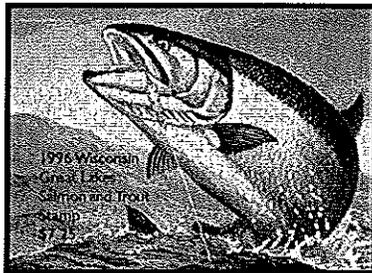
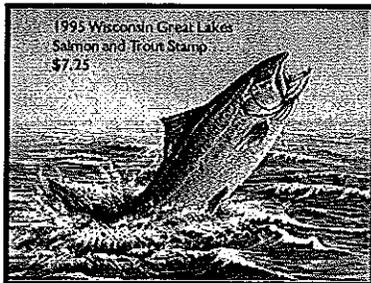


Expenditures of Great Lakes Salmon & Trout Stamp Revenues



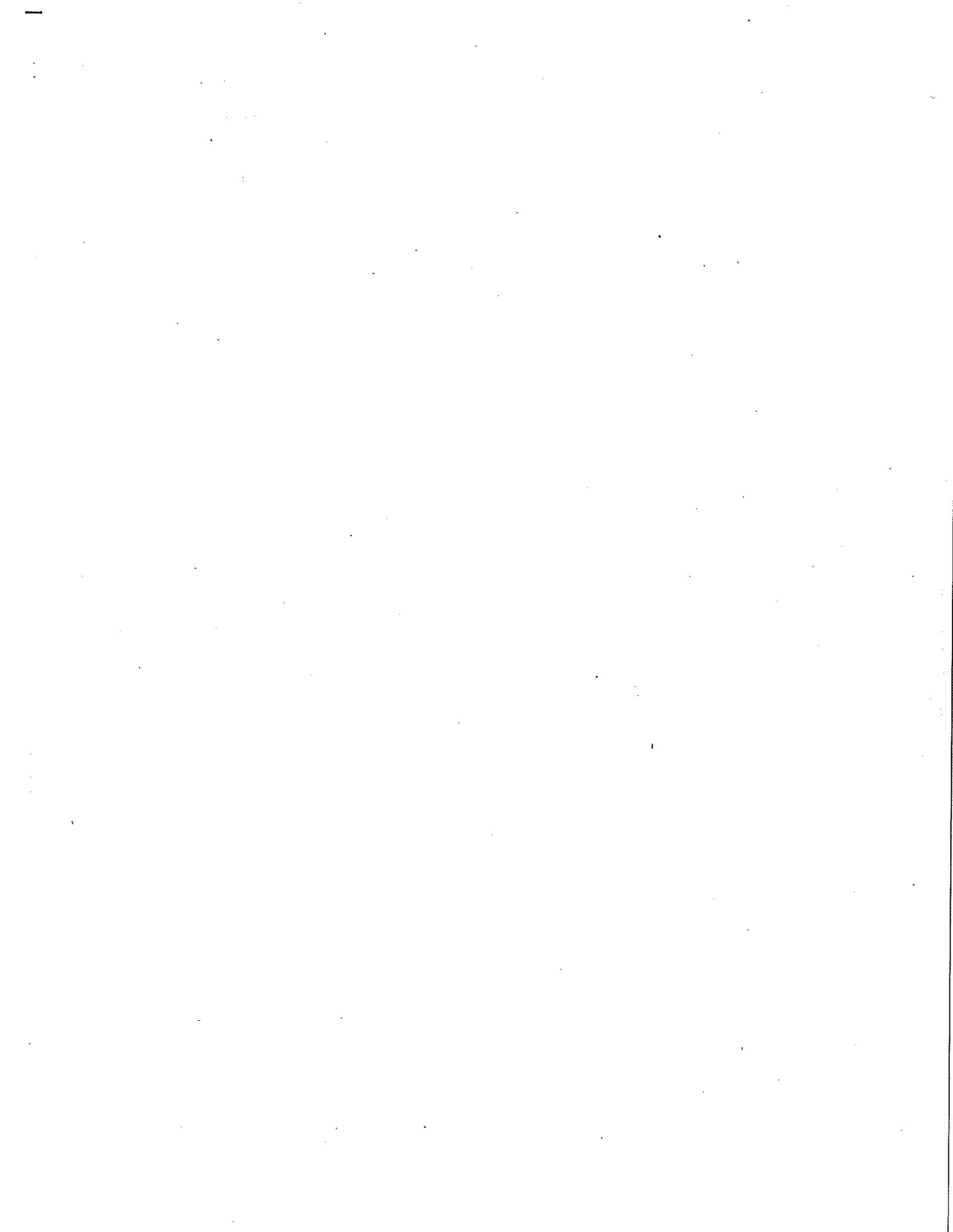
Fiscal Years 1995-1997

Administrative Report # 40

By Patrick S. Oldenburg
Design by Kim Giese



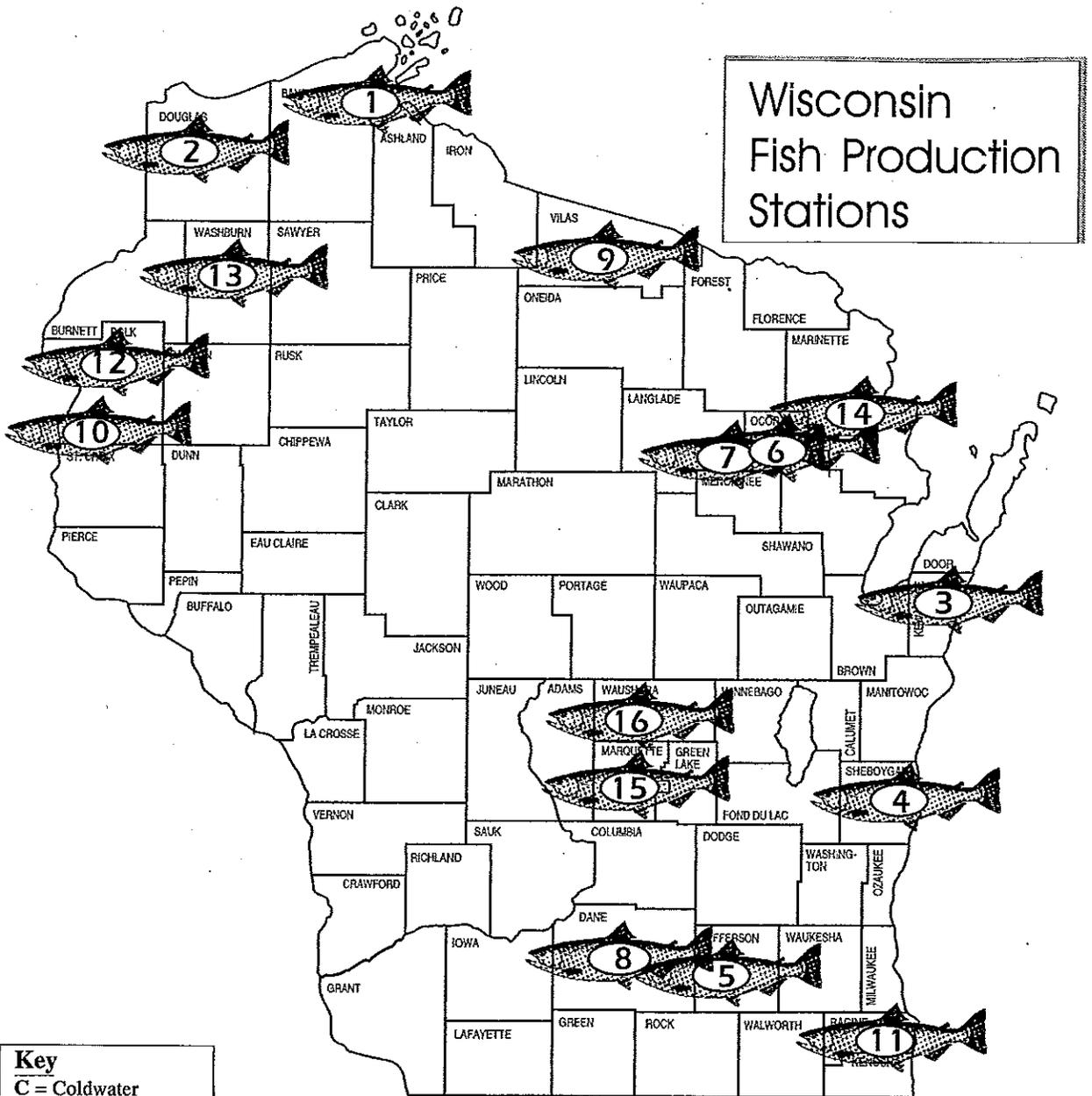
Wisconsin Department of Natural Resources
Bureau of Fisheries Management and
Habitat Protection
Madison, Wisconsin
April 1996



Expenditures of
Great Lakes
Salmon & Trout
Stamp Revenues
Fiscal Years 1995 - 1997

