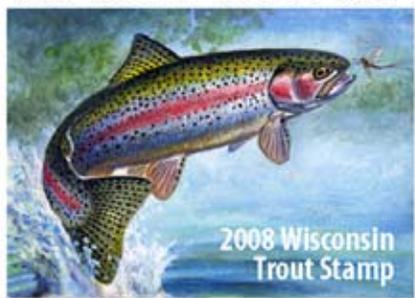


Expenditures of Inland Water Trout Stamp Revenues

Fiscal Years 2008-2010



June 2011
Administrative Report No. 67



Expenditures of Inland Water Trout Stamp Revenues Fiscal Years 2008-2010

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An early season brown trout - caught and released.

STAMPED A SUCCESS!

Inland Trout Stamp Revenue Expenditures 2008 - 2010

Trout anglers have helped subsidize the inland waters trout stamp program for over 30 years. Their support is critical to the success of the program.

The inland waters trout stamp program was created in 1977 to provide additional funding for improving and restoring trout habitat. The Wisconsin Department of Natural Resources has a long history of successful trout stream habitat management. Work began with the federal work programs in the 1930s and improved as more successful methods were developed over the history of the program. Only limited work could be accomplished due to limited funding (\$140,000) until the trout stamp program began in 1977. Wisconsin is now envied by other states because of the amount and dedication of the trout stamp funds for habitat improvement. All trout stamp funds are used for restoring and maintaining trout habitat, with a very small amount for printing the stamps and producing these reports. Some money (< 10%) was used for trout stream surveys in FY 1998 –2004, but none has been used for surveys since then.

The cost of the trout stamp has increased from \$2.50 during 1978-1983, to \$3.25 during 1984-1991, to \$7.25 during 1992-2006, and currently is \$10.00 (since 2006).

The number of trout stamps sold varies from year-to-year and averages about 142,000 stamps annually over the last 10 years. In 2008 sales increased by 5% over 2007 and in 2009 sales in-

creased 7% over 2008. In addition, Patron License holders (currently about 50,000) support the Inland Waters Trout Stamp program (Table 1). DNR biologists and technicians have used the money to improve an average of 25 miles of stream and 1 spring pond per year. This has resulted in about 865 miles of stream improved out of a total of approximately 13,000 miles of trout streams in Wisconsin (Note: The previous measurement of miles of trout stream has been updated based on the improved estimates of distances and reporting). In addition, many miles



Completed bank cover on McKenzie Creek, Polk County. Photo: Terry Margenau

Table 1 -- License sales contributing to the inland waters trout stamp account

| Year | Patron Card | Trout Stamp | Total Trout Anglers | Total Revenues |
|-------|-------------|-------------|---------------------|----------------|
| 1978 | N/A | 183,185 | 183,135 | \$244,459 |
| 1979 | N/A | 183,447 | 183,447 | \$393,912 |
| 1980 | N/A | 187,958 | 183,958 | \$420,403 |
| 1981 | N/A | 194,873 | 194,873 | \$445,189 |
| 1982 | N/A | 194,658 | 194,658 | \$440,949 |
| 1983 | N/A | 190,821 | 190,821 | \$424,617 |
| 1984 | N/A | 192,510 | 192,510 | \$503,337 |
| 1985 | 218 | 181,960 | 182,178 | \$548,513 |
| 1986 | 264 | 182,354 | 182,618 | \$550,349 |
| 1987 | 398 | 180,096 | 180,494 | \$544,367 |
| 1988 | 254 | 177,138 | 177,392 | \$674,422 |
| 1989 | 449 | 162,447 | 162,896 | \$723,358 |
| 1990 | 756 | 131,910 | 132,666 | \$401,174 |
| 1991 | 539 | 113,640 | 114,179 | \$346,440 |
| 1992 | 847 | 131,008 | 131,855 | \$647,594 |
| 1993 | 13,486 | 131,308 | 144,794 | \$971,516 |
| 1994 | 24,757 | 135,425 | 160,182 | \$1,044,839 |
| 1995 | 34,942 | 130,701 | 165,643 | \$1,066,710 |
| 1996 | 43,370 | 136,687 | 180,057 | \$1,107,057 |
| 1997 | 48,368 | 127,840 | 176,208 | \$986,760 |
| 1998 | 55,579 | 129,385 | 184,964 | \$1,008,113 |
| 1999* | 89,114 | 184,526 | 273,640 | \$1,553,033 |
| 2000 | 76,175 | 140,603 | 216,778 | \$1,019,645 |
| 2001 | 81,211 | 142,449 | 223,660 | \$1,180,221 |
| 2002 | 82,615 | 142,633 | 225,248 | \$1,157,984 |
| 2003 | 80,851 | 143,405 | 224,256 | \$1,166,441 |
| 2004 | 74,587 | 137,828 | 212,414 | \$1,126,266 |
| 2005 | 69,979 | 133,441 | 203,420 | \$1,147,805 |
| 2006 | 59,974 | 129,194 | 189,168 | \$1,782,603 |
| 2007 | 56,676 | 130,119 | 186,795 | \$1,495,230 |
| 2008 | 55,159 | 136,836 | 191,995 | \$1,504,428 |
| 2009 | 50,752 | 146,803 | 197,555 | \$1,618,053 |

*A spike in sales occurred in FY 99 due to implementation of the Automated License Issuance System (ALIS).

of previous habitat work is maintained each year and in 2008, 750 miles of trout stream were kept free of beaver dams in northern Wisconsin. In 2009 and 2010, over 1,500 miles of trout stream were kept free of beaver dams. It is important to note that many of the DNR personnel working on trout habitat projects are not paid by trout stamp funds. Therefore a significant amount of non-trout stamp dollars support trout habitat work. An average of \$411,812 per year from 2008

through 2010 was spent on inland trout habitat from general fishing license fees (Table 2). Table 3 shows that we usually have a cash balance of funds that are not spent each year. This could be due to weather, flooding, position vacancies or increase in revenue from stamp increases or rebates from other programs. These funds are added to revenues the next year to give us total available funds.

Table 2. Expenditures of inland waters trout stamp revenue and general license fees supporting trout habitat work in fiscal years 2008-2010. Salaries and fringe benefits are also included in projects costs in the first three lines.

| Expenditures | FY 08 | FY 09 | FY 10 |
|---------------------------------|-------------|-------------|-------------|
| Habitat Restoration | \$1,584,952 | \$1,612,848 | \$1,647,897 |
| Stamp Printing and Reports | \$1,854 | \$3,086 | \$1,425 |
| Permanent Salaries | \$350,127 | \$365,500 | \$341,100 |
| Fringe Benefits ¹ | \$177,378 | \$188,795 | \$183,679 |
| Total Expenditures ² | \$1,586,806 | \$1,615,934 | \$1,651,937 |
| General License Fees | \$321,258 | \$322,191 | \$591,986 |

¹ Fringe benefits only permanent fringe.

² Salaries and benefits are only included once.

Research and management evaluations have proven the positive results of stream improvement. Numerous DNR Technical Bulletins <<http://dnr.wi.gov/org/es/science/publications/tb.htm#fisheries>> and Research Reports <<http://dnr.wi.gov/org/es/science/publications/rr.htm#fisheries>> document increased numbers and size of trout in improved areas. Many anglers seek out streams with habitat work, knowing that good fishing will likely be found there. Recognizing this need, a private book (Todd Hanson, 2008, Improved Trout Waters of Wisconsin, Where Am I Publications, Madison, WI) was published recently that shows the location of all habitat work.

This document summarizes expenditures of the Inland Waters Trout Stamp (IWTS) fisheries pro-

gram for fiscal years 2008, 2009, and 2010. Each fiscal year runs from July 1 of one year through June 30 of the next. Actual expenditures may exceed Inland Waters Trout Stamp contributions since other fishing license revenues and federal funds also support this program. In the past decade, the Department has expanded the use of trout stamp money to other aspects of trout stream habitat management. Since 1992, these funds have included maintenance of habitat improvements, which is vital to insuring the long-term benefits of habitat work. Trout population surveys were added as a viable use in 1998. Surveys are very important for planning habitat improvement projects and evaluating the results of funded projects on improving trout populations. Federal Sport Fish Restoration (SFR) money has been used to do trout surveys since 2004. Other

Table 3. Annual Inland Waters Trout Stamp account activities, fiscal years 2008-2010.

| | FY 08 | FY09 | FY10 |
|------------------------|-------------|-------------|-------------|
| Beginning cash balance | \$556,862 | \$474,495 | \$476,614 |
| Revenues | \$1,504,438 | \$1,618,053 | \$1,569,374 |
| Total available funds | \$2,061,300 | \$2,092,548 | \$2,045,988 |
| Total expenditures | \$1,586,806 | \$1,615,934 | \$1,651,937 |
| Cash balance | \$474,495 | \$476,614 | \$394,051 |

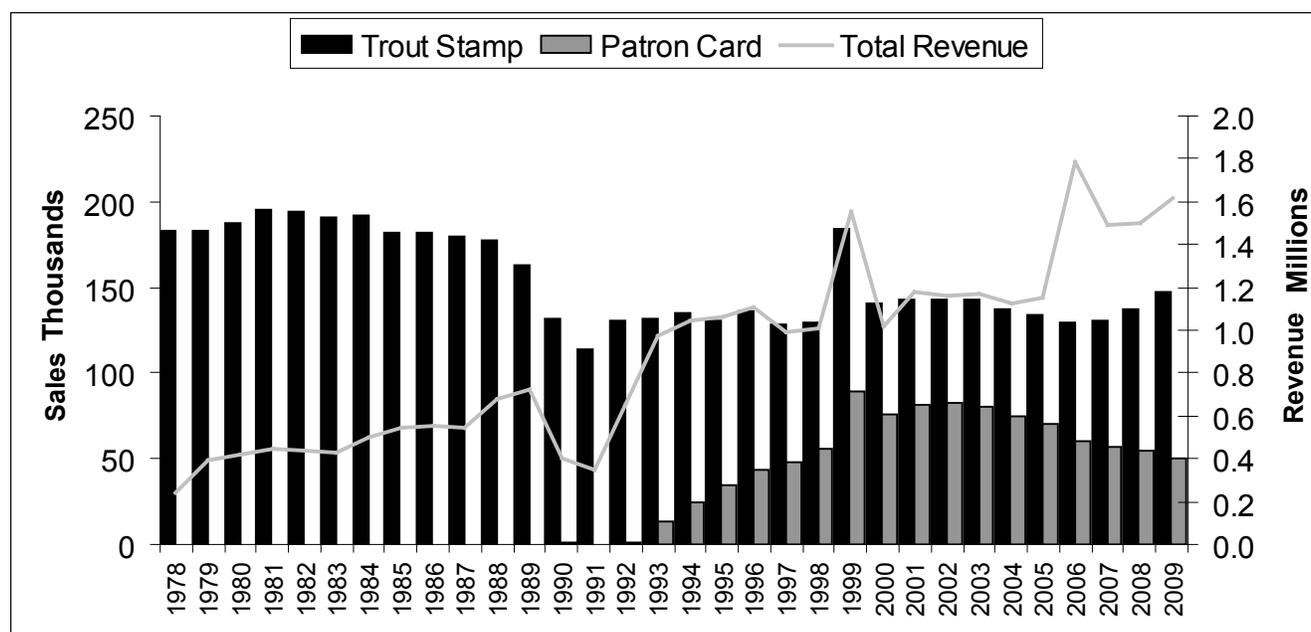


Figure 1. Trout stamp, patron sales and total license revenue from 1978 - 2009. The spike in sales in 1999 was due to implementation of the Automated License Issuing System (ALIS). The spike in revenues in 2006 was due to the fee increase and a rebate from the surplus in the heavy equipment pool.

federal and state funds also support other parts of Wisconsin inland trout management program. From 2008-2010 about \$1,343,000 per year was spent for inland trout propagation and stocking, and about \$922,829 per year was spent on trout surveys. With continued public support, these funds will provide for increased trout fishing opportunities and increased quality of trout habitat into the future.

Guidelines for the use of Inland Waters Trout Stamp revenues

Wisconsin State Statute 29.191(4)(e) states: "The Department shall expend the receipts from the sale under this subsection of inland waters trout stamps on improving and maintaining trout habitat in inland trout waters, conducting trout surveys in inland trout waters and administering this subsection." In addition to applying to trout species, these statutes define the geographic and program requirements of the Inland Waters Trout Stamp Program.

