

## **MANOOMIN (WILD RICE) ENHANCEMENT AND RESEARCH IN THE CEDED TERRITORIES - 2007**

### **INTRODUCTION**

The Great Lakes Indian Fish and Wildlife Commission (GLIFWC) conducts a wild rice (*Zizania palustris*) enhancement and research program in the territories ceded in the Treaties of 1836, 1837, and 1842. Most wild rice management projects are conducted cooperatively with other natural resource agencies. This report summarizes activities carried out under this program in 2007.

### **BACKGROUND**

Manoomin has been a staple in the diet of native people in the upper Great Lakes region for over 1000 years (Johnson 1970). It has been an important component of the diet and the culture of the Ojibwe people since their immigration into the heart of wild rice range nearly 3 centuries ago (Vennum 1988). With the arrival of Europeans, wild rice also became an important economic commodity, providing critical nutrition to the fur-trappers and traders moving into the area. Today, manoomin retains extraordinary significance to the Ojibwe, and is considered sacred food. The September moon is still referred to as Manoominike Giizis (the Rice Making Moon), and the harvest season is still celebrated with traditional pow-wows.

In addition to its value to Native Americans, wild rice provides a valuable food source for wildlife, and its presence increases the biological diversity of wetlands. Wild rice can also improve water quality by tying up nutrients and by decreasing the wind action across lakes that can suspend particles and lead to water clarity and quality problems. Unfortunately, wild rice is much less abundant than it was historically.

The re-affirmation of off-reservation treaty rights has restored the tribes' opportunity to cooperatively manage wild rice in the ceded territories. The general objective for the enhancement program is to increase the amount of wild rice in the ceded territories through the reestablishment of historic beds and the development of new beds. In 1985, GLIFWC and the Wisconsin Department of Natural Resources (WDNR) cooperated in the first attempt to inventory wild rice beds in Wisconsin. In 1987, GLIFWC began off-reservation seeding activities by planting 200 pounds of seed in Pat Shay Lake, Vilas County, Wisconsin in cooperation with the Nicolet National Forest (NNF), and providing approximately 100 pounds of seed to the WDNR for seeding on a state wildlife area. The seeding program grew gradually over the next several years, until it expanded significantly in 1991 (Figure 1) with support of funding from the Bureau of Indian Affairs Circle of Flight Program. Restoration efforts continue to be an important part of GLIFWC's manoomin management program.

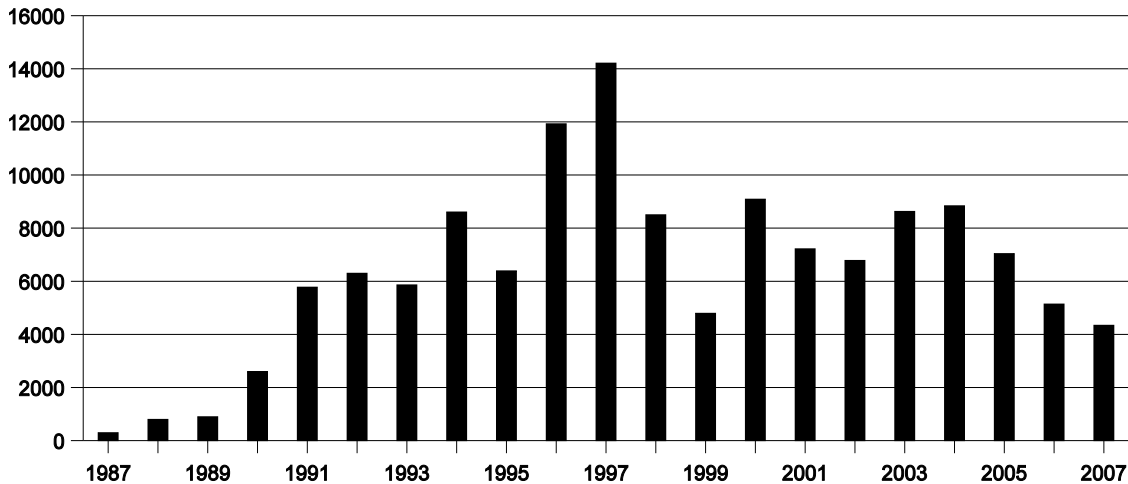


Figure 1. Pounds of manoomin purchased by GLIFWC and seeded by GLIFWC, its member tribes, or cooperators, 1987-2007.

