

**SPECIAL ISSUE**

**GLIFWC  
BIOLOGICAL  
REPORTS**

**GREAT LAKES INDIAN  
FISH AND WILDLIFE  
COMMISSION**

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(CCARW)

**MASINAIGAN**



A CHRONICLE OF THE  
**LAKE  
SUPERIOR  
OJIBWAY**  
MARCH, 1986



**DNR / TRIBES WORK AT  
SPEARING AGREEMENT**

**AT THE TABLE**

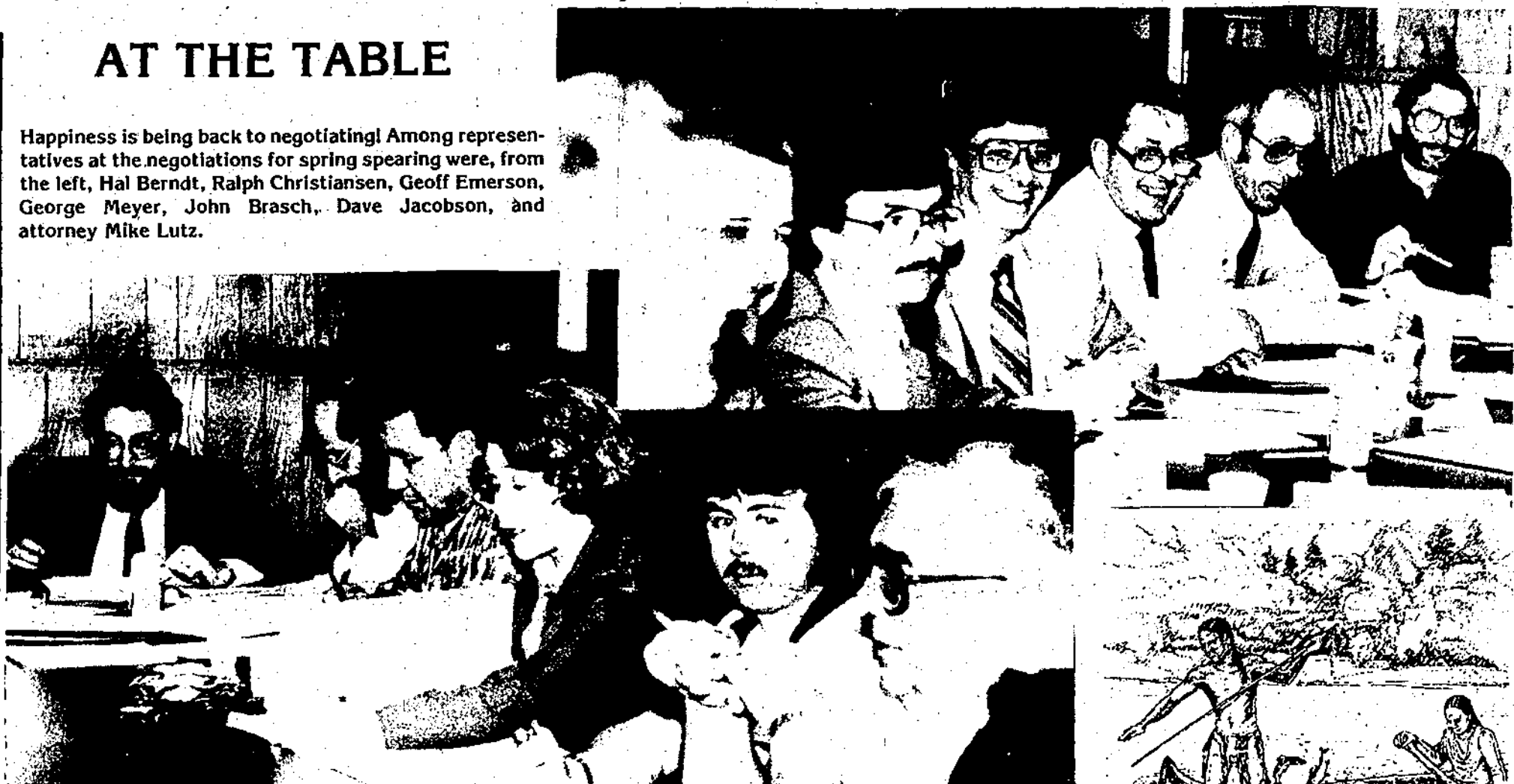
(Editors note: Negotiations resume as the paper goes to press.)

Wisconsin Department of Natural Resources (WDNR) and Voigt Inter-Tribal Task Force representatives have made headway towards reaching a 1986 off-reservation spring spearing agreement following two days of negotiating at Lac du Flambeau on March 17th & 18th.

According to Voigt Task Force Chairman, James Schlander, talks are scheduled to resume on March 27th at Lac du Flambeau to deal with a few issues which remain unresolved between the WDNR and tribal task force representatives.

The right to harvest fish during a spring spearing season was re-affirmed through the Voigt Decision which upheld treaty-reserved rights of the Chippewa to hunt fish and gather on ceded territories.

Happiness is being back to negotiating! Among representatives at the negotiations for spring spearing were, from the left, Hal Berndt, Ralph Christiansen, Geoff Emerson, George Meyer, John Brasch, Dave Jacobson, and attorney Mike Lutz.



On the other side of the table are the tribal negotiators, some of whom are pictured above. From the left are David Siegler, GLIFWC policy analyst; Howard Bichler, St. Croix tribal attorney; Tom Maulson, Lac du Flambeau rep.; Kathryn Tierney, Lac du Flambeau tribal attorney; Mark Duffy, Red Cliff rep.; and Ken Andrews, Red Cliff, rep.



In 1985 tribal spears harvest is maintained is by took 2758 walleye and 86 musky during the spring season which ran from April 19-May 2. Lac du Flambeau spears took 75% of the walleye (2039 of them) and spent more "nights" spearing (195 to 328) than Mole Lake and St. Croix members. Although up to 20 walleye could be taken per night, spears averaged around 8 walleye or 14 pounds nightly.

One means of judging if the resource is protected and of ensuring that a safe level of

looking at pounds of fish taken per acre of water. On the average up to 2-3 pounds of walleye can be removed per acre. Tribal members speared walleye in 13 lakes where harvest reached or neared 0.5 lbs/acre. Each of the three tribes voluntarily closed a lake to continued spearing. This closure at 0.5 lbs/acre occurred even though harvest by tribal spears was still at a safe level and even though the number of fish taken by hook-and-line anglers was not determined.

**SPEARING  
STUDY SHOWS  
NO HARM TO  
RESOURCE**

Summary of Spearing Harvest and Effort in Off-Reservation Lakes During Spring 1985. by Niel Kmecek, GLIFWC Inland Lakes Biologist

Name of Lake	Area in Acres	Number of Walleye Speared	Estimated Weight of Walleye	Lbs. Per Acre-Walleye	Estimated Number of Females	Estimated Number of Males	Number of Musky	Estimated Weight of Musky	Lbs. Per Acre-Musky	Walleye Per Boat-HR	Number Spears	Walleye Spearer	Pounds Spearer
<b>Reservation: Lac du Flambeau</b>													
Big Lake	850	119	180	0.21	0	0	0	0.0	0.0	6.3	28	4.2	6.4
Big. St. Germaine Lake	1617	172	246	0.15	13	149	2	17.0	12.4	26	6.6	9.5	
Flambeau Flowage	13545	21	32	0.00	0	0	0	0.0	0.00	13.1	6	3.5	5.3
North Twin Lake	2788	365	628	0.22	0	0	14	168.0	0.06	16.4	36	10.1	17.2
Squirrel Lake	1352	592	725	0.54	68	514	2	23.0	0.02	0.0	33	17.9	22.0
Tomahawk Lake	3392	770	1495	0.44	106	664	11	154.0	15.3	66	11.6	22.7	
<b>*Subtotal</b>	<b>23544</b>	<b>2039</b>	<b>3298</b>		<b>187</b>	<b>1327</b>	<b>30</b>	<b>362.0</b>		<b>195</b>			
<b>Reservation: Mole Lake</b>													
Enterprise Lake	505	168	272	0.54	12	109	8	83.0	0.16	11.3	11	15.3	24.7
Lac Vieux Desert	2853	49	81	0.03	0	0	3	17.0	0.01	7.0	7	7.0	11.6
Metonga Lake	1991	88	104	0.05	0	0	0	0.0	0.00	6.6	18	4.4	5.8
Pelican Lake	3585	225	388	0.09	9	211	24	300.0	0.08	4.5	45	5.0	6.8
Upper Post Lake	757	0	0	0.00	0	0	1	15.0	0.02	0.0	0	0.0	0.0
<b>Subtotal</b>	<b>9691</b>	<b>522</b>	<b>765</b>		<b>21</b>	<b>320</b>	<b>36</b>	<b>415.0</b>		<b>81</b>			
<b>Reservation: St. Croix</b>													
Big McKenzie Lake	1185	145	232	0.20	0	0	9	81.0	0.07	6.3	16	9.1	14.5
Big Round Lake	1015	11	66	0.07	0	0	2	54.0	0.05	0.5	12	0.9	5.5
Sand Lake	322	41	157	0.49	0	0	8	88.0	0.25	1.5	24	1.7	6.5
Yellow Lake	2287	0	0	0.00	0	0	1	5.0	0.00	0.0	0	0.0	0.0
<b>Subtotal</b>	<b>4809</b>	<b>197</b>	<b>455</b>		<b>0</b>	<b>0</b>	<b>20</b>	<b>220.0</b>			<b>52</b>		
<b>Total</b>	<b>38044</b>	<b>2758</b>	<b>4518</b>		<b>208</b>	<b>1647</b>	<b>86</b>	<b>977.0</b>			<b>328</b>		



Negotiations looking towards a spring spearing agreement between the Wisconsin Department of Natural Resources and the Chippewa tribes with off-reservation hunting and fishing rights progress for two days, March 17th and 18th. Talks will be resuming on March 27th when WDNR and Voigt Inter-Tribal Task Force representatives once again try to formulate an agreement satisfactory to each.



It wasn't so long ago that DNR and Voigt Inter-Tribal Task Force representatives met a press conference following the 1985 spearing season. Despite lack of biological evidence of depletion, DNR surprised the tribes by announcing another spearing season would never be acceptable in Wisconsin.

## PRESS CONF: CIVIL RIGHTS

Carmelo Mendez, Midwest Regional Office, U.S. Commission on Civil Rights, says the Commission will be sponsoring a press conference in Wausau on April 10th to address the subject of the treaty spring spearing season and the problems of confrontation which were evident in the '85 season.

The intent will be to issue a position relative to the racial tensions which surfaced in the prior season. Mendez says representatives of the U.S. Commission on Civil Rights

will be calling for local and state entities to help avert confrontation.

The conference is for press only, according to Mendez, and will take place at 10 a.m. in the Wausau City Council Chambers. Commissioner Destro from the Na-Commission will be speaking as well as members of the Wisconsin Advisory Committee.

The Commission also has prepared materials on the subject of Indian tribes and their quest for sovereignty which they will be distributing.

## GRAND JURY TO HEAR TESTIMONY

Editor's Note: Questions regarding the possible violation of the civil rights of Chippewa spearsmen during the 1985 spring spearing season are in the process of being investigated.

A grand jury hearing will be held on April 3rd. A grand jury is essentially a group of citizens who listen to evidence and decide if there is sufficient evidence to charge.

The exercise of treaty hunting, fishing, and gathering rights fall into the scope of civil rights.

Angry confrontations between non-Indians and Chippewa fishermen during last spring's off-reservation spearing season will be investigated by a grand jury looking for possible violations of Indians' civil rights, a newspaper confirmed Friday night.

The Wausau Daily Herald said that it had confirmed that the grand jury will convene in U.S. District Court at Madison, April 3, to look into reports that rocks were tossed, rifles fired and abusive language used in at least one of the incidents.

FBI agents served subpoenas Friday on news reporters and others, seeking such things as photographic negatives, films and tapes that could help in the probe.

During last spring's spearing season, state Department of Natural Resources wardens had reported a number of tense confrontations when opponents of Indian spear-fishing rights temporarily blocked boat landings being used by the Chippewa.

There were reports of rock-tossing, abusive language and about five rifle shots during a May 2 incident at Big Twin Lake, but no actual fighting or injuries were reported.

The Chippewa were permitted to spear game fish on some lakes as part of an agreement with the DNR on rules for last year's Indian fishing season.

A federal court ruling three years ago upheld the rights of the Chippewa to fish, hunt, trap and gather wild rice on non-reservation lands across about the northern third of Wisconsin.

Opponents to the treaty rights have noted that non-Indians are not permitted to spear game fish and contended that allowing the Chippewa to do so could deplete fish populations.

(From the Ashland Daily Press)



## WCA RESCINDS ABROGATION RESOLUTION #59



The Wisconsin Counties Association (WCA) Board of Directors voted unanimously at their March meeting to rescind Resolution 59, an abrogation resolution which has long haunted the Wisconsin Chippewa Tribes.

According to Mark Rogacki, WCA executive director, the move should be interpreted as "a gesture of good

will" towards the Chippewa tribes.

Mark Hazelbaker, WCA attorney, explained that the Board's motion will have to go to the national convention in September for a final vote, but Wisconsin's clear recommendation for rescission should provide a clear impetus for rescission at that level as well.

Hazelbaker said that the

Board of Directors recent vote chiefly called all staff off from working on the issue. However, he said, the issue of abrogation was not one on which WCA staff were told to push anyway.

Hazelbaker said that the original resolution, Resolution 59, reflects the feeling on the part of counties that they were being deprived of control over county-owned lands. He said

they did not feel that the Wisconsin Department of Natural Resources were representing their interests and that the counties' interests were being ignored.

Resolution 59 was the counties' reaction to the Voigt Decision and the apparent implications when it was first announced, he said.

## PUBLIC FORUM: POSITIVE RESPONSE QUESTIONS CONTINUE

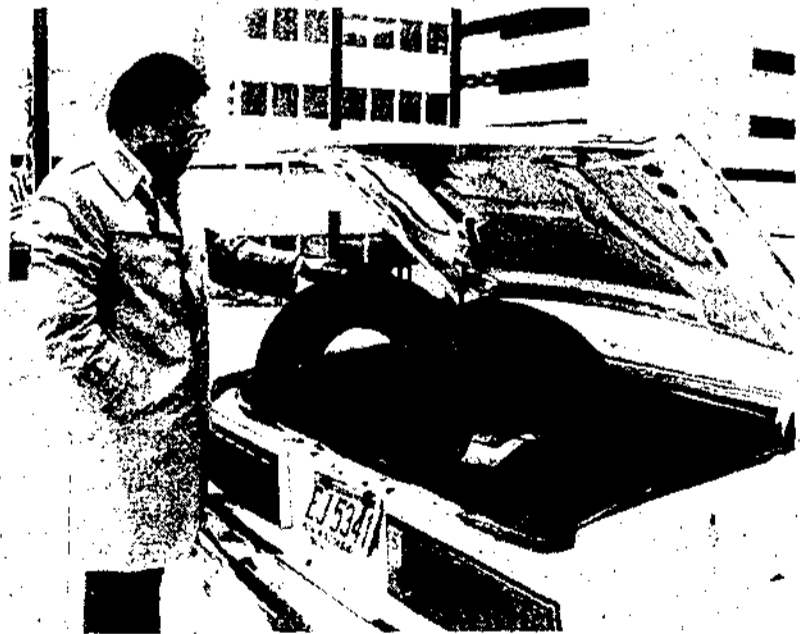
A public forum on the issue of treaty rights was aired live by the Lakeland Broadcasting Corporation on March 10th in Minnoka and received considerable positive commentary, according to broadcaster John Sherer of WWMH-FM.

Speakers at the forum included James Schlender, Voigt Inter-Tribal Task Force Chairman, Neil Kmeciek, GLIFWC inland lakes biologist; George Meyer, lead negotiator for the Wisconsin Department of Natural Resources (WDNR); and Dale Urso, WDNR District Director of the Northwest District.

"Comments we have received from listeners, community leaders and the other stations which participated have all been positive, leading us to explore the possibility of repeating a forum broadcast," Sherer reported in a letter to the GLIFWC Public Information Office.

"Because of the plethora of questions received from the community members participating in the forum and also because of the response to the broadcast indicating that it was instrumental in educating the public, Scherer is considering a second similar forum, perhaps prior to the fall gun deer season.

Following is a list of some of the questions/comments which remained unaddressed during the March 10th forum



Vandalism—following the Minnoka forum, Jim Schlender found the tires on his car slashed, an ugly reminder of the mentality of some.

due to time limitations. The list provides an indication of what people do not know or do not understand:

— "With so few Indians participating in the spearing of gamefish, why do the Tribes insist on exercising their so-called right to do so when it offends so many people and costs Wisconsin taxpayers so much money?"

— "Mr. Meyer, why are you now again negotiating another season-spearfishing behind closed doors and out of sight and hearing of the news media and the public? Don't you feel they deserve to know what's going on, before it's too late?"

— "Did not the District Court of this Seventh Federal District tell Judge Doyle that the Indian (Native American) Treaty Rights be adhered to so long as the resource was not endangered? If its not endangered, then why do we have any bag limits or seasons for the other 'non-natives'?"

