Stream Tender Magazine

July 2012

"Local Trout Stream News and Information"

Articles by Guy Woods

Riparian and Fish Habitat Enhancement Fisheries Management Bio-Engineering Stream Reclamation and Restoration Bank Erosion and Sediment Control Water

Magazine Mission Statement

Publisher/Editor's Comment

Stream Tender Web Site

Previous Issue

Cochrane Foundation

Cochrane Community Grant Program

"Approximately 2000 Willow and Tree Plants Were Planted Along Bighill Creek This Year!"

"Millennium Creek Restoration Update!"

It has been four years since the completion of the stream restoration and fish habitat enhancement project on Millennium Creek! My, how time flies!

It has been a pleasure to monitor the work that was completed on the creek, over the past four years. Every year, I take the time to walk the stream banks of Millennium Creek and observe how the pool habitats that were constructed are doing.

The pools are now sheltered by willow plants and still providing a deepwater refuge for the resident trout! The dark-deep water and undercut banks are perfect habitat for the trout to stay hidden in and for a small creek like Millennium, this is a perfect home for them!

For the casual passer-by, it would be hard to tell that the pools were made by the hand of man, rather than natural influences! The log v-weirs at the head of the pools is now covered with algae and moss, making them blend into the streambed!

I often see trout holding in these pools, when I am walking the edge of the stream bank. Some of those trout are relatively large for such a small trout stream! There are also juvenile trout from the early season's hatch on the creek!

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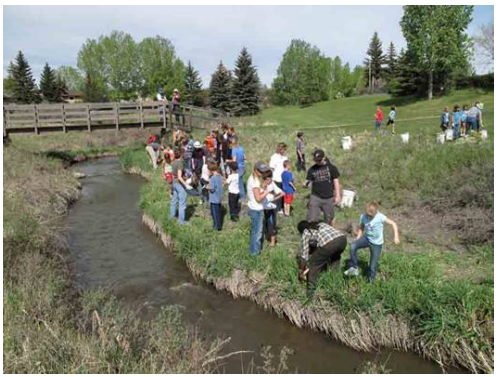
" Before and After Photos Show Results"

See some examples of this!

Above: This is one of the pool habitats, four years after it was constructed on Millennium Creek.



Above: Cochrane Glenbow Elementary School kids get first hand experience planting willows

"Nose Creek Watershed Program Undertakes Major Corporate Willow Planting Projects this Season!"

Erin MacMahon had a busy planting season this year, with plenty of new willows that were planted along the banks of West Nose Creek and Nose Creek , Airdrie!

Erin is the program coordinator for the watershed partnership program and an employee of Trout Unlimited Canada.

Working with corporate groups from Microsoft, CP, Stantec and BP retirees, Erin managed to get over 1,750 willow plants into the ground! Plantings were carried out on West Nose Creek and along Nose Creek in the Town of Airdrie. All of the sites chosen for planting were in dire need of some stream bank cover!

This riparian recovery program for the Nose Creek system is a daunting task, but the long term benefits will be a definite improvement in both the fishery and the water quality of Nose Creek. Other wildlife will also benefit from the newly created riparian zone!

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Branches and Banks and Glenbow Elementary School Planting Program Continues in 2012!

The first year of this school planting program was in 2010, and it involved grade 4 students. The second year, in 2011, there were grade 3 and 4 students participating. This year, the younger grade 2 students also rolled up their sleeves and helped plant over 400 willow plants along the Bighill Creek, just blocks away from their class rooms.

The school planting program is organized by local Branches and Banks executive Tim Giese and school teacher Kim Knitter, with plenty of help from volunteers and other teachers from the Glenbow Elementary School.

There were over 300 students from all of the classes that had a chance to plant at least one willow plant along Bighill Creek. This year's weather conditions were great, for the third year running and no rain suits and gum boots were required.

All of the holes for the plants were pre-drilled, so that all the kids had to do was pop the willow in the hole and fill it with a soil and water mix!

