

**Invitation for Comments on “Short List” for the
Candidates for the Critical Ecosystem Assessment Model Review Panel
EPA Science Advisory Board**

May 18, 2004

The EPA Science Advisory Board Staff Office announced in a *Federal Register* Notice (Volume 69, Number 77; Pages 21524-21525) that the SAB will conduct a review of the EPA’s Critical Ecosystem Assessment Model (CrEAM). The review will be performed by members of the SAB Ecological Processes and Effects Committee (EPEC). To augment the expertise of the SAB EPEC, the SAB Staff Office sought public nominations of individuals with expertise in ecology and the use of geographic information system technology to evaluate data and conduct landscape scale analyses. Biographical sketches of current EPEC members are available on the SAB website (http://www.epa.gov/sab/pdf/epec_bios_for_web.pdf). Background information on the project and details on the nomination process appeared in the cited notice. The notice is available on the SAB Website at www.epa.gov/sab/.

The SAB Staff Office has received eleven nominations of individuals in response to the request. The SAB Staff Office has identified eight candidates based on the qualifications, interest, and availability of the nominees. These eight candidates compose the “Short List” of nominees. Brief biographical sketches of candidates on the “Short List” are listed below for comment. We welcome information, analysis or documentation for the Staff Office to consider in evaluating the “Short List” candidates.

The SAB Staff Office Director, in consultation with SAB leadership, as appropriate, makes the final decision about who will serve on the panel in the “Panel Selection” phase of this process. In that phase, the SAB Staff completes its review of information regarding conflict of interest, possible appearance of impartiality, and appropriate balance and breadth of expertise needed to address the charge. Staff reviews all information provided by candidates, along with any information that the public may provide in response to the posting of information about the prospective panel on the SAB Web site during the “Short List” phase and information gathered by SAB Staff independently on the background of each candidate.

Please provide any comments you may have with respect to the “Short List” candidates, no later than June 9, 2004. Please make your comments to the attention of Dr. Thomas Armitage, Designated Federal Officer. Emailing comments (armitage.thomas@epa.gov) is the preferred mode of receipt.

Critical Ecosystem Assessment Model Review Panel Nominee Short List

Ralph Boerner

Dr. Ralph E. Boerner is Professor and Chairperson of the Department of Evolution, Ecology, and Organismal Biology at The Ohio State University. He earned the Ph.D. at Rutgers University under the direction of Professor Richard Forman, and taught at Burlington College in New Jersey for four years before joining OSU in 1980. Dr. Boerner's research focuses on the effects of fire, atmospheric deposition, and management on landscape-scale ecology of the soil, forest floor, and vegetation of temperate forests. His current projects involve gauging the efficacy of structural and functional restoration treatments on wildfire hazard reduction and ecosystem health in forests in California, Ohio, Oregon, South Carolina, and North Carolina. This research is currently funded by the U.S. Department of Agriculture and the U.S. Joint Fire Sciences Program. Dr. Boerner is a past president of the Soil Ecology Society, and a current member of the Professional Ethics Committee of the Ecological Society of America and the Executive Board of the National Fire and Fire Surrogates Network. He has served on six grant panels for the National Science Foundation and seven Technical Advisory Panels for the U.S.D.A. Forest Service. He was elected a Fellow of AAAS in 1995, and is a recipient of the OSU Alumni Award for Distinguished Teaching and The Nature Conservancy Oak Leaf Award. Extramural Research Support: Evaluation of the Efficacy of Fire and Fire Surrogates for Wildfire Fuels Management and Forest Restoration in the Klamath National Forest, California. U.S.D.A. Forest Service, August 2001 – July 2005: \$225,935. Spatial Aspects of Soil Chemistry and Biochemistry in Forested Watersheds: U.S.D.A. Forest Service, April 2001 – March 2003: \$38,699. A National Study of the Consequence of Fire and Fire Surrogate Treatments: U.S Joint Fire Science Program, March 2000-September 2004 (one of 18 co-PIs, P. Weatherspoon PI). Total funding \$13,377,815; Boerner lab funding: \$221,000. Prescribed Burning and Restoration of Oak-Hickory Forest in Southern Ohio/Renewal. U.S.D.A. Forest Service Ecosystem Management Program, October 1998 – June 2001 (Co-PIs E. Sutherland, L. Iverson). Boerner Lab funding: \$92,571. Prescribed Burning and Restoration of Oak-Hickory Forest in Southern Ohio. U.S.D.A. Forest Service Ecosystem Management Program, April 1994 - October 1998 (Co-PIs E. Sutherland, L. Iverson). Boerner Lab funding: \$213,648. Ecological consequences of the evergreen and deciduous habits in sympatric species of southern beech (*Nothofagus dombeyi*, *N. obliqua* and *N. pumilio*). National Science Foundation International Programs, November 1996 - December 1999 (Co-PI K.L.M. Decker) \$15,914. Comparacion de las eficiencias nutritivas en especies con diferente longevidad de la hoja del genero *Nothofagus*. Universidad de Concepcion, Chile, June 1995 - December 1999 (Co-PIs M.L. Minoletti, M.F. Hevia, C.G. Pereira). 2,098,000 Chilean pesos. Soil Ecological Interactions with Harvesting and Acidic Deposition in Oak/Maple Forests. U.S.D.A. Forest Service Northern Global Change Program, June 1994 - June 1996. (with E. Sutherland). \$31,349. Differential Expression of Defense Genes in Hybrid Poplar in Relation to Ozone, Drought, and Bacterial Attack: Development of an Indicator of Ecosystem Stress. U.S. Environmental Protection Agency, January 1992 - December 1994. (with K. Davis). \$241,948.