— "In the 1950's or early 60's the Wisconsin Conservation Department (now called the D.N.R.) asked for and received power to stop spearing of all game fish off the reservations. Why? What was the reason?"

— "As long as hunting, fishing, and gathering rights are guaranteed by the federal

government do you think the Tribes are doing the state a favor by negotiating with them at all?"

— "Can a Chippewa Indian spearfishing season justifiably be called 'subsistence' fishing in light of all the state and federal programs which are in place for the Tribes?"

— "I'm not too concerned about the fishing and hunting! But, is the goal of the Tribe to take over hunting, fishing, mineral, water rights, etc.?"

— "It's spearing now, when does the gill netting, set lines, etc. get addressed? Is there something new every year?"

— "If Judge Doyle rules that the Tribes have the right to commercialize in fish and game taken under Treaty Rights, what steps will the Tribes take to implement self control? Subsistence is one thing-selling another. Is the legal position of 50 percent of the fish belonging to the Tribes based on the strong possibility that the courts will rule in favor of commercialization?"

— "At a press conference in Park Falls after last year's spearing season you (G. Meyer) you were quoted as saying that 'depletion of the resource could happen if spearing continues in the future.' What safeguards is the D.N.R. taking to prevent the very thing you predicted from becoming reality in the north?"

# DRUM MUSIC: NOT CONFRONTATIONAL

Traditional Chippewa POW WOW music (the music of the drum) and feasting were part of the Chippewa spring spearing last season and may well be expected to be a part of this season's spearing as well. They are traditionally intermingled with harvesting and gestures of thanksgiving.

Last spring the feasting took the form of a fish fry on beaches following the successful harvest of fish. The music and the feasting both are part of the Chippewa culture, religious expression apically a part of a significant community event.

As Fred Ackly, Mole Lake tribal council member, expresses it, "the music of the Drum are the sounds of traditional prayer songs, giving thanks and also used as an offering for a good harvest."

Mole Lake members also give tobacco prior to a harvest, another traditional ceremony of the Chippewa. Ackly says that in earlier days runners were sent when the time of harvest was ready to contact

the people in various bands. Soon the scattered bands would congregate in the area of harvest, whether it be for wild rice, fish or maple syrup, and there would be a time of community, of sharing what has been gathered, accompanied by the prayer songs, dancing and feasting.

Mole Lake still retains its original Drum and religious ceremonies are common today in association with harvest times as they were in the past. Many other Chippewa tribes also retain a deep and lasting affiliation with their traditional religious practices. Members of the Lac du Flambeau Tribe also played Drum music during the spearing season last year.

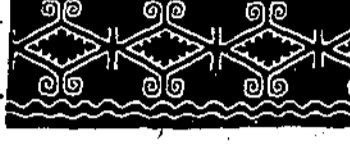
The sounds and songs of the Drum have both religious and cultural significance to the Chippewa people; the songs are dear to them as are many Christian hymns to the white community. They are not meant or felt to be inflammatory in nature, nor should they be interpreted as such.



BEADWORK, ONEWAY



QUILLWORK ON BUCKSKIN BAG, OJIBWAY



BEADWORK, SALK & FOX

# \$100,000 EPA GRANT TO GLIFWC

# ENFORCEMENT TRAINING BROADLY BASED



Alan Ruger, left, and David Siegler, both GLIFWC staff, at one of several meetings on a radioactive waste repository site.

The Great Lakes Indian Fish and Wildlife Commission (GLIFWC) recently received confirmation of a \$100,000 grant from the Environmental Protection Agency (EPA) to inventory the environmental needs on member reservations, according to GLIFWC Environmental Biologist Alan Ruger.

Ruger says that GLIFWC will be working with the Council of Energy Resource Tribes (CERT), EPA's prime contractor, in lookings at the environmental problems of eleven member tribes. Six tribes are in Wisconsin, three in Minnesota, and two in Michigan.

The EPA is currently funding a national effort through the Americans of Indian Opportunity (AIO) which will be inventorying environmental needs of larger tribes, however,

EPA feels it is also important for the activity to be performed for smaller reservations as well.

Ruger says that he and Policy Analyst, David Siegler will begin work on the project in May of this year. They will be performing a needs assessment in regard to the reservations' environment and developing an options analysis for all 11 reservations. Their study will be taking into account tribal values and desires as well.

EPA feels that in order for tribes to rationally decide what types of environmental programs they want to endorse, they first need to acquire a broad understanding of the problems facing them and what solutions are possible.

The intent of the program is that, following the initial study, tribes will be in a posi-

tion to determine more specifically the areas of environmental protection which warrant the development of local expertise and commence their own programs, assessing the benefits of inter-tribal cooperation in relation to these programs.

According to the EPA, Phase II of the program will be "to develop operational expertise needed to assume EPA delegable programs". And Phase III will be "the assumption and operation of such programs, or the operation of comparable independent tribal programs with a commensurate level of professionalism and effectiveness".

Ruger feels that the grant and resultant study are a first step in getting tribes involved with EPA programs in developing tribal expertise in environmental issues.

Law enforcement personnel gained a broad-based perspective on enforcement issues, such treaties, treaty rights, and tribal jurisdiction, at a four-day training session held in Keweenaw Bay in February.

The session was co-sponsored by the Keweenaw Bay Indian Community and the Great Lakes Indian Fish and Wildlife Commission (GLIFWC) for the benefit of both tribal enforcement and social services staff.

GLIFWC Chief Warden Mike Cardinal felt the attendance of many of the Michigan Department of Natural Resources (MDNR) staff made the workshop particularly productive. It provided an opportunity for open dialogue, questions, and responses, between tribal and state personnel and also channelled thought towards more cooperative enforcement of the up-coming commercial fishing season, according to Cardinal.

with them on lake patrol.

The first two days of the training provided participants with background on treaties and treaty issues. Walt Bresette, GLIFWC PIO, talked about the significance of the treaties, explaining that treaties and the rights reserved in them are not new, or something recently granted to the tribes by the courts, but rather a re-affirmation that those rights and treaties remain valid today.

Cardinal says that the MDNR suggested some additional tribal codes be approved which would make the DNR's enforcement job easier, such as the marking of nets. DNR spokesmen also agreed to work cooperatively with the tribal and GLIFWC wardens in monitoring the season by passing along information on violations to appropriate personnel, and also, by trying to get their large patrol boat into Lake Superior for several weeks so the GLIFWC wardens can work

Kathryn Tierney, Lac du Flambeau Tribal Attorney, and Howard Bichler, St. Croix Tribal Attorney, provided background information on the various cases which have affirmed treaty rights. Cardinal also went over the implications of the Settler vs. Leimiere Case from the Pacific Northwest, demonstrated tribal jurisdiction over members in ceded territories.

Cardinal says that the presentations were fruitful in clearing up basic misconceptions about the treaties and promoted considerable dialogue over such issues as tribal jurisdiction and off-reservation.

Other aspects of the training session covered more routine matters of enforcement, such as arrest techniques, weapons use, and how to handle suspects.

Cardinal felt the entire session to be very fruitful for all participants and hopes a similar session can be arranged again in the coming year.



Mike Cardinal, GLIFWC Chief Warden



Kathryn Tierney, Lac du Flambeau Tribal Attorney presented background on litigation at the training center.

# COMMISSIONER SPEAKS OUT ON ACID RAIN BILL

# MEDIA WORKSHOP FOR MEMBER TRIBES

ODANAH - Richard Gurnoe, Red Cliff Tribal Chairman and Chairman of the Great Lakes Indian Fish and Wildlife Commission (GLIFWC) is encouraging people to contact their legislators in support of Senate Bill 546, which addresses the acid rain problem in northern Wisconsin.

The GLIFWC represents eleven Chippewa Tribes in Wisconsin, Minnesota, and Michigan in the exercise of their off-reservation treaty rights. Six of these tribes are within Wisconsin. Approximately the upper third of Wisconsin is within the treaty area where the Chippewas retain hunting, fishing, and gathering rights.

In a letter to Representative Jeanette Bell, Gurnoe noted that Senate Bill 546 will reach the Assembly floor within the next several days. The Commission maintains that passage of this Bill is essential for the protection of the natural resources of Wisconsin.

Gurnoe is concerned because a number of northern Wisconsin lakes have been altered by acid precipitation and at least 1,400 others are known to be vulnerable. The relationship of acid precipitation and the uptake of heavy metals by aquatic life is another area which is of great concern to the tribes. This Bill



Richard Gurnoe, Chairman of GLIFWC and Red Cliff Tribal Chairman

will help to mitigate additional problems with heavy metals such as mercury, according to Gurnoe.

Although sulfur dioxide (SO2) emissions are about 375,000 tons for 1985, a reduction to 250,000 tons per year is essential to control further damage to Wisconsin's lakes. A key provision of SB 546 would limit SO2 emissions to 1.2 lbs. per million BTU's by 1993. This provision must remain in the Bill for it to have an impact on the acid precipitation problem, says Gurnoe.

Wisconsin's fish, wildlife and natural resources. The people

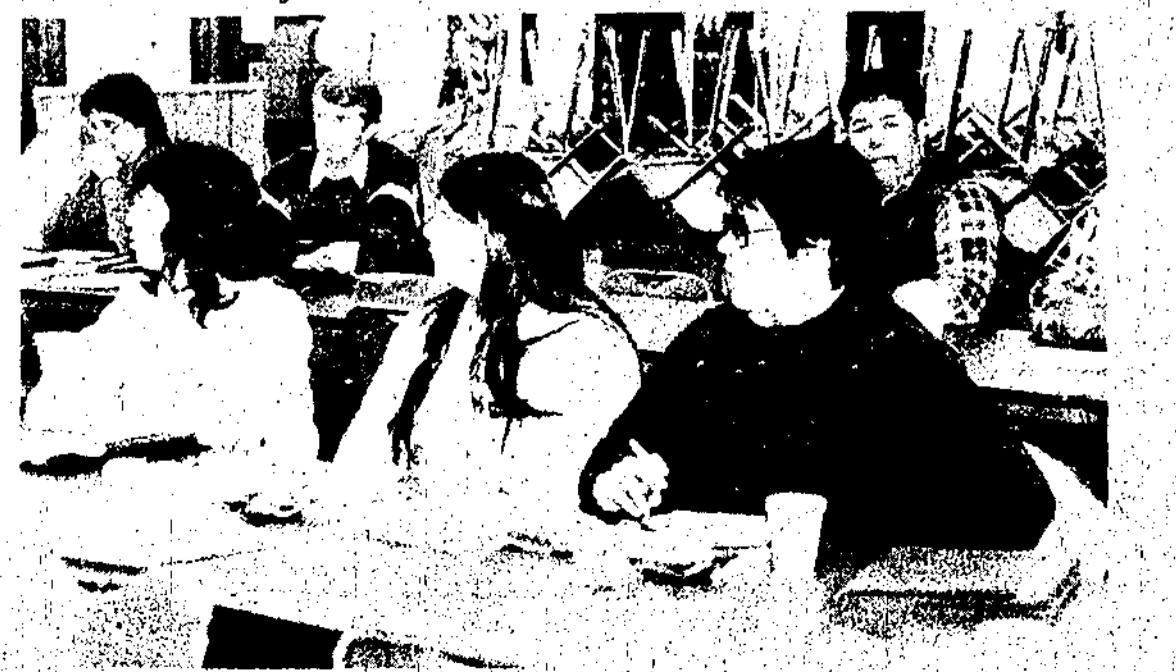
of Wisconsin cannot afford to see the \$3 billion tourism and recreational industry depleted and the Tribes cannot afford to see their hunting, fishing, and gathering rights usurped by pollution.

"We will all benefit from passage of SB 546 with the 1.2 lbs. SO2 limit, and we urge positive action by the Assembly," Gurnoe stated on behalf of the Commission tribes.

Senate Bill 546, with the 1.2 lbs. of SO2 per million BTU's provision, is a step forward for all those who enjoy



Above and below, a media workshop was sponsored jointly by the GLIFWC and Lac du Flambeau Public Information Offices. The purpose was to acquaint tribal participants with various area media staff and to also work on technical skills such as writing press releases. Representatives from newspapers, t.v. and radio were present to explain how to reach the media most effectively.



# HANFORD'S HOPE - A NUKE WASTE DUMP IN THEIR BACKYARD

The citizens of Hanford, Washington, want a nuclear waste repository. In fact, they are supporting the selection of Hanford for the first nuclear waste dump and are one of the three now being considered by the Department of Energy. (DOE)

A number of area representatives from Wisconsin tribes and from the Great Lakes Indian Fish and Wildlife Commission (GLIFWC) recently returned from an observation tour of the Hanford site, which is currently a large development researching on and disposing of military radioactive waste and producing nuclear energy.

However, according to GLIFWC Environmental Biologist Alan Ruger, who took part in the tour, not everyone in the area shares the Hanfordites enthusiasm for the siting of a repository at Hanford.

Because the site lies close to the Columbia River, the surrounding tribes which include the Nez Perce, Yakima and Umatilla, strongly object, fearful of contamination of the river and eventually destruction of their fishing resource. Joining the tribes are the State of Washington, the city of Portland (which lies at the mouth of the Columbia River),

and the State of Oregon.

The tour was sponsored in order to give people concerned with the issues of a second repository site in Wisconsin and Minnesota a first hand glimpse of a major radioactive waste facility and to discern the possible effects as well as operation of such a site.

Ruger says that DOE started the Hanford site in 1942, so presently the Hanford community represents the 3rd generation of "nuke" people, people who have made a living on production and disposal of nuclear waste. Essentially, the people of the community are totally dependent upon the Hanford site, with about 3/4 of the population relying on it economically.

Radioactive waste is currently being stored at Hanford from the defense department and power plants. It is only partially below ground, and the storage system has a history of leakage. Ruger noted. The largest leak, he says, was 500,000 gallons - a leak which is still continuing to emit tridium into the environment today.

Originally the site operated 9 reactors, but due to a cutback in funding during the 1970's all have been closed

down except one. The federal government then started a program to diversify the site, initiating other programs. Currently 7 to 8 programs, including several in research, are in operation.

Work is also going full steam ahead with the testing of the basalt rock, which would hold the first permanent repository.

Hanford citizens are doing their best to prove that Hanford is the best place in America for the storage of high-level radioactive waste, despite the potential pollution in the Columbia River and the leakages in the current operation.

Unfortunately for Hanford, not everyone thinks it is the best place scientifically. Ruger says that several geologists who have no direct ties to the Hanford site feel it has become an institution and that is not best choice.



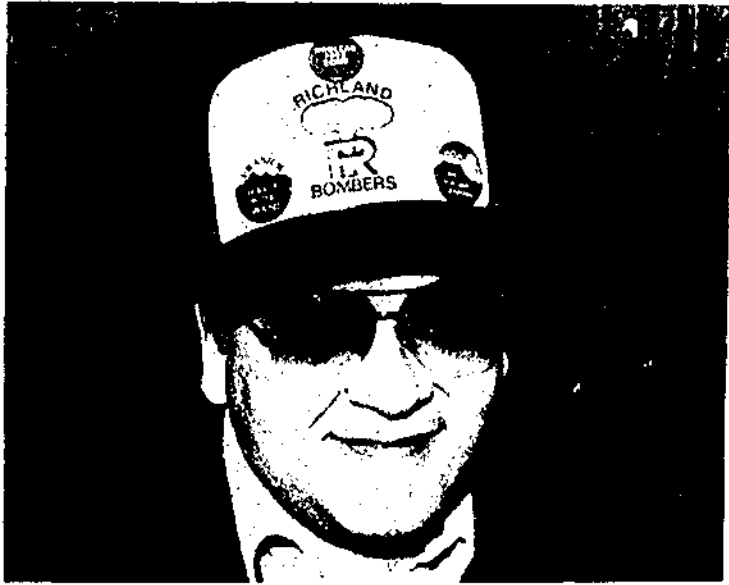
Lecturer on the Hanford tour stands on a truck used to transport nuclear waste. He stands by one of the canisters.



Robotics for the canister storing nuclear waste at the Hanford site. It is all done by remote control so no one is exposed to the waste.



In the tunnel leading into a mountain where the Hanford site is doing tests on heat & compression on the salt rock - trying to prove this is the best place for a repository.



Donning a Richland "Bombers" hat, replete with mushroom cloud logo, is Jim Schlender who went on the Hanford site tour.

Protection of Long Island. Update on the Acquisition of Long Island by National Park Service by Jon Gilbert

Long Island is a very important island in Chequamegon Bay. It is a barrier island which helps to protect the bay and, along with Chequamegon Pt., helps to protect the Kakagon Sloughs. The island supports the last nesting pairs of piping plovers in Wisconsin. It also has the first lighthouse constructed on the shores of Lake Superior and is a very important island in the culture and history of the Chipewya people. For these reasons it is imperative that the island and its natural and cultural resources be protected. I believe that this is a valid and appropriated role of the National Park Service.