## ENHANCEMENT

### Seeding Summary

In 2007, as in other recent years, GLIFWC concentrated its management efforts on purchasing locally harvested rice and distributing it to cooperators (listed below) who conducted the majority of the seeding. Seeding sites were selected by GLIFWC staff, member tribes, cooperators, or some combination of the three. With the assistance of these cooperators a total of 4,344 pounds of wild rice was seeded in 14 waters in 11 Wisconsin counties and 10 waters in 5 Michigan counties.

GLIFWC's wild rice seeding program is a highly cooperative effort. Without the strong financial and manpower support of numerous partners, this important undertaking would be far less successful. Tribal interest in this resource has acted as a catalyst, stimulating effective partnerships with other agencies sharing a concern for this resource. Cooperators in 2007 included GLIFWC member tribes, including the Keweenaw Bay Indian Community, the Bay Mills Indian Community, the Lac Courte Oreilles Band and the Red Cliff Band; federal agencies including the and the Chequamegon\Nicolet and Ottawa National Forests; and the Wisconsin Department of Natural Resources. The contributions of each of these cooperators are summarized by project below.

Seed purchasing in 2007 was conducted under conditions of a relatively poor crop and a decline in the number of sellers willing to accept the price (\$2 per pound) that GLIFWC was offering. While Vilas County supported good beds, much of the rest of the state, and especially the northwest, had relatively poor stands (David 2008). Nevertheless, GLIFWC was able to purchase over 4,300 pounds of seed (Figure 1). Seed purchased was harvested from 15 waters, with the largest amounts coming from the Mississippi River (Crow Wing County, MN, 703 pounds) and Pillager Lake (Cass County, MN, 618 pounds). All other waters supplied less than 500 pounds of seed.

### **Seeding Locations**

Fourteen Wisconsin and 10 Michigan waters received 4,344 pounds of seed under cooperative seeding ventures in 2007. Figure 2 displays the locations of seeded waters. All sites were seeded in the fall. Sites seeded were:

- 1) **Name:** “Rice Flats” on the St. Croix River (WBIC 2632500)  
**Location:** St. Croix County, WI  
**Cooperator:** WDNR  
**Seed Source:** Minong Flowage, Douglas County WI (224 pounds); Hay Creek, Pine County, MN (55 pounds); Webb Creek, Burnett County, WI (36 pounds).  
**Summary:** The WDNR seeded 315 pounds of seed into this wetland associated with the St. Croix River in an initial seeding attempt to re-establish historic beds which once existed at this site.
  
- 2) **Name:** St. Croix (Gordon) Flowage (WBIC 2740300)  
**Location:** Douglas County, WI  
**Cooperator:** Gordon Flowage Association  
**Seed Source:** Mississippi River, Crow Wing County, MN (136 pounds); Pillager Lake, Cass County, MN (88 pounds).  
**Summary:** GLIFWC seeded 224 pounds of seed into various bays on the west end of this very large flowage in an initial effort to re-establish some of the historic abundance of rice on this water. A bed currently exists on the east end of the flowage where the St. Croix River enters, and a small patch can be found east of the boat landing on the north side of the flowage.
  
- 3) **Name:** Lake Montanis (WBIC 2103200)  
**Location:** Barron County, WI  
**Cooperator:** WDNR  
**Seed Source:** Hay Creek, Pine County, MN (199 pounds).  
**Summary:** The WDNR seeded 199 pounds of seed into this lake in the second annual year of seeding.

- 4) **Name:** Cranberry Bed Conversion Ponds  
**Location:** Sawyer County, WI  
**Cooperator:** Lac Courte Oreilles Band  
**Seed Source:** Wabicon Lake, Forest County, WI (79 pounds); Spur Lake, Oneida County, WI (34 pounds).  
**Summary:** The Lac Courte Oreilles Band seeded 113 pounds of seed into these on-reservation ponds in an initial effort to convert commercial cranberry beds into wild rice wetlands.
- 5) **Name:** Eagle Bay Beaver Ponds  
**Location:** Bayfield County, WI  
**Cooperator:** Red Cliff Band  
**Seed Source:** Wabicon Lake, Forest County, WI (32 pounds); Spur Lake, Oneida County, WI (25 pounds).  
**Summary:** The Red Cliff Band seeded 57 pounds of seed into these beaver ponds in an on-going effort to establish an on-reservation bed at this location.
- 6) **Name:** Schooner (Red Cliff) Bay  
**Location:** Bayfield County, WI  
**Cooperator:** Red Cliff Band  
**Seed Source:** Little Bear Creek, Vilas County, WI (78 pounds); Rice Lake, Forest County, WI, (46 pounds); Wisconsin River, Lincoln County, WI (44 pounds); Wabicon Lake, Forest County, WI (26 pounds).  
**Summary:** The Red Cliff Band seeded 194 pounds of seed into mouth of this bay on Lake Superior in an on-going effort to establish an on-reservation bed at this location.
- 7) **Name:** Augusta Wildlife Area Flowages  
**Location:** Eau Claire County, WI  
**Cooperator:** WDNR  
**Seed Source:** Mississippi River, Crow Wing County, MN (96 pounds); Little Rice Lake, Vilas County, WI (59 pounds).  
**Summary:** The WDNR seeded 155 pounds of seed into the Wiggins and Wood Duck pools (flowages) on this state wildlife area in an initial attempt to establish rice on this property.
- 8) **Name:** Dike 17 Wildlife Area Flowage  
**Location:** Jackson County, WI  
**Cooperator:** WDNR  
**Seed Source:** Pillager Lake, Cass County, MN (107 pounds); North Fork Flowage, Burnett County, WI (66 pounds); Little Rice Lake, Vilas County, WI (63 pounds).  
**Summary:** The WDNR seeded 236 pounds of seed into this flowage in an initial seeding