DeWitt Braud

Mr. DeWitt Braud is Director, Academic Area, Coastal Studies Institute, Louisiana State University. He received a M.A. in Geography from Michigan State University and a B.S. in Geography from Louisiana State University. He has been an instructor, manager, and director in the Department of Geography and Anthropology at Louisiana State University. In addition, Mr. Braud has also held the following positions: Principal, Decision Associates, consulting in the areas of remote sensing, and decision analysis; Research Associate in the Division of Engineering Research at the Remote Sensing and Image Processing Laboratory of Louisiana State University; Supervisor, Senior Instructor and Editor at the National Aeronautics and Space Administration Earth Resources Laboratory, Slidell Computer Complex; Land Use Consultant, Louisiana Office of State Planning, Urban Planner and Environmental Coordinator, Louisiana Commission on Intergovernmental Relations; Research Assistant, Computer Institute for Social Science Research. Mr. Braud's professional experience includes work in: remote sensing (satellite image processing, classification, image analysis, enhancement, image fusion, terrain analysis, land-water interface extraction, and land cover mapping); geographic information systems (spatial analysis, spatial modeling, land suitability analysis, computer mapping, and sensitivity analysis). Mr. Braud's professional experience also includes environmental impact assessment, environmental sensitivity analysis, coastal wetland analysis, and change and detection analysis. He has been involved in the development of an on-line statewide geographic information system of Louisiana. Recent grants and contracts include: National Oceanic and Atmospheric Administration, Cumulative Coastal Stressors – Northern Gulf of Mexico, Co-PI \$249,590/yr, 2002-2007. Louisiana Oil Spill Coordinator's Office, Mapping and Technical Support Services for the Louisiana Oil-Spill GIS (LOGIS), Co-PI, \$74,750, 2004. Minerals Management Service – Coastal Marine Institute, Environmental Sensitivity Index and Land Water Interface Using High-Resolution Satellite Imagery, PI, \$200,760, 2002-2004. Louisiana Oil Spill Coordinator's Office, Mapping and Technical Support Services for the Louisiana Oil-Spill GIS (LOGIS), PI, \$389,052, 2001-2003. Governor's Office of Coastal Activities, Coastal Marsh Monitoring Capability Utilizing Landsat 7 Enhanced Thematic Mapper Satellite Imagery, PI, \$9,982, 2000-2001. Louisiana Department of Environmental Quality, Development of IRS-TM Satellite Fusion of Louisiana, PI, \$50,000, 2000-2001. Louisiana Oil Spill Research and Development Program, La. GIS CD Demonstrations, PI, \$19,000, 200-2001. NASA, World Deltas, A Baseline and Changes, Co-PI, \$297,898, 2000-2002. Louisiana Department of Environmental Quality, Multi-temporal Agricultural Classification from Satellite Imagery for Non-Point Source Pollution Modeling, PI, \$50,000, 1999-2000. Louisiana Oil Spill Research and Development Program, Satellite and GIS Database of Louisiana: A Continuation of Training, Co-PI, \$50,000, 1997-1998., Louisiana Board of Regents Coastal Modeling Grants Program, Predicting Coastal Land Loss at a Scale of Disturbance, Co-PI, \$20,000, 1999. Minerals Management Service, Development of Louisiana GIS Data in Support of the MMS Gulf-wide Information System, Co-PI, \$488,000, 1998-2000. Louisiana Department of Environmental Quality, Identification and Delineation of urban Riparian Zones and Their Influence on Local Environmental Conditions, Co-PI, \$131,508, 1997-1999.

