Summary of the 2011 Off-Reservation Treaty Waterfowl Season

Peter David
Wildlife Biologist

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Great Lakes Indian Fish & Wildlife Commission
Biological Services Division
P.O. Box 9
Odanah, WI 54861
(715) 682-6619

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INTRODUCTION

The fall of 2011 marked the 27th year of off-reservation treaty waterfowl hunting by Great Lakes Indian Fish and Wildlife Commission (GLIFWC) member tribes on lands ceded in the treaties of 1837 and 1842 (Figure 1). Participating tribes included Bad River, Lac Courte Oreilles, Lac du Flambeau, Mole Lake, Red Cliff and St. Croix of Wisconsin, Keweenaw Bay and Lac Vieux Desert in the Upper Peninsula of Michigan, and the Mille Lacs Band of Minnesota. In addition, 2011 marked the 21st year of off-reservation treaty waterfowl hunting in the 1836 treaty area by the Bay Mills Indian Community in Upper Michigan.

Hunting regulations proposed by GLIFWC, as authorized by tribal governments, were reviewed by the U.S. Fish and Wildlife Service (USFWS) after consultation with GLIFWC and the Departments of Natural Resources of Wisconsin (WDNR), Michigan (MiDNR) and Minnesota (MnDNR), and published in the Federal Register for public comment. Final regulations approved by the USFWS are described below.

Annual surveys to estimate the number of hunters, harvest, and effort by tribal waterfowl hunters were conducted via mail from 1985 to 1994 and by telephone from 1995-1998. Due to the low harvest estimates and minimal biological impact of the harvest, GLIFWC began conducting waterfowl harvest surveys on a 3 year cycle, conducting a telephone survey after the 2001, 2004, and 2007 seasons. A survey was also conducted after the 2008 season to help determine if an increase in the mallard bag limit that year (from 10 to 30) influenced harvest levels. This report summarizes the first harvest survey conducted since the 2008 season survey.

REGULATIONS

Season dates for zhiishiibag (ducks), aajigadeg (coot), manoominikeshiinh (rails), mergansers, gallinules, and snipe [ginwaa'okojiis (central/western dialect) or jiichiishkwenh (eastern dialect)] ran from September 15 - December 31 on all ceded lands. The nikag (goose), seasons opened September 1 for Canada geese, and September 15 for all other species, and closed December 31, but also continued later for geese in any area that was open to state-licensed hunters after December 31. Badashka'anzhi (woodcock) hunting was open from September 6 until December 1. A mourning dove [omiimii (central/western dialect) or miimii (eastern dialect)] season ran from September 1 until November 9 in the 1837 and 1842 ceded territories.

The daily bag limit for zhiishiibag (ducks) was 30, with additional limits on black ducks, pintails and canvasbacks (9 each in the 1837 and 1842 ceded territories, 5 each in the 1836). The daily bag limit for nikag (geese), all species combined, was 20 in the three treaty ceded areas. Other bag limits in all ceded territories were: mergansers 10 (in the aggregate), coots and gallinules 20 (in the aggregate), rails 20 (in the aggregate), snipe 16, and woodcock 10. The bag limit for mourning doves was 15 (where allowed).

There were no possession limits. All federal and state closed areas and method restrictions were adopted, with the exceptions of state imposed open water hunting restrictions, Michigan state decoy restrictions, and shell limit restrictions on shotguns. Shooting hours were from ½ hour before sunrise to ½ hour after sunset.

