

Byrne Creek Watershed

Status Report – May 2005

Burnaby, B.C.



Prepared by

Byrne Creek Streamkeepers

www.byrnecreek.org

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Streamkeeper float at Edmonds Santa Parade



Booth at A Taste of Edmonds

Report Contributors: David & Jane Burkholder, Joan & Rob Carne, Paul Cipywnyk, John Grange, Maho Hayashi, Yumi Kosaka, Susan Sharp; **Graphs and Charts:** David Burkholder; **Photographs:** Paul Cipywnyk, Yumi Kosaka.

Byrne Creek Streamkeepers Contacts

Web: www.byrnecreek.org

E-mail: info@byrnecreek.org

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Summary of Byrne Creek Watershed Health Indicators

Indicator	Rating 2004-05	Rating 2003-04	Comments
Spawners	 Chum  Coho  Spawning Channel	 Chum  Coho  Spawning Channel	Number of spawners rose to 91 in 2004, with 24 coho, up from a total of 62 in 2003. A few salmon used the artificial spawning channel for first time in several years in autumn 2004.
Juvenile and Resident Fish			Number of fry and juvenile fish continues to be encouraging.
Water Quality: Sedimentation, Pollution, Erosion			Continuing control of sediment flows from construction sites, though still occasional problems; ongoing road wash; oil trickle.
Water Quality: Invertebrate Surveys			Water quality appears to have improved based on bug sampling, however there is a long way to go.
Water Quantity: Creek Discharge			Huge flows from watershed due to decreasing pervious surfaces cause erosion and possible flooding.
Habitat – Invasive Plant Species			Discouraging spread of invasive plant species.

Suggested Solutions:

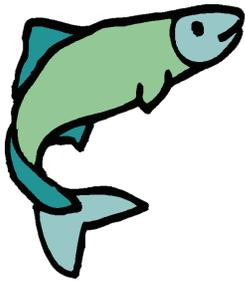
Spawners / Juvenile and Resident Fish: A modified and automated flap gate design at the Byrne Creek/Fraser confluence may allow for increased opening of the gate without increasing risk of flooding. Improve quality of spawning habitat. “Goofy” dog signs remind owners to keep dogs out of the creek.

Water Quality: Public awareness of storm drains, car washing, cars leaking oil and antifreeze, and pesticide use. Continued efforts to reduce or eliminate the use of the insecticide Merit to combat chafers, as it is highly toxic to aquatic invertebrates (bugs) that fish rely on for food. Enforcement of bylaws. Clean out sediment in spawning and rearing habitat.

Water Quantity – Creek Discharge: Include water retention in all new developments and require a certain proportion of pervious surfaces. Construct SEA (street edge alternative) streets. Retain as much natural habitat and treed space as possible.

Invasive Plant Species: Streamkeepers would like to coordinate a program of invasive species removal and replanting with native plants and trees with the support of the City of Burnaby. A dumpster could be placed in the spawning habitat for collection of invasive species. Continue education about dumping garden trimmings and non-native plants, particularly for homeowners and landscaping companies working near ravine parks.

Introduction



Byrne Creek Streamkeepers is a community volunteer group dedicated to the restoration and protection of the Byrne Creek watershed. Streamkeepers undertake community projects and public education, and help monitor the creek's rejuvenated populations of coho salmon, chum salmon and cutthroat trout.

Streamkeepers want to share their successes and their concerns, and continue to strive toward solutions to watershed problems.

Byrne Creek Streamkeepers present this report to summarize the state of the watershed and to show that it is possible to have salmon-bearing streams in urban areas, that education and perseverance do pay off, and that with hard work we can preserve our amazing natural resources for future generations.

Volunteers meet once a month to plan activities and events. The group works closely with the City of Burnaby's engineering, planning and parks departments, and the federal Department of Fisheries and Oceans.

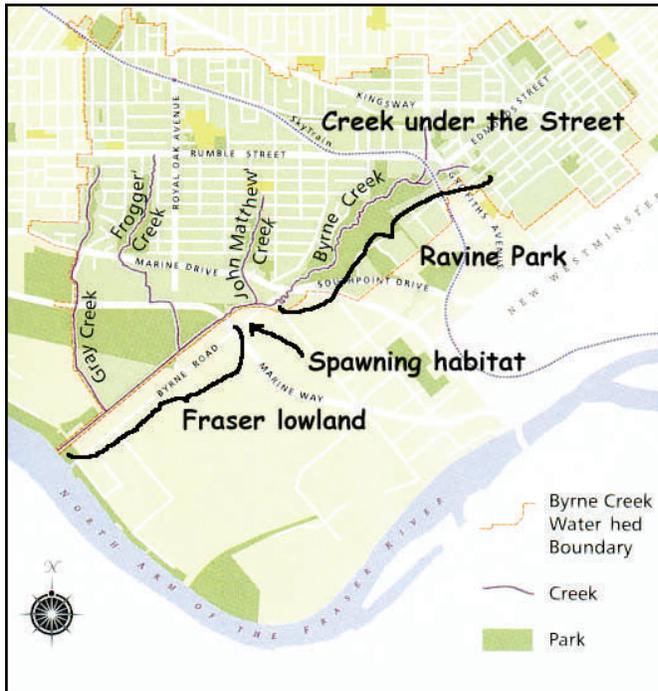
By the 1980s, flood control measures, habitat destruction and poor water quality had destroyed Byrne Creek as a fish-bearing watercourse. Streamkeeping activities began under the Vancouver Angling and Game Association (VAGA) in 1987. They organized cleanups, fish releases and trail construction in the Byrne Creek ravine.

A catastrophic toxic spill into a storm drain in 1998 that killed 5,000 fish galvanized a new generation of streamkeepers who joined with the VAGA members to form the Byrne Creek Streamkeepers on April 1, 1999. Now in its sixth year, the group continues to grow and increase its monitoring and education activities.

