



Kelly A. Burks-Copes

Ecologist (DB04-0408)

Environmental Laboratory

US Army Engineer Research & Development Center

3909 Halls Ferry Rd., Vicksburg, MS 39180

601-634-2290

Kelly.A.Burks-Copes@usace.army.mil

Ongoing Research Activities

- **16 years of experience** in project management and landscape level evaluations of habitat impacts and ecosystem restoration for the USACE.
- **Project Manager** on Strategic Environmental Research and Development (SERDP) RC 1701 study entitled, *Risk Quantification for Sustaining Coastal Military Installation Assets and Mission Capabilities* focused on Sea Level Rise Impacts to Naval Station Norfolk
- **Principal Investigator** on 2nd SERDP study entitled, *Addressing the Impacts of Climate Change on U.S. Army Alaska with Decision Support Tools Developed Through Field Work and Modeling* focused on possible mission impairment to Ft. Wainwright (Fairbanks, AK) as a result of climate change and permafrost melt.
- **Principal Investigator** on new Applied Research (6.2) project entitled, *Evaluating Ecological Threats Under Climate Change* focused on the assessment biome shifts in the interior US and the impacts to species response and migration patterns under future climate scenarios.
- **Primary Developer** of the HEAT: Habitat Evaluation and Assessment Tools software system and Principal Investigator on 10+ studies using the HEAT software across North America.



Education

- Currently pursuing a **PhD** in Interdisciplinary Ecology from the University of Florida
- **M.S. Biology**, 1993, New Mexico State University
- **B.S. Biology**, 1991, University of New Mexico

Publications

- **Burks-Copes, K. A.**, A. C. Webb, M. F. Passmore and S.D. McGee-Rosser. 2010. HEAT - Habitat Evaluation and Assessment Tools for Effective Environmental Evaluations. User's Guide. Final Report. ERDC-EL, Vicksburg, MS. 312 pp. + appendices.
- **Burks-Copes, K. A.** and A. C. Webb. 2009. Middle Rio Grande Bosque Ecosystem Restoration Feasibility Study Habitat Assessment Using Habitat Evaluation Procedures (HEP): Analyses, Results and Documentation, Draft Report. ERDC-EL, Vicksburg, MS.
- Russo, E. J., **K.A. Burks-Copes**, W. M Ford, T. H. Wakeman III. 2010. Assessing and managing climate change effects and impacts on maintaining and restoring global environmental security. *Climate Change: Global Change and Local Adaptation Conference*, Hella, Iceland, 6-10 June 2010.
- **Burks-Copes, K. A.**, and A.C. Webb. 2010 Webinar on HEAT - <http://cw-environment.usace.army.mil/exchange.cfm?Option=z=Webinar&Type=Past&CoP=Env&Id=28&ICS=No>

Other Scientific Activities

- **Principal Investigator** on 13 Reimbursable studies - developing community-based Habitat Suitability Index models and facilitating and/or evaluating the proposed restoration designs/construction impacts nationwide
- **St. Paul District** - Currently developing Spatial Decision Support System for the Sunrise River Watershed Mitigation Study to assess watershed vulnerability and identify, prioritize and select compensatory mitigation sites in advance of urban growth and development
- **Los Angeles District** - Developed a Planning-based HGM Model for urban streams and associated wetlands and applied on 6 studies (El Rio Antiguo Rillito, Paseo de Las Iglesias, Va Shly Ay Akimel, Tres Rios del Norte, Rio Saldo Oeste, and El Medio)
- **Kansas City District** - Currently developing and applying an Urban Stream community model for the Brush Creek Multi-purpose Study
- **Galveston District** - Developed and applied 3 community index models (Shaded Riverine/Riparian, Coastal Prairie, and Salt Marsh) for Clear Creek Flood Damage Reduction and Ecosystem Restoration Study; Have completed and am in the process of applying a Resaca (lacustrine) community index model for the Brownsville Resacas Ecosystem Restoration Study
- **Albuquerque District** - Developed and applied a Bosque Riparian (Cottonwood) Community model for the Middle Rio Grande Ecosystem Restoration Study; Developed and applied ecosystem service indices and a spatial heterogeneity index for the study
- **Chicago District** - Developed and applied 5 community index models (Lake Fringe, Prairie, Rivers and Streams, Savanna, and Woodlands) on the Upper Des Plaines River Ecosystem Restoration Study
- **Omaha/Kansas City Districts** - Currently developing and applying a Riparian community (cottonwood) model for the Missouri Recreation River Biological Opinion; Devised a GIS-based analyses to identify and prioritize potential sites using a Multi-Criteria Decision Analysis (MCDA) approach

Honors and Awards

- 2006 Department of the Army Commanders Award for Civilian Service
- 2008 ERDC Research and Development Achievement Award for the Regional Internet Bank Information Tracking System (RIBITS)
- 2009 ERDC Research and Development Achievement Award for the Middle Rio Grande Bosque Ecosystem Restoration Study
- 2010 ERDC Research and Development Achievement Award for the Missouri River Cottonwood Management Plan
- 2011 ERDC Research and Development Achievement Award for the Naval Station Norfolk Study - SERDP RC 1701 *Risk Quantification for Sustaining Coastal Military Installation Assets and Capabilities*

Professional Societies

- Society of Ecological Restoration
- Ecological Society of America
- Wetland Society of Scientists
- Society of Conservation Biology
- International Association of Landscape Ecology (US Region)

Research, Training or Presentations

- **Primary Instructor**, Annual HEAT Training Workshops
- **Instructor**, Ecological Resources, (PROSPECT, Course 168)
- **Instructor**, Interdisciplinary Training in Ecosystem Restoration, (PROSPECT, #1280)