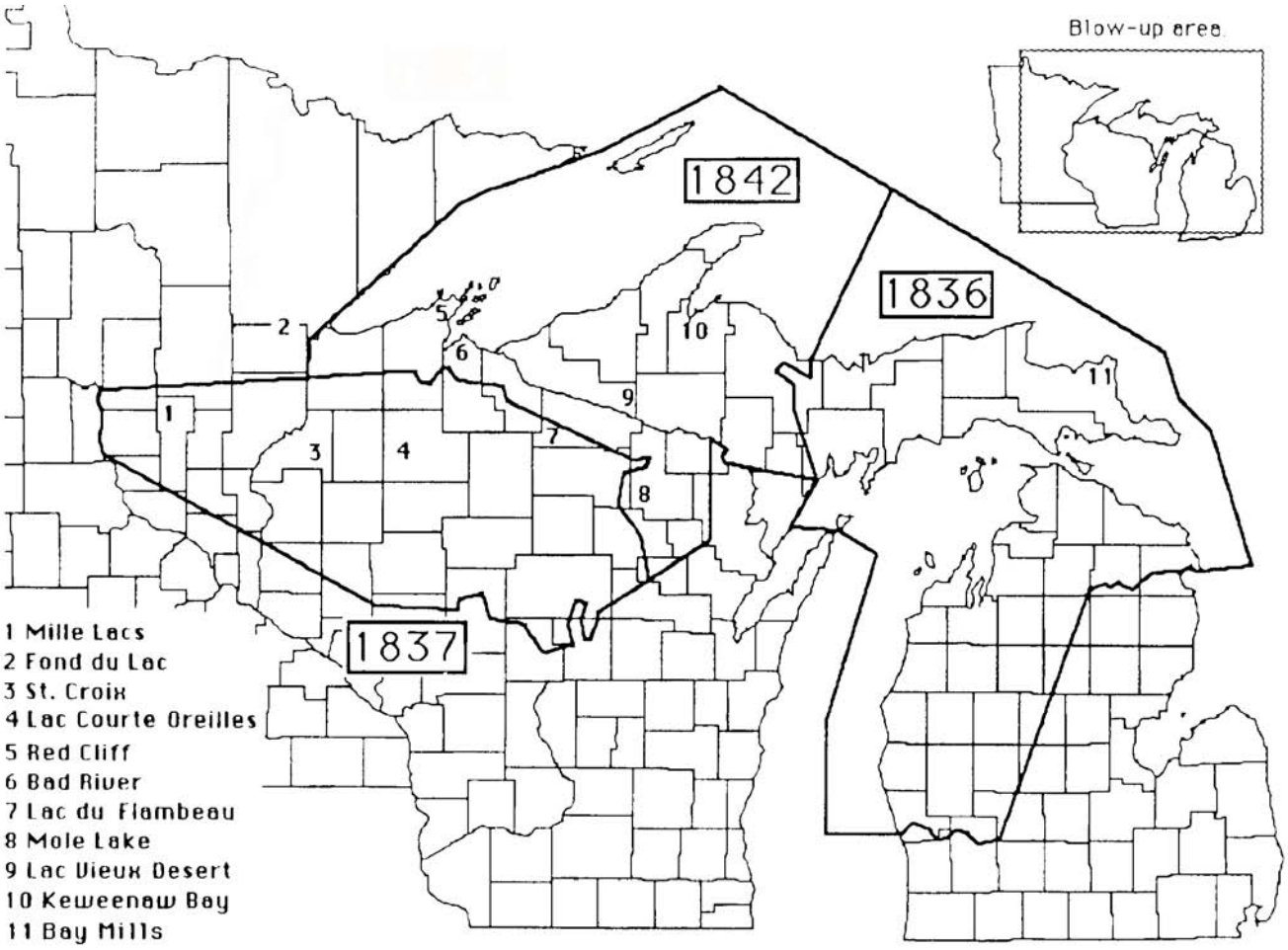

Figure 1. Map of the territories ceded in the treaties of 1836, 1837, and 1842 with reservation locations. (Ceded territory boundary depictions approximate.)