A Short History of the Byrne Creek Watershed:

- 1960s: Wild salmon and trout disappear due to habitat destruction and water pollution
- 1980s: City of Burnaby constructed a new channel across the Fraser floodplain and a flood gate, improving lowland fish habitat and fish access to the river
- 1987: Vancouver Angling and Game conducted an assessment with DFO
- 1989: Coho salmon stocking initiated
- 1997: Chum salmon stocking initiated
- 1998: Toxic spill into storm drain kills 5,000 fish
- 1999: Byrne Creek Streamkeepers founded
- 1999: City of Burnaby builds salmon spawning and rearing habitat as compensation for road construction.
- 2000: First Stream of Dreams Mural unveiled for Rivers Day
- 2002: Lowland reach re-excavated to reduce the risk of flooding
- 2004: A record 91 spawners return to Byrne Creek (24 coho, 67 chum)

Getting Located



The Byrne Creek watershed is located in the steep south slope area of Burnaby. The watershed has an area of 825 hectares and is highly urbanized with a combination of industrial, retail and residential land uses. It can be thought of in three distinct parts: the Fraser lowland which includes the constructed spawning habitat, the ravine park section, and the “Creek Under the Streets” section in which the water flows predominantly in buried pipes.

Streamkeepers reference data collection to a set of numbered location tags. These tag numbers are used along with descriptive names throughout this report to identify locations of survey points or features of interest.

A tag location map is included in Appendix A.



Japanese journalists observe bug count



Storm drain marking



Streamkeepers and city workers salvage fish before the sediment pond above the spawning habitat is cleaned out in summer 2004

Fish: Spawner Returns



Spawned coho

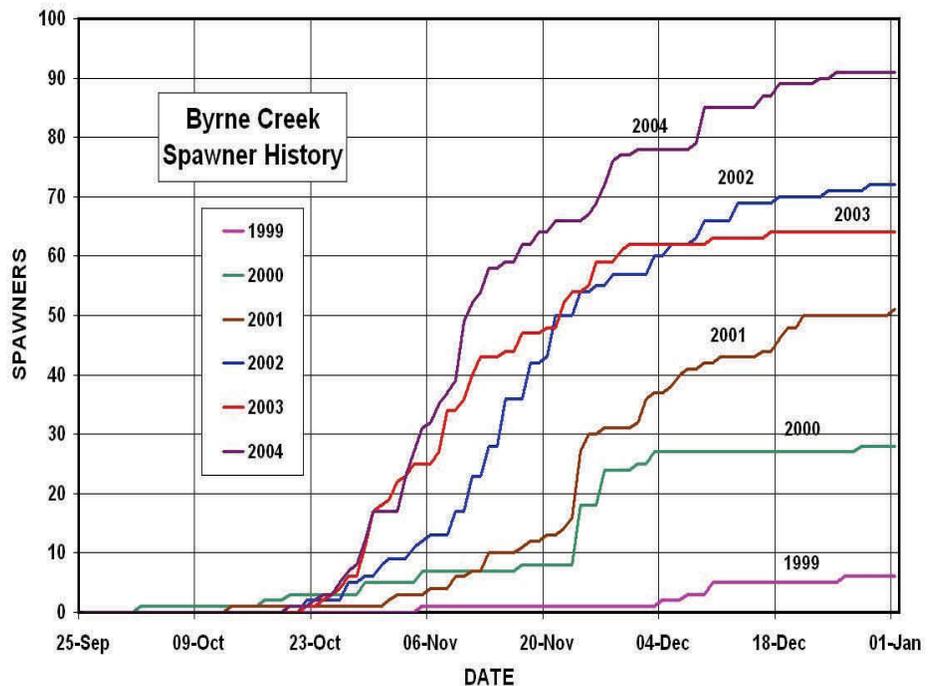
The Byrne Creek Streamkeepers have counted returning adult salmon for six years. Before then, the Vancouver Angling and Game Association monitored spawners from 1992. Between mid-October

and the end of December, streamkeepers look for dead fish between Marine Way (Tag 505) and the bottom of the ravine stairs (Tag 521) on a daily basis. Volunteers count dead fish, measure their lengths, determine species, gender and whether they have successfully spawned. The bodies are cut in half to avoid double counting and are returned to the creek to provide food and nutrients for other plants and animals.

The graph below shows spawner survey results for the last six years. The number of returning salmon has increased significantly since 1999. The highest return was in 2004 with 91 spawners returning to Byrne Creek, including 24 coho.

Starting in 2003, salmon began returning much earlier than in previous years. This is primarily due to the introduction of chum salmon, which was started in 1997. Typically, the chum salmon return to the creek in early and mid November, while coho return in late November and early December. The creek has seen a significant increase in the number of chum salmon in recent years. In 2003, 88% of returning salmon were chum and only 12% were coho, while in 2004, 74% of spawners were chum and 26% were coho.

It is estimated that in 2004, 86% of females successfully spawned compared to only 29% in 2002.



Concerns: When the flood gate at the Fraser River is not chained open, fish access to the creek is restricted. The artificial spawning channel is silted up and fish don't use it. Dogs playing in the creek can damage eggs during the spawning season and while eggs are in the gravel.

Solutions: A modified flap gate design at the Fraser River may allow for increased opening of the gate without increasing risk of flooding. Periodically opening the gate in the Sediment Pond may improve the quality of the spawning habitat by flushing away accumulated sediment. Whimsical dog signs along the creek remind owners to keep dogs out.