John Briggs

Dr. John Briggs (Professor of Life Sciences, Arizona State University) received a B.S. in Biology in 1978, a M.S. in 1980 in Biology (both from Pittsburg State University, Pittsburg, KS) and his Ph.D. in Zoology in 1985 from the University of Arkansas. His research interests include Landscape Ecology, the use of remote sensing and geographical information systems in Ecosystem Research; Urban Ecology and Plant Ecology especially the role of fire in grasslands. He is author or co-author of over 50 peer-reviewed manuscripts. He has been involved with the Konza Prairie Long Term Ecological Research project since 1984 and is also a senior investigator on the CAP-LTER program at Arizona State University. He served as Program Director of Ecology at the National Science Foundation and was interim Department Chair of the Department of Plant Biology at Arizona State University from 2002-2003. He is currently co-director of ASU GIS Certificate Program. GRANT (in review): National Science Foundation. 2004-2006. Ecosystems in transition: N, Fire and the balance between grass and woody plant dominance in mesic grasslands. Briggs PI. \$579,074.00. Submitted July 2003. GRANTS FUNDED: National Science Foundation. 2002-2007. Konza Prairie LTER V: Long-term Research on Grassland Dynamics and Global Change. Blair (PI), Briggs, Hartnett, Johnson, and Knapp (co-PIs). \$4,468,000.00. National Science Foundation. 2002-2003. Briggs PI. Ecosystems in Transition: Causes and Consequences of Dramatic Shifts in Growth Form Dominance: REU \$5,780.00. National Science Foundation. 2001-2002. Coupled Nutrient, Water and Salt Cycles in Urban and Agricultural Ecosystems: Incubation Grant-BioComplexity. Brezonik et al. PIs (University of Minnesota); Briggs, Elser, Hope, Grimm, Stefanov (ASU contacts). \$99,250. ASU-College of Liberal Arts and Science. 2001. Wentz (PI), Briggs and Stefanov (CO-PIs). Reconstruction of Fire History Patterns in Sonoran Deserts around the Greater Phoenix Area. \$16,140.00. National Science Foundation. 2000-2003. Briggs PI. Ecosystems in Transition: Causes and Consequences of Dramatic Shifts in Growth Form Dominance. \$442,845.00. NASA. 1997-2000. Johnson (CO-PI), Briggs (CO-PI) with Blair, Ham, McKane, Owensby and Rice. Land-cover changes in the Great Plains: Predicting impacts of regional forest expansion on biogeochemical processes. \$485,000.00. NASA. 1997-1999. Nellis (PI), Allen, Briggs, Gogineni, Goodin, Harrington, Henebry and Price (CO-PIs). Spatial and Spectral Scale Dimensions for Modeling Rural Resource Systems: Projections for Global Change. \$418,000.00. NASA Earth System Science Graduate Student Fellowship. 1997-1999. Briggs (Advisor-PI) and Rieck (Graduate Student). Using Spatio-Temporal Heterogeneity for Landcover Characterization: Multi-Sensor Analysis of a Tallgrass Prairie Gradient \$66,000.00. NASA. 1996-1998. Briggs and Knapp. Local Validation of Global Estimates of Biosphere Properties: A Synthesis of Scaling Methods and Results Across Several Major Biomes. \$27,500.00. National Science Foundation. 1996-2001. Blair, Briggs, Dodds, Hartnett, Johnson, Kaufman, Knapp (co-PIs). Long-Term Ecological Research in Tallgrass Prairie: The Konza Prairie LTER Program. \$3,360,000.00. National Science Foundation. 1995. Supplement to NSF Grant: Fire, Grazing and Climatic Interactions in Tallgrass Prairie. \$37,236.00. National Biological Survey. 1994-1995. Gibson, Blair, Briggs, Fay and Knapp. The Capacity of Ft. Riley Tallgrass Prairie to Support Military Training Activity-Preliminary Analysis. \$67,000.00. National Science Foundation. 1994. Supplement to NSF Grant: Fire, Grazing and Climatic Interactions in Tallgrass Prairie. \$62,000.00. National Science Foundation (REU). 1994. Projects at a Tallgrass Prairie LTER site. \$10,000.00. Environmental Protection Agency (EMAP). 1994-1996. Briggs (PI) Use of Remotely Sensed Data on Phenological Activity and Heterogeneity to Detect Changes in Grassland Species Composition in Response to Stress. \$240,842.00. EOSAT Corporation. 1994-1995. Briggs (PI) Constructing Landscape Trajectories: Using TM Data for Ecological Remote Sensing. \$25,000.00.

