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DeBoville Slough
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2006 Japanese Knotweed Control Review



Our attempts at controlling Japanese Knotweed continued in 2006. We hope we have learned from our first experiences in 2005.

In 2005 we had a total of three cuttings on seven sites. We averaged close to twenty five volunteers at each event and removed 5,370 kg of material. The knotweed was cut as close to the base as possible, gathered up and loaded into a disposal container. The container was then taken to the GVRD incinerator in Burnaby for disposal. We chose cutting due to the nature of the rhizome root system that when cut or broken can potentially grow a new plant from each piece. Herbicides were rejected because of the proximity to a sensitive watercourse and riparian area. Herbicide application would have to be by individual stem injection, a labour intensive project, and one that would eliminate the use of volunteers.

We experimented with covering the largest site with black plastic to inhibit the growth of the Japanese Knotweed. While the growth was somewhat inhibited and knotweed a bit deformed, all other plants under the plastic were eliminated. This left no competition for the knotweed and the potential for erosion. At the second largest site we planted over thirty plants of seven different native species, hopefully to eventually grow and shade out the knotweed. Unfortunately this was the only site that was a good candidate for planting as most of the sites are on the sides of the dike.

After reviewing our cutting schedule for 2005 we decided to cut earlier and more often during the spring and early summer growing season and once in the early fall. We conducted work parties on May 7th, June 3rd, July 9th and September 9th. The September 9th cutting was earlier than we would have liked as the City of Port Coquitlam requested that the City of Coquitlam mow the north dike to remove tall grass prior to a half marathon event later in September and we wanted to cut the knotweed beforehand so the mowing wouldn't spread knotweed fragments along the dike. Unfortunately, due to some miscommunication at the City of Coquitlam, the north side dike was mowed late in August, ahead of our knotweed work party.

Once again we had a great turn out of volunteers, averaging over twenty per event. Our lowest number was in September, the day was quite wet but we still had sixteen people out. On the first two cuttings we had twenty four people each time. This allowed us to go over all of the areas that we had worked on the previous year plus we attacked two more large areas on the north side of the slough. Unfortunately we didn't have enough volunteers at the last two cuttings to keep up the effort on the new areas. In total we removed 4,350 kgs of material.



Volunteers working on new area.

This represents a reduction of approximately 20% less material than last year while increasing the amount of areas worked. A rough estimate, on the areas worked last year, would be that we cut 50% less material this year, due to less growth, even though we cut one more time.

The rate of success can be divided into two categories. We seem to be having good success with the larger, older sites, especially where they aren't being mowed by city works crews. In fact all of the areas that weren't mowed are showing substantially



Growth a 5 weeks after final cutting.

less growth and the growth is spindly and less dense. There is also considerable in growth of grass in some areas and blackberry in others. Hopefully this will also stress the Japanese Knotweed further. While Himalayan Blackberry is also invasive it is the lesser of two evils as it does provide habitat and food for many bird and mammal species. We are looking into seeding the areas on the dike sides with a grass mixture that is more environmentally sound than the existing invasive Reed Canary Grass.

The second category was the areas along or near the dike tops that were mowed by city works crews. In these areas we found that the plants were smaller as in the other areas

but the growth was much denser. We put this down to the fact that the nodes on the stem can also generate new plants and when mowed the stems are cut into multiple pieces and distributed around the cutting area. In a number of areas, you can see the expansion of the knotweed as it stretches along the dike top immediately adjacent to a large stand that has been mowed.

Doing the three cuttings during the rapid growth period seems to be having the desired effect but the cutting in the late summer was probably a couple of weeks earlier than optimum. The final cutting to have the most effect needs to be done in the last seven weeks of the growing season. We also found, on the two new sites started this year, that only two cuttings early didn't have as much effect on the final size of the plants as we would have liked.

The success to date has been to the concentrated efforts of the volunteers, support and assistance from the City of Coquitlam and Wesbild. At the beginning of this project two years ago we committed to a three year process. Both the City of Coquitlam and Wesbild have indicated that they are on board for next year. The City of Coquitlam has helped with logistics, finances and in kind work while Wesbild has once again supplied some heavy equipment and a flatbed truck for moving the material. Wesbild has also graciously supplied coffee and muffins in the morning and lunch at the finish of the work parties. The Friends of DeBoville have organized the work events and along with the Burke Mountain Naturalists have supplied manpower. Additional volunteers have been recruited through advertising in local papers and poster at different locations. A great big THANKS goes out to all those volunteers and The City of Coquitlam, especially Caresse Selk, who contributes beyond the dictates of her job. A special thanks also goes to Wesbild and there employees, many of which volunteered many hours and came out rain or shine.

In the short to medium term, groups of committed volunteers can stop the spread and reduce the area of Japanese Knotweed at DeBoville Slough. In the long term, the amount of areas infested with knotweed in the Tri-Cities area is much larger than volunteers can handle. Much of the area is on private land or in inaccessible locations. The ultimate solution is some form of biological control. Currently we know of no research into biological control of knotweed being done in Canada. There is some research being done in both the UK and the US. As Japanese Knotweed is a serious threat to wetlands and riparian areas we feel that Non Profit Environmental Groups, Municipal Government and the GVRD need to be lobbying senior governments for research here in Canada.

