



FISHERIES MANAGEMENT PLAN

15

YEARS OF PROGRESS

It all started from a blank piece of paper with public and agency partners at the table interested in making the Grand River fishery better. Volunteers and agency staff worked together to identify and work towards how they wanted “their river” to be managed and how to realize the potential of the waters flowing through their communities. This open and collaborative process has created a unique fisheries management plan where both agencies and community groups have taken ownership of the plan and are dedicated towards its implementation.

The Plan

Canadian Recreational FISHERIES AWARD



Award winners on Parliament Hill.

In June of 2009, several members of the Grand River Fisheries Management Plan Implementation Committee (GRFMPIC) were invited to Parliament Hill in Ottawa where the Honorable Gail Shea, Minister of Department of Fisheries and Oceans, presented The Canada's Recreational Fisheries Award to Warren Yerex and Larry Mellors representing the volunteer members of the GRFMPIC. The committee received this prestigious award to recognize their accomplishments in improving recreational fishing in the Grand River watershed.

The Grand River Fisheries Management Plan was built with consensus through a three-year process starting in 1995. Agency staff took direction from public partners to build a plan that integrated public input, addressed the Grand River Watershed Management Plan that GRCA was charged to complete; and the Cambridge Ministry of Natural Resources fisheries plan that required updating. This ultimately led to the development of the Grand River Fisheries Management Plan (GRFMP). The “Community-Based” approach involved fisheries managers from various agencies and representatives from the public, universities and fisheries groups. These people all worked together to complete the GRFMP by 1998. The strength of the Grand River Fisheries Management Plan is that it provides a balanced approach, relying on dedicated volunteers with their community ties and grass roots knowledge with technical expertise from agency staff. The GRFMP provides guidance on managing the fish resources and overall environmental health of the watershed.

This shared responsibility allowed the plan to easily transition to implementation after its publication in 1998. The partners involved have all continued to work towards making the river better as time, technical and financial resources become available.

The plan has contributed to several awards for the committee and its partners. Looking back over the past 15 years, the plan contributed towards the GRCA receiving the Theiss Riverprize, an International award for excellence in river management; an Amethyst Award, the highest honour for Ontario public service employees and the KW Bassmasters received an International B.A.S.S. award for fisheries stewardship excellence. The volunteer members of the committee were awarded the 2009 Canadian Recreational Fisheries Award. Several partners have received individual awards for work towards the common goal of improving the river. This recognition has been well-earned due to the commitment, vision and action in making the Grand River fishery better.

The river appears to be in good hands and moving in a very positive direction. But, there are still many ways the fishery can be improved. With current pressures the river faces from increased populations and the need to maximize production on the land, significant ongoing work is required just to keep the river in its current state. The partners of the Grand River Fisheries Management Plan are up for this challenge.



MNR Stewardship Rangers after a river debris removal project.

Celebrating fishing

Many different activities in the Grand River watershed are held each year to celebrate fishing and the river they require to thrive in. These events have helped bring many new anglers into the ranks. These events are largely volunteer driven and very affordable. The passion of our local anglers is contagious. Catch some of the excitement by attending one of these events.

Grand Waters... Grand Fish Celebration

The fish plan committee has hosted two celebration dinners in Brantford. Under the leadership of Larry Mellors, with the help of several committee members and sponsors, these events were very successful. These “Grand Waters...Grand Fish Celebration Dinner and Symposium” attracted partners, interested people and media to learn about the river and celebrate the group’s accomplishments while raising over \$20,000 to support future river improvements. These events also raised awareness of the actions taken through the fish plan to help the river and its fisheries to industry and community leaders who attended these events.

Grand River Spey Clave

A “clave” is a gathering fly rod anglers who like to Spey cast. This is a technique used mainly in pursuit of steelhead and salmon with long, two handed fly rods. The first Grand River Spey Clave was held in 2003. It has since become an annual gathering where as many as 250 people have attended. Held at Bean Park in Paris, the free event consists of Canadian and International fly fishers presenting various casting techniques to the stream side audience. This is an opportunity to meet and share stories with other spey fishing enthusiasts, equipment manufacturer’s and fishing guides.

All proceeds from this event help Friends of the Grand River deliver projects to improve the Grand River fishery. Plan on attending the 2013 Grand River Spey Clave on Saturday, September 14 and Sunday, September 15, 2013. For more information visit <http://www.grandriverspey.ca/>

Grand Opportunities Fly Fishing Forum

Friends of the Grand River hosts a celebration of the Grand River and fly fishing at Belwood Lake Conservation Area the first Saturday in June every year. This is an opportunity for fly fish friends to meet and share stories. There are on-river seminars, a BBQ steak lunch and used equipment sale. There is also a chance to support this organization that helps the tailwater area with fish stocking, clean-ups, volunteer river patrols, access improvements, habitat assessments and improvement projects. For more information visit www.friendsofthegrandrivers.ca

Canadian Fly Fishing Championships & Conservation Symposium 2006

The fourth time that the Canadian Fly Fishing Championships were held on the Grand River and Conestogo River tailwaters. This was the first time the event was in Ontario and was a tribute to the people who have worked to make these rivers quality fisheries. The event attracted over 60 participants and over 120 people attended the conservation symposium.

Cops Kids and Canadian Tire

These events have targeted youth at risk in urban centres in the Grand River watershed. Events in Waterloo Region, Guelph and Brantford have helped youth experience fishing as a healthy outdoor activity with police officers. This is done with police officers helping young

people on a recreational level. The fishing experiences can help build a new positive life skill that also introduces them to the outdoor environment. This type of experience has been shown to have very positive effects on urban youth at risk. The Waterloo Regional Police have been holding these events for the past few years exposing numerous youth to the sport of fishing on our local waters.