Geographical Requirement. - Projects that use trout stamp revenues must be geographically focused on Wisconsin's inland trout waters. These

revenues may not be used on portions of Great Lakes tributaries that are only accessible to anadromous trout and salmon.

Program Requirement. - Projects funded by Inland Waters Trout Stamp money must specifically relate to inland trout habitat management (improving and maintaining habitat) or to conduct trout surveys. Expenditures for trout surveys are limited to not more than 10% of the habitat management budget.

Habitat management encompasses activities such as maintaining trout streams, improving existing streams and restoring streams capable of sustaining trout populations. Beaver control projects may be funded as part of habitat management. The purchase of equipment to conduct this work is also authorized.

Surveys authorized must be limited to trout surveys of inland waters. Surveys funded to date include those designed to plan and evaluate habitat improvement projects, wild trout stocking, trout genetics and regulations.

Sources of Revenue for the Inland Trout Stamp Account

All receipts from the sale of Inland Waters Trout Stamps are placed in the Inland Waters Trout Stamp Account (IWTS). However, Inland Waters Trout Stamp revenues are not the only source of funds for the Inland Waters Stamp account. Some revenues from the sales of patron licenses and collector stamps also contribute. 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 \$.75 for the patron license and \$.25 for the Inland Waters Trout Stamp. Calculations and references in this report exclude vendor’s fees.

Currently the cost of each Inland Waters Trout Stamp is \$10.00. At present, the IWTS account receives about \$3.40 for each Patron License sold.

In addition, collectors can purchase souvenir Inland Waters Trout Stamps from previous years.

Table 4. Time coded to Trout Stamp projects by permanent employees by fiscal year. FTE’s are full-time equivalents, or person-years of time (hours/1825).

| Year | Permanent FTEs |
|---------|----------------|
| FY 2008 | 12.22 |
| FY 2009 | 11.92 |
| FY 2010 | 13.05 |

All revenues from these sales contribute to the Inland Trout Stamp account. License sales that contribute to the Inland Waters Trout Stamp Account are shown in Figure 1 and in Table 1.

General fishing license fees, federal Sport Fishing Restoration (SFR) funding and donations also support the inland trout program. Four previous Inland Waters Trout Stamp Expenditure reports have been published. They cover the fiscal years 1998-2001, 2000-2003, 2002-2005, and 2004-2007.

Our partners have requested that we include information in this report on the time spent by permanent employees on trout stamp funded work. Table 4 shows person-hours (FTE = full time equivalents) of time spent on habitat projects in each fiscal year. The information was taken from the computer database (PALS) of hours recorded on time sheets and coded to specific trout stamp funded projects. It only includes FH employees. There are 9.34 permanent positions funded by the trout stamp, but in actuality our



Two thousand feet of stream were restored on Pine Creek, Chippewa County using 5,800 tons of rock, 44 LUNKER structures, 6 rock grade control plunge pools, and 5 cross-log plunge pools. Photo: Nate Anderson.

finance systems charges the trout stamp account with up to 9.34 FTE of work done by any FH employee doing trout stamp work. Any additional hours spent on eligible activities are billed to the Department’s Fish and Wildlife account which is supported by general fishing and hunting license sales. By law, permanent staff hours spent working on non-trout projects cannot be billed to the IWTS account. LTEs (Limited Term Employees) are not included in this total.

TROUT HABITAT IMPROVEMENT PROJECTS FUNDED BY TROUT STAMP FROM 2008-2010

These project reports were taken from annual progress reports and edited for this report. Projects are listed within regions by locations and year(s) under the following three categories:

- Habitat Development
- Habitat Maintenance
- Beaver Control

HABITAT DEVELOPMENT

NORTHEAST REGION



◆ Beaver Creek Watershed – Marinette and Oconto Counties

Fiscal Year: 2008 & 2009

Contact: MIKE DONOFRIO

In fiscal year 2008, work was carried out with the Green Bay Chapter Trout Unlimited on choosing a watershed or stream to adopt. However, the group was unable to decide on the direction they wanted to take with this project and has since decided not to adopt a stream. Several individual work days on different streams were coordinated with them throughout the summer of 2008. The Marinette Chapter of Trout Unlimited is still actively seeking land acquisition and easements throughout the Beaver Creek watershed, and the DNR coordinated with this group on this project as needed. A work day was planned on the North Branch Beaver Creek Fishing pier during the summer of 2008.

In fiscal year 2009, chainsaw safety training, CPR and First Aid training were completed and outstanding projects consisting of brush clearing, brush bundling and shoreline stabilization were completed. The DNR hosted Trout Unlimited work days in July and August of 2008 and June of 2009.

◆ Hemlock Spring Pond – Oconto County

Fiscal Year: 2010

Contact: MIKE DONOFRIO

In fiscal year 2010, permits and compliance issues were addressed. Spoil locations were located, identified and approved. U.S. Forest Service compliance issues were addressed. Sounding of Hemlock spring pond was completed and a map was made showing current depth contours.

◆ South Branch Pike River – Marinette County

Fiscal Year: 2008 & 2009

Contact: MIKE DONOFRIO

In fiscal year 2008, pre-habitat construction stream shocking was conducted for a second year. A double run population estimate stream shocking run was carried out on June 17 and 19, 2008. A single back pack shock unit was used. Physical habitat work was scheduled to begin July 2008.



WDNR fisheries technicians along with Trout Unlimited members work together to provide maintenance (in the form of rock rip-rap) to constructed bank covers located in the North Branch Beaver Creek. Photo: Mike Donofrio

In fiscal year 2009, removal of 5 remnant beaver dams which consisted of 415 linear yards of beaver dam was complete and 70 yards of stream channel were restored. For additional cover, 16 crossover logs were placed over the stream. Two sand traps were installed with the downstream trap needing to be re-dredged 3 times.

◆ **Sullivan Springs Dredging – Oconto County**

Fiscal Year: 2008 & 2009

Contact: MIKE DONOFRIO

This project was completed in the Northeast Region with assistance and cooperation from the Northern Region and involves two connected spring ponds. In fiscal year 2008, an access road was built to the spring ponds adding gravel to the roads to support the heavy equipment. The areas were then seeded and mulched. Care was taken to reduce the amount of impact to the riparian area of the spring ponds during this project. A dyke was built to increase the storage capacity of the upland spoil area. One of the two 0.7 acre ponds was completely dredged out to a depth of approximately 10 feet. The channel between the two ponds was then dredged and widened and some woody debris removed to allow access for the dredge barge to pass between the two ponds. The dredge was removed for the winter months. In May 2008 the dredge was returned to the site and dredging on the second 0.7 acre spring pond commenced. It was noted by the staff dredging that they had observed several larger brook trout in the spring ponds and some forage fish. This is an improvement over no observed fish in the ponds for several years prior to the start of the project.

In fiscal year 2009, both ponds were dredged to the depth of eight feet. Some rubble and boulders were exposed. Many sunken trees were also exposed. An earth dike, which was used for holding spoil in a disposal valley, was reduced in height to conform to its surroundings. About 50 linear yards of dike were removed and placed back in its origin.

◆ **Un-named tributaries to the upper Peshtigo river – Marinette County**

Fiscal Year: 2010

Contact: MIKE DONOFRIO

All 3 streams were back-pack shocked in 2009 in order to obtain a baseline on the current cold water fishery. All beaver were removed. Beaver dams were also removed on the width of stream (bank to bank) in order to allow normal stream flow and fish passage. No linear footage of beaver dam removal (across riparian zone) was conducted due to abnormal rainfall.

◆ **Walker and North Fork Thunder and Little Waupee Creeks – Marinette and Oconto Counties**

Fiscal Year: 2010

Contact: MIKE DONOFRIO

Work on this project began in fiscal year 2010. All permits and compliance issues were completed. In order to address NHI compliance issues, a meeting at the project site on Walker Creek was held with Bob Hayes (retired E.R. turtle expert) and constituents. Areas were staked-out and technical advice was given on how to construct turtle nesting sites with material from sand traps. No sand trap construction on either Walker or North Fork Thunder Creeks was conducted due to excessive rainfall.

◆ **Millhome Creek – Manitowoc and Sheboygan Counties**

Fiscal Year: 2008

Contact: STEVE HOGLER

Since removing the remaining concrete structures, the old pump house and rebuilding a bridge that was dismantled to allow removal of the last dam during phase-1 of this project, the stream changes have been monitored. Flow through the system appears to have improved with the removal of the concrete structures and spring house. The banks have stabilized and have become vegetated. Trout have been utilizing the site of the former spring house for spawning, although there is no hard evidence that indicates the brook trout population of Millhome Creek has increased following restoration. Additionally, wading birds using other restored areas within the project boundary have been noted.

◆ **Northeast Region – Oconto, Waupaca and Waushara Counties**

Fiscal Year: 2008 & 2009

Contact: SHAWN SULLIVAN

In fiscal year 2008, the crew cut and bundled 3,700 excess Christmas trees to be used as brush bundles on Willow Creek in Waushara County and in other streams as well. All but around 300 trees were installed. Rock and other materials were staged at job sites throughout the region under this budget. The saw mill at Wild rose was used to cut 400 pilings plus a large volume of planking for habitat projects in the region for bank covers.

In fiscal year 2009, some of the general trout habitat work equipment charges were made to this project. The saw-mill at Wild Rose was also operated under this project.

◆ **Wild Rose Habitat Station**

Fiscal Year: 2010

Contact: SHAWN SULLIVAN

This project included mostly limited term employee wages for trout habitat work in the Northeast Region. Most of the expenses were incurred at the West Branch of the White River near Wautoma. This project along with other trout streams projects were used to stockpile materials and to initiate bank cover construction. Several hundred feet of structures were constructed. The project continued into fiscal year 2011.

◆ **Upper Fox-Wolf Basin streams - Marquette, Waushara, Waupaca, and Shawano Counties**

Fiscal Year: 2008 - 2010

Contact: SHAWN SULLIVAN, AL NIEBUR, AND DAVE BARTZ

In fiscal year 2008, two large bank covers, numerous boulders and digger logs were installed on 1000 feet of the Mecan River in Waushara County and 3,700 feet of Willow Creek in Waushara County were mechanically brushed. Christmas tree bundles were used to narrow the stream. Digger logs and boulders were placed for in-stream cover and posts were jettied for overhead bank covers. In cooperation with Trout Unlimited, 450 feet (of the total 2,700 feet) of Lawrence Creek, Marquette County was improved. This work included two jettied bank covers, Christmas tree brush bundles and 1,700 Christmas trees have been baled for use on future projects. Project planning and permits were applied for 4,200 ft on the West Branch of The White River, Waushara County, 2,600 feet on Leer Creek, Waupaca County, 2,300 feet on Trout/Nace Creek, Waupaca County, and 1,000 feet on Waupaca River (park).

In fiscal year 2009, trout habitat development and maintenance work was completed on several streams in Marquette, Waushara, Waupaca, and Shawano Counties. Intensive development of overhead bank covers, brushing and brush bundles on 0.3 miles of the Lawrence Creek below 1st Avenue were completed. Pilings for all structures were jettied in by hand and all heavy equipment work was done in the winter because of soft access. Tag alder cuttings in conjunction with Christmas tree bundles were utilized to construct brush bundles and fill braids above 1st Avenue. DNR coordinated brush bundle project and worked with Trout Unlimited Volunteers. The total stream impact was 1,000 feet. Reconnaissance and mapping of easement for intensive development of overhead bank covers and brush bundling project on Trout/Nace Creek was completed. Project design and permits were obtained. About 80% of the 0.6 mile project was completed by June 30, 2009. On Chaffee Creek, four tiers of beaver dams were removed and minor habitat restoration was completed on approximately 3,000 feet of stream upstream of 11th St. As part of a cooperative effort with Trout Unlimited, 0.5 miles of the South Branch of Little Wolf were mapped and designed. Reconnaissance was completed and necessary permits were obtained. Overhead covers, brush bundles and large woody debris were determined to be used on this stream segment. Two work days occurred with approximately 10% of the job complete. Work on a 0.4 mile segment of Cedar Springs Creek was also a cooperative effort with Trout Unlimited. The reconnaissance, mapping, design and permit were completed. Rock, wood and some pilings were replaced on old structures. Brush was removed and used in bundles and the project was about 10% complete.