Rating for autumn 2004:

Chum 😊 Coho 😊
Spawning channel 😞

Fish: Juvenile and Resident Fish Counts



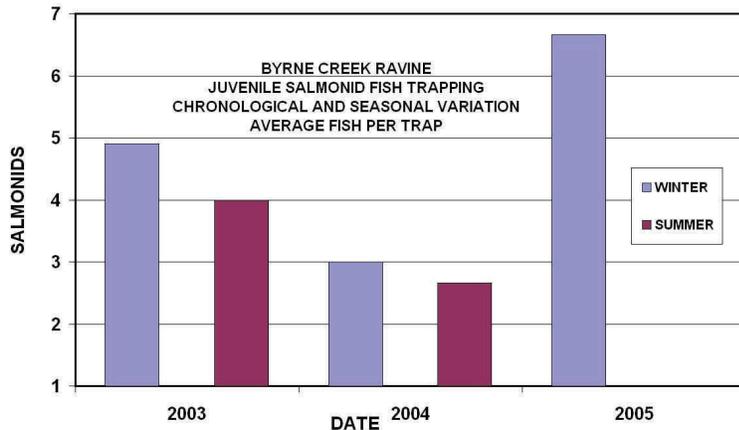
Naturally occurring coho fry that hatched in Byrne Creek

Concerns: Poor water quality, restricted fish access to river, increased sedimentation.

Solutions: Public awareness, environmentally friendly flap gate at Fraser River, increased water retention.

Rating for winter 2004: 😊

Juvenile trapping helps indicate the number of young fish residing in the creek. Traps are baited with salmon roe, placed at regular locations along the ravine area of the creek and retrieved a day later. The trap location and the number, length and species of fish are recorded before they are released.



Trapping results for the past three years are shown in the table and chart below. The results from winter 2005 are encouraging as 60 salmonid juveniles, including 54 cutthroat and 6 coho, were trapped in nine traps (average of over 6.7 fish per trap). Salmonids continue to be found throughout the entire ravine reach between the Edmonds Skytrain Station (Tag 539) and Marine Drive (Tag 515).

Cutthroat trout typically stay in the creek for their entire life cycle. Coho remain in the creek a full year before going out to sea. Chum fry only remain in the creek a few weeks, and are not normally available during the two trapping periods. Cutthroat trout were the predominant salmonid species in the ravine area. In the past three years, 90% of the fish trapped were cutthroat and 10% were coho.

Juvenile Trap Distribution						
Trap	Loca-tion	2003		2004		2005
		Winter	Summer	Winter	Summer	Winter
1	T515	10	9	1	4	4
2	T519	5	6 (2)	8	lost	10 (4)
3	T521	2	3	6	2	
4	T522	4	3 (3)	2	5	13
5	T524	4	5	2	4	12
6	T527	5	6 (2)	1 (1)	1	3 (1)
7	T530	8 (2)	5 (3)	6 (2)	2	5
8	T534	8	2	3	2	2
9	T535	2	0	1	1	3
10	T539	1	1	0	3	8 (1)
Total		49 (2)	40 (10)	30 (3)	24 (0)	60 (5)

Figures in (brackets) indicate coho, others are total fish



Fry release with schoolchildren, DFO

Water Quality: Sedimentation, Pollution, Erosion



Sediment pumped from a construction site into storm drains, or rain drains as streamkeepers like to call them, enters the sediment pond above the artificial spawning habitat in May 2004.

Sediment damages good spawning areas and potentially smothers salmon eggs.

Normally, this water would be crystal clear.

Road runoff carrying pollutants such as oil and anti-freeze from leaking vehicles, soap from car washing, and numerous other toxins can kill fish and other wildlife.

After several dry weeks in summer 2004, rain carried accumulated pollutants into the creek, creating the suds seen here.



Decreasing rainwater retention due to development in the upper watershed is causing huge flows from storm drains into the creek.

A heavy rain in late November 2003 resulted in flows so heavy that there was a major slide in the creek (just below Tag 517) that changed its course.

There was so much water in the system that it almost overflowed the bridges on Meadow Ave. and Byrne Road (adjacent Tag 507).

Deposition of material downstream of the slide covered spawning areas and smothered salmon eggs. In spite of these adversities, the population of salmon fry that emerged from the spawning beds in early spring 2004 was encouraging.

Concerns: Pollution, erosion and sedimentation from storm drain runoff.

Solutions: Public awareness of storm (rain) drains, car washing, cars leaking oil and antifreeze, and pesticides. Enforcement of bylaws. SEA (street edge alternative) streets. Daylight the creek and create wetlands (Ernie Winch Park?) to retain and filter water, and increase public awareness of water quality issues.