attempt on this state wildlife area..

- 9) **Name:** Squaw Creek Impoundment (WBIC 2243200)  
**Location:** Price County, WI  
**Cooperator:** Chequamegon National Forest  
**Seed Source:** Minong Flowage, Douglas County WI (120 pounds).  
**Summary:** The Chequamegon National Forest seeded 120 pounds of seed into this lake in the initial seeding effort on this water. This site is different from the Upper Squaw Creek Impoundment, which has also been seeded.
- 10) **Name:** Popple Creek Impoundment  
**Location:** Price County, WI  
**Cooperator:** Chequamegon National Forest  
**Seed Source:** North Fork Flowage, Burnett County, WI (65 pounds); Webb Creek, Burnett County, WI (39 pounds).  
**Summary:** The Chequamegon National Forest seeded 104 pounds of seed into this flowage, which had also been seeded in 1999 and 2000. This small flowage, not shown on many maps, is located north of the Wilson Flowage.
- 11) **Name:** Rice Lake (WBIC 1617200)  
**Location:** Oneida County, WI  
**Cooperator:** WDNR  
**Seed Source:** Pillager Lake, Cass County MN (176 pounds); Wabicon Lake, Forest County, WI (58 pounds); Spur Lake, Oneida County, WI (47 pounds).  
**Summary:** The WDNR seeded 281 pounds of seed into this historic rice lake in an initial effort to reestablish previous abundance. Rice has persisted on the lake, but only in very sparse distribution.
- 12) **Name:** Moose Lake (WBIC 337600)  
**Location:** Langlade County, WI  
**Cooperator:** WDNR  
**Seed Source:** Rogers Lake, Crow Wing County, MN and/or Mississippi River, Crow Wing County MN (110 pounds).  
**Summary:** The WDNR seeded 110 pounds of seed into this lake in the second annual seeding effort on this water.
- 13) **Name:** Florence Lake (WBIC 352400)  
**Location:** Langlade County, WI  
**Cooperator:** WDNR  
**Seed Source:** Rogers Lake, Crow Wing County, MN and/or Mississippi River, Crow Wing County MN (345 pounds).  
**Summary:** The WDNR seeded 345 pounds of seed into this lake in an initial seeding

attempt.

- 14) **Name:** Robago Lake (WBIC 674100)  
**Location:** Florence County, WI  
**Cooperator:** WDNR  
**Seed Source:** Little Rice Lake, Vilas County, WI (153 pounds).  
**Summary:** The WDNR seeded 153 pounds of seed into this lake in the second annual seeding effort on this water.
  
- 15) **Name:** Presque Isle Flowage  
**Location:** Gogebic County, MI  
**Cooperator:** MIDNR  
**Seed Source:** Wolf River, Forest County, WI (234 pounds); Wabicon Lake, Forest County, WI (113 pounds); Spur Lake, Oneida County, WI (56 pounds); Pillager Lake, Cass County, MN (43 pounds); Mississippi River, Crow Wing County, MN (32 pounds).  
**Summary:** GLIFWC seeded 478 pounds of seed into this flowage as a continuation of the 2005/2006 effort to re-establish beds which had been started prior to a dike failure which occurred in 2002.
  
