



conduct preconstruction surveys, integrate existing data, conduct analysis for environmental assessments, develop post-construction monitoring plans, and identify viable mitigation options for energy projects.

BRI's approach is to facilitate early and open dialog between agency biologists and managers of renewable energy facilities. Through a collaborative process, and using the best available science, BRI supports identifying innovative solutions to complex problems.

BRI has conducted more than 50 projects related to renewable energy development in partnership with state and federal agencies, developers, environmental consultants, universities, and other nongovernmental organizations. Beyond project-specific support, BRI also conducts primary research and facilitates stakeholder-driven processes to: (1) identify data gaps for wildlife in relation to energy development; (2) identify permitting requirements; (3) synthesize existing knowledge; and (4) develop best practices.*

BRI's field capabilities include:

- Wildlife Surveys and Monitoring
 - Waterbird and raptor surveys using aerial and ground-based visual methods
 - Songbird point counts and transect surveys
 - Bat breeding, migrations, and hibernacula surveys
 - Threatened and endangered species surveys
 - Boat-based and aerial surveys for marine wildlife
 - Bird and bat passive acoustics and video monitoring
 - Next Generation Radar (NEXRAD)
- Wildlife Capture and Tracking
 - Capture of birds and bats using mist netting, night lighting, audio lures, and other methods
 - Tracking of wildlife using all available technology, including satellite and radio transmitters, automated radio tracking with nanotags (i.e., Motus), geolocators, GPS transmitters, and other technologies.

*BRI research is conducted with all applicable federal and state permits, and Institutional Animal Care and Use Committee (IACUC) approval.



PROJECT CONTACT

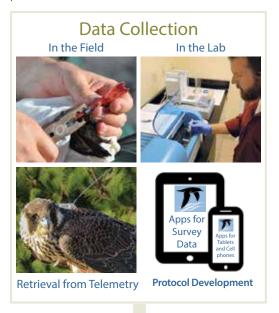
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CONTRIBUTING STAFF

Evan Adams-Ecological Modeling • Andrew Gilbert-Data Management • Dustin Meatty-Waterfowl • Kevin Regan-Shorebirds • Iain Stenhouse-Marine Birds • Dave Yates-Mammals

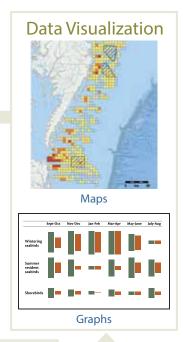
Data Science and Communication

BRI's reputation and integrity are founded on the quality of our work. Throughout every stage of the scientific process—from data collection, to analysis, interpretation, and dissemination—we follow strict protocols and adhere to best practices to provide decision makers with the most accurate information.





Journals Communications
We present critical information in ways
that industry leaders and policymakers
can understand and use for successful
solutions to environmental issues.



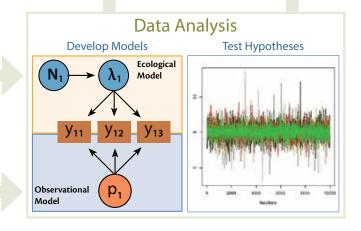


BRI experts achieve the highest quality in data preparation and standardization, ensuring quality control of data processing and management. We have the expertise to perform the following:

- Design and develop ecological databases, including databases in PostgreSQL, R, and ArcGIS
- Create custom Python and R scripts for mapping and analysis
- Integrate data into existing web portals and develop custom online web mapping capabilities
- Analyze and model spatial data using PostgreSQL, ArcGIS, R, BUGS, JAGS, NIMBLE, and others
- Conduct multivariate, hierarchical, spatial models in likelihood-based and Bayesian frameworks
- Create spatially explicit individual-based models
- Conduct population modeling and population viability analysis
- Conduct movement and behavioral modeling

Stakeholder and Desktop Processes

- Facilitate workshops to establish scientific consensus
- Facilitate communication between state and federal agency staff to establish permitting goals and processes
- Elicit expert knowledge through surveys and interviews
- Conduct literature reviews to inform stakeholders about current research





Biodiversity Research Institute

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Credits: p. 1: Wind turbines courtesy Nysted Havmøllepark; Silver-haired bat © BRI-Jonathan Fiely; White-winged Scoter © Daniel Poleschook; Common short-beaked dolphin © Anthony Pierce; Sea turtle © Kate Sutherland; School of sardines © Andrea Izzotti-shutterstock; Moon jellyfish © sgm09-shutterstock. p. 2: Bird in hand; BRI Lab; Peregrine Falcon © BRI-staff.