Patrick Comer

Mr. Patrick Comer completed graduate work in Forest and Landscape Ecology from the University of Michigan in 1987. Throughout much of the 1990s, Mr. Comer worked as an ecologist with The Nature Conservancy in the Great Lakes region and throughout the West. He completed extensive field research, inventory, mapping, and consultation on forest, wildlife, and environmental management. He specialized in the development of ecological classifications and methods for ecoregional assessment that have been applied across North America. Mr. Comer is currently Chief Terrestrial Ecologist with NatureServe. He oversees NatureServe's Ecology Department and works on core NatureServe activities, including the development of the new Terrestrial Ecological Systems Classification for the Americas. He maintains involvement with development and implementation of the U.S. National Vegetation Classification and parallel efforts in Canada and Latin America. Mr. Comer is engaged in several U.S. regional-scale mapping and assessment efforts with NASA, the Gap Analysis Program, interagency sagebrush ecosystem projects, and U.S. Forest Service regional assessments. Mr. Comer serves on the core science team for development of NatureServe's conservation decision support methods and software.

Joseph Curtis

Dr. Curtis is Professor, Dept. Evolution, Ecology, and Organismal Biology, The Ohio State University. Educational background: University of California, Berkeley, Zoology, B.A. 1977; State University of New York, Stony Brook, Ecology & Evolution, M.S. 1981; University of California, Davis, Botany, Ph.D. 1985; Smithsonian Institution, Physiological Ecology, 1986-1988. Research activities: A major research focus in on the carbon cycle of eastern North American forests. He is Director of a carbon cycle research facility located in northern lower Michigan that operates within a national network of carbon flux sites, the AmeriFlux network. This work combines above-canopy measurements of carbon, water, and energy exchange using meteorological methods with process-level studies of forest eco-physiology. His lab also uses isotope ratio mass spectrometry, focusing on ^{13}C , ^{18}O , and ^{15}N , to analyze exchanges between biosphere and atmosphere. In another major research activity, he is involved in testing theories and applications directed at the restoration of functioning natural ecosystems on human-altered landscapes. The target systems in this work are restored tallgrass prairies on abandoned agricultural lands in Ohio. Sources of current grant support. N.S.F. Ecology. 2004-2007, \$300,000. Competitive and demographic tradeoffs: restoration of tallgrass prairie. With M. Miriti, R. Klips. N.S.F. Atmospheric Chemistry/Biocomplexity. 2001-2005, \$1,927,000. Development of instrumentation for measurement of biosphere-atmosphere fluxes of carbon and nitrogen. With B. Lamb, H. Westberg, A. Guenther, P. Shepson. Dept. of Energy, National Institute for Global Environmental Change. 2003-2006, \$985,773. Mass and energy exchange in a northern hardwood ecosystem. With H. P. Schmid, C Vogel. N.S.F. Integrative Graduate Education and Research Training. 1999-2004, \$2,699,016. Biosphere-atmosphere research and training. With S. Bertman, M. Carroll, D. Karowe.

