

Great Lakes Trout and Salmon Stamp Revenue and Expenditures Report Fiscal Years 2008-2013

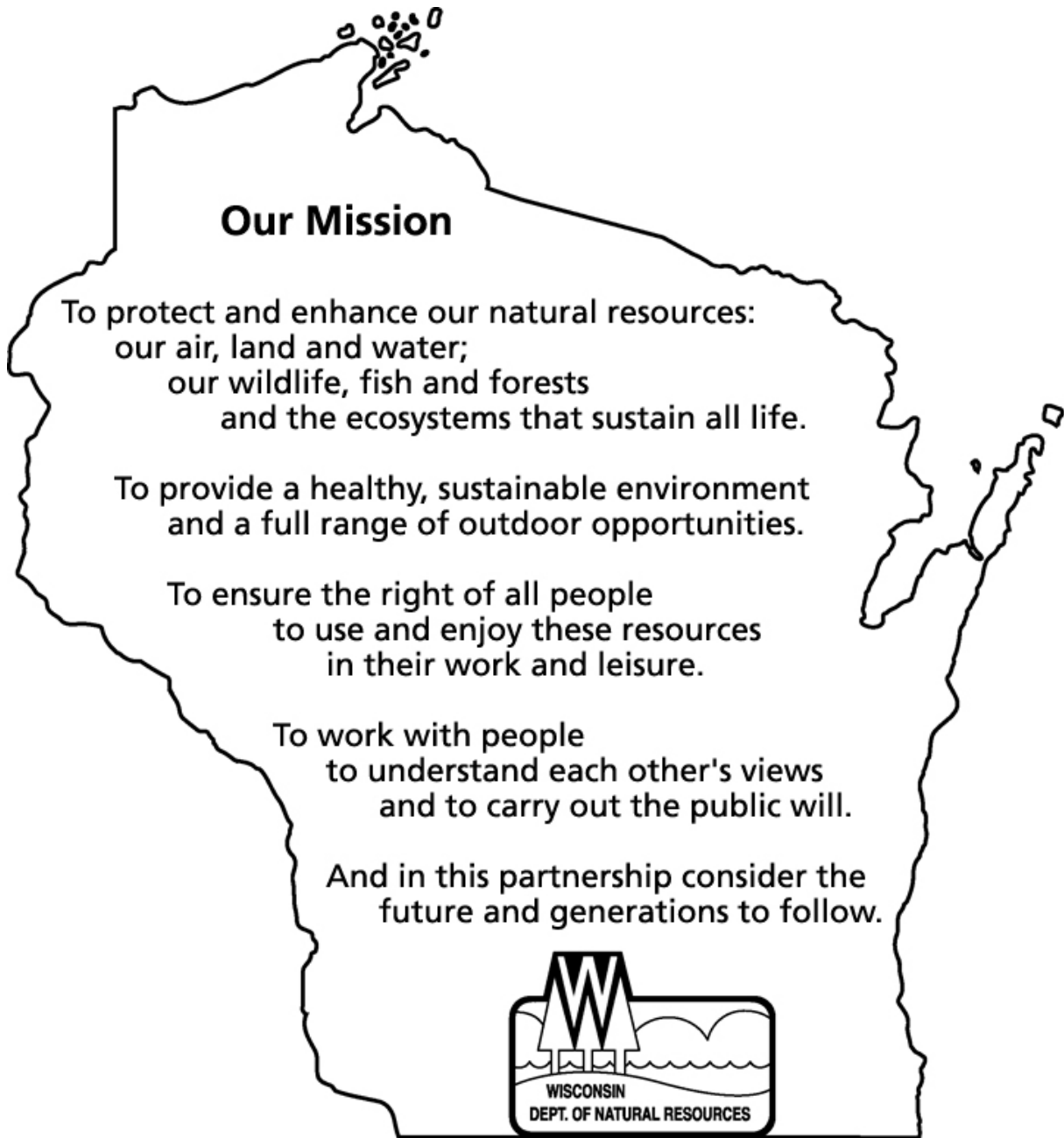


Open House at the Root River Steelhead Facility, October 2013. Photo by Steve Nagel.

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Program Background

Creation of the Trout and Salmon Stamp Program

In the early 1980s, the loss of federal funding for non-native trout and salmon stocking prompted the creation of Wisconsin's Great Lakes Trout and Salmon Stamp Program. The Wisconsin Department of Natural Resources (DNR) faced the prospect of large reductions in the Great Lakes stocking program, including the elimination of coho salmon stocking. Concerned Great Lakes anglers initiated and promoted the legislation that created the Great Lakes Trout and Salmon Stamp (commonly referred to as the Salmon Stamp). Since 1982, every angler fishing for salmon or trout in the Wisconsin waters of the Great Lakes has been required to purchase a Salmon Stamp in addition to a fishing license. Revenues from the sale of Salmon Stamps help support the DNR trout and salmon rearing and stocking program for the Great Lakes.

Guidelines for the use of Great Lakes Salmon & Trout Stamp revenues

Wisconsin statutes stipulate, "The Department shall expend the receipts from the sale of Great Lakes Trout and Salmon Stamps to supplement and enhance the existing trout and salmon rearing and stocking program for outlying waters and to administer this section." The expenditures are (1) species limited to salmon and trout only, (2) geographically limited to the Wisconsin waters of Lakes Michigan and Superior and their tributaries, and (3) program limited to the rearing and stocking program. Projects funded by stamp monies must meet these three requirements or be related to the administration of these monies.

Species requirement

Great Lakes Trout and Salmon Stamp revenues may only be used for projects that pertain to salmonine species. These species include Pacific salmon (coho, chinook), trout (rainbow [steelhead], brown) and chars (brook trout, splake and lake trout). Stamp money may not be used for projects specifically directed toward warm or cool water fishes such as percids, esocids, and centrarchids.

Geographical requirement

Projects that use stamp revenues must be geographically focused on the Great Lakes watershed. Specifically, the geographical scope of these projects may include tributaries accessible to Great Lakes salmon and trout, as well as Lakes Michigan and Superior themselves. Projects that pertain to trout waters other than the Great Lakes (e.g., Great Lakes tributaries inaccessible to Great Lakes salmon and trout, inland trout streams and lakes) may not use Salmon Stamp money.