METHODS

Tribal waterfowl hunters were required to possess a natural resource harvesting permit. All tribes with the exception of Keweenaw Bay (KB) used an off-reservation natural resources harvesting permit provided by GLIFWC. This permit was obtained by 1,547 individuals. Approximately 1 out of 4 randomly selected permit holders were surveyed by telephone (381 total individuals). Telephone surveys have generally been used since 1995 because of suspected

response bias in mail surveys. Total harvest estimates were made by extrapolating the responses of surveyed individuals. Due to the adoption of a new licensing system in 2011, it was not possible to stratify survey sampling on the basis of hunting activity the previous year as had been done in past surveys.

The Keweenaw Bay Tribe issues a general, life-long hunting/fishing/trapping permit to their tribal members who participate in any of these activities. As a result, the waterfowl hunting activity rate among permit holders is very low: a mail survey sent to 350 of the 636 KB permit holders after the 2007 waterfowl season yielded only 4 active waterfowl hunters among 82 responses (David, 2008), and it is suspected that this number is biased high by a positive response rate among active waterfowl hunters. As a result, KB tribal members were not surveyed in 2011 and no estimate of their 2011 harvest is included in this report. In 2007, KB members accounted for 21.7% of the total harvest estimate of ducks, 56.6% of the estimated goose harvest, and none of the estimated coot harvest (David, 2008). However, because of the suspected positive response bias, it is thought these figures may over-represent the actual harvest levels by KB members that year.

Identification of the species harvested in 2011, as in previous years, is based on the hunter's skills and recollection, and may not be comparable to estimates from surveys based on parts collections. In this report, the composition of the duck bag is only broken down for a few common species (mallards, wood ducks, scaup, and blue-winged teal); all others are grouped.

It can be difficult to use the tribal waterfowl harvest data to draw solid inferences about the impact of particular harvest regulations. Estimates based on a small number of hunters can be greatly influenced by random variation and data outliers; in this survey for example, two respondents accounted for over a third of the reported duck take and only 7 geese were reported harvested by surveyed individuals. Waterfowl harvest also tends to be influenced by weather, the strength of the fall flight, local wetland conditions, and other factors. The interplay of these variables can make it difficult if not impossible to discern the individual effect of any one, particularly in a given year. In general, tribal harvest estimates may best be used to evaluate long-term trends.

RESULTS

Although the GLIFWC-issued tribal harvesting permits were validated for waterfowl hunting by 1,547 individuals in 2011, the proportion of permit holders who hunt waterfowl is low, likely because the permit is free and is often obtained by individuals obtaining permits for other hunting or gathering activities. In 2011, 5.8% (89) of the permit holders were estimated to have hunted waterfowl (Table 1).

Table 1. Summary of the 2011 tribal off-reservation waterfowl harvest survey sampling.				
Total Permits	Number Surveyed	Percent Surveyed	Percent Active	Estimated Number Active
1,547	381	24.6 %	5.8 %	89

The 22 active survey respondents reported harvesting 187 ducks, 7 geese and 0 coots, in 97 days, yielding total harvest estimates of 759 ducks, 28 geese and 0 coots in 394 days (Table 2). This combined harvest estimate is compared to previous harvest estimates in Table 3.

Table 2. Estimated 2011 tribal off-reservation waterfowl harvest.							
Respondent Reported Harvest				Total Estimated Harvest			
Ducks	Geese	Coot	Days	Ducks	Geese	Coot	Days
187	7	0	97	759	28	0	394

Table 3. Estimated treaty waterfowl harvest in 1996, 1997, 1998, 2001, 2004, 2007, 2008 and 2011.

YEAR	ESTIMATED # OF HUNTERS	ESTIMATED # OF DAYS	ESTIMATED HARVEST			DUCKS PER DAY
			DUCKS	GEESE	COOT	
2011*	89	394	759	28	0	1.9
2008*	76	504	1,124	213	137	2.2
2007	146	780	1,644	535	892	2.1
2004*	63	421	645	84	91	1.5
2001	75	353	1,014	81	146	2.9
1998	92	625	599	177	172	1.0
1997	151	951	1,022	183	164	1.1
1996	125	572	1,278	72	57	2.2
Ave.	102	575	1,010	172	207	1.8

*2004, 2008 and 2011 estimates do not include the Keweenaw Bay Tribe.