Administrative Report #40

Wisconsin Fish Production Stations



Facilities	Phone	Type of Fish	Hatches Eggs	Live Fish Display	Restrooms	Address
1 Bayfield	(715) 779-5430	C	●	●	●	141 S. Third Street, Bayfield, WI 54814
2 Brule	(715) 372-4820	C	●	●	●	13847 E. Hatchery Road, Brule, WI 54820
3 Besadny Spawning Facility	(414) 388-2105	C	●	●	●	N. 3884 Ransom Moore Lane, Kewaunee, WI 54216
4 Kettle Moraine Springs	(414) 528-8825	C	●	●	●	N1929 Trout Spring Road, Adell, WI 53001
5 Lake Mills	(414) 648-8012	C/W	●	●	●	302 S. Main Street, Lake Mills, WI 53551
6 Lakewood	(715) 276-6066	C	●	●	●	14865 Hatchery Lane, Lakewood, WI 54138
7 Langlade	(715) 882-8757	C	●	●	●	W1269 Fish Hatchery Road, White Lake, WI 54491
8 Nevin	(608) 275-3246	C	●	●	●	3911 Fish Hatchery Road, Fitchburg, WI 53711
9 Oehmcke	(715) 356-5211	C/W	●	●	●	8770 Hwy. J, Woodruff, WI 54568
10 Osceola	(715) 294-2525	C	●	●	●	2517 90th Avenue, Osceola, WI 54020
11 Root River Spawning Facility	(414) 638-0134	C	●	●	●	2300 Dominick Drive, Racine, WI
12 St. Croix Falls	(715) 483-3535	C	●	●	●	230 River Street, St. Croix Falls, WI 54024
13 Thompson	(715) 635-4147	W	●	●	●	951 W. Maple Street, Spooner, WI 54801
14 Thunder River	(715) 757-3541	C	●	●	●	W13562 Hatchery Road, Crivitz, WI 54114
15 Westfield	(608) 296-2343	C	●	●	●	220 W. Pioneer Park Road, Westfield, WI 53964
16 Wild Rose	(414) 622-3527	C/W	●	●	●	Hwy. 22N. Wild Rose, WI 54984

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Contact List

If you have any questions concerning this report, please contact the personnel listed with the specific project of interest.

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Belonger, Brian, Marinette; (715) 732-5512.

Boronow, George, Green Bay; (414) 448-5126.

Eggold, Brad, Plymouth; (414) 892-8756.

Fajfer, Steve, Wild Rose Hatchery, Wild Rose; (414) 622-3527.

Hogler, Steve, Manitowoc; (414) 683-4923.

Holzbauer, Gary, Thunder River Rearing Station, Crivitz; (715) 757-3541.

Horns, Bill, Madison; (608) 266-8782.

Kaas, Al, Lake Mills Hatchery, Lake Mills; (414) 648-8012.

Keniry, Mike, Great Lakes Research Facility, Milwaukee; (414) 382-7921.

Link, Randy, Kettle Moraine Springs Hatchery, Adell; (414) 528-8825.

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Martin, Jim, Westfield Hatchery, Westfield; (608) 296-2343.

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Opgenorth, Mark, Lake Michigan District, Green Bay; (414) 492-5833.

Peeters, Paul, Sturgeon Bay; (414) 746-2865.

Schrage, Mike, Winnebago; (414) 424-1263.

Schram, Stephan, Bayfield; (715) 779-4030.

Schottky, Raoul, Lakewood Rearing Station, Lakewood; (715) 276-6066.

Toneys, Mike, Sturgeon Bay; (414) 746-2864.

Background

Creation of the Salmon and Trout Stamp

Since 1982 every angler wishing to fish for salmon or trout in the Wisconsin waters of the Great Lakes has been required to purchase a Great Lakes Salmon and Trout Stamp (Salmon Stamp). In the early 1980's, the loss of federal funding for non-native trout and salmon stocking and evaluations prompted the creation of the Great Lakes Salmon and Trout Stamp. The Department of Natural Resources (DNR) faced the prospect of large scale reductions in the Great Lakes stocking program, including the possible elimination of coho salmon stocking. Concerned with this threat to their sport, Great Lakes anglers initiated and promoted the legislation that created the Great Lakes Salmon and Trout Stamp.

Wisconsin Statute 29.15(5) directs the DNR to "expend the receipts from the sale of Great Lakes Salmon and Trout Stamps to supplement and enhance the existing trout and salmon rearing and stocking program for outlying waters and to administer this section."

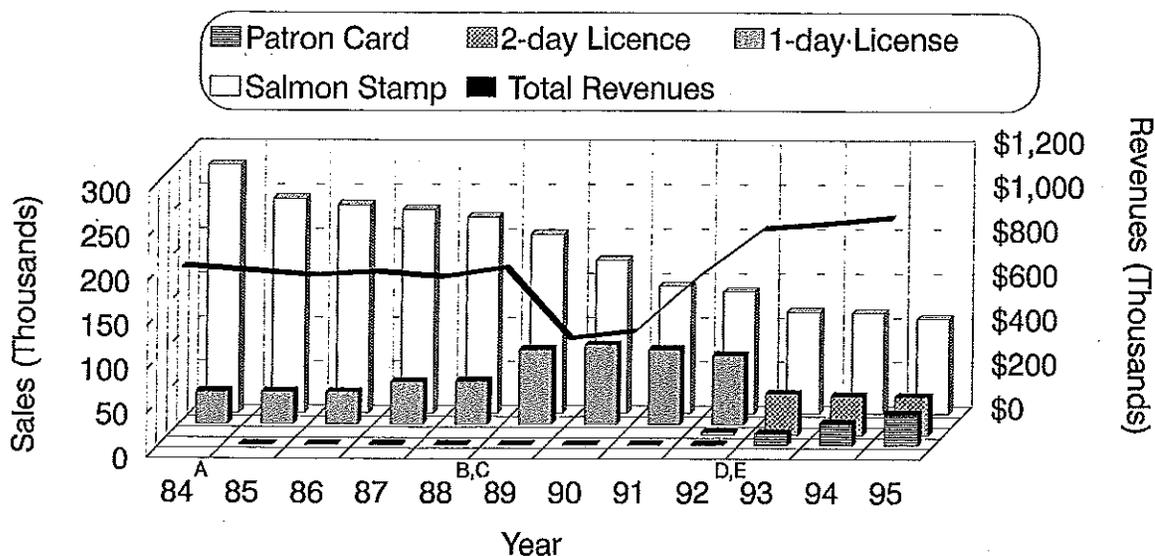
In 1982 the DNR developed more specific guidelines. Expenditures of Salmon Stamp revenue must be "(1) species limited to salmon and trout only, (2) geographically limited to the Wisconsin waters of Lakes Michigan and Superior and their tributaries, and (3) program limited to the rearing and stocking program."¹ The stocking program includes a variety of activities and physical facilities that require equipment, services, and labor. Activities within the stocking program are classified as propagation, evaluation, or experimental. The physical facilities of the stocking program are the equipment, buildings, and land required to support the stocking program activities (See Appendix 1).

Other License Sales Contributing to the Salmon Stamp Account

Receipts from the sale of Great Lakes Salmon and Trout Stamps are placed in a Salmon Stamp account. In 1984, the Legislature approved a one-day fishing license for the Great Lakes (Fee - \$6.00). The intent was to provide an inexpensive license that would allow people to spend one day fishing for trout and salmon on the Great Lakes without having to buy an annual Great Lakes Salmon and Trout Stamp. Since this might mean a reduction in the amount of money available to fund the salmon and trout program, the law directed that half the revenues from the license would be used for salmon and trout projects on the Great Lakes.

¹Hansen, M.J. 1984. Expenditures of Great Lakes Salmon and Trout Stamp Revenues, 1983-1984. Administrative Report No. 22. Bureau of Fisheries Management, Department of Natural Resources, Madison, Wisconsin.

License Sales Contributing to The Great Lakes Salmon and Trout Stamp Account Fiscal Years 1984 - 1995



- A,B 1-day License fee increases in FY84 and FY88 (from \$3.50 to \$6.00 in FY84 and to \$6.10 in FY88).
- 1-day License valid for both inland and Great Lakes fishing beginning in FY88.
- D 2-day License (valid for Great Lakes only) replaces 1-day license in FY92.
- Salmon Stamp fee increase in FY92 (from \$3.25 to \$7.25).

In 1988, the Legislature changed the daily license to allow people to fish inland or on the Great Lakes (Fee - \$6.10). The law required that the revenue be split among Great Lakes salmon projects, inland trout habitat projects, and general fisheries work.

In 1992, the Legislature replaced the daily license with a two-day fishing license valid only for the Great Lakes (Fee - \$8.00). By law, half the revenue must be placed in the Salmon Stamp account along with the revenue from stamp sales. Also in 1992 the Salmon Stamp fee was increased from \$3.25 to \$7.25.

The Salmon Stamp account also receives funds from Patron License sales. Patron License receipts are distributed to the different stamp and license accounts on a *pro rata* basis. This means that for every Patron License sold, the Salmon Stamp account gets a share of the receipts (currently \$3.74 per Patron License).