Watershed Education

Educating youth and watershed residents is important for the future of the Grand. In the watershed there are many people sharing their love of our local environment with future generations. These events take many forms, but the end goal is educating people to help keep the Grand a special river. Below are events where you will meet people passionate about the Grand and the valley it flows through.

The Ontario Stewardship Rangers and the Mill Creek Stewardship Ranger programs help train tomorrow’s environmental leaders. These Rangers experience various environmental management projects and learn through hands-on activities and expert training while getting paid. This is a super opportunity for a someone looking to make natural resource management a career.

In the watershed there are several fishing oriented clubs and community organizations that help get people out enjoying local waters and doing their part educating youth about fishing, completing clean up projects and doing rehabilitation work. Make sure you take advantage of these opportunities to pitch in or learn about the river valley we live in and support these folks that are sharing their passion for the watershed and doing their part to keep the river Grand.

Building Capacity for Aquatic Renewal

The Grand River Fisheries Management Plan originally used the term “Aquatic Renewal” to describe grassroots initiatives that would rehabilitate degraded aquatic ecosystems in the Grand River watershed to a more functional state. A great example of this is the ongoing renewal of Marden Creek back to a brook trout stream through community partners who have the knowledge and capacity to lead rehabilitation efforts on their home waters. Part of the Aquatic Renewal Program’s focus is training and empowering people to work in local streams.

The Aquatic Renewal Training Program instructs volunteers and professionals interested in watershed and stream rehabilitation. This instruction provides them the skills and mentoring needed to undertake on-the-ground projects. It is developing a new community of stream restoration managers to carry on from those that pioneered the field over the last 30-40 years.

The first aquatic renewal training sessions were led by MNR Stewardship Coordinators from the Waterloo, Wellington and Brant Stewardship Councils in 2008. The pilot program was very well received and laid the groundwork for a more comprehensive training program involving partners from MNR, Trout Unlimited Canada (TUC) and the University of Guelph. A key message stressed during the sessions is that without the proper knowledge of how an aquatic system functions, you will not solve problems degrading the system. Poorly planned work can make things worse. “Look before you leap” and “use proper rehabilitation techniques for the job” are points that are driven home with several practical examples. To learn more about the aquatic renewal training series or to get involved, contact Silvia D’Amelio of TUC at sdamelio@tucanada.org or visit the Aquatic Renewal page on the TUC website at www.tucanada.org



Bioengineering work on Canagagigue Creek in Elmira.



Learning the finer points of casting at Youth Outdoor Opportunity Day.

Getting Youth Outdoors

A recent Cornell University study confirms children exposed to the wonders of nature at a young age grow up with a commitment to the environment as adults. Outdoor education classes are helpful, when a child catches that first fish or frog, sees that first bluebird, or hears a wild turkey gobble on a misty spring morning is special. The Youth Outdoors Day and Shimano Take a Kid Fishing Day are important venues that can help make this introduction for our city kids. Both of these events allow kids to participate in hands-on casting archery, and target shooting, bird box building, falconry and bird banding

demonstrations and much more. The Youth Outdoors Day takes place every September at the Luther Marsh Wildlife Management Area and the Shimano Kids Fishing Day is held every May at the Belwood Lake Conservation Area.

Thanks to the many volunteers who have provided this wonderful opportunity to thousands of local children over the years. For more information on the Take a Kid Fishing Day, contact Belwood Lake CA's Derek Strub at dstrub@grandriver.ca and to learn more about the Youth Outdoors Day, check out their website at www.youthoutdoorsday.com

That's a lot of fish

At last count, 93 different species of fish have been found in the Grand River watershed. The Grand holds over half of the species found in all of Canada. The watershed contains diverse aquatic habitats from a deep slow moving river near its mouth to small cold water streams in its headwaters. For a list of all of the fish species you can look for the Fish Plan tab at www.grandriver.ca



Round Goby



Rusty Crayfish

Grand Invaders

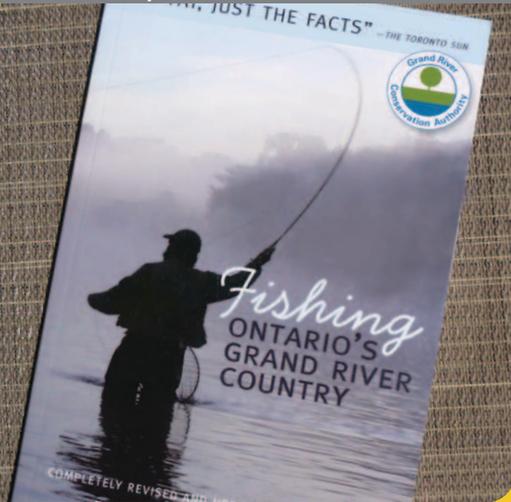
The fish species found in the Grand River are not all ones that have been here since the last glaciers left the area and carved the Grand River valley. There are many fish species that are pretty recent arrivals. Our ability to travel around the globe has also allowed species from around the world to colonize in areas they are not traditionally found.

Fifteen of the species found in the Grand are either not native to Ontario and have been intentionally or unintentionally introduced. Some of those species such as rainbow trout, brown trout and common carp provide excellent angling opportunities and are usually welcomed by anglers. Other species have been called Aquatic Invasive Species which are harmful whose introduction or spread threatens the environment. Among these are the sea lamprey, round goby and the common carp. There are some more recent arrivals like the rusty crayfish, zebra mussel and a variety of non-native aquatic plants are also having a negative effect on the watershed and its ecosystem.