Program requirement

Projects funded with Salmon Stamp money must also relate specifically to the Great Lakes stocking program. Activities within the stocking program may be categorized as evaluation and research or propagation activities (including facility developments). Examples of evaluation and research activities include lake-wide creel surveys, species and strain evaluations (tagging and marking studies), development of management plans (annual stocking plans, species plans, long-

term plans) and annual propagation planning. Propagation activities include hatchery operation costs (electricity, labor, fish food, waders, etc.), acquisition of fertilized eggs, egg incubation, fish rearing and transportation of fish to stocking sites. Propagation activities also include the purchase, maintenance, and repair of the physical facilities that support the stocking program. Those facilities include raceways, rearing ponds, hatchery grounds, generators, pumps, water supply systems, vehicles, aerators, automatic fish feeders, land, engineering plans, and incubators.

Sources of revenue for the Salmon Stamp Account

The Salmon Stamp account pays for about half of the total Great Lakes trout and salmon program. As summarized in Table 3, fishing license fees and other sources also support the program.

All receipts from the sale of Salmon Stamps are placed in the DNR Fish & Wildlife Segregated Account and reserved for eligible Salmon Stamp activities. These funds are referred to as the Salmon Stamp account. Interest earned on these funds accrue to the Fish & Wildlife Segregated Account. Some revenues from the sales of patron licenses, two-day sport fishing licenses and collector stamps also contribute to the account. The price of each license to the consumer includes the base price of the license plus a fee that goes to the vendor. The vendor's fee is \$0.75 for the two-day license and the patron card; it is \$0.25 for the Salmon Stamp. Revenue and expenditure figures in this report exclude the vendors' fees.

Funding for the Salmon Stamp account has changed over time. It was established in 1982 with a price of \$3.00. In 1984, the Wisconsin State Legislature approved a \$6.00 one-day fishing license for the Great Lakes. This inexpensive license allowed anglers to spend one day fishing for trout and salmon on the Great Lakes without being required to buy an annual Great Lakes Trout and Salmon Stamp. To prevent a sharp reduction in funding for the salmon and trout program, one-half of the revenues from the license supported Great Lakes salmon and trout projects.

In 1988, the Legislature changed the one-day license by allowing inland fishing. Revenues from the new one-day license were split among Great Lakes salmon projects, inland trout habitat projects, and general fisheries work. In 1992, the Legislature replaced the one-day license with a \$7.25 two-day license, valid for the Great Lakes only, and in 1997, the two-day license fee was increased to \$9.25. One-half of those revenues are placed in the Salmon Stamp account. Also in 1992, the Salmon Stamp fee was increased from \$3.00 to \$7.00. In 2004 the Salmon Stamp fee was increased to \$10.00 and the two-day license fee was increased to \$14.00

Until recently the Salmon Stamp account also received \$1.83 from every Patron License sold. In recent years the allocation from each Patron License has exceeded \$3.00, totaling \$198,933 in fiscal year 2006, \$186,506 in fiscal year 2007, \$183,925 in fiscal year 2008, \$171,443 in fiscal year 2009, \$158,851 in fiscal year 2010 (with an additional \$7,985 allocated retroactively for fiscal years 2006-2009), \$152,914 in fiscal year 2011, \$149,544 in fiscal year 2012, and \$152,732 in 2013. Patron license revenue not deposited to dedicated stamp accounts is deposited to the larger fish and wildlife account and spent for a wide variety of conservation purposes. Collectors can purchase souvenir Salmon Stamps from previous years. All revenues from these sales contribute to the Salmon Stamp account.

Reports

Findings of evaluation and research activities are included in annual reports that are posted on the Lake Michigan and Lake Superior web pages (<http://dnr.wi.gov/topic/Fishing/lakemichigan/index.html> and <http://dnr.wi.gov/topic/Fishing/lakesuperior/index.html>). Stocking data can be found in the on-line fish stocking data base (<http://dnr.wi.gov/topic/Fishing/stocking/index.html>).

Summary Tables

Table 1. Salmon Stamp account revenues and expenditures in fiscal years 2008-2013. Expenditures for individual projects include supplies and limited-term employee (LTE) wages. Combined expenditures for LTE overhead costs and fringe benefits are shown in a separate line. Individual projects are described briefly in the body of this report. Permanent staff positions made possible by Salmon Stamp include two fisheries technicians on Lake Michigan, a fisheries biologist and a fisheries technician on Lake Superior, and a fisheries technician at the Kettle Moraine Springs State Fish Hatchery. Note that \$2,246,555 allocated for Wild Rose Hatchery development in 2005 and 2008 was refunded to the Department by the Department of Administration in 2010.