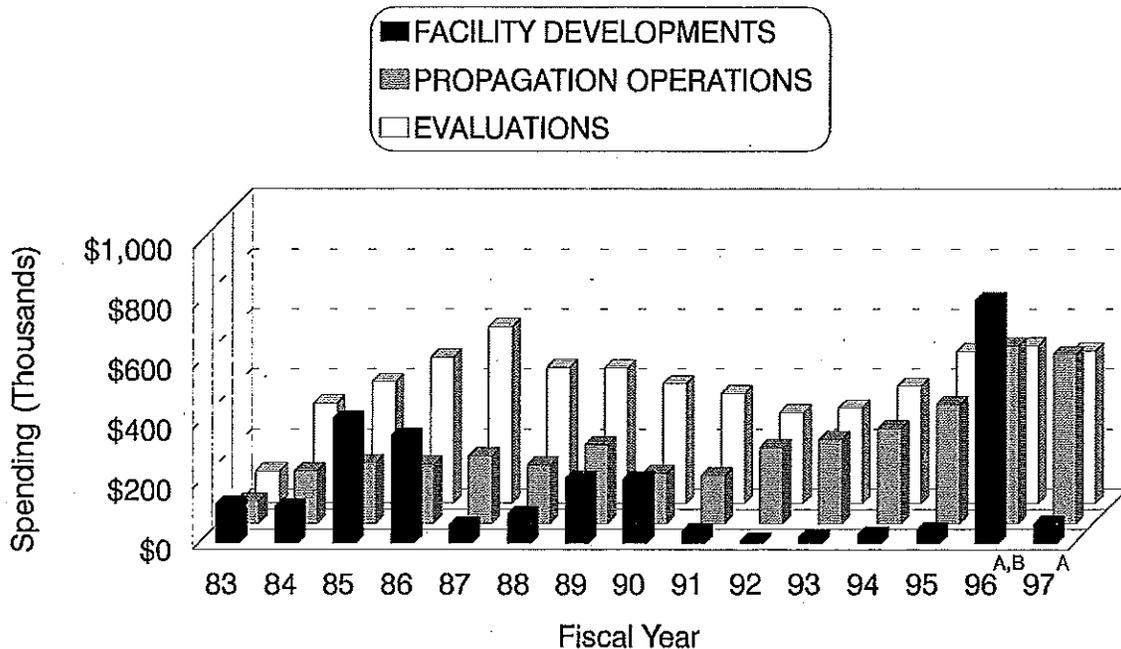
Use of Salmon Stamp Revenues

Since its inception the Great Lakes Salmon and Trout Stamp has enabled the DNR to maintain and further develop the salmon and trout fisheries in Lakes Michigan and Superior and their tributaries.

Since 1983 Salmon Stamp funds have:

- ⇒ Provided over a million dollars for physical plant improvements at state hatcheries producing salmon and trout for the Great Lakes, including over \$400,000 of improvements at Kettle Moraine Springs Hatchery which produces approximately 600,000 steelhead annually.
- ⇒ Helped make possible the production and stocking of nearly 70 million brook and brown trout, splake, steelhead, and coho and chinook salmon since 1982.
- ⇒ Allowed us to work with other states to develop a thiamine (vitamin B₁) treatment as a simple and effective means of controlling Early Mortality Syndrome (a condition resulting in massive losses of fry shortly after hatching).

Salmon Stamp Expenditures Fiscal Years 1983 - 1997



^A Projected sending shown for FY 1996 & FY 1997.

^B Spending for FY 1996 assumes expenditure of previous development commitments.

- ⇒ Paid for annual creel surveys that have given Wisconsin the best data on salmon and trout harvest and catch rates in the entire Great Lakes.

- ⇒ Assisted in the development and operation of the Root River Steelhead Facility, the C.D "Buzz" Besadny Anadromous Fisheries Facility, the Strawberry Creek Weir, and the Bois Brule River Lamprey Barrier. The Bois Brule River Lamprey Barrier provides an effective method of non-chemical sea lamprey control. The other facilities enhance our stocking effort in the Great Lakes by assuring the collection of high quality eggs from feral salmon and trout. All these facilities furnish excellent data on fish returns, as all salmon and trout passing through the facilities can be counted.

Creel surveys, fish return counts at weirs, and other techniques provide the data needed to tailor the stocking program to improve fishing opportunities for Great Lakes salmon and trout anglers. A prime example of how Salmon Stamp funded evaluations provide feedback to the stocking program is the development and implementation of the Lake Michigan Steelhead Fishery Management Plan.²

In the mid-1980's, creel census results indicated declining return rates associated with the use of the Mount Shasta strain steelhead. This spurred an attempt to find better performing strains of steelhead. The results of this search, and subsequent evaluations, led to the current stocking program utilizing three different steelhead strains (Skamania, Chambers Creek, and Ganaraska). Not only do the three strains furnish an excellent lake fishery, the staggered timing of their spawning runs provide opportunities for stream anglers nine months of the year.

² Wisconsin Department of Natural Resources. 1988. Lake Michigan Steelhead Fishery Management Plan. Administrative Report No. 29. Bureau of Fisheries Management, Department of Natural Resources, Madison, Wisconsin.

Introduction

This report summarizes the expenditures of the Salmon Stamp account for fiscal year 1995 (actual), and for fiscal years 1996 and 1997 (planned). Fiscal years run from July 1 of one year through June 30 of the next. (For example, FY96 is the period from July 1, 1995 through June 30, 1996) Actual and planned expenditures are presented by projects that are categorized as either program operations (activities) or developments (physical facilities). For purposes of this report, operations are divided into 3 classifications: a) evaluations (Lake Superior and Lake Michigan), b) propagation, and c) administration. Each classification is further divided into three categories: (a) activities ending in fiscal 1995, (b) activities continuing from fiscal 1995 through 1997, and (c) new activities starting in fiscal 1996. All costs associated with travel, special services, supplies, permanent property, and limited term employee salaries are included. Permanent employee salaries and fringe benefits are charged against separate allocations within each district as employees engage in approved projects. While permanent employee salaries are included in this report for each classification, fringe benefits are summarized only in Table 1 on page 9.

Because of limited knowledge of future program needs, all projects are scheduled for tentative funding. Planned projects listed may not be funded at the levels shown if higher priority or urgent program needs become apparent at a later date.

The closing cash balance at the end of fiscal 1995 (FY95) was \$1,011,780.* This includes encumbrances. Encumbrances are committed expenses planned for a given fiscal year that didn't occur during the fiscal year, but will be expended in the future. The uncommitted cash balance at the end of FY95 is \$815,468. The predicted uncommitted cash balance at the end of FY96 is \$155,499 and \$89,060 will remain at the end of FY97.

A six-year plan encompassing planned expenditures for use of stamp sale revenues in the years 1983-1988 was published in 1983³. Several summaries of actual expenditures of Salmon Stamp sale revenues have been published previously. These expenditure reports summarize the fiscal years 1983-1984⁴, 1985-1986⁵, 1987-1992⁶, and 1993-1994⁷.

*All expenditure information presented in this report reflect accurate but unaudited data.

³ Krueger, C.C. 1983. Expenditure Plan for Great Lakes Salmon and Trout Stamp Revenues, 1983-1988. Administrative Report No. 18.

⁴ Hansen, M.J. 1984. Expenditures of Great Lakes Salmon and Trout Stamp Revenues, 1983-1984. Administrative Report No. 22.

⁵ Welch, D. 1987. Expenditures of Great Lakes Salmon and Trout Stamp Revenues, 1985-1986. Administrative Report No. 26.

⁶ Horns, W.H., Zilker D.A., and Perkins, L. November 1993. Expenditures of Great Lakes Trout and Salmon Revenues 1987-1992. Administrative Report No. 36.

⁷ Lentz, D.R. 1994. Expenditures of Great Lakes Trout and Salmon Stamp Revenues 1993-1994. Administrative Report No. 37.

All footnoted Administrative Reports listed above are produced by The Bureau of Fisheries Management, Wisconsin Department of Natural Resources, Madison, Wisconsin.

Although Wisconsin's superb Great Lakes trout and salmon fishery relies heavily on the contribution of the Salmon Stamp, it is hardly its sole source of support. Much of the support for the Great Lakes trout and salmon program comes from sources not detailed in this report. For example, in fiscal 1995 over \$1,200,000 for propagation operations and developments came from non-Salmon Stamp sources. Most of this support came from fishing license fees. General tax revenue, federal funding and donations also played important roles.

For specific information on Great Lakes stocking numbers, two cumulative reports, updated annually, are available: *Wisconsin's Lake Michigan Salmonid Stocking Program* and *Wisconsin's Lake Superior Salmonid Stocking Summary*.

It is important to us at the Department that you find this information useful. To help us better meet this goal we ask that you let us know how we can improve this report. Please direct your suggestions to:

Attn.: Bill Horns, Great Lakes Specialist

Wisconsin Department of Natural Resources
Bureau of Fisheries Management and Habitat Protection
P.O. Box 7921
101 S. Webster St.
Madison, WI 53703
Phone: (608) 266-8782 or
(608) 266-1877
Internet: horns@dnr.state.wi.us

Thank you for your interest.

