



**SETTING A COURSE
OF ACTION:
A Forum**

SUMMARY ISSUE BRIEFS FOR THE BREAKOUT DISCUSSION GROUPS

1-Conservation of Priority Forest Areas

The ever increasing conversion of land to agricultural, residential, and urban development in the Upper Mississippi watershed has greatly reduced the amount of forest land and is severely threatening the quality of the remaining forest land. In the Midwest the majority of this forest land is owned by private individuals and the number of forest landowners, each owning smaller chunks of forest land, increases each year. From 1993 to 2003 the number of forest land owners in the Northeast increased by a little more than 1 million. Also harvesting the northern pine forests and conversion of prairies and forests to agriculture has altered the hydrology of the watershed.

There is no exception to the areas affected - public water supply recharge areas, steep slopes, habitat for threatened and endangered species, riparian areas and wetlands are being impacted. A mosaic of agricultural, suburban, and urban land uses has replaced the native prairie, oak savannah, forest, and wetland in the Upper Mississippi River Basin. This change has been at the expense of critical natural ecosystems.

2-Loss of Migratory Bird Habitat

The Upper Mississippi River basin is a focal point for a variety of major bird conservation efforts. The river's north-to-south orientation and contiguous habitat make it critical to the life cycle of many migratory birds. It is a globally important migratory flyway for 40 percent of all North American waterfowl and 60% of all the bird species in North America. However, the loss of over 50% of historic floodplain and valley hardwood forests creates a problem for many waterfowl, raptors, and song and shorebirds. The boreal transition forests of the Upper Mississippi provide nearly the entire habitat for species such as Kirtland's and golden-winged warblers. Losses of prairie and oak savannah and transition habitats have threatened other species such as the prairie chicken, Bell's vireo and Cerulean warbler. The management of these unique and rich hardwood forest ecosystems is of particular interest to future recovery and conservation of many target species.

3-Regeneration of Bottom Land Hardwoods

The Upper Mississippi Basin, as a whole, benefits from floodplain forests. They provide diverse habitat for wildlife and fish. Floodplain forests also reduce soil erosion, improve water quality, enhance recreational activities, and provide a scenic landscape. Floodplain forests are not regenerating in the Mississippi and Illinois River system due to agricultural and urban developments, changes in natural river flood pulses, rising water tables, wind and wave erosion and aggressive invasion by exotic plants, such as reed canary grass and common native competitors. The remaining floodplain forests are changing in composition from shade intolerant species such as cottonwood, American elm, and silver maple to forests dominated by shade tolerant species such as hackberry and the non native mulberry.

4-Preservation of Water Quality and Aquatic Habitat (Establishment of Riparian Forest Buffers)

Land use changes in riparian areas have led to declining water quality in the Gulf of Mexico, and the upper Mississippi River and its tributaries. Pollutants, including sediment, Nitrogen and Phosphorus are the result of poorly managed farms, urban development, surface mines, and timber harvests. Increased sediment loads have contributed to filling of the pools in the Upper Mississippi River and its backwaters and side-channels. These areas are critical for fish and wildlife. In addition, many environmental contaminants are strongly attached to soil particles and deposited in the river pools. Aquatic organisms and fish can be harmed by contact with contaminated sediments.

The delivery of high amounts of nitrogen to the Gulf of Mexico causes a hypoxia zone to expand each summer. About 90% of the nitrate load to the Gulf of Mexico comes from nonpoint sources, and over 31% of that load comes from the Upper Mississippi River. The hypoxia zone has persisted and grown for the past decade. The hypoxia zone was about 5,000 square miles in 1993, and it reached its all time high in 2002 at 8,500 square miles, about the size of the state of Massachusetts.