

State Water Resources Control Board

TO: Christopher Rose
Senior Environmental Scientist
Central Coast Regional Water Quality Control Board



FROM: Gerald W. Bowes, Ph.D., Manager
Cal/EPA Scientific Peer Review Program
Office of Research, Planning and Performance

DATE: August 29, 2012

**SUBJECT: REVIEWERS APPROVED FOR PROPOSED BASIN PLAN AMENDMENT
TO ADOPT TOTAL MAXIMUM DAILY LOADS FOR TOXICITY AND
PESTICIDES IN SANTA MARIA WATERSHED**

I am pleased to response to your request for scientific peer-reviewers for the subject noted above, The University of California, with whom Cal/EPA has an Interagency Agreement to identify reviewer candidates, recommended scientists it considered qualified to perform the assignment based on carefully conducted interviews.

Each candidate who was both interested and available for the review period was asked to complete a Conflict of Interest Disclosure form and send it to me for review. In follow-up communications with selected candidates, I asked for clarifications as necessary, and affirmation that there is nothing in their background: a) that might be reasonably construed by others as affecting their judgment, and b) which might constitute an actual or potential source of bias. They also were asked to affirm they would be able to perform an objective and independent review.

Reviewers Approved:

- a) Jeffrey Jenkins, Ph.D.
Professor, Department of Environmental and Molecular Toxicology
Oregon State University
331 Weniger Hall
Corvallis, Oregon 97331
Telephone: (541) 737-5993
Email : Jeffrey.Jenkins@oregonstate.edu

- b) Linda S. Lee, Ph.D.
Professor of Agronomy
College of Engineering
Purdue University
701 West Stadium Avenue
West Lafayette, Indiana 47907-2045

Telephone: (765) 494-8612
FAX: (765) 494-9321
Email: lslee@purdue.edu
- c) Jonathan D. Maul, Ph.D.
Assistant Professor
Department of Environmental Toxicology
Institute of Environmental and Human Health
Texas Tech University
Reese Technology Center building, 555
1207 Gilbert Drive
Lubbock, Texas 79416

Telephone: (806) 885-4577
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Email: jonathan.maul@TIEHH.TTU.edu

Curriculum Vitae are attached.

Contacting Reviewers. Contact the reviewers immediately. Tell them you have just learned of their identities, and when to expect review material. Keep them informed of delays, and ensure new dates are acceptable. Include me as a "cc" on communications indicating delays.

Initiating the Review. Send the reviewers a cover letter with the following:

- a) original letter of request for reviewers and attachments, which was sent to them by the University during the solicitation process;
- b) Key Document(s) for Review;
- c) Key Supporting Documents.

An example of a cover letter initiating the review is attached. Please send me a copy of the cover letter.

Essential Directions. Tell your reviewers in the cover letter:

- a) **Follow the review guidance provided in the initial letter of request for reviewers, Attachment 2.**
- b) **Address all topics listed in Attachment 2, as expertise allows, in the order given.**

Revisions. If you have revised any part of the initial request, stamp "Revised" on each page where a change has been made. Clearly describe the revision in the cover letter. Reviewers must be made aware of changes.

Mode of Transmission. Review material frequently is sent electronically. Hard copy is recommended for lengthy documents and documents with fold-out sections. Confirm electronic and hard copies have been received by reviewers.

Confidentiality of the Review Process. Approved reviewers were sent the attached January 7, 2009 Supplement to the Cal/EPA Peer Review Guidelines. Please read it carefully. In part it provides guidance to ensure confidentiality through the peer review process. Reviewers must keep their identities confidential, and I ask that you do also to avoid compromising the external review.

Communication Restrictions. Communications between reviewers and requesting organizations are restricted to questions of clarification. Both enquiries and responses must be in writing.(email is fine). If you prefer, all communications can be routed through me.

Contacts by Outside Parties. After reviews have been submitted, the Supplement notes reviewers are under no obligation to discuss their comments with third parties, and we recommend they do not.

All outside parties are provided opportunities to address a proposed regulatory action through a well-defined rulemaking process. Ask your reviewers to direct third parties to you, or a designated staff person, with comments or suggestions in writing.

Completed Reviews. These are to be sent directly to the person signing the letter initiating the review, unless directed otherwise.

If I can provide additional help, contact me at any time during the review process.

cc: Mr. Peter Meertens
Environmental Scientist
pmeertens@waterboards.ca.gov
Mr. Harvey Packard
Supervising Engineer
hpackard@waterboards.ca.gov
Central Coast Regional Water Quality Control Board

Mr. Rik Rasmussen
TMDL Section Chief
rrasmussen@waterboards.ca.gov
Ms. Frances McChesney
Supervising Senior Staff Counsel
FMcChesney@waterboards.ca.gov
State Water Resources Control Board

Attachments (5)

- 1) Curriculum Vitae – Jeffrey Jenkins, Ph.D.
- 2) Curriculum Vitae – Linda S. Lee, Ph.D.
- 3) Curriculum Vitae – Jonathan D. Maul, Ph.D.
- 4) Example of Letter Initiating Review
- 5) Supplement to Cal/EPA External Scientific Peer Review Guidelines

Jeffrey J. Jenkins
Professor
Department of Environmental and Molecular Toxicology
Oregon State University
Corvallis, OR

<http://emt.oregonstate.edu/jeffreyjenkins>

A. EDUCATION AND EMPLOYMENT

Education:

California Polytechnic State University, San Luis Obispo, CA	B. S.	1972	Biochemistry/Soil Science
Michigan State University, East Lansing, MI	Ph. D.	1981	Entomology Advisor: M. J. Zabik

Employment:

1973-1975	Instructor in Health Sciences, Baylor University-Academy of Health Sciences of the United States Army, San Antonio, TX
1975-1982	Graduate Research and Teaching Assistant, Pesticide Research Center, Michigan State University, East Lansing, MI
1982-1986	Senior Research Chemist, Merck Sharp & Dohme Agricultural Research and Development, Three Bridges, NJ
1986-1990	Assistant Professor, Department of Entomology, Pesticide Coordinator, Cooperative Extension, and Associate Director, Massachusetts Pesticide Analysis Laboratory, Agricultural Experiment Station, University of Massachusetts, Amherst, MA.
1990-1993	Assistant Professor and Extension Specialist, Agricultural Chemistry Department and Graduate Toxicology Program, Oregon State University, Corvallis, OR
1993-1997	Associate Professor and Extension Specialist, Agricultural Chemistry Department and Graduate Toxicology Program, Oregon State University, Corvallis, OR
1998-2001	Associate Professor and Extension Specialist, Department of Environmental and Molecular Toxicology, Oregon State University, Corvallis, OR
2000-present	Adjunct faculty, Mid-Columbia Agricultural Research and Extension Center, Oregon State University, Hood River, OR
2001-present	Professor and Extension Specialist, Department of Environmental and Molecular Toxicology, Oregon State University, Corvallis, OR

Professional Societies: American Chemical Society
Society of Environmental Toxicology and Chemistry
Society of Toxicology

State, Regional, and National Committees:

Current

Trustee and President of the Toxicology Education Foundation (<http://www.toxedfoundation.org>)
Oregon Water Quality Pesticide Management Team, adjunct member
Oregon Pesticide Analytical and Response Center Consultant
North American Blueberry Council, Crisis Management Advisor
USDA Multistate Research Project W-2045: Mechanisms and Mitigation of Agrochemical Impacts on Human and Environmental Health

American Chemical Society Agrochemicals Division Hospitality Committee and Chair of the Public Relations Committee.