Anglers and others can do their part to reduce the spread of non-native species like the rusty crayfish and round goby by familiarizing themselves with the section on "Laws to Help Stop the Spread of Invading Species" found in Ontario's Recreational Fishing Regulations Summary.

The Grand River Watershed

FISHING THE GRAND RIVER Country Book



In 2008 a new updated version of “Fishing Grand River Country” was published. This text provides anglers with a road map to the major fishing opportunities found in the watershed. The Grand has a wonderful assortment of fishing opportunities and this book can direct you to the river’s best fishing spots. You can pick up a copy through the Grand River Conservation Authority Web site or look for it at your favorite book outlet. All of the proceeds from this book are dedicated to the Grand River fish plan and making improvements in the watershed.

Aquatic Species at Risk in the Grand Watershed

The Grand River is a unique environment and it is home to some of the rarest fish in Canada. These species include the Silver Shiner, Redside Dace, Greenside Darter and River Redhorse, Black Redhorse, and Eastern Sand Darter. In addition two endangered mussels, the Wavy-rayed Lampmussel and the Round Pigtoe call the Grand River home. Many of these species are threatened by poor water quality as a result of runoff from farmlands, urban development and erosion. Dams also have an impact on these species by preventing them from accessing key habitat areas and through

temperature and water quality change caused by impounded water.

There is a Recovery Team and Recovery Strategy for Fishes at Risk in the Grand River. Surveys are being completed to determine species distributions and to determine important habitat areas. Work is ongoing to improve the environment in the Grand River to be able to sustain healthy fish populations that include some of these threatened species. For more information about Species at Risk in the Grand River visit the Ministry of Natural Resources web site.

Walleye in the Grand River Watershed

Walleye are the most sought after fish in Ontario and their range in the Grand River is expanding. Before 1989, walleye were only present in the Grand River below the dam in Paris and in the Nith River up to New Hamburg. Walleye were also found in Puslinch Lake. They are now found through a larger portion of the watershed.

The Ministry of Natural Resources has been working to help walleye flourish in the watershed. In the Conestogo Reservoir adult walleye transfers in 1991, 2005 and 2006 and the release of fingerlings in 2000 have resulted in solid population being established. A fisheries assessment completed in 2012 found about 16% of all fish caught in the reservoir were walleye.

Walleye are also establishing themselves in Belwood Lake through unauthorized stocking. The 2012 fisheries assessment revealed that almost 6% of the fish captured were walleye. Walleye have migrated downstream from the reservoirs and they are finding suitable habitat at several locations in the Grand River and Conestogo Rivers. Anglers have reported catching walleye as far downstream as Cambridge.

On the Nith River, a fishway that was added to the New Hamburg dam in

1989 allowed walleye to access many kilometers of suitable habitat upstream again expanding the range of walleye in the Grand.

Closer to Lake Erie walleye use both the Grand River and Lake Erie as critical habitat. Work to improve the fishway at the Dunnville Dam and helping walleye above this barrier to the habitat between Dunnville and Caledonia has shown promise towards increasing the population of walleye in both the River and the Eastern Basin of Lake Erie. Volunteer efforts by the “Tri clubs” of Ontario Federation of Anglers and Hunters (Dunnville District Hunters & Anglers Conservation Club, Port Colborne Conservation Club, Fort Erie Conservation Club), has been a big help in capturing fish and releasing them above the dam to allow them access to better water upstream. Some of these fish were used for the Conestogo Lake introductions. These fish are also marked with “PIT tags” allowing other fisheries assessment to help find out where these fish travel to be completed as part of a Lake Erie wide international study. Between 300 and 800 adult fish are moved over the dam annually.

Watershed-Wide River Improvements

Small Dam Removals

In the past, dams created towns, helped businesses thrive and provided value to many communities in the Grand River watershed. Today many of these structures are ageing, obsolete and unsafe. Several dams in the watershed have been removed in the past few years in an effort to improve water quality, fish habitat and public safety. Decommissioning the Five Oaks Dam on Whitemans Creek, the Beatty Dam in Fergus, Chilligo Dam in Hespeler, Taqyanyah Dam near Cayuga, Ignatius, Marden and others on Marden Creek near Guelph has resulted in improvements to water quality and fish habitat on all of these streams. Removing these dams involved many challenges, but they share a common trait; after dams are removed, water quality improves and area residents are usually happy with the new free-flowing stream in their community. Case studies and workshops have been delivered to help continue the process of removing barriers to our creeks and rivers. With several ageing, dangerous and non-useful dams in the watershed expect more improvements to the system through dam decommissioning in the future.

Tree Planting & Stream Rehabilitation

Trees provide a variety of benefits to our local streams. They provide shade helping to cool waters and their roots stabilize stream banks and help filter run off. For this reason, tree planting can be a very valuable activity to improve water quality and fish habitat.

There are several groups in the watershed that have been planting millions of trees over the past few decades. The river is better off because of these efforts. Many groups have also embarked on stream rehabilitation projects. Countless groups and individuals are working to improve small and larger waterways in the watershed. For more information as to how you can get involved on the ground and in stream contact your local Trout Unlimited chapter, fish plan partner or the Grand River Conservation Authority. Together we can make a difference and see even more improvements to our local waters.