In fiscal year 2010, several streams underwent trout habitat maintenance and improvement. A 3,700 foot section of the Willow creek, Waushara County, upstream of Hwy Z and S was finished by completing 5 overhead structures, log sills, refuge cover and in-stream woody debris. Approximately 1,500 feet of this segment are left to complete. Materials were staged over the winter and a project was begun on a 4,200 foot section of the West Branch White River in Waushara County. Approximately 2,500 feet have been completed consisting of 5 overhead bank covers, log refuge cover and brush bundles. The work on 2,800 feet of trout habitat development on Trout/Nace Creek in Waupaca County was completed including: 10 overhead bank covers, mid-channel boulders, large woody debris cover, and bank stabilization from cattle pasturing. In addition, approximately 4,000 feet of livestock exclusion fence and two cattle crossing areas were constructed. The application process to complete habitat work at Riverview Park on the Waupaca River in Waupaca was continued. DNR worked with DOT to design a trout habitat project at the County Highway Q crossing on the Waupaca River that will integrate with an angler/boater access. Work was proposed for the 2010-11 fiscal cycle. A Central Wisconsin Trout Habitat Restoration Workshop was conducted with Trout Unlimited. The workshop was used to educate interested citizens on trout stream ecology and use, the application of various habitat restoration and improvement methods for Central Wisconsin trout streams.

NORTHERN REGION



◆ Elvoy Creek - Forest County

Fiscal Year: 2008

Contact: MIKE VOGELSANG

This project encompassed 2,350 feet of Elvoy Creek, beginning near County A in Forest County downstream to former Elvoy Creek meadows dam sill. All areas were located within the Chequamegon-Nicolet National Forest property. Woody vegetation overhanging the stream was removed within the project area during summer of 2007 with assistance of Northwoods Chapter of Trout Unlimited. Approximately 403 boulders, and fifty-five 14' whole cover logs were brought on site to provide cover for trout in the project area. During the placement of these habitat structures, the stream channel was also contoured to allow for 36 pools, one island, 10 runs, and 31 riffles to be created. The narrowing of the stream channel in conjunction with the creation of a more sinuous thalweg resulted in a number of positive physical changes for the trout. The mean channel length increased from 2,350 feet to 2,650 feet; mean channel width decreased from 34 feet to 16.4 feet; average channel depth increased by 0.5 feet. Trout Unlimited donated \$500 toward the project which helped defray excavator costs.

◆ Hunting River and Evergreen River in Headwaters Basin – Langlade County

Fiscal Year: 2010

Contact: MIKE VOGELSANG

As a previous habitat development project in 1979, a combination of 35 boom cover/wing deflectors were installed with the purpose of narrowing, deepening, and adding overhead cover to the Hunting River. Since that time about 95% of these structures have failed. Due to their collapse, this stretch of river had lost most of its overhead cover and stream flow had been negatively impacted. On July 20, 2009 a 307 tracked excavator was delivered by the DNR fisheries crew to the access site along Highway T. The 307 assisted in the removal of several trees along the access site. The access site used had once been an old county trail. A minimal amount of work was needed to open up this trail, which made it an ideal access point. On July 21st work started on the stream. Starting upstream and working down, field staff used the 307 excavator to clear out sediments and reposition boulders. In the areas where these devices needed to be removed or repositioned, boulders, root wads, logs, and other woody structures were installed in their place. All of the woody materials and rock were gathered on site. The woody structures were embedded into the stream bank and or secured with boulders. These structures should prove to be exceptional habitat for both fish and invertebrates. The majority of failed devices were not removed. Over time they had filled in, to the point where almost none of their parts were exposed. Instead of ripping them out, which would cause unnecessary damage to the stream, staff decided to leave them buried and simply add woody habitat in front of them. Where the devices were still functioning, little work needed to be done with the exception of removing gravel and sand where it had built up in front of the devices, and repositioning the boulders to where they would more effectively direct water flow to help keep these structures free of future silt deposits. Material excavated from the bottom of the stream was used to make point bars on the inside bends of wide shallow areas of the stream. In addition one bank that was collapsing was reshaped and sloped. This reshaped banks and all the other areas that had exposed soil due to excavation were seeded and mulched. On July 27th the heavy equipment was removed from the stream. In the first year of this two year project, fisheries staff completed .51 miles of this 1.3 mile project. The remaining portion of this project was expected to be completed during the next fiscal year.

The Evergreen River Trout Habitat Project is a two year project that reaches over 1.6 miles of the Evergreen River and was chosen because of its water quality, location, and potential to produce and hold large numbers of native brook trout. The project is located at T31.N-R14E., Section 31 in the town Wolf River in Langlade County. During the fall of 2008, wildlife and forestry crews had cut numerous trees down to facilitate several wildlife openings at Peters Marsh Wildlife area. After the trees were cut and removed the Antigo fisheries crew then came in and helped with the removal of 25 stumps and root wads. These root wads were gathered and stock piled along with about thirty large boulders, in anticipation for use in the Evergreen River Trout Habitat Project. On July 27th,



An excavator was used to move boulders and root wads, dig pools, and drive root wads into the bank for stabilization and fish cover on the Evergreen River, Langlade County.

2009 a 307 cat excavator was delivered to Peters Marsh. Here it was used to load the boulders and root wads into an 8 yard dump truck equipped with a rock box. The materials were then hauled to a staging area, located along the access site of the project. All of the materials used were hauled upstream and scattered before any digging started. On July 28th the actual digging started. In doing this project, the stream thalweg was changed and the average width of the stream was decreased and the depth increased. While most areas of the stream were approximately 40 feet some areas had been as wide as 95 feet. Overall the stream was narrowed to 1/5-1/2 of its original width. In the pool areas the depth increased from approximately 2 feet to about 4 feet. When creating pools, the materials excavated were deposited in the existing stream channel directly adjacent to the newly dug pools. After the pools were dug, the woody habitat was introduced. Each pool area received several root wads and or logs. Each root wad was anchored to the bottom of the stream with at least two to three "Earth Anchors". About 35 log/root wads were gathered locally and also used in the stream. Ash trees near the stream that measured between 4-8 inches were selected. When harvesting these root wads, approximately eight feet of stump was left on the root bundle. The stumps were sharpened with a chainsaw and then the points were driven into the bank with the excavator, leaving the root wads suspended in the pool areas of the stream. These root wads proved to be very stable and should provide ample cover for fish. In addition to the root wads, several boulders were scattered throughout the project, the most common places were in the pool areas. These boulders provided additional habitat and helped to mix up water flows. The project site is naturally without a lot of rock, so to keep the natural appearance intact, introduced rock was kept to a minimum. While most of the outside bends were excavated, all of the riffle areas were left intact. These areas had good flows and substrates and will provide ideal spawning areas for trout. At the end of each day all of the areas with disturbed soils including; excavator deposits, any tacks left by the machine, and the areas where root wads were harvested, were both seeded and mulched. On Aug 19th equipment was removed from the stream. The 2009 work effort resulted in 2,250 feet of stream being restored.

The project continued in the summer of 2010. Some areas of stream were actually wider and shallower than first anticipated, which slowed progress on the Evergreen. At the end of the 2010 field season the work progress was reevaluated to determine if work needed to continue into the next season.

◆ **Headwater Basin streams – Florence, Forest, Langlade, Lincoln, Oneida and Vilas Counties**

Fiscal Year: 2010

Contact: MIKE VOGELSANG

This project includes various past habitat work and maintenance in previous development projects in a 6 county area. Project activities included: brushing existing bank covers and channel deflectors, maintaining fences for cattle watering areas, re-seeding for erosion control, cleaning sediment traps, re-furbishing brush bundles, adding half-logs and woody cover, and checking over 20 stream miles that have had previous intensive habitat work done. More than 20 miles of intensive stream habitat work were maintained in the Headwaters Basin. This project also improved functionality and aesthetics of past work and extended the life-span of past projects. A crew of 2-3 staff inspected and maintained all past habitat project sites in the basin. Approximately 90% of the work involved brushing to remove excess over hanging cover and prolong life span of recently completed projects. In some cases boom covers were removed or repaired; mulching and seeding over areas that didn't take.

◆ **Popple River – Florence County**

Fiscal Year: 2009

Contact: MIKE VOGELSANG

This project restored 1,800 feet of trout stream habitat that has been negatively impacted by late 1800's logging practices. The project site was located near the confluence of Woods Creek, with this tributary splitting the restoration work into an 'upstream half' and 'downstream half'. The intent was to restore the stream to its original condition prior to the running of logs down the stream. Depth and cover in this stretch is limited for various year classes of trout. The Wisconsin DNR partnered heavily with the public during early stages of this project, namely the Wild Rivers Advisory Committee which has representatives from Wisconsin DNR, County Forestry, Trout Unlimited, Sierra Club, and The River Alliance. This group unanimously agreed that it is necessary to further enhance the habitat of this site for trout. This was accomplished by restoring more of a channel meander and increasing depth by channel contouring with heavy equipment. Natural cover materials in the form of boulders and whole logs were added to the stream channel in the process. All fill areas and the single supply landing was properly groomed and seeded. Erosion control measures were applied where necessary.

The objective of this project was to restore the natural stream meander, increase depth, provide cover and improve water quality for all year classes of brook and brown trout. This activity will benefit the entire cold water fish and invertebrate community. Annual mid summer trout mark and recapture population estimates and fish community, catch per unit effort electrofishing assessments will be performed following this activity. This information will be compared to data gathered prior to the completion of the project. This comparison will identify a stable trout population of fingerling and yearling age groups with an increase in adults. It will also identify any changes in the entire fish community.

Approximately 150 boulders, and twenty-five 14' whole cover logs were brought on site to provide cover for trout in the project area. During the placement of these habitat structures, the stream channel was also contoured to allow for 12 pools, two islands, several runs, and riffles to be created. The narrowing of the stream channel in conjunction with the creation of a more sinuous thalweg resulted in a number of positive physical changes for the trout. The mean channel length increased; mean channel width decreased from 34 feet to 16.4 feet; average channel depth increased by 0.5 feet. Trout Unlimited donated \$1,000 toward the project which helped defray excavator costs.

◆ **Tamarack Creek – Vilas County**

Fiscal Year: 2008 & 2009

Contact: MIKE VOGELANG

In fiscal year 2008, the problem culvert was replaced with cooperation and heavy equipment support from the Village of Conover. The dam sill was also breached and removed to restore the original stream channel. Trout sampling occurred during the summer and early fall of 2008 and continued in future years to monitor success of project.

◆ **South Fork White River – Bayfield County**

Fiscal Year: 2008 - 2010

Contact: TERRY MARGENAU

In fiscal year 2008, habitat development on a 1,000 foot section of stream at the main access area to the White River Fisheries Area was postponed until an undersized culvert immediately downstream of the site was removed. The culvert was impounding water in the project area causing sedimentation and deleterious stream flows. In response, a \$40,000 Federal Fish Passage Grant Application was submitted to assist with the removal of the culvert and earthen dam it breaches and replace them with single-lane clear-span bridge set on wooden pilings. With the assistance of the Bayfield County Land Conservation Department a site plan was developed for project site. The site plan along with a Capitol Development request was submitted to Bureau of Facilities and Lands for engineering delegation. The project failed to receive Federal Fish Passage Monies in FY08 and the grant application was resubmitted for funding in FY09. Assistance in the amount of \$30,000 was also requested from the Bureau of Facilities and Lands to help share the cost of developing an environmentally sound stream crossing at the site before habitat work is conducted upstream.

In fiscal year 2009, efforts to replace an undersized culvert in the White River Fishery area were stalled indefinitely. As such, funds were moved to another Northern Region trout stamp project where a deficit was realized. A base of funding was carried over into FY 2010 to initiate an effort to control extensive growths of buckthorn. Some funding for this project was used to replace failing boom cover on the White River.

In fiscal year 2010, work primarily involved stream bank brushing to control the invasive shrubs common buckthorn, *Rhamnus cathartica* and glossy buckthorn, *Rhamnus frangula*. These species dominated riparian zones along the stream, resulting in allelopathic elimination of native forest species. As a result, the stream corridor lacked vegetative diversity and regeneration of large woody species important to stream ecosystems is inhibited. In addition, dense buckthorn canopies have resulted in an overly shaded stream environment and reduced growth of aquatic vegetation important to both trout and non-game fish species. A total of 1,600 feet of stream bank was selectively brushed. All native species were preserved and all buckthorn encountered were removed via hand pulling or manual cutting. Density of buckthorn (mature and immature) in areas treated ranged from 90 to 229 stems per cubic meter. Work will continue in fiscal year 2011 and included foliar spraying to control buckthorn regeneration in the treatment areas. In addition to planting of seedling white spruce, *Picea glauca* and tamarack, *Larix laricina*, tree spades were planned to be used to transplant 3 inch diameter red, *Pinus resinosa* and white pine, *Pinus strobus* in the treatment area.