Table 1. Expenditures of Great Lakes Salmon and Trout Stamp revenues for program operations and facility developments in Wisconsin fiscal years 1995-1997.

	FY 95 Actual Expenditures	FY 96 Planned* Expenditures	FY 97 Planned* Expenditures
Operations			
Lake Superior			
Evaluations	101,928	95,010	93,410
Permanent Salary	38,702	39,100	39,100
	140,630	134,110	132,510
Lake Michigan			
Evaluations	254,336	270,076	267,471
Permanent Salary	36,243	51,200	51,200
	290,579	321,276	318,671
Propagation			
Operations	346,371	538,548	511,560
Permanent Salary	33,205	33,200	33,200
	379,576	571,748	544,760
Administration	13,524	18,420	6,500
Developments	43,529	808,719	65,000
Fringe Benefits	74,095	70,069	67,059
Miscellaneous	4,114	0	0
	946,047	1,924,342	1,134,500

* Amounts shown for fiscal 1996 and 1997 include encumbrances from fiscal 1995, new allotments and previously committed development funds.

Table 2. Annual Great Lakes Salmon and Trout Stamp account balances fiscal years 1995-1997.

	FY95	FY96	FY97
Beginning Cash Balance	889,766	1,011,780	155,499*
+ Revenues	1,068,061	1,068,061*	1,068,061*
= Total Available Funds	1,957,827	2,079,841*	1,223,560*
- Total Expenditures	(946,047)	(1,924,342)*	(1,134,500)*
= Cash Balance	1,011,780	155,499*	89,060*

* Estimated figures.

OPERATIONS

Lake Superior Evaluations

Activities Ending in FY95

None.

Activities Continuing from FY95 through FY97

Creel Survey and Index Sampling

(Expenditure: \$39,252 in FY95)

(Planned Expenditures: \$37,660 in FY96 and \$37,660 in FY97)

Contact: Stephen Schram, Fisheries Supervisor, Bayfield.

Annual creel surveys are conducted to monitor the catch of salmonids. Results provide information on the success of stocking programs and the status of self-sustaining species. Index stations in Lake Superior and tributary streams are monitored to assess the health of salmonid populations. Information collected from creel surveys and index sampling has resulted in new regulations designed to better manage salmonid populations in Lake Superior. A recent example is the steelhead size limit in Lake Superior and its tributaries – a conservative regulation that will allow the fish to make a comeback on their own.

Increasing salmon and trout fishing opportunities relies on several surveys and assessments that provide insights into managing for healthy fish populations and improved fishing.

Rehabilitate Lake Trout Population in Lake Superior

(Expenditure: \$32,816 in FY95)

(Planned Expenditures: \$34,640 in FY96 and \$34,640 in FY97)

Contact: Stephen Schram, Fisheries Supervisor, Bayfield.

Lake trout rehabilitation consists of controlling harvest and sea lamprey mortality, as well as stocking historical spawning reefs. The controls on harvest have been to put restraints on commercial and sport fishing – and lake trout have responded favorably. Sea lamprey mortality continues to loom as a major obstacle to rehabilitation. Continued efforts to control this parasite will be necessary.



Fisheries personnel aboard the DNR research vessel Hack Noyes, removing lake trout from gill nets during fall spawner assessments.

Expenses under this project cover costs associated with the spring and fall lake trout assessments. This project evaluates the long term trends in the lake trout population including distribution, abundance, growth and mortality rates. Also, in an effort to improve natural reproduction, almost 16 million lake trout eggs have been placed in "astro-turf bundles" on Devils Island Shoal as an alternate stocking strategy. Preliminary results of this strategy look promising.

Develop a Management Plan for Lake Superior Trout Tributaries

(Expenditure: \$17,247 in FY95)

(Planned Expenditures: \$8,830 in FY96 and \$8,830 in FY97)

Contact: Stephen Schram, Fisheries Supervisor, Bayfield.

The coldwater tributaries flowing into Lake Superior are unique trout resources in Wisconsin. They are the spawning and nursery areas for the lake-run rainbow and brown trout, and coho and chinook salmon. The majority are self-sustaining, and if managed properly will likely provide anglers with stable lake and stream fisheries without expensive stocking. Baseline tributary inventories have been completed, and most of the tributaries have watershed acquisition programs (South Shore Streams and Brule River State Forest). Life history information has been gathered in several individual studies and species status is monitored at electrofishing index stations on most tributaries.

Operate Brule River Lamprey Barrier

(Expenditure: \$12,613 in FY95)

(Planned Expenditures: \$12,280 in FY96 and \$12,280 in FY97)

Contact: Stephen Schram, Fisheries Supervisor, Bayfield.

The Bois Brule River sea lamprey barrier has played a vital role in the sea lamprey control program. Almost 20,000 lampreys have been trapped since operations began in 1986. All salmon and trout migrating upstream past the barrier are counted, allowing accurate assessment of spawning runs. The fisheries management information gained helps improve stocking strategies and ultimately fishing opportunities.

..... Activities Beginning in FY96

None.

Permanent Employee Salaries

(Expenditure: \$38,702 in FY95)

(Planned Expenditures: \$39,100 in FY96 and \$39,100 in FY97)

Permanent employee salaries are for Fishery Technicians in the Lake Superior Work Unit whose primary responsibilities are creel surveys, lake trout assessments, and other evaluations.

Lake Michigan Evaluations

..... Activities Ending in FY95

Food Habits of Salmonids

(Expenditure: \$16,962 in FY95)

Contacts: Paul Peeters, Fisheries Biologist, Sturgeon Bay, and Brad Eggold, Fisheries Biologist, Plymouth.

The identification of trout and salmon food habits is important to our understanding of Lake Michigan fish populations. This study utilized stomach samples collected from fish caught by sport anglers, incidentally in commercial nets, and during various DNR surveys to describe the diet of the major salmonids. Data were collected and analyzed by both

LMD and SED staff. The food habits for each of the different salmonid species were analyzed by size of the predator, season of capture, and area of Lake Michigan. The project began in 1990 examining the diet of chinook salmon and expanded in 1991 to include coho salmon, steelhead, lake trout, and brown trout. Field work and lab analysis for this project were completed in fiscal 1995. Data analysis and a final report are in progress.

This project has contributed to the lakewide understanding of the balance between prey fish populations and the level of predator (trout and salmon) stocking required to support a healthy fishery.

Assess Chinook Population in Lake Michigan

(Expenditure: \$1,751 in FY95)

Contacts: Paul Peeters, Fisheries Biologist, Sturgeon Bay, and Mike Toney, Fisheries Supervisor, Sturgeon Bay.

This project was discontinued in FY95. After several attempts to fish 30' floating graded-mesh gill nets from the DNR research vessel Barney Devine, we decided that we could not efficiently capture chinook salmon in the open waters of Lake Michigan with the gear and equipment we had available. It was not feasible to retrofit the Barney Devine with the equipment necessary to safely and efficiently fish 30' floating gill nets.

Activities Continuing from FY95 through FY97

Conduct Lake Michigan Creel Survey

(Expenditure: \$104,191 in FY95)

(Planned Expenditures: \$113,550 in FY96 and \$113,550 in FY97)

Contacts: Brad Eggold, Fisheries Biologist, Plymouth, and Paul Peeters, Fisheries Biologist, Sturgeon Bay.

From March through October, annual creel surveys for trout and salmon are conducted from Door through Kenosha counties and in Marinette county. Creel clerks, following a stratified randomized schedule, count anglers and vehicles to estimate fishing activity, and interview anglers to estimate harvest. Creel clerks collect over 13,000 interviews each year. In addition to counting, weighing and measuring fish in possession of anglers, clerks may examine the fish for fin clips, recover coded-wire or floy tags, take scale samples, or collect stomach samples.

The data collected from this survey allow us to estimate the numbers of salmon and trout harvested, to monitor trends in size of fish caught, to evaluate strains, to assess regional differences in fishing, to assess diets, study movements of stocked fish, and to make other assessments needed for successful management of salmon and trout in the Great Lakes. This creel survey is the best method to determine the success of the trout and salmon stocking program.

Analyze Lake Michigan Sport Fishery Survey

(Expenditure: \$12,534 in FY95)

(Planned Expenditures: \$19,280 in FY96 and \$19,280 in FY97)

Contact: Brad Eggold, Fisheries Biologist, Plymouth.

All survey data from moored boats, charterboats and creel surveys are entered into computer data bases. The data are checked for errors and loaded onto a mainframe computer at the central DNR office in Madison. There, statistical programs generate the angling effort and harvest estimates by species location, angler type, and time of year.

In past years, the data have also been used to: 1) evaluate different coho harvest level strategies; 2) evaluate the effectiveness of stocking accelerated growth coho salmon; 3) assess the effectiveness of lunger structures in Oak Creek; 4) streamline the creel survey so creel clerk effort is directed at sites and times anglers are present; 5) provide individuals and organizations with data not normally generated by existing programs; and 6) guide the geographic distribution of stocking.