Grand River Access

Public access to the Grand and its tributaries allows locals and visitors to experience the river valley and its waters. With local access and use of the river there will be passionate protectors of our waters whether they fish, swim, canoe, or raft on the river or simply walk its banks. Over the past decade access improvements have happened upstream and downstream and on some of the tributaries. Access to the Grand and Conestogo River tailwaters has been lead by Friends of the Grand River with support from the Ministry of Natural Resources and other partners. Further downstream in the Paris to Brantford area the Exceptional Waters Committee has built access and in the Caledonia area Mike Pettigrew and local municipalities helped improve access to the river in that reach with parking spaces, trails and a wheel chair accessible fishing platform. Access improvements have been ongoing and are expected to only get better in the years to come.

New Walleye Regulations

One of the tools that is used by fisheries managers to help maintain fish stocks are angling possession limits and seasons. In the Grand River Watershed the limits and seasons were changed in 2008.

After much public input, the walleye regulation was changed through much of Fisheries Management Zone #16 to protect future walleye stocks. Most of the watershed now has a limit of four fish, only one of which can be over 46cm (18.1") in length for Resident Sport Fishing Licence holders. Seasons for walleye fishing have also changed. It is now closed from March 16th through to the second Saturday in

May providing better protection for spawning fish. On the Grand River downstream of the Onondaga and Tuscarora Townships line to Lake Erie the season closes on March 1.

Below the Dam in the town of Caledonia there are no size restrictions. Walleye anglers are also reminded of two fish sanctuaries that are in place. In the Grand River from the Penman's Dam downstream to the William Street bridge in the town of Paris no fishing is permitted from October 1st to November 30th. In the Grand River in the town of Paris from 100m downstream of the Hwy 2 bridge downstream to the pedestrian

and service bridge that crosses the river upstream (west) of the Brant Conservation Area in the City of Brantford no fishing is permitted from March 1st to the Friday before the 4th Saturday in April. In this latter area, only artificial lures containing only one barbless hook may be used during the open season. There is also a zero (0) catch and possession limit for all sport fish including walleye in this area.

For details please consult the MNR's Summary of Fishing Regulations. This document will outline the rules in place to help ensure the sustainability of our provincial fisheries.

Southern Grand River: Caledonia to Port Maitland

In the southern Grand River area partnerships among the “tri clubs” (Dunnville District Hunters and Anglers, Port Colborne Hunters and Anglers and Fort Erie Conservation Club), the MNR and Grand River Conservation Authority have resulted in a better understanding of the walleye fishery in the lower reaches of the Grand River and some measures to improve the populations of these popular fish. Over the past several years volunteers have worked with agency staff to provide spawning bed improvements, monitor and improve fish passage around the Dunnville Dam and to transfer adult walleye above the dams in Dunnville opening up a large amount of quality spawning and rearing habitat for these migratory fish. Some walleye were even relocated as far upstream as above the Conestogo Reservoir to aid in re-establishing populations of these fish through the reservoir and the main stem of the river. For More information Contact Felix Barbetti or Tom MacDougall.

Southern Grand Walleye Research

The southern Grand River from Brantford to Port Maitland is a very important area of the Grand River Researchers from MNR and GRCA studied many different aspects of the southern Grand River environment and fishery between 2000 and 2005. With funding from the Canada / Ontario Agreement (COA) through the MNR, MNR and GRCA the study team are taking the pulse of the southern Grand River; these agency staff have been assisted by dedicated volunteers from various groups in the area.

The work was completed to assess the fisheries of this area through monitoring the Dunnville Fishway, reviewing water quality, assess wetland health, and track movements of walleye through the lower reaches of the Grand River.



The Southern Grand River Walleye Assessment team (2005).

The Grand River stock of walleye is important to the fishery in eastern Lake Erie. Any efforts that increase the numbers of Grand River walleye ultimately have the potential to improve Lake Erie’s eastern basin fishery of which the Grand River stock is a significant component.

Volunteer clubs are a significant help to walleye improvement efforts. Volunteers from the Dunnville District Hunters and Anglers Conservation Club (DDHA) collect eggs to supply a walleye bell jar hatchery that has been in operation for a number of years. The southern Grand River walleye hatchery is a collaboration of the DDHA, members of the Fort Erie Conservation Club and Port Colborne Conservation Club. Fertilized eggs are distributed to hatcheries at Dunnville and Port Colborne.

Once hatched, fry are placed in ponds to be grown to fingerling size. Walleye fingerlings from the ponds are released into the Grand and Welland Rivers. The clubs usually raise about 30,000 fish for release each season. In addition to the hatchery program, the clubs and GRCA have assisted the MNR with the direct transport of spring-run walleye from below to above the Dunnville Dam. Since 2000, several hundred walleye per year have been given access to the large areas of good spawning habitat above Dunnville.

Southern Grand River Fishways

It is well known that barriers to fish migration such as dams can have a negative effect on fish populations. In the 1860’s, John Kerr identified that barriers were having a significant impact on fish populations in the Grand River, and without solutions the fishery would be severely damaged. First Nations groups have continued to express their concerns regarding dams for a number of decades.

Within the southern Grand River, the dams at Dunnville and Caledonia present obstacles to fish moving upstream from Lake Erie. Fishways are one method of helping fish navigate dam structures. To help fish negotiate the Dunnville Dam a denil-type fishway was constructed in Weir #3 on Sulphur Creek in the fall of 1994. The GRCA with funding assistance from the Ministry of Natural Resources, completed the project, allowing non-jumping fish species to pass above the dam. For a period of time after its construction, volunteers and agency staff collected data on fish using the fishway. Data collected included details about the timing and species composition of migratory runs. This information would otherwise be unknown were it not for the monitoring efforts of volunteers and agency staff between 1995 and 2005.

