

# Iowa Wetland Management District



Breeding Pair Accessibility Maps are produced from long-term 4 square mile survey data. They are commonly known as "Thunderstorm Maps" because of a perceived resemblance to a Doppler radar image of a thunderstorm. Thunderstorm maps display predictions of the number of upland nesting duck pairs (mallards, blue-winged teal, gadwall, northern pintail, and northern shoveler) that could potentially nest in the upland habitats of every 40 acre block of the Prairie Pothole Region (PPR) of Minnesota and Iowa. These predictions are based on the known maximum travel distances of hens from wetlands to their nest sites, and regressions (statistical models) created from 4 square mile survey data predicting the number of duck pairs that utilize every individual wetland in PPR during a "typical" breeding season. The primary purpose of this map is to help identify priority sites for the protection or restoration of grassland habitats for breeding waterfowl. The map identifies sites where upland management treatments would be most beneficial to nesting hens. They are also useful in identifying priority wetland complexes to be protected through acquisition of Waterfowl Production Areas and wetland and habitat easements, and areas to be enhanced by private lands wetland restorations. This map was created using Geographic Information Systems (GIS) modeling techniques by the U.S. Fish and Wildlife Service's Habitat and Population Evaluation Team (HAPET) office in Fergus Falls, Minnesota.