Rating for 2004-05: 😊

Water Quality: Invertebrate Surveys



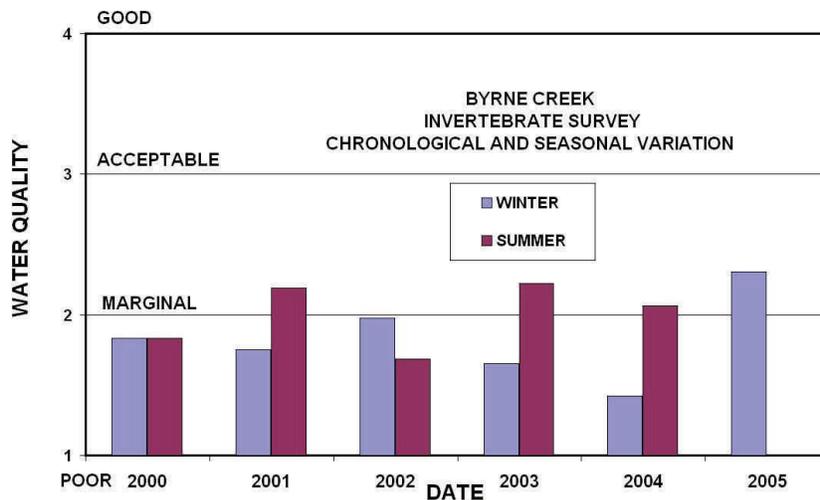
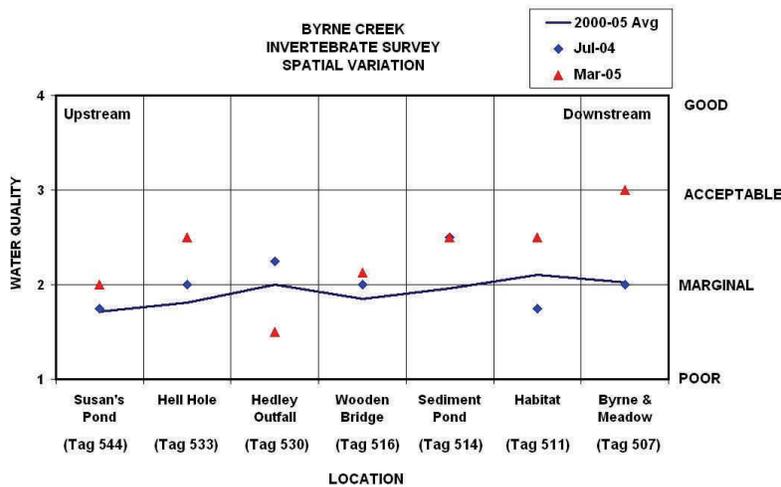
Aquatic bugs (invertebrates) give a reasonably accurate indicator of water quality. Some species, such as caddisflies, require good water quality, while other species, such as aquatic worms, are more tolerant of poor water.

Streamkeepers have completed invertebrate surveys twice a year for the past five years. Survey location points extend from 18th Avenue and 18th Street (Susan’s Pond at Tag 544) to Byrne Road and Meadow Avenue (Tag 507). Spatial variations along the creek are shown in the chart below. The line indicates the average water quality rating for the past five years, while the points (diamonds and triangles) indicate individual readings over the past year. Last year’s readings are relatively higher (better) than the average but remain predominately in the “marginal” range. The best ever “acceptable” rating (3.0) was obtained at Byrne Road and Meadow Avenue (Tag 507) in March 2005.

Concerns: Poor water quality due to pollution. Merit insecticide used to control invasive European chafer problem is highly toxic to water bugs.

Solutions: Public awareness of storm drains, car washing, cars leaking oil and antifreeze, and pesticides.

Rating for 2004-05: 😊



Chronological and seasonal variations in water quality have also been analyzed. The figure below shows the average winter and summer readings for the past five years. All readings are in the “marginal” to “poor” range. The 2005 winter results are encouraging, with significantly higher ratings than in previous recent winters.

Merit and Chafer Grubs

A new issue of great concern is the introduction of Merit insecticide to control the invasive European chafer infestation.

Merit is highly toxic to aquatic invertebrates, and regulations say it must not be applied within 30 meters of streams and ponds, or in areas where it could run off into bodies of water, yet many landscape companies are promoting its use.

Water Quantity: Creek Discharge

The figure below shows creek discharges recorded intermittently from July 2002 – December 2004. The readings are recorded manually at the sediment pond using measurements from permanently mounted staff gauges and the gate opening size. The calculated discharge includes both the low flow through the gate into the spawning habitat and the high flow over the weir into the flood by-pass channel. Readings tend to be concentrated around high discharge events. Depending on the timing of readings, the highest recorded value for a given storm may be significantly less than the maximum instantaneous discharge.

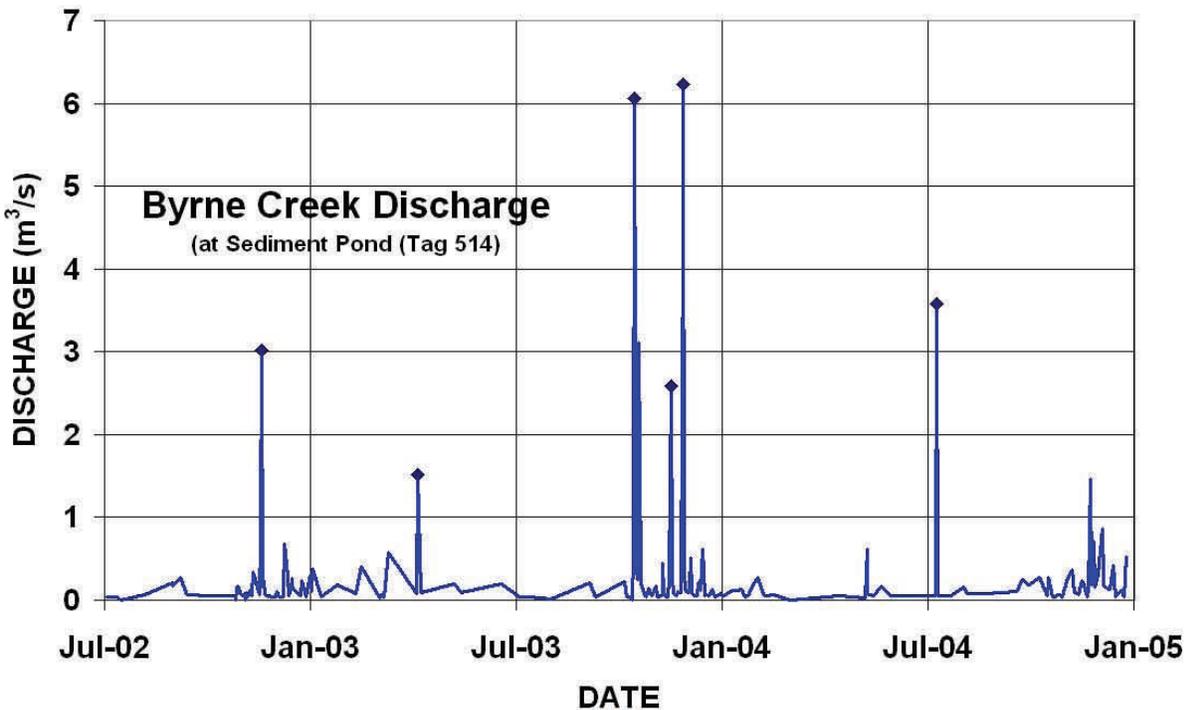
The highest recorded values are 6.1 m³/sec on October 16, 2003, and 6.2 m³/sec on November 28, 2003. The increased erosion and sediment in the creek over the autumn period can be directly attributed to these large storms.