	2008	2009	2010	2011	2012	2013
Beginning Cash Balance	2,205,083	408,106	750,718	3,142,558	3,068,697	3,184,633
Revenues	1,846,803	1,795,005	1,785,900	1,685,224	1,835,864	1,673,600
Stamp sales	1,309,600	1,288,649	1,307,505	1,243,274	1,393,021	1,244,742
Two-day license sales	352,161	331,197	310,644	288,489	293,288	276,126
Patron license sales	183,925	171,443	166,846	152,914	149,544	152,732
Collector fee	1,080	1,670	880	547	10	0
Refunds and corrections	37	2,046	35	0	0	0
Refund of money allocated for Wild Rose	0	0	2,246,555	0	0	0
Total Available Funds	4,051,886	2,203,147	4,783,221	4,827,782	4,904,561	4,858,233
Expenditures	3,643,780	1,452,393	1,640,615	1,759,085	1,719,930	1,845,136
<u>Lake Michigan Projects</u>						
Seeforellen brown trout (FHCB)	3,268	1,457	2,506	3,184	8,156	7,567
Feral broodstock mgmt. (FHCC)	2,488	0	0	1,249	2,574	2,352
Lake Michigan creel survey (FHCR)	121,710	110,592	128,670	115,178	110,953	106,586
Creel survey data analysis (FHIC)	12,824	10,525	11,654	11,955	14,027	11,735
Habitat on Oconto River (FHCD)	0	1,772	0	0	0	0
Broodstock eval. (FHHZ, FHSE, FHIZ)	21,876	12,621	14,761	26,100	24,292	14,430
Steelhead fin clipping (FHKV)	21,524	18,176	16,322	20,799	21,894	16,475
Nearshore rainbow (FHNL)	2,340	169	1,628	0	705	30
Lake trout restoration (FHCA)	24,500	16,572	16,780	13,940	17,713	17,444
G.L. Assessment Boat (FHNS)	0	0	0	179,829	21,653	298,580
<u>Lake Superior Projects</u>						
Sea lamprey barriers (FHCI)	21,906	19,730	20,063	22,229	17,763	49,409
Lake Superior creel survey (FHFE)	34,681	0	22,949	24,764	37,566	34,732
Coaster brook trout mgmt. (FHIB)	5,584	0	5,628	5,809	4,044	3,159
Tributary management plan (FHSC)	2,706	2,654	2,166	2,027	2,054	3,359
Lake trout restoration (FHCA)	38,971	40,178	33,884	33,743	40,547	48,307
<u>Propagation</u>						
Basic hatchery survices (FHBS)	73,090	60,136	85,545	103,738	70,219	55,929
Salmon and trout prod. (FHBW)	621,405	640,184	705,752	638,408	732,359	665,102
Salmon and trout distr. (FHBZ)	16,270	7,427	8,448	9,976	9,782	4,761
Weir operations (FHXC)	127,604	112,142	117,552	113,275	99,923	104,096
Hatchery maint. (FHJJ, HDYH, HDYR)	0	0	53,870	1530	55,974	0
Off station propagation (FHJG)	2,716	4,089	2,884	4,603	2,783	2,604
Operate annex at KMSSFH (FHME)	11,369	30,204	14,932	20,113	20,984	20,294
Wild Rose SFH development	2,100,000	0	0	0	0	0
<u>Other</u>						
Salmon stamp adm. costs (FHNB)	1,955	2,061	1,808	0	0	0
Permanent salaries and fringe benefits	275,141	276,223	23,740	221,078	215,550	222,606
Overhead and LTE fringe benefits	99,853	85,479	149,076	185,557	188,418	155,578
Closing Cash Balance	408,106	750,718	3,142,558	3,068,697	3,184,633	3,013,097

Table 2. License-year sales of cards, licenses, and stamps supporting the Great Lakes Trout and Salmon Stamp account from the inception of the program.

	Patron Cards	Two-day licenses	One-day licenses	Great Lakes Trout and Salmon Stamps
1982			27,586	245,890
1983			34,783	279,552
1984	217		35,282	239,971
1985	265		34,312	237,571
1986	286		46,569	226,243
1987	366		45,023	224,283
1988	449		83,615	208,811
1989	567		88,431	175,314
1990	713		84,526	151,769
1991	1,024		83,566	139,715
1992	2,847	45,884		113,442
1993	12,243	43,769		109,566
1994	24,566	43,514		111,208
1995	34,927	40,644		109,569
1996	43,915	40,570		109,866
1997	50,036	41,827		111,227
1998	54,011	41,223		113,809
1999	67,221	40,601		111,741
2000	77,443	38,052		114,926
2001	81,340	51,943		116,453
2002	81,934	44,248		123,994
2003	81,112	44,351		122,653
2004	74,822	41,016		126,894
2005	70,410	44,995		129,744
2006	60,778	49,204		129,240
2007	57,516	53,420		136,978
2008	56,096	48,670		130,766
2009	51,757	48,953		133,281
2010	47,762	43,967		131,841
2011	45,873	39,780		126,804
2012	44,984	42,922		137,416

Table 3. Total expenditures from all sources for work described in this report. The first row is taken directly from Table 1. The Segregated Fund receives money from the sale of a variety of fish and wildlife licenses and stamps. The second row shows expenditures from the Segregated Fund, excluding Salmon Stamp expenditures reported in Table 1. General Purpose Revenues are from income and other taxes. Great Lakes Surcharges are a portion of fines levied for certain violations related to Great Lakes fish.

	2008	2009	2010	2011	2012	2013
Salmon Stamp	3,643,780	1,452,393	1,640,615	1,759,085	1,719,930	1,845,136
Segregated Fund (not Salmon Stamp)	1,572,321	1,625,729	1,619,818	1,595,153	1,468,171	1,578,216
General Purpose Revenues	0	0	2,026	0	0	0
Great Lakes Surcharges	0	44,801	0	0	0	0
TOTAL	5,216,101	3,122,923	3,262,459	3,354,238	3,188,101	3,423,352

Lake Michigan Evaluation and Research Activities

Assessment of Seeforellen brown trout (FHCB)

Contact: Tammie Paoli, Fisheries Biologist, Peshtigo

This project has five components: 1) annual clipping of 31,000 Seeforellen yearling brown trout that will get stocked through the ice in Feb/March each year; 2) annual electroshocking surveys in the lower Menominee River to evaluate fall runs of salmonids; 3) collecting and analyzing biological data from the M&M Great Lakes Sportfishing Club's annual fishing derby, 4) assisting in salmonid stocking, such as recording water temperatures to better coordinate stocking location and timing, drilling holes in the ice to stock fish through, and assisting truck drivers onsite during stocking events, and 5) purchase of tanks and fuel required for the RV Coregonus to stock fish offshore.

Feral steelhead broodstock management (FHCC)

Contact: Nick Legler, Fisheries Biologist, Sturgeon Bay

The annual steelhead assessment project was initiated in 1992 at the Besadny Anadromous Fisheries Facility (BAFF) to (1) assess the return of the three steelhead strains to BAFF and (2) collect basic biological information on each strain. During fiscal years 2011-2013 the steelhead biologist and technician continued the ongoing steelhead project. All data are entered into the Lake Michigan database system and proofed.

