

Fraser Salmon & Watersheds Program



Fraser Basin Council

2009 Final Report

FSWP File Number: FSWP 09 26

Please use the FSWP File Number provided in previous FSWP 2008 project correspondence

Contact Information

Sponsoring Organization's Legal Name

City of Surrey

Are you a federally registered charity, non-profit organization or business (Yes / No)? No

If yes, please indicate which: ☐ Charity ☐ Non-profit organization ☐ Business

Registration number: N/A GST number: N/A

Are you a registered Society (Yes / No)? N/A Society Registration number: N/A

Mailing Address

City of Surrey, 2nd Floor Engineering 14245 - 56 Avenue Surrey, BC V3X 3A2

Street Address (if different from above)

Project Manager

Name: Tracy Sutherland Title: SHaRP Coordinator

Affiliation: City of Surrey, Engineering Phone: (604) 591-4383

Fax: (604)591-8693 E-mail: tlsutherland@surrey.ca

All correspondence will be directed to the Project Manager.

Alternate Project Contact

Name: Carrie Baron Title: Drainage and Environment Manager

Affiliation: City of Surrey, Engineering Phone: (604) 591-4278

Fax: (604)591-8693 E-mail: cabaron@surrey.ca

Name: Stephen Godwin Title: Environmental Coordinator

Affiliation: City of Surrey, Engineering Phone: (604) 591-4691

Fax: (604)591-8693 E-mail: sgodwin@surrey.ca

Name: Laura Dilley Affiliation: Dillon Consulting Limited

Phone: (604) 278-7847 E-mail: ldilley@dillon.ca

Project Information

City of Surrey

City of Surrey's Salmon Habitat Restoration Program (SHaRP)

Project Summary

SHaRP activities occurred across the City of Surrey, a municipal district in Metro Vancouver in southwestern B.C. The majority of sites visited for enhancement works were within or adjacent to watercourses. Sites selected typically included: riparian areas infested with invasive plant species, littered with anthropogenic wastes or that lacked native vegetation cover; creeks with actively eroding channel banks; and agricultural lands where livestock were impacting the integrity of channel banks and substrates. In addition to this, educational and promotional activities were carried out at a variety of community events, business establishments and residential areas within the municipality. Some examples of areas where SHaRP worked on site remediation projects include along the Nicomekl River, ditches in the Serpentine watershed, Hyland Creek, Eugene Creek, Colliers Canal and Cougar Creek.

Project Budget	\$ 41,500	Total Project Value	\$388,137	Non-FSWP Funds	\$ 346,637
----------------	-----------	---------------------	-----------	----------------	------------

* Non-FSWP funds include both cash and in-kind funding. In-kind funding refers to all non-cash contributions such as equipment, supplies, labour, etc. Please refer to Budget Section for further details.

Project Summary

Over the past 14 years the SHaRP program has provided significant environmental and social benefits to the City of Surrey through the protection and enhancement of its urban watersheds, the education of its residents and businesses and the employment of local youth. The goals of SHaRP 2009 were to enhance negatively affected stream sites and deliver environmental education campaigns to the community, including schools and businesses, while engaging youth in stewardship work. The SHaRP 2009 teams restored fish habitat in urban streams, which are vital routes, rearing, spawning and feeding grounds for seven species of salmon and trout. If these streams were not enhanced, the negative impacts from urbanization could be detrimental to the aquatic species using these streams. The education outreach programs that the teams conducted within the community targeted all age groups and a diversity of backgrounds, from primary school day camps to the proprietors of industrial and agricultural operations. In addition to the benefits to the environment through the restoration and education programs, the students that make up the SHaRP teams gained valuable career-oriented job experience in workplace safety, team building and leadership, public relations, community and industrial education, habitat restoration, bioengineering and restoration planting techniques. Students emerged with a heightened interest in their community and a stewardship outlook for the natural environment. The 2009 SHaRP season was very successful: the teams completed approximately 44 restoration sites in and around watercourses, provided environmental presentations to 6 elementary schools and 6 day camps, attended 23 community events with watershed stewardship information, and visited 214 business operators and distributed 250 best management practices brochures while emphasizing the importance of caring for Surrey's urban salmon habitat. In addition 856 stormdrains were marked with metal plate markers saying "no dumping – drains to creek" to raise awareness and reduce pollution.