Carol A. Johnston

Dr. Carol A. Johnston is Director of the Center for Biocomplexity Studies, and Professor in the Department of Biology and Microbiology at South Dakota State University. Dr. Johnston is author of the book, *Geographic Information Systems in Ecology*, and was co-editor of the book, *GIS and Environmental Modeling: Progress and Research Issues*. Dr. Johnston received a Ph.D. in Soil Science from the University of Wisconsin in 1982; an M.S. in Land Resources from the University of Wisconsin in 1977; an M.S. in Soil Science from the University of Wisconsin in 1977, and a B.S. in Natural Resources from Cornell University in 1974. Dr. Johnston is a Certified Professional Wetland Scientist and a Certified Professional Soil Scientist. Dr. Johnston's professional experience includes positions as: GIS Administrator and Senior Research Associate at the Natural Resources Research Institute in Duluth, MN (1986-2003); Lecturer in Continuing Education and Extension at the University of Minnesota at Duluth from (1991-1992); Research Ecologist at the Environmental Protection Agency (1989-1990); Environmental Consultant at the Oak Ridge National Laboratory in Oak Ridge, TN (1984-1985); and Natural Resource Supervisor and Planning Analyst at the Wisconsin Department of Natural Resources in Madison, WI from (1978-1983). Dr. Johnston served on the Water Science and Technology Board of the National Research Council from 1994-2000 (Vice-chair from 1997-2000), she served on the National Research Council Committee on Watershed Management from 1996-1998, and on the National Research Council Committee on Wetland Characterization from 1993-1995. Dr. Johnston's National Science Foundation activities have included: Director of the Ecosystem Studies Program (2000-2002); Biodiversity Observatory Network Work Group (1999); Workshop on Geographic Information Science and Geospatial Activities (1999); Ecosystems Program Review Panel (1996-1999); Database Activities in the Biological Sciences Review Panel (1994); National Center for Ecological Analysis and Synthesis (1994). Dr. Johnston also served on the U.S. EPA Science Advisory Board's Ecological Processes and Effects Committee (1995-1999), she has been President of the National Society of Wetland Scientists, and has served on the Minnesota Governor's Council on Geographic Information.