Lake Michigan creel surveys - data collection (FHCR)

Contact: Brad Eggold, Fisheries Supervisor, Milwaukee

We conduct an annual contact creel survey to estimate the harvest of salmon and trout. Creel clerks visit fishing locations to count anglers and trailers, to interview anglers, and to measure and examine a sample of the catch from March through October. Each year the clerks visit over 150 ramp, pier, shore, or stream sites (not counting multiple locations on individual streams), conduct approximately 13,000 interviews, make approximately 10,000 angler or trailer counts, and measure and examine for clips approximately 3,000 salmon and trout. Clerks also count and collect registration numbers for all moored fishing boats on Lake Michigan and Green Bay and monitor fishing contests from Kenosha to Marinette, collecting biological information on harvested fish including coded-wire tags and vertebral samples for OTC-marked fish. The data are analyzed as part of a separately-funded project (see below).

Lake Michigan creel surveys – analysis (FHIC)

Contact: Brad Eggold, Fisheries Supervisor, Milwaukee

Data from a postal survey of moored boats, reports submitted by charter captains, and the Lake Michigan creel survey are analyzed to estimate fishing effort, catch rates, total harvest, and size of fish harvested. Data are also used to evaluate the effectiveness of stocking strategies and to guide the geographic distribution of stocking. The creel survey design is continuously evaluated so

maximum effort is directed at sites and times anglers are present. The work includes the following elements: 1) Continue to refine survey design of Lake Michigan Creel Survey, moored boat survey and charter boat survey. 2) Refine data analyses programs and create new programs to handle specific requests. 3) Supervise data collections, entry and editing of data to insure compliance with #1 above. 4) Surveillance of creel clerks to insure quality of data. 5) Analyze and summarize data collected during surveys. 6) Provide annual summaries and reports to Lake Michigan biologists for inclusion in assessment surveys. 7) Report on annual and long term trends in the Lake Michigan sport fishery. Creel survey reports are available at <http://dnr.wi.gov/topic/Fishing/lakemichigan/FishManagementReports.html>).

Oconto River habitat improvement (FHCD)

Contact: Tammie Paoli, Fisheries Biologist, Peshtigo

In partnership with local chapters of Trout Unlimited and other groups, DNR has enhanced habitat for trout and salmon by installing two artificial islands and placing hundreds of boulders in a 1000 foot section of the lower Oconto River. The purpose of this project was to evaluate the impact of the habitat improvements. This project was concluded in 2009.

Broodstock management & evaluation (FHHZ, FHSE, FHIZ)

Contact: Brad Eggold, Fisheries Supervisor, Milwaukee (regarding coho, chinook and steelhead management at the Root River Steelhead Facility)

Nick Legler, Fisheries Biologist, Sturgeon Bay (regarding coho, chinook, and steelhead management at the Besadny and Strawberry Creek Facilities)

Each year salmon and trout are stocked in many Lake Michigan locations (for detailed information about stocking numbers and locations see http://infotrek.er.usgs.gov/wdnr_public/ or <http://dnr.wi.gov/topic/fishing/lakemichigan/ManagementReports.html#stocking>). Those stocked in Strawberry Creek, the Kewaunee River, and the Root River sustain the salmon and trout program in Lake Michigan. When fish return to those rivers as adults to spawn, eggs are collected and fertilized for the hatcheries to raise. This project is an assessment of biological characteristics of the stocked fingerlings and yearlings, and of the mature adults. Annual data collected includes: length, weight, age, sex, and fin clip. Various lots of chinook, coho and steelhead are marked with fin clips or tags prior to stocking to evaluate the performance of different strains or to assess alternative rearing strategies and disease treatments. Long-term trends indicate whether the desired characteristics of size, health, time of spawning run and survival are achieved. Health assessments are performed on coho, chinook and steelhead brood fish to detect early signs of disease and to provide baseline data on fish health.

The Strawberry Creek Weir (SCW) is the primary site for the collection of mature chinook salmon. The C. D. "Buzz" Besadny Anadromous Fisheries Facility (BAFF), on the Kewaunee River, is used to assess the return of three steelhead strains, collect adult coho salmon, and serves as a backup facility for collection of chinook salmon. The Root River Steelhead Facility is used to collect spawning adult coho salmon and steelhead, and serves as a backup facility for capture of mature chinook salmon. At SCW and BAFF, surplus eggs and eggs unsuitable for hatchery production are sold under contract to a bait dealer with the proceeds returned to the Wisconsin general fund.

In 2011 a small project was initiated to assess natural reproduction by salmon or trout in Southeast Wisconsin streams. Using backpack or stream shocking based on wadable stream protocol, five

streams, including Willow, Sauk, Sucker and Pigeon Creeks, and the Pike River were sampled. Each location was sampled once per week for 4 weeks in July in 2011 and 2012. Thermistors were deployed to monitor yearly stream temperature. Fish collected were identified to species, measured, and a fin will be snipped to allow estimation of the population size. Fish not saved as voucher specimens were returned to the stream.

Annual reports are available on the DNR's Lake Michigan fishery web page at <http://dnr.wi.gov/topic/Fishing/lakemichigan/FishManagementReports.html>. They can also be obtained from Brad Eggold for all species returning to the Root River Steelhead Facility, from Nick Legler for all species returning to the Besadny and Strawberry Creek Facilities.

Finclip Rainbow Trout (FHKV)

Contact: Andrew Hron, Operations Supervisor, Kettle Moraine Springs State Fish Hatchery

This project supports the fin clipping of rainbow trout, both steelhead and non-migratory strains stocked to provide a nearshore fishery. The marks allow us to identify separate strains for propagation and to assess returns to the spawning weirs.

Nearshore stocking of rainbow trout (FHNL)

Contact: Nick Legler, Fisheries Biologist, Sturgeon Bay

There is a strong public demand for nearshore fishing opportunities on Lake Michigan. Nearshore fishing opportunities for Lake Michigan trout and salmon declined after the late 1980's because of changes in species or strains stocked, reduction in the Lake Michigan forage base, or perhaps from clearer water making trout and salmon more difficult to catch. To enhance nearshore fishing, the Department has supplemented steelhead stocking by stocking strains of rainbow trout believed to stay closer to shore. During 2008-2013 over 700,000 yearling Arlee and Erwin strain rainbow trout were stocked in this project.

