

## **Water bird counts initiated on Mississippi River**

Last fall aerial surveys were conducted to count water bird use on the Mississippi River from the Twin Cities downstream to Lake Pepin. These surveys were conducted weekly from late September through early December by US Fish and Wildlife Service pilots, who along with observers from the National Park Service and MN Dept of Natural Resources flew standardized routes over the Mississippi and counted the number of water birds, primarily waterfowl, that were using the river.

The US Fish and Wildlife Service has been conducting counts further down river within the Upper Mississippi River National Wildlife and Fish Refuge for over 20 years, this is the first time this upper stretch of river has been surveyed. The information collected is used by the US Fish and Wildlife Service and states to monitor waterfowl use and abundance, determine peak migration times, aid in establishing protected areas, and to help evaluate the effects of habitat restoration projects and management actions. The information is analyzed by US Fish and Wildlife Service Biologists and is reported as the number of use days by species and location.

This newly surveyed reach of the Mississippi, which includes Pool 2 (upstream of Hastings), Pool 3 (Hastings to Red Wing), and Pool 4 (Red Wing through Lake Pepin) includes areas that are listed by the Pollution Control Agency as impaired for turbidity (water clarity) and excess nutrients. It is the most degraded reach of the Mississippi River in Minnesota. The water bird surveys began as a result of the Mississippi Makeover, a stakeholder driven effort being led by Dakota County to identify biological indicators for measuring progress towards habitat and water quality improvement goals that are tied to the impairments.

Waterfowl, along with water clarity, sedimentation, fish, and mussels were recommended by citizen stakeholders as important indicators of the health of the Mississippi River. Survey information was available for all of the indicators with the exception of water birds. State and federal agencies and other partners took the stakeholder recommendations to heart and worked together to secure funding and initiated water bird counts along this reach.

As expected, counts in the newly sampled reach were very low relative to similar counts within the Upper Mississippi River National Wildlife and Fish Refuge. Puddle ducks, like mallard and wood duck did not exceed 17,000 use days on any pools in this reach, compared to over a million use days in other pools further down river with better habitat and water quality. For diving ducks, like canvasback and scaup, numbers were even more dramatic with less than 9,000 use days in any of the upper pools compared to over 14 million in Pool 9 alone.

Low use numbers were expected by river managers and biologists, since habitat in the reach between the Twin Cities and Lake Pepin is very degraded as compared to river pools below Lake Pepin, which settles out the extensive sediment load that is coming in from the upstream watershed. These sediments create muddy water and prevent light penetration from reaching aquatic plants and invertebrates, which are sparse. Aquatic plants are a primary food source for many species of migrating water birds, and are one of the main ingredients in where water birds decide to rest and feed along their migration routes.

Knowing the current status of water bird use will allow managers to set achievable targets for restoration. As best management practices are implemented in the watershed, and restoration projects are completed on the Mississippi we will be able to document increases in water bird use.

Partners in this effort include: US Fish and Wildlife Service, National Park Service, MN and WI Dept's of Natural Resources, Prairie Island Indian Community, and Audubon Minnesota. Information on the Mississippi Makeover can be found at: [www.dakotaswcd.org/wshd\\_missmak.html](http://www.dakotaswcd.org/wshd_missmak.html)