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Past Issues

December 2011

"Bighill Creek Project 2012–Riparian Recovery and Enhancement Program"

The 2012 Riparian Recovery and Enhancement Program on Bighill Creek resulted in the successful planting of over 1,500 willow and tree plants this year! With a partnership between BVHD, the Cochrane Foundation and the Town of Cochrane Community Grant Program, the willow and tree planting project topped the previous record set for willow planting in the Bighill Creek Project, during past years.

There were four planting sites chosen for this year's program, all of which were located on areas of the Bighill Creek that were in need of riparian recovery work. Three of the sites were in Cochrane Ranch Park and the largest site was located in Glenbow Park, further downstream.

It turned out to be a great season for planting willows and trees along Bighill Creek, with plenty of precipitation to insure that the survival rates for the plants is high, when compared to previous planting seasons! The planting sites have been monitored on a regular basis to see how their growth has progressed! At this point in time, the survival rates for the plants is in the high 90% range and it is expected that most of these plants will make it through to their second season!

It will take approximately three to four years before the willow crops are large enough to stand out, above the riparian grasses. Once they reach the fifth year, they will be quite obvious along the banks of the Bighill Creek.

One of the four planting sites is located on a known spawning area for both brown trout and brook trout, so the future growth will enhance this location for spawning trout.

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"2011 Bighill Creek Willow Planting Update"

In 2011, a total of 1,036 willow and trees were planted along the banks of Bighill Creek at two different planting sites. The planting project was a result of a partnership program between BVHD and Inter Pipeline, as part of the Bighill Creek Project, Riparian Recovery and Enhancement Program.

BVHD is pleased to report that the results of that planting program has been very successful! The 2012 **PHOTO ON THE RIGHT:** Shows a few of the willow plants this spring, growing very rapidly along the creek!

These willows were the Stage One, pre-rooted plants, prepared and planted in 2011.

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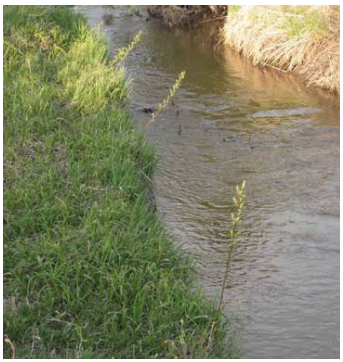


This website was designed and it is maintained by Guy Woods - Contact at—info@streamtender.com

Stream Tender Magazine

July 2013

Millennium Creek Restoration Photos

Progress Report for:
"Willows Planted Around Pool Habitats"

Above: This is what the willow plants looked like in 2007, after they were planted around a pool habitat on the lower reach of the creek.

Below: This is what the willow plants look like in 2012, five years after they were planted around the pool!

Above: These three photos show the riparian development of the stream channel over a five year period of time. The photo on the left shows a pool habitat, just after it was constructed in 2006. The middle photo shows the same reach of channel in 2008, one year after willows were planted along the stream channel and around the pool. The photo on the right shows the stream channel from the same perspective, in the summer of 2012. Note how the willows have grown tall and they are helping shelter the pool habitat with cover. Very natural in appearance!

"Video of Brook Trout as they Emerge from Spawning Gravel!"

I have been identifying small brook trout that have hatched in the constructed spawning channel for the last few years, but it wasn't until this season that I actually observed the trout emerging from the spawning gravel!

It happened this past March, on one of my many trips down to the spawning channel to monitor the hatch of incubating trout eggs, from this past fall's spawning event!

As I have done on many previous trips at this time of the year, I stopped to watch the spawning beds to see if I could spot any sign of movement, indicating an emerging brook trout fry.

On these trips to the site, I almost always pack a camera or video equipment with me, just in case an opportunity presents itself. Fortunately, my perseverance finally paid off on this day in March. After sitting next to the spawning channel for some time, I caught the movement of something small and dark partially hidden in the gravel streambed.

It turned out to be a small brook trout fry that was just starting to learn how to swim. Newly hatched trout will often hold for some time, in the gravel, just after they have emerged from the protection of the spawning gravel beds. It was a very rewarding experience!