OPTIONAL: If your project has a special interest through a community group or business, please include a short paragraph in the project summary. Please tell us what that group would be. Do not use more than 50 words.

Since 1996, the City of Surrey's Salmon Habitat Restoration Program (SHaRP) has provided significant environmental and social benefits to the City through the protection and enhancement of its urban watersheds, the education of its residents and businesses and the employment of local youth. The goals of SHaRP are to enhance negatively affected stream sites and deliver environmental education campaigns to the community, including schools and businesses, while engaging youth in stewardship work. SHaRP's inclusive approach of hiring students, working with communities, industry, and other organizations create a comprehensive approach to habitat protection. By working in partnership with other organizations SHaRP takes a leveraged approach. Through working with local community groups and helping each other in stewardship efforts our results are magnified and the outcome is greater than what each group could have achieved on their own.

<p>Species and life stages the project targets: <i>please list</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> All life stages of the 7 species of salmon and trout commonly found Surrey (Chinook, Chum, Coho, Steelhead, Pink, Rainbow Trout, Cutthroat Trout), however the restoration works especially benefits Chum Salmon, Coho Salmon, Rainbow Trout and Cutthroat Trout. <input type="checkbox"/> Other incidental aquatic species within Surrey's watercourses due to a reduction in pollution events (e.g. benthic macro-invertebrates, fish species, crayfish)
<p>Watershed(s) the project targets: <i>please list</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Nicomekl Watershed <input type="checkbox"/> Serpentine Watershed <input type="checkbox"/> Little Campbell Watershed

Project Deliverables and Results

Place in the deliverables outlined in your Detailed Proposal (question #4 under project relevance and significance heading) into the table below. Then, place in the results associated with each deliverable. Please include copies of any relevant communications products (brochures, posters, videos, website addresses etc.) resulting from this project.

Deliverable	Result
Enhancement of over 20 riparian sites through installation of plants, removal of invasive plant species, and/or installation of erosion protection material.	Enhancement of 44 riparian sites through installation of plants, removal of invasive plant species, and/or installation of erosion protection material.
Attendance at over 10 community events and 15 day camps, and partnership with local volunteer groups to assist with restoration works at a minimum of 2 riparian sites.	Attendance at over 23 community events and 12 day camps/elementary schools, and partnership with local volunteer groups to assist with restoration works at 6 riparian sites.
Distribution of over 800 environmental stewardship and 200 agriculture stewardship related brochures.	Approximately 800 brochures and educational materials and 50 agricultural stewardship brochures were distributed.
Construction of livestock exclusion fences or buffer strip habitat on farms at a minimum of 4 locations.	1 livestock exclusion fence was installed along the Little Campbell River near the hatchery. 4 buffer strip habitat enhancements were completed on local agricultural land creeks and ditches.
Educational materials regarding pollution prevention initiatives delivered to a minimum of 500 business operators in conjunction with industrial education campaign.	Educational materials regarding pollution prevention initiatives delivered to approximately 250 business operators in conjunction with industrial education campaign. In addition 190 yellow fish decals were marked and 856 "No Dumping - Drains To Creek" plates were installed on stormdrains.

Project Effectiveness

Place in the effectiveness of your project in the table below.

The 2009 Salmon Habitat Restoration Program was effective in restoring and enhancing riparian habitats, engaging community members and organising or participating in community events celebrating Surrey's watercourses and promoting stewardship. Factors which indicate the effectiveness of the program are highlighted below with a description of why they are considered successful.

