HAILSTONE

NATIONAL WILDLIFE REFUGE

At Hailstone National Wildlife Refuge, flocks of eared grebes, American wigeons and northern shovelers descend upon wetlands surrounded by nothing but rolling hills of shortgrass prairie and limitless sky. In central Montana, this is *the* place for waterfowl production. Thousands of ducks settle in to nest or just to rest for awhile on their long journeys spanning the hemisphere. This 2,000-acre refuge was created for these winged wayfarers—the mallards, gadwalls, redheads, canvasbacks and other migratory water-dependent birds such as American avocets, phalaropes, American white pelicans and at times, thousands of Franklin's gulls. In all, more than 200 species of birds can be seen here including lark buntings and vesper sparrows. Many are drawn by Hailstone Lake, a 300-acre reservoir created in the 1930s.

The refuge is also home to many prairie species that have found a haven here while so much of the Great Plains' native prairies have been lost to agriculture and development. Black-tailed prairie dogs build towns upon uplands of sagebrush, greasewood and native grasses. They remain constantly alert for the searching eyes of golden eagles and hawks that would make a meal of them. Burrowing owls stand guard at the entrance to their tunnels, motionless sentries at the gates of an underground world. Sharp-tailed grouse shuttle at the feet of pronghorn antelope grazing the wide-open grassland.

While native prairies are a largely lost ecosystem, Hailstone has restored some of its shortgrass prairie. Still, much of the surrounding area remains in the service of agriculture, which supplanted this native landscape and many of the animals that thrived upon it. Loss of the prairie ecosystem has had some devastating environmental effects historically, including the Dustbowl of the 1930s, when drought killed the crops that had replaced the more hardy native grasses which had held the earth in place.[10] Today, at the Hailstone refuge, the land and its inhabitants continue to weather the loss of this native ecosystem. When the prairie was intact, rainwater was absorbed into the ground and root systems of plants, but the wheat fields that have replaced the prairie grasses do not hold the water as well, especially in years when they are left fallow. Rainwater then hits the ground and carries salt and selenium deeper into the soil, running along the water table toward the reservoir. Over the years, the salt and selenium have formed seeps that flow into the reservoir when it rains or when snow melts, creating a toxic soup for birds. The birds die from excessive salt intake, their bodies encrusted and organs overloaded with salt.[11] And as evaporation of water further concentrates the deposits, the threat of selenium toxicity grows. The same forces were at work at Kesterson National Wildlife Refuge in California before its reservoir was labeled a toxic waste dump in the 1980s after causing large-scale die-offs and horrible birth defects in birds at the refuge.[12]

Mallard | © Rob Curtis/The Image Finders

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The 1997 refuge improvement act included safeguards for ensuring the biological integrity and environmental health of national wildlife refuges, in part, because of the catastrophe at Kesterson. And yet, the Hailstone refuge and its populations of migratory waterfowl are plagued by the fallout from the disintegrating health of its wetlands and animals are literally being poisoned. Further, the toll that agricultural runoff is having on migratory bird habitat is not limited to Hailstone. There are similar contamination issues at other refuges in the prairie region, all of which are essential to the systemic health of the Mississippi Flyway and the birds that migrate through.