Evaluate Lake Trout Stocking

(Expenditure: \$25,907 in FY95)

(Planned Expenditures: \$30,200 in FY96 and \$30,200 in FY97)

Contacts: Mike Toney, Fisheries Supervisor, Sturgeon Bay, and Mike Keniry, Fisheries Supervisor, Great Lakes Research Facility, Milwaukee.

This project contributes to the lakewide evaluation of lake trout stocked by the U.S. Fish and Wildlife Service. Netting surveys are conducted from Door County to Milwaukee using the DNR research vessel Barney Devine and contracted commercial boats to determine if long-term stocking of lake trout has resulted in detectable natural reproduction. The surveys provide information on abundance of adult and juvenile fish, relative survival of different strains, movement of tagged fish, diet, contaminants, health, and lamprey wounding. Samples of fish are provided to researchers nationwide for special studies. Assistance is also provided for the U.S. Fish and Wildlife Service experiment to incubate

lake trout eggs in astro-turf bundles on a potential spawning reef east of Door County. Data collected under this project were used in the decision to extend the sport fishing season for lake trout in the spring and fall beginning in 1995.

Evaluate Salmonid Stocking

(Expenditure: \$15,953 in FY95)

(Planned Expenditures: \$23,000 in FY96 and \$23,000 in FY97)

Contact: Bill Horns, Great Lakes Specialist, Madison.

This project covers the costs associated with marking over 300,000 coho salmon yearly, using fin clips and coded wire tags, for three different evaluations.

One study will compare coho stocked as fall fingerlings versus coho stocked in spring as yearlings. Fingerlings and yearlings will be compared with respect to contribution to the sport fishery and returns to spawning weirs. The study is targeted at the Kewaunee River and Root River for three years. The expenses in FY95 were for fin clipping the first stage of coho released in this study.

Two other studies are designed to compare the return success ratios of coho given different rearing conditions. One study will assess the long term effects of feeding medicated feed to control bacterial kidney disease before stocking. The other will assess the long term effects of holding eggs in a thiamine bath during water hardening. Both studies will consist of releasing marked treated and untreated fish at the Kewaunee River and then comparing the adult return rates at the Besadny Facility.

Evaluate Thiamine Treatments of Lake Michigan Salmonid Progeny

(Expenditure: \$5,946 in FY95)

(Planned Expenditures: \$12,005 in FY96 and \$10,000 in FY97)

Contact: Sue Marcquenski, Fish Health Specialist, Madison.

Recent evidence suggests that the progeny of Lake Michigan coho and chinook salmon, steelhead, and brown trout treated as eggs and fry with a thiamine solution have lower mortality rates due to Early Mortality Syndrome than untreated fish. This project evaluates the long term benefits of the thiamine treatments by measuring the return rates of treated and untreated fish.

These expenditures are for treating the eggs and fry from Lake Michigan broodstocks

(coho and chinook salmon, steelhead, and Seeforellen brown trout) for all three years, and for marking a group of untreated chinook salmon with coded wire tags in fiscal 1996. The costs of marking groups of treated and untreated coho salmon and treated chinook salmon are covered by other projects.

The coho will be planted at the Besadny Facility in spring 1997 and the chinook at Strawberry Creek in spring 1996. Long term benefits will be assessed by comparing the adult return rates at the egg collection facilities (through fall 1998 for coho salmon and fall 1999 for chinook salmon).

Assess Salmon at Release and Harvest Facilities

(Expenditure: \$13,182 in FY95)

(Planned Expenditures: \$9,515 in FY96 and \$9,515 in FY97)

Contact: Paul Peeters, Fisheries Biologist, Sturgeon Bay.

Each year, chinook and coho salmon are stocked at the C.D. "Buzz" Besadny Anadromous Fisheries Facility, and chinook salmon are stocked at the Strawberry Creek weir. When they return as adults attempting to spawn, fertilized eggs are collected for the hatcheries to raise for stocking in Lake Michigan. This project is an assessment of biological characteristics of the stocked fingerlings and yearlings, and of the mature returning adults. Annual data collected includes length, weight, age, sex, fin clip, and percent which survive to adults. Various lots of chinook and coho are marked with fin clips or coded wire tags to evaluate the performance of different strains and the presence of disease. Long term trends indicate whether the desired characteristics of size, health, time of spawning run, or percent survival are achieved to maintain stable fishing.

Evaluate Lake Michigan Steelhead, Chinook, and Coho Salmon Populations at the Root River Steelhead Facility

(Expenditure: \$28,631 in FY95)

(Planned Expenditures: \$25,525 in FY96 and \$25,525 in FY97)

Contact: Mike Keniry, Fisheries Supervisor, Great Lakes Research Facility, Milwaukee.

This project is designed to take advantage of the Root River Steelhead Facility as a management tool to evaluate the rates of return, harvest and growth of coho and chinook salmon and three strains of steelhead (Skamania, Ganaraska and Chambers Creek) to the Root River. It is also designed to use the Root River Steelhead Facility as an index station at which to evaluate long term changes in abundance, exploitation rates and return rates for these fish.

Expenses incurred under this project are for fin clipping fish before stocking in the Root River and capturing and marking adult coho, chinook and steelhead returning to the river. Beginning in the fall of 1994 the Root River Steelhead Facility has been used as the primary tool to collect data from these species returning to the river. The first year of facility operation was recently completed and a report is available.

Brown Trout Strain Evaluation

(Expenditure: \$4,887 in FY95)

(Planned Expenditures: \$4,800 in FY96 and \$4,800 in FY97)

Contact: Brian Belonger, Fisheries Biologist, Marinette.

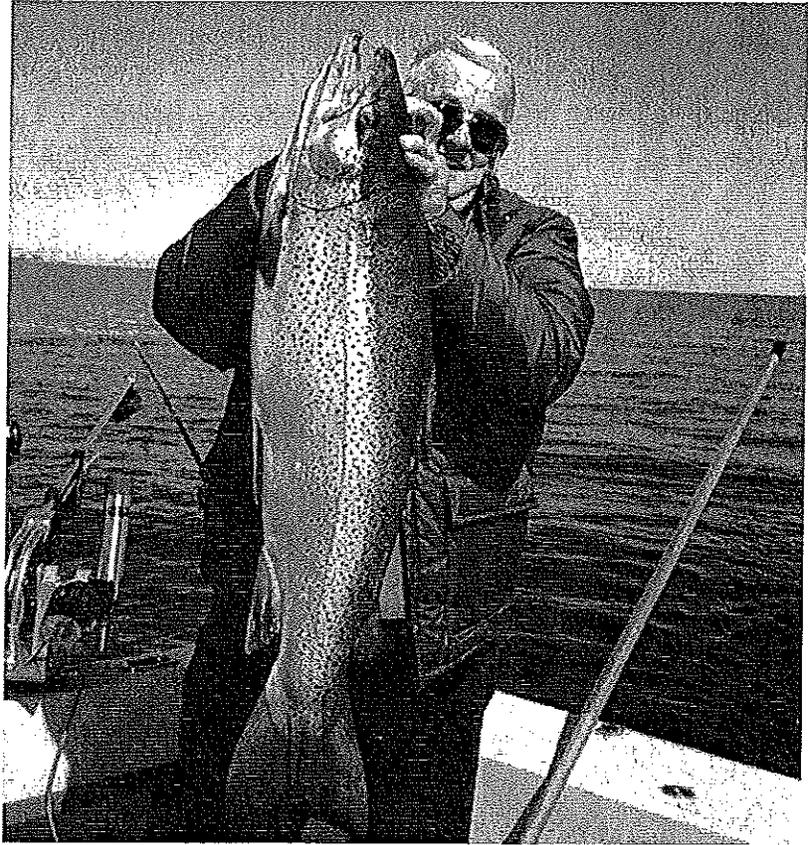
Three groups of brown trout were experimentally stocked to improve the number of brown trout caught by anglers and to test a new strain for producing trophy size fish.

- 1) Domestic Wild Rose - Adults of the Wild Rose strain are held in Wisconsin hatcheries and used to produce yearlings for regular stocking in Lake Michigan.
- 2) Feral Wild Rose - Wild Rose strain brown trout that have lived in Lake Michigan and returned to tributary streams to spawn are also used to produce yearlings for stocking.
- 3) Seeforellen - Adults of the Seeforellen strain were obtained from New York DNR and used to produce yearlings. This strain matures a year or two later than the Wild Rose strain and, therefore, has the potential to grow larger.

Yearling brown trout (approximately 578,000) from these strains were marked with fin clips and released in two areas of Green Bay and three areas of Lake Michigan from 1991 through 1993. The release locations in Green Bay were the Menominee River and various bay shore locations along Door County. In Lake Michigan, yearlings were released in the Kewaunee River, the Root River, and various lake shore locations along Door County.