Lake trout restoration & management (FHCA)

Contact: David Boyarski, Fisheries Supervisor, Sturgeon Bay

The lake trout restoration and management program has two main components: 1) Annual spring lake-wide assessment program (LWAP) done in conjunction with other state, federal, and tribal agencies; and 2) Fall spawning reef surveys. The Wisconsin portion of LWAP is conducted to assess trends in the abundance of lake trout at the mid-lake reef complex (MLRC), trends in the prevalence of sea lamprey wounds and scars, lake trout strain performance, and presence of naturally reproduced (unmarked) lake trout. Fall lake trout spawning reef surveys are conducted in the MLRC and nearshore near Milwaukee to assess abundance and age composition of mature spawning lake trout, determine trends in prevalence of sea lamprey wounds and scars, and to collect eggs to measure thiamine concentration. In addition, DNR personnel cooperate with early life history investigations within the MLRC being conducted with the UW-Milwaukee Great Lakes Water Institute and the University of Michigan.

In recent years some naturally reproduced lake trout have been detected in both fall and spring surveys. During 2012 fall surveys, we identified unmarked lake trout at a rate of 13.4% at the Northeast Reef (MLRC) and less than 5% at nearshore areas near Milwaukee. During spring 2013 LWAP surveys we identified unmarked lake trout at a rate of 8.2% at the Northeast Reef. Overall we have identified 16 sexually mature age groups of lake trout ranging from age 7 to age 22. The MLRC has the highest abundance of sexually mature lake trout in Lake Michigan. This level of abundance compares favorably with levels in other Great Lakes regions where natural reproduction has been documented. Sea lamprey data are provided to the Great Lakes Fishery Commission, which has responsibility for sea lamprey control in the Great Lakes.

Great Lakes Assessment Boat (FHNS)

Contact: Dave Boyarski, Fisheries Supervisor, Sturgeon Bay

In 2011 the Department retired the RV Barney Devine after more than 70 years of service on Lake Michigan, replacing it with the RV Coregonus at a cost of \$2,058,895. Most of that cost is being paid for from the Fish and Wildlife Account with license fee revenues, but \$500,000 is being provided from the Great Lakes Trout and Salmon Stamp account. Current salmon and trout projects using the Coregonus include lake trout restoration (FHCA) and stocking of brown trout (FHCB).

Permanent employee salaries - Lake Michigan

Permanent employee salaries are for Fisheries Technicians at the Great Lakes Research Facility. They work on lake trout assessments, manage operations at the Root River Steelhead Facility, conduct surveys and evaluations, collect data, and manage databases.

For more information on the Lake Michigan fishery visit:
<http://dnr.wi.gov/topic/Fishing/lakemichigan/FishManagementReports.html>

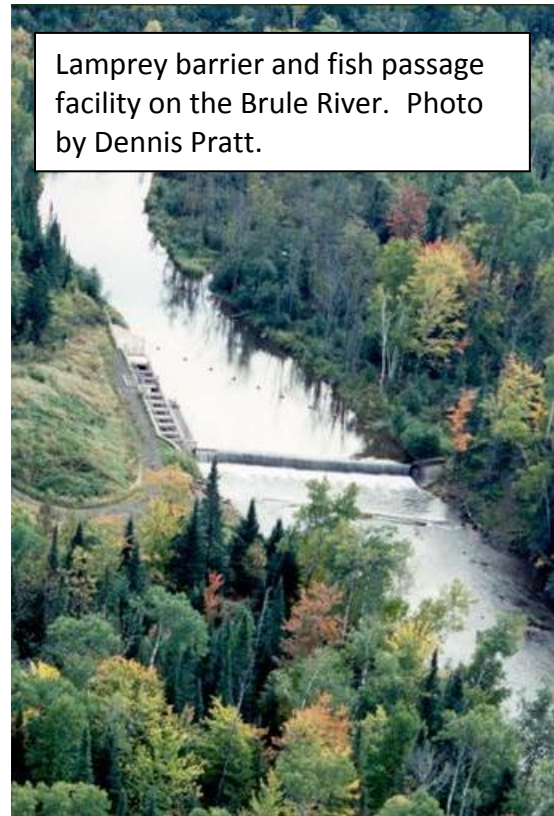
Lake Superior Evaluation and Research Activities

Brule River lamprey barrier operation (FHCI)

Contact: Paul Piszczek, Fisheries Biologist, Superior

The Great Lakes Fishery Commission has primary responsibility for the control of sea lamprey in the Great Lakes, but states take responsibility for maintenance of some barriers. Lamprey barriers, traps, and lampricide applications are the primary elements of the control program. The goal of this project is to efficiently operate and maintain Wisconsin's three lamprey barriers on the Middle, Bois Brule, and Iron Rivers. These barriers block the upstream spawning migration of sea lamprey limiting reproduction to the downstream portion of the stream. The Brule River barrier includes a fishway (step-pool ladder), which is outfitted with an observation window and time-lapse video monitoring equipment, to monitor lake-run salmon and trout. The window and video equipment are inspected and maintained regularly throughout the year. The fishway is equipped with a sea lamprey trap, which is inspected and maintained primarily by the U.S. Fish and Wildlife Service

Sea Lamprey Control Program. General maintenance was also performed on the access roads at the Brule and Iron River barriers. For additional information about the Brule barrier and fish passage go to <http://dnr.wi.gov/topic/fishing/lakesuperior> and look under “Fishing the Brule”.



Lamprey barrier and fish passage facility on the Brule River. Photo by Dennis Pratt.

Creel survey & index sampling (FHFE)

Contact: Jared Myers, Fisheries Biologist, Bayfield

Annual creel surveys are conducted at all major ports on Lake Superior to monitor sport harvest of salmon and trout. Creel clerks randomly check anglers at boat landings throughout the year. When combined with information about commercial and charter harvests, the creel data helps to estimate population size, evaluate and develop stocking strategies and decide how to best manage the Lake Superior fishery. Index sampling with graded mesh gill nets during the summer monitors long term trends in the fish community of Lake Superior.