◆ **Clam River – Polk County**

Fiscal Year: 2010

Contact: TERRY MARGENAU

A total of 0.6 miles of work was completed. Four areas of blockage were removed from main channel, three areas of bank erosion were repaired, seven plunge pools were created, five new overhead covers were constructed and two old covers made in 1971 that were still good were repaired. Rip rap was completed on two springs entering the river and erosion on both ends of Ice Age Trail Bridge that crosses Clam River was repaired. All areas were then seeded and mulched.

◆ McKenzie Creek – Polk County

Fiscal Year: 2008 & 2009

Contact: TERRY MARGENAU

In fiscal year 2008, approximately 400 feet of brushing (bank to bank) on the stream has been completed. A total of 75 feet of overhead cover was constructed, seeded and mulched. A total of 40 sections of covers were built and 300 yards of rock were hauled for summer work (fiscal year 2009).

In fiscal year 2009, a total of 4.5 miles of brushing was completed on McKenzie Creek. In addition, 1,500 feet of new work which included 8 covers, 2 plunge pools, 2 woody debris structures, and 2 tree deflectors were completed.

◆ Osceola Creek – Polk County

Fiscal Year: 2008

Contact: TERRY MARGENAU

A total of 1,500 feet of stream was restored. A total of 1,000 trees were planted by area students and 5 covers, 4 plunge pools, and eroded banks were repaired. A parking area, angler walking trails and fishing platforms were constructed with donation from Willard Seth Memorial Fund. A tour of the completed project was given to the



Crew shows finished development project on Osceola Creek to interested citizens. Photo: Terry Margenau

DNR Regional Management Team and local officials from the village of Osceola. Staff were acknowledged for their work on the project.

◆ **Turtle Creek – Barron County**

Fiscal Year: 2010

Contact: TERRY MARGENAU

Part one of the project was completed with field rock hauled to the stream. In-stream work was initiated in May 2010 and was progressing well through the end of the fiscal year.

◆ **Lake Superior – Ashland, Bayfield and Douglas Counties**

Fiscal Year: 2008 – 2010

Contact: PETER STEVENS

In fiscal year 2008, the trout habitat crew partially restored 2.31 miles of trout habitat on Saxine Creek, Little Sioux River, West Flag River and an unnamed tributary to the East Fork Flag River in Bayfield County and Sandy Run and its unnamed tributary in Douglas County. Restoration was accomplished by uncovering the original stream bed features in sand buried stream reaches. The habitat crew cut stream side alder and hand removed small woody debris and beaver dam footprints that were holding this excess sand bed-load in place. Spawning habitat restorations in this fiscal year cost approximately \$10,389 per mile of new work. The habitat crew also monitored and maintained 9.9 miles of past habitat work this year. On the Onion River the annual fall juvenile trend monitoring station revealed a steady and sustained improvement in salmonid production after stream restoration work. The use of herbicides to suppress stream side alder re-growth on reaches passing through the Bayfield County forest was requested and preliminary results were positive. This project also supported a portion of the effort to remove beaver and dams in conjunction with USDA and APHIS. Brule River Sportsmen's Club trout stream habitat volunteer days on three Saturdays in August were conducted where a buried stream channel on a 2,000 foot section of Sandy Run in downtown Brule was restored.

In fiscal year 2009, the trout habitat crew partially restored 2.3 miles of new trout habitat on Saxine Creek, Onion River, unnamed tributaries to the East Cranberry River, an unnamed tributary to the East Fork Flag River in Bayfield County, and an unnamed tributary to Sandy Run in Douglas County. Restoration activities were similar to fiscal year 2008. Spawning habitat restorations cost approximately \$7,907 per mile of new work. The habitat crew also monitored and maintained 11.4 miles of past habitat work this year. Herbicides to suppress stream side alder re-growth was requested again. Preliminary results were, again, positive. This project also supports a portion of the effort to remove beaver and dams in conjunction with USDA and APHIS. Brule River Sportsmen's Club trout stream habitat volunteer days were conducted on four Saturdays in July and August where a buried stream channel on a 2,000 foot section of Sandy Run in downtown Brule was restored.

In fiscal year 2010, the trout habitat crew partially restored 3 miles of new trout habitat on Sandy Run, East Flag, unnamed tributaries to the East Cranberry River, and an unnamed tributary to the East Fork Flag River in Bayfield County. Spawning habitat restorations in this fiscal year cost approximately \$5,000 per mile of new work. The habitat crew also monitored and maintained 11.9 miles of past habitat work this year. Herbicides were requested again. We also conducted Brule River Sportsmen's Club trout stream habitat volunteer days on four Saturdays in July and August where we continued restoring buried stream channel on a 0.4 mile section of Sandy Run in downtown Brule.

◆ **Lenroot Reach of the Namekagon River – Sawyer County**

Fiscal Year: 2008 - 2010

Contact: DAVE NEUSWANGER



Before and after comparison of a reach on the East Flag River (tributary to Lake Superior). The stream restoration project was to expose heavily sedimented underlying course substrate for salmonid spawning by applying a selective wood removal strategy. Photo: Bill Blust.

In fiscal year 2008, the National Park Service (NPS) partnered with the DNR (\$10,000 of their dollars and \$5,000 DNR dollars) to fund a Fish Habitat History Study of the upper Namekagon River and to compare the historical condition of the Namekagon to the present condition. Some progress was made in searching local historical archives. A decision was expected by December 31, 2008 to determine whether the operational phase of this project will be permitted by the NPS.

In fiscal year 2009, a report written by the University of Notre Dame through the National Park Service on the history of fish habitat on the Namekagon River was reviewed, edited and approved. However, by the time the report was finalized in late May, the fiscal year had almost expired, and there was not enough time to obtain permits and mobilize people fast enough to complete this project.

The Fish Habitat History study was completed and distributed by the contractor (University of Notre Dame). Results were consistent with the DNR assertion that the Namekagon River in its natural state could and should contain upwards of 300 wood structures per mile. A site plan for restoration of Big Woody Cover was prepared for review by NPS. NPS indicated a need to move the project site to brook trout habitat on the Cable reach. NPS prepared a required report for the project which was supposed to be implemented in August, 2010. NPS Regional Office reviewed the report and found problems with the presence of brown trout in the study area, the recommended beaver control on tributaries, and several other issues. The Agencies scheduled an on site visit to resolve their differences in October, 2010.

SOUTH CENTRAL REGION

◆ Dane, Green, Rock County streams, including Story & Allen Creeks

Fiscal Year: 2008 - 2010

Contact: DON BUSH



In fiscal year 2008, funding was utilized to make repairs and installations on four properties on Black Earth Creek. A total of 500 feet of riprap was installed. About 20 tree drops were initiated, each one using cable stops and earth anchors to secure the coarse woody debris to the shoreline. Maintenance brushing was performed on about 8 miles of stream frontage. We also installed 8 boulder retard complexes and 8 point deflectors. Follow-up electro-fishing surveys indicate great success. This project also reinvigorated the relationship with Trout Unlimited as a major partner in protecting the stream.

In fiscal year 2009, development work included installation of tree drops to add in-stream cover and direct current and stream flow to scour sediments, add depth, and create surface turbulence that provides safety from overhead predation. Development also includes placement of rip rap for stabilization of the bank and diversification of in-stream features, removal of nuisance trees, removal of failed bridge structure, and excavation/training of stream channel.

On Black Earth creek, 30 new tree drops were added over 2.5 miles of stream. Several dozen problematic cedars were removed from the Rolf parcel to allow for light penetration and development of grassed banks. An old concrete stream crossing bridge was removed and the bank area adjacent re-rocked to secure the bank area above and below. Vermont creek received 15 tree trunk installations as cross log revetments and "k" type structures to encourage pool development and undercut. On Token creek, an additional 650 feet of channel was developed by management of the headcut created from removal of the former mill pond dam.

In Green Country the DNR partnered with the Land Conservation Department for a project on the Little Sugar River along Hwy 69 on the edge of New Glarus. The DNR portion of the project was to purchase the lumber at a cost of \$5000 dollars. In total the project re-shaped and protected banks on over 1/2 mile of stream and installed 20 LUNKER structures.

In fiscal year 2010, significant brushing projects were completed during the winter on Story Creek (Dane County) and Allen Creek (Rock County.) The work was performed by the crew working out of Wild Rose. Distances restored included 1.5 miles on Allen Creek and 3 miles of frontage on Story Creek. The work was combined with Wildlife Management projects to provide brush control on the Brooklyn Wildlife Area and Evansville Wildlife area. Co-funding this project saved money by splitting mobilization costs.

◆ **Token Creek – Dane County**

Fiscal Year: 2008 – 2010

Contact: SCOT STEWART

In fiscal year 2008, a stream channel was dug to original elevation for a distance of 650 feet upstream of the former dam. Banks were sloped to 10:1 and seeded and mulched. Silt traps were maintained in two locations.

In fiscal year 2009, the proper equipment to manage the head cut was not available. As a result money was carried over and management of the head cut will resume in fiscal year 2010. A 315 excavator was borrowed, and it was operated off of three military bridge sections.

In fiscal year 2010, approximately 1,500 feet of stream was dug to the original elevation upstream of the headcut. Spoil was seeded and mulched.

◆ **Conley-Lewis Creek – Iowa County**

Fiscal Year: 2008

Contact: BRADD SIMS

Work was completed as specified in the work plan objectives. Tree and brush removal was completed for 1,600 feet of stream thread 60 feet landward on each bank. The work was located on property owned by Michael and Cathy Leonard, T5N, R4E, NE/4 of section 23. There is a perpetual public stream bank easement held by the State of Wisconsin for project area.

◆ **Steiner Branch and Little Platte River – Grant, Lafayette and Iowa Counties**

Fiscal Year: 2008 - 2010

Contact: BRADD SIMS

In fiscal year 2008, the SCR Operations Crew installed 11 LUNKER structures at 3 sites, 2 upstream weirs (wedge dams), 540 yards of rock, and placed in-stream boulders on Steiner Branch. Structures were installed throughout a stream thread of 1,225 feet.

In fiscal year 2009, 875 feet of in-stream trout habitat work was completed on the Little Platte River, Grant County, 4N, R1W, Section 1 of the Lima Township. Work was completed within the Little Platte River Remnant Fishery Area. The project total included 725 feet of bank sloped, seeded, and rocked. 8,500 sq feet of stream bank graded and seeded, multiple boulder retards and 3 vortex weirs were installed.

In fiscal year 2010, work was completed on 1,450 feet of in-stream habitat work. The original request was a budget for 3,500 feet of stream but that was modified due to the decreased project budget and increased cost of equipment rental. The project included 1425 feet of bank shaping, installation of 5 cross log units, 2 vortex weirs, and 590 linear feet of rock.

◆ **Trout Creek – Iowa County**

Fiscal Year: 2008 & 2009

Contact: GENE VAN DYCK

In fiscal year 2008, tree and brush clearing was completed on both banks of about 3 miles of stream thread on Trout Creek, during late spring and early summer. A large number of massive brush piles remained to be dealt with either by pushing back to the hill side or burned this winter with snow cover. One large beaver dam and two feeder dams were removed.

In fiscal year 2009, approximately \$11,000 was spent on removing trees and brush along both banks of about 5 miles stream all on DNR Fish Fee Title lands. All of the problem trees and brush for this entire length of stream were cleared.

◆ **Big Spring Branch – Grant County**

Fiscal Year: 2010

Contact: GENE VAN DYCK

Shot rock and grass seed mix were purchased for a cooperative project performed on DNR Fish management easements by a contractor for the Nohr Chapter of Trout Unlimited.

◆ **Mill & Willow Creeks – Richland County**

Fiscal Year: 2010

Contact: GENE VAN DYCK

The stream bank clearing was completed on 1.5 miles of Mill Creek and 3/8th of a mile on Willow Creek (Smith Hollow).

◆ **Jennings Creek – Columbia County**

Fiscal Year: 2008

Contact: DAVE ROWE

The stream bank where the creek was draining was plugged and rip-rapped. The old streambed, which was the first part of the connection between the stream and drainage ditch, was filled. The connection was created by headcutting between the old channel and the ditch was filled with rock at its mouth to prevent further head cutting. Approximately 5 acres of tag alder vegetation was cut and herbicide applied (Element 3-A) to encourage a change in vegetation to grass, thus providing more stability to the soil, to deter future channel connections. New headcut have developed in some places, but ground was too soft to deal with. Hopefully this action will prevent significant dewatering of the stream for several years. About 1/2 mile of brushing occurred on the south stream bank, upstream from a road crossing. This will provide access for anglers to fish the stream now.