Above: A brook trout fry over the spawning gravel.

Would you like to share the same experience?

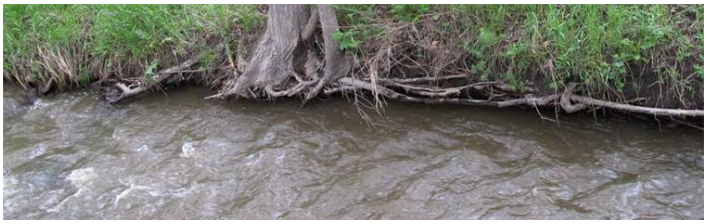
Watch the video

Click Here!

"Willow and Tree Root Systems Provide Stability to Unstable Stream Banks!"

The photo on the right is a good example of how root systems from trees can help to stabilize a stream bank!

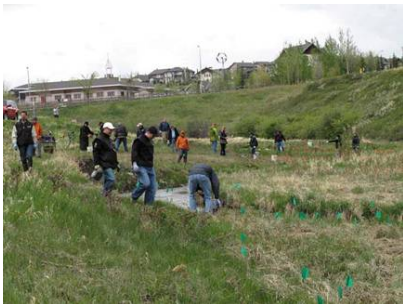
This system of roots suspended above the water level will also provide good overhead cover for sport fish such as trout!



Back to Cover Page

Stream Tender Magazine July 2012

Nose Creek Watershed Partnership Planting Programs for 2012



Above: A volunteer force from the Microsoft Calgary Office plants willows along the stream banks of West Nose Creek, in the City of Calgary, Alberta.

Microsoft Volunteer Crew Plant Willows on West Nose Creek, in the City of Calgary!

Despite the threat of heavy rains, a large contingent of volunteers from the Calgary office of Microsoft Canada showed up to plant over 600 willow plants along the stream banks of West Nose Creek! It was a rainy morning on May 24th of 2012, but regardless of the wet conditions, a large number of Microsoft volunteers got right to work planting native varieties of willow plants. A total of 646 willows went into the ground, along the banks of this recovering trout stream, within the city limits of Calgary.

It only took a few hours of work, but the long term benefits of this planting program will be an improvement of the riparian habitat along the creek. There are trout living in the lower reaches of West Nose Creek and with an ongoing restoration program by the Nose Creek Watershed Partnership Program, it is hoped that one day a population of trout will also occupy these upper sections of the stream!

Above: Volunteers from CP restore the riparian zone along the banks of Nose Creek, in the City of Airdrie, Alberta.

Canadian Pacific Employees Volunteer to Plant Willows!

It was a damp and overcast morning on June 23rd, 2012. Not the greatest weather conditions for volunteers, but it was a good day for planting willows! However, this is my opinion and the volunteers from CP didn't seem to mind the weather at all! Soon after the group had arrived from Calgary, they quickly went to work along the banks of a section of Nose Creek, in the City of Airdrie!

The reach of the Nose Creek where the planting took place, is void of any native willow plants, so it was a great section of the stream for an enhancement program. The moist ground conditions, from recent rains, would get the willow plants off to a great start! The group planted a total of 356 willows, consisting of a mix of native varieties, typical to the watershed.

"Stantec Volunteers Plant a Crop of Willows on Nose Creek in Airdrie on June 24th, 2012!"

Following the CP planting on the 23rd of June, Stantec volunteers from the Calgary office showed up to plant the next section of creek, downstream of the CP site. Part of their planting reach was located along a very wide section of Nose Creek, in between a storm drain pond and the main channel. It was a perfect section of stream to have a riparian restoration program be completed. The plants along this section of stream bank will be also utilized by nesting waterfowl, in future years!

The compact group of volunteers from Stantec managed to plant a total of 646 willow plants in just over 3 hours of hard work! They didn't seem to mind the pace and having that number of willows planted by a smaller group of volunteers is something to be proud of!

I am sure that when they return to the site at some point in time, in the future, they can appreciate all of their hard work and efforts to restore this section of the stream bank!

