



Wildlife and Offshore Wind Development

US Wind's plans to protect wildlife before, during, and after construction

US Wind conducts wildlife studies and surveys to supplement and complement existing research by agencies and academic institutions like the Bureau of Ocean Management (BOEM), University of Maryland Center for Environmental Science (UMCES) and Maryland Department of Natural Resources. These studies are essential for building a body of knowledge that help us care for our oceanic ecosystems — from sea ducks to humpback whales — for years to come. Read the examples below to learn more about US Wind's present and future plans for protecting our ocean and wildlife as we develop clean energy for the region.

Tracking Key Species with a State-of-the-Art Buoy System

US Wind deployed a Metocean Buoy, a Floating LiDAR buoy, in May 2021 to gather wind and other meteorological and ocean data in the Lease area. LiDAR, which stands for Light Detection and Ranging, uses a laser beam to get information about the surroundings. The buoy uses the following technology:

- NanoTag antennas to detect any tagged birds and bats that pass by. The tags provide species-specific information and can be added to databases to track where individual birds have been detected. Tagged birds are usually endangered species such as Red Knot, Piping Plover and Roseate Tern. This information will be shared with the U.S. Fish and Wildlife Service, among others.
- Bird acoustic sensors to record bird calls throughout the day and night, which are later analyzed to determine the specific species. The acoustic sensors help fill data gaps for spring and fall migrant passerines — including warblers, grosbeaks, buntings, pipits, thrushes and redstarts — that would probably not be detected by other bird survey methods.
- Bat acoustic sensors, which constantly record any bat activity in the area. Bats use echolocation, or echo sounds, to gather information about their surroundings, including insect prey movement. Scientists analyze these recordings to determine the specific species in the area.
- A measuring device that detects passing tagged fish, such as sturgeon, white sharks and other species, and provides details on what kinds of fish may be in the Lease area. These findings can then be shared with other organizations that also track tagged animals.



Metocean Buoy

Resourceful Data Collection

US Wind uses survey vessels that map the seafloor to gather more data on the environment in which we plan to develop offshore wind energy. These research vessels use the following methods to ensure greater protection of area wildlife:

- Protected Species Observers (PSOs) to monitor areas around low-frequency sound sources and watch for and protect marine mammals, sea turtles and other protected species. PSOs are always on duty during surveys or when vessels are passing through the area. This wealth of confirmed visual detection data will be compiled along with wildlife survey data as an important component of US Wind's wildlife information database, available to researchers and the public.

- Bat acoustic detectors have been deployed on the survey vessels to record bat calls, similar to the bat detectors on the Metocean Buoy. Detections are analyzed to determine the species and that information is added to US Wind’s wildlife information database.

Field Surveys for Data Collection

- Samples and video from the ocean floor have been collected at more than 200 locations throughout the Lease area and relevant corridors. These surveys provide information about species on and in the seabed, as well as potential fish habitat.
- Digital aerial surveys will build on earlier boat- and aerial-surveys to detect birds such as loons, gannets and sea ducks in the Lease area before and after construction. The aerial surveys will be conducted for two years prior to construction and two years after construction to characterize changes in bird use of and densities in the Lease area. These surveys include significant buffer area to show birds that may have avoided the wind farm and gathered or used other nearby locations instead.
- US Wind plans to conduct a shellfish density survey in Indian River Bay the summer of 2022. Shellfish such as clams are present in Indian River Bay but the information regarding how many there are and where is not up to date. This shellfish information will inform cable routing through Indian River Bay.



Photo Courtesy of RPS Protected Species Observer Team

Whale, Dolphin, and Fish Monitoring

In March 2022, US Wind announced a major partnership with UMCES to support several research efforts, including:

- Continued deployment of a near real-time whale buoy that provides timely alerts on the presence of baleen whales (North Atlantic right whales, and humpback, fin and sei whales) for a 12-month period from 2022 to 2023. This buoy detects calls from marine mammals, which are then analyzed by UMCES daily to determine when and what types of whales may be nearby. The information is posted to a website hosted by Woods Hole Oceanographic Institution: http://dcs.whoi.edu/mdoc0521/mdoc0521_mdoc.shtml.
- A passive acoustic monitoring (PAM) array will be deployed for about six years to listen for dolphins, porpoises and large baleen whales. The information is expected to build on a similar effort by UMCES researchers in the same area from 2014 to 2017 and will help inform construction timing and monitoring.
- Fisheries resource monitoring will be conducted over six years: before, during and after construction to characterize potential effects to black sea bass commercial and recreational fisheries. It is anticipated that the creation of new structures in the water—turbine foundations—will serve as aggregation spots for species such as black sea bass. Years of research at the Block Island Wind Farm found no negative impacts to fish, and, in fact, found positive effects from aggregation around the new underwater structures.