Representative Obey has introduced a bill (HR 2182) which would authorize the National Park Service to acquire Long Island as part of the National Lake Shore. Initially, when Rep. Obey introduced the legislation there was some concern that the bill was not specific enough to afford adequate protection to this critical habitat.

The concerns were twofold. The bill was proposed to protect critical habitats and the nesting grounds of the en-

dangered piping plover. However, shortly after the bill was introduced there was talk of developing the lighthouse area as an interpretive center and the creation of picnic areas and swimming beaches. Many people could not understand how the National Park Service could protect the critical habitats while at the same time promote tourism in the area. These seemed to be conflicting uses. The Bad River Tribe was also concerned that increased boat traffic to Long Island would mean increased boat traffic in the Kakagon Sloughs. There is evidence that boat traffic in wild rice beds, especially during the rice's floating leaf stage is detrimental to the rice. The tribe is dedicated to the protection of the rice in the sloughs. It is for these reasons that the Bad River tribe opposed HR 2182.

The tribe and other organizations (Nature Conservancy, for example) were interested in developing, in a positive way, an alternative proposal which would protect Long Island and the Kakagon Slough. The tribe met with the Nature Conservancy to discuss the idea of establishing a natural area which would include Long Island, Chequamegon Point and the Kakagon Slough. A natural area designation would provide protection by prohibiting significant development and

alternation to the native flora and fauna.

Through discussions with Washington representatives we learned that there was little interest in defeating HR 2182 and proposing an alternative. In the same discussions, however, we also learned that there may be a way to address the concerns of the tribe and other groups interested in Long Island's protection. A document entitled Report on the Intent of Congress which states what the Congress intends with a particular piece of legislation. We have been given assurances that if the natural resource agencies in the Chequamegon Bay area will draft this report, Senator Kasten and Representative Obey will include it as part of the legislation.

All natural resource agencies in the Bay area, National Park Service, Wisconsin DNR, Sigurd Olson Institute, Nature Conservancy, Bad River Tribe, and the GLIFWC will meet at the Sigurd Olson Institute to draft this report. I am confident that we will succeed in writing a report which will outline the ways in which the natural and cultural resources on Long Island will be protected.

I am confident that if we are successful in writing this report the National Park Service will do an outstanding job in ensuring the protection of this critical habitat.

## LONG ISLAND: A NEED TO CO-MANAGE



Jonathan Gilbert, GLIFWC wildlife biologist

# GLIFWC BIOLOGISTS REPORT...

## WATERFOWL

Table 3. Summary of off-reservation treaty waterfowl season, 9/20/85-9/29/85 and 10/5/85-11/13/85.

	Permits issued	Number hunting	Hunters successful	Duck harvest	Ducks <sup>d</sup> per season	Goose harvest	Geese <sup>d</sup> per season	Coot harvest
LDF <sup>a</sup>	49	13	8	50	3.85	19	1.46	
St. Croix	27	14	11	90	6.43	5	0.36	59
Red Cliff	26	7	6	7	1.00	12	1.71	
LCO <sup>b</sup>	20	5	5	50	10.00	4	0.80	
Mille Lacs	9	4	4	35	8.8	2	0.50	29
Bad River	3							
Mole Lake	1							
KB <sup>c</sup>	1	1	1	3	3.0	2	0.50	
Total (rep) <sup>e</sup>	136	44	35	235	5.34	44	0.95	88
Total (est)	136	63 <sup>h</sup>	50 <sup>h</sup>	336 <sup>f</sup>	5.34	63 <sup>f</sup>	0.95	124

<sup>a</sup>LDF = Lac du Flambeau.

<sup>b</sup>LCO = Lac Courte Oreilles.

<sup>c</sup>KB = Keweenaw Bay.

<sup>d</sup>Per season per hunter = reported harvest/reported number hunting.

<sup>e</sup>Totals reported by hunters surveyed.

<sup>f</sup>Total Harvest = estimated early season harvest plus estimated regular season harvest.

<sup>g</sup>Estimated total number hunting = total estimated harvest/reported ducks or geese per season per hunter.

<sup>h</sup>Estimated number of successful hunters = reported successful hunters x estimated number hunting/reported number hunting (63/44).

Excerpted From the Summary of the 1985 Off-Reservation Treaty Waterfowl Season in Northern Wisconsin Compiled by: Timothy Andryk

The 1985 tribal hunt was the first off-reservation treaty waterfowl season in northern Wisconsin. The hunting regulations initially proposed by the Great Lakes Indian Fish and Wildlife Commission (GLIFWC) were modified somewhat by the U.S. Fish and Wildlife Service (USFWS) after joint consultation with GLIFWC and the Wisconsin Department of Natural Resources (WDNR). The proposed regulations were reviewed by the Mississippi Flyway Council and published in the Federal Register for public comment. GLIFWC and WDNR subsequently concurred with the regulations, when finalized by WSFWS, and entered into an agreement allowing for joint implementation and enforcement of the hunt.

The dates for the tribal duck and coot seasons were: 20-29 September and 5 October - 13 November, with an additional scaup only season 14-29 November (Appendix A). A five day closed period between the early and regular seasons (30 September - 4 October) was implemented to allow waterfowl to recongregate in areas that may experience localized "burnout" from tribal hunting pressure. The Canada goose season dates were 28-29 September and 5-22 October. Bag and possession limits for ducks followed the 1985 federal point values, and for Canada Geese were 3 daily and 6 in possession. All federal and state closed areas, permissible methods, and shooting hour restrictions were the same for the tribes.

The purpose of this report is to present the results of the 1985 off-reservation treaty waterfowl season, including tribal hunter participation, effort, success and harvest. Hunter and harvest statistics were derived by prorating totals reported during mail and telephone surveys by the response rates. Seventy-four percent of individuals issued hunting permits for the September hunt (20-29 September) and 68% of individuals hunting during the 2nd hunt (5 October - 13 November) responded to mail and telephone surveys.

One hundred and thirty-six tribal members were issued off-reservation waterfowl hunting permits, of which roughly 63 actually hunted, harvesting approximately 523 birds (336 ducks, 63 geese, and 124 coots). Roughly one third of the harvest occurred during the 10-day September hunt. Duck hunting success was lower during the September hunt, most likely because of unseasonably cold weather just prior to the hunt and the resulting early departure of major concentrations of blue-winged teal. The overall tribal-hunter success of 1.4 ducks/trip is higher than the average Wisconsin state hunter success of 1 or slightly less than 1 duck/trip.

Wood ducks comprised the largest portion of the harvest during the entire season. Wood duck numbers appear to be increasing in northern Wisconsin, probably in part due to the abundant beaver populations. Migrant ducks, especially scaup, became a major component of the bag in the 2nd hunt, and contributed to the greater hunter success.

St. Croix members harvested the largest number of ducks taking approximately 38% of the estimated 336 ducks taken by treaty hunters. Lac du Flambeau members harvested the largest number of geese, taking approximately 43% of the estimated 63 harvested during the treaty hunt. Tribal hunters averaged 5.3 ducks/season, which is roughly what the Wisconsin state hunters averaged.

Tribal hunters harvested approximately 96 ducks, 19 geese, and 48 coots during the September hunt. Sixty-five percent of the ducks harvested were reported to be taken by St. Croix and (Lac Courte Oreilles members) 50% of the

geese by Lac du Flambeau members. Wood ducks made up the largest portion of the bag. A cold front on 19 September resulted in the early departure, before the hunt began, of major concentrations of blue-winged teal from northern Wisconsin, resulting in a lower than expected percentage of blue-winged teal in the bag. Tribal hunters were limited to hunting geese for 2 days during the early hunt, 28-29 September, consequently the goose harvest was low.

Tribal hunters harvested approximately 240 ducks, 44 geese and 76 coots during the 2nd hunt (10/5/85 - 11/13/85). Sixty-seven percent of the ducks were reported to be harvested by St. Croix and Lac du Flambeau members, and 70% of the geese by Lac du Flambeau and Red Cliff members. Mallards made up the largest percentage of the hunters bag followed closely by scaup and wood ducks.

The wild rice lake-pothole region of Burnett and Polk counties received the heaviest tribal duck and coot hunting pressure and harvest during

the September hunt. This region accounted for approximately 46% of the tribal duck and coot hunting trips, 58% of the duck harvest and all of the reported coot harvest. Hunter success in the rice pothole region, reported at 1.5 ducks/day, was higher than the tribal average for the September hunt. Powell Marsh in Vilas County received the heaviest goose hunting pressure and harvest with roughly 48% of the goose hunting trips and 43% of the goose harvest.

The wild rice lake-pothole region of Burnett and Polk counties received the heaviest goose hunting pressure and 60% of the goose harvest. Chequamegon Bay and the Chequamegon National Forest had the highest goose hunter success, reported at 1.3 and 1.5 geese/trip respectively.

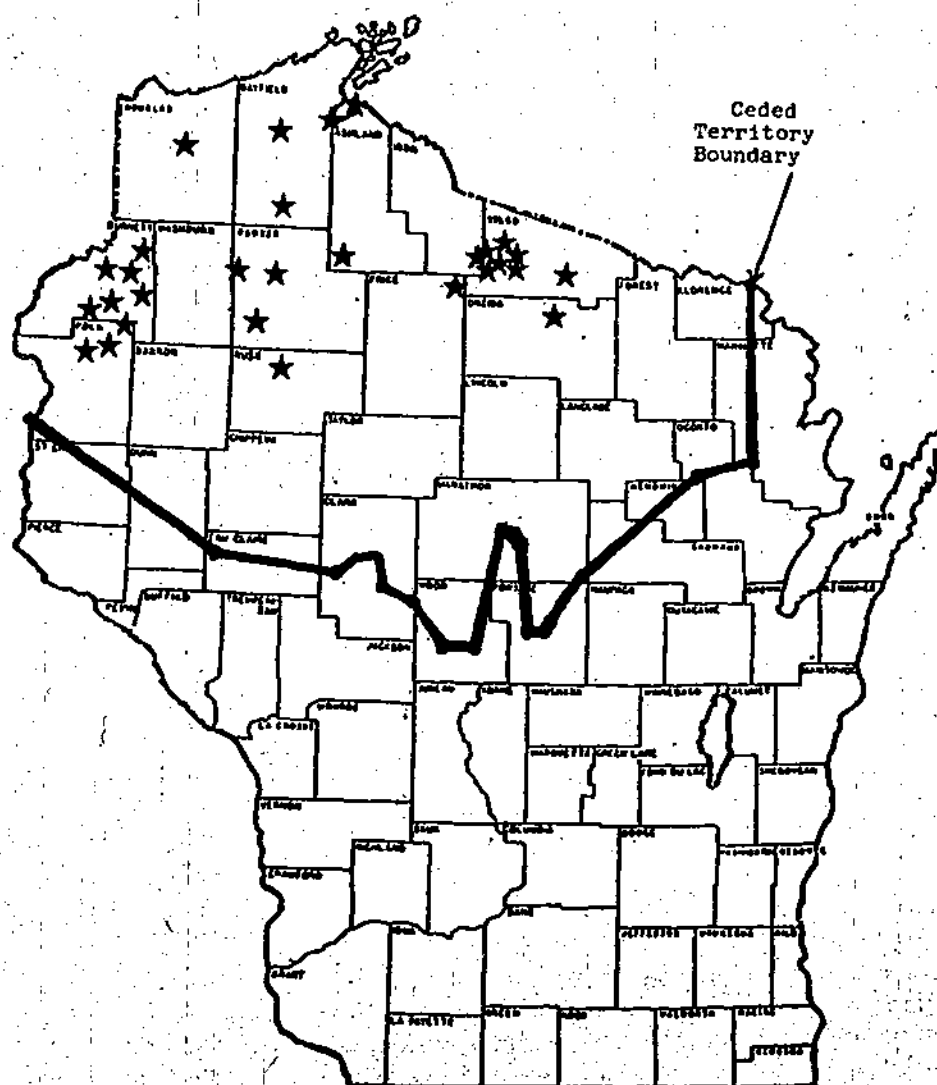


Fig. 1. Off-reservation treaty waterfowl hunting pressure, 9/20/85-9/29/85 and 10/5/85-11/13/85 (\* = 10 or less hunting trips).

During the course of the year GLIFWC biologists have been involved in numerous surveys and have spent many hours in the field at the various reservations collecting data on deer, fish, waterfowl, and wild rice.

Winter months provide them the time to computerize collected data, formulate it into an organized body of material and analyze what they have found.

Consequently, in March several reports resulting from their studies have been produced. Excerpts from several of them are included in this section of MASINAIGAN.

Much of the work done by GLIFWC biologists helps substantiate both litigation and negotiation stances for the eleven member tribes in the realm of treaty hunting, fishing, and gathering agreements. However, they also serve as a basis for the individual tribes and GLIFWC to better assess and, thus, more effectively manage their resources.

Should anyone wish copies of an entire report, please contact GLIFWC, Public Information Office, Box 9, Odanah, 54861, or call (715) 682-6619.

Excerpted From the Assessment of the 1985 Early Tribal Off-Reservation Waterfowl Season in Northern Wisconsin, 20-29 September 1985

By:

Timothy Andryk  
Great Lakes Indian Fish and Wildlife Commission

### Objectives

The objectives of the study were to monitor the early off-reservation hunt and assess its impacts, specifically: flyway waterfowl populations.

1. The impact of tribal harvest on local, state, and flyway waterfowl populations.

2. The impact of tribal hunter disturbance on state hunter opportunity.

Specific areas of anticipated tribal hunting pressure to be monitored were:

1. Powell Marsh, roughly a 4,300 acre state wildlife area, adjacent to the Lac du Flambeau Reservation in Vilas and Iron counties of north-central Wisconsin.

2. Glacial Lake Grantsburg, comprised of 3 state wildlife areas: 30,000 acre Crex Meadows, 14,000 acre Fish Lake, and 7,500 acre Amsterdam Sloughs, in western Burnett County, northwestern Wisconsin.

3. Wild rice lakes and river in eastern Burnett County, northwestern Wisconsin as follows: 1,500 acre Upper and Lower Clam Lake, 160 acre Gaslyn Lake, 55 acre Briggs Lake, and a 5 mile stretch of the Yellow River.

### Methods

This study was an inter-agency effort conducted by personnel of GLIFWC, WDNR, and USFWS, including wildlife managers, biologists, technicians, and wardens.

Waterfowl counts to monitor density and movements were conducted on the specific study areas 1 to 3 days prior to the early hunt (16-19 September), during the early hunt (20-29 September), during the 5 day rest period (30 September - 4 October), and during the first part of the regular tribal-state season (5 - 17 October). Bag check surveys were conducted to collect harvest and effort data from tribal hunters during the early hunt, and on tribal and

state hunters during the first 2 days of the regular tribal-state season. A mail survey was sent to all tribal hunters issued permits to hunt during the early season, and was followed up with a telephone survey of nonrespondents to obtain harvest and hunter effort information. Harvest and effort estimates were projected from the data reported by 74% of the tribal members who were issued off-reservation waterfowl hunting permits.

Approximately 278 hunters hunted the Glacial Lake Grantsburg state wildlife areas on opening weekend of the state and regular tribal seasons. No tribal hunters were found during bag checks of almost two-thirds of the hunters. An estimated 360-380 ducks were harvested opening weekend, at a rate of 0.9 ducks/day/hunter, which was down from the long term average of 1.2 - 1.5 ducks/day/hunter. Mallards comprised 47% of the bag followed by 19% for green-winged teal and 14% for ring-necked ducks. No blue-winged teal were found in hunter bags (P. Kooiker pers. comm.).

### Discussion Ceded Territory

The 1985 total tribal early season harvest of approximately 96 ducks, 48 coots, and 19 geese was insignificant and did not impact local, state, or flyway populations. However, weather did have a substantial impact on waterfowl concentrations and movements. Unseasonably cold weather in mid and late September resulted in an early departure, before 1 October, (and before 20 September in many areas) of local blue-winged teal and to a lesser extent wood ducks and mallards from northern Wisconsin, as reflected in the tribal hunter bag (Table 1). State hunter duck harvest in northern Wisconsin, during the early part of the state season, (4-6 October), was lower as a result of the early duck departure.

(continued on page 6)

# WATERFOWL

(continued from page 5)

Unprecedented high numbers of Canada geese in northern Wisconsin arrived in early October, when Canada experienced an early winter storm. At the peak concentration, a minimum of 100,000 Canada geese were estimated to be in Ashland, Bayfield, Douglas, and Iron counties on 2 October (F. Strand pers. comm.). Consequently, state hunter goose harvest in northern Wisconsin during the early part of the state season was much higher than average.

### Powell Marsh

The tribal harvest at Powell Marsh during early season, of approximately 6 geese and 2 ducks, was insignificant, clearly not impacting local populations. There appeared to be no change in duck and goose numbers of movements in response to tribal hunting pressure, as duck and goose numbers appeared to remain stable or increase during the early tribal hunt (Fig. 2).

The major departure of ducks and geese on 5 October was most likely due to the cold northerly winds that morning and the depletion of the food patches within the goose refuge. The goose refuge (roughly 35% of the Powell Marsh Wildlife Area) usually holds geese during the fall until they exhaust the food patches planted there (C. Botwinski pers. comm.). However, there was 20-25% less food planted in 1985, and much of the crop planted was flooded out, so less food was available within the goose refuge. Also, the fall migration was earlier this fall as the peak goose concentration was about a week earlier than normal at Powell Marsh.