Species that benefit from the project (check all that apply)

- ☐ All life stages of the 7 species of salmon and trout commonly found Surrey (Chinook, Chum, Coho, Steelhead, Pink, Rainbow Trout, Cutthroat Trout), however the restoration works especially benefits Chum Salmon, Coho Salmon, Rainbow Trout and Cutthroat Trout.
- ☐ Other incidental aquatic species within Surrey's watercourses due to a reduction in pollution events (e.g. benthic macro-invertebrates, fish species, crayfish)

Watershed(s) the project targets, please list

- ☐ Nicomekl Watershed
- ☐ Serpentine Watershed
- ☐ Little Campbell Watershed

Project Deliverables and Results

- Paste in the deliverables outlined in your Detailed Proposal (question 13 under project relevance and significance heading) into the table below. Then, please list the results associated with each deliverable.
- Please include copies of any relevant communication products (brochures, posters, videos, website addresses etc.) resulting from this project.

Deliverable	Result
Enhancement of over 20 riparian sites through installation of plants, removal of invasive plant species, and/or installation of erosion protection material.	Enhancement of 44 riparian sites through installation of plants, removal of invasive plant species, and/or installation of erosion protection material.
Attendance at over 10 community events and 15 day camps, and partnership with local volunteer groups to assist with restoration works at a minimum of 2 riparian sites.	Attendance at over 23 community events and 12 day camps/elementary schools, and partnership with local volunteer groups to assist with restoration works at 6 riparian sites.
Distribution of over 800 environmental stewardship and 200 agriculture stewardship related brochures.	Approximately 800 brochures and educational materials and 50 agricultural stewardship brochures were distributed.
Construction of livestock exclusion fences or buffer strip habitat on farms at a minimum of 4 locations.	1 livestock exclusion fence was installed along the Little Campbell River near the hatchery. 4 buffer strip habitat enhancements were completed on local agricultural land creeks and ditches.
Educational materials regarding pollution prevention initiatives delivered to a minimum of 500 business operators in conjunction with industrial education campaign.	Educational materials regarding pollution prevention initiatives delivered to approximately 250 business operators in conjunction with industrial education campaign. In addition 190 yellow fish decals were marked and 856 "No Dumping - Drains To Creek" plates were installed on stormdrains.

Project Effectiveness

The 2009 Salmon Habitat Restoration Program was effective in restoring and enhancing riparian habitats, engaging community members and organising or participating in community events celebrating Surrey's watercourses and promoting stewardship. Factors which indicate the effectiveness of the program are highlighted below with a description of why they are considered successful.

Number of Students Hired: Base funding for the 2009 program would have allowed for 20 students. Thanks to the generous contributions of outside funders, including FSWP, we were able to hire 29 students and achieve greater results. The students hired through SHaRP this year earned more than 10,000 hours of valuable work experience and stewardship training.

Riparian Sites Enhanced: The extra students made it possible to complete more than double the number of riparian sites enhanced in 2008. SHaRP was also able to increase the number of partnerships with other stewardship groups and complete more restoration works on agricultural lands.

Fall SHaRP: The increased funding also made it possible for 11 students to continue working into the Fall. They attended community events and planted riparian plants on weekends in September and October, increasing further the number of community members reached and the riparian areas in Surrey that were enhanced.

SHaRP Teams:

The program objectives were achieved through various activities completed by the 5 teams that comprise SHaRP. Two teams focused on awareness and education, two teams accomplished instream restoration works and the remaining team created program awareness through working with local media outlets. SHaRP received coverage through print media (The Peace Arch News, The NOW newspaper, and The Surrey Leader) and on the event websites (see articles attached).

Partnerships with Stewardship groups:

SHaRP was able to expand its partnerships to work on more than 6 sites with other Stewardship groups including: A Rocha, Ducks Unlimited, Cougar Creek Streamkeepers, Semiahmoo Fish and Game Club and Surrey Natural Areas Partnership. Through working jointly on habitat enhancements each group achieved greater results.

