/6/2002
Maureen Mathias	M.S.	9/26/2002
Mario A. Isaias-Vera	M.S.	7/16/2002
Darin Rungkamol	M.S.	3/15/2001

Undergraduate Student Summer Lab Experience:

Elizabeth Runde (Chemical Engineering) B.S. 2011

Many students associated with NSF GEN-EN project (mentored by Tyler Radniecki)

Colette Griffith (Chemical Engineering) B.S. 2006

Katie Walker (Chemical Engineering) B.S. 2004

Undergraduate Advisees:

I currently advise approximately 20 undergraduate students and routinely meet with both undergraduate and graduate students seeking information about or applying to our program.

Research Funding:

Proposals Pending:

None. A major focus of next year will be to submit proposals for funding.

Proposals Current:

- 1) Agency: ATI Wah Chang/Oregon Metals Institute
Title: Nitrate Removal Optimization for treatment in Constructed Wetlands
Total Award Amount: \$140,000
Total Award Period Covered: 9/10-6/11
Person-Months Per Year Committed to the Project: 1.0

Prior Research Funding:

- 1) Agency: NSF GEN-EN
Title: Global Transcriptional Responses in Nitrogen Cycling and Nutrient Removal Processes and Development of Supplemental Instructional Workshops
Total Award Amount: \$2,000,000
Total Award Period Covered: 10/04-9/09
Person-Months Per Year Committed to the Project: 0.5
- 2) Agency: EPA Western Region Hazardous Substance Research Center

Title: Continuous-Flow Column Studies of Reductive Dehalogenation with Two Different Enriched Cultures: Kinetics, Inhibition, and Monitoring of Microbial Activity

Total Award Amount: \$281,000

Total Award period Covered: 1/1/04 – 12/31/06

PI: Lewis Semprini, CO-PIs: Mark Dolan, Alfred Spormann

Person Months Committed to the Project: Cal: 0.5

- 3) Agency: EPA Western Region Hazardous Substance Research Center
Title: Aerobic Cometabolism of Chlorinated Ethenes by Microorganisms Grown on Organic Acids and Alcohols
Total Award Amount: \$200,209
Total Award period Covered: 1/1/04 – 12/31/06
PIs: Mark Dolan, Dan Arp, Peter Bottomley, Lew Semprini
Person Months Committed to the Project: Cal: 0.5