

## Biological Resources for Offshore Projects



As one of only a few qualified firms to do so, AECOM biologists prepared the biological resources sections of the COP, including appendices, for 2 major offshore wind energy projects in the Massachusetts and Rhode Island Wind Energy Development Area.

### Key Regulatory Material

- BOEM SAP and COP Guidelines
- USFWS ESA and MBTA policy
- NEPA Policy and Guidance, including cumulative impact assessment
- FAA Permitting guidelines for lighting and marking of infrastructure

### Overview

It's important on offshore wind projects that teams contain a variety of subject matter experts including qualified, agency-approved biologists and regulatory specialists to guide clients through a streamlined permitting process, avoiding risks associated with permitting delays. Many smaller consultants, for instance, require subcontracts because they do not have credentialed bat specialists as does AECOM.

### Our Approach

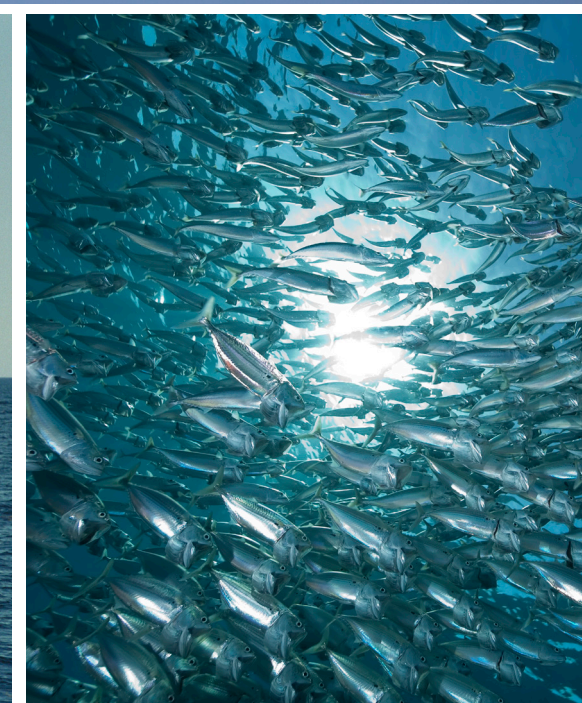
Our avian and bat team includes qualified, agency-approved biologists with extensive regulatory expertise and decades of experience with T&E species including the roseate tern, piping plover, red knot, northern long-eared bat, and Indiana bat. As leading subject matter experts with advanced quantitative skills, our avian and bat biologists have years of experience designing and implementing onshore and offshore surveys.

Our avian and bat experts understand the permitting complexities and how these are related to the protection of avian and bat species. We work collaboratively with our clients to prepare comprehensive risk assessments, exposure and vulnerability scoring, and cumulative impact analyses. We provide monitoring, minimization, and mitigation planning services consistent with BMPs in the offshore wind energy industry. AECOM's regulatory specialists are ready to assist your state and federal permitting needs, including the NEPA process.

Our staff of experienced avian and bat biologists, risk assessors, scientists, and regulatory specialists combine innovative approaches with traditional ecological methods. We assist our clients with managing the most complex bat and avian permitting challenges for large infrastructure projects, while providing expedited permitting and subsequent cost savings.

### Key Attributes

- Local experience with national subject matter expertise
- International expertise with points of contact located across North America, Latin America, and Europe
- Global network and full-service environmental capabilities
- Trusted professionals doing quality work
- Ph.D., M.S., and B.Sc. level, agency-approved support
- Regulatory expertise to ensure smooth permitting
- Prime client satisfaction: two major offshore wind projects





## Biological Resources for Offshore Projects *(continued)*



### Areas of Expertise

#### • GENERAL BIOLOGICAL AND WILDLIFE RESOURCES

- Onshore and offshore surveys following Best Management Practices (BMPs) and international guidelines.
- Climate resilience, impact-producing factors, and cumulative impact analysis
- Quantitative exposure risk assessment, scoring, and mapping
- Population vulnerability analysis, collision and displacement sensitivity scoring
- Facility siting, engineering, project design envelope and maximum-case scenario
- Physical oceanography, hydrographic, bathymetric, geological and geophysical surveys
- Laboratory and field studies in freshwater, estuarine, nearshore and deep-sea ecosystems
- Nearshore and deep-sea survey design, implementation, and analysis
- Pre- and post-construction boat-based and aerial survey design, implementation, and analysis
- Baseline, Before-After-Control-Impact or Before-After-Gradient studies
- Bayesian hierarchical modeling of marine bird, mammal, fish and invertebrate communities
- Statistical modeling and mapping of invertebrate and forage fish prey such as sand lance
- Distance sampling and density modeling of detection probability
- Construction, protection, enhancement, conservation, and management plans
- Avoidance, minimization & mitigation planning measures and stakeholder engagement

#### • AVIAN AND BAT SPECIES

- International impact assessment for avian/bat species in North America, Latin America, Europe
- Threatened & Endangered (T&E) species monitoring, breeding surveys, nest census
- Expertise in roseate tern, piping plover, red knot, northern long-eared bat, Indiana bat
- Quality assurance and control and the Northwest Atlantic Seabird Catalog
- Mist-netting, trapping, telemetry and tracking studies using Motus Wildlife Network
- Deterrence, coastal disturbance monitoring, predator or invasive species management
- Habitat, presence/absence, passive acoustic, telemetry, imaging and emergence surveys
- Studies consistent with Avian Power Line Interaction Committee guidelines
- Fatality monitoring, mortality reporting and incidental take permit processes

### Complementary Permitting Expertise

#### • NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) ENVIRONMENTAL IMPACT ASSESSMENTS

#### • BUREAU OF OCEAN ENERGY MANAGEMENT (BOEM) SITE ASSESSMENT PLANS (SAP) AND CONSTRUCTION OPERATION PLANS (COP)

- US FISH & WILDLIFE SERVICE (USFWS)
- Endangered Species Act (ESA) consultation
- Biological Assessment
- Habitat Conservation Plans
- Bald and Golden Eagle Protection Act Management Plans
- Migratory Bird Treaty Act (MBTA)

#### • FEDERAL AVIATION ADMINISTRATION (FAA) LIGHTING AND MARKING GUIDELINES

#### • FEDERAL ENERGY REGULATORY COMMISSION (FERC) RELICENSING

#### • COASTAL ZONE MANAGEMENT ACT STATE AGENCY PLANS, PERMITTING AND PUBLIC UTILITIES