Flows during storms are characterized by steep rising limbs and steep recessions. This behavior will likely continue in the future as more urban development takes place, and as the watershed impervious surface area increases and water retention decreases.

Concerns: Single-family housing is being replaced by higher-density development with less pervious surfaces. Continued reduction of urban forest areas in the upper watershed.

Solutions: Include water retention in developments, require a certain proportion of pervious surfaces, and encourage development of SEA (street edge alternative) streets. Promote use of rain collector barrels and development of roofing systems that support vegetation (green roofs).

Rating for 2004-05: ☹️



Habitat – Invasive Plant Species

Seven invasive species occur in the lowland and ravine areas in moderate to extreme levels. Himalayan Balsam (*Impatiens glandulifera*) AKA Policeman’s Helmet; Japanese Knotweed (*Polygonum cuspidatum*); Himalayan Blackberry (*Rubus armeniacus*); English Ivy (*Hedera helix L.*); Lamiastrum (*Lamiastrum galeobdolon*); Scotch Broom (*Cytisus scoparius L.*) and Morning Glory (*Convolvulus arvensis*). See Appendix B on page 14 for locations and prevalence.

Considerable effort was expended during spring and summer 2004 to control the spread of Policeman’s Helmet in the reach between Byrne Road and Meadow Avenue (Tag 507) and the John Matthew’s confluence (Tag 506). Policemen’s Helmet is a highly invasive annual that absorbs great amounts of water and can choke the streambed. Follow-up eradication activities are planned for spring and summer 2005.

Japanese Knotweed is another serious concern in the creek. It is a fast-growing plant that is very difficult to eradicate, and will overshadow and out-compete all other nearby plants. Different methods to control this stubborn invasive species are currently being assessed.

Streamkeepers encourage the City of Burnaby to develop an integrated invasive plant species control program that would take advantage of volunteer efforts to combat this growing problem, in combination with replanting with native species of plants, shrubs and trees. Streamkeepers have observed commercial landscapers dumping organic matter in ravines and parks, and have reported such activity to city staff. Stepped up education and enforcement are crucial to stopping such activity.



In July 2004, sections of the creek were nearly choked by Policeman’s Helmet. In this photo, taken near the John Matthew’s confluence (Tag 506), the creek runs from the top left to the bottom right. Intensive work by streamkeepers over several weekends put a temporary dent in the problem.

Concerns: Invasive species are choking the creek and overpowering indigenous plants.

Solutions: Streamkeepers would like to establish an ongoing program of invasive species removal and replanting with indigenous plants and trees with the support and assistance of the City of Burnaby. A dumpster could be placed in the habitat for collection of invasive species. Increased public education and enforcement are required to stop dumping of organic matter in ravines and parks.

Rating: ☹️

New Streamkeeper Initiatives:

Edmonds - Byrne Creek Skytrain Station

The Byrne Creek Streamkeepers contacted TransLink in March 2005 with the idea of renaming Edmonds Skytrain station, the Edmonds - Byrne Creek Skytrain station, after it was noticed that several Skytrain station names have had second parts added to them.

Why become Edmonds - Byrne Creek Station?

- Byrne Creek runs within a few meters of the station.
- Thousands of people pass Byrne Creek every day as they walk to the station, whether they are coming from the east or the west.
- Byrne Creek drains the largest watershed in south Burnaby.
- Byrne Creek Ravine Park is the largest ravine, and one of the largest parks in south Burnaby. This forest is key to maintaining urban biodiversity in the area.
- Translink promotes green values and the benefits of mass transit. What better connection than the most productive stream in south Burnaby with active runs of coho and chum salmon in an urban environment?
- It is the closest station to the new, high-tech, green, Byrne Creek Secondary school that is under construction and will open in autumn 2005.
- Developers of townhouse and high-rise projects near the station tout the beauties of Byrne Creek in their advertising.

Growing Liaison with Schools & Educational Tours

Streamkeepers have been doing increasing numbers of tours of the watershed with classes of schoolchildren of all ages, and Boy Scouts and Girl Guides.

The Green Team from Burnaby South Secondary has toured the watershed and is helping out with invasive plant species and cleanups.