Past

Trustee and Vice President of the Toxicology Education Foundation
Oregon State University Food Safety and Environmental Stewardship Laboratory Advisory Board
Oregon Department of Environmental Quality Persistent Pollutant Science Workgroup
American Chemical Society Agrochemicals Division Executive Committee
American Chemical Society Agrochemicals Division Awards Chair, Program Chair, and Division Chair
Legislative Workgroup on Pesticide Use in and Around Oregon Schools (2008-2009)
State Representative to the USDA IR-4 Program
NIOSH Pacific Northwest Agricultural Safety and Health Center Advisory Committee
Oregon Department of Environmental Quality Technical Review Committee: Water Quality Criteria for Pollutants
Technical Advisory Panel Member, National Agricultural Aviation Research and Education Foundation
Washington State University Food and Environmental Quality Laboratory Advisory Board
Pacific Northwest Association of Toxicologists, Secretary-Treasurer
Oregon Poison Prevention Task Force (Executive Appointment) 1996-2000
State Liaison Representative to the USDA Pesticide Impact Assessment Program
USGS Willamette National Water Quality Assessment Liaison Committee
USDA Western Region IR-4 Program Executive Committee
Oregon Pesticide Analytical Response Center Aquatic Herbicide Use Subcommittee
USDA Cooperative Regional Research Project W-45, Secretary and Chair
USDA/EPA Pesticide Benefits Methodology Working Group
American Association of Pesticide Safety Educators Nominations Committee
USDA Pesticide Properties Database Advisory Committee
Oregon Aerial Applicators Drift Task Force
Triennial Review of Oregon's Water Quality: Groundwater Subcommittee
Oregon Health Division Advisory Committee on Toxicology
Oregon Health Division Phase II Pesticide Drinking Water Advisory Committee
USDA Lorsban/Diazinon National Benefits Assessment Team
USDA Western Regional Coordinating Committee (WRCC-60) on Pesticide Resistance, Chairman of Subcommittee on Economic Impact of Pesticide Resistance
EPA/USDA National Review Team of Private Pesticide Applicator Training
Massachusetts Dept. of Food and Agriculture Right of Way Vegetation Management Plan Advisory Panel
Massachusetts Dept. of Food and Agriculture Task Force on Pesticide Applicator Certification & Training
Massachusetts Department of Food and Agriculture Task Force on Pesticide Disposal
Massachusetts Department of Food and Agriculture Task Force on Cholinesterase Testing (Co-Chairman)
State Liaison Representative to the USDA Pesticide Impact Assessment Program from Massachusetts

Awards:

United States Department of Agriculture Certificate of Merit, 1989.
United States Department of Agriculture Soil Conservation Service Certificate of Appreciation, 1989.
United States Department of Agriculture Certificate of Appreciation, 1992.
Gamma Chapter of the EΣΦ National Honorary Extension Fraternity State Team Award, 1992.
United States Department of Agriculture Certificate of Appreciation, 1995.
Oregon Department of Environmental Quality Certificate of Appreciation, 1996
United States Department of Agriculture Group Honor Award for Excellence, 2003
Oregon State University College of Agricultural Sciences Team Award, 2005
Western Extension Director's Awards of Excellence - Regional Qualifying Program, 2006
Oregon Department of Environmental Quality Certificate of Appreciation, 2009
Fellow, Agrochemicals Division of the American Chemical Society, 2012

Invited Seminars:

EPA Corvallis Environmental Research Laboratory, Corvallis, OR	1980	
New York State Agricultural Experiment Station, Geneva, NY	1980	
Ag Organics Division, Dow Chemical Company, Midland, MI	1981	
Department of Entomology, University of Massachusetts, Amherst, MA	1983	
Pesticide Research Center, Michigan State University, East Lansing, MI	1983	
Department of Entomology, Clemson University, Clemson, SC	1984	
USGS National Water Quality Laboratory, Denver, CO	1985	
Entomological Society of America National Conference, Boston, MA	1988	
Department of Plant Sciences, University of Rhode Island, Kingston, RI	1989	
Special Seminar on Groundwater Issues, Michigan State Univ., East Lansing, MI	1989	
Department of Environmental Toxicology, UC Davis, Davis, CA	1991	
California Department of Food and Agriculture, Sacramento, CA		1991
Departments of Agronomy and Soil Science, North Carolina State University, Raleigh, NC	1992	
Du Pont Agricultural Products Experiment Station, Wilmington, DE	1995	
California Department of Food and Agriculture, Sacramento, CA		1995
EULA-Chile Center, University of Concepción, Chile	1996	
OHSU Center for Research on Occupational and Environmental Toxicology, Portland, OR	1997	
Department of Plant, Soil, and Entomological Sciences, University of Idaho, Moscow, ID	1999	
Graduate Toxicology Program, University of California, Riverside, CA	2003	
U.S. – Latin American Workshop on Environmental Chemistry, Salvador da Bahia, Brazil	2004	
Department of Botany and Zoology, Stellenbosch University, South Africa	2005	
Food and Agriculture Organization of the United Nations, Rome, Italy	2005	
Centre de Recherches en Ecotoxicologie pour le Sahel, Dakar, Senegal	2005	
Laboratoire de Toxicologie et de Contrôle de la Qualité Environnementale (LTCQE) du	2007	
Laboratoire Central Vétérinaire (LCV), Bamako, Mali		
Agrochemical Division of the American Chemical Society International Award Symposium		2009
Cairo University Faculty of Medicine, Cairo, Egypt	2010	
National Institute for Food Control, Hanoi, Vietnam	2011	

Refereed Publications:

Jenkins, J. J., M. J. Zabik, R. Kon, E. D. Goodman. 1983. A Model for Azinphosmethyl Attenuation and Movement in a Michigan Orchard Ecosystem: I. Development and Presentation of the Experimental Data Base. Arch. Environ. Contamin. Toxicol. 12, 99-110.

Goodman, E. D., J. J. Jenkins, M. J. Zabik. 1983. A Model For Azinphosmethyl Attenuation and Movement in a Michigan Orchard Ecosystem: II. Parameterization Of A Field Based Model. Arch. Environ. Contamin. Toxicol. 12, 111-119.

Brooks, M. W., J. J. Jenkins, M. Jimenez, T. Quinn, J. M. Clark. 1989. A Rapid Method for the Analysis of Alachlor, Atrazine, and Metolachlor from Groundwater by Solid Phase Extraction. Analyst. 114, 405-406.

Brooks, M. W., D. M. Tessier, D. Soderstrom, J. J. Jenkins, and J. M. Clark. 1990. A rapid method for the simultaneous analysis of chlorpyrifos, isophenfos, carbaryl, iprodione, and triadimefon in groundwater by solid-phase extraction. J. Chromatogr. Sci., 28 (9), 487-489.

Cooper, R. J., J. J. Jenkins, A. S. Curtis. 1990. Pendimethalin Volatility Following Application to Turfgrass. J. Environ. Qual. 19:508-513.