Monitoring conducted by volunteer groups including the Dunnville District Hunters & Anglers Conservation Club, Port Colborne Conservation Club, Fort Erie Conservation Club, Dofasco Anglers and Dunnville BassMasters. Other groups

that have assisted in the past include Six Nations of the Grand River, Brant BassMasters, Habitat Haldimand, Niagara College and Dunnville Secondary School. Monitoring was initiated in the spring of 1995 and continued yearly from about mid-March to mid-May through to 2006. Volunteers contributed well over 10,000 hours in support of this project.

Almost 27,000 fish and twenty-nine different fish species were captured in the fishway trap. Species that regularly used the fishway included a variety of sucker species, gizzard shad and mooneye and to a lesser degree rainbow trout and walleye.

Monitoring efforts along with radio telemetry studies have made it apparent that, while rainbow trout easily negotiate the dam, only a few walleye attempting to migrate upstream use the fishway each year. Engineering changes to water flow and ongoing plans for upgrades will hopefully make the fishway more attractive to walleye. The fishway has provided hundreds of thousands of fish the opportunity to navigate the Grand with greater ease; most of these fish simply could not have negotiated the dam without this structure.

Upstream, the Caledonia Dam impedes fish migration. There are currently two fishways built into the dam structure, but they are not effective. Engineered plans have been prepared to improve one of the fishways to allow more fish species the opportunity to travel even further upstream to the waters near Brantford. This area offers prime walleye spawning and nursery habitat that cannot be used by lake-run walleye and other non-jumping species.

Partnerships with government agencies, private sector and public groups are needed fund and support the Caledonia project. This plan is estimated to cost hundreds of thousands of dollars and will require strong partner commitment to see its completion.

Cayuga's Mill Creek Revival

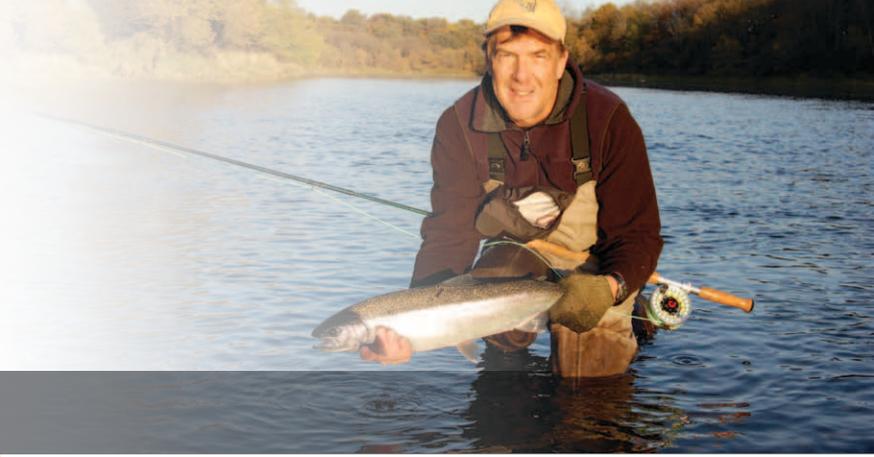
Mill Creek in the lower reaches of the Grand River has experienced a revitalization over the past few years. With the removal of the Taquanyah Dam in 2006 it was discovered that there was a cold water resource with a huge potential to be returned to a quality cold water stream. Volunteers from the Ted Knott Chapter of Trout Unlimited have worked with a variety of partners including the Haldimand Stewardship Council, MNR and GRCA to help this stream.

This tireless crew of volunteers have taken on a variety of initiatives working towards recovery of this stream. They are monitoring the stream with the use of temperature loggers and a variety of other means including putting on miles walking the stream to better understand it and to build community connections that will help realize the goals of restoring brook trout to this waterway. They have also removed beaver dams and installed beaver bafflers to help maintain good flows in the stream; reconfigured culverts and restricted livestock access to the stream. The stream is responding to these efforts and with the dedicated volunteer attention, this may be a place to fish for brook trout in the near future.



Mill Creek assessment near Cayuga.

Exceptional Waters



FISHING IN THE EXCEPTIONAL WATERS

by Ken Collins



Ken Collins and a happy client on the Grand River.

One of the recommendations in the Grand River Fisheries Management Plan was to implement reduced harvest limits in the reach of the river between Paris and Brantford. As a fly fishing guide I am all for having more fish in the river to help increase the odds of clients hooking up. It was unheard of in Ontario to have no harvest regulations for species like smallmouth bass at the time, but I was happy to see these fish and this fishery protected.

The Exceptional Waters area is a beautiful place to quickly get away from it all and do a little fishing. I have seen the number and size of the fish in this area increase steadily. It is a true example of what we can produce when we set a goal of managing for success versus managing all waters with the same “happy medium”. There are several reasons why this area is one I use regularly. It has quality access to get boats and canoes in and out of the water. The river corridor has a natural beauty despite it flowing so close to major populations. It feels like a wilderness area and is less than an hour from downtown Toronto, and I am seeing more bald eagles, osprey, deer, mink, beaver and a variety of other wildlife each season.

The real clincher for my clients though is the fishing. In the summer smallmouth bass fishing can be phenomenal and the spring trout fishing seems to improve annually. In the fall this is a superb destination for pursuing steelhead. This area is truly something that all Grand River residents should be proud of. This is a perfect example of seeing its rewards of an improved environment. The Grand's Exceptional Waters area provides an increased quality of life for local residents and economic opportunity for local outfitters. Now that is exceptional!