Heron eating coho smolt in Byrne Creek habitat

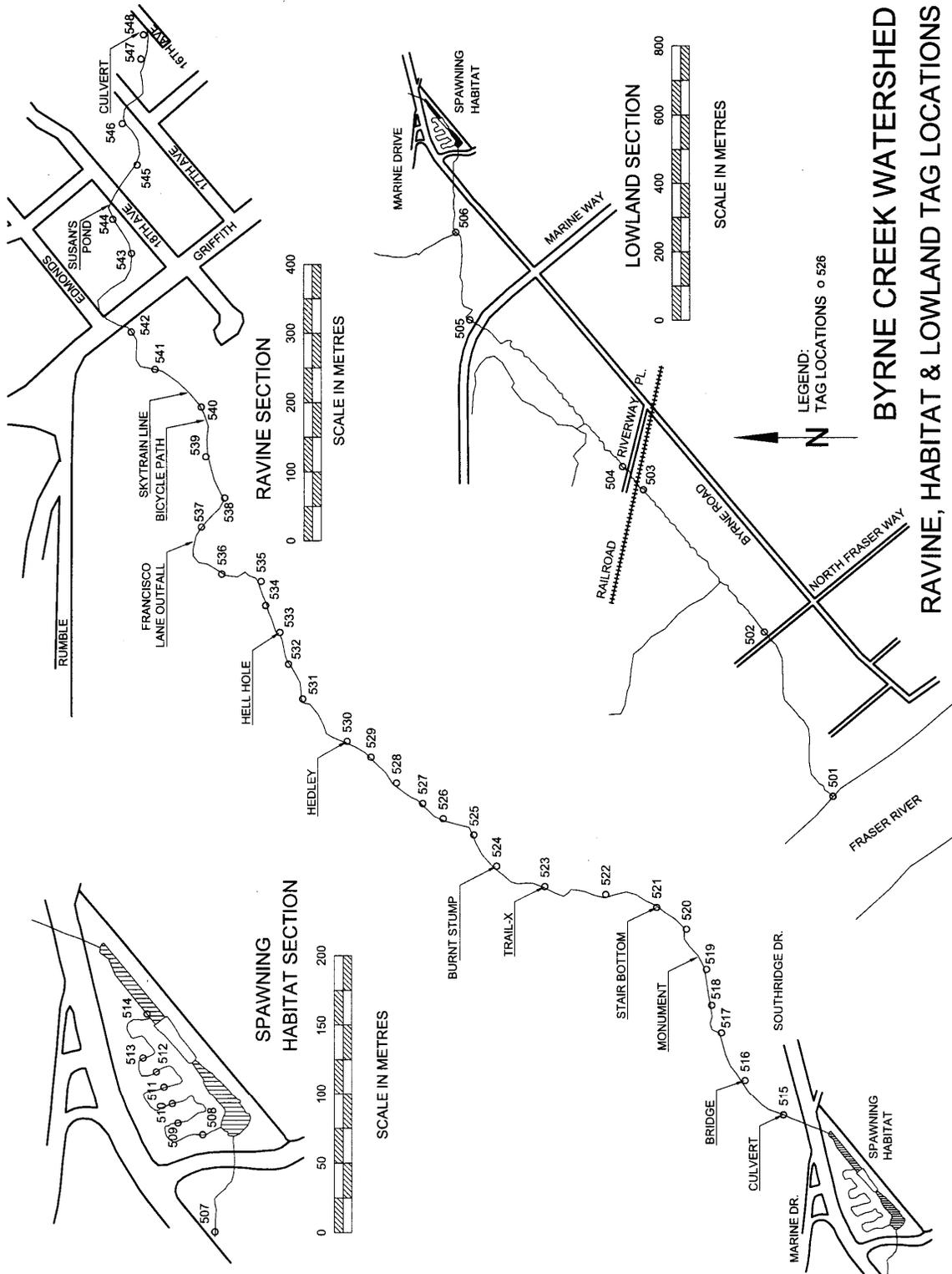
Several classes of Gladstone Secondary students from Vancouver have toured the watershed and have been introduced to issues such as urban biodiversity, the impacts of development on watersheds, and the salmon life cycle.

Several teachers and classes from Stride Avenue Community School have expressed interest in helping monitor Byrne Creek, and streamkeepers are providing watershed tours.

Streamkeepers hope that with the upcoming opening of Byrne Creek Secondary School, a program may be established in which students are taught streamkeeping techniques, and work with streamkeepers to monitor and improve the environment in the Byrne Creek watershed.

At the same time, streamkeepers are cautious about the impact of too many “little feet” along the creek, and are working with teachers and youth group leaders to minimize possible detrimental impacts on the riparian zone.

Appendix A: Byrne Creek Tag Locations



BYRNE CREEK WATERSHED
RAVINE, HABITAT & LOWLAND TAG LOCATIONS

Appendix B: Invasive Plant Locations & Prevalence

A new survey to document the spread of invasive species at key locations in the ravine and lowlands from 18th Avenue and 18th Street (Susan’s Pond, Tag 544) and Marine Way (Tag 505) was completed in May 2005. The survey will enable streamkeepers to determine the extent of coverage of six invasive species and monitor their proliferation over time. The results of the initial survey, shown in the table below, confirm that invasive species are a significant and growing concern in the Byrne Creek riparian zone.

Blackberry continues to be a significant problem in a number of reaches where there is no thick canopy of large trees. Japanese Knotweed is a critical concern at the Hedley Outfall (Tag 530) and downstream of the Ken Glover Monument (Tag 517 – 518). The prevalence of Policeman’s Helmet has been greatly reduced near the John Matthew’s confluence due to a concentrated effort by streamkeepers last summer, but is still a problem upstream of Marine Way. Ivy is a major problem on the left bank of the Homestead (Tag 536 – 537) and in the downstream end of the ravine (Tag 515 and 516). Although Scotch Broom and Morning Glory were observed in a number of reaches in the riparian zone, they are not considered to be a critical concern at this time, however Morning Glory is killing shrubs and young trees along the Brynlor trail at the top of the ravine.