- Jenkins, J. J., R. J. Cooper, A. S. Curtis. 1991. Field Chamber Technique for Measuring Pendimethalin Airborne Loss from Turfgrass. *Bull. Environ. Contamin. Toxicol.* 47:594-601.
- Thomson, P. A., J. J. Jenkins, and D. R. Buhler. 1995. Teaching on-line data systems to graduate students of toxicology. *J. Chem. Ed.* 72:4 324-326.
- Kamrin, M. A., A. Craigmill, T. A. Miller, and J. J. Jenkins. 1995. EXTOWNET: A Unique Approach to Environmental Toxicology Outreach. *The Toxicologist* 15, 169.
- Strauss, S. H., S. A. Knowe, J. J. Jenkins. 1997. Benefits and Risks of Transgenic Roundup Ready Cottonwoods. *J. Forestry*, 95:5, 12-19.
- Moate, T. F., and J. J. Jenkins. 1997. Gas chromatographic determination of airborne residues of azinphosmethyl and azinphosmethyl-oxon by cool on-column injection. *J. Chrom. A* 775: 307-312.
- Runes, H. B., J. J. Jenkins, J. A. Field. 1999. A Method for the Analysis of Triadimefon and Ethofumesate from Dislodgeable Foliar Residues on Turfgrass by Solid-Phase Extraction and In-Vial Elution. *J. Ag Food Chem.* 27:8 3252-3256.
- Bailey, B. J. and J. J. Jenkins. 2000. Association of azinphos-methyl with rat erythrocytes and hemoglobin. *Arch. Toxicol.* 74: 322-328.
- Runes, H. B., P. J. Bottomley, R. N. Lerch, and J. J. Jenkins. 2001. Atrazine remediation in wetland microcosms. *Environ. Toxicol. Chem.* Vol. 20 No. 5. pp. 1059-1066.
- Peterson, J. L., P. C. Jepson, J. J. Jenkins. 2001. A test system to evaluate the susceptibility of Oregon native stream invertebrates to triclopyr and carbaryl. *Environ. Toxicol. Chem.* Vol. 20, No. 10, pp. 2205-2214.
- Peterson, J. L., P. C. Jepson, J. J. Jenkins. 2001. Effect of varying pesticide exposure duration and concentration on the toxicity of carbaryl to two field-collected stream invertebrates, *Calineuria californica* (Plecoptera: Perlidae) and *Cinygma* sp. (Ephemeroptera: Heptageniidae). *Environ. Toxicol. Chem.* Vol. 20, No. 10, pp. 2215-2223.
- Runes, H. B., J. J. Jenkins, and P. J. Bottomley. 2001. Atrazine degradation by bioaugmented sediment from constructed wetlands. *Appl. Microbiol Biotechnol* 57:427-432.
- Buchwalter, D., J. J. Jenkins, L. R. Curtis. 2002. Respiratory strategy is a major determinant of [³H] water and [¹³C]chlorpyrifos uptake in aquatic insects. *Can. J. Fish Aquat. Sci.* 59: 1315-1322.
- Sandahl, J. F, and J. J. Jenkins. 2002. Pacific Steelhead (*Oncorhynchus Mykiss*) exposed to chlorpyrifos: benchmark concentration estimates for acetylcholinesterase inhibition. *Environ. Toxicol. Chem.* 21: 2452-2458.
- Runes, H. B., J. J. Jenkins, J. A. Moore, P. J. Bottomley, and B. D. Wilson. 2003. Treatment of atrazine in nursery irrigation runoff by a constructed wetland. *Water Res.*, Vol. 37, p. 539-550.
- Buchwalter, D.B. J. J. Jenkins, and L. R. Curtis. 2003. Temperature Influences on Water Permeability and Chlorpyrifos Uptake in Aquatic Insects with Differing Respiratory Strategies. *Environ. Toxicol. Chem.* Vol. 22, No. 11, pp. 2806-2812.
- Sandahl, J. F., D. H. Baldwin, J. J. Jenkins, N. L. Scholz. 2004. Odor-evoked field potentials as indicators of sublethal neurotoxicity in juvenile coho salmon (*Oncorhynchus kisutch*) exposed to copper, chlorpyrifos, or esfenvalerate. *Can. J. Fish. Aquat. Sci.* 61(3): 404-413

- Buchwalter, D.B., J.F. Sandahl, J.J. Jenkins, L.R. Curtis. 2004. Roles of uptake, biotransformation, and target site sensitivity in determining the differential toxicity of chlorpyrifos to second to fourth instar *Chironomus riparius* (Meigen). *Aquatic Toxicol.* 66:149-157.
- Jenkins, J., H. Runes, T. Moate. 2004. Xylenes in Oregon Hazelnuts. *Bull. Environ. Contam. Toxicol.* 72:1152-1156.
- Sandahl, J. F., D. H. Baldwin, J. J. Jenkins, N. L. Scholz. 2005. Comparative thresholds for acetylcholinesterase inhibition and behavior impairment in coho salmon exposed to chlorpyrifos. *Environ. Toxicol. Chem.* 24 (1): 169-178.
- Villeneuve, D.L., L. R. Curtis, J. J. Jenkins, K. E. Warner, F. Tilton, M. L. Kent, V. G. Watral, M. E. Cunningham, D. F. Markle, D. Oraphinkrissanakriangkrai, E. R. Johnson, R. Grove, K. A. Anderson. 2005. Environmental Stresses and Skeletal Deformities in Fish from the Willamette River, Oregon. *Environ. Sci. Technol.*, 39, 3495-3506
- Warner, K.E. and J.J. Jenkins. 2007. Effects of 17 Alpha-Ethinylestradiol and Bisphenol A on Vertebral Development in the Fathead Minnow (*Pimephales promelas*). *Environ. Toxicol. Chem.* 26, 732-737.
- Sandahl, J. F., D. H. Baldwin, J. J. Jenkins, and N. L. Scholz. 2007. A sensory system at the interface between urban stormwater runoff and salmon survival. *Environ. Sci. Technol.* 41 (8), 2998 -3004.
- Johnson, K., Jepson, P. and Jenkins, J. 2008. Esfenvalerate-Induced Case-Abandonment in the Larvae of the Caddisfly *Brachycentrus americanus*. *Environ. Toxicol. Chem.* Vol. 27, No. 2, pp. 397-403
- Palmquist, K. R., J. J. Jenkins, P. C. Jepson. 2008. Clutch Morphology and the Timing of Exposure Impact the Susceptibility of Aquatic Insect Eggs to Esfenvalerate. *Environ. Toxicol. Chem.* Vol. 27, No. 8, pp. 1713-1720.
- Palmquist, K. R., J. J. Jenkins, P. C. Jepson. 2008. Effects of Dietary Esfenvalerate Exposures on Three Aquatic Insect Species Representing Different Functional Feeding Groups. *Environ. Toxicol. Chem.* Vol. 27, No. 8, pp. 1721-1727.
- Palmquist, K. R., P. C. Jepson, J. J. Jenkins. 2008. Impact of Aquatic Insect Life Stage and Emergence Strategy on Sensitivity to Esfenvalerate Exposure. *Environ. Toxicol. Chem.* Vol. 27, No. 8, pp. 1728-1734.
- Stone, D.L., D.L. Sudakin, J.J. Jenkins. 2009. Longitudinal trends in organophosphate incidents reported to the National Pesticide Information Center, 1995-2007. *Environmental Health* 2009, 8:18 (20 April 2009)
<http://www.ehjournal.net/content/8/1/18>
- Hope, BK, D Stone, T Fuji, RW Gensemer, J Jenkins. 2010. Meeting the Challenge of Identifying Persistent Pollutants at the State Level. *Integrated Environmental Assessment and Management*, Vol. 6, No. 4, pp. 735-748.
- Forsberg, ND, R Rodriguez-Proteau, L Ma, J Morr , JM Christensen, CS Maier, JJ Jenkins, KA Anderson. 2011. Organophosphorus pesticide degradation product in vitro metabolic stability and time-course uptake and elimination in rats following oral and intravenous dosing. *Xenobiotica*, 41(5): 422-9.

Book Chapters:

- Jenkins, J. J., R. J. Cooper, A. S. Curtis. 1990. Comparison of airborne and dislodgeable residues of pendimethalin following application to turfgrass. In *Long Range Transport of Pesticides*. D. A. Kurtz, Ed., Lewis Publishers, Chelsea, MI, 29-46.