◆ **Honey Creek and Rowan Creek – Columbia and Sauk Counties**

Fiscal Year: 2008 – 2010

Contact: DAVE ROWE

In fiscal year 2008, 1,300 feet of stream was improved on Honey Creek. This included installation of 22 LUNKER structures, several rock vortex weirs, rock cross revetments, and individual boulders. Thirty-five 8 foot LUNKER structure units were built for installation in fall.

In fiscal year 2009, 1,500 feet of Honey Creek was improved with rip rap for bank stabilization. Thirty-three LUNKER structures and several vortex weirs and cross log deflectors were installed.

In fiscal year 2010, 1,500 feet of habitat on Rowan Creek was planned, but did not occur because weather conditions limited the ability to use heavy equipment.

◆ **Manley Creek, Dell Creek, Bohlman Branch and Rocky Run Creek - Columbia and Sauk Counties**

Fiscal Year: 2008 & 2009

Contact: DAVE ROWE

In fiscal year 2008, one-half mile each on Manley Creek and Dell Creek were intensively brushed during the winter with a brush-hog cutter head machine. Stumps were re-cut and Element 3-A herbicide was applied. Results were excellent. Re-growth has not been noted. The cost of both banks was \$1.70 per foot of stream, approximately 50' back on each bank.

In fiscal year 2009, the stream corridor brushing was completed on Manley Creek and Dell Creek in the spring. A brush cutter head attachment mounted on a wide tracked low ground pressure backhoe was used to cut and grind up the brush which consisted mostly of tag alder, box elder and black willow. Some large trees were removed by chainsaw. After the snow melted in the spring, all stumps were cut flush to the ground by hand with chainsaws and chemically treated to prevent re-sprouting. On Manley Creek in Sauk County both stream banks were brushed back approximately 60' from the stream edge on a 2800' stretch of the stream corridor starting at Hwy "113" proceeding upstream on Devils Lake State Park property. On Dell Creek in Sauk County both banks were brushed back 60' from the stream edge on a stretch starting at South Avenue and proceeding downstream 3000' including 100' of the tributary of Beaver Creek. All work was completed on DNR owned wildlife property.

Following the summer of 2008, both stream corridors looked excellent with very little re-sprout and dominated by grasses and forbs. On Dell Creek where the streams banks have not been rock rip rapped the addition of sun light and grass growth will help slowly narrow the stream and increase pool depth and trout cover.

Numerous positive comments from anglers about the brushing have been received. Four large brush/tree piles that were left from the trout habitat improvement project completed in spring of 2007 on the Bohlman Branch to Lodi Creek were burned in the fall of 2008.

The Rocky Run Creek brushing project was not completed because of short falls in funding for year 2 of the biennium. Trout Stamp funding slated for the Rocky Run Creek brushing project was diverted to finance budget over runs on the Honey Creek Trout Habitat Improvement Project.



SOUTHEAST REGION

◆ **Mullet River and Onion River – Sheboygan County**

Fiscal Year: 2010

Contact: SUE BEYLER

The work for this project did not begin until fiscal year 2010. The staff time and funding was redirected to accomplish trout stream improvement on Paradise Springs Creek. In fiscal year 2010, the permit for an Onion River Mussel survey for possible incidental takings was completed. Site visits to map the stream profile for floodplain analysis was completed. LUNKER structures were built and placed on site but not installed, and rock was delivered and stockpiled on site.

◆ **Paradise Springs Creek – Waukesha County**

Fiscal Year: 2008 - 2010

Contact: SUE BEYLER

In fiscal year 2008, using mainly volunteer labor from Trout Unlimited, the shoreline of the pond and Paradise Springs Creek above Hwy N was brushed and the stumps treated with herbicide to prevent resprouting.

In fiscal year 2009, the 300 foot portion of the eastern shoreline of the pond was stabilized, sheet piling was removed, biologs were installed and Trout Unlimited volunteer days utilized. This project provides additional quality catch and release trout angling opportunity on a beautiful one acre spring pond with adequate access.

In fiscal year 2010, structures were installed on 1/4 mile of stream using Trout Unlimited volunteers on 3 work-days. Stream brushing and removal of obstructions was done on 1/4 mile of the headwaters area of the stream, above Hwy N.

◆ **Scuppernong River – Waukesha County**

Fiscal Year: 2008 & 2009

Contact: SUE BEYLER

In fiscal year 2008, using volunteer labor from Trout Unlimited, the marl pit pond was separated from Scuppernong Creek using rock material.

In fiscal year 2009, the Scuppernong stream restoration was delayed due to severe winter conditions and accessibility issues. The project was redirected to the nearby tributary Paradise Springs trout stream where 60 LUNKER structures were installed on 600Æ feet of a formerly ditched portion of stream. The project site is located west of Hwy N and prior to the installation of the structures had shallow braided areas with low velocity and heavy siltation. Post installation width to depth ratios increased as well as increased sinuosity providing excellent trout cover and bank stabilization.

◆ **Van Slyke and Potawatomi Creeks – Walworth County**

Fiscal Year: 2010

Contact: SUE BEYLER

In a cooperative effort, DNR and Trout Unlimited staff brushed 500 feet of Van Slyke and Potawatomi Creeks. Obstructions were removed and in-stream materials relocated in 2,000 feet of stream to prevent water from backing up.

◆ **Mole Creek – Ozaukee County**

Fiscal Year: 2008 - 2010

Contact: BRAD EGGOLD

In fiscal year 2008, work was proposed to complete a design, plan and permit for enhancing up to 2 miles of Mole Creek and adjoining former wetlands along an easement obtained by the WDNR in 2004. After obtaining the easement and proposing work at the site, the entire construction corridor (WDNR easement) was identified as Tier 3 Butler's Garter Snake habitat and recently as a mapped floodplain by FEMA. What was once proposed to be a relatively simple plan and design leading to construction of a project via a Manual Code approval, required significant more effort in meeting requirements to protect the Butler's Garter Snake and it's habitat and a more detailed hydrologic and hydraulic analysis to satisfy local floodplain ordinances and FEMA requirements (e.g., Letter of Map Revision). A limited term employee with the Bureau of Environmental Assessment and Review (BEAR) was working on field collections for the Butlers and habitat assessments to verify the tier level of habitat, and absence or presence of specimens.

In fiscal year 2009, work was continued on regulatory issues including Butler's Garter Snake Tier 3 habitat assessment and archeological review for State Historic Preservation Office (SHPO). The revised FEMA floodplain was adopted by the county and V. Saukville.

In fiscal year 2010, the project was not started due in part to 1) a Butler's Garter Snake issue and 2) the fact Mole Creek is mapped in Ozaukee Co in a floodplain and any work conducted in this stream would necessitate a hydrologic and hydraulic floodplain analysis.

The Butler's Garter Snake (BGS) issue started to be addressed using a field survey to determine if these snakes are present in the project area. In June, 14 boards that would provide cover for any garter snake in the area were set out. The plan was to check those boards a total of 12 times. The boards were checked 10 times and no BGS were found in the area. Once this survey is completed, future plans for this project can be made.

WEST CENTRAL REGION



◆ Fordham Creek, Plover River, Brewer Creek, Tomorrow River and Campbell Creek – Adams, Juneau and Portage Counties

Fiscal Year: 2008 – 2010

Contact: JASON SPAETH

In fiscal year 2008, over 10,000 feet of stream were brushed in Fordham Creek, Plover River and Campbell Creek. In Brewer Creek, 2 sets of jetted overhead bank covering 75 feet in total length were installed as well as 1 digger log and 3 log deflectors.

In fiscal year 2009, work was completed on 800 feet of the Tomorrow River Rolling Hills Road that included; 1) 38 LUNKER structures totaling 304 feet in length and 2) 775 Christmas Trees bundles with the help of the Izaak Walton League. Other work plans call for, covering the structures, the installation of 50 boulder retards and 20 half logs and other various woody debris. Campbell Creek (1,500 Feet) 1) Installed 5 sets of jetted overhead bank covers 225 feet total in length. 2) Installed 15 log retards to provide mid channel cover as well as current deflectors. 3) Installed 1 digger log 4) covered all structures with sandbags. 5) Installed 1 wing deflector using sandbags. The total cost of the project was \$4,225.

In 2010, trout crews were able to complete 0.75 miles of new trout habitat work this year on Fordham Ck. Brush bundles, LUNKER structures, boulder retards and digger logs were used.

◆ Pine Creek, Eau Galle, Elk Creek, Gilbert Creek, Parker Creek – Chippewa, Dunn, Pepin, St. Croix Counties

Fiscal Year: 2008 - 2010

Contact: BOB HUJIK

In fiscal year 2008, 2000 feet of stream were restored on Pine Creek using 5,800 tons of rock, 44 LUNKER structures, 6 rock grade control plunge-pools, 5 cross-log plunge-pools, 3 vortex weirs and 12 rootwads. Then it was mulched and seeded. Eau Galle was restored (1,940 ft) with 2 rock weirs 9 LUNKER structures, and 2 rock plunge-pools. Soil was put over the entire length of rock and then it was mulched and seeded. Approximately 340 ft of Eau Galle-Elmwood banks were stabilized with 10 tons of rock and 1,850 ft of Gilbert Creek banks were stabilized with 2,000 tons of rock, 36 LUNKER structures, 4 rock grade control/plunges, 3 cross-log plunges, 4 root-wads, 3 spawning riffles. The banks were then seeded and mulched. About 4,000 feet of Elk Creek was restored with 7,000 tons of rock, 45 LUNKER structures, 6 rock grade control/plunge pools, 5 cross-log plunges. The banks were then seeded and mulched.

In fiscal year 2009, three projects were conducted. On Elk Creek in Chippewa County crews restored 3,900 ft of highly degraded stream. Crews sloped the banks back at a 4 to 1 slope and used nearly 700 tons of ungraded



Habitat restoration work on Timber Coulee Creek, Vernon County. Photo: Jordan Weeks.

limestone rock along the stream edge, narrowing the stream. Crews placed over 30 LUNKER structures in the stream, created 5 plunge pools, added many boulder retards and made 2 vortex weirs. Several hundred hours of volunteer time was added to the project by various groups including Trout Unlimited. On Gilbert Creek, Dunn County, 1,800 feet of stream thread was restored. Nearly 7,000 tons of rocks were used along the stream banks to control erosion after the banks were sloped at a 4 to 1 ratio. Onsite logs and rootwads were used to provide habitat and 25 LUNKER structures were built and installed by volunteers and DNR crews. Cost of the project was approximately \$85,000. Parker Creek, St Croix County, was completed in spring 2009. This 5,000 foot project was funded by Priority Watershed funds. Over 9,000 tons of rock were used, 45 LUNKER structures were built and installed; 5 plunge pool/grade controls were constructed; many rootwads and boulder retards were installed. Volunteer efforts came from various Trout Unlimited groups, local citizens, and other sportsmen clubs. Project cost was approximately \$212,000.

In fiscal year 2010, three projects were completed (Elk Ck, Parker Ck and Gilbert Ck) totaling 2.35 miles. Habitat improvement techniques included: sloping of banks, erosion control, LUNKER structures, root wads, boulder retards, log weirs, plunge-pools and wood. Projects were funded by Trout Stamp, St Croix County, Trout Unlimited Chapters and various sportsman clubs.



Traverse Valley habitat project included channel shaping, woody debris for cover, rip rap rock, bank sloping, box elder tree removal and planting native grasses on the stream banks



Brook trout response to habitat development on Bruce Valley Creek, Trempealeau County, resulted in a 500% increase in adult brook trout numbers and increased natural reproduction.

◆ **Mormon Coulee Creek, Dutch Creek, Tainter Creek, Coon Creek, Copper Creek, Sugar Creek, Reads Creek, Coon Creek, and Leon Creek – Crawford, La Crosse, Monroe and Vernon Counties**

Fiscal Year: 2008 - 2010

Contact: MIKE LEONARD and JORDAN WEEKS

In fiscal year 2008, restoration work was performed on Mormon Coulee Creek, Dutch Creek, Tainter Creek, Coon Creek and Copper Creek totaling 0.53 miles (2,780 feet) of stream length. The total number of structures installed was 14 rock weirs, 22 LUNKER structures, 23 in-stream logs/root wads, 7 machinery crossings, two cattle watering areas and numerous boulder retards. The estimated average cost per mile of stream restored was \$125,373.00.