BYRNE CREEK
INVASIVE PLANT SPECIES SURVEY
SPATIAL DISTRIBUTION

Place Name	Tag Location	Reach Length (m)	Rating						Cumulative
			Blackberry	Knotweed	P.Helmet	Broom	Ivy	M.Glory	
Susan's Pond	544	75	1	2	5	5	3	5	1
Homestead	536 - 537	100	4	4	5	5	0	5	0
Hell Hole	533	50	5	5	5	5	5	5	5
Hedley Outfall	530	50	2	0	5	5	5	5	0
U/S of Stairs	521 - 522	50	5	4	5	5	4	5	3
D/S of Monument	517 - 518	150	5	1	5	5	3	5	1
Wooden Bridge	516	150	3	3	5	5	2	5	1
New Weir	515	100	2	3	5	4	2	5	1
Sediment Pond	514	75	4	5	5	4	5	4	4
Habitat	508 - 513	200	3	4	5	4	5	3	3
Byrne & Meadow	507	100	4	4	4	5	5	4	4
John Matthews	506 - 507	175	3	4	4	4	5	4	3
Marine Way	505 - 506	275	2	3	2	4	5	4	1
Average Rating			3.3	3.2	4.6	4.6	3.8	4.5	2.1

Legend:

Description	Rating	% Coverage
Good	5	0
Satisfactory	4	< 1
Acceptable	3	1 - 5
Marginal	2	5 - 10
Poor	1	10 - 25
Terrible	0	> 25

Date: 14-May-05
Surveyors: Maho, John W.
Dave, Joan

Appendix C – Byrne Creek Streamkeepers Activities May 1, 2004 – April 30, 2005

May 1, 2004	Noons Creek Fingerling Festival: Byrne Creek Streamkeepers had the group's information booth up at this event.
May 5, 2004	Coho Smolt Release: Kids from Stride Elementary released coho smolts into Byrne Creek under streamkeeper supervision. Thanks to the Department of Fisheries and Oceans which trucked the fish to the creek from the Bell-Irving Hatchery at Kanaka Creek.
May 8, 2004	Edmonds Community Clean Sweep: The cleanup ran from 10:00 a.m. to noon. Streamkeepers focused on the upper reaches of Byrne Creek. The event ended with munchies at Eastburn Community Centre on Edmonds St.
May 8, 2004	Stoney Creek Great Salmon Sendoff: Byrne Creek Streamkeepers had the group's information booth up at this fun-filled event.
May 13, 2004	Regular Meeting: Discussion centered on City of Burnaby development plans. The original Stream of Dreams installation created in 2000 to commemorate the death of 5,000 fish and aquatic animals in Byrne Creek in 1998 is slated for redevelopment as a new library, and commercial/residential project. We want to make sure our voices are heard in the planning process, and that the dreamfish are incorporated into the site's new design. We also discussed continued input into development plans around the Byrne Rd./Marine Way intersection.
May 15, 2004	Japanese City Councilor Tour: A group of city councilors from Okayama City in Japan toured the Byrne Creek watershed and learned about volunteer streamkeeper activities.
May 26, 2004	Storm Drain Marking: Streamkeepers and Girl Guides painted yellow fish next to storm drains on the south slope of Burnaby.
June 6, 2004	Environment Week, May 31 - June 6: Streamkeepers held an invasive plant removal on June 6 with the support of the City of Burnaby, and 26 people showed up.
June 10, 2004	Regular Meeting: We discussed plans for summer bug counting and juvenile fish trapping, along with preparations for the Ugly Bug Ball. The completed Byrne Creek Watershed Status Report for 2004 was distributed to members.
June 19, 2004	Canada Lands Planting: Streamkeepers helped landscaping contractors plant new native vegetation at the northeast corner of Glenlyon Business Park. Thanks to Larry Morgan from Canada Lands Company for coordinating the event.
June 22, 2004	Byrne Creek Watershed Orientation: Byrne Creek Streamkeepers led a two-hour tour of the ravine park and salmon habitat, and were happy to see many new faces.
June 26, 2004	Ugly Bug Ball: Byrne Creek Streamkeepers attended this all-day event put on by Department of Fisheries and Oceans Community Advisors. It was a blast! Hope they do it again...
July 1, 2004	Canada Day: Byrne Creek Streamkeepers had their booth set up at this annual event at the Eastburn Community Centre on Edmonds St. in Burnaby.
July 18, 2004	Annual Summer BBQ: Our annual summer BBQ was great fun, with able hosting at the Grange residence. Members began working on new lanterns for the Night of 2004 Lights to be held on Sept. 18.
July 28-29, 2004	Juvenile Fish Trapping,: Streamkeepers set out Gee traps to see what kind of fish are living in the creek.
June 27, July 10, July 24, 2004	Summer Bug Counting: Summer weekend bug counts assessed water quality in Byrne Creek.