Rinehold, J. and J. J. Jenkins. 1991. Diazinon use on hops in the United States: A special report on the impact to the hops industry upon the removal of diazinon for registration on hops. In *The Biologic and Economic Assessment of Diazinon*. USDA Extension Service, Washington, D. C.

Rinehold, J. and J. J. Jenkins. 1991. Lorsban use on mint in the United States: A special report on the impact to the mint industry upon the removal of lorsban for registration on hops. In *The Biologic and Economic Assessment of Lorsban*. USDA Extension Service, Washington, D. C.

Rinehold, J. and J. J. Jenkins. 1991. Lorsban use on grass seed in the United States: A special report on the impact to the grass seed industry upon the removal of lorsban for registration on hops. In *The Biologic and Economic Assessment of Lorsban*. USDA Extension Service, Washington, D. C.

Rinehold, J. and J. J. Jenkins. 1991. Lorsban use on clover seed in the United States: A special report on the impact to the clover seed industry upon the removal of lorsban for registration on hops. In *The Biologic and Economic Assessment of Lorsban*. USDA Extension Service, Washington, D. C.

Jenkins, J. J., A. S. Curtis, and R. J. Cooper. 1993. Two small plot techniques for Measuring Airborne and dislodgeable residues of pendimethalin following application to turfgrass. In ACS Symposium Series No. 522, *Pesticides in Urban Environments: Fate and Significance*. K. D. Racke, Ed., American Chemical Society, Washington, D. C., 228-242.

Rinehold, J. and J. J. Jenkins. 1994. Chlorpyrifos use on mint. In *The Biologic and Economic Assessment of the Field Crop Usage of Chlorpyrifos*, USDA Extension Service, Washington, D. C., Tech. Bulletin No. 1832. pp. 14.

Rinehold, J. and J. J. Jenkins. 1994. Chlorpyrifos use on grass seed Crops. In *The Biologic and Economic Assessment of the Field Crop Usage of Chlorpyrifos*, USDA Extension Service, Washington, D. C., Tech. Bulletin No. 1832. pp. 46.

Rinehold, J. and J. J. Jenkins. 1994. Chlorpyrifos use on clover seed. In *The Biologic and Economic Assessment of the Field Crop Usage of Chlorpyrifos*, USDA Extension Service, Washington, D. C., Tech. Bulletin No. 1832. pp. 30.

Rinehold, J. and J. J. Jenkins. 1994. Diazinon use on hops. In *The Biologic and Economic Assessment of the Field Crop Usage of Diazinon*, USDA Extension Service, Washington, D. C.

Norris, L. A., F. Dost, R. VanBossuyt Jr., J. J. Jenkins. 2002. Risk Analysis for tree growth regulators (TGR) used on electric utility rights-of-way. Proceedings of the Seventh International Symposium on Environmental Concerns in Rights-of-Way Management. September 9-13, 2000, Calgary, Alberta, Canada. John W. Goodrich-Mahoney, Dean Mutrie and Colin Guild, eds., p. 673-688.

Articles:

Buchwalter, D., D. Judd, J. Jenkins, L. Curtis. 2001. Testing Toxicological Hypotheses Based on Ecological Observations: A Case Study Using Aquatic Insects and Epithelia. In *Society of Environmental Toxicology and Chemistry Globe*, Vol. 2, No.1, p. 30-31.

Presentations at national meetings:

Riley, S., J. Fults, S. Marcoe, R. Kachadoorian, K. Masterson, K. Kishida, J. Groom, D. Farrer, J. Jenkins. Interagency Management of Pesticides and Water Quality in Oregon. 2012. Columbia River Estuary Conference: New Scientific Findings and their Management Implications, May 15-17, 2012, Astoria, Oregon.

Janney, P, K Anderson, J Jenkins. 2012. Continuous monitoring of pesticides in a Pacific Northwest freshwater off-channel habitat using lipid-free tubing passive sampling devices. 8th National Monitoring Conference – Water: One Resource – Shared Effort – Common Future. Portland, OR, April 30 - May 4, 2012.

Riley, S, K Masterson, S Marcoe, M Allen, D Farrar, K Kishida, R Kachadoorian, J Fults, and J Jenkins. 2012. Interagency management of pesticides and water quality in Oregon. 8th National Monitoring Conference – Water: One Resource – Shared Effort – Common Future. Portland, OR, April 30 - May 4, 2012.

Jenkins, JJ. 2011. Fishing for Answers in the Willamette River: The Mystery of the Newberg Pool. Society of Environmental Toxicology and Chemistry North America 32st Annual Meeting. Boston, MA. November 13-17, 2011.

Forsberg, N, R Rodriguez-Proteau, L Ma, J Morre, M Christensen, C Maier, J J Jenkins, K Anderson. Metabolic stability and pharmacokinetic studies suggest that the DAP biomarkers may lead to overestimates of organophosphate pesticide exposure. ASMS Conference on Mass Spectrometry and Allied Topics. Denver, CO, June 5 - 9, 2011.

KA Anderson, M Sarr, G Sower, WE Hillwalker, L Quarles, J Jenkins. Strategies and Challenges of Capacity Building and Technology Transfer for Environmental Monitoring in the United States and Western Africa. Society of Environmental Toxicology and Chemistry North America 31st Annual Meeting. Portland, OR. November 7-11, 2010.

Janney, PK, JJ Jenkins, SM Eden, RM Hadden. 2010. Identifying Hydrologic and Landscape Characteristics that Influence Pesticide Surface Water Loading in the Willamette Valley, Oregon. Society of Environmental Toxicology and Chemistry North America 31st Annual Meeting. Portland, OR. November 7-11, 2010.

Jenkins, J, P. Jepson, K. Blaustein, W. Settle, M. HamaGarba, M. Sarr, M. Sow, M. Dia. Challenges of pesticide human health risk assessment in West Africa. Chemistry for a Sustainable World, The Royal Australian Chemical Institute's National Convention and the 12th IUPAC International Congress of Pesticide Chemistry, Melbourne, Australia, July 4-8, 2010.

Jenkins, JJ. A mechanistic approach to the evaluation of pesticide risks to aquatic species native to the Pacific Northwest. 91st Annual Meeting of the Pacific Division of the American Association for the Advancement of Science, Southern Oregon University, Ashland, OR, 13 – 17 June 2010.

Janney, PK, JJ Jenkins, K Wallis, H Riedl. Effect of Riparian Vegetation on Surface Water Loading of Ground and Aerially-Applied Pesticides in Cherry Production. Abstract, 2010 Pacific Branch Entomological Society of America Meeting, Boise, ID, April 11-14, 2010

Jenkins, JJ, K Wallis, PK Janney, H Riedl. Effect of Riparian Vegetation on Surface Water Loading of Ground and Aerially-Applied Pesticides in Cherry Production. 239th American Chemical Society National Meeting, March 21-25, 2010, San Francisco, California

Jenkins, J. Pesticide characteristics important to predicting volatile loss from foliar surfaces. International Award for Research in Agrochemicals: Don Wauchope and Friends--Reflections on the Future of Pesticide Environmental Chemistry. American Chemical Society 238th National Meeting, Washington DC, 8/16-20/2009.

Blaustein, K., J. Jenkins, P. Jepson, M. Sow, M. Sarr. Risk assessment tools that contribute to effective risk management and risk communication. 6th International IPM Symposium: Transending Boundaries, Portland OR, 3/23-26/09.