- 16) **Name:** Brush Lake  
**Location:** Gogebic County, MI  
**Cooperator:** Ottawa National Forest  
**Seed Source:** Rice Lake, Forest County, WI (128 pounds); Wolf River, Forest County, WI (25 pounds).  
**Summary:** The Ottawa National Forest seeded 153 pounds of seed into the this small lake in an initial seeding attempt.
  
- 17) **Name:** Lake 13  
**Location:** Houghton County, MI  
**Cooperator:** Ottawa National Forest  
**Seed Source:** Rice Lake, Forest County, WI (72 pounds); Wolf River, Forest County, WI (70 pounds).  
**Summary:** The Ottawa National Forest seeded 142 pounds of seed into this small undeveloped lake in an initial seeding attempt.
  
- 18) **Name:** Kunze Lake  
**Location:** Houghton County, MI  
**Cooperator:** Ottawa National Forest  
**Seed Source:** Wolf River, Forest County, WI (30 pounds).  
**Summary:** A total of 30 pounds of rice was planted in an initial seeding attempt by the Ottawa National Forest on this small, undeveloped lake.

- 19) **Name:** Lake St. Kathryn  
**Location:** Iron County, MI  
**Cooperator:** Ottawa National Forest  
**Seed Source:** Wolf River, Forest County, WI (79 pounds).  
**Summary:** The Ottawa National Forest seeded 79 pounds of seed into this relatively undeveloped lake in an initial seeding attempt.
- 20) **Name:** Menge Creek  
**Location:** Baraga County, MI  
**Cooperator:** Keewenaw Bay Indian Community  
**Seed Source:** Roger Lake, Crow Wing County, MN (97 pounds); Mississippi River, Crow Wing County, MN (40 pounds).  
**Summary:** The Keewenaw Bay Indian Community seeded 137 pounds of rice where the mouth of this creek empties into Lake Superior.
- 21) **Name:** Kelsey Creek Wetlands  
**Location:** Baraga County, MI  
**Cooperator:** Keewenaw Bay Indian Community  
**Seed Source:** Roger Lake, Crow Wing County, MN (149 pounds).  
**Summary:** The Keewenaw Bay Indian Community seeded 149 pounds into wetlands associated with Kelsey Creek.
- 22) **Name:** Gomanche Creek  
**Location:** Baraga County, MI  
**Cooperator:** Keewenaw Bay Indian Community  
**Seed Source:** Mississippi River, Crow Wing County, MN (59 pounds).  
**Summary:** The Keewenaw Bay Indian Community seeded 59 pounds of rice into Gomanche Creek, an on-reservation water.
- 23) **Name:** Laughs (Lost) Lake  
**Location:** Baraga County, MI  
**Cooperator:** Keewenaw Bay Indian Community  
**Seed Source:** Mississippi River, Crow Wing County, MN (58 pounds); Nixon Creek, Vilas County, WI (43 pounds).  
**Summary:** The Keewenaw Bay Indian Community seeded 101 pounds of rice into this small, on-reservation lake.
- 24) **Name:** Deep Creek  
**Location:** Chippewa County, MI  
**Cooperator:** Bay Mills Indian Community

**Seed Source:** Pillager Lake, Cass County, MN (204 pounds); Little Bear Creek, Vilas County, WI (63 pounds); Mississippi River, Crow Wing County, MN (56 pounds); Wisconsin River, Lincoln County, WI (50 pounds); Little Rice Lake, Vilas County, WI (26 pounds); Spur Lake, Oneida County, WI (11 pounds).

**Summary:** The Bay Mills Indian Community seeded 410 pounds of seed in an initial effort on this on-reservation water.

## **RESEARCH**

In 2007 GLIFWC began laying the groundwork for an inventory of ceded territory manoomin beds. Funding from the WDNR and the Administration for Native Americans was secured to allow field surveys to be conducted in both 2008 and 2009.