Comparing the 2011 estimates to those made for 1996, 1997, 1998, 2001, 2004, 2007 and 2008 (the seven previous years surveyed) suggests that tribal waterfowl hunting has not changed in a biologically substantive way. Despite efforts to increase the subsistence nature of the harvest through various season, bag and method liberalizations, the average number of ducks harvested per day has not increased over time (Table 3).

Nearly all (390) of the estimated 394 hunting days took place in Wisconsin, with just 4 occurring in Michigan and 0 in Minnesota. The Minnesota and Michigan figures may be under-estimates, as low but somewhat higher levels of off-reservation waterfowl hunting are believed to take place in those states. As in past years, most hunting took place in or near counties with reservations (Fig. 2).

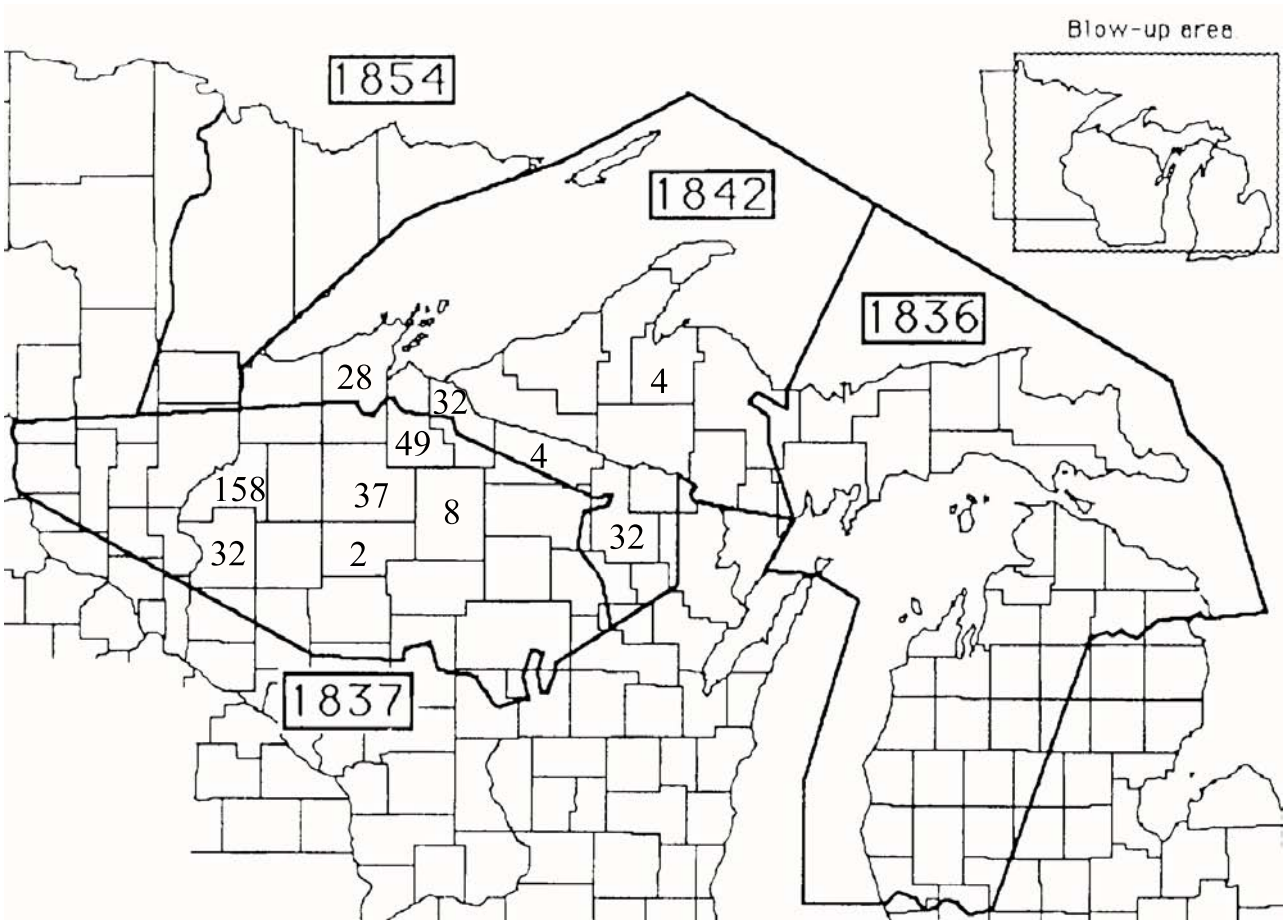

Figure 2. Estimated waterfowl hunting days by county in 2011.

No survey respondents reported harvesting snipe, rails, doves or woodcock. Among active hunters with an opinion (n=20), 35% felt the fall flight was poorer than in 2010, 10% felt it was better, and 55% felt it was about the same.

As in 2007 and 2008, hunters were asked to report the largest number of ducks and geese they harvested on a single day of hunting. The greatest number of ducks reported harvested in a single day was 15, while the average harvest was 1.9 ducks per hunting day. The highest number of geese reported taken on a single outing was 2, and the average harvest was 0.1 geese per hunting day. These responses are similar to what was reported in 2007 and 2008 (Table 4). It is clear that hunter harvest is generally determined by factors other than the bag limit. Although total duck harvest remained low in 2011 even with a thirty-bird bag limit, the large bag limit is important to tribal hunters because it allows those individuals who do locate ducks on a particular hunting trip a greater opportunity to meet their subsistence needs.