Jenkins, J. and M. Sarr. Trends and Importance of Pesticide Risks in Surface Waters in West Africa and the Pacific Northwest. 6th International IPM Symposium: Transending Boundaries, Portland OR, 3/23-26/09.

- Settle, W., H. Gaba, M. Sarr, P. Jepson, J. Jenkins. The Role of Community Based Participatory Education in Reducing Risks to Agro-Chemicals while Meeting Food Security Goals. 6th International IPM Symposium: Transending Boundaries, Portland OR, 3/23-26/09.
- Janney, P. K., J. J. Jenkins, K. Wallis, H. Riedl. 2008. The Effect of Riparian Vegetation on Surface Water Loading of Aerially-Applied Malathion in Cherry Production. Society of Environmental Toxicology and Chemistry North America 29th Annual Meeting, Tampa, FL. November 2008.
- Jenkins, J. J., D. Sudakin, D. Stone. 2008. The National Pesticide Information Center. American Association of Pesticide Control Officials Annual Meeting, Washington, DC, March 3-5, 2008.
- Johnson, K., Jenkins, J. and Jepson, P. 2007. Use of Multiple Life Stages in Assessing *Cinygmula* Sp. Mayfly Nymph Sensitivity to Esfenvalerate. Pacific Branch of the Entomological Society of America Annual Meeting, Portland, OR, March 25-28, 2007.
- Metta, John W.P., Bolte, John, Vache, Kellie B., Jepson, Paul, Jenkins, Jeffrey, and McDonnell, Jeffrey. 2006. A Watershed-Scale, Fully-Distributed, Model of Pesticide Fate/Transport. Geological Society of America Annual Meeting, Philadelphia, PA October 22-25, 2006 (*Abstracts with Programs*, Vol. 38, No. 7, p. 40)
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Links:

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Education University of Florida 9/77 - 12/83 B.S. (Chemistry)
University of Florida 8/86 - 4/89 M.S. (Environmental Engineering Sciences)
University of Florida 1/90 - 6/93 Ph.D. (Soil Chem./Contaminant Hydrology)

Academic Appointments

2011- present	Associate Head, Department of Agronomy
2006 - present	Head, Ecological Sciences & Engineering Interdisciplinary Graduate Program
2011-present	Affiliated Faculty, Division of Environmental Ecological Engineering
2005 - 2010	Associate Director, Discovery Park Center for the Environment
2006 - 2010	Pre-Environmental Studies Program, Chair (2006-07AY); Co-Chair (2007-09AY)
2001 - present	Professor, Purdue University, Department of Agronomy
1997 - 2001	Associate Professor, Purdue University, Department of Agronomy
1993 - 1997	Assistant Professor, Purdue University, Department of Agronomy
1981 - 1982	High School Science & Math Teacher, Westwood Hills Christian Academy
1980 - 1981	Junior High Science & Math Teacher, Westwood Hills Christian Academy
1984 - 1993	Chemist/Senior Chemist, University of Florida, Soil Science Department

Membership in Academic, Professional, and Scholarly Societies & Related Activities

American Chemical Society (ACS); American Society of Agronomy (ASA); Soil Science Society of America (SSSA); Society of Environmental Toxicology & Chemistry (SETAC); American Association for the Advancement of Science; The Advancement of Sound Science Coalition (TASSC); Ecological Soil Screening Task Group on Soil Chemistry (Eco-SSLs); Indiana Water Resources Research Center Faculty and External Advisory Committees; National Council of Science and the Environment (NCSE); Council of Deans and Director (CEDD); Association of Environmental Engineering and Science Professors (AAESP); EPA Peer Consultation PFOA Panel for Alabama Dow Site Evaluation; EPA Peer Consultation PFOA Panel for the DuPont Washington Works Site Evaluation; Perfluorotelomer Biodegradation Supplemental Environmental Project External Evaluation Team; NRC Report Review Team.

Editorial Boards/National Committees

Associate Editor - Vadose Zone J. (2002-7) and J. Environ. Qual. (2003-6); W45 Mechanisms & Mitigation of Agrochemical Impacts on Human and Environmental Health (2000-5); W82/W1082/W2082 Evaluating the Physical and Biological Availability of Pesticides and Pharmaceuticals in Agricultural Contexts (1994-current); Livestock & Poultry Expert (LPE) Pharmaceutical Expert Team (2007-09).

Awards and Honors

Chemist Certification, American Chemical Society (1984); Frederick B. Smith Scholarship, University of Florida (1991); Certificate of Merit, American Chemical Society (1991); University of Florida Sigma Xi Graduate Student Research Award (1992); Award for Excellence in Graduate Studies, Soil & Water Science, University of Florida (1993); Emil Truog Award for Best Doctoral Dissertation, Soil Science Society of America (1994); Gamma Sigma Delta Research Award of Merit (2001); Purdue University Faculty Scholar (2001-2006); SSAJ Citation for Excellence in Manuscript Review (2003); ASA Fellow (2003); SSSA Fellow (2004); Outstanding Assoc. Editor for J. of Environ. Quality (2004); Gamma Sigma Delta Award of Merit in Research & Teaching (2005); Outstanding Graduate Educator in Agronomy (2008, 2009, 2010).

Research Emphasis

Research emphasis is on developing a mechanistic understanding of the processes that govern environmental fate and remediation of contaminants for use in decision tools and management guidelines for industrial and agricultural settings. Current research projects include the fate of emerging contaminants including pharmaceuticals (trenbolone, estrogens, human and veterinary antibiotics) and perfluorinated telomere-based compounds in soils, sediments, streams, and biosolids; and plume control of selected contaminants of concern.

Publication Summary (sine 1989)

73 (+3 in review) *Refereed papers, 8 Book Chapters, and 28* proceedings, reports, and commentaries >150 Research Abstracts

Extramural funding Summary at Purdue

Funding totaling over \$ 9.5 million from federal agencies (NSF, USEPA, USEPA-STAR, USDA-HEC, USDA-BARD, AFCEE), state (Clean Coal Technology Research, Joint Transportation Program Indiana Soybean Research and Education Fund), Purdue internal competitions (PRF, ARP, Lynn, Showalter, Undergraduate Research Funds), and with over \$3.3 million from industry (Electric Power Research Institute, DuPont, CINERGY, NIPSCO, NISOURCE, American Coal Ash Association, Ish Inc, META Environmental Inc., Tetra Tech EM Inc.).

Previous Major or co-Major Graduate Advisees: 14 PhD, 4 MS-Thesis, & 3 MS-nonthesis.

Current Major or co-Major Graduate Advisees: 3 PhD & 1 MS students

Graduate Student Committee member only since 2005 (degree, graduation): K. Das (PhD., current), D. Bampoh (MS to PhD, current), T. Omotoso (MS to PhD, current), P. Caldwell (MS, current), B. Dorie (PhD, current), A. Martin (PhD, current), J. Zenobio (MS, current), J. Leet (PhD, current), K. Riha (PhD, current), O. Omotilewa (MS to PhD, current), K. Rana (PhD, current), S. Ravindrana (PhD, 2011); H. Gall (PhD, 2011); Payne (MS, 2010), D. Mu (PhD, 2010), B. Atkinson (MS, 2009), R. Perry (MS, 2009), A. Tripathy (MS, 2009), S. Maity (PhD, 2011), E. Johnson (2009, MS), K. Ralston-Hooper (2009, PhD), H. Gall (PhD, current), K. Rana (PhD, current), H. Gall (MS, 2008), K. Davis (MSCE. 2008), S. Pandit (2008, MSCE), E. Cox (2010, MS), J. Siehling (2007, MS), A. Strack (2006, MS), N. Basu (2006, PhD), J. Lee (2006, PhD, 2006), K. Euliss (2005, PhD), N.G. von Kiparski (2005, PhD), X. Zhai (2005, PhD).