A total of 3,305 cubic yards of riprap rock was hauled and stockpiled along the stream banks of Sugar Creek, Reads Creek and Tainter Creek to be used for future projects. This work along with the cost was not included in the amount of miles of stream restored, nor the estimate for the cost per mile of stream restored.

In fiscal year 2009 restoration work was performed on Tainter Creek, Coon Creek and Leon Creek totaling 0.38 miles (2,020 feet) of stream length. The total number of structures installed was 5 rock weirs, 6 LUNKER structures, 21 in-stream logs/root wads, 2 machinery crossings, one cattle watering area and numerous boulder retards. In addition, 4 backwater pools were constructed to create habitat for forage, reptiles, amphibians and other wildlife. The estimated average cost per mile of stream restored is \$137,254. Riprap rock was hauled and stockpiled along the stream banks of Tainter Creek and will be used for future projects. This work along with the cost for this work was not included in the amount of miles of stream restored, nor the estimate for the cost per mile of stream restored.

In fiscal year 2010, restoration work was performed on Sugar Creek and Tainter Creek in Crawford County totaling 0.34 miles (1,769 feet) of stream length. The Prairie Rod & Gun Club matched County Aide funds that helped to purchase some of the riprap rock for this project. The numbers of structures installed were 12 rock weirs, 6 LUNKER structures, several in-stream logs/root wads and numerous boulder retards. In addition, 3 small backwater pools were constructed to create habitat for forage, reptiles, amphibians and other wildlife. The estimated average cost per mile of stream restored was \$148,065.

Crawford County Aide funds along with matching funds from the Prairie Rod & Gun Club purchased riprap rock that was hauled and stockpiled along the stream banks of Tainter Creek and will be used for a future project. This work along with the cost for this work was not included in the amount of miles of stream restored, nor the estimate for the cost per mile of stream restored.

◆ **Burns Creek - La Crosse County**

Fiscal Year: 2009 & 2010

Contact: MIKE LEONARD and JORDAN WEEKS

In fiscal year 2009, restoration work was performed on Burns Creek on three separate segments with different land owners. Two segments received complete restoration work and the third segment only had a machinery crossing installed to allow work for next fiscal year. The total length of stream restored was 0.50 miles (2,640 feet). The work included the installation of 19 LUNKER structures, 13 weirs, numerous cross channel and in-stream logs, 4 cattle/machinery crossings, and numerous boulder retards. In addition, 7 backwater pools and/or stream bank scrapes were constructed to create habitat for forage, reptiles, amphibians and other wildlife. The estimated average cost per mile is \$89,897.

In fiscal year 2010, riprap rock was hauled and stockpiled to the third segment of the project, but no stream work was performed. This project is to be completed in fiscal year 2011 when the stream work will be performed for the third segment along with a fourth segment on Little Burns Creek.

◆ **Coon Creek – Vernon County**

Fiscal Year: 2009 & 2010

Contact: MIKE LEONARD and JORDAN WEEKS

In fiscal year 2009, the work for this project included intense tree removal on state owned property along a 2,000 foot stretch of Coon Creek. The tree removal was clearing the way for next fiscal year when trout stream restoration work, the construction of two wildlife scrapes and the planting of prairie species. The majority of the trees that were removed will be utilized for in-stream habitat, habitat in the scrapes that will be constructed, and for upland brush pile habitat. The estimated cost per mile of stream, for the tree removal only, was \$22,292.

In fiscal year 2010, restoration work was performed in a cooperative project with the Coulee Region Trout Unlimited (TU) and Vernon County NRCS on Coon Creek in Vernon County totaling 0.38 miles (2,000 feet). The high stream banks of this project constituted extensive work for removing the soil to create a 4:1 slope along with shaping and riprapping the stream banks. An estimated 7,000 cubic yards of soil was removed from the flood plain and 4,220 cubic yards of riprap rock was used for stream bank riprap and in-stream structures. A considerable amount of in-stream cover was installed including 7 rock weirs, numerous boulder retards and large woody debris. Small backwaters along with the 4 small wildlife scrapes were constructed to create habitat for forage, reptiles, amphibians and other wildlife. One turtle hibernacula and one snake hibernacula were constructed and installed to attract and harbor turtles and snakes. The planting of prairie species were incorporated into the upland portion of the stream banks. Many people have made positive comments towards this project. The president of the Coulee Region TU who acquired the grant for this project stated, "I would like to say that this is the best and most natural project I have ever seen anywhere! You have done some amazing work on this section of water. I especially like the shallow areas you incorporated into the work. This project has it all, deep runs, shallow runs, riffles, pools and I really think the in-stream boulders are a huge improvement over some of the other (older) projects." The estimated cost per mile of stream restored is \$345,991. The estimated cost for a contractor completing this same work is \$1,080,000.

◆ Pine Creek, Traverse Valley Creek, Bruce Valley Creek, Borst Valley Creek, French Creek, and Tank Creek - Trempealeau and Jackson Counties

Fiscal Year: 2008 - 2010

Contact: DAN HATLELI

In fiscal year 2008, trout habitat restoration projects were done on the following coldwater streams: Pine Creek, Traverse Valley Creek, Bruce Valley Creek, and Borst Valley Creek which are all in Trempealeau County. For Pine Creek, 1400 feet of stream bank was cleared of brush/trees, rocked, sloped, raked and seeded and the following habitat was added: 11 plunge pools, 11 rock grade controls, 4 riffles, 14 cover logs, and 12 rock wing current deflectors. The majority of the stream thread was narrowed to improve flow and water temperature characteristics and expose preexisting gravel. Approximately 1000 cubic yards of rock rip-rap were liberated from the Jackson County Iron Mine and hauled to the project site. The total project length was 1,600 feet. For Traverse Valley Creek, 1000 feet of stream bank was cleared of brush/trees, rocked, sloped, raked and seeded. In addition, the following habitat was added: 5 riffles, 10 rock grade controls, 6 jetted over-head bank covers, 20 rock wing current deflectors, 10 pools, and 12 cover logs. Approximately 800 cubic yards of rock rip-rap were hauled to the site from either the Jackson County Iron Mine or a private pit. Total project length was 2,000 feet. For Bruce Valley Creek, 200 yards of rock rip-rap were hauled to the site from a private pit. Rock was used to rip-rap select eroded bank areas, cover 6 over-head bank covers, create 12 grade controls, and placed in the channel for additional habitat. Additional habitat included 6 cover logs and 12 pools. Eroded banks were sloped and seeded. This work was incorporated into a 1500 foot segment of the creek. For Borst Valley Creek, 500 feet of stream bank was cleared of brush/trees, rocked, sloped, raked and seeded, and the following habitat was added: 3 riffles, 9 rock grade controls, 7 cover logs, and 6 pools. Approximately 550 yards of rock were hauled to the site from either the Jackson County Iron Mine or a private pit. The total project length was 735 feet. Additional work included 4 work days for full-time Fish Biologist and Fish Technician to review and develop work activities and meet with landowners. Because some of these projects had outside monetary donations, and each required various amounts of rock, habitat devices, and equipment, cost of completed stream work per mile is hard to estimate, but cost approximately \$80,000.

In fiscal year 2009, trout habitat restoration projects were done on the following coldwater streams: Pine Creek and Bruce Valley Creek in Trempealeau County and French Creek and Tank Creek in Jackson County. For Pine Creek, 920 feet of stream bank was cleared of brush/trees, rocked, sloped, raked and seeded. In addition, the following habitat features were added: 4 plunge pools, 5 rock grade controls, 1 riffle, 21 cover logs, and 1 rock

wing current deflector. The majority of the stream thread was narrowed to improve flow and water temperature characteristics and expose preexisting gravel. For Bruce Valley Creek, 100 yards of rock rip-rap were hauled to the site from a private pit. Rock was used to rip-rap select eroded bank areas, cover 4 over-head bank covers, create 5 grade controls, or placed in the channel for additional habitat. Additional habitat included 3 cover logs and 4 pools. Eroded banks were sloped and seeded. This work was incorporated into a 400 foot segment of the creek (work done on both banks). For French Creek, 1228 feet of stream bank was cleared of brush/trees, rocked, sloped, raked and seeded. In addition, the following habitat features were added: 4 rock weirs, 6 plunge pools, 13 cover logs, 5 rock wing current deflectors, 9 boulder retards, 1 riffle, and 4 brush wing deflectors. Approximately 338 cubic yards of rock rip-rap were hauled to the site from the Jackson County Iron Mine. Total project length was 1258 feet (includes both banks). For Tank Creek, 760 feet of stream bank was cleared of brush/trees, rocked, sloped, raked and seeded. In additions, the following habitat features were added: 7 rock grade controls, 16 cover logs, 6 pools, 18 boulder retards, 2 riffles, and 2 rock wing current deflectors. Approximately 180 cubic yards of rip-rap were hauled to the site from the Jackson County Iron Mine. Total project length was 830 feet (both banks). Additional work included 4 work days for full-time Fish Biologist and Fish Technician to review and develop work activities at the Tank Creek Site and complete necessary permit requirements. Because some of these projects had outside monetary donations and each required various amounts of rock, habitat devices, and equipment, cost of completed stream work per mile is hard to estimate, but it was approximately \$80,000.

In fiscal year 2010, trout habitat restoration projects were done on the following coldwater streams: Pine Creek and Traverse Valley Creek in Trempealeau County and French Creek in Jackson County. In Pine Creek, 420 feet of stream bank was cleared of brush/trees, rocked, sloped, raked and seeded, and the following habitat features were added including 13 cover logs, 1 boulder retard, and 1 brush cover. The majority of the stream thread was narrowed to improve flow and water temperature characteristics and expose preexisting gravel. In Traverse Valley Creek, 676.5 tons of various sized rock (shot, breaker, boulder) were hauled to the site from a private pit for future in stream work. In French Creek, 1420 feet of stream bank was cleared of brush/trees, rocked, sloped, raked and seeded, and the following habitat features were added: 5 rock weirs, 5 plunge pools, 31 cover logs, 11 rock wing current deflectors, 42 boulder retards, 1 riffle, and 9 brush wing deflectors. Approximately 800 cubic yards of rock rip-rap were hauled to the site from the Jackson County Iron Mine. Because each of these projects required various amounts of rock, habitat devices, and equipment, cost of completed stream work per mile is hard to estimate, but it was approximately \$80,000.

◆ **Elk Creek, Pine Creek, Sugar Creek and Tainter Creek - Chippewa, Dunn, Jackson, Peirce, Trempealeau, and Vernon Counties**

Fiscal Year: 2008 - 2010

Contact: PETE SEGERSON

In fiscal year 2008, this provided limited term employee support for trout habitat projects on Elk Creek in Chippewa County, Pine Creek in Trempealeau County, Sugar and Tainter Creeks in Vernon County, Gilbert Creek in Dunn County. Most of the work activity was heavy equipment, rock, and other material hauling.

In fiscal year 2009, one West Central Region Fisheries Operations limited term employee acquired a CDL license and was operating and transporting dozers and excavators on regional trout habitat projects. Streams worked on include Traverse Valley and Pigeon Creek in Trempealeau County, Tank Creek in Jackson County, Pine Creek in Pierce County, and Gilbert Creek in Dunn County. Heavy equipment, lumber, and rock were delivered to trout habitat sites throughout the West Central Region.

In fiscal year 2010, streams worked on included Traverse, Pigeon, Borst, and Bruce Valley in Trempealeau County, French Creek in Jackson County, Trout and Elk Creeks in Chippewa County, and Burns Creek in La Crosse County. Heavy equipment, rock, and lumber have been delivered to trout habitat sites throughout the West Central Region.

TROUT HABITAT MAINTENANCE

NORTHEAST REGION

◆ **Marinette and Oconto County streams**

Fiscal Year: 2008 - 2010

Contact: MIKE DONOFRIO

In fiscal year 2008, sugar sand deposits along the stream banks of the Eagle Creek Marinette County were removed and stream banks were tapered then reseeded using an experimental coconut seed blanket to aid in seed germination and increase success of plant growth and reestablish stabilized banks. Sand trap at the downstream end of the habitat section on Eagle Creek was also dug out and sediment removed to an upland location. No work was completed on the scheduled maintenance of the North Branch Beaver Creek (Marinette County) habitat area.

In fiscal year 2009 in Marinette County, 2-Sand traps were re-dredged (Upper Middle Inlet & Eagle Creeks), 1100 feet of trout stream were brushed and 10 bank covers were given rip-rap maintenance (30 cubic yards w/co-op from Trout Unlimited). In Oconto County, 10000 feet of trout stream were brushed with a co-op from Trout Unlimited. A point bar was extended by applying brush bundling 150 ft long & 25 ft wide (South Branch Oconto River).