Duck harvest at Powell Marsh, during the early part of the state and tribal regular seasons (5-6 October), was among the lowest ever because of the early departure of local ducks, corresponding with the cold front, and few incoming migrant ducks. However, the peak count of roughly 3500 Canada geese was among the highest recorded at Powell Marsh and the goose harvest, during the early part of the state season, was high despite the early goose departure.

### Wild Rice Lakes

The tribal harvest of approximately 41 ducks, 36 coots and 1 goose during the early hunt on the wild rice lakes was insignificant and had no impact on local populations. We did not observe any change in waterfowl concentrations or movements in response to tribal hunting pressure. Hunting pressure was light, as no tribal hunters were found during bag check surveys.

Weather also seemed to be the major factor affecting duck concentrations and movements on the wild rice lakes. Significant concentrations of ducks had already left the rice lakes before the early tribal hunt began. It appears ducks moved from surrounding wild rice lakes and potholes to stage earlier at Crex Meadows, in response to unseasonably cold weather and little available rice (due to the wet and windy weather) in September (D. Evenson pers. comm.).

### Conclusions

The tribal harvest of approximately 96 ducks, 48 coots, and 19 geese, during the 1985 early off-reservation waterfowl season in Wisconsin, was insignificant and did not impact the status of local, state or flyway populations.

Tribal hunting pressure during the 1985 early tribal season did not affect state hunter opportunity during the state season. Localized "burnout" did not occur because tribal hunting pressure was neither sufficiently large nor concentrated to affect waterfowl concentrations or distribution.

Weather and not tribal hunting pressure affected duck and goose concentrations and movements in northern Wisconsin in 1985. Unseasonably cold weather in mid and late September resulted in the early departure, before 1 October (and before 20 September in many areas), of major concentrations of blue-winged teal and to some extent wood ducks and mallards. An early winter storm in Canada resulted in unprecedented high numbers of Canada geese in northern Wisconsin during early October.

# COMMERCIAL CATCH IN LAKE SUPERIOR

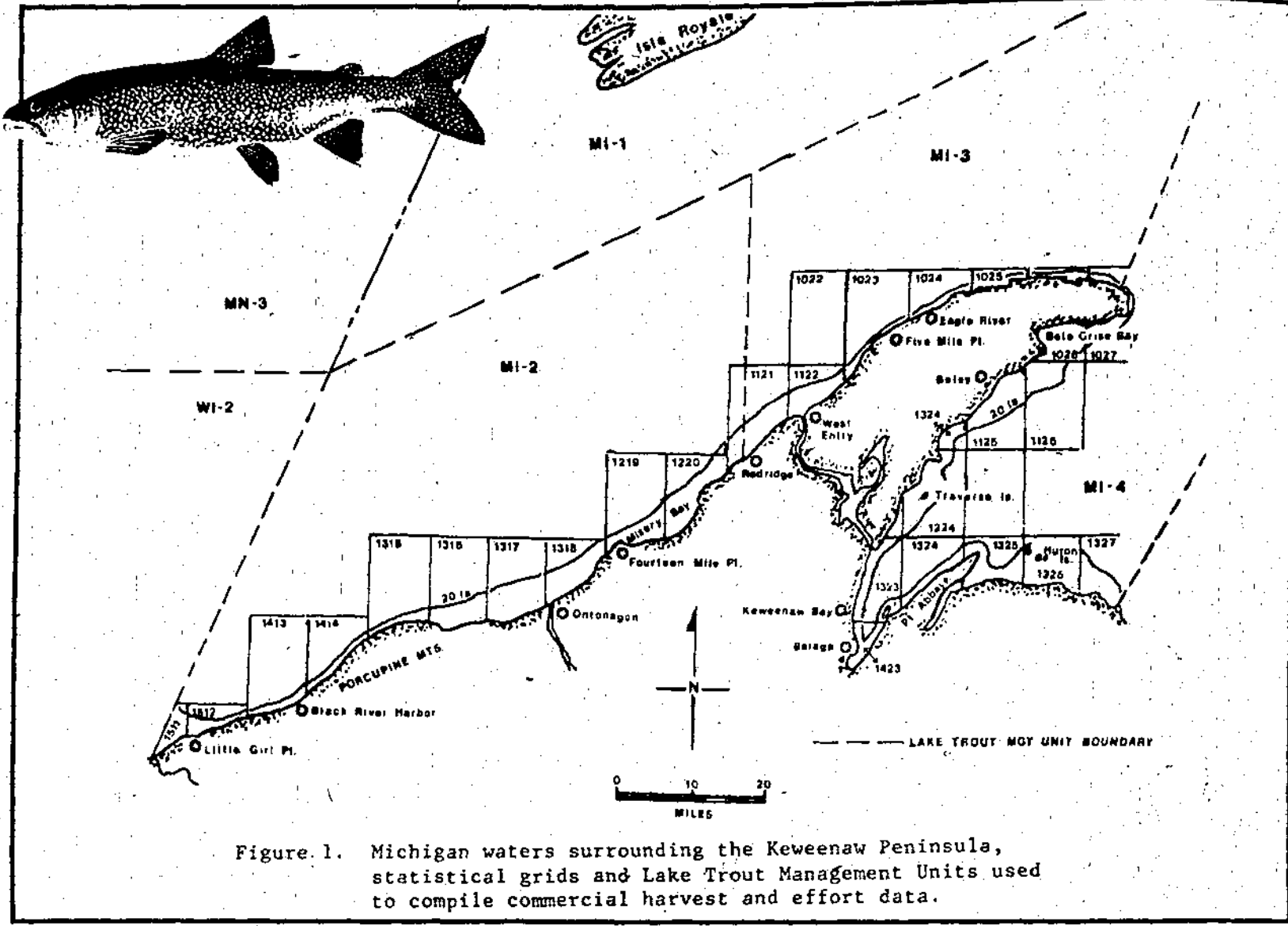


Figure 1. Michigan waters surrounding the Keweenaw Peninsula, statistical grids and Lake Trout Management Units used to compile commercial harvest and effort data.

### Biological and Commercial Catch Statistics from Inter-Tribal Fishing in Michigan Waters of Lake Superior in 1985

Prepared for the Red Cliff, Bad River and Keweenaw Bay Bands of Lake Superior Chippewas

By Mark P. Ebener  
Great Lakes Indian Fish and Wildlife Commission

#### Introduction

In the fall of 1984, the Red Cliff, Bad River, and Keweenaw Bay Bands of Lake Superior Chippewas initiated an inter-tribal fisheries assessment of previously underutilized fish stocks in Michigan waters on the west side of the Keweenaw Peninsula. Objectives were to collect needed biological information for management of the shared fish resources and to assess the feasibility of establishing a substantial tribal commercial fishery. The 1984 data was insufficient to develop such recommendations requiring additional information from spring and summer fishing activities. Therefore, with the signing of a renewed inter-tribal agreement, the assessment effort was extended from the spring through the fall of 1985. In addition, we were requested by the tribal governments to present some initial proposals for managing tribal commercial fisheries along the eastern side of the Keweenaw Peninsula because of demands by tribal commercial fishermen to increase fishing activity in this portion of the treaty-ceded waters. This report presents a summary of the biological and commercial catch statistics collected in 1985 from both sides of the Keweenaw Peninsula in Michigan waters of Lake Superior.

#### Management Concerns

Lake trout and lake trout rehabilitation are our major biological concern in developing tribal commercial fisheries along the Keweenaw Peninsula. Progress towards rehabilitation on the east and west sides of the Keweenaw Peninsula is promising because native and sexually mature fish (age 7 and older) comprise a comparatively large proportion of the total population; natural reproduction is occurring, and total mortality is at or below the 50% target level set by the Lake Superior Lake Trout Technical Committee. In order to maintain the current

positive trend toward recovery, the expanding tribal commercial fishery should minimize increases in lake trout fishing mortality, especially on natives.

Of equal concern is the protection of Gull Island Shoal lake trout which are known to move along the south shore into Michigan waters during parts of the year. A fish refuge in Wisconsin waters of Lake Superior, established in 1975, protects this self-reproducing stock in Wisconsin. The Red Cliff and Bad River Bands, by not targeting this stock for over ten years, have a vested interest in maintaining the integrity of the Gull Island Shoal population. Efforts to control exploitation on the Gull Island fish in Michigan waters should be considered in order to assist rehabilitation efforts in Wisconsin waters.

#### Methods

##### Western Michigan Waters

Pursuant to the 1985 Inter-tribal Assessment Agreement, six commercial gill net tugs were licensed to harvest whitefish and lake trout in Lake Superior. No more than two boats from each tribe were allowed to fish in the affected area at any one time. The tribes agreed to limit the total lean lake trout harvest and Red Cliff was assigned an individual lean lake trout quota of 3,750 lbs. The Keweenaw Bay fishermen had a 30,000 lb. quota. All large boat operators were required to submit daily catch and effort data on a weekly basis. To enforce the lake trout quota large boat operators were required to tag all lean lake trout harvested by their boats, and daily catch reports were cross-referenced by biologists with fish wholesale records from volume fish buyers in Wisconsin and Michigan.

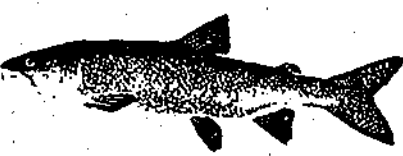
Commercial catches were monitored and biological data collected by fishery technicians and biologists from the Red Cliff Fisheries Department (RCFD) and the Great Lakes Section of the Great Lakes Indian Fish and Wildlife Commission (GLIFWC). Information collected consisted of total fish length, weight, lake trout fin clip observations, occurrence and classification of sea lamprey wounds and scars, and scale samples for age determinations.

In an attempt to collect information on whitefish and lake trout in areas removed

from the focus of fishing activity, fishermen were individually requested to fish in selected locations during the fishing season. The fishermen were to set between 5,000 and 6,000 ft of gill net consisting of several different mesh sizes and tribal technicians or biologists would sample the entire catch. For these lifts 100 lbs of lake trout applied to the fisherman's quota regardless of the total poundage of lean lake trout caught by the fishermen.

##### Eastern Keweenaw Peninsula

In accordance with the 1985 agreement only licensed fishermen from Keweenaw Bay were allowed to fish on the eastern side of the Keweenaw Peninsula in 1985. There was no lean lake trout quota applied to the east side of the Peninsula but Keweenaw Bay fishermen were required by tribal law to tag all lean lake trout harvested. The fishermen were also required to submit monthly catch and effort reports to the Keweenaw Bay tribal government. Tribal commercial harvests from the east side of the Peninsula were monitored from April through September by GLIFWC personnel or a Keweenaw Bay fisheries aide.



#### Results

##### Commercial Harvest and Effort Statistics

Tribal fishermen reported lifting 3.3 million feet of gill net in management units MI-1 through MI-4 in 1985 and reported a harvest of 390,000 lbs of whitefish and 61,000 lbs of lake trout. Whitefish catch-per-unit-effort (CPE) for all units combined was 124 lbs/1000 ft of gill net. No lake trout CPE could be calculated for units MI-2 or MI-3 because commercial fishermen were targeting for whitefish and returning lake trout to the water to avoid catching their individual lake trout quotas. However, in MI-4 where Keweenaw Bay fishermen could target for lake trout and no lake trout quota was in effect, CPE was 39 lbs/1000 ft of gill net.

The majority of the harvest and effort occurred in MI-3, including 61% of the whitefish harvest and 66% of the gill net effort. Both harvest and effort within MI-3 were

concentrated just outside the West Entry in grids 1121 and 1122. More specifically, 59% of all tribal gill net effort in Michigan waters occurred in grids 1121 and 1122.

Catch rates for whitefish and lake trout varied considerably from one location to another, but it appeared that where whitefish were abundant, lake trout were not, and vice versa. Areas with the largest whitefish CPE's were from Fourteen Mile Pt. (grid 1219) up to Five Mile Pt. (grid 1023), and in the Bete Grise Bay area (grid 1026). The whitefish to lake trout ratio (WF/LT) in these areas were high (9.5-180.0). Areas with high lake trout abundance (a low WF/LT ratio) were from Little Girl Pt. (grid 1511-1512) through the Porcupine Mts. in MI-2, and in all grids of MI-4 south of Bete Grise Bay. The WF/LT in these areas ranged from less than 1.0 to 1.8.



##### Seasonal Distribution of the Catch

There were distinct seasonal changes in the distribution of whitefish and lake trout within MI-2 and MI-3 based on fishery CPE and directed assessments by commercial fishermen. Whitefish appeared to move from west to east along the western Keweenaw Peninsula from spring to fall. From April through May whitefish were concentrated in the Misery Bay to Redridge area, but by June and July the fishery was centered just outside of West Entry. By late September most of the whitefish fishing occurred north of West Entry up to the Five Mile Pt. area.

Lake trout appeared to be more widely distributed in May than most other months. Data from directed assessments indicated lake trout were abundant at Five Mile Pt. and Eagle River in early May, but by June whitefish were much more abundant than lake trout at both locations. The same pattern was true for the West Entry area, where lake trout were more abundant in early May than in late May. However, lake trout were consistently found from Little Girl Pt. through the Porcupine Mts. Only one assessment was made in the Ontonagon area but it appeared that lake trout were more abundant than whitefish there.



Table 1. Total reported tribal catch and effort statistics by grid for units MI-1, 2, and 3; Lake Superior, 1985. Pounds are dressed weight.

Unit	Grid	Effort (ft)	Whitefish (pounds)	CPE (WF)	Lake Trout (pounds)	WF/LT ratio
MI-1	818	3000	6	16	160	0.04
Subtotal		3000	6	2	160	0.04
MI-2	1511	58900	3468	59	4355	0.80
	1512	29200	2041	70	3184	0.64
	1316	13000	155	12	1699	0.09
	1219	41000	7937	194	108	73.49
	1220	121000	25562	211	142	180.01
Subtotal		263100	39163	149	9488	4.13
MI-3	1121	1281700	121798	95	12815	9.50
	1122	653800	83712		13.42	
	1023	179400	30536		15.34	
	1024	46800	4024		3.80	
Subtotal		2161700	240070	111	22102	10.86
MI-4	1026	270800	80205	296	7207	11.13
	1124	30000	5716	191	3141	1.82
	1125	79500	7281	92	5991	1.22
	1224	13200	4314	327	3225	1.34
	1323	117800	2092	18	1931	1.08
	1324	24000	1674	70	919	1.82
	1325	48100	4991	104	2706	1.84
	1326	2400	490	204	567	0.86
	1423	276600	5956	22	3679	1.62
Subtotal		862400	112719	131	29366	3.84
Grand Totals and Means		3290200	391958		61116	6.41

# DEER HARVEST REPORT



Excerpted From Summary of the 1985 Off-Reservation Treaty Deer Season

By Wildlife Section Leader Introduction

In 1985 a third interim agreement governing the exercises of off-reservation hunting rights was negotiated between the Wisconsin bands of Lake Superior Chippewa and the Wisconsin Department of Natural Resources (WDNR). The 1985 off-reservation treaty deer season agreement provided for an 85 day gun season from September 14 through December 14 with an 8 day break from November 15 through November 22. The off-reservation treaty bow season coincided with the Wisconsin state bow season.

For the most part, the 1985 regulations paralleled the 1984 off-reservation deer season regulations except for a few important differences. Two carcass tags were issued at a time to each tribal member. Antlerless deer permits were valid for 2 weeks and were issued based on a success rate. The season was divided into 3 parts with regulatory differences between each part. Carrying loaded and uncased guns while hunting and shooting from unpaved roads was permitted from September 28 through October 12. (The October 12 closure was triggered by a provision in the agreement, which in turn was triggered by passage of Wisconsin Senate Bill 88. A full discussion of this matter is beyond the scope of this report.) During the state's deer-gun season (November 23-December 1) tribal members were required to wear back tags and blaze orange clothing, the same as state-licensed deer-gun hunters. After

December 2 the back tag and blaze orange were no longer required.

In an unusual step, following the state's deer-gun season WDNR biologists and administrators determined that the antlerless deer harvest was insufficient in 19 deer management units statewide. Six of these units were in the ceded territories. The state permitted tribal members to hunt in those units which had a tribal quota remaining. Only Lac du Flambeau elected to extend the season. No deer were harvested during this time.

The purpose of this report is to present the results of the 1985 off-reservation treaty deer season including a description of the carcass tag/antlerless deer permit system.

heavily harvested units. Unit 39 had a four-fold increase in harvest. It is not known what accounted for this large increase.

A total of 10712 biweekly antlerless deer permits were issued during the 1985 off-reservation treaty deer season. Weekly permits were issued for a few units after 75% of the unit quota had been met. (Using the number of antlerless permits issued as an indicator of hunter pressure it is apparent that hunter pressure was high during the opening 2 week period. Pressure decreased during the next two permit periods and then began to increase in November. The period of most hunter participation occurred during the state's deer gun season. Hunter pressure dropped dramatically after December 1.