Public Engagement:

At more than 23 community events SHaRP teams engaged the public in interactive and educational games, presented displays and distributed informative brochures. The Industrial education team also conducted door-to-door campaigns in business and industrial areas, as well as marking over 850 stormdrains to raise awareness that they drain to creeks and ways to protect them from pollution. Through these activities and the inclusion of the community during several neighbourhood based stewardship planting events, SHaRP teams increased awareness of Surrey's salmon and their habitat within Surrey. By having the community participate in local plantings and SHaRP increases the chance of success for sites through engaging the local residents and inspiring an interest in seeing the plants grow and thrive.

Team Leader Reports: At the end of the summer program, SHaRP team leaders write a Final Report including results of the program, and tips for the following year and student responses to the program. In this year's report, the feedback received was positive. Participating students hoped to acquire fieldwork experience, leadership skills, teamwork skills and improve their public communication skills. Student reports reflect they feel that they achieved these aims successfully while spending an enjoyable summer working on stewardship issues. The overall response to the program was both enthusiastic and positive and students reiterated their support for the program with hopes that it continues in the future.

Having 5 different teams works well because it allows for a comprehensive stewardship program. Because two teams work on education and two do the physical work of restoration, we are able to increase the probability of success and viability of our plantings. By engaging the public through interactive education, restoration projects are better understood and are less likely to be undermined. Our 5th team targets media and public relations to increase awareness of the program and upcoming SHaRP projects and events. The team structure is also flexible enough to allow for interested students to try out another team during the season, to broaden their experience and give them a fuller understanding of the program.

What are the top three lessons learned from this program that would be important to communicate to other young people working throughout the Basin?

1. Connecting with and working with other stewardship organizations when possible, strengthens each separate program and increases the number of people that can be reached by each organisation.
2. Integrating community events with restoration work is effective community engagement. By having team members explaining restoration works, as they are occurring, while also giving community members the opportunity to participate, community members are more likely to feel connected and to become stewards themselves.

3. If a program is able to continue over successive years, like SHaRP, projects can be monitored and revisited to ensure plant survival and that stabilization features are holding. There is also the opportunity to observe which types of plantings work better and which are less successful and change future plans accordingly.

Project Effectiveness

Please describe how your project has addressed each Priority Activity identified in your Detailed Proposal.

Priority Activity	How the Priority Activity has been Addressed
Left blank as per Tiffany Pither's instruction	

Please paste each priority activity identified in your Detailed Proposal in the space provided.

Further Comments

Please provide any further comments including recommendations for future conservation efforts and suggestions for helping partners to meet the goals of the Fraser Salmon and Watersheds Program. If your project produced a narrative or scientific report or additional project products (e.g. maps, photos), attach them as an appendix.

SHaRP 2009 Summary Report attached.

8) Appendix (Attach reports, maps, photos, etc if applicable)

SHaRP

SALMON HABITAT RESTORATION PROGRAM

Fraser Salmon and Watersheds Program

2009 Final Report

Supporting Documents

CONTENTS:

- Media Coverage
- Letter to the Editor (Peace Arch)
- Example Media Advisory (Watershed Showcase)
- Letter of Appreciation from Semiahmoo Fish & Game Club
- Example site prescription from the Watershed Enhancement team
- Summary Report for SHaRP 2009 created by Dillon Consulting Ltd.

VOICE OF THE SURREY COMMUNITY
www.peacearchnews.com

best next week in Australia.
see page 23

Developers donate twice to save White Rock traditions

Spirit fest fireworks not up in smoke

Tracy Holmes
Staff Reporter

There will be fireworks at White Rock's Spirit of the Sea Festival. Festival director Matt Todd confirmed this week a sponsor has stepped forward to help meet costs of the display.