In fiscal year 2010, 12,700 feet of tag alder encroachment removal was conducted on 5 trout streams. The streams in Marinette County were Eagle River, K.C. & N Br Beaver Creeks, and the streams in Oconto County were 1st S Br Oconto & S Br Oconto Rivers including 150 ft of brush bundling on the S Branch.

◆ **Northeast Region streams**

Fiscal Year: 2008 & 2009

Contact: JOHN NELSON

In fiscal year 2008, the crew did 3,500 feet of brushing on Willow Creek in Waushara County and used some of the brush to construct brush bundles in the stream. They brushed 1,000 ft of stream at Caves Creek in Marquette County. They also spent time maintaining equipment for trout habitat work on the job site.

In fiscal year 2009, most of the costs associated with this project were to pay for equipment and materials that are used region wide for the trout habitat program. Such things as rain gear, safety equipment and equipment repairs entirely associated with trout habitat work were purchased. It also funded a limited term employee that worked on trout habitat projects implemented by the Wild Rose Habitat station.

◆ **Peterson Creek, Lawrence Creek, Caves Creek, Chaffee Creek, Trout/Nace Creek, Cedar Springs Creek, Jones Creek, Kaminski Creek, South Branch Little Wolf and other Marquette, Shawano, Waushara and Waupaca County streams**

Fiscal Year: 2008 - 2010

Contact: RON BRUCH

In fiscal year 2008, 1000 feet of improvement on Peterson Creek, Waupaca County was completed. This included selective brushing and placement of brush (Christmas tree) bundles. About 200 feet of Lawrence Creek, Marquette County was improved where old structures and stream braids were repaired using sand bags and brush. Also, 500 feet of improvement on Caves Creek, Marquette County was completed and brushed and fallen trees were removed.

In fiscal year 2009, several streams were developed and maintained in the following counties: Marquette, Waushara, Waupaca, and Shawano. Intensive development of overhead bank covers, brushing

and brush bundles on 0.3 miles of the Lawrence Creek below 1st Avenue was completed. Pilings for all structures were jettied in by hand and all heavy equipment work was done in the winter because of soft access. Tag alder cuttings in conjunction with Christmas tree bundles were utilized to construct brush bundles and fill braids above 1st Avenue. DNR coordinated brush bundle project and worked with Trout Unlimited Volunteers. About 1,000 feet of Lawrence Creek was impacted.

Reconnaissance and mapping of easement for intensive development of overhead bank covers and brush bundling project was completed on Trout/Nace Creek. Project was designed and permits were obtained. The project was 80% completed by June 30, 2009 and the total length of stream affected was 0.6 miles.

Four tiers of beaver dams were removed on Chaffee Creek and minor habitat restoration was completed on about 3000 feet of stream upstream of 11th ct.

During two work days, reconnaissance, mapping, and design were completed and permits were obtained for a cooperative effort with Trout Unlimited on the South Branch of Little Wolf. Overhead covers, brush bundles and large woody debris are planned to be used on this .5 mile job. Approximately 10% of the job was completed.

Reconnaissance, mapping, design and permits were completed for a cooperative effort with Trout Unlimited on .4 miles of Cedar Springs Creek. Rock, wood and some pilings will be replaced on old structures. Brush was removed and used in bundles and the project was about 10% complete.

In fiscal year 2010, on Cedar Springs in Waushara County, brushing, brush bundles and structure removal was done on 2,000 feet of stream with cooperation from Trout Unlimited and Fox Valley Tech. There was still structure work to be completed. Brushing, brush bundles and overhead bank cover construction work was done in cooperation with Trout Unlimited on 2,600 feet of South Branch Little Wolf. Approximately 1,800 feet were completed.

Kaminski Creek, in Waushara County was brushed and herbicide was applied to tag alder and buckthorn on 1,500 feet of stream. Jones Creek in Waushara County was also brushed and herbicide was applied to tag alder and buckthorn on 1,000 feet of stream.

NORTHERN REGION

◆ Plum Creek - Vilas County and other Headwater basin streams

Fiscal Year: 2008 & 2009

Contact: MIKE VOGELSANG

In fiscal year 2008, a crew of 2-3 limited term employees inspected and maintained all past habitat project sites in the basin. Approximately 90% of the work involved brushing to remove excess over hanging cover and prolong life span of recently completed projects. In some cases boom covers were removed or repaired (Plum Creek, Vilas County); mulching and seeding re-done over areas that didn't take.

In FY 2009, a crew of 2-3 limited term employees inspected and maintained all past habitat project sites in the basin, including outlet streams to spring ponds. Approximately 90% of the work involved brush-



Before and after photos of the trout habitat restoration work that was completed on a targeted 0.5-mile reach of Foulds Creek, Price County. Habitat work included refurbishing of degraded cover structures, brushing and brush bundles, and reestablishing a defined stream channel through thick emergent vegetation.

ing to remove excess over hanging cover and prolong life span of recently completed projects. Several old and failing boom covers were removed or repaired on Plum Creek, Vilas County.

◆ **Rock Creek, a Class 1 trout stream and tributary of the Popple River - Florence County**

Fiscal Year: 2009

Contact: MIKE VOGELSANG

Two 64"x43"x30' culverts were purchased with these funds to replace a perched and failing culvert on Rock Creek (NE 1/4 SE 1/4 Sec 29 T38N R 16E). Work was conducted by the USFS and involved the replacement of two other problem culverts upstream on this creek. Rock Creek is now in a free-flowing state with no fish passage issues for trout.

◆ **Beaver Brook, Clam River, and Upper Pine Creek – Barron, Polk and Washburn Counties**

Fiscal Year: 2008

Contact: TERRY MARGENAU

A total of 2,000 feet of Beaver Brook was brushed from bank to bank. Approximately 400 feet of stream bank erosion was repaired with Envirolok sand and soil filled bags at five different locations on stream. A total of 1,800 feet of Upper Pine Creek was brushed 10 feet back from each bank and a total of 300 yards of rock were hauled in for a future project on the Clam River.

◆ **Iron River, Big Brook, South Fork White River, Dogtown Creek, Five mile Creek Bayfield County**

Fiscal Year: 2008 - 2010

Contact: TERRY MARGENAU

In fiscal year 2008, three sections of a damaged boom covers (24 feet.) were removed and replaced as part of maintenance activities of the South Fork of the White River. Work also included implementing erosion control practices and re-vegetation of ground disturbance caused by the project activity. In addition, washed round gravel matching recently conducted pebble counts was used to construct three 125 sq. feet spawning areas in the project area.

Maintenance activities on Big Brook involved manual removal of approximately 60 dilapidated boomcovers placed during habitat projects from 1965 to 1977. All boomcovers in the lower 4 miles were removed. Remaining boomcovers lying in the upper 2 miles were scheduled to be removed during the first quarter of fiscal year 2009.

In fiscal year 2009, one damaged boom cover was replaced in the South Fork of the White River (Bayfield County) and another was repaired on the Iron River Main stem. On Big Brook (Bayfield County) approximately 15 dilapidated boomcovers remaining from habitat work conducted from 1965 to 1977 were removed. In total, maintenance work in fiscal year 2008 and fiscal year 2009 resulted in the manual removal of nearly 75 badly damaged boomcovers which were causing deleterious flows and were aesthetically displeasing. Also, the township and county with assistance from the DNR, replaced a culvert that was perched and created a fish passage barrier. Fisheries staff (Trout habitat and NOR operations) provided manpower and equipment, while materials (culvert, rock) were provided by township. This was a cooperative effort involving the local town, county, USFWS, and NPS. Beaver Brook (Washburn County) - One beaver dam and 1-60 feet erosion control were removed in Beaver Brook, Washburn County and another beaver dam in Engle Creek, Barron County was also removed.

In fiscal year 2010, all habitat work that had been completed on a 2.0 mile section of South Fork since the mid 1990s was inspected and found to be in good condition and functioning as intended. Similar surveillance efforts of habitat work completed on a 0.5 mile section of the Iron River during the late 1990s was found to be functioning and in good condition. About 1.1 mile on Dogtown Creek was brushed ten feet back from the edge of stream.

◆ Foulds and Newman Creeks - Price County

Fiscal Year: 2008 – 2010

Contact: SKIP SOMMERFELDT

In fiscal year 2008, trout habitat restoration work was completed on the targeted 0.5-mile reach of Foulds Creek.

In fiscal year 2009, contract funding and oversight for maintenance and repair work to the 0.5-mile intensive improvement area on the upper end of Foulds Creek was provided. This work included refurbishing cover structures, brushing and brush bundles, and general stream maintenance.

In fiscal year 2010, maintenance and repair work to the 0.5-mile intensive improvement area on the upper end of Foulds Creek was postponed due to manpower shortages caused by an intensive fire season for US Forest Service personnel. Project funds were carried over to the next fiscal year. This habitat work includes the refurbishing of degraded cover structures, brushing and brush bundles, and re-establishing a defined stream channel through thick emergent vegetation.

◆ South Fork Main Creek – Rusk County

Fiscal Year: 2010

Contact: DAVE NEUSWANGER

About \$4,000 of the \$8,600 FY10 allotment went to pay a contractor who repaired the cattle exclusion fencing on both banks of a 0.3-mile reach of South Fork Main Creek (Rusk County) near Bridge Road in October 2009. The inspection revealed that the contractor completed the job well.

SOUTH CENTRAL REGION

◆ Black Earth Creek, Mt. Vernon Creek, Hefty Creek, Story Creek, Allan Creek, Raccoon Creek – Dane, Green and Rock Counties

Fiscal Year: 2008 & 2009

Contact: DON BUSH

In fiscal year 2008, major stream side brushing was accomplished on 4 fee and easement parcels (below village of Black Earth, Schoepp parcel, Rettumond parcel, and above Sherbel Road) on Black Earth Creek. Woody sapling vegetation, nuisance boxelder and willow, and invasive buckthorn and honeysuckle were mowed and sprayed to recreate grassed riparian corridors. Additionally, on parcels below Salmo pond, cedar trees were thinned and limbed to open the stream to light. Fire breaks were established on all parcels to aid in planned burns in the near future. Additional easement negotiations were initiated with Carolyn Mae (Pine Quarry Farms) to widen the access and allow for vegetation management in the stream portion below South Valley Rd. Tree drops were added in all referenced areas

in partnership with Trout Unlimited to demonstrate trout response to woody debris and to increase instream cover where lacking. Herbicide and material support was supplied to the Southern Chapter of Trout Unlimited and the Deer Creek Sportsman's Club to assist in their individual work day efforts.

In fiscal year 2009, maintenance work consisted of mowing using a FECON rotary head affixed to a skid steer track vehicle, flail head decks attached to excavator booms, and the use of fire.

Maintenance work was conducted on 4 individual parcels on Black Earth Creek (Schoepp, Allen, Salmo Pond- Ranch tavern, and Rolf) and on Vermont Creek.

In Black Earth Creek, maintenance mowing to control new sprouting of undesirable woody vegetation (willow, box elder), invasive control (parsnip, teasel) and to create and/or retain fire breaks occurred on 26,100 feet of stream bank and parcel perimeter. On Vermont creek, 2,600 lineal feet of mowing was performed near Windy ridge Road as well as a controlled burn of fisheries lands south of Michaleas Rd.



Major stream-side brushing was accomplished on several easement parcels on Black Earth Creek. Photo: Scott Harpold

SOUTHEAST REGION

◆ Bluff and Whitewater Creeks –Walworth County

Fiscal Year: 2008 - 2010

Contact: SUE BEYLER

In fiscal year 2008, 1,000 feet of streambank were brushed to improve access to the streambanks. Struc-

tures were evaluated and some were determined to need repair, replacement or relocation.

In fiscal year 2009, a field survey was done to identify half log and boomcover structures that needed replacement or maintenance.

In fiscal year 2010, trout habitat structures were inspected and site preparation, including brushing and mowing, completed. Materials were purchased and equipment prepared.

WEST CENTRAL REGION

◆ Emmons Creek, Tomorrow River, Fordham Creek, Fountain Creek, Brewer Creek, Little Roche-A-Cri Creek - Adams, Juneau and Portage Counties

Fiscal Year: 2008 - 2010

Contact: JASON SPAETH

In fiscal year 2008, 44 structures totaling 352 feet, 2 rock wings, and 13 Christmas tree bundles (800 Christmas trees) were installed in Emmons Creek, 4,670 feet and in the Tomorrow River (Rolling Hills Road), 700 feet. About 700 Christmas trees were installed with the help of the Izaak Walton League.