Table 4. Highest single day duck and goose harvest as reported by active respondents in 2007, 2008, and 2011.

Most Birds Harvested in a Single Day	Number of active hunters reporting for:							
	Ducks				Geese			
	2011	2008	2007	Total	2011	2008	2007	Total
0-3	16	18	17	51	22	27	25	74
4-6	2	6	9	17	0	2	2	4
7-10	2	3	1	6	0	1	1	2
10+	2	3	1	6	0	0	0	0

Survey respondents were asked to report the composition of their duck harvest. The reported composition in 2011 differed in some respects from the collective composition from the 12 previous surveys (Figure 3). The percentage of wood ducks, mallards and blue-winged teal in 2011 was above the long-term average, while the percentage of scaup and "other" species in 2011 was lower than the long-term average.

Over time, the percentage of scaup in the duck harvest has been declining, while the percentage of mallards has been increasing (Figure 4). Wood ducks have shown great variability, but no clear trend.

SUMMARY

A tribal waterfowl harvest survey was conducted following the 2011 season and estimates were compared to previous surveys. The estimated number of hunters and hunter days in 2011 were within the range of previous surveys while estimated harvest of ducks, geese and coot in 2011 was below average (Table 3). While the exercise of the treaty right to harvest waterfowl remains culturally significant to individual tribal members, the biological impact is widely dispersed and remains insignificant to waterfowl populations.