Cressey Development Group ini-

tially pitched in \$5,000. And, after learning remaining funds were found by trimming a community mural project, the company donated an additional \$2,000 to cover that shortfall as well.

The festival team had decided Monday night to find the remaining funds needed for the fireworks

by foregoing two of three murals that had been in the plans.

"It was a question of where do we put our money," Todd explained Tuesday. "If we have x dollars and we want more than what x provides, something has to give."

Feedback on news earlier this month that the August long week-

end's fireworks may be cancelled clinched the decision to juggle the budget.

"There was a lot of people who felt it was a highlight of the day," Todd said. "It seemed to be something that was motivating people to come to the festival... and then they were there for all the other activi-

ties. It was a significant draw." And that was all Cressey officials needed to hear. After reading about planned cuts on peacearchnews.com, vice-president Hani Lamnam announced Wednesday Cressey would also cover the \$2,000 to ensure the event is as

see page 4

Friends of a feather

Jana

Ottrevangers (left), Claire Thompson and Nick Loney team up to remove spartina grass from Mud Bay Park. The trio were part of a July 20 effort

organized by members of Surrey of Natural Areas Partnership, Salmon Habitat Restoration Program and Ducks Unlimited

to restore habitat in sensitive tidal and terrestrial areas of the park, which provides important and foraging areas for local and migratory birds.



From Gabriella Photo

12 Peace Arch News Friday, July 31, 2009

lifestyles

Keeping cows in bounds

Kolby Solinsky
Black Press

The weather was so hot this week that all the cows at the Little Campbell Hatchery collectively took shelter underneath a tree.

And yet, as they relaxed, not far away, university and high school students with SHaRP's Agricultural Stewardship Program endured the hot sun, building a fence that will protect the cattle from overstepping their bounds.

Established in 1996, SHaRP (Salmon Habitat Restoration Program) is a student-based initiative promoting salmon habitat enhancement for the local creeks and streams in Surrey.

Members of the Agricultural Program, led by Erin Catherall of SHaRP's media and public relations team, spent two days this week building a fence that will prevent the bovines from entering the hatchery's waterstream.

If the cows enter the water, it causes sedimentation that is bad for the hatchery's fish population.

"We're helping out the hatchery," said Catherall.

The group is also removing reed canary grass, an invasive plant.

"It out-competes natural vegetation and limits the habitat for wildlife," she said.

Because Catherall's team is made entirely of students (members are from high school, and leaders are from university), the program has taken a mentoring role as well.

All the members are from Surrey, ensuring that their message is both given and received on a local level.

"Another big goal here is community



Kolby Solinsky photo

Erin Catherall and the SHaRP Agricultural Stewardship team brave the hot weather to build a cattle fence at Little Campbell Hatchery.

education," said Catherall. "We want to educate the public on these creeks and streams that are

salmon-bearing." There are more than 300 kilometres of salmon-inhabited creeks and streams in

Surrey, Catherall noted. "We are working to reduce urban impacts on these salmon habitats."

A12/ Friday, August 14, 2009 thesurreynews.com

CITY OF SURREY PUBLIC NOTICE

AN INVITATION TO A PUBLIC OPEN HOUSE

Re: Public Park Event To Design The New Unwin Water Park

You are invited to a Public Park Event to provide input on designing the new Unwin Water Park which is located in Unwin Park between the parking lots along 68th Avenue near 134th Street. There will be free drinks, treats, prizes, and other giveaways under the tent beside the water park. Bring the whole family!

The purpose of this Event is to provide you with an opportunity to review and give input on some preliminary design ideas and themes the City has been developing. Staff will be on hand to receive community feedback on the plan that is being presented. This information will help guide the development of a final plan to be presented to the Parks and Community Services Committee and City Council.

The Event will be held:

Date: Saturday, August 15th, 2009

Time: 2:00 p.m. to 6:00 p.m.