There were 16 units which received heavy hunting pressure (300 permits issued.) These units were generally close to the reservations and had large areas of public land, a pattern which was established in 1984. However, in 1984 the more heavily hunted units also had large quotas. In 1985 quotas in many units with high hunter pressure were the same, except for units 13, 35 and 36 which had the three highest quotas (and largest harvests). Units 13 and 35 had more permits issued than any other units, following the pattern established in 1984 of hunter pressure following larger quotas. Unit 36 was closed to antlerless deer hunting because its quota was attained by October 28, before the peak hunting pressure. This may account for the relatively low number of permits issued in this unit.

(continued on page 8)



Most of the tribal harvest (87.3%) occurred in 23 of the 53 deer management units (where the unit harvest was greater than 30 deer). Harvest figures were highest in units 13, 35, 36, and 39. Three of these 4 units (i.e. 13, 35, 36) sustained the highest harvest in the 1984 tribal season as well. This reflects a similar pattern as that in 1984 where units with relatively large quotas, close to reservations, and with large acres of public lands had the largest harvests. Unit 10, which had one of the highest harvests in 1984, also had an increased harvest in 1985, but other units (i.e. units 2, 3 and 8) had larger increases. These 3 units also share the same characteristics as the more

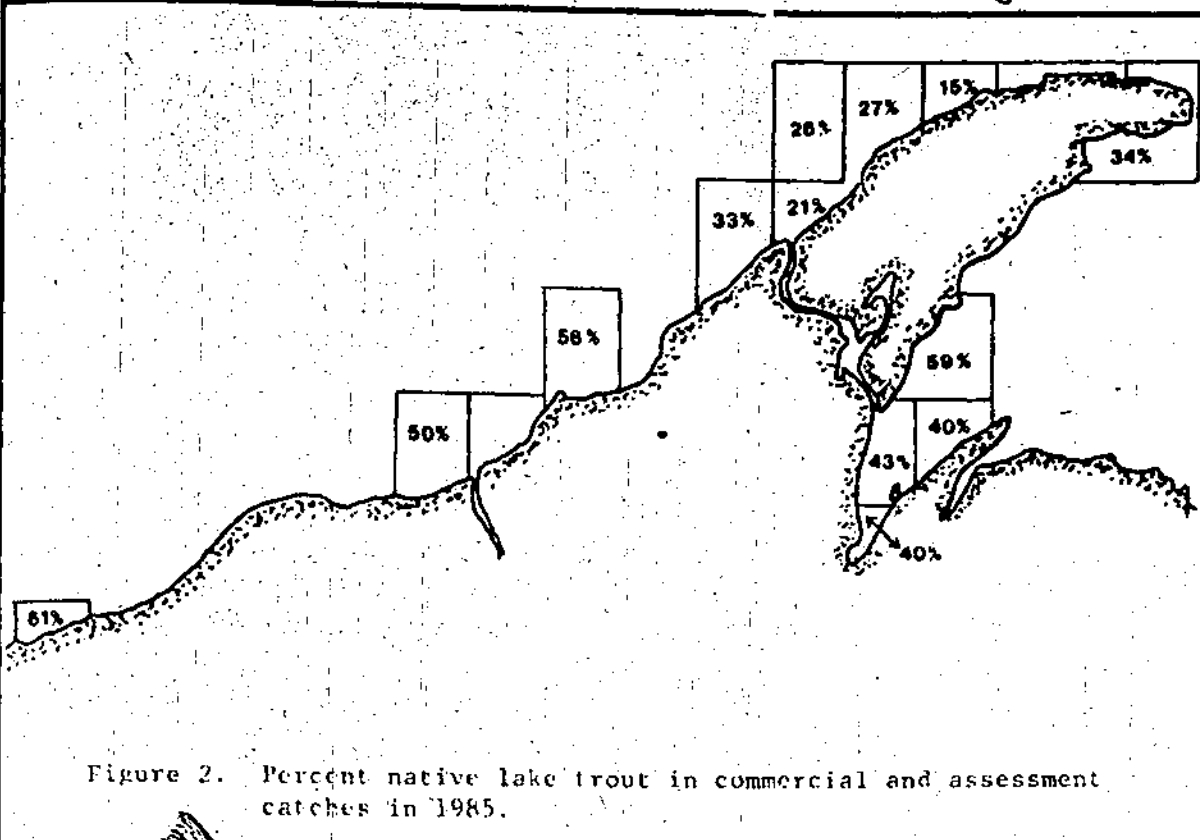
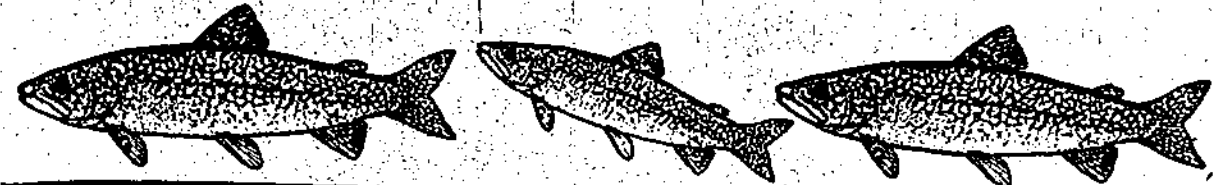


Figure 2. Percent native lake trout in commercial and assessment catches in 1985.



## LAKE TROUT GROWTH

### Lake Trout Growth Trends in Lake Superior

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#### Introduction

Growth of lake trout is important to rehabilitation because maturity is size-dependent, and delayed maturity exposes lake trout, particularly females, to a longer period of fishing and lamprey mortality before reproduction. Growth is also important in determining the size and quality of fisheries.

This report updates two of the data series on lake trout length at age presented in 1985 at the Council of Lake Committees session on predator/prey issues ("Predator Responses to Fish Community Changes in Lake Superior") in GLFC with problems as an indicator of growth, it seems to be the best indicator currently available in Lake Superior data sets.

To provide a single number describing growth in a given year, I used length at age to calculate instantaneous growth in length of cohorts at ages 6, 7, and 8.

Ages 6-8 were selected

because 1) sample sizes at those ages are generally sufficient; 2) growth in length at those ages is approximately linear; 3) ages 6-8 encompass the broad peak of 4-1/2 inch gill net selectivity; 4) ages 6-8 make up roughly 60% of lake trout biomass; 5) growth rates at ages 6-8 are intermediate between older and younger segments of the population.

#### Data Sources

Data in this report are from 3 sources: 1) Michigan Department of Natural Resources spring assessment fishery, Ashland Biological Station, 2) Red Cliff Fisheries Department samples from the Red Cliff tribal commercial fishery, and 3) Great Lakes Indian Fish and Wildlife Commission samples from the Grand Portage tribal commercial fishery.

#### Results

Indicators of growth from the 1984 growing season (the most recent available from length at age data) decreased in Management Zone W-2, after poor growth in 1982 and about average growth in 1983. An erratic downward trend in growth is apparent in both the Wisconsin and Michigan management zones since the late 1970's.

Data from Grand Portage in Zone MN-3 is not part of a long-term data series, but shows a two-year trend similar to the Wisconsin and Michigan zones.

#### Recommendations

It is not known if declining growth represents a major threat to the rehabilitation effort. Causes for declining growth are not readily apparent. However, these results indicate that lake trout growth rates should be a continuing concern throughout Lake Superior. Growth rates should be further examined at an inter-agency level in light of lake trout food habits, prey abundance and size structure, and water temperatures. Lake trout population dynamics should be analyzed at lower growth rates, to estimate effects on potential egg deposition. Length at age data should continue to be collected by agencies, and more effective and timely ways to measure growth should be investigated. Monitoring of lake trout stomach contents should be continued or increased. Studies of other predator species should be initiated to determine whether competition for food is occurring.

The off-reservation treaty deer harvest was distributed between 22 counties. However, 70% of the harvest was taken from only 6 counties (i.e. Bayfield, Burnett, Forest, Oneida, Sawyer, and Vilas). As with the harvest by deer management unit these counties are all close to reservations and have large areas of public lands.

Table 1. Distribution of carcass tags and hunter success during the 1985 off-reservation treaty deer season by registration station.

Registration Station	Carcass Tags Allotted	Carcass Tags Issued	Number Of Hunters	Number of Successful Hunters	Percent Successful Hunters
Bad River	300	220	180	54	30.0
LCO	2000	1462	402	149	37.0
LDF	3000	1646	413	163	39.4
Mole Lake	1000	602	109	52	47.7
Red Cliff	700	675	274	50	18.2
St. Croix	600	472	103(65)	37	56.8
Keweenaw Bay			5	3	60.0
Mille Lacs			68	18	64.2
Totals	7600	5077	1476	526	35.6

This table shows the number of hunters and the number and percent of the hunters who were successful. A successful hunter is defined as a person who harvested 1 or more deer. Of the 103 St. Croix hunters only 65 were individually identifiable. Only these 65 hunters were included in the success rate calculation. Keweenaw Bay and Mille Lacs members obtained carcass tags from one of the six Wisconsin tribal registration stations.

The number of deer allotted to tribal members was 3993 of which 1331 could be antlerless. Tribal conservation departments were allotted carcass tags proportional to the number of tags issued in 1984. The number of carcass tags issued to tribal members was much greater than in 1984 because 2 tags were issued per hunter rather than the 1 tag/hunter in 1984. Fewer hunters obtained tags in 1985 than in 1984. This may be a result of tribal members becoming confident that there are enough tags and permits available for their needs, so they did not send their spouses or children to obtain tags.

The number of successful hunters increased in 1985 over 1984. The tribal permit system allowed for a greater number of hunters in the field at any time, and therefore permitted more hunters to harvest deer. The increase in the number of successful hunters and the decrease in the number of total hunters increased the hunter success rate to 35.6% from the 1984 rate of 25.0%.



Table 4. Age and sex distribution of deer harvested during the 1985 off-reservation treaty deer season by county.

County	Antlered Deer	% Antlered Deer	Female Deer	% Female Deer	Fawns	% Fawns	Total Deer
Ashland	6	25.0	16	66.6	2	8.3	24
Barron	1	16.6	5	83.3	0	0.0	24
Bayfield	37	31.6	63	53.8	17	14.5	117
Burnett	62	48.4	62	48.4	4	3.1	128
Douglas	30	37.5	38	47.5	12	15.0	80
Eau Claire	0	0.0	2	100.0	0	0.0	2
Florence	3	23.0	7	53.8	3	23.0	13
Forest	54	35.2	68	44.4	31	20.2	153
Iron	7	26.9	12	46.1	7	26.9	26
Langlade	6	24.0	14	56.0	5	20.0	25
Lincoln	1	10.0	9	90.0	0	0.0	10
Marathon	0	0.0	0	0.0	2	100.0	2
Marquette	8	38.1	9	42.8	4	19.0	21
Oconto	1	20.0	4	80.0	0	0.0	5
Oneida	25	25.7	61	62.8	11	11.3	97
Polk	6	54.5	4	36.3	1	19.6	56
Price	11	19.6	34	60.7	11	19.6	56
Rusk	16	44.4	16	44.4	4	11.1	36
Sawyer	49	39.8	62	50.4	12	9.7	123
St. Croix	1	100.0	0	0.0	0	0.0	1
Vilas	87	24.3	215	60.0	56	15.6	358
Washburn	18	29.0	37	59.6	7	11.2	62
Unknown County	6	25.0	13	54.1	5	20.8	24
Totals	435	31.5	751	54.4	194	14.0	1380

# DEER HARVEST

(continued from page 7)

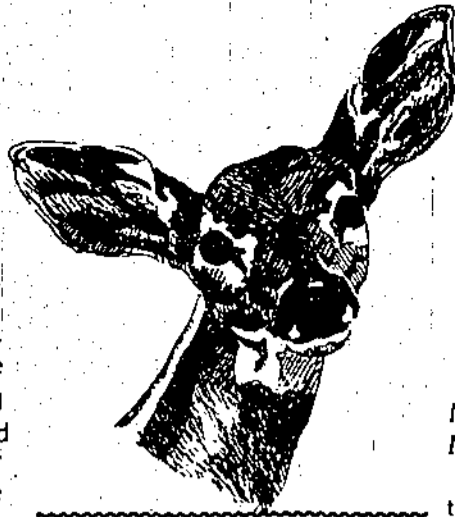
The tribes harvested 71% of the antlerless deer allotted to them. Unit harvest reached the quota in 19 of the 53 deer management units. These units were closed to antlerless deer hunting as the quota was reached. The successful closure of these units proves that the system implemented and monitored by the tribes was effective in preventing an over-harvest of antlerless deer. The antlerless deer harvest exceeded the quota in 11 of 53 units. None of these excesses represents a biological over-harvest especially in light of the under-harvest of quota deer in many units by state licensed hunters. The largest excess was in unit 3. The harvest was 39 and the quota was 25. Most of this harvest was achieved by Red Cliff hunters during the fifth permit period when 27 deer were killed.

The number of antlerless deer to be harvested each year is recommended by wildlife

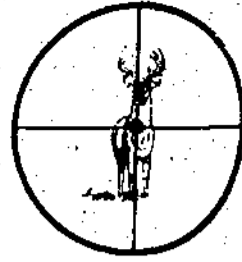
For most units the state quotas were set without regard to the entire tribal quota or a portion of the tribal quota. Apparently, WDNR believed the tribes were incapable of harvesting their portion of the quota in these units and state hunters, therefore,

had to make up the difference. As tribal members become more accustomed to hunting off reservation, and as improved regulations allow for a greater harvest, tribal quotas will be consistently achieved. If the tribal quota is not accounted for in future years, many units will be subject to consistent over-harvest, which will significantly reduce herd size.

managers using a set of guidelines developed by the WDNR Bureau of Research. These recommended quotas are submitted to the DNR Natural Resources Board (NRB) for approval through the emergency rule making process. The Department is then required to issue permits in such a manner to achieve this quota. The number of permits issued is determined by a formula defined in the Administrative Code. By knowing the number of permits issued by the state actual quotas may be calculated. The sum of the state's quota and the tribal quota should equal the quota approved by the NRB. This table shows that in many cases the actual quota exceeds that approved by the NRB. Because WDNR approved the tribal quotas and implemented their quotas independently, there was apparently a lack of coordination within WDNR.



# DEER HUNTER SURVEY RESULTS



## Mail Questionnaires Methods

After the conclusion of the treaty deer season all hunters who obtained an off-reservation deer tag were mailed an anonymous questionnaire. The questionnaire was divided into 2 parts, the first part included questions concerning deer hunting practices in general, either on or off the reservation. Questions addressed the months hunted, methods and weapons used, the number of deer killed and what use the hunter made with any deer killed.

The second half of the questionnaire specifically asked about off-reservation hunting under the negotiated interim agreement. Hunting effort (in days and hours) was quantified. Hunter distribution was determined by each hunter marking on a map the unit(s) he or she most frequently hunted. Comments on any problems encountered were solicited. Results are presented as percent of respondents answering the question. In most cases more than 1 answer to a given question was acceptable, therefore, percents do not always sum to 100.

## Results

There were 705 respondents to the questionnaires, yielding a response rate of 42.9%. Of those respondents 91.8% hunted deer in 1984. If a person did not hunt further information was neither required nor accepted.

Generally hunting was infrequent during the late winter, spring and early summer and began to increase in late summer during the firefly season. The most frequently hunted months were November (93.7%) and October (57.8%).

The favorite hunting method was by foot. The majority of the hunters indicated that they hunted during a drive or, to a lesser extent, from a vehicle. Approximately 25% of the respondents indicated they hunted from a tree or at night while shining. Few people hunted from a boat or over bait. Generally, methods which were frequently marked on the mail questionnaire were also those methods used by successful deer hunters.

The percent of respondents to the mail survey using one of the 5 weapon types was very similar to the registration information. There were, however, relatively more bow hunters than people who registered deer shot with a bow and arrow, indicating the relative inefficiency of this method.

The total deer kill reported by 317 successful respondents was 1161. This yields 3.7 deer harvested per successful respondent and a success rate of 44.9% (317/705). Extrapolation of this information to estimate total tribal harvest

could be misleading if response bias is not first examined. An indication of this bias is gained from later questions.

Twenty-three percent of all hunters and 38.5% of successful hunters were satisfied with their harvest. Incidentally, 12.3% of the satisfied hunters harvested no deer. Hunters who were not satisfied with the reported harvest were asked how many additional deer they would need to be satisfied. An estimation of total need for deer by the respondents is 2462 (1161 + 1301).

The large majority of people hunted for their family's consumption, although many hunters shared their deer kills. Successful hunters were more than likely to say they would share their deer than all hunters combined.

The rest of the questions addressed off-reservation hunting under the 1984 off-reservation treaty deer season.

Ten percent of the respondents who hunted did not go off the reservation. Reasons given for not hunting off reservation ranged from being afraid of physical harm (28.5%) to being satisfied with on-reservation hunting (18.3%).

When tribal members did go off reservation the majority had no such problems. Most people who experienced problems felt that their lack of knowledge of public land was the primary cause. Others had problems with the permit/registration system (35.7%), anti-Indian attitudes (29.6%) or harassment from non-tribal members or WDNR conservation wardens (26.9%).