Undergraduate Research Advisor: **18 Previous Undergraduate Research Advisees.**

Postdoctoral Associates and Visiting Scientists Sponsored (12 previous and 1 current): Dr. S. Hyun, Korea University; Eunice Thomas, University of Ibadon, Nigeria; Dr. Sarmah, Land Care Research, NZ; Dr. Burns, Troy Risk; Dr. Hyun, Dr. Carmosini, Purdue U.; Dr. Oliviera, Embrapa, Brazil; Dr. Yan, WWTP, PA; Dr. Das, Indian Instit. Technol, India; Dr. Li, Michigan State U.; Dr. J. Kim, Korean U., Seoul Korea; Dr. X. Qiao, Dalian U. of Technology, Dalian, China; C. Simond, EPFL.

Publications

Refereed Journal Papers (* denotes graduate student advisee)

- (1) Royer, L.*, L.S. Lee, R.F. Turco, and L. Nies. 2012. Aerobic Biodegradation of 8:2 Fluorotelomer Acrylate in Aerobic Soils. *Environ. Sci. Technol.*, *In review*.
- (2) Dasu*, K., L.S. Lee, R.F. Turco, and L. Nies. 2012. Aerobic Biodegradation of 8:2 Fluorotelomer Stearate Monoester and 8:2 Fluorotelomer Citrate Triester in Forest Soil. *Chemosphere*, *In review*.

- (3) Gall*, H., S. Sassman*, B. Jenkinson, L.S. Lee, and C. Jafvert. 2012. Hormone Loads Exported by a Tile- Drained Agroecosystem Receiving Animal Manure Wastes. *Hydrological Processes, In review*.
- (4) Khan*, B. and L.S. Lee. 2012. Estrogens and Synthetic Androgens in Manure Slurry from Trenbolone Acetate/Estradiol Implanted Cattle and in Waste-Receiving Lagoons Used for Irrigation, *Chemosphere, In press*.
- (5) Card, Marcella L., Yu-Ping Chin, and Linda S. Lee. 2012. Prediction and experimental evaluation of soil sorption by natural hormones and hormone mimics. *J. Food Agric. Chem.*, 60 (6):1480–1487.
- (6) Dasu*, K., J. Liu* and L.S. Lee. 2011. Aerobic Soil Biodegradation of 8:2 Fluorotelomer Stearate Monoester Degradation. *Environ. Sci. Technol.*, Web-released, DOI: 10.1021/es203978g.
- (7) Gall*, H., S. Sassman*, L.S. Lee, and C. Jafvert. 2011. Hormone Chemograph Behavior in a Tile Drained Agroecosystem Receiving Animal Wastes. *Environ. Sci. Technol.*, 45:8755-8764.
- (8) Qiao, X., N. Carmosini, F. Liu, and L.S. Lee. 2010. Probing the Primary Mechanisms Affecting the Environmental Distribution of Estrogen and Androgen Isomers. *Environ. Sci. Technol.*, 81:911-917.
- (9) Mashtare, M., B. Khan, and L.S. Lee. 2010. Evaluating stereoselective sorption by soils of 17 α -estradiol and 17 β -estradiol *Chemosphere*, 82:847–852.
- (10) Dasu*, K., L.A. Royer*, J. Liu and L.S. Lee. 2010. Hydrolysis of Fluorotelomer Compounds Leading to Fluorotelomer Alcohol Production During Solvent Extractions of Soils. *Chemosphere*, 81:911-917.
- (11) Hyun*, S. and L.S. Lee. 2010. Phenanthrene and 2, 2', 5, 5'-PCB Sorption by Several Soils from Methanol-water Solutions: The Effect of Weathering and Solute Structure. *Chemosphere*, 78(4), 423-429.
- (12) Khan*, B. and L. S. Lee. 2009. Soil Temperature and Moisture Effects on the Persistence of Synthetic Androgen 17 α -Trenbolone, 17 β -Trenbolone and Trendione, *Chemosphere*, 79:873-879.
- (13) Carmosini*, N. and L.S. Lee. 2009. Sorption of an Amphoteric Pharmaceutical Ciprofloxacin by Diverse Types of Dissolved Organic Carbon. *Chemosphere* 77:813-820.
- (14) Khan, B., X. Qiao, and L.S. Lee. 2009. Stereo-selective Sorption by Agricultural Soils and Liquid-Liquid Partitioning of Trenbolone (17 α and 17 β) and Trendione. *Environ. Sci. Technol.* 43:8827–8833.
- (15) Ralston-Hooper*, K., J. Hardy, L. Hahn, H. Ochoa-Acuña, L.S. Lee, R. Mollenhauer, and M. S. Sepúlveda. 2009. Acute and Chronic Toxicity of Atrazine and its Metabolites Deethylatrazine and Deisopropylatrazine on Aquatic Organisms, *Ecotoxicology*, Online June 2009, DOI 10.1007/s10646-009-0351-0.
- (16) Carmosini*, N. and L.S. Lee. 2008. Partitioning of Fluorotelomer Alcohols to Different Sources of Dissolved Organic Carbon. *Environ. Sci. Technol.* 42: 6550-6556.
- (17) Goldberg, S., S. Hyun, and L.S. Lee. 2008. Chemical Modeling of As(III,V) and Se(IV,VI) adsorption by soils surrounding ash disposal facilities. *Vadose Zone J.*, (*In press*).
- (18) Khan*, B., S.A. Sassman, and L.S. Lee. 2008. Degradation 17 α - and 17 β -Trenbolone and Trendione in Agricultural Soils. *Environ. Sci. Technol.*, 42:3570-3574.
- (19) Hyun*, S. and L.S. Lee. 2007. Pentachlorophenol sorption by variable-charge soils in methanol-water mixture: pH effect at the low solvent volume fraction. *Chemosphere*, 70(3): 503-510.
- (20) Liu*, J., L.S. Lee, L.F. Nies, C.H. Nakatsu and R.F. Turco. 2007. Biotransformation of 8:2 Fluorotelomer Alcohol in Soil and by Soil Bacteria Isolates. *Environ. Sci. Technol.* 2007; 41(23); 8024-8030. DOI: 10.1021/es0708722.
- (21) Liu*, J. and L.S. Lee. 2007. Effect of Perfluorocarbon Chain Length on Solubility and Sorption by Soils of Fluorotelomer Alcohols. *Environ. Sci. Technol.* 41(15); 5357-5362.

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- (23) Sassman, S., A.K. Sarmah, and L.S. Lee. 2007. Sorption and Degradation of Tylosin A, Tylosin D., and Tylosin A-Aldol in Soils. *Environ. Toxicol. Chem.* 26(8):1629–1635.
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- (25) Hyun*, S, P.E. Burns*, I.P. Murarka, and L.S. Lee. 2006. Se(IV and VI) sorption by soils surrounding fly ash management facilities. *Vadose Zone J.*, 5:1110-1118.
- (26) Burns*, P.E., S. Hyun*, L.S. Lee, and I.P. Murarka. 2006. Characterizing As(III, V) Adsorption by Soils Surrounding Ash Disposal Facilities. *Chemosphere*, 63(11):1879-1891.
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- (29) Jafvert, C.T., D. Lane*, L.S. Lee, and P.S.C. Rao. 2006. Partitioning of Mono- and Poly-cyclic Aromatic Hydrocarbons in a River Sediment Adjacent to a former Manufactured Gas Plant Site. *Chemosphere*, 62:315-321.
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- (31) Strock*, T.J., S.A. Sassman, and L.S. Lee. 2005. Swine Antibiotic Carbadox and Associated N-Oxide Reduced Metabolites. *Environ. Sci. Technol.* 39:3134-3142.
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- (40) Hyun*, S. and L.S. Lee. 2004. Factors controlling sorption of prosulfuron by variable-charge soils and model Sorbents. *J. Environ. Qual.* 33:1354-1361.
- (41) Sassman, S.A., L. S. Lee, M. Bischoff, and R. F. Turco. 2004. Assessing N,N'-Dibutylurea formation in soils after application of n-butylisocyanate and Benlate fungicides, *J. Food Agric. Chem.*, 52:747-754.