Location: Unwin Water Park in Unwin Park
13313 68th Avenue, Surrey, BC
Enter from 68th Avenue

If you have any questions, please call 604 501-6050. We look forward to working closely with the community to develop plans for the new Unwin Water Park.



www.surrey.ca

COMMUNITY

Surrey creek in for some TLC

Bonnacord Creek is receiving special treatment this Saturday, courtesy of SHARP (Salmon Habitat Restoration Program).

The creek, which stretches through Hawthorne Park, is one of the many salmon-bearing creeks in Surrey.

SHARP is a student-based initiative that promotes watershed stewardship and habitat enhancement for fish species within the City of Surrey.

SHARP strives to protect and improve fish habitats, educate the community and increase awareness of the importance of urban streams for indigenous freshwater fish species.

The SHARP Media and Press Relations team and Watershed Enhancement Team are putting on the event and the day is intended to educate the public about fish and wildlife habitats through games, education booths and a nature walk.

But the main feature of the day will be the creek enhancement.

"The purpose of this event is going in and helping to restore this creek and to help increase habitat value for local wildlife in the park," said Erin Catherall, a member of SHARP's Media and Press Relations team.

"We will remove all invasive plants and be planting a native species in its place to help promote wildlife - bugs go on the vegetation and it helps fish in the stream."

The public is invited to help install the native plants and be part of creek enhancements through out the day.

Those who take part in the games and planting will receive a native plant seedling for their own garden.

"A large number of creeks and stream in Surrey are salmon-bearing and many people don't know that."

"By having the community participate, they can contribute to the enhancement of this creek and it also promotes community education."

"When people are more aware of these areas in Surrey, they can try to reduce their impacts on these habitats."

The event will take place on Aug. 15 at Hawthorne Park, located at 10503 144th St., from 10 a.m. to 4 p.m.

What do you think?

E-mail your thoughts on this issue to editor@thesurreynews.com or send mail a letter to Suite 201, 7688 132nd Street, Surrey, B.C., V3W 4M2. Include full name, address and phone number for verification purposes.

Friday August 21 2009 4:3



EVAN SEAL / THE LEADER

Creek cleanup

Jenna McBeth and Kyle Prakash, both members of SHARP (Salmon Habitat Restoration Program) and members of SNAP (Surrey's Natural Areas Partnership), teamed up with area volunteers Wednesday morning to clean up the banks of King Creek in Kiyo Park, located near 90 Avenue and 140 Street. The two environmental groups also planted native vegetation and removed invasive plant species to restore the habitat for birds, fish and other wildlife.

10/6/ Friday, August 21, 2009 thesurreynews@paper.com

NEWS

IKIYO PARK

Garbage carted from 20-acre greenspace

About two dozen summer students turned out to pull invasive weeds, gather garbage and restore Kiyoko Park to its natural state Wednesday morning.

As they worked, a man who lived near the Surrey greenspace, near 90th Avenue and 140th Street, stopped to watch for a moment.

"I really appreciate what I see here," he said, after relating the story of how one morning he saw a woman wheel up a shopping cart full of garbage and leave it by the coho salmon-bearing stream.

Not long after, volunteers pulled a shopping cart out of the bushes lining

King Creek.

The work is part of the ongoing partnership between Salmon Habitat Restoration Program (SHARP), Surrey's Natural Areas Partnership (SNAP) and the City of Surrey.

The day wasn't all work, though. There were information booths set up for the public to learn about the project and the importance of maintaining a healthy riparian environment as well as activities for kids for later in the day.

Kiyoko Park was established in 2001 through a land exchange between the families of Norman and Irene Tanyuki and James and Lily Yoshizawa. The 20-acre

parcel of land was once a farm, nursery and greenhouse site; although the families did some work to maintain the health of the creek and its salmon population over the years.

The families donated the land and financially contributed to the development of the park in hopes of providing a legacy for fish conservation and to help preserve a piece of Surrey history.