The percent of respondents indicating that they harvested a deer off reservation was 44.9%. It appears that 83.4% of the successful hunters responded to the questionnaire. Using this information the best estimate of the total deer harvest, on or off reservation, is 1392 (1161/834).

The question concerning the number of additional deer needed for a tribal member to be satisfied was also examined for differences between successful and unsuccessful hunters. The average number of additional deer needed for the 317 successful hunters to be satisfied was 3.5. This was significantly more than the average of 2.1 additional deer needed in order for the 252 unsuccessful hunters to be satisfied (P .01). The total number of deer needed for respondents to be satisfied was 1301. In order to extrapolate this number, we must adjust for the response bias of successful hunters. Therefore, the additional number of deer needed for all successful hunters was 991 (827/.834) and 1105 (474/.429) for unsuccessful hunters. The total

number of additional deer needed is 2096 (991 + 1105).

Hunters were asked to indicate on a map where they most frequently hunted. Deer management units 3, 13, and 35 received the most pressure. These units were close to reservation lands and had large amounts of public land. Unit 35 also had the largest harvest with 14.7% of the total tribal harvest; however, unit 3 had less than 2% and unit 13 had 7.1% of the total tribal harvest. Therefore, deer harvest by tribal members did not occur in proportion to tribal effort.

Rather a complex combination of factors influence tribal harvest levels. The three most important factors appear to be deer density, proximity to the reservations and the area of public land. At this early stage it is not possible to explain the exact relationships between these three factors. The units with the largest tribal deer harvest all have relatively high deer densities, are close to 1 or more reservations, and have large areas of public land. Other units, which may have much public land and which are close to reservations, but have low deer densities, yielded low harvests (e.g. unit 29b). Units with high deer density and much public land but far from reservations also had low tribal harvest (e.g. unit 45). Season Recommendations

Based on the results of 2 years of experience and the results of 2 questionnaires, there are a few modifications in the 1984 season which appear necessary.

Season timing was much improved in 1984 over 1983, however, the opportunity to hunt in late summer should be given to tribal members in order to reflect tradition.

Shining and hunting from vehicles are important methods which have their roots in tradition and are widespread practices today on reservation lands. These methods should be included in future seasons.

The number of deer allocated to tribes appears sufficient to meet tribal needs. In a state where 250,000 plus deer are harvested annually a few hundred or thousand more would not adversely affect deer numbers or state-licensed hunter success. However, the permit system employed by the tribes in 1984 was unduly restrictive. It accomplished its objective of limiting antlerless harvest to below quota levels. It also severely limited hunter opportunity.

Some accommodation should be made for those tribal members living off the reservation and having to travel long distances to obtain tags and register deer. Perhaps registration stations could be established outside the reservations to give members the opportunity to register a deer closer to their place of residence.

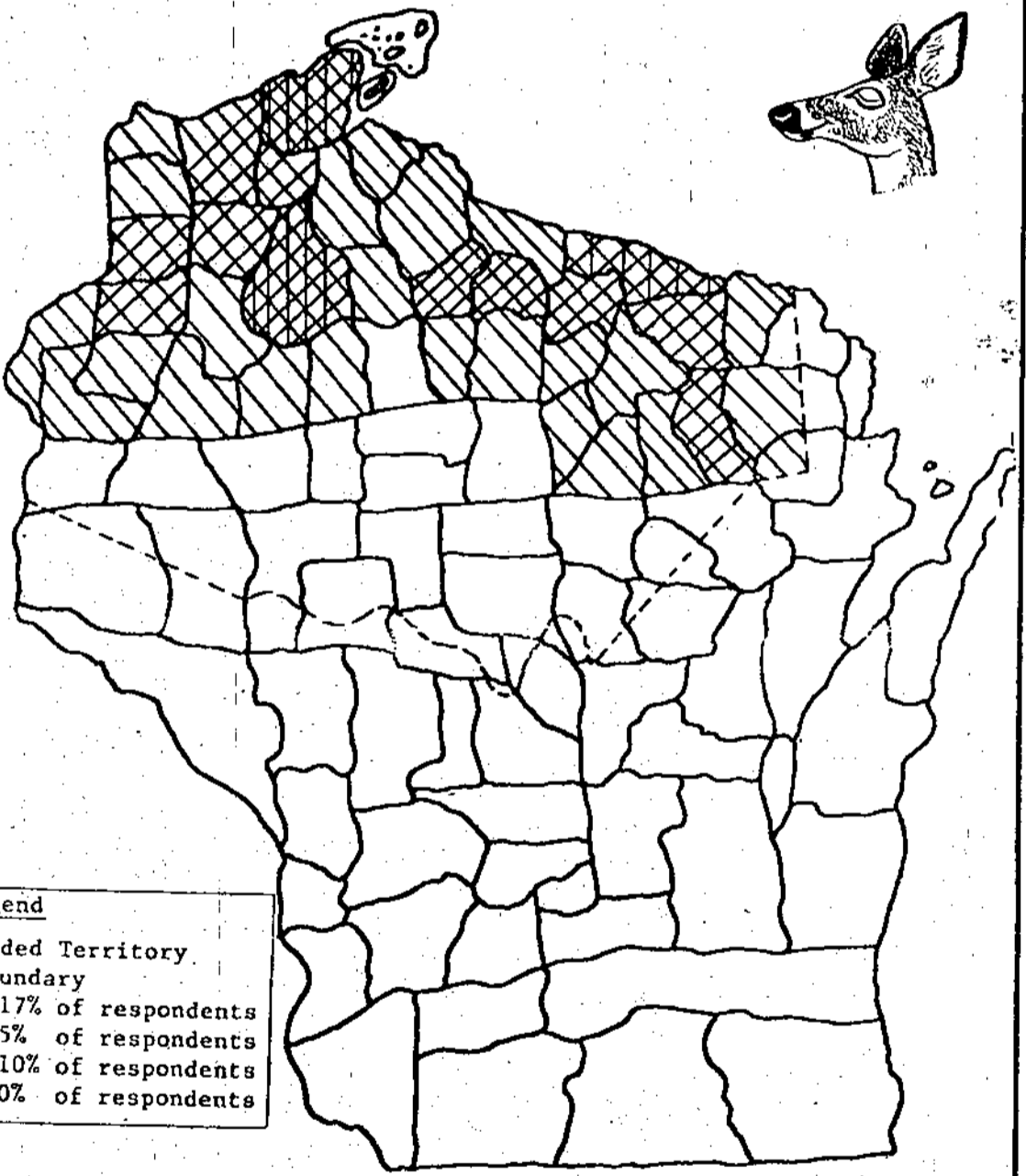


Figure 8. Distribution of tribal hunting effort during the 1984 treaty deer hunt.

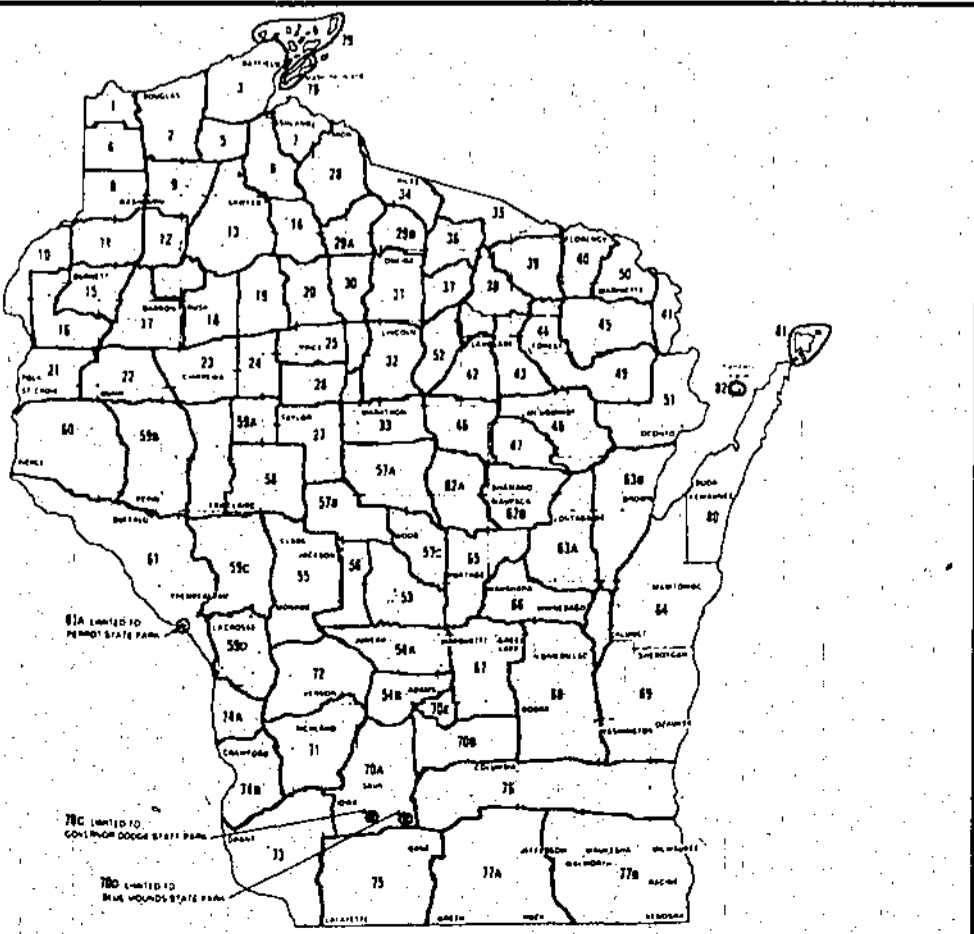


Figure 61. Wisconsin's 96 white-tailed deer management units.



GLIFWC Inland Wildlife Biologists, from the left, Jonathan Gilbert and Tim Andryk.



# TRIBAL JUDGES MEET

Tribal judges met once again to move towards the formation of the Great Lakes Tribal Judges Association. They met on March 6th at Keweenaw Bay, MI.

Addressing the assembled judges was Lorraine Rousseau from the Northern Plains Tribal Judges Association. Rousseau explained the function of Northern Plains and proposed that the Great Lakes judges consolidate with the Northern Plains organization.

However, the judges decided to continue with the formation of their own regional organization. They will be meeting again on April 9th in Minneapolis for the purpose of electing officers and formalizing the Association.

One of the reasons for the Association, and for the commitment to remain regional, is to be able to provide training for tribal court staff close to home. Currently, much of the training needed is only available on the west coast.

Tribal judges from Michigan, Minnesota, Wisconsin, and possibly Illinois will be

part of the Great Lakes Tribal Judges Association. Within their own ranks are several highly qualified trainers who could initiate training workshops for judges and clerks.

Another reason for the Association is provide a forum for tribal judges to openly discuss problems and concerns which they confront in tribal court and seek input from their peers.

The association will also be striving to renew interest in the National Tribal Judges Association.

The Great Lakes Association will be the fourth tribal judges' association in the country. Currently, there are the Northwest Tribal Judges Association, the Southwest Tribal Judges Association, and the Northern Plains Tribal Judges Association.

Those present at the meeting also discussed the upcoming training session in Minneapolis, on April 10 and 11th, for tribal court clerks and judges.

# ERFERS TO RALLY

Equal Rights For Everyone (ERFE), a 40,000 member Wisconsin and national organization, will sponsor a public "Rights Rally" at noon on April 19 in Hayward.

Commitments from 1,000 persons must be received by the first week in April for the rally to go on. Federal and state representatives have said they are willing to attend if commitments are reached, according to Paul R. Mullaly, ERFE president.

Persons interested should call 634-4238, or write ERFE, Rt. 1, Hayward, WI 54843.



# CCARW FORMED

A prominent Chippewa spokesman, James Schlender, Lac Courte Oreilles, was elected Chairman of a regional board formed to assist in the review and coordination of the radio-active waste siting process around the Putitan Batholith region. The board is called Citizens Concerned About Radioactive Waste (CCARW).

The possible candidacy of the Putitan Batholith, which is located in Bayfield, Ashland, Iron, and Sawyer counties, has provoked the concern of numerous area residents, many of whom came to an organizational meeting at Telemark Lodge, Cable on March 1st.

The results of the meeting was the election of an executive board which will serve for a six-month term. Those elected include James Schlender as Chairman; vice chairperson - Jim Lee, Ashland; Gayle Johnson, Ojibwa; Kathy Duffy, Exeland; Gene Cisewski, Hurley; Tom Hastings, Hayward; Frank Kehn, Herbster; Tim Ross, Hayward, Tim Ross, Hayward, and John Stoessel, Iron River.

Pat Sheridan, Port Wing, was elected secretary, and Steve Drug, Exeland, as treasurer.

A major part of the discussion focused on the purpose and goals of the board, with considerable debate among participants on the issue of opposing nuclear waste production, as well as the location of a dump site in the area.

Some of the objectives which were approved were:

- Participating in the site review process
- Organizing opposition to the burial of nuclear waste in Wisconsin
- Formation of a liaison between northern Wisconsin residents, Indian tribes and the Wisconsin Radioactive Waste Review Board
- Recognition of the need to support measures to eliminate the production of nuclear waste
- Coordination of the efforts and concerns of all individuals

and — Coordination of the efforts and concerns of all individuals and groups concerned about nuclear waste issues.

Schlender commented the group will be focusing on promoting public involvement and awareness of the testimony to be heard by Department of Energy representatives in Ashland on April 9th. "It is crucial that the area's citizenry express their objections and concerns at that hearing," he said, "CCARW is doing it's best to insure a good turn-out at that meeting, because DOE has to know that we, the citizens of this region do not want & will not tolerate, a high-level nuclear waste disposal site in northern Wisconsin."

Schlender can be contacted at the LCO Tribal Governing Board, Rt. 2, Box 2700, Hayward, 54843, or phone 715-634-8934 for more information.

## TO THE EDITOR

March 14, 1986  
Box 3  
Herbster, WI 54844

Dear Editor:

The Department of Energy (DOE) is coming to Ashland on April 9, 1986. The DOE will conduct a public hearing at Ashland High School. The public hearing will begin at 5:00 p.m. DOE is trying to "sell" us a radioactive waste dump. This radioactive waste dump will have to last thousands and thousands of years before the area might be safe for humans and animals.

Never mind the fact that 70% of DOE monies are spent on military projects. Pay no attention to the deplorable conditions found in Washington State at the DOE Hanford radioactive storage facility. Ignore the giant corporations (Bechtel, Battelle, and the power companies) who are trying to sell the radioactive waste repository project (a nuclear dump) as a safe idea. Forget about the politicians who are content to ignore the real issue of radioactive waste production and scream "not in my backyard". Forget all the arguments, the posturing and consider only the future. How can a government "of the people, for the people, by the people" ignore the future for short term gains. This repository will need to last for thousands and thousands of years. Do we actually want to leave this foolishness as our legacy?

Frank K. Koehn  
Citizens Concerned About Radioactive Waste

## 85 SUMMARY



# RED CLIFF FISHERIES

Harvest and Assessment of Fish Stocks By Lake Superior Chippewas in the Wisconsin Waters of Lake Superior, 1985

by  
Charles R. Bronte  
Red Cliff Fisheries Department  
Red Cliff Band of Lake Superior Chippewas  
Bayfield, WI 54814

The Red Cliff and Bad River Bands of Lake Superior Chippewas license and regulate commercial and subsistence fishing by tribal members in the Apostle Islands region of Lake Superior. During the 1985 fishing season, which runs from November 28, 1984 to November 29, 1985, a total of 21 "large boat" and 24 "small boat" were issued by the Red Cliff and Bad River Fisheries Departments. All fishing done with bottom set gill nets with licensee activity levels ranging from inactive to very active year-round.

Total harvest, obtained from mandatory daily catch reports, was approximately 285,000 lbs. composed of six principle species. Lake Whitefish comprised 41% of the total harvest, followed by lean lake trout (37%) and chubs (11%). Native or wild lake trout comprised 39% of the lake trout catch.

Low or non-existent market demand precluded large scale effort toward lake herring and siscowets. Poundages reported here mainly reflect incidental catches in effort directed towards other species. The total 1985 harvest for all species represents a total fishing effort of approximately 6 million gill net feet lifted.

Comparison with 1984 indicated a 14% reduction in total landings resulting from a

16% decrease in fishing effort. Whitefish, siscowet, and chubs all experience significant declines in harvesting while lake trout and herring remained similar to last year's totals. The only species to show any increase in harvest was walleye. Catch per unit of effort was down 27% for whitefish, however catch per effort generally increased for all other targeted species.

The major factor affecting the above changes in the tribal commercial fishery is the participation of the better and more aggressive fishermen in the developing inter-tribal fisheries in the Michigan waters of Lake Superior along the Keweenaw Peninsula. With the expansion of this fishery and the impending reductions in lake trout extractions tribal fishing effort and catches in the Apostle Islands are expected to decrease again in 1986.