These two photos show some of the willow plants that were planted along Nose Creek in Airdrie on June 23rd and June 24th of 2012. The photo on the left was taken a few weeks after the planting events and the one on the right was taken on July 14th. As you can see, these willows are looking very healthy and in a few years they will be quite obvious along the stream banks of Nose Creek!

"Nose Creek Pike Fishing Story!"

"A Fishing Tale for the Willow Planters" by Guy Woods

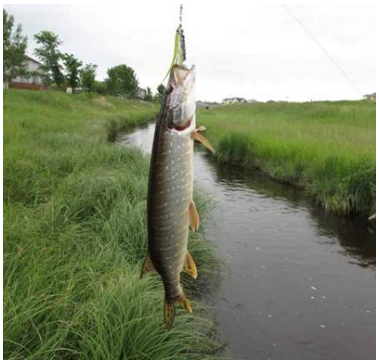
I had arrived at the Stantec willow planting site, in the early morning hours of June 24th, to flag off areas of the Nose Creek for the planting that was to take place later on that morning. As I was flagging the lower reach of the planting site, I noticed a swirl on the surface of the water, just out from my position on the stream bank.

Later on, another disturbance occurred again, and I was confident that it was a rising fish that broke the water! Then, only a few minutes later, I discovered a dead pike along the water's edge. It was only a small one, but none the less, it was a pike. This lead me to believe that there existed a resident pike population in the Nose Creek in this area, and further more, I was convince that the rising fish that I had noticed, were in fact Pike!

Having fly fished for pike on many occasions, I was now committed to return to this location at a future date and try my luck. Besides, the fish that had broken the surface were larger fish and I was really curious to find out how big they might be. This thought of fishing the creek in another time soon, kept crossing my mind during the planting program, later on that morning!

A few days later, I had to make a trip up to the planting sites to do an inspection and determine initial survival rates for the willow planting projects, so I decided to pack my fly rod along, to do some important scientific research, while I was up there!

After doing a quick check on the plants, I set up my fly rod and started to cast in a likely looking spot. It took two casts of my streamer pattern before I hook my first pike! What a great surprise! I managed to land four pike that morning and I had a few larger fish hit my fly, but I didn't catch them. Just knowing that larger pike lurk in those dark waters has lured me up there on a few occasions since that first outing, and I know that on one of these trips, I will hook the big one!



Above Photo: Volunteers from the CP and Stantec willow planting program, will recognize the background in this photo, as I hold up an averaged sized pike, caught in Nose Creek. It is always reassuring to know that your efforts to enhance a flowing stream will have a direct benefit to that streams fishery. Now that we know there are pike in Nose Creek, we can expect a little added enthusiasm from any future volunteer willow planters, that are also fishers of pike! I know that I am on that list of future participants!!

Back to Cover Page

Stream Tender Magazine

July 2012

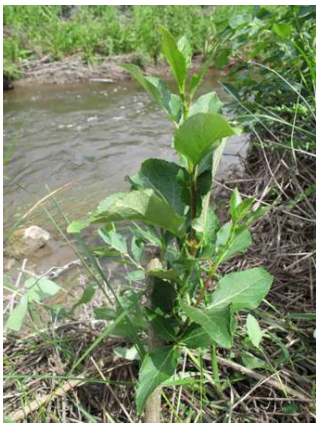
The Bighill Creek Project
2012 Riparian Recovery and Enhancement Partnership Program

"The Cochrane Foundation Willow Planting Project –2012"

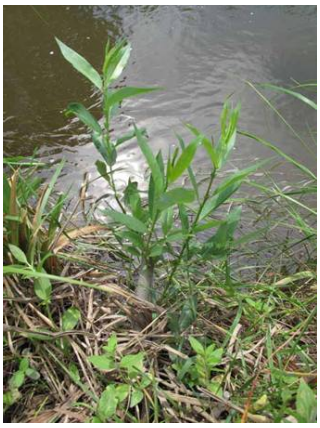
Over a period of four days in May of 2012, a total of 510 willow and tree plants were planted along the stream banks of the Bighill Creek, at three different sites. The plants consisted primarily of four different varieties of Salix, with a mix of Silverberry, Western Water Birch, Red Osier and Yellow Twig Dogwood, with a few poplar trees included in the batch.