Early results indicate that any of the strains can provide good fishing as two year olds. Annual survival of specific strains has varied. The trophy potential of Seeforellen looks very promising. They live longer and most three and four year olds caught by anglers are of this strain. Also, at these older ages they are larger than the other strains. The average weight of age 4+ brown trout in the Marinette/Menominee Brown Trout Derby in 1994 was 16.6 pounds for Seeforellen, 13.5 pounds for feral Wild Rose, and 13.2 pounds for domestic Wild Rose. The largest verified Seeforellen to date was a 24.7 pound, 36 inch caught off Marinette in the spring of 1995. This fish was four years old. While Seeforellen strain grow faster and survive better to age 4+, low numbers seen at age 5+, and thus

Angler Arne Paavola with his 26-inch, 27.4 pound brown trout, the largest verified Wisconsin Seeforellen brown, caught off Marinette in April 1995.



far, appear to indicate they will not have the predicted longevity to age 10. It also appears the fastest growing fish that are reaching as much as 23 pounds by age 3+ are not surviving as long as the slower growing individuals.

This project will be completed when brown trout from the 1991 through 1993 stockings are no longer found in creel surveys, fishing tournaments or weir collections.

Assess PCB Assimilation in Sheboygan River Steelhead and Coho

(Expenditure: \$17,218 in FY95)

(Planned Expenditures: \$6,351 in FY96 and \$6,351 in FY97)

Contact: Mike Keniry, Fisheries Supervisor, Great Lakes Research Facility, Milwaukee.

This project evaluates the effect of PCBs in the Sheboygan River system on PCB levels in steelhead and coho salmon which were stocked there. This is being done by comparing concentrations of PCBs in returning adult fish that had been stocked in the Sheboygan with those in fish that had been stocked in the Root and Pigeon Rivers. Beginning in 1994 chinook salmon were stocked in the Sheboygan River under this project.

These expenditures are for marking the fish that were stocked in the Sheboygan and

Pigeon Rivers in 1994 and 1995, and for collecting smolts, adults and sub-adult steelhead and coho for contaminant analysis. No more smolts will be marked before stocking as part of this project. The reduced planned expenditures for FY96 and FY97 will be used for collection of returning marked adults.

Beginning in 1987, routine stocking of salmonids had been prohibited in the Sheboygan River due to PCB contamination. Data collected during this study show that there is no significant difference in PCB concentrations in adult coho salmon and steelhead returning to the Sheboygan, Pigeon, and Root Rivers. These data were used as the basis for the decision to discontinue the stocking prohibition for coho, steelhead and chinooks. Coho and steelhead will be stocked as yearlings because of a rapid uptake of PCBs by fall stocked fingerlings over-wintering in the river.

Basic Program Services - Lake Michigan Work Unit

(Expenditure: \$7,174 in FY95)

(Planned Expenditures: \$4,100 in FY96 and \$4,100 in FY97)

Contact: Mike Keniry, Fisheries Supervisor, Great Lakes Research Facility, Milwaukee.

Expenses under this project cover general administrative, travel, staff training costs, as well as some equipment purchases for trout and salmon work that cannot be attributed to a single project. One example of work completed under this project is the compilation and printing of the annual Lake Michigan salmonid stocking summary.

..... Activities Beginning in FY95-96

Assess Steelhead Fishery

(Planned Expenditures: \$11,150 in FY96 and \$11,150 in FY97)

Contact: Steve Hogler, Fisheries Biologist, Manitowoc.

This project is designed to assess the return, harvest, and growth rates of the three strains of steelhead (Chambers Creek, Ganaraska and Skamania) which are currently stocked in Wisconsin's Lake Michigan tributaries. Each individual strain must be monitored yearly to ensure the continuation of an excellent fishery for both lake and stream anglers.

In spring, as Chambers Creek and Ganaraska strain eggs are harvested at the C.D. "Buzz" Besadny Anadromous Fisheries Facility for propagation, basic biological information, including date of return, length, weight, fin clip, sex and maturity is collected from all returning fish. These data can be compared to data collected in previous years to deter-

mine if desired traits, including size, return rate and date of return are being maintained. Additionally, adults are marked with uniquely numbered tags to collect information on growth, movement, and angler catch rates to further improve management of the species.

Adult Skamania steelhead are collected each fall at the weir and sent to Kettle Moraine Springs Fish Hatchery to be held until they are ready to be spawned. Warm water conditions, causing stress to the fish, allow for only minimal data, including sex and fin clip, to be collected.

Steelhead are carefully handled and allowed to recover before being returned to the river. Returned fish provide fishing opportunities for stream anglers above the weir, and for lake anglers after the fish have returned downstream to the lake.

Sauk Creek Habitat Improvement Project

(Planned Expenditures: \$10,000 in FY96 and \$10,000 in FY97)

Contact: Brad Eggold, Fisheries Biologist, Plymouth.

Sauk Creek in Port Washington has been physically degraded over the last 10 years with many sections being very wide and shallow. During periods of low water many of these sections are difficult for trout and salmon to swim through. This project will deepen and narrow these sections, and along with lunker structures provide better habitat for trout and salmon. Additionally, many stream bank sections are highly erodible releasing soil into the stream. Efforts will be made to stop this erosion through appropriate erosion control methods.

Permanent Employee Salaries

(Expenditure: \$36,242 in FY95)

(Planned Expenditures: \$51,200 in FY96 and \$51,200 in FY97)

Permanent employee salaries are for Fishery Technicians in both the North and South Lake Michigan Work Units to work on lake trout assessments, plant eggs in astro-turf bundles on potential spawning grounds, manage operations at the Root River Steelhead Facility, conduct habitat work in Sauk Creek, conduct other surveys and evaluations, and analyze and report results.

Propagation

Activities Ending in FY95

Coldwater Production - Nevin Hatchery

(Expenditure: \$27,864 in FY95)

Contact: Al Kaas, Hatchery Superintendent, Lake Mills Hatchery, Lake Mills.

Annually the Nevin Hatchery produces approximately 615,000 trout for stocking in both inland waters and in Lake Michigan. In FY95, 84,350 brown trout fingerlings, 35,700 brook trout fingerlings and 50,400 brook trout yearlings were produced for Lake Michigan.

This funding covered hatchery operation expenses that were directly related to Lake Michigan fish propagation and stocking, such as: electricity costs, fish food, transporting fish to stocking sites, equipment purchase and maintenance, and various other supplies.

Activities Continuing from FY95 through FY97

Acquire and Rear Eggs from Naturally Spawning Salmon and Trout

(Expenditure: \$58,087 in FY95)

(Planned Expenditures: \$68,500 in FY96 and \$68,500 in FY97)

Contact: Mark Opgenorth, Operations Coordinator, Lake Michigan District, Green Bay.

This project assures the collection of adequate numbers of quality eggs from naturally spawning trout and salmon for Wisconsin hatcheries to rear and stock back into Lake Michigan. Project funding maintains the operation of the C.D. "Buzz" Besadny Anadromous Fisheries Facility, the Strawberry Creek weir and rearing ponds in Kewaunee and Manitowoc. The weir facilities trap adult trout and salmon for collection and fertilization of eggs. The Besadny facility operates in spring and late summer for steelhead and throughout the fall for other trout and salmon. The Strawberry Creek weir operates in fall

for chinook salmon collection. Strawberry Creek and the Kewaunee and Manitowoc ponds also rear fingerling and yearlings to imprint them to the tributary streams before stocking. This project provides the vital links between maintaining wild broodstock in Lake Michigan and collecting enough fertilized eggs to hatch and rear for restocking Lake Michigan.

Offstation Rearing and Broodstock Collection

(Expenditure: \$7,609 in FY95)

(Planned Expenditures: \$6,500 in FY96 and \$6,500 in FY97)

Contact: Randy Link, Hatchery Superintendent, Kettle Moraine Springs Hatchery, Adell.

This project covers expenditures for spawning, broodstock capture, and rearing of salmonids at areas away from the hatchery. Typically this project covers expenses incurred by hatchery staff during capture and spawning of broodstock at the Besadny Facility in Kewaunee and at the Root River Steelhead Facility, and in rearing and imprinting of fish at the Kenosha Cooperative Rearing Pond.



By inspecting the internal organs of all spawned salmon for clinical signs of disease, hatchery personnel help insure that high quality eggs are used for propagation.

Coldwater Production - Kettle Moraine Springs Hatchery

(Expenditure: \$154,061 in FY95)

(Planned Expenditures: \$150,680 in FY96 and \$138,780 in FY97)

Contact: Randy Link, Hatchery Superintendent, Kettle Moraine Springs Hatchery, Adell.

Kettle Moraine Springs Hatchery is Wisconsin's primary steelhead production facility. The hatchery produces Chambers Creek, Ganaraska and Skamania strain steelhead, all from wild Lake Michigan broodstock captured at either the Besadny Facility in Kewaunee or at the Root River Steelhead Facility. Annually, approximately 600,000 steelhead are produced for stocking in Lake Michigan. The hatchery also incubates and hatches coho salmon eggs to be reared at other state hatcheries. The majority of this funding covers all hatchery operation expenses that are directly related to fish propagation and stocking, such as: electricity costs, fish food, vehicle operation and maintenance, building operation and maintenance, supplies and equipment.