July 3, 5, 7, 17, Aug. 7, 2004	Removing Invasive Policeman's Helmet: Streamkeepers repeatedly worked on a section of the creek from Byrne Rd. (Tag 507) to the John Matthews confluence (Tag 506), where Policeman's Helmet had nearly choked the creek
Aug. 14, 2004	Japanese Homestay Kids Pull Invasive Plants: A group of Japanese junior high school kids visiting Canada volunteered to help remove invasive plants in Byrne Creek ravine.
Aug. 16 & 19, 2004	Cleaning the Habitat Sediment Pond: Streamkeepers helped Burnaby city staff and Envirowest clean out the sediment pond above the artificial spawning and rearing habitat. We netted, counted and classified and released fish before the city dug out the pond.
Sept. 6, 2004	A Taste of Edmonds: Our information booth was a hit at this community street festival.
Sept. 9, 2004	Regular Meeting: Members reviewed summer activities including removal of invasive plant species, fish trapping, cleaning out the sediment pond, water temperatures and quality, and discussed upcoming events..
Sept. 18, 2004	Night of 2004 Lights: Streamkeepers displayed fish lanterns near the Shadbolt Centre for the Arts at Deer Lake Park. It was a blustery, rainy day and evening, however we brought tarps, ropes and ladders, and strung up a shelter under the trees for our lanterns. It poured in the afternoon and early evening, and we were the only community group to show up!
Sept. 25 & 26, 2004	Rivers Day: Streamkeepers participated in the 25th annual Rivers Day at the Fraser Fore-shore Park at the south end of Byrne Rd. On Saturday night we set up our fish and wildlife lanterns, and manned our information booth from 10:00 a.m. to 3:00 p.m. on Sunday.
Oct. 14, 2004	Regular Meeting: We discussed upcoming events, and encouraged members to write letters to cabinet ministers to maintain funding for the Salmonid Enhancement Program run by the Department of Fisheries and Oceans.
Oct.—Dec., 2004	Spawner Patrols: Streamkeepers patrolled the creek for returning chum and coho spawners nearly every day over a three-month period.
Oct. 18, 2004	Burnaby Streamkeepers Roundtable: Burnaby streamkeeper groups met at the Stoney Creek Environment Centre to share information.
Oct. 20, 2004	Ravine Park Girl Guide Tour: Streamkeepers took Girl Guides on a tour.
Oct. 30, 2004	Byrne Creek Watershed Tour: New streamkeepers and interested people learned about the watershed, what some of the issues are, and what streamkeepers do.
Nov. 1, 2004	City Council Presentation: Streamkeepers presented their 2004 Byrne Creek Watershed Status Report to Burnaby City Council.
Nov. 8, 2004	RCMP Tour of Byrne Creek: Streamkeepers took the new Southeast District Commander on a tour of the watershed.
Nov. 16, 2004	Regular Meeting: Reported on returning salmon counts, painted fish on sticks for Edmonds Santa Parade.
Nov. 18, 2004	Salmon Migration Seminar: West Vancouver Streamkeepers Society and North Shore Streamkeepers sponsored a special presentation by Dr. Kees Groot on Migration, Orientation, and Navigation of Pacific Salmon.
Nov. 27, 2004	Edmonds Santa Parade: Byrne Creek Streamkeepers won a trophy at last year's inaugural event, and we added a float this year.
Dec. 9, 2004	Regular Meeting: Reported on record returning salmon counts, began planning guest speakers and events for the new year, and shared Xmas goodies.
Jan. 13, 2005	Regular Meeting: Spawner counts, activity and event planning. Discussed Department of Fisheries and Oceans Wild Salmon Policy draft.

Feb. 8, 2005	First Fry of 2005 Found: Streamkeepers spotted salmon fry (baby fish) for the first time in Byrne Creek this year. It was an unusually early appearance, and exciting confirmation of the success of a record spawner run in autumn 2004.
Feb. 10, 2005	Regular Meeting: DFO Community Advisor Maurice Coulter-Boisvert spoke on Department of Fisheries and Oceans community projects.
Feb. 23 - 27, 2005	Home and Garden Show: Streamkeepers manned a booth at the show for the first time, and also assisted the Stream of Dreams Murals Society in helping the public paint fish to accompany the City of Burnaby's salmon eco-sculpture.
March 10, 2005	Regular Meeting: Streamkeepers discussed plans for the increasingly busy spring season. We also reported on ongoing bug counts and the best juvenile fish trapping since we began keeping records.
Feb. 27, March 6, March 13, 2005	Bug Counting: Streamkeepers met three weekends in a row to conduct the first of two annual counts of bugs that indicate the quality of the water in the creek.
March 14, 2005	Burnaby Streamkeepers Roundtable: Burnaby streamkeeper groups met at the Stoney Creek Environment Centre to share information, including salmon spawning reports for autumn 2004.
March 18, 2005	Let It Rain: A Conference on Managing Rainwater Runoff with Low Impact Development Methods: Byrne Creek streamkeepers attended this interesting conference at Douglas College Institute of Urban Ecology.
March 31, 2005	Burnaby South Secondary Talk: A streamkeeper talked to the Green Team at the Burnaby South High School about streamkeeping and the Byrne Creek watershed.
April 8, 2005	Byrne Creek Fry Count: A couple of streamkeepers did a fry count in a section of the creek where we often find spawning salmon in the autumn and saw over 400 coho babies!
April 13, 2005	Burnaby Parks Hazard Tree Tour: Several streamkeepers met with a Burnaby Parks arborist to discuss concerns about the removal of trees in Byrne Creek Ravine Park. He explained the city's policies, liability concerns, and how the arborists determine which trees have to be pruned or cut down.
April 13, 2005	Girl Guides Orientation: Streamkeepers demonstrated several activities, including bug counting, juvenile fish trapping, and invasive plant species identification and removal to an eager group of Girl Guides.
April 14, 2005	South Slope Elementary Fry Release: Streamkeepers helped grade 1 & 2 students release chum fry they had raised in their classroom into Byrne Creek..
April 14, 2005	Regular Meeting: We reported on past activities and events for the spring season. We also discussed several issues including the use of Merit insecticide on chafers (it is highly toxic to aquatic bugs and is not supposed to be used anywhere where it can run off into aquatic systems), and rumours about more developed paths planned in Byrne Creek Ravine Park.
April 17, 2005	Invasive Plant Removal and Replanting: With the city's approval streamkeepers tackled invasive plants at the bottom of the ravine and replanted with native species.
April 26, 2005	Chum Fry Release: Streamkeepers helped the DFO and kids from Suncrest School release 30,000 chum fry in Byrne Creek.
April 29, 2005	South Burnaby Secondary Green Team: Members of the Burnaby South Secondary Green Team joined streamkeepers on a creek tour and helped pull invasive ivy.
April 30, 2005	Edmonds Community Clean Sweep: Streamkeepers joined this Edmonds Town Centre Business and Community Association event to clean up the Edmonds area of Burnaby. We filled two dumpsters with garbage and invasive ivy, and planted 50 trees along the creek. Thanks to the 15th Horizontes-Burnaby Cub Group and all other community members!