These surveys also measure the success of other Lake Superior fishery management projects, including the Brule River sea lamprey barrier and the lake trout rehabilitation program. Interactions between anadromous species and other species are also monitored throughout Wisconsin waters of Lake Superior. Diet and age data collected from trout and salmon provide a look at long-term, lake-wide trends. For survey and sampling results, visit <http://dnr.wi.gov/topic/fishing/lakesuperior/>.

Brook trout management plan for Wisconsin’s Lake Superior basin (FHIB)

Contact: Paul Piszczek, Fisheries Biologist, Superior

Brook trout were the only known species originally inhabiting coldwater tributaries flowing into Wisconsin’s Lake Superior. Early visitors reported abundant stream populations and a unique group of brook trout they called rock trout (coaster), which were caught along the rocky shoreline of Lake Superior’s Bayfield Peninsula and seasonally in streams when they ascended to spawn. They were also commonly found utilizing the downstream portions of streams during the summer months as a refuge from warming lake temperatures. Many different factors led to brook trout decline, most notably stream habitat destruction resulting from early logging practices in the late 1800s and early 1900s. Today, brook trout populations are very small in comparison to the years prior to the late 1800s. This project has funded Wisconsin’s activities on the Brook Trout Subcommittee of the Great Lakes Fishery Commission leading to the development of a lake-wide rehabilitation plan to improve brook trout abundance.

Wisconsin’s “Lake Superior Basin Brook Trout Plan”, a joint effort by the Wisconsin Department of Natural Resources and the U.S. Fish and Wildlife Service was completed in 2005. This plan describes the life history, threats, and management of brook trout in Wisconsin’s portion of the Lake Superior basin and its tributaries and also outlines objectives and tactics necessary to

accomplish the goal of rehabilitation and protection of the depleted stock. Primary objectives include; improve sustaining brook trout populations and their habitat within the Basin and attempt to establish several populations that exhibit life history diversity (both stream resident and migratory ‘coaster’ life history). Three streams were selected to conduct particular strategies, the Bois Brule, Bark and Whittlesey Creek.

See <http://dnr.wi.gov/topic/fishing/lakesuperior/cbrktrout.html> for additional information about the brook trout management and restoration. The WDNR/USFWS joint brook trout plan can be found at <http://dnr.wi.gov/topic/fishing/documents/lakesuperior/LakeSupBrookTroutPlan2005.pdf>.

Lake Superior tributaries management plan (FHSC)

Contact: Paul Piszczek, Fisheries Biologist, Superior

This project supports management initiatives in the Lake Superior clay plain tributaries. Individual activities include support for

- fisheries management of the South Shore Fish and Wildlife Area (acquisition and riparian property mgt. project on five of the coldwater trout tributaries) and the Bois Brule river (angling regulation evaluation, and support of the Brule River Sport Club and Brule River Preservation habitat initiatives),
- beaver control on 117 miles of critical stream thread,
- the Non-point Source Pollution Abatement Strategies Technical Steering Group/ Lake Superior Basin Partnership Team (vision statement - to develop an understanding of the erosion processes that impact waterways and to identify management strategies that promote healthy watershed conditions in the Wisconsin Lake Superior Basin) and others (Sioux River Watershed Council, Bad River Watershed Council, Whittlesey Creek Wildlife Refuge, the Chequamegon National Forest, Bayfield County, Red Cliff and Bad River bands of the Lake Superior Ojibwa),
- individual landowners in land management strategies to protect and enhance coldwater tributary habitat and to continue wild-strain stocking evaluation of naturalized salmonids.

Lake Trout restoration & management (FHCA)

Contact: Jared Myers, Fisheries Biologist, Bayfield

Lake Superior lake trout restoration and management addresses two critical factors regulating lake trout populations: harvest levels and sea lamprey-related fish mortality. The controls on harvest include constraints on commercial and sport fishing. Wild lake trout abundance has increased steadily due to these regulations. In the Ashland-Bayfield area, approximately 34% of the lake trout harvested in 1985 were wild fish. By 2006, the percentage had risen to over 90%. Consequently stocking in the Apostle Islands area has been discontinued. Sea lamprey related fish mortality, however, still remains an obstacle to complete rehabilitation.

This project covers the cost associated with the spring and fall lake trout assessments and evaluates the long-term trends in the lake trout population including distribution, abundance, growth, and mortality rates. Data collected from these assessments and commercial and sport harvest are incorporated into computer models that help determine safe harvest levels for lake trout.

Permanent employee salaries - Lake Superior

Permanent employee salaries are for a Fisheries Biologist and a Fisheries Technician on Lake Superior. The Fisheries Biologist conducts evaluations and research to support the fish stocking program for the Lake Superior watershed. The primary responsibilities of the Fisheries Technician are to conduct creel surveys and to monitor the harvest of lake trout by commercial fishers.

For more information on the Lake Superior fishery visit:

<http://dnr.wi.gov/topic/fishing/lakesuperior>

Propagation Activities

Basic hatchery services (FHBS)

Contact: Darren Miller, Fisheries Team Supervisor, Les Voigt State Fish Hatchery.
Andrew Hron, Operations Supervisor, Kettle Moraine Springs State Fish Hatchery
Steve Fajfer, Operations Supervisor, Wild Rose State Fish Hatchery

Funds expended in this project area cover basic operating services not directly associated with fish rearing at Les Voigt, Kettle Moraine Springs, Thunder River, and Lake Mills State Fish Hatcheries. Expenses include facilities and grounds maintenance; operational expenses such as telephone, electricity and heat; staff travel costs; supplies; computer equipment and costs associated with conducting public educational events and tours.

General maintenance and safety upgrades were performed at all of the hatcheries. Grounds were landscaped including removal of trees for safety and aesthetic reasons.