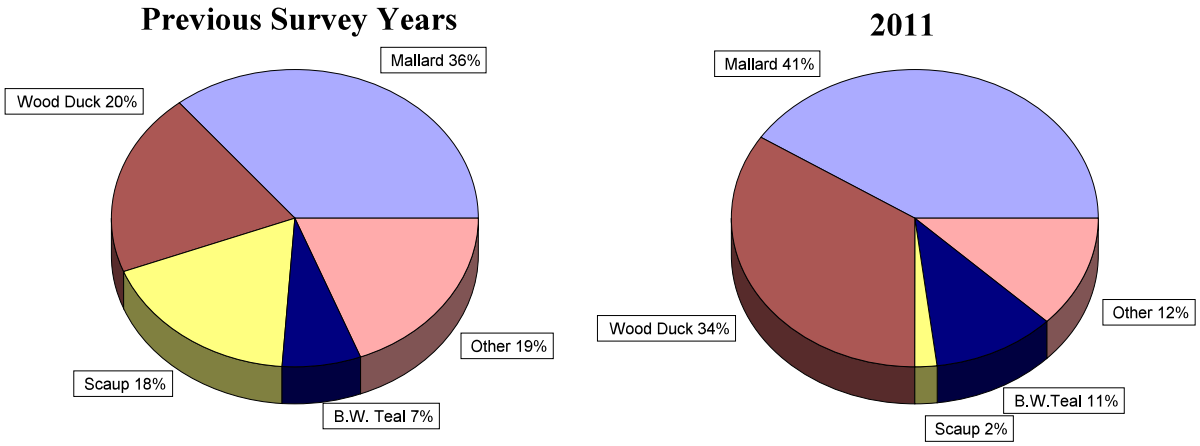

Figure 3. Species composition of the treaty duck harvest, 2011 versus previous survey years (1991-1998, 2001, 2004, 2007 and 2008 combined).

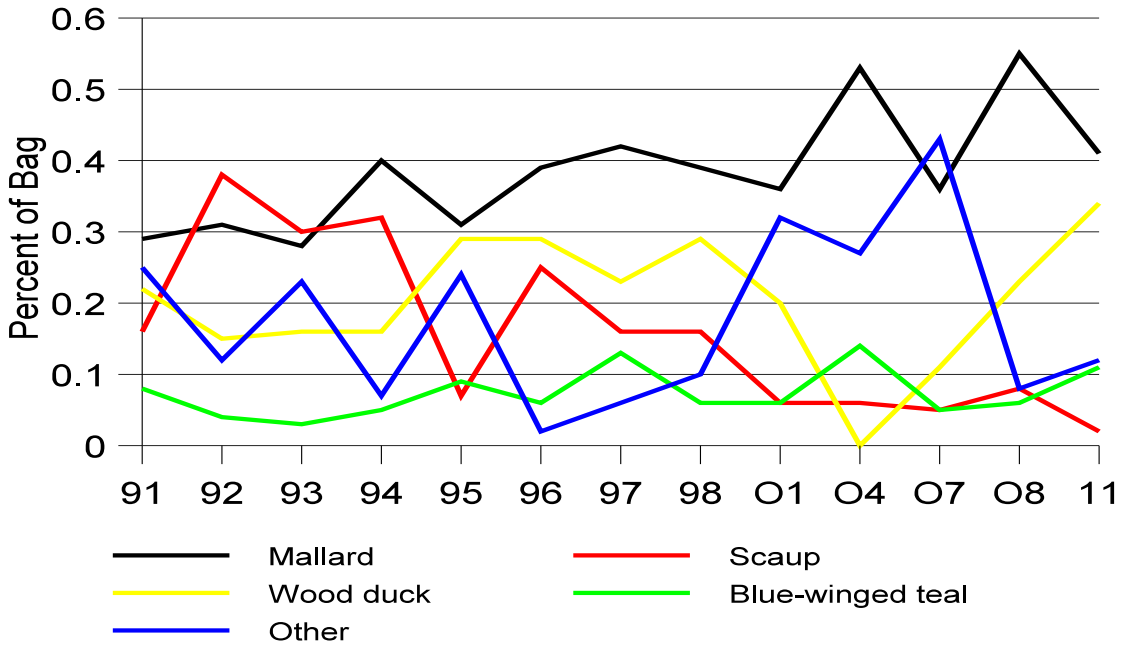

Figure 4. Duck species composition by survey year.

LITERATURE CITED

David, P. 2010. Summary of the 2008 Off-Reservation Treaty Waterfowl Season. Great Lakes Indian Fish and Wildlife Commission Administrative Report 10-05. 7 pp.