Some of these moneys also help support other administrative and facility maintenance expenses at the hatchery not directly related to fish propagation, for example: staff training, office supplies and expenses, and facility and grounds maintenance.

Coldwater Production - Lake Mills Hatchery

(Expenditure: \$49,289 in FY95)

(Planned Expenditures: \$46,838 in FY96 and \$46,400 in FY97)

Contact: Al Kaas, Hatchery Superintendent, Lake Mills Hatchery, Lake Mills.

These expenses support our cold water rearing budget for rearing coho salmon. Expenditures include such things as: feed, electrical overhead (well pumping, freezer operation, facility electrical needs), and facility and equipment maintenance relating to salmon production.

We are responsible for hatching and early rearing for most of the coho salmon produced in Wisconsin. To control smolt size at stocking, we have been experimenting with reduced incubation and rearing temperatures to try to more closely duplicate conditions that exist in nature. With cooler temperatures slowing growth rates, a nearly full ration can be fed. These coho seem healthier than those raised with a warmer constant-temperature water supply and restricted feed rates. Use of cooler lake water has reduced our reliance on pumped well water during the winter months, and gives us an opportunity to perform annual maintenance on the wells to control iron bacteria.

Coldwater Production - Westfield Hatchery

(Expenditure: \$6,788 in FY95)

(Planned Expenditures: \$37,130 in FY96 and \$37,130 in FY97)

Contact: Jim Martin, Hatchery Superintendent, Westfield Hatchery, Westfield.

This project provides funds for the hatching and rearing of 600,000 chinook fingerlings and the rearing of 80,000 coho yearlings at the Westfield Hatchery, and for transporting fish from the hatchery to Lake Michigan. The majority of these expenses are directly related to fish propagation and stocking, such as electricity costs, fish food, facility operation and maintenance, supplies and equipment. A small portion of the expenses are for administrative activities not directly related to propagation, such as conducting educational tours of the hatchery and staff training.

The pronounced increase in planned expenditures for FY96 and FY97 over FY95 expenditures is because in previous years most operational funding for Westfield came from fishing license fees, with Salmon Stamp funds supporting only coho rearing. Beginning in FY96 Salmon Stamp funds will pay for a larger share of expenditures incurred in the production of chinook salmon.

Coldwater Production - Wild Rose Hatchery

(Expenditure: \$37,480 in FY95)

(Planned Expenditure: \$15,600 in FY96)

Contacts: Steve Fajfer, Hatchery Superintendent, Wild Rose Hatchery, Wild Rose, and Mike Schrage, Fisheries Supervisor, Winnebago.

This project provides funds for hatching and rearing of trout and salmon at the Wild Rose Hatchery and for transport of fish from the hatcheries to stock in Lake Michigan. This project also funds the collection of fertilized eggs from wild Seeforellen brown trout captured in the Menominee River. In addition to routine hatchery operations, an oxygen injection system was used at critical times to reduce nitrogen gas saturation and prevent mortality problems. Also, chinook salmon were administered medicated feed prior to stocking to improve their health and control bacterial kidney disease. The project assures adequate numbers of trout and salmon for stocking Lake Michigan.

Coldwater Production - Thunder River Rearing Station

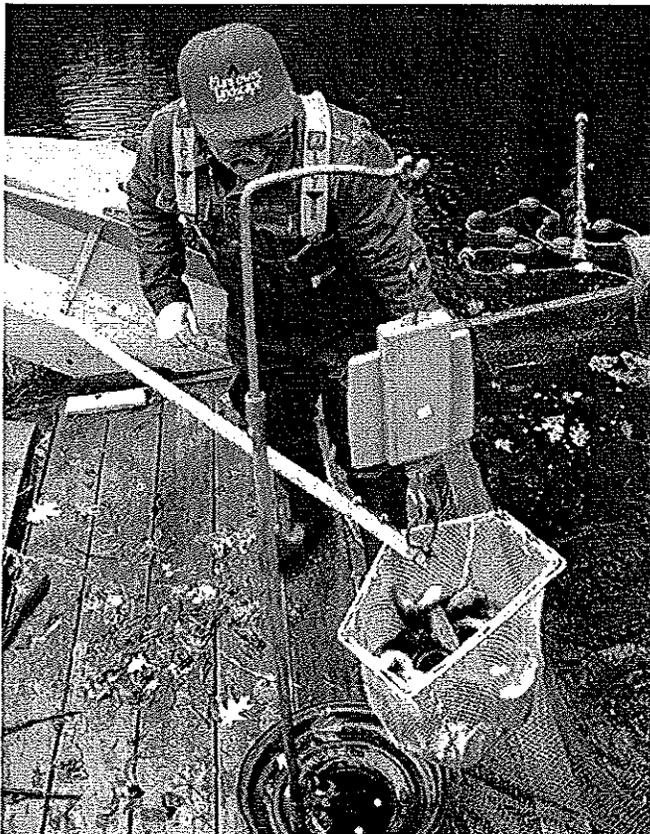
(Expenditure: \$3,007 in FY95)

(Planned Expenditures: \$41,365 in FY96 and \$41,885 in FY97)

Contact: Gary Holzbauer, Hatchery Superintendent, Thunder River Rearing Station, Crivitz.

The primary assignment of the Thunder River Trout Rearing Station is to raise on average 218,000 brown trout and 90,000 coho salmon yearly for stocking in Lake Michigan and Green Bay. Traditionally, the hatchery operated only seasonally from May through November. However, in the fall of 1994 (FY95) hatchery operations were extended to eleven months to accommodate the raising of yearling coho salmon. Salmon Stamp funds were used to cover some of the additional expenses incurred in the expansion of hatchery operations. Salmon Stamp funds paid for fish food, air pumps, ice diffusion lines, a new electrical service by the rearing ponds, and increased power demands for winter rearing conditions.

The pronounced increase in planned expenditures for FY96 and FY97 over FY95 expenditures is because in previous years most operational funding for Thunder River came from fishing license fees, but beginning in FY96 Salmon Stamp funds will pay for a larger share of hatchery expenses.



Hatchery personnel at the Thunder River Trout Rearing Station weighing brown trout before being put into trucks for distribution to various Lake Michigan stocking sites.

Coldwater Production - Lakewood Rearing Station

(Expenditure: \$2,186 in FY95)

(Planned Expenditures: \$4,000 in FY96 and \$4,000 in FY97)

Contact: Raoul Schottky, Hatchery Superintendent, Lakewood Rearing Station, Lakewood.

On average 50,000 Brook Trout are reared yearly at Lakewood for stocking in Lake Michigan. In FY95 coho salmon were also raised over winter. Salmon Stamp funds are used for various expenses such as fish food, equipment purchases, pond maintenance, transporting fish to stocking sites and other supplies.

Activities Beginning in FY96

Coldwater Production - Bayfield Hatchery

(Planned Expenditures: \$135,000 in FY96 and \$135,000 in FY97)

Contact: Larry Nelson, Hatchery Superintendent, Bayfield Hatchery, Bayfield.

These funds will help pay for the spawning, hatching, rearing and stocking of nearly 900,000 fingerling and yearling trout and salmon for Lakes Michigan and Superior. The majority of this funding will cover hatchery operation expenses that are directly related to fish propagation and stocking, for example: electricity costs, fish food, vehicle operation and maintenance, building operation and maintenance, supplies and equipment.

Some of these moneys also help support other administrative and facility maintenance expenses at the hatchery not directly related to fish propagation, such as staff training, office supplies and expenses, and grounds maintenance.

Coldwater Production - Langlade Rearing Station

(Planned Expenditures: \$32,395 in FY96 and \$32,825 in FY97)

Contact: Doran Arrowood, Hatchery Superintendent, Langlade Rearing Station, White Lake.

The primary assignment of the Langlade Trout Rearing Station is to rear and stock brown trout. Each spring small fingerlings are received from Wild Rose Fish Hatchery and raised to stocking size. These funds will help pay for the rearing and stocking of approximately 100,000 fingerling and 60,000 yearling brown trout annually for Lake Michigan. The funds will cover expenses directly related to fish production, such as: fish food, electricity, pond and raceway maintenance, equipment purchase and maintenance, and stocking costs.

Permanent Employee Salaries

(Expenditure: \$33,205 in FY95)

(Planned Expenditures: \$33,200 in FY96 and \$33,200 in FY97)

Permanent employee salaries are for a Fish Propagation Technician at the Kettle Moraine Springs Hatchery whose primary duties involve the incubating of coho eggs, and the propagating and rearing steelhead, and for a Fish Propagation Technician at the Thunder River Rearing Station to perform various chores at the hatchery related to coho production.

Administration

Activities Ending In FY95

None.

