

Upland Sandpipers vs Airport Safety

Background

The Upland Sandpiper is considered an endangered species in NH and is protected by the "Endangered Species Conservation Act." The only known sandpiper nesting site in NH is at



Upland Sandpiper

"Portsmouth International Airport at Pease" (PSM). Habitat favorable to sandpipers is found adjacent to the runway and includes grassed infield areas between the runway and taxiways. In cooperation with NH Fish & Game (NHF&G), PSM has been managing the grassland habitat as needed to protect nesting sandpipers and comply with NH wildlife regulations. Until recently this has meant not mowing these areas from May until August.

The Federal Aviation Administration (FAA) requires that certified airports manage wildlife hazards. Although the sandpiper poses a minimal threat to aircraft, habitat favorable to sandpipers is also attractive to flocking birds

and other species that are more hazardous to aviation.

Caught in the middle between FAA regulations pertaining to aviation safety and state laws protecting the upland sandpiper, this research sought to reduce wildlife hazards at PSM by encouraging sandpipers to breed in areas away from the airport.

Upland Sandpiper History

The Upland Sandpiper is native to the prairie states. During the late 1700's and early 1800's, large areas of the eastern United States were cleared for agriculture. This created new "prairie-like" habitat and the sandpiper expanded its range eastward into New England. Reforestation and development of agricultural land has diminished available sandpiper habitat. As a result, the Upland Sandpiper population has declined and is now considered an endangered species in NH and throughout the northeastern states.

Upland Sandpiper Habitat

The sandpiper needs very large grassland areas (greater than 150 acres) for breeding. They require a mix of short and tall grasses (8" to 24") for foraging and nesting and tend to avoid grasslands with high densities of legumes or with a dense litter layer. Naturally occurring habitat that meets these requirements is not common in NH because the land tends to support forest. This means that suitable sites must receive an appropriate level of maintenance to remain grassland. Habitat such as this is typically found only on large airfields and agricultural lands.



Grasslands at Pease

Research

Grasslands in close proximity to PSM were evaluated to determine suitability as potential upland sandpiper habitat resulting in a focus on the Great Bay National Wildlife Refuge (GBNWR). The sandpiper population at PSM was monitored to better understand their habitat needs. Birds were captured to gather weight and size measurements and they were banded and fitted with radio transmitters to enable tracking of their movements. Nests were located and a vegetation analysis was conducted at the nest sites.

NHF&G worked with the U.S. Fish & Wildlife Service to improve potential habitat at GBNWR by clearing woody vegetation and mowing grass areas to replicate conditions found at PSM. These improvements yielded a habitat area that is significantly smaller than that of PSM. It was determined to be unlikely that sandpipers would choose to nest at GBNWR rather than PSM because of its smaller relative size. Because of this, the research focus turned to finding a way to maintain acceptable sandpiper habitat at PSM while still meeting the FAA safety requirements.

USDA Wildlife Services recommends that grass be maintained at a height of 6" to 12" to minimize the presence of wildlife at airports. A pilot management program was implemented combining the efforts of wildlife biologists and PSM staff. Biologists located and marked nests prior to mowing. Mowing operations were scheduled to minimize frequency while maintaining the recommended grass height. PSM fabricated a "flushing bar" that would chase birds from the mower's path.



Biologists capture, measure, and band upland sandpipers



Upland Sandpiper Nest



Tractor-mounted "flushing bar"

Results

The pilot management program seems successful in that upland sandpipers continue to nest and reproduce while airfield grasslands are managed to comply with FAA guidelines. NHF&G has recommended that this strategy continue with annual reviews of sandpiper status, management practices, and regulation updates.

The success of this effort is a positive reflection on the cooperative relationship between wildlife managers and the staff at PSM.