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- (46) Hyun*, S., Lee, L.S., and P.S.C. Rao. 2003. Significance of Anion Exchange in Pentachlorophenol Sorption by Variable-Charge Soils. *J. Environ. Qual.* 32: 966-976.
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- (52) Seol*, Y. and L.S. Lee. 2000. Effect of Dissolved Organic Matter from Treated Effluents on Sorption of Atrazine and Prometryn by Soils, *Soil Sci. Soc. Amer. J.*, 64:1976-1983.
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Book Chapters

- (1) Carmosini*, N. and L. S. Lee. 2007. *Sorption and Degradation of Selected Pharmaceuticals in Soil and Manure*, IN: Fate of Pharmaceuticals in the Environment and Water Treatment Systems. CRC Press, pp. 139-166.
- (2) Lee, L.S., N. Carmosini*, S.A. Sassman, H.M. Dion, and M. S. Sepulveda. 2007. Agricultural Contributions of Antimicrobials and Hormones on Soil and Water Quality, *Adv. Agron.* Volume 93, Chapter, pp. 1-68.
- (3) Lee, L.S., N.D. Priddy*, and D.C.M. Augustijn. 1998. Estimating mass-transfer of polyaromatic hydrocarbons from coal-tar contaminated soil. IN: *Soil and Aquifer Pollution: Non-Aqueous Phase Liquids - Contamination and Reclamation*, H. Rubin and J. Carberry (eds.) Springer-Verlaag, Berlin, Germany, Chapter 6, p. 91-108.
- (4) Augustijn, D.C.M., L.S. Lee, R.E. Jessup, M. D. Annable, and P.S.C. Rao. 1997. Remediation of Soils Contaminated with Hydrophobic Organic Chemicals: Theoretical Basis or the Use of Cosolvents. In: *Subsurface Restoration Handbook*, C.H. Ward, J.A. Cherry, and M.R. Scalf (eds.), Ann Arbor Press, Inc., Chelsea, MI, Chapter 15, p. 227-244.

- (5) Rao, P.S.C., **L.S. Lee**, D.C.M. Augustijn, and A.L. Wood. 1995. Environmental fate and transport of organic contaminants in soils at waste disposal sites. Environ. Soil Science Conference Proceedings, Canadian Soil Sci. Soc. Annual Meetings, Edmonton, Alberta, Canada (August 10-13, 1992), Canadian Society of Soil Sci., Manitoba, Canada, Chap. 3, p. 47-93.
- (6) Rao, P.S.C., C.A. Bellin, and **L.S. Lee**. 1995. Sorption and biodegradation of organic contaminants in soils: Conceptual representation of process coupling. In: *Environmental Impact of Soil Component Interactions*, P.M. Huang, J. Berthelin, J.-M. Bollag, W.B. McGill, and A. L. Page (eds.), CRC Press, Boca Raton, FL, Chapter 25, pp. 259-270.
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Curriculum Vitae

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(a) Professional Preparation

Stony Brook University	Biology	B.S., 1994
The University of Mississippi	Biological Sciences	M.S., 1997
Arkansas State University	Environmental Sciences	Ph.D., 2004
Southern Illinois University	Aquatic Ecotoxicology	2004-2007

(b) Appointments

2/07 – Present Assistant Professor, Department of Environmental Toxicology, Texas Tech University, Lubbock, TX.
5/04 – 2/07 Post-doctoral Fellow, Department of Zoology, Southern Illinois University, Carbondale, IL.
9/09 – 5/04 Graduate Research Assistant, Arkansas State University, Jonesboro, AR.
9/97 – 9/99 Biologist, USDA, Agricultural Research Service, National Sedimentation Laboratory, Oxford, MS.
9/94 – 5/97 Graduate Research Assistant, The University of Mississippi, Oxford, MS.

(c) Publications: 5 closely related to this proposed project

1. Qin G, SM Presley, TA Anderson, W Gao, **JD Maul**. 2011. Effects of predator cues on pesticide toxicity: Toward an understanding of the mechanism of the interaction. *Environmental Toxicology and Chemistry* 30:1926-1934.
2. Mehler WT, **JD Maul**, J You, MJ Lydy. 2010. Identifying the causes of sediment-associated contamination in the Illinois River using a whole-sediment Toxicity Identification Evaluation (TIE). *Environmental Toxicology and Chemistry* 29:158-167.
3. Brausch KA, TA Anderson, PN Smith, **JD Maul**. 2010. Effects of functionalized fullerenes on bifenthrin and tribufos toxicity to *Daphnia magna*: Survival, reproduction, and growth rate. *Environmental Toxicology and Chemistry* 29:2600-2606.
4. **Maul JD**, AA Brennan, AD Harwood, MJ Lydy. 2008. Effect of sediment-associated pyrethroids, fipronil, and metabolites on *Chironomus tentans* growth rate, body mass, condition index, immobilization, and survival. *Environmental Toxicology and Chemistry* 27:2582-2590.
5. **Maul JD**, AJ Trimble, MJ Lydy. 2008. Partitioning and matrix-specific toxicity of bifenthrin among sediments and leaf-sourced organic matter. *Environmental Toxicology and Chemistry* 27:945-952.

5 additional significant publications

6. Brausch KA, TA Anderson, PN Smith, and **JD Maul**. 2011. The effect of fullerenes and functionalized fullerenes on *Daphnia magna* phototaxis and swimming behavior. *Environmental Toxicology and Chemistry* 30:878-884.

7. Mehler WT, J You, **JD Maul**, MJ Lydy. 2010. Comparative analysis of whole sediment and pore water toxicity identification evaluation techniques for ammonia and nonpolar organic contaminants. *Chemosphere* 78:814-821.
8. **Maul JD**, LJ Schuler, JB Belden, MR Whiles, MJ Lydy. 2006. Effects of the antibiotic ciprofloxacin on stream microbial communities and detritivorous macroinvertebrates. *Environmental Toxicology and Chemistry* 25:1598-1606.
9. **Maul JD**, JB Belden, BA Schwab, MR Whiles, B Spears, JL Farris, and MJ Lydy. 2006. Bioaccumulation and trophic transfer of polychlorinated biphenyls (PCBs) by aquatic and terrestrial insects to tree swallows (*Tachycineta bicolor*). *Environmental Toxicology and Chemistry* 25:1017-1025.
10. Belden JB, **JD Maul**, MJ Lydy. 2007. Partitioning and photodegradation of ciprofloxacin in aqueous systems in the presence of organic matter. *Chemosphere* 66:1390-1395.

(d) Synergistic Activities

1. Served on the 2010 and 2011 panel review for the Ford Foundation Fellowship Programs.
2. Serve as a mentor for the NIH funded project “Plains Bridges to the Baccalaureate” for underrepresented undergraduates.
3. Taught a 3-day summer session on Ecotoxicology within the “Science: It’s a girl thing” program for 5th and 6th graders sponsored by Texas Tech University.
4. Serve as a student career mentor for the Society of Environmental Toxicology and Chemistry at the last three annual meetings. Activities have included Seminars on Job searches and interviewing skills.
5. Developed an Aquatic Ecotoxicology course at Texas Tech University focused on integrating basic principles of aquatic ecology and toxicology.