Activities Continuing from FY95 through FY97

Salmon Stamp Expenditure Report And Plan

(Expenditure: \$7,558 in FY95)

(Planned Expenditure: \$11,920 in FY96)

Contact: Bill Horns, Great Lakes Specialist, Madison.

These expenses cover the costs of limited term employees to research, gather data, write, and assemble the most recent Salmon Stamp Expenditure Report (Administrative Report # 37) and this current report.

Administer the Salmon and Trout Stamp Program

(Expenditure: \$5,967 in FY95)

(Planned Expenditures: \$6,500 in FY96 and \$6,500 in FY97)

Contact: Bill Horns, Great Lakes Specialist, Madison.

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

Activities Beginning in FY96

None.

Permanent Employee Salaries

None.

Developments

Alternate Water Supply Design and Construction - Bayfield Hatchery

(Expenditure: \$29,817 in FY95)

(Planned Expenditures: \$586,183 in FY96, \$65,000 in FY97)

Contact: Larry Nelson, Hatchery Superintendent, Bayfield Hatchery, Bayfield.

The Bayfield Hatchery has experienced increasing problems with its water supply in the years since it was renovated in 1974. It currently relies on high capacity wells to provide water for the annual production of nearly one million trout and salmon. These wells continually pump a certain amount of fine sand, which abrades the pumping equipment. As a result, periodic expensive repairs measures must be taken to keep the wells operational and at full pumping capacity.

To increase flow rates, reduce operating costs, and alleviate or reduce expensive repair bills, an alternate water supply line is being constructed that will run directly from Lake Superior to the hatchery. The new supply line will increase the water supply to the hatchery from 850 gallons per minute (gpm) to 6,000 gpm. The total estimated cost of this project will be \$1,060,000 with \$586,000 paid at the outset and the balance of \$474,000 borrowed and repaid over twenty years.

Expenses incurred in FY95 were for the initial phase of engineering and design of the project, the planned expenditure for FY96 includes both additional costs for design and for the down payment on construction. The planned expenditure for fiscal FY97 is for the first year of debt payment.

Spawn Collection Facility - Lake Michigan

(Expenditure: \$3,172 in FY95)

(Planned Expenditure: \$150,327 in FY96)

Contact: George Boronow, Fisheries Supervisor, Green Bay.

The first phase in the development of the C.D. "Buzz" Besadny Anadromous Fisheries Facility was primarily the construction of the basic barrier structure and fish ladder. This allows for the collection of fish attempting to spawn. If phase 1 targeted "collection", phase 2 could be characterized as "processing and public participation".

The expenditures listed here are supporting the planning and design of phase 2. The project involves the construction of a new building which is needed to facilitate the practical aspects of an efficient and clean facility for the sensitive process of collecting, fertilizing and preparing eggs for transport to the hatchery. A clean facility is also very important in conducting disease treatment and in the collection of scientific samples.

A walk through observation area will provide better viewing of the entire process – a very popular feature with student groups as well as the general public. Integral to the observation area will be a display explaining the activities at the facility and the benefits to trout and salmon fishing on Lake Michigan. The viewing area will be integrated with the existing observation deck and park-like walkways. Public restrooms are also included.

Kewaunee River Adult Salmonid Habitat Development

(Expenditure: \$51 in FY95)

(Planned Expenditure: \$34,699 in FY96)

Contact: Steve Hogler, Fisheries Biologist, Manitowoc.

The first riffle section of the stream channel of the Kewaunee River upstream from the Lake Michigan lake level was wide and shallow with the bottom covered with small to medium sized rock. During periods of low water, much of this rocky rubble was exposed, making it difficult for anadromous trout and salmon to migrate upstream.

The first goal of this project was to deepen and better define the main channel of the river in the project area. This would allow anadromous fish easier access to the C.D. "Buzz" Besadny Anadromous Fisheries Facility, ensuring healthy fish for propagation and ultimately restocking of their progeny into Lake Michigan. The second goal was to place large boulders along the deepened channel to provide resting locations for migrating adult fish.

This project was completed during the summer of 1995 (early in FY96), accomplishing the desired goals. Nearly 5,000 cubic yards of bottom material was removed from the stream, creating a ten to twenty foot wide, two to four foot deep, meandering stream channel. The removed material was used either as rip-rap to stabilize eroding banks, or to taper the stream bottom from the excavated channel to the river bank. A total of 5,550 feet of stream was affected by this project. An additional 535 tons of rock (423 large boulders) were placed individually or on groups in the excavated stream channel to act as resting locations. Both fish and anglers used this new habitat along this stretch of public land during the 1995 fall spawning runs.



Reconstruction of the holding pond at the Strawberry Creek weir, Wisconsin's most important collection site for chinook salmon eggs.

Strawberry Creek Weir Maintenance

(Planned Expenditure: \$16,850 in FY96)

Contact: Paul Peeters, Fisheries Biologist, Sturgeon Bay.

The Strawberry Creek rearing pond and salmon weir plays an important role in the management of chinook salmon in Lake Michigan. It is Wisconsin's primary egg collection facility for chinook salmon. The last major maintenance of this important facility occurred in the early 1980's. Early in fiscal 1996 the Strawberry Creek rearing pond and salmon collection weir were rebuilt. The refurbished rearing pond and collection facility should serve the Lake Michigan fisheries program well beyond the year 2000.

Wild Rose Hatchery Groundwater Survey

(Expenditure: \$4,600 in FY95)

(Planned Expenditure: \$15,400 in FY96)

Contact: Steve Fajfer, Hatchery Superintendent, Wild Rose Hatchery, Wild Rose.

In cooperation with U. S. Geological Survey, this project, when completed, will identify the capabilities of the Wild Rose hatchery's ground water usage and recharge. As plans continue for complete hatchery renovation, this information becomes invaluable to correctly calculate production capacity for the future. The computer model detailing potential water supply will be available in late 1996.

Wild Rose Hatchery Storage Facility

(Expenditure: \$5,889 in FY95)

(Planned Expenditure: \$5,260 in FY96)

Contact: Steve Fajfer, Hatchery Superintendent, Wild Rose Hatchery, Wild Rose.

This project replaced an old building at the Wild Rose Hatchery. The Department of Transportation donated the building as part of wetland mitigation from a highway project. With funds from this project, the new building was moved from the construction site to the hatchery and reconstructed. The new facility provides rodent-proof feed storage, equipment storage and room for hatchery operations.

Appendix 1.

Guidelines For The Use of Great Lakes Salmon and Trout Stamp Revenues⁸

Wisconsin state statute 29.15(5) states that "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." These statutes clearly define that 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

Salmon and trout stamp revenues may only be used for projects that pertain to salmonid species. These species include Pacific salmon (e.g. coho and chinook), trout (e.g. rainbow and brown), and chars (e.g. brook, splake and lake trout). Stamp money may not be used for projects specifically directed toward warm and/or cool water fishes such as percids, esocids, and centrarchids.

Geographical Requirement

Projects that use stamp revenues must also be geographically related to the Great Lakes watershed. Specifically, the geographical scope of these projects may include tributaries accessible to Great Lakes salmon and trouts well as Lakes Michigan and Superior themselves. Stamp money, however, is excluded from use in projects that pertain to trout waters other than the Great Lakes (e.g. Great Lakes tributaries not accessible to Great Lakes salmon and trout, inland trout streams and lakes).

Program Requirement

Projects funded by salmon and trout stamp money must also relate specifically to the stocking program for the Great Lakes. This program includes a variety of activities and physical facilities which require equipment, services, and manpower.

⁸ Excerpted from Krueger, C.C. 1983. Expenditure Plan for Great Lakes Salmon and Trout Stamp Revenues. Administrative Report No. 18. Bureau of Fisheries Management, Department of Natural Resources, Madison, Wisconsin.

Activities within the stocking program may be categorized as propagation, evaluation, or experimental.

Propagation activities include hatchery operation costs (electricity, manpower, fish food, waders, etc.) acquisition of fertilized eggs, egg incubation, fish rearing (fry, fingerling, broodstock, etc.), and transportation of fish to stocking sites.

Evaluation activities within the stocking program include obtaining information about the return to angler of hatchery fish and using this information for planning purposes. These activities provide the "quality control" for the stocking program. Examples of evaluation and monitoring activities include lakewide creel censuses, species and/or strain evaluations (tagging and marking studies), development of management plans (annual stocking plans, species plans, long-term plans etc.), and annual propagation planning.

Experimental activities of the stocking program involve the use and evaluation of alternative methods for conducting propagation and evaluation activities. Projects within this category include evaluation of automatic fry feeders, innovative hatchery incubators, alternative fish foods, artificial reef substrates for egg incubation, new creel census methods, new fish marking methods, and gamete preservation.

The physical facilities of the stocking program are the equipment, buildings, and land required to support the stocking program activities. Specifically, these facilities include raceways, rearing ponds, hatchery grounds, generators, pumps water supply systems, vehicles, aerators, automatic fish feeders, land, engineering plans, and incubators. Salmon and trout stamp revenue may be used for maintenance, repair, or purchase of these facilities in order to maintain or expand the stocking program.