Exceptional Waters: Paris to Brantford

This program made the Grand River between Paris and Brantford a destination for anglers from far and wide and increased the profile and perception of the river with local residents. This group was very active especially through the 2003 through 2005 when coordinator Bob Scott worked with a committee of local representatives to complete an access guide, develop and install interpretive and directional signs, improve access at three key nodes, implement special angling regulations to protect the sensitive quality fisheries here including Ontario's first catch and release bass fishery. This committee has also been active in the Low Water Response team and has worked with local stakeholders to identify and address local concerns about the river and its use through developing both an access plan and a management plan for this reach of the river.

Both Brant County municipalities have kept this concept before them in their planning process. Brantford highlighted the designation in a long-range document as “must be considered during planning”. The expectation of the program, to make the local population more aware of the tremendous recreational and environmental value of the river to the communities is being realized.

A key indicator of the renewed importance of the Exceptional Waters Reach is evident in the increased use of the waterway in this area for recreational paddling, increased angling and the increasing use of the adjacent trails by hikers. A very specific indicator of the improving water quality has been the establishment of a bald eagle nest in the Brantford area that has produced numerous successful clutches since the nest was built in 2008.

Exceptional Waters Program and Beyond – Cambridge to Glen Morris

The Exceptional Waters Program between Paris and Brantford has been very successful in raising the awareness of individuals, landowners and municipalities alike with the value of this section of river. Though there are challenges, work continues to protect the stream corridor and its fisheries. The next reach of river of high value being examined is between Cambridge and Paris. This reach is groundwater rich with good channel structure and, so far, intact riparian corridor. It also has high ecological and eco-tourism value and needs the same level of community involvement as the first successful reach.

Low Water Challenges

The summer of 2012 was the hottest and driest in recent memory, and nowhere were the effects of the drought felt harder than in Whitemans Creek near Brantford Ontario. Whitemans Creek provides critical habitat for brown and rainbow trout sport fisheries. Observations during the height of the 2012 drought confirmed that trout in Whitemans Creek were very stressed by the extreme conditions, and that some actually died. One important tributary, Landon's Creek, almost dried up.

These observations, while concerning, point out one important fact: Groundwater fed tributaries provide critical refuge habitat that allowed most of the trout in Whitemans Creek to survive these harsh conditions. Given that global climate change will probably give us more summers like 2012, it is critical that we protect these tributaries and even enhance their ability to provide refuge habitat in the future. One of the "Best Bets" of the Fish Plan is to identify coldwater locations offering thermal refuge. As these locations are identified, Fish Plan implementation partners will work together to improve access to and utilization of refuge areas by coldwater fish. To learn more about this initiative, contact MNR Partnership Coordinator Larry Halyk at larry.halyk@ontario.ca.

Restoring D'Aubigny Creek – A Community Based Watershed Approach

The D'Aubigny Creek watershed, located within the limits of the City of Brantford, was identified in the late 1980's as an area of proposed residential development. This creek is an important cold water stream as natural self-sustaining brook trout were identified as inhabitants of this water system. In 1992, partnerships were formed to establish the D'Aubigny Creek Environmental Council. The first partners were the Brantford Steelheaders, Pauline Johnson High School, the City of Brantford, the Grand River Conservation Authority and the Ontario Ministry of Natural Resources. Goals included conducting hands-on aquatic renewal, completing stream monitoring, securing funding, and increasing public awareness of the importance of healthy streams and watersheds, including the importance of D'Aubigny Creek.

Over six kilometres of the stream have been rehabilitated. As well, monitoring and restoration of D'Aubigny Creek have been incorporated into the Pauline Johnson High School's curriculum by teacher Tom Sitak. Other accomplishments include a completed watershed management plan, community work days, aquatic invertebrate monitoring, newspaper and television coverage, interpretative signs. The real success is that brown trout and brook trout populations have increased, and stream conditions have improved. The City of Brantford also received an international award based in part on the environmental work completed in the D'Aubigny Creek watershed.

The Restoration of Rest Acres Creek

Rest Acres Creek is a small, cold-water tributary of Whiteman's Creek flowing mostly through Apps Mill Nature Centre. It is a significant spawning system for brook and brown trout. The brown trout migrate into the creek for spawning purposes. The lower section of Rest Acres Creek was rehabilitated in the 1990's. Some of the materials used in the restoration became exposed over time and was a danger to the public. A planning committee consisting of the Brantford Steelheaders, Middle Grand Chapter of Trout Unlimited Canada, Grand River Conservation Authority, Ontario Ministry of Natural Resources and The Brant Resource Stewardship Network. Funds were raised to restore the creek back to a natural channel. Trees were planted to stabilize this work. In the fall of 2102 many of us witnessed upwards of sixty brown trout using the creek for spawning purposes.

Whiteman's Creek Trout Assessment

Between 1913 and 1962, the Ontario government introduced brown trout to numerous streams in southern Ontario. Of all the streams where brown trout were introduced, Whiteman's Creek was one of the few where the species developed a self sustaining population. Brown trout were stocked into Whiteman's until 2001 and after stocking stopped, there were some concerns about the health of the brown trout population. To answer those questions, the MNR with the help of numerous volunteers conducted a trout biomass survey of Whiteman's Creek in August of 2010.

Among the many things that were learned: Brown trout are reproducing successfully; Stocking is not required to maintain the brown trout population; Reproduction of brown trout may be affected by high flows at certain times of year; The population of rainbow trout has increased significantly in following the removal of the Lorne Dam in Brantford in 1989.



Whitemans Creek Electrofishing.

Striking Silver on the Grand

Rainbow trout are one of the most sought after fish species on the Grand River, but it wasn't always that way. In the 1970s, catching a rainbow or steelhead as they are commonly called, migrating from Lake Erie was big enough news to rank a photo in a local newspaper. The removal of the Lorne Dam in Brantford in 1989 changed all that. Suddenly, steelhead could access high quality spawning habitat in Whitemans Creek and several Nith River tributaries. Steelhead use these cold streams as nursery habitat. Fish migrate downstream to Lake Erie and return to the Grand as adults weighing up to 5 kg or more.