Amanda Rodewald

Dr. Amanda Rodewald is an Assistant Professor of Wildlife Ecology in the School of Natural Resources at The Ohio State University. She received a B.S. in Wildlife Biology from The University of Montana, an M.S. in Zoology from The University of Arkansas, and a Ph.D. in Ecology from The Pennsylvania State University. Her research interests and expertise include landscape ecology, community ecology, population demography, and urban ecology. Her work is published in diverse outlets ranging from broad-based *Ecology and Ecological Applications* to the more specialized *Journal of Wildlife Management* and *Forest Science*. Dr. Rodewald's current research projects focus on understanding multiscale impacts of landscape heterogeneity (especially resulting from urbanization and silviculture) in maintaining animal communities and populations. This research is funded by the National Science Foundation, U.S. Fish and Wildlife Service, The Nature Conservancy, and Ohio Department of Natural Resources. Dr. Rodewald actively contributes to her profession by serving as an Associate Editor for *Journal of Wildlife Management*, guest associate editors for *Society of Conservation Biology* and *Wildlife Society Bulletin*, and reviewer for 12 scientific journals related to ecology and conservation. She regularly interacts with colleagues in agencies on both research and management-related issues. For example, she is frequently consulted by Ohio Division of Forestry, Wayne National Forest, and The Nature Conservancy to discuss potential management impacts on wildlife. She also was an expert reviewer for Wayne National Forest Plan Revision and Species Viability Evaluation Process as well as of biodiversity indicators for sustainable forestry for the National Commission on Science for Sustainable Forestry (NCSSF). Dr. Rodewald also helped to develop the all-bird-conservation plan for Bird Conservation Region 22 (Eastern Tallgrass Prairie). FUNDED GRANTS (OVER \$900,000 SINCE 2000): The role of the landscape matrix in structuring avian communities (2004-2006), National Science Foundation. Conservation of Cerulean Warblers in the Ohio Hills (2004-2006), U. S. Fish and Wildlife Service. Terrestrial Wildlife Ecology Lab (2003-2004) Ohio Department of Natural Resources – Division of Wildlife, Co-PI: Robert Gates. Conservation of late-successional birds in managed forest landscapes (2003-2006), Ohio Department of Natural Resources – Division of Wildlife. Balancing the needs of early and late successional birds on public forestlands (2003-2006), Ohio Department of Natural Resources – Division of Wildlife. Bird conservation in midwestern riparian forests: local and landscape influences on breeding birds (2003-2004), Ohio Department of Natural Resources – Division of Wildlife. Edge effects in tropical montane forests: impacts on avian communities (2003), American Association for the Advancement of Science. Minimum area and habitat requirements of scrub-successional birds: does landscape context matter? (2001-2003), Ohio Department of Natural Resources – Division of Wildlife. Assessment of midwestern golf courses as breeding habitat for a declining bird species: the Red-headed Woodpecker (2001-2004), National Fish and Wildlife Foundation / U.S. Golf Association, Co-PI: Paul Rodewald. Wildlife habitat enhancement on public open spaces (2001-2003), U.S. Fish and Wildlife Service. A multi-scale analysis of landscape matrix effects on riparian forests: implications for wildlife conservation and buffer design (2000-2002), OARDC Research Enhancement Competitive Seed Grants. A landscape approach to riparian forest buffer design: implications for wildlife conservation and policy (2001), The C. William Swank Grant Program in Rural-Urban Policy. Suitability of riparian and upland forests as stopover habitat for migrating songbirds: a multi-scale approach (2001), Ohio Department of Natural Resources – Division of Wildlife, Co-PI: Paul Rodewald.

Sandra Williams

Ms. Sandra Williams is the President and Senior Environmental Specialist for Blueskies Environmental Associates in Richmond, Virginia. She graduated in 1991 from the Virginia Institute of Marine Science with an M.S. In Biological Oceanography. Her thesis work focused on the fate of nitrogen and phosphorus in the plant community and groundwater in a forested wetland ecosystem, identifying sources and sinks at the upland, slope interface and wetland in southeastern Virginia. Ms. Williams also holds a B.A. in Marine Science from Kutztown University of Pennsylvania, with a specialization in coastal wetlands. Ms. Williams has focused her career on wetlands and their role in the ecosystem and their importance as natural managers of storm water runoff. Ms. Williams worked for the NOAA National Estuarine Research Reserve Program in Virginia where she had the opportunity to evaluate wetland systems throughout all of coastal Virginia, evaluating their potential for inclusion in the national program. Since that time she has focused on utilizing natural wetlands for buffering storm water runoff at airports and creating natural wetland mitigation systems for unavoidable impacts associated with development, specializing in aviation facilities. Ms. Williams served on the air emissions (NO_x and SO_x) working committee for the Virginia Department of Environmental Quality. She is the past president of the Virginia Association of Wetland Professionals and serves on the student review board for the Society of Wetland Scientists. She is also active on the Environmental Affairs Committees of the American Association of Airport Executives and Airports Council International. Ms Williams began her career in Virginia collecting samples for the Chesapeake Bay Program and remains active on issues involving the Chesapeake Bay. She also evaluated wetland areas using GIS layers for Virginia Dominion Power. Ms. Williams is a consultant to aviation and government entities on wetlands, water quality and permit compliance.