Coldwater production (FHBW)

Contact: Alfred Kaas, Statewide Fish Propagation Coordinator, Madison

This project covers production costs associated with fish rearing at hatcheries and rearing stations and is separate from basic hatchery services. Typical costs include fish food, electricity, pond and raceway maintenance and aerators to provide increased oxygen levels and reduce the ice cover. In 2007 the Department provided \$20,000 of Salmon Stamp revenues to the Michigan DNR on a one time basis to enhance their production of yearling cohos for stocking in 2008. This was matched by \$48,000 raised by fishing clubs. Table 4 summarizes all Great Lakes salmon and trout production during 2008-2013.

Coldwater distribution (FHBZ)

Contact: Alfred Kaas, Statewide Fish Propagation Coordinator, Madison.

Salmon Stamp funds are used to inventory, load, and deliver fish for to designated sites. Costs include equipment disinfection and maintenance.

Operate anadromous fisheries facilities (FHCX)

The Besadny Anadromous Fisheries Facility, the Root River Steelhead Facility, and the Strawberry Creek Weir are key to Wisconsin's salmon and trout stocking programs. Salmon Stamp funds are used to collect broodstock and eggs for fertilization, as well as maintain/operate the facilities. Public education and tours are also supported by Salmon Stamp funds.

Besadny Anadromous Fisheries Facility

Contact: John Komassa, Southeast Hatchery Group Leader, Fitchburg

Each year eggs are collected for propagation from adult anadromous trout and salmon. Steelhead are trapped in late spring and summer and chinook and coho salmon are trapped in the fall. The Besadny Facility allows the general public to safely observe at a very close distance the harvesting of eggs and other related spawning activities. There are guided as well as self-guided tours available year round.

Root River Steelhead Facility

Contact: John Komassa, Southeast Hatchery Group Leader, Fitchburg

Funding from the Salmon Stamp is used to maintain and operate the Root River Steelhead Facility in Racine from mid February to early May and mid July to mid November. The Root River facility traps adult trout and salmon for propagation. More than two dozen educational/informational tours are conducted each year. DNR personnel also assisted the fish health program with spawning chinook salmon as part of a long-term study of bacterial kidney disease.

Strawberry Creek Weir

Contact: John Komassa, Southeast Hatchery Group Leader, Fitchburg

This facility in Door County is the primary chinook salmon spawning facility in Wisconsin. In recent years, low natural flow rates at the facility have required the installation of a pump and pipeline to supply water from the Sturgeon Bay ship canal to the facility. Salmon Stamp funds have supported the installation and maintenance of this pumping system.



Chinook salmon in the Strawberry Creek facility, fall 2013. Photo by Kevin Naze.

Hatchery renovation and maintenance (FHLJ, HDYH, HDYR)

Contact: John Komassa, Southeast Hatchery Group Leader, Fitchburg, and Gary Lindenburger, Northwest Hatchery Group Leader, Spooner

Funding covers general maintenance and upkeep of hatchery facilities. In addition to covering numerous smaller maintenance and upkeep projects, funds have been used for completing more significant projects. At the Les Voigt Hatchery projects have included repair and or maintenance of a walk-in freezer (2008), a roof (2008), production wells (2010, 2012), process pumps (2012, 2013), and a generator (2009). Relatively major electrical upgrades were completed at both the

Les Voigt Hatchery and the Brule River Rearing Station in 2013. At Lake Mills State Fish Hatchery funds have been used to erect an improved predator barrier around the raceway and pond rearing area and to purchase a pond harvest seine and chemicals to control aquatic vegetation in the over wintering coho salmon pond. In fiscal year 2011 roof repair work was completed at Kettle Moraine State Fish Hatchery and in 2013 materials were purchased to reinforce a retaining wall on a rearing pond at the Thunder River Rearing Station.

Off-station coho and steelhead propagation activities (FHJG)

Contact: Andrew Hron, Operations Supervisor, Kettle Moraine Springs State Fish Hatchery

This project covers special activities related to the propagation of coho salmon and rainbow trout (including steelhead strains). It includes funding for collection at the spawning weirs of coho salmon and steelhead eggs, the collection of adult Skamania broodstock, and other off-station activities.

Operate annex facility at Kettle Moraine Springs State Fish Hatchery (FHME)

Contact: Andrew Hron, Operations Supervisor, Kettle Moraine Springs State Fish Hatchery

Chinook salmon and steelhead are spawned, hatched, and reared at the annex facility of the Kettle Moraine Springs State Fish Hatchery. These fish are transferred to other hatchery facilities for final rearing and stocking.

Wild Rose SFH development

Contact: Alfred Kaas, Statewide Fish Propagation Coordinator, Madison.

Salmon stamp funds were allocated in 2005 and 2008 for renovation of the Wild Rose State Fish Hatchery. In 2010 those funds were refunded to the Department by the Department of Administration, so they will remain available for hatchery renovations elsewhere in the state.

Permanent employee salaries in the propagation system

Permanent employee salaries are for one Fisheries Technician at the Kettle Moraine Springs Hatchery whose primary duties are incubating coho eggs and propagating and rearing steelhead.

Program Administration

Print stamps and prepare expenditure reports

Contact: Bill Horns, Great Lakes Fisheries Specialist, Madison

This project covers costs associated with the judging and printing of the Great Lakes Trout and Salmon Stamp and preparing the Great Lakes Trout and Salmon Stamp expenditure report.

Table 4. Production summary. Lake trout stocked by the USFWS in Lake Michigan are not included. For all species except chinook salmon, fingerlings are stocked in the fall after one year of hatchery rearing and yearlings are stocked the following spring after 18 months of hatchery rearing. Chinooks are stocked as spring fingerlings after only one winter of hatchery rearing. Rainbow trout include both steelhead and non-migratory strains.