In fiscal year 2009, Fordham Creek upstream from CTH J (2670 feet) was maintained. Ten jetted overhead bank cover structures totaling 589 total feet in length were installed. The entire 2,362 feet of stream that was previously improved in 2000-2001 was re-brushed. Two plunge pools and two digger logs were installed. Fordham Creek at 10th was re-brushing 2981 feet (.56 miles). Brushed both banks On the Tomorrow River at CTH I, 2000 feet were re-brushed on both stream banks. In Fountain Creek, Juneau County, 4,775 (0.90 miles) of stream on both banks were re-brushed. In Brewer Creek, 3700 feet (0.71 miles) of stream on both banks were re-brushed. Little Roche-A-Cri Creek 10th Ave was Re-brushed for 1679 ft (0.32 miles).

In fiscal year 2010, over 1 mile of trout habitat maintenance was completed. Brush bundles, wing deflectors and jetted overhead bank covers will be installed along eroded banks controlling amounts of sediment entering the stream as well as increasing aesthetic values.

◆ Spring Coulee Creek, Copper Creek, Nederlo Creek, Sugar Creek - La Crosse, Monroe, Vernon and Crawford Counties

Fiscal Year: 2008

Contact: MIKE LEONARD and JORDAN WEEKS

In fiscal year 2008, maintenance work was performed in response to damage from flooding on Spring Coulee Creek, Copper Creek and Nederlo Creek totaling 0.32 miles (1,180 feet) of stream length. The work included deposition removal and/or reconstruction of machinery crossings, stream channel reconstruction, waterway repair, Hewitt ramp repair and stream bank riprap repair. The estimated average cost per mile of stream maintained was \$24,060.00. Three beaver dams were removed on Sugar Creek which impacted approximately 0.32 miles (1,695 feet) of stream length.

BEAVER CONTROL

CENTRAL OFFICE

◆ Statewide

Fiscal Year: 2008 - 2010

Contact: STEVE AVELALLEMANT

This cooperative agreement between DNR and USDA Wildlife Services is for beaver control and dam removal on priority watersheds, mostly in the Northern Region. The work in Central Office consisted of establishing a cooperative agreement, monitoring monthly reports of accomplishments, and paying bills from Wildlife Services.

In fiscal year 2008, APHIS kept 750 miles of trout stream beaver free. A cooperative agreement and work plan was established. About 90% of the work was in the Northern Region.

In fiscal year 2009, APHIS beaver control activities were completed as scheduled and 1,517 miles of trout stream were kept free of beaver dams.

In fiscal year 2010, APHIS-Wildlife Services completed beaver control and dam removal on 1,500 miles of trout stream statewide.

NORTHEAST REGION

◆ Marinette and Oconto county streams

Fiscal Year: 2008 - 2010

Contact: MIKE DONOFRIO

This is a continuing project which controls beaver populations in 52 trout streams in Marinette and Oconto counties, protecting 424 miles of stream. In fiscal year 2008, all streams had been flown during fall, after leaves had fallen. Maps, displaying beaver dam locations, were made available for any interested trappers. Numerous contacts were made with trappers in reference to dam locations and with property owners requesting permission to remove dams off their properties. Beaver colonies on private properties were trapped along with colonies where there was no apparent interest with trappers. In total there were 94 beaver trapped and 19 dams removed.

In fiscal year 2009, the same streams in Marinette & Oconto Counties were flown to locate new beaver colonies. Maps, with beaver colonies marked on them, were provided and available for interested trappers. Of the total streams, 22 (124 miles) had beaver activity on them. Beavers (56) and beaver dams (39) were removed from these streams.

In fiscal year 2010, all 52 trout streams were flown in fall of 2009 to locate active beaver colonies. Out of the all the streams surveyed, 17 streams (73 miles) had beaver dams. Beavers (56) and beaver dams (65) were removed from these 17 streams.

◆ Upper Fox Wolf Streams - Marquette, Waupaca, and Shawano Counties

Fiscal Year: 2008 - 2010

Contact: SHAWN SULLIVAN, AL NIEBUR, DAVE BARTZ

In fiscal year 2008, one beaver dam was blown on Tagatz Creek and two dams were removed and 4 beavers were trapped on Chaffee Creek in Marquette County. Staff responded to several complaints and inspected area streams as necessary. A local trapper was contracted to remove 7 beaver on the Whitcomb, Trout/Nace, Peterson, and South Branch Little Wolf Rivers. The trapper also removed several dam obstructions on all streams.

In fiscal year 2009, 4 tiers of beaver dams were removed on the Chaffee Creek

In fiscal year 2010, a private trapper was contracted with to remove 8 beavers from Trout/Nace and South Branch Little Wolf River. Two beavers were trapped and removed from Willow Creek along with two dams and two dams were removed from the Chaffee Creek.

NORTHERN REGION

◆ Spring ponds in Lincoln and Langlade counties

Fiscal Year: 2008 – 2010

Contact: MIKE VOGELSANG

This is a continuing project that keeps more than 30 dredged spring ponds and 25 natural spring ponds free of beaver activity. This project maintains high quality trout water by keeping beavers and their dams off spring ponds, spring runs, feeder tributaries, and rivers. The purpose is to decrease or maintain the currently low beaver populations on selected trout water in Lincoln and Langlade Counties. Preserve quality and integrity of past management work on dredged spring ponds and natural spring ponds and their tributaries. Two limited term employees are dedicated to beaver control and removal work during late May through September.

In fiscal year 2008, all priority spring ponds and outlet tributaries were inspected and kept free of beaver activity.

In fiscal year 2009, all priority spring ponds and outlet tributaries were inspected and kept free of beaver activity. Beaver control efforts also took place on Ninemile Creek, a tributary to the Wolf River system. This was a cooperative effort with Wolf River Trout Unlimited and DNR, with DNR handling all the beaver/dam removal on State-owned lands within this tributary.

In fiscal year 2010, all priority spring ponds and outlet tributaries were inspected and kept free of beaver activity. Also at least 175 sites were checked (by foot or canoe) on tributaries from these spring ponds to larger mainstem systems in Lincoln and Langlade counties. Active and inactive beaver dams were removed, and beavers were trapped at these sites.

◆ Pine/Popple River Watershed – Florence and Forest Counties

Fiscal Year: 2009

Contact: MIKE VOGELSANG

In fiscal year 2009, funds were used to supplement beaver control work on the Pine-Popple River system, which would not have been possible otherwise. Effort was supplied by APHIS, and this project assured tributaries to the Pine-Popple were kept beaver free.

◆ **Chequamegon-Nicolet National Forest – Ashland, Bayfield, Rusk, and Sawyer Counties**

Fiscal Year: 2008 - 2010

Contact: SKIP SOMMERFELDT

This project is to control and/or minimize beaver damage to important aquatic and riparian habitats on 55 miles of classified trout stream in the Upper Chippewa Basin and Chequamegon-Nicolet National Forest. This project has not been fully funded for all years. In fiscal year 2010, some work was completed, including two separate contracts with USDA Animal Damage Control: 1) In September 2009 APHIS trappers removed 5 beaver and 8 beaver dams from Becky Creek (Rusk County) between Edgewood Road and the agriculture fields near US Highway 40; and 2) during follow-up maintenance in June 2010, one beaver and one dam were removed from the same site.

◆ **Iron River Watershed – Bayfield County**

Fiscal Year: 2009 & 2010

Contact: TERRY MARGENAU

Project proposals developed in fiscal year 2009 to begin beaver control on the Iron River watershed were initiated in fiscal year 2010. Work involved development of a landowner database of property owners along streams targeted for control, aerial reconnaissance of nearly 55 miles of stream and landowner contacts along the Upper East Fork and its tributaries. Efforts to date resulted in beaver control efforts on nearly 12 miles of high quality trout water and the removal of 29 beaver and 34 dams.

SOUTH CENTRAL REGION

◆ **Trout streams - Columbia and Sauk Counties**

Fiscal Year: 2008 & 2009

Contact: DAVE ROWE

In fiscal year 2008, only one stream, Lodi Creek, had significant beaver problems. Six beaver were trapped under this project and one large dam was blown under a statewide APHIS project.

In fiscal year 2009, this project paid for inspection of beaver activity and problems in Columbia and Sauk Counties. Activity on this project was limited, so beaver control will be folded into other trout projects in the future.

WEST CENTRAL REGION

◆ Area Class I and II streams - Buffalo, Clark and Jackson Counties

Fiscal Year: 2008 – 2010

Contact: DAN HATLELI

In fiscal year 2008, 22 beaver dams were removed from 6 Class I and II streams in Jackson and Trempealeau Counties. Streams included: South Fork Buffalo River (Class II) 6 dams, South Fork Trempealeau River (Class II) 1 dam, Pine Creek (Class I) 4 dams, French Creek (Class I) 2 dams, North Fork Trempealeau River (Class I) 6 dams, Tank Creek (Class I) 3 dams. A complaint of possible beaver activity was also responded to on Pigeon Creek (Class II). However, no dams were found. Locations of all beaver dams were provided to interested area trappers. All dam locations were checked later to determine if beavers had rebuilt the dams.

In fiscal year 2009, 24 beaver dams were removed from 7 Class I and II streams in Jackson and Trempealeau Counties. Streams included: South Fork Buffalo River (Class II) 8 dams, South Fork Trempealeau River (Class II) 2 dams, Pine Creek (Class I) 3 dams, Halls Creek (Class II) 2 dams, North Fork Trempealeau River (Class I) 3 dams, Tank Creek (Class I) 3 dams, North Fork Buffalo River (Class II) 3 dams. Locations of all beaver dams were provided to interested area trappers. All dam locations were checked later to determine if beavers had rebuilt the dams.

In fiscal year 2010, 21 beaver dams were located and removed from 7 Class I and II streams in Jackson and Trempealeau Counties. Streams included: Pine Creek (Class I) 2 dams, Halls Creek (Class II) 14 dams, Tank Creek (Class I) 3 dams, North Fork Buffalo River (Class II) 2 dams. Locations of all beaver dams were provided to interested area trappers. All dam locations were checked later to determine if beavers had rebuilt the dams.

CONTACTS

If you have any questions concerning specific projects in this report, please contact the personnel listed by phone or e-mail that are responsible for that specific project.

| | |
|--------------------|--|
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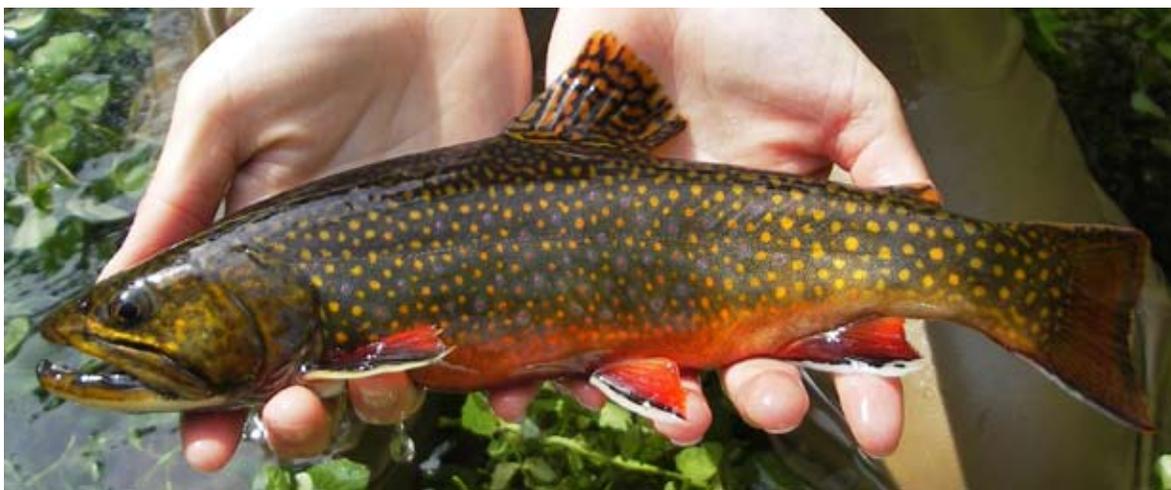
ACKNOWLEDGEMENTS

It is important to the Wisconsin Department of Natural Resources' Fisheries Management program that you find this document useful. To better meet this goal, direct your suggestions for improving this report to:

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dnr.wi.gov



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