The Grand features one of the best runs on the Great Lakes. It's not just the fishing that makes the Grand popular. The "Grand River Spey Clave" in Paris is an annual gathering of a particular breed of steelhead angler who uses traditional two handed fly rods that originated on the River Spey in Scotland in the 1800s. The Grand is one of only a few spey fishing hubs in North America.

The success of the Grand River steelhead fishery can be partly attributed to the Grand River Migratory Fish Committee. This group has implemented angling regulations (gear restrictions, harvest limits, and sanctuaries) to allow steelhead to thrive while protecting native brook trout populations. With the deterioration of other ageing dams on the Grand River system, there will be challenges and opportunities for the migratory fish committee.

Mill Creek Has Many Friends

Mill Creek has steadily improved in recent years thanks to a community based organization called Friends of Mill Creek (FOMC). Mill Creek originates south of Guelph and flows through Puslinch Township before joining the Grand River in the City of Cambridge. FOMC's diverse membership of landowners, environmentalists, and representatives from government and local industries they set aside their differences and focus their efforts to rehabilitate this coldwater stream. To outside observers, FOMC members may appear to have conflicting interests; however, they have made a difference on this stream system being recognized by a GRCA watershed award in 2012.

The Mill Creek Stewardship Ranger program launched in the summer of 2003 is a joint venture between the FOMC and the Optimist Club of Puslinch sees a crew leader and four local teenagers are hired to improve the stream. They complete projects narrowing the stream channel, flushing accumulated sediments and improving water quality and associated trout habitat. The crew also plants trees, removes streamside garbage, and improves environmental awareness in the community. Funds for the ranger program come mainly from local business and industry partners. There are now nearly 40 ranger alumni, many who have gone on to careers in the environmental field. To learn more about the FOMC and the Mill Creek Stewardship Rangers, visit the FOMC website at www.friendsofmillcreek.org.

The Transformation of Marden Creek

Marden Creek is a small Speed River tributary just north of Guelph that faced many of the challenges of small streams flowing through agricultural areas in southern Ontario. Habitat conditions in Marden Creek declined over the last century to the point that many were convinced that restoring it as a native brook trout stream was a lost cause. After all, no one had seen a trout here since the early 1970s. Fortunately, not everyone gave up hope.

Volunteers from the Wellington County Stewardship Council (WCSC) adopted the creek in 1999 and were soon joined by the Speed Valley Chapter of Trout Unlimited Canada (TUC). The partners started collecting data to determine what needed to be done and in 2005, an electrofishing survey confirmed that a small trout population still persisted in the headwaters. Since then, volunteers, agencies and landowners have worked together to plant trees, remove dams and ponds, improve spawning habitat, and improve the stream channel to reduce warming and flush sediments.

The most visible project of the rehabilitation program has been the removal of a dam on the Ignatius Jesuit Centre (IJC) property in 2010. Up to that point, the partners had extended the trout range downstream to the pond and the Ignatius dam was the last "barrier" preventing them from accessing the Speed River. The response of the creek to the dam removal was dramatic. The stream quickly established a new meandering channel through the former pond bottom. The revegetation was accelerated with tree and shrub plantings lead by TUC, WCSC and the IJC, and supported by neighbours and community volunteers. Not long after the dam was removed, a male brook trout in bright spawning colours was captured from the former pond area. Is this the vanguard of future generations of trout that will seasonally migrate downstream to Riverside Park in Guelph? Everyone involved in the renewal of Marden Creek is confident that it is.

To get involved in the Marden Creek project, contact MNR Partnership Specialist Larry Halyk at larry.halyk@ontario.ca or Silvia D'Amelio of TUC at sdamelio@tucanada.org



Warren Yerex and Larry Halyk examining a completed project on Mill Creek.



Grand River Tailwater

Friends of the
GRAND RIVER

The cold waters released from Belwood Reservoir have created a unique environment resulting in the Grand's best known fishery. This "tailwater" fishery has received international attention due to the quality brown trout fishing found here. Efforts from agency staff and volunteers have been required to support and realize this fishery.

A management plan has been completed that outlines the key components that make this place special. The tailwater fisheries plan identifies how to maintain the areas quality public river access, habitat improvements, the special fishing regulations, on-going trout stocking program and research to support this resource. The cornerstones of this fishery are an MNR trout stocking program, volunteer efforts spearheaded by Friends of the Grand River and community support. The river helps the local economy in the Elora/Fergus area. For more info Contact Art Timmerman or www.friendsofthegrandrivers.com

Tailwater Large Structure Enhancements

In the fall of 2007 a Large River Structural Enhancement project was started in the Grand River tailwater near the town of Inverhaugh. In the first installment of this project, 200 tonnes of rock, full trees and clusters of boulders were used to create a deeper pool, better defined riffle and various types of cover that helped many different species in this area. Work continues to implement other sites in this area and other portions of the river where the use of large river rehabilitation techniques can make a difference to fish habitat and improve fishing opportunities. For more information contact Al Murray at MNR or visit www.friendsofthegrandrivers.ca.