	<u>Lake Michigan</u>			<u>Lake Superior</u>		
	fingerling	yearling	LM total	fingerling	yearling	LS total
2008						
	brown trout	345,195	619,642	964,837		
	chinook salmon	725,572		725,572		
	coho salmon	129,416	153,494	282,910		
	rainbow trout	143,230	399,413	542,643		
	splake				138,750	138,750
2009						
	lake trout				103,871	103,871
	brown trout	405,986	528,434	934,420	37,419	83,945
	chinook salmon	952,804		952,804		
	coho salmon		344,471	344,471		
	rainbow trout	231,561	425,828	657,389		
	splake				90,665	90,665
2010						
	brook trout		40,546	40,546		
	lake trout				93,613	93,613
	brown trout	177,068	558,298	735,366	94,367	94,367
	chinook salmon	1,233,922		1,233,922		
	coho salmon	11,665	333,770	345,435		
	rainbow trout		445,135	445,135		
2011						
	lake trout				145,675	145,675
	brown trout	127,598	577,006	596,104	42,302	42,302
	chinook salmon	1,127,444		1,127,444		
	coho salmon		433,196	433,196		
	rainbow trout		427,693	427,693		
	splake				95,693	95,693
2012						
	lake trout				82,601	82,601
	brown trout	103,962	569,890	668,270	114,487	114,487
	chinook salmon	1,175,213		1,175,213		
	coho salmon		542,192	542,192		
	rainbow trout		398,520	398,520		
	splake				83,662	83,662
2013						
	lake trout				110,172	110,172
	brown trout	103,837	609,351	723,871	242,197	242,197
	chinook salmon	802,061		802,061		
	coho salmon		383,339	383,339		
	rainbow trout		410,919	410,919		

Contact List

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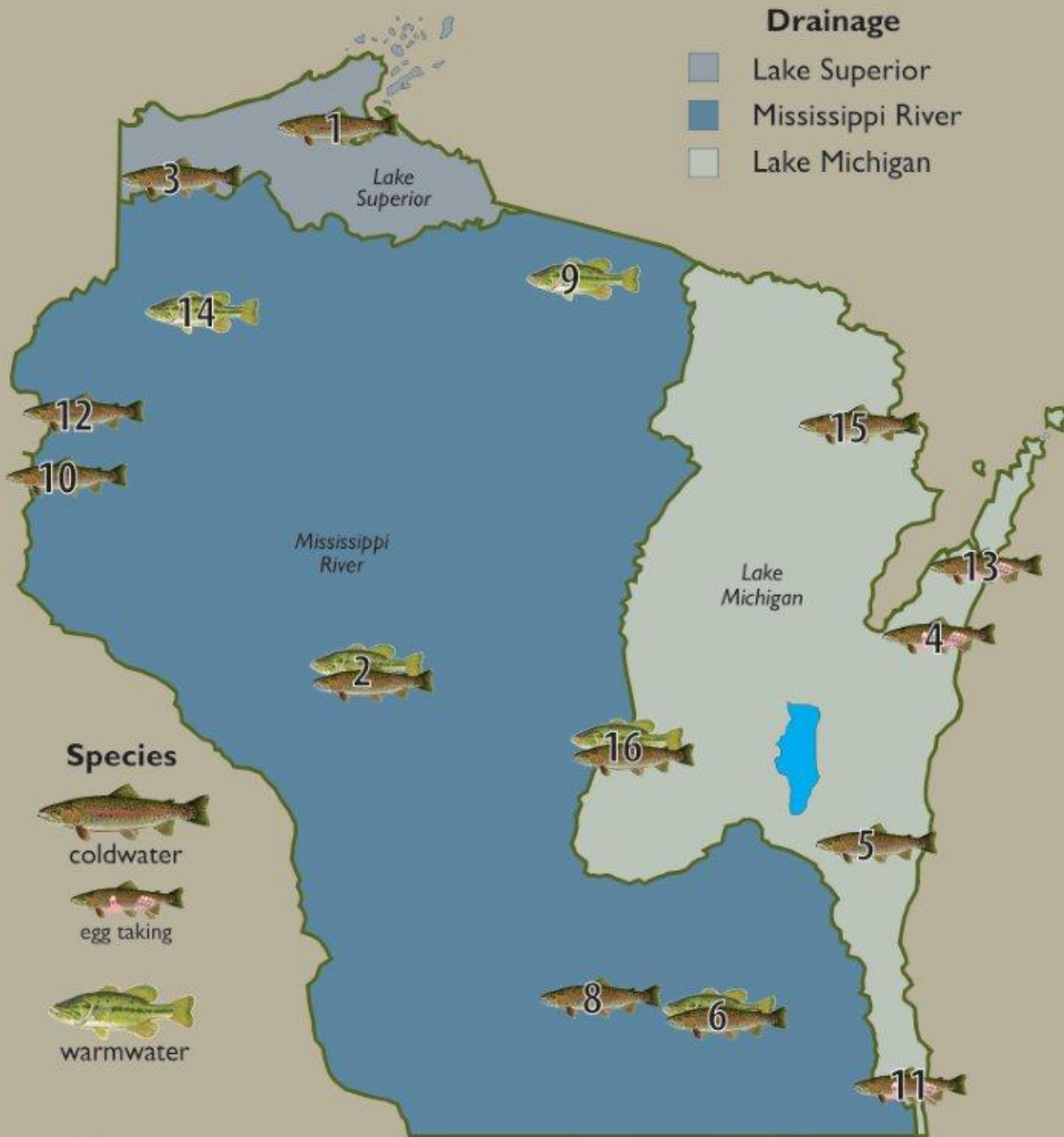
Bill Horns; WDNR; 101 S. Webster St., Madison; (608) 266-8782; William.Horns@wisconsin.gov

For more information on Great Lakes fishing and many other subjects, visit the DNR Web site.

<http://www.dnr.wi.gov>

Wisconsin's Fish Propagation Facilities

by major drainage



- 1 Les Voigt (Bayfield); 2 Black River Falls (WCR Operations); 3 Brule; 4 Besadny Spawning Facility; 5 Kettle Moraine Springs; 6 Lake Mills; 8 Nevin (Madison); 9 Oehmcke (Woodruff); 10 Osceola; 11 Root River Steelhead Facility; 12 St. Croix Falls; 13 Strawberry Crk Spawning Site; 14 Thompson (Spooner); 15 Thunder River; 16 Wild Rose



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