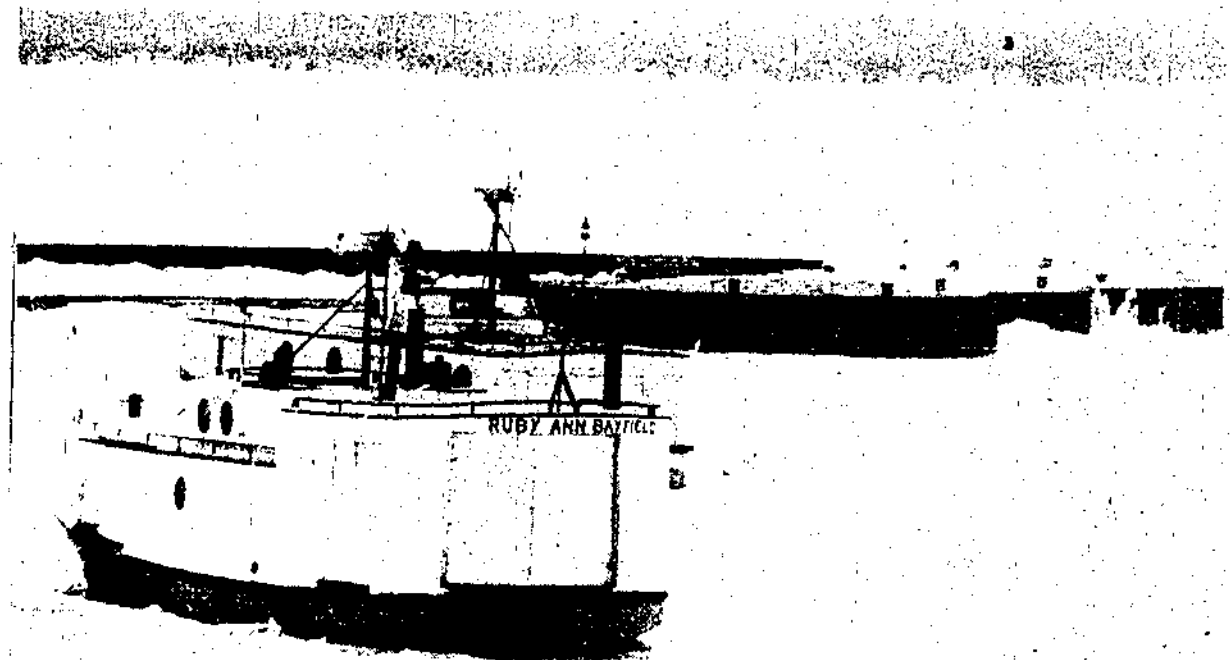
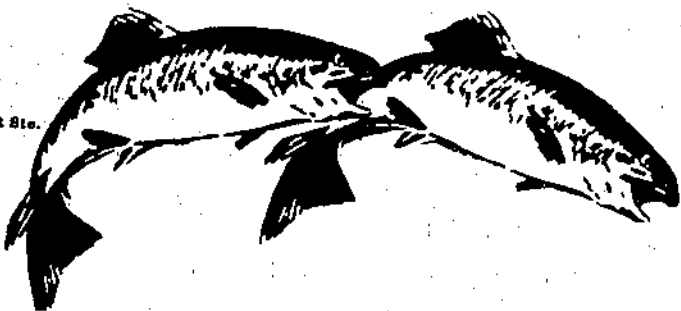
For the 1986 fishing year, Red Cliff has issued 11 large boat and 20 small boat permits with Bad River issuing an additional 5 large boat and 1 small boat. Since January of 1985, both tribes have been negotiating a new Lake Superior Fishing Agreement with the State of Wisconsin. While a draft of a new 10 year accord has already been drawn up, finalization of the agreement is pending. If signed, the new agreement will include a 42% reduction in the total lake trout harvest by all groups, a 9.5 mi<sup>2</sup> addition to Devils Island Refuge along the southwestern boundary, a 13 mi<sup>2</sup> deletion of the Gull Island Refuge along its southern boundary, assessment fishing in Chequamegon Bay to establish tribal fisheries for yellow perch and walleye, and more cooperative efforts between the tribes and the state in law enforcement and fish resource inventories.

Lake Trout Spawning Assessment

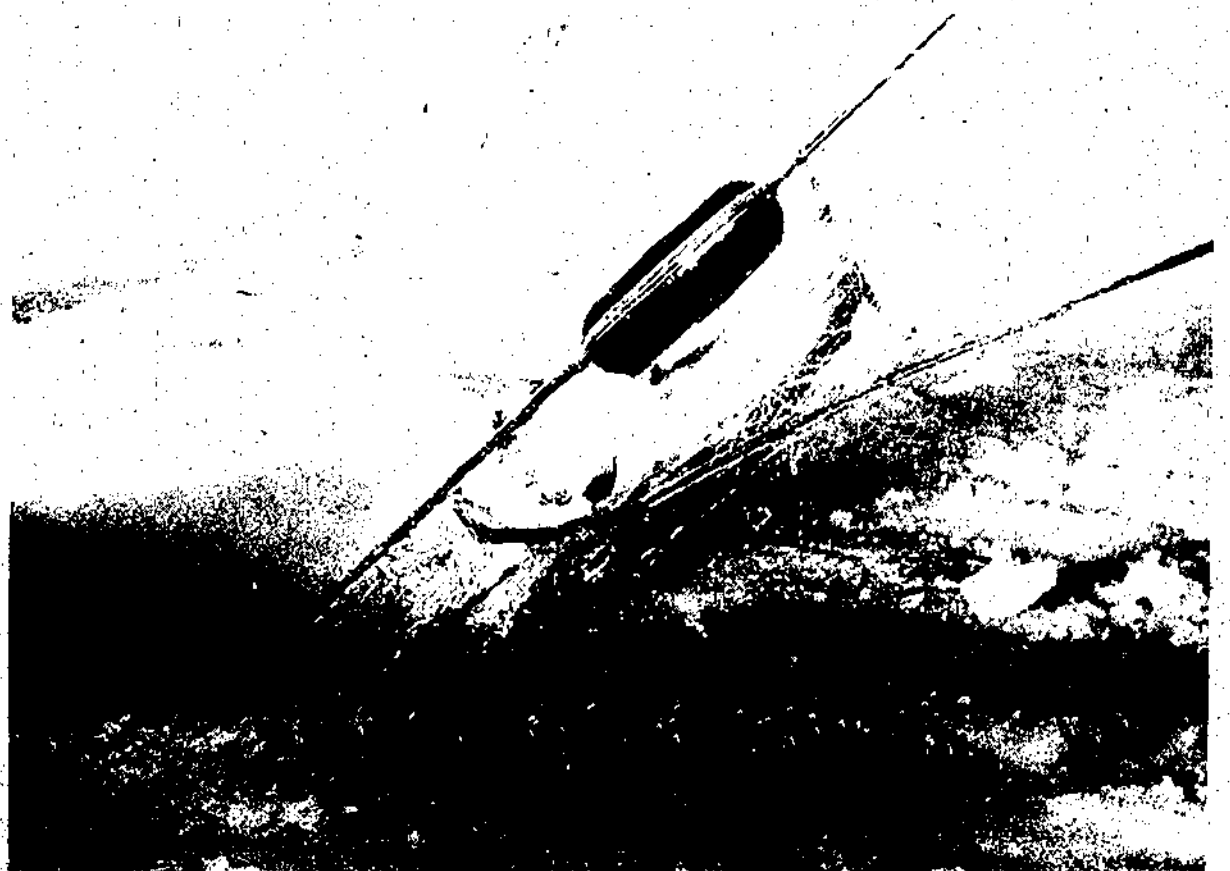
Since 1981, Red Cliff Fisheries Department has assessed historically known lake trout spawning sites in the western Apostle Islands. In 1985, a total of 28,800 feet of 4 1/2 inch gill net was lifted between Bark Point and Raspberry Island at 14 separate locations. A total of 398 fish were captured representing an over-all catch per effort of 13.8 fish/1000 feet. As in previous years, the highest catch per effort's were generally observed at near shore locations while off shore sites experienced the lowest catch rates. The highest abundance was recorded at Squaw Point at 161.3 fish/1000 feet, followed by Bark Point at 31.8 and Squaw Bay Caves at 30.0. Reproductive potential using Peck's (1979) catch per effort criteria was considered excellent at Squaw Point, good at Squaw Bay Caves, Roman Point, and Bark Point, and fair or poor at all other locations including Eagle Island Shoal which historically was known to be a major spawning area for lake trout. Males and females comprised only 10.6 and 12.8% of the spawners, respectively.

Comparisons between previous years indicate that sampling in 1985 measured apparent decreases in the relative abundances of total, native, and female spawning lake trout. Decreased stocking rates since the mid 1970's and increased fishing mortality are most likely responsible for the noted declines.

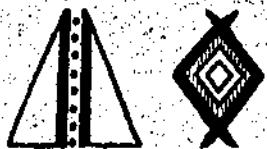
(Editors Note: Bronte also has reports on the Devil's Island Refuge Assessment & the Lake Trout Diet Survey.)



Commercial fishing boats will soon be freed of their ice shackles and be plying the open water of Lake Superior for catches of lake trout and whitefish.



A trout arrives flopping fresh through a fisherman's hole in the ice. Commercial fishing is a year-round job, as is assessment.



# OUT WEST COALITION THE ANSWER TO RESOURCE MANAGEMENT

Excerpted from Saving Northwest Fish The Columbia Basin, The Pacific Salmon Treaty, and the Future

by S. Timothy Wapato Executive Director, Columbia River Inter-Tribal Fish Commission (CRITFC) (Credits to CRITFC and the Fly Fisher)

In the past few years, the world of Pacific Northwest salmon and steelhead management has changed dramatically from its decades of futility in combatting resource decline. Two key things have happened: first, the United States has signed a treaty with Canada and enacted other laws that demand strong protection for anadromous fish resources; second, most of the region's non-Indian and Indian fishery interests have learned to work together, and are realizing the tremendous benefits of cooperative -- rather than competitive -- management. The tribes and many other groups, including prominently the Federation of Fly Fishers, can claim credit for these changes. As my friend and colleague Billy Frank, chairman of the Northwest Indian Fisheries Commission, would say: "If the salmon could talk, he'd be thanking us."

### New Laws for Salmon and Steelhead Protection

When the Northwest Power Act was passed in 1980, it was hailed as the best hope for Columbia River basin salmon and steelhead in at least 50 years. The act promised that, for the first time since hydroelectric dam construction began in the 1930s, the Columbia and Snake Rivers would be managed equally for fish and electric power. Idaho, Oregon, Washington, Montana, the Columbia River tribes, and federal fish agencies were directed to create and implement a comprehensive program to remedy the damage to fish runs caused by dams on the Columbia system. The act will commit an estimated \$800 million or more to this massive rehabilitation project.

Also passed in 1980 was the Salmon and Steelhead Conservation and Enhancement Act, which called for Northwest state and tribal fish

agencies to develop a new, coordinated management structure. With this legislation and the Power Act, regional fish managers at last had almost all the necessary tools to produce a new era for the Northwest's in-river fisheries.

Still missing, however, was the "ocean connection." A mechanism had yet to be designed that would solve the problem of ocean interception and overharvest of Columbia basin salmon.

### At Sea on the Ocean

In the early 1980s, at about the same time Congress was changing the framework for fisheries management within the basin, information was obtained on catch distribution of salmon stocks originating in the upper two thirds of the Columbia basin, where runs were the most severely depressed. The new data showed that Columbia River chinook were heavily harvested by ocean fishing fleets not based in the Northwest. For example, almost three of every four fall chinook that spawned upriver in Idaho, Oregon, and Washington were caught by fishermen from outside the Columbia basin; over 40 percent of the catch went to Canadian fishermen, and about 35 percent to the southeast Alaska fleet. The Columbia's upriver summer chinook also underscored the gravity of the situation: although in-river fisheries had been virtually eliminated on these critically low stocks, the combined Alaskan and British Columbia harvest annually claimed about 60 percent of the total population.

Northern interceptions of Columbia River chinook caused more than inequitable harvest-sharing. Canada's and Alaska's ocean fisheries could not be controlled to conserve depressed stocks. With Canada beyond the jurisdiction of United States fish managers, this country was powerless to prevent enormous increases in Canada's chinook interceptions; and the North Pacific Fishery Management Council, which regulates ocean fishing in United States waters off Alaska's coast, was unwilling to reduce Alaskan catches when the savings would only be harvested farther south in

Canadian waters.

The picture was clear. Columbia basin salmon were in dire trouble in the first years of this decade, and the sole solution to the ocean problem was an international agreement -- a treaty -- to cut salmon interceptions in the northern Pacific Ocean.

### Trying for a Treaty

The United States and Canada had discussed the need for a Pacific salmon interception agreement since 1971, but the talks had made little progress; they were focused on only a few stocks, primarily Fraser River sockeye and pink salmon, and little attention was given to Northwest chinook. With new knowledge of northern ocean interceptions, delegates from the Columbia River tribes -- Nez Perce, Umatilla, Warm Springs, and Yakima -- began in 1981 to make a case in the treaty negotiations for international chinook conservation.

In 1982, with determined prodding by Columbia River and Washington coastal tribes, both nations acknowledged the existence of a chinook conservation crisis. Indeed, it had become evident that the crisis was not only on the Columbia River, but extended coastwide. Many chinook stocks for Puget Sound, coastal Washington, and northern Oregon coastal rivers were also big contributors to Alaskan and Canadian harvests: about 56 percent of the harvest of Puget Sound's chinook was taken by those ocean fisheries; the interception rate for Washington coastal chinook was about 69 percent; and between 30 and 60 percent of northern Oregon's coastal river chinook was caught by Canadian and Alaskan trollers.

The chinook crisis became the paramount issue in treaty negotiations. When the United States and Canada finally reached agreement in January 1985, their treaty contained strong provisions for conserving the species: the two countries have committed themselves to rebuild naturally spawning, chinook stocks, by 1998, and the basic means for achieving that goal is limitation of ocean interceptions.

### The Treaty

Chinook: Under the United States-Canada Pacific Salmon Treaty, which was ratified in March 1985, chinook fisheries in Canada and Alaska were reduced by about 25 percent (some 400,000 fish) in 1985, and will be reduced by the same percentage in 1986. After 1986, fisheries will be limited to whatever numbers are necessary for rebuilding stocks by 1998; at which time the current harvest distribution ratios will also have changed: more chinook from the lower three states will be caught by fishermen in those states than by British Columbia and Alaskan harvesters.

Coho: The treaty's conservation measures are not only indispensable for chinook, but also for coho, with emphasis on naturally spawning populations. Like chinook, coho are both an important sport fish and a valuable commercial species, and during the last year or two of treaty negotiations, the situation for coho began to resemble the chinook crisis. The coho stocks in trouble were principally of Washington origin; Canadian harvests had radically increased, while escapements to Washington rivers plummeted. As much as 90 percent of Canada's overall coho catch was thought to be of United States fish.

In response to this problem, the treaty establishes 1985 and 1986 coho catch ceilings for the Canadian troll fishery off the coast of Vancouver Island, where most Washington-produced coho are intercepted. (The ceiling represent a significant reduction from 1983 and 1984 catch levels.) For 1987 and beyond, new harvest limits will be negotiated through the Pacific Salmon Commission.

Steelhead: The Pacific Salmon Treaty breaks new ground by including a mandate for international conservation of steelhead, in which the United States and Canada agree to take coordinated action to protect the species. The treaty contains no harvest regimes for steelhead because they are not now the target of directed intercepting fisheries, but it does instruct the countries to guard the fish from such fisheries, should they take place, and also from incidental ocean harvest.



The Pacific Salmon Commission: How the Treaty Will Operate

The Pacific Salmon Treaty Act, Congress's enabling legislation passed in March of 1985 concomitant with ratification, places principal United States responsibility for the treaty's implementation on Oregon, Washington, Alaska, and 24 Indian treaty tribes. A bilateral forum, the Pacific Salmon Commission, is the implementation vehicle. The United States section of the commission has three voting members, representing the 24 tribes, Oregon and Washington jointly, and Alaska, plus a non-voting federal representative. The federal government has the right to intercede if commission decisions do not fulfill the United States' treaty obligations. The commission's Canadian section will be patterned along similar lines.

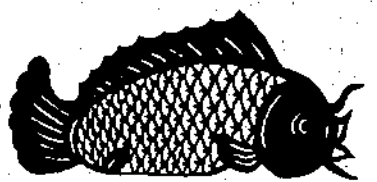
Representation and voting procedures of the United States section require that tribes and states operate as equals. Because the section will make its decisions by consensus, the treaty structure is one of equal bargaining power, and was designed to facilitate fair negotiations and compromise.

The treaty also establishes three regional panels subordinate to the commission: one responsible for Fraser River salmon, and one each for stocks originating north and those originating south of mid-British Columbia. A panel's job is to sift through technical and policy options and recommend management and conservation measures to the commission. Each panel has a section for each country. United States panel sections are made up of state, federal, tribal, and user-group representatives; on its section of the southern panel, for example, this country has five fish managers and one member from the recreational or commercial fishing industry.