The entire crop was created from cuttings collected further up the stream system, in the late winter months of 2012. It is important to use native planting stock that are indigenous to the watershed, to maintain the bio-diversity of the riparian zone along the creek.

As of mid-July, almost all of the plants are doing very well, with the enhanced growth due in a large part to the high amounts of precipitation that we have received this spring. One of the biggest threats to the plants during the late summer is damage caused by rodents browsing on the new growth of the cuttings. Hopefully, with all of the lust growth this year, the mice, gophers and moles will not target the newly planted willows and trees!



Above: This is a Stage One poplar tree.



Above: This is a Stage One willow plant (Salix).

"The Town of Cochrane – Community Grant Program - Willow Planting Project for June of 2012"

In June of 2012, over a period of four days, 500 Stage One willow plants were planted at all of the four planting sites, in this years planting program on Bighill Creek. The survival of this crop of willows and trees is still in the high 90% range, as of mid-July of this summer.

The CCGP willows are recognizable as being slightly less advanced in growth, as the Cochrane Foundation willow crop that was planted a month earlier, but by next year it will be impossible to distinguish the difference! Presently, most of the willow crop from both plantings is hidden by the tall riparian grasses that grow along the banks of the Bighill Creek.

These planted willows will become more evident along the creek in a few years of growth, and by the fourth or fifth year, they will be quite obvious. The root systems from the new crop of willow plants will start to benefit the stream banks in the first season, by re-enforcing the soil with strong root systems that will help prevent bank erosion.

The shade and overhead cover from the new willows and trees, will come in future years, when the plants are tall enough to benefit the stream in this way.

Left Photo:
This is a large diameter —Stage two — willow plant that was planted earlier in the spring of 2012. The large diameter plants have a thicker bark and they are not chewed upon as much by rodents, as the younger, smaller diameter willow plants.

Right Photo:
This a an average sized Stage Two willow plant, with a smaller diameter stem, but as you can see, the top of the plant is growing quite high in less than a month after it was planted.

"Bow Valley Habitat Development (BVHD) Plants 540 More Advanced Plants Along Creek"

As part of the 2012 Partnership Planting Program, BVHD chipped in to plant 540 Stage Two willow and tree plants along the Bighill Creek. This total consisted of 440 large diameter Stage Two plants and 100 medium sized Stage Two willow and tree plants. These more advanced willow and tree plants take a little more time and effort to plant, but they are faster growing than the Stage One plants when they are in the ground.

Also, because of the taller tops on the plants, rodents such as mice and gophers are less likely to be able to reach the new shoots on the stem of the cutting, without doing a little climbing first! Rodents have been a real problem in the past, with planting programs in the Town of Cochrane. Without the natural predators to keep the rodent populations under control, their numbers are very high, when compared to a more natural setting or environment.

Once there is a healthy riparian zone along the entire lower reach of Bighill Creek, I expect that more predators will move into this habitat when there is enough cover. This should help keep the balance of predator/prey a little more natural. The moles that inhabit the lower reach will probably always be a problem for new plants. They feed on the succulent root systems of the new willows and if the plants are just starting to establish their root systems after planting, this can destroy the new plant very quickly!

With the Stage Two plants, the root systems are already more advanced and the plants have a better chance at survival if they are feed upon!

"What to Expect in the Future!"

"The Photos Below Will Give You an Idea!"

Above: This is a section of Millennium Creek in Feburary 2008. The willows that you can see along the stream were planted in the spring of 2007 and they are tall enough to show above the snow on the creek.

Above: This photo was taken from the same spot on the creek in the summer of 2012. You can see that the willow plants are now tall enough to hide the creek from view. It took five years of growth for this to happen on the creek!

Back to Cover Page