

The Upper Fox Basin



- The basin includes all of Marquette County and portions of Green Lake, Columbia, Fond du Lac, Waushara, Calumet, Adams, and Winnebago counties



- Numerous endangered, threatened and otherwise rare species exist in the basin, including the threatened White Lady's Slipper (far right), a species that needs fens and calcareous wet prairies, and Forster's Tern (left), which needs large marshes, estuaries and lake islands.

- The total area of the Upper Fox Basin is 2,090 square miles. The primary land uses are agriculture (61.1%), forests (13.7%), water (12%), wetlands (10.5%), urban (3%), and barren (0.2%).
- The population of the basin was estimated at 276,377 in 2000.
- The basin's 15 watersheds are drained by 1,257 miles of rivers and streams, 164 miles of which are cold water trout streams, 310 miles are warm water sport fisheries, and 20 miles are warm water forage fisheries. There are 154 lakes larger than 10 acres in size and additionally a large number of small kettle lakes in the western portion of the basin.
- Over 10% of the basin area is wetland greater than 40 acres in size, accounting for 145,428 acres. The total wetland area is actually much greater, as mapping identifies wetlands as small as 2 acres in size.
- The Upper Fox Basin contains Lake Winnebago, Wisconsin's largest inland lake, which is home to the largest self-sustaining lake sturgeon population in North America.
- Much of the drinking water in the basin is derived from groundwater. Yet the basin itself is considered a *source water area* for Lake Winnebago, which provides drinking water to the communities of Oshkosh, Neenah, Menasha, and Appleton.
- There are over 55,678 acres of major public lands in the basin including 51,311 acres of state wildlife, fisheries and park lands (not including the 11 state natural areas in the basin) and 4,367 acres U.S. Fish and Wildlife Service wildlife refuge and waterfowl production acres.
- Recreational highlights include wildlife watching, hiking, fishing, hunting, bicycling, horseback riding, snowmobiling, skiing, camping, picnicking, and water sports.



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Basin Ecology

- The Basin includes the Central Sand Ridges, Southeast Glacial Plains, and a small portion of the Central Sand Plains Ecological Landscapes.
- Most of the basin's cold water trout streams are located in the western portion of the basin near the Sandy Ridges ecosystem. Warm water rivers, streams and lakes support various game and non-game species including large and small mouth bass, walleye, northern pike, catfish and sturgeon.
- Common woodland wildlife include white-tailed deer, turkey, ruffed grouse; upland/grassland wildlife includes ring-necked pheasant, non-game songbirds (vesper sparrow, bobolink (right), meadowlark); grassland nesting waterfowl include mallards and blue-winged teal. Wetland species include various waterfowl, amphibians and reptiles.
- Oak-hickory is the most common forest type and the tree species with the greatest volume in the Upper Fox Basin is white oak followed by black and pin oak, white and red pine, aspen and soft maple.



Environmental Concerns

- Water quality problems from in-place pollutants, runoff in urban and agricultural areas, floodplain development and overuse of groundwater supplies.
- Riparian/wetland, woodland, and grassland habitat loss, deterioration, and fragmentation from rapid development and conversion of rural lands. Protection and maintenance of habitat is important for maintaining spatial and temporal ecosystem diversity critical for wildlife.
- Grassland restoration is a major initiative, with virtually all of the historic prairie, sedge meadows and oak savannas having been converted to agriculture due to their flat topography and rich soils.
- Exotic species are a continuing and emerging problem. Plant species such as reed canary grass, purple loosestrife, buckthorn, garlic mustard, and Eurasian water milfoil can quickly out-compete native species and wreak havoc on ecosystem balance. Zebra mussels and rusty crayfish are spreading to basin waterways, disrupting stream and lake ecology.
- Monitoring of wildlife populations, water quality, and ecosystem function are needed to understand the status and trends of resources.

Priority Actions

In April of 1998, the Upper Fox Basin Partnership held a workshop to identify concerns and issues facing natural resources in the basin. The three priorities listed below are not ranked against each other, but rather, they rose to the top when compared to all of the other stressors affecting the natural resources of the basin and the uses of those resources by the public.



- 1) Wetland filling/loss
- 2) Habitat loss and fragmentation
- 3) Nutrient loading/Nonpoint Source Pollution

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See a copy of the State of the Upper Fox Basin Report or for other information: <http://www.dnr.state.wi.us/org/gmu/upfox/index.html>

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[Front photo: White Lady's Slipper and Forster's Tern, WDNR Endangered Resources; Above: Observatory Hill State Natural Area, DNR Bureau of Endangered Resources.] This document produced by the Wisconsin Department of Natural Resources, Madison, Wisconsin.
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