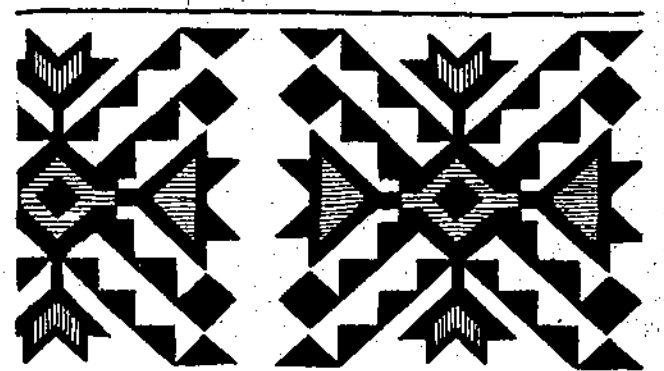
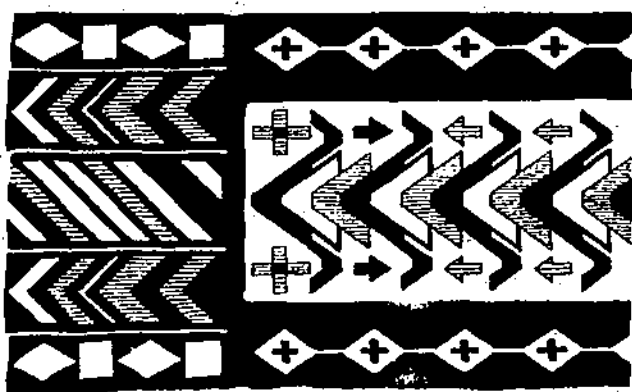
### The Pacific Salmon Treaty Coalition

From the process that engendered the treaty come a number of additional benefits, foremost of which is the subject of these paragraphs. Early in 1985, Northwest tribes, Oregon/Washington non-Indian fishermen, conservationists, businesses, cities, counties, port authorities, biologists, and fish agencies, formed a coalition that became a pivotal factor in bringing about the treaty and its ratification. And by the way, the Federation of Fly Fishers, particularly Washington clubs and leaders, were key players in the coalition's success. As the Northwest's Congressional delegation will tell you, when the entire salmon-and-steelhead-dependent community speaks with one voice the politicians sit up and listen.

The Pacific Salmon Treaty Coalition forged new understandings between former antagonists -- between fishery managers and users, Indians and non-Indians, commercial and sport fishers. Having achieved the treaty, coalition members decided to continue working together, dropped the word treaty from their name, and are pursuing, among other issues, high-seas interceptions of Northwest salmon and steelhead. Recent studies show that between five and ten percent of Columbia River steelhead are taken by Japanese (and to a lesser extent, Korean and Taiwanese) factory ships operating in the Pacific outside the United States 200-mile limit. The coalition is urging the federal government to put diplomatic or economic pressures on the Japanese to cut their interceptions. Working on this and other unresolved problems that jeopardize Northwest fisheries -- pollution, hydro development, anything else that damages natural habitat, and so forth -- the Pacific Salmon Coalition can be a positive force for many years to come.



Assessment of fish involves measuring, taking scale samples, and stomach samples. Staff from GLIFWC or tribal fisheries frequently accompany tribal fishermen in order to gather data from their catch.



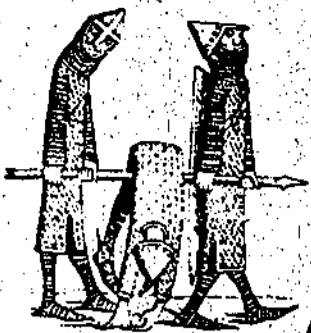
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MASINAIGAN, is (usually) a monthly publication of the public information office of Great Lakes Indian, Fish, & Wildlife Commission, P.O. Box 9, Odanah, WI 54861.  
The name is an Ojibwa word for paper. Some of the elders referred to the treaties as gitchi-masinaigan, or big paper.  
As such, MASINAIGAN focuses on treaty rights issues of the Chippewa around the Great Lakes.  
Subscriptions are free on request. If you have questions or comments, write the above address or call 715/682-6619.

Co-Editors/Writers: Walt Brantje, Sue Erickson, Lynn Spreutels



# RAD WASTE GROUND-WATER: A DANGEROUS MIXTURE



The U.S. Department of Energy (DOE) may build a high-level nuclear waste dump (repository) in Northern Wisconsin's crystalline bedrock. If radiation escapes from the repository, some of Wisconsin's groundwater may become contaminated with radiation. This contaminated groundwater could discharge radiation into our lakes, streams, rivers, and wetlands.

Wisconsin has more than two million-billion (two quadrillion) gallons of groundwater, enough water to cover the entire state thirty feet deep.

Seventy percent of Wisconsin residents and all rural and agricultural activities depend on pure groundwater.

Plutonium, a major component in nuclear waste, will remain radioactive for 250,000 years; other waste products decay at varying rates. Human exposure to radiation can cause cancer, genetic damage and other disease.

Groundwater in the Upper Midwest is part of the water cycle that feeds the world's largest sources of fresh water—the Great Lakes basin and the Mississippi River watershed. Severe pollution of groundwater could eventually affect the water supply of the entire region.



## What is Groundwater?

Groundwater is stored in pores (tiny spaces) and fractures (larger spaces) in soil and bedrock, like a sponge absorbing and transmitting water. Contrary to common myth, groundwater does not flow in some large mysterious underground river.

## Where Does Groundwater Come From?

Groundwater comes from precipitation. About 75% of precipitated water is evaporated or transpired through plants back into the atmosphere. Depending on soil and geographic conditions, the remaining water either runs off the land into surface water (lakes, rivers, streams or wetlands), or seeps into the ground. Soils with high clay content are not very porous; water does not seep easily through them. On the other hand, sandy soils allow a lot of seepage. Locations where water seeps underground are called recharge areas.

## Groundwater Flow Systems

Water seeps through the soil into the underlying rocks. It moves slowly, but continuously through pores and fractures. The rate of flow varies from several feet per day to just a few inches per year. Generally groundwater travels faster through porous rock like sandstone than through rock with small pores like crystalline rock. But groundwater flows faster if there are fractures in the rock.

Groundwater flows from upland recharge areas to lowland discharge areas, such as lakes, streams, springs, rivers, and many wetlands where the water table meets the land surface.

## Multi-Barrier System

DOE's theory is that several barriers within the repository will keep radiation away from the human environment. Barriers include the waste canister, a series of cement and steel overpacks, and the rock itself. Although the waste will remain dangerously radioactive for at least 10,000 years, most scientists agree that the canister, and overpack systems will contain the radiation for only about 500 years. The rock is expected to contain the radiation for the remaining

9,500 years. Studies are underway in the U.S., Canada, Sweden and Switzerland to test this theory.

## Why Crystalline Rock?

Wisconsin's crystalline rock, including granite, is strong, stable, and relatively impermeable to groundwater flow, when not fractured. Because of these qualities, DOE believes crystalline rock is suitable for nuclear waste disposal and isolation. DOE admits that radioactive contamination of groundwater might occur at deep levels, but says that radiation will have decayed to safe levels by the time it reaches the human environment.

DOE bases this assumption on the fact that groundwater moves very slowly through unfractured crystalline rock.

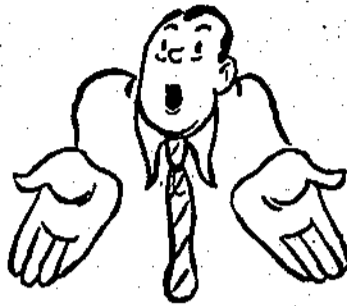
## How Fast Could Groundwater Travel?

Several scientists agree with DOE. Many other scientists, however, question DOE's assumption, because current field research shows that crystalline rock contains complex natural fracture systems. In addition, excavating a deep geological repository below the water table, may create even more fractures.

Wisconsin is concerned about these scientific uncertainties. If irradiated groundwater travels from the repository below the water table, it may create even more fractures.

Wisconsin is concerned about these scientific uncertainties. If irradiated groundwater travels from the repository to the surface environment, it might contaminate the Great Lakes and the Mississippi River water basins for thousands of years.

If you are concerned about potential groundwater contamination, now is the time to inform yourself.



Because thick glacial deposits of soil and rock debris cover much of the state's bedrock, scientists have not been able to fully study rock fractures and groundwater flow systems in crystalline rocks.

## Aquifers

When all the spaces in the rock are saturated with water, it is called the saturated zone. The upper surface of the saturated zone is called the water table. When a rock or soil layer is capable of storing, transmitting or yielding water is called an aquifer. Virtually all of Wisconsin is underlain by one or several aquifers.

## Groundwater Pollution

Pollutants in the air, on the land or underground can leach into groundwater. Once groundwater has been contaminated, it is very difficult and expensive to clean up. To assure clean groundwater in the future, we must protect its quality, right now.

## Buried Nuclear Waste?

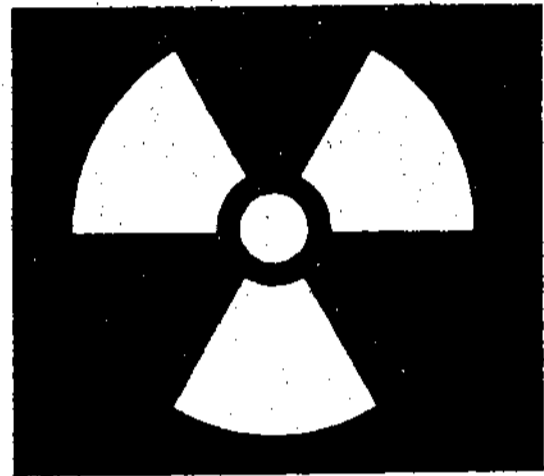
Crystalline rock bodies in Northern Wisconsin are under consideration by the DOE for a 400 acre high-level nuclear waste repository. The repository, about a half mile deep, would contain a series of tunnels with holes drilled into the floor waste burial. High-level waste is spent fuel from commercial reactors and waste from the manufacture of nuclear weapons.

*(Credit to Meg Wise of Wisconsin Radio Active Waste Review Board)*

## What is nuclear waste?

Nuclear waste is the deadly garbage that results from production of nuclear power or weapons. It has been piling up, with no known safe disposal method, since the atomic age began nearly 40 years ago. Nuclear waste is produced at every step along the way, from the time the uranium ore is mined and processed until it has lost its usefulness and must be disposed of.

Nuclear power and weapons production turn uranium fuel into about 200 different kinds of poisonous wastes. These 'radionuclides' are radioactive and unstable, which means that their atoms are spontaneously ejecting or 'radiating' particles and energy waves. This process is called radioactive decay. Some radionuclides decay quickly. Some will remain dangerously radioactive for thousands of years. There is no way to speed up the decay process, or to make these poisons less toxic.



We cannot afford apathy about treaty-ceded lands...

# HEARING APRIL 9 A "MUST"



Say "NO GLOW!" for northern Wisconsin at the DOE hearing, April 9, beginning at 5 p.m. at the Ashland High School gym. Keep a high-level radioactive waste site away from our children and their land.

# REGIONAL BOARD (CCARW) AGAINST DUMP SITE

The need for a massive public turn-out at the Department of Energy's (DOE) hearing on a radioactive waste repository in our area was one of the major issues discussed by the executive committee of Citizens Concerned About Radioactive Waste (CCARW), which met Friday evening in Ashland.

CCARW is a regional, elected board which acts to coordinate local activities in opposition to the proposed nuclear waste dump site in the Puritan Batholith, affecting Ashland, Bayfield, Sawyer, and Iron Counties.

CCARW also acts as a source of public information regarding the proposed site and as a liaison between the community and the Wisconsin Radioactive Waste Review Board (WRARB).

Jim Lee, CCARW executive committee member, reported that an informational letter has been composed regarding the issue of the candidate radioactive waste dump site in the region and informing people about the DOE's scheduled hearing on April 9th. The letter will be mass-mailed in order to promote the necessary attendance at the meeting and prepare the public to make testimony.

CCARW Chairman Jim Schlender later stated that the board is concerned first of all that citizens do attend en

masse, even if they do not give testimony. The presence of numbers of people opposing the site, even though they do not speak at the hearing, will give the DOE representatives a message that the community-at-large will not tolerate the dump site, he said.

Another matter of concern regarding the April 9th testimony is that people who give testimony should attempt to personalize that testimony. Schlender emphasized that testimony does not have to be of technical nature, but should express at least one reason why the individual testifying would be adversely affected by the siting of a radioactive waste dump in the area.

The April 9th hearings are scheduled to begin at 5 p.m. at the Ashland High School gymnasium. According to Schlender, persons wishing to testify should reserve a time slot by contacting the DOE, Chicago Operations Office, Crystalline Repository Project Office, Attn: Hearing Registrar, 9800 Cass Avenue, Argonne, ILL., 60439, or call that office.

During the course of Friday's meeting the CCARW executive committee endorsed a proposal presented by Rick Olivo, Ashland, to canvass the city of Ashland with a flyer, perhaps the letter already composed by CCARW. Olivo said that he would organize a group from Northland College to help

door-to-door the city with the flyer in order to help promote attendance at the April 9th meeting.

Another community effort towards public education is being run through CCARW executive committee member Frank Koehn, Herbster. Koehn has both issued a series of press releases regarding the up-coming hearings and has been offering a presentation of the Wisconsin Radioactive Waste Review Board's slide and tape program.

To date Koehn reported that he has made appearances in Herbster, Port Wing, and one scheduled at the Highbridge Town Hall on March 31st.

Koehn says he is hopeful that he will have the program in both Mellen and Glidden in the near future. Any organization wishing to view the slide/tape presentation on the issue of radioactive waste storage should contact Frank Koehn at 774-3333. Koehn says that he is making the presentations as part of the work of CCARW's sub-committee on the production of high-level radioactive waste.

Another part of CCARW's work is the identification of sites which were mined or drilled, especially where dynamite was used in the process. As part of the research, CCARW has sent out a letter to all drillers in the area, hoping as a stable site for a dump.



CCARW executive committee members work at plans to promote a public turn-out at the April 9th DOE hearing at the Ashland High School gym. From the left are: Jim Lee, Ashland; Jim Schlender, CCARW chairman, Lac Courte Oreilles; and Pat Sheridan, CCARW secretary, Port Wing.

## Citizens Concerned About Radioactive Waste

Route 1, Box 62  
Port Wing, WI 54865  
(715) 774-3862

March 18, 1986

Dear Neighbor:

Did you know that the United States Department of Energy (DOE) has designated parts of Ashland, Bayfield, and Sawyer Counties as a potential radioactive waste dump? Did you know that the sites selected by DOE will contain very high level radioactive wastes that will be hazardous to our environment for the next 10,000 years. Did you know that 10,000 acres consumed by a dump site would be four times the size of the City of Ashland, sixteen times the size of Hayward, and will be located only 40 miles from Lake Superior?

We are concerned residents because we *don't know* what effect a radioactive waste dump will have on our fish and wildlife population. We *don't know* what damage spilled radioactive waste could do to our precious groundwater. We *don't know* the impact that this will have on area businesses and the local economy. We *don't know* the safety and security problems that 27 or more truckloads of nuclear waste each day—everyday of the year—will pose for the government or residents of the area. We *don't know* whether the DOE can guarantee safety for the next ten thousand years.

We *do know* that the proposed site will be at the headwaters of the Chippewa, the Flambeau, the Namekagon and the Bad Rivers and that waters flow from the proposed site in all four directions. We *do know* that the Space Shuttle program demonstrates that failure from even a small inexpensive part can cause catastrophic consequences and that safety considerations can be compromised by human errors in judgement! We *do know* that concerns raised already by state governments have chastized the DOE for being less than truthful in providing vital information. We *do know* that the DOE will choose a dump site that poses the least political problems from area residents and that our area has one of the lowest populations of any proposed sites.

We need your help! The U.S. Department of Energy is holding a public hearing on Wednesday, April 9th at the Ashland High School Gym, beginning at 5:00 PM. Your attendance is crucial! You can testify if you wish to voice your concerns or ask questions, but if you don't wish to speak, please come anyway because your presence will show that we are a people vitally interested in keeping our northwoods clean. In case you cannot make it to the hearing, you can listen to live coverage of the event on WOJB, 88.9 FM, broadcasting from Reserve, Wisconsin. Also, if you cannot attend you can write directly to DOE. Their address is U.S. Department of Energy, Chicago Operations Office, Crystalline Repository Project Office, Attn: Hearing Registrar, 9800 S. Cass Avenue, Argonne, Illinois 60439. You can also write your senator and congressman, but do so before June 1st.

Sincerely,

Pat Sheridan, Secretary  
Citizens Concerned About  
Radioactive Waste

P.S.: Pay attention to posters, ads, and local radio announcements in case the scheduled time or place for the DOE hearing changes.



The DOE hearing in Wausau drew thousands to protest a high-level radioactive repository in Wisconsin. A similar response is needed on April 9th in Ashland.



Attending the DOE presentation in Wausau are, from the left, David Siegler, GLIFWC policy analyst; Howard Bichler, St. Croix tribal attorney; and Candy Jackson, Bad River tribal attorney.



# APRIL 9TH HEARING A "MUST"

# CITIZENS DON'T MISS IT!