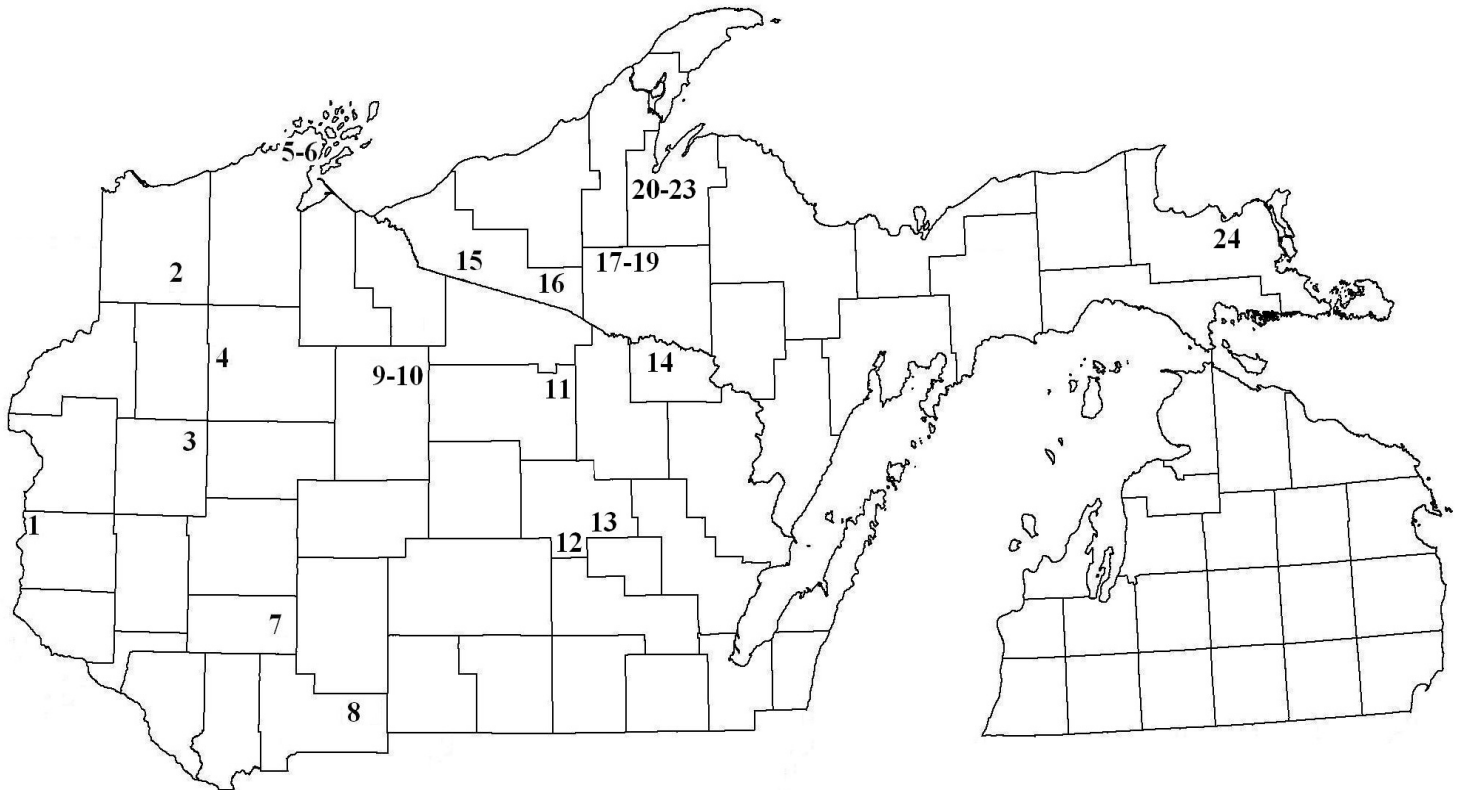
## **LITERATURE CITED**

David, P.F. 2009. Manoomin (wild rice) abundance and harvest in northern Wisconsin in 2007. Great Lakes Indian Fish and Wildlife Commission Admin. Report 09-01. 16 pp.

Johnson, E. 1970. Preliminary notes on the historic use of wild rice. *The Minnesota Archaeologist*, Vol XXX, Number 2.

Vennum, T. 1988. *Wild rice and the Ojibwa people*. Minnesota Historical Society Press. 357 pp.





1) Rice Flats on the St. Croix River	12) Moose Lake
2) St. Croix (Gordon) Flowage	13) Florence Lake
3) Lake Montanis	14) Robago Lake
4) Cranberry Bed Conversion Ponds, LCO Reservation	15) Presque Isle Flowage
5-6) Eagle Bay Beaver Ponds and Schooner (Red Cliff) Bay, Red Cliff Reservation	16) Brush Lake
7) Augusta Wildlife Area Flowages	17-19) Lake Thirteen, Kunze Lake and Lake St. Kathryn
8) Dike 17 Wildlife Area Flowage	20-23) Gomanche Creek, Kelsey Creek, Laughs (Lost) Lake and Menge Creek, KB Res.
9-10) Squaw Creek and Popple Creek Impoundments	24) Deep Creek, Bay Mills Reservation
11) Rice Lake	

Figure 2. Waters seeded in 2007 GLIFWC cooperative ventures.