(e) Collaborators and Other Affiliations

Collaborators and Co-Editors. Anderson, Todd (Texas Tech University); Brausch, John (BASF); Canas, Jaclyn (Texas Tech University); Cobb, George (Texas Tech University); Cooper, Charles (USDA–ARS); Cox, Stephen (Texas Tech University); Farris, Jerry (Arkansas State University); Godard-Codding, Celine (Texas Tech University); Halbrook, Richard (Southern Illinois University); Jackson, William (Texas Tech University); Kendall, Ronald (Texas Tech University); Lydy, Michael (Southern Illinois University); Mehler, Tyler (Southern Illinois University); Morse, Audra (Texas Tech University); Nations, Shawna (Texas Tech University); Paden, Norka (Texas Tech University); Perry, Gad (Texas Tech University); Presley, Steve (Texas Tech University); Salice, Christopher (Texas Tech University); Schuler, Lance J (Monsanto Inc.); Smiley, Peter (USDA–ARS); Smith, Ernest (Texas Tech University); Testa, Sam (USDA-ARS); Theodorakis, Chris (Southern Illinois University-Edwardsville); Trimble, Andrew A (Ashland University); Wages, Mike (Texas Tech University); You, Jing (State Key Laboratory, Guangzhou Institute of Geochemistry, China).

Graduate Advisors and Post Doctoral Sponsors. Jerry Farris (ASU, PhD advisor), James Kushlan (U of M [retired], MS advisor), Michael Lydy (SIU, Post-doc advisor).

Total number of Graduate Students Advised: M.S. = 2; Ph.D. = 6

State Water Resources Control Board

[Date]

[Example of a letter initiating review.]

[Name and
professional address
of reviewer]

Dear Professor _____,

[SUBJECT] PEER REVIEW OF _____

[Optional Introductory Paragraph]

My letter today is intended to initiate the next phase of the external review – the actual review itself.

Included in this letter are the following:

- a) The [date] request for external reviewers, including [#] attachments, signed by _____;
- b) January 2009 Supplement to the Cal/EPA Peer Review Guidelines;
- c) Key documents for review (if not included with request letter attachments);
- d) Key supporting documents, including all references in hard copy and/or on CD.

Comments on the foregoing:

1. You have been sent the request letter during the solicitation process for reviewer candidates conducted by the University of California.
2. Attachment 2 to the request letter provides focus for the review. I ask that you address all topics, as expertise allows, in the order listed.
3. The January 7, 2009 Supplement. In part, this provides guidance to ensure the review is kept confidential through its course. The Supplement notes reviewers are under no obligation to discuss their comments with third-parties after reviews have been submitted. We recommend they do not. All outside parties are provided opportunities to address a proposed regulatory action through a well-defined regulatory process. Direct third-parties to me.

Please return your review directly to me. Questions about the review, or review material,

Professor _____

- 2 -

[Date of Letter]

should be for clarification, in writing – email is fine, and addressed to me. My responses will also be in writing. The State Water Resources Control Board (Water Board) should not be contacted. All this information will be posted at the program website, and the State and Regional Water Board's Scientific Peer Review website.

I would appreciate your review being completed by _____ [30-day period recommended].

Your acceptance of this review assignment is most appreciated.

Sincerely,

[Signature and professional affiliation,
as well as contact information.]

**Supplement to Cal/EPA External Scientific Peer Review Guidelines –
“Exhibit F” in Cal/EPA Interagency Agreement with University of California
Gerald W. Bowes, Ph.D.**

Guidance to Staff:

1. Revisions. If you have revised any part of the initial request, please stamp “Revised” on each page where a change has been made, and the date of the change. Clearly describe the revision in the cover letter to reviewers, which transmits the material to be reviewed. The approved reviewers have seen your original request letter and attachments during the solicitation process, and must be made aware of changes.
2. Documents requiring review. All important scientific underpinnings of a proposed science-based rule must be submitted for external peer review. The underpinnings would include all publications (including conference proceedings), reports, and raw data upon which the proposal is based. If there is a question about the value of a particular document, or parts of a document, I should be contacted.
3. Documents not requiring review. The Cal/EPA External Peer Review Guidelines note that there are circumstances where external peer review of supporting scientific documents is not required. An example would be "A particular work product that has been peer reviewed with a known record by a recognized expert or expert body." I would treat this allowance with caution. If you have any doubt about the quality of such external review, or of the reviewers' independence and objectivity, that work product – which could be a component of the proposal - should be provided to the reviewers.
4. Implementation review. Publications which have a solid peer review record, such as a US EPA Criteria document, do not always include an implementation strategy. The Cal/EPA Guidelines require that the implementation of the scientific components of a proposal, or other initiative, must be submitted for external review.
5. Identity of external reviewers. External reviewers should not be informed about the identity of other external reviewers. Our goal has always been to solicit truly independent comments from each reviewer. Allowing the reviewers to know the identity of others sets up the potential for discussions between them that could devalue the independence of the reviews.
6. Panel Formation. Formation of reviewer panels is not appropriate. Panels can take on the appearance of scientific advisory committees and the external reviewers identified through the Cal/EPA process are not to be used as scientific advisors.
7. Conference calls with reviewers. Conference calls with one or more reviewers can be interpreted as seeking collaborative scientific input instead of critical review. Conference calls with reviewers are not allowed.

Guidance to Reviewers from Staff:

1. Discussion of review.

Reviewers are not allowed to discuss the proposal with individuals who participated in development of the proposal. These individuals are listed in Attachment 3 of the review request.

Discussions between staff and reviewers are not permitted. Reviewers may request clarification of certain aspects of the review process or the documents sent to them.

Clarification questions and responses must be in writing. Clarification questions about reviewers' comments by staff and others affiliated with the organization requesting the review, and the responses to them, also must be in writing. These communications will become part of the administrative record.

The organization requesting independent review should be careful that organization-reviewer communications do not become collaboration, or are perceived by others to have become so. The reviewers are not technical advisors. As such, they would be considered participants in the development of the proposal, and would not be considered by the University of California as external reviewers for future revisions of this or related proposals. The statute requiring external review of science-based rules proposed by Cal/EPA organizations prohibits participants serving as peer reviewers..

2. Disclosure of reviewer Identity and release of review comments.

Confidentiality begins at the point a potential candidate is contacted by the University of California. Candidates who agree to complete the conflict of interest disclosure form should keep this matter confidential, and should not inform others about their possible role as reviewer.

Reviewer identity may be kept confidential until review comments are received by the organization that requested the review. After the comments are received, reviewer identity and comments must be made available to anyone requesting them.

Reviewers are under no obligation to disclose their identity to anyone enquiring. It is recommended reviewers keep their role confidential until after their reviews have been submitted.

3. Requests to reviewers by third parties to discuss comments.

After they have submitted their reviews, reviewers may be approached by third parties representing special interests, the press, or by colleagues. Reviewers are under no obligation to discuss their comments with them, and we recommend that they do not.

All outside parties are provided an opportunity to address a proposed regulatory action during the public comment period and at the Cal/EPA organization meeting where the proposal is considered for adoption. Discussions outside these provided avenues for comment could seriously impede the orderly process for vetting the proposal under consideration.

4. Reviewer contact information.

The reviewer's name and professional affiliation should accompany each review. Home address and other personal contact information are considered confidential and should not be part of the comment submittal.