Conestogo River Brown Trout Program

The creation of a brown trout fishery in the Conestogo River tailwater area was a "Best Bet" identified in the Fish Plan. Work with a variety of partners resulted in a 5 year stocking plan being initiated in 2003. This has "spawned" a flurry of activity resulting in improved access points and a variety of restoration and education supporting the trout stocking. Friends of the Grand River's CREW (Conestogo River Enhancement Workgroup) has been a key player in establishing safe river access, facilitating fish stocking and tree planting in this area. The Brant Rod and Gun Club hatchery was also a key contributor of fingerling brown trout for this initiative. The local residents are appreciating and enjoying this new fishing opportunity. This fishery appears to be a grand success that will provide a quality fishing opportunity for years to come. For more information Contact Art Timmerman at MNR or visit www.friendsofthegrandrivers.com.



Friends of the Grand River Osprey Platforms

Friends of the Grand River has been a member of the Grand River Fishery Management Plan group since its inception 20 years ago. A non-profit group based mainly in the Township of Centre Wellington area, most members are fly fishers, but the goal of the group is to preserve, conserve and enhance the ecology of the Grand River as well as to educate youth and other river users. From tree plants to garbage clean-ups to participation in planning processes related to the river, FOGR has made its mark. FOGR is a champion of the river and an advocate for improvement. There are garbage kiosks, river map boards, signage and even staircases to make access to the river safer, regardless of the type of recreational pursuit the user enjoys. Visit www.friendsofthegrandrivers.com for more information



Development of monitoring framework for Cumulative Effects Assessment in the Grand River Watershed

The Grand River watershed is under considerable threat from numerous stressors that have the potential to act in a cumulative way. Intensification of agriculture and population growth are of particular concern in the Grand River watershed. Changing water availability and quality resulting from altered land use and climate change, the biological integrity and resiliency of the ecosystem will be further challenged in the near future. A University of Waterloo centred research team has been undertaking pioneering research to help to measure cumulative impacts and provide monitoring programs and guide decisions as part of the Grand River Water Management Plan.

In the spring of 2012, researchers from the universities of Waterloo, Guelph, Western Ontario and Wilfrid Laurier began to produce a framework for integrated regional-scale monitoring for the Grand River. This work is part of a large national project by the Canadian Water Network bringing researchers and water managers together to find ways to measure changes in river health and advance monitoring frameworks to support cumulative effects assessments helping water managers make informed decisions. In five watersheds across Canada, researchers who study chemistry, aquatic insects, fish, and river dynamics are working together to determine the most appropriate parameters to detect changes in the watershed due to human activities or natural ecosystem processes.

Measuring pharmaceuticals and personal care products in the Grand River has been a University of Waterloo project ongoing for over a decade. The research led by Gerald Tetreault and the lab of Dr. Mark Servos, has been developing ways to measure and monitor prescription drugs like the cholesterol medication, anti-epileptics drugs, ibuprophen, and hormones through sewage treatment plants in the watershed and in the Grand River itself. Results from river samples indicated that downstream of the major plants levels of these compounds can be detected in the parts-per-billion range (equivalent to a single drop in an Olympic sized swimming pool) but are quickly degraded. Although, there

appears to be no cause of concern for human health, fish and other biota near treated wastewater discharges are demonstrating adverse health effects.

Initial studies found that darters (small forage fish) showed delayed development in reproductive tissues and the changes in the function of those tissues. It was discovered that some males have developed female eggs, a condition known as intersex. Fish community assessment, at the same wastewater sites where male fish were feminized, showed changes in the fish community from the dominant darter species to sucker and sunfish species which are more tolerant to pollution. Currently, PhD student Meghan Fuzzen is continuing this research and discovering that exposed darters have lower egg production and survival rates. The research team is currently looking at similar effects to species such as Smallmouth Bass and other panfish. The Waterloo research group investigating the response of fish to the ongoing upgrades at the wastewater treatment facilities and developing approaches to evaluate the cumulative effects of human activities on fish populations and communities.



Field Assessment on the Grand River.

Grand Communications

When you do a lot of good work and several partners are involved, it can be easy to forget to share what you have accomplished. The fish plan partners hired a coordinator with the assistance of the Ontario Wildlife Foundation and the Ontario Trillium Foundation.

Between 2004 and 2006 a project coordinator was hired to develop several materials to help others better understand the work being done and the need to get more people involved with helping the Grand River fishery. Coordinator Steve May worked with agency staff and volunteers to produce a detailed

newsletter of activity from 2004-2006, a new trade show display for the plan partners was completed and the Grand River Fish Plan and other important documents were updated and consolidated on a CD and now at the www.grandriver.ca web site. There were also other products produced to help promote the fishery and the activities of the plan partners including a very successful Celebration Dinner. The coordinator also helped address information needs of the committee and build partnerships with research institutions and to deliver a few rehabilitation projects that benefitted fish habitat.



Larry Halyk explaining the importance of Grand River fish and the environment at a public event near Guelph.

How can you help?



A streamside tree planting event on Jones Creek near Brantford.



- Join a local conservation club and get involved with local projects.
- Make a donation to the GRFMPIC through the GRCF
- Take a kid fishing
- Read and follow the Fishing Regulations
- Please “limit your harvest” versus “harvest your limit” when fishing the Grand.
- Join in a local clean up event
- Participate in one of the events identified in this publication
- Visit a Nature Centre
- Get out and explore the Grand River
- Preserve natural vegetation and plant native trees, shrubs and grasses along watercourses.
- Leave a buffer of natural unmowed vegetation along the edge of small streams or the river.
- Limit use of fertilizers and pesticides on your property.
- Never empty bait buckets into the river.
- Don’t dump yard waste on vacant land or river banks.
- Prevent leakage of gas and oil from cars, tractors, lawn mowers and other machinery.
- Limit lawn watering and only water early and late in the day during dry periods.
- Practice water conservation in your home and business.
- Reduce the amount of salt you use on your driveway and sidewalks