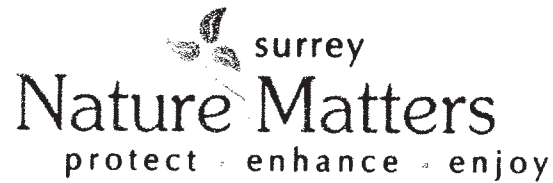
Meanwhile, this Saturday (Aug. 22) the public is also invited to help out when SNAP will be restoring an unnamed park in Surrey. That day's work will focus on removing non-native plants at "Greenbelt 131B" at the junction of 14A and 134A Street. The work will run from 11 a.m. to 2 p.m. Tools and refreshments will be provided, and volunteers will be shown which plants to target.

ccooke@thesurreynews@paper.com



SNAP crew members pull an old shopping cart from the creek during a clean-up and habitat-restoration event Wednesday at Surrey's Kiyoko Park.

Photo: Sharon Doucette



Dear Editor,

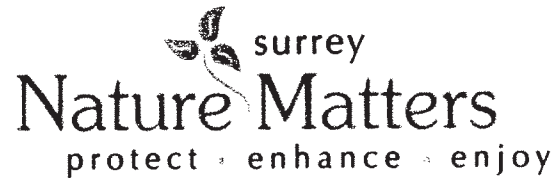
On July 31st, Surrey's Salmon Habitat Restoration Program (SHaRP) was featured in the Peace Arch article "Keeping Cows in Bounds". SHaRP was highlighted for their efforts at the Little Campbell Hatchery for installing cattle exclusion fencing and removing invasive plants along the banks of the Little Campbell River. SHaRP would personally like to thank the operators of the Little Campbell Hatchery, the Semiahmoo Fish and Game Club volunteers, and the Pacific Salmon Foundation for their support and partnership in this restoration project, as well as the Peace Arch News for providing media coverage for this event. The success of this project was made possible by the help of these individuals and funders.

Sincerely,

Erin Catherall



SHaRP Media/Public Relations
sharpmediapr@gmail.com
778-846-0547



Media Advisory

INVITATION TO MEDIA

Watershed Showcase Event

****Photo Opportunity**

Members of the media are invited to attend a Watershed Showcase Event held at Hawthorne Park on Saturday, August 15th. This event is hosted by Surrey's Salmon Habitat Restoration Program (SHaRP). SHaRP's Watershed Enhancement and Community Education Teams, composed of both post secondary and high school students, are teaming up to enhance a section of the Bon Accord Creek, which will help to increase the habitat value within Hawthorne Park.

Bon Accord Creek, a fish-bearing watercourse, stretches throughout Hawthorne Park in Surrey. This creek provides an important habitat for fish, birds, and other wildlife. The SHaRP teams will be removing invasive plant species, installing native streamside vegetation, as well as educating the public about fish and fish habitat in their communities through interpretative nature walks and games. The public is invited to watch live puppet shows and help install native plant species along the banks of Bon Accord Creek. Visitors who participate in the event activities and games can take home a native plant seeding to help green their gardens! This event is an opportunity for media to highlight community efforts and the importance of stream restoration in Surrey.

SHaRP is a City of Surrey initiative that was first implemented by the City's Engineering Department in 1996. This program employs students with the aim of introducing local youth to environmentally sustainable practices. SHaRP students conduct stream and riparian restoration, public education, community outreach, and agricultural stewardship, while gaining career-oriented leadership focused training. Additional program support provided by the Habitat Conservation Trust Fund and the Fraser Salmon and Watershed Program has contributed to the success of this year's SHaRP program.

Event Details:

Where: Hawthorne Park, just north of 144 St. and 106 A Ave.
Meet at the parking lot, and follow the signs to the event

When: Saturday, August 15th
10 am – 4 pm

For further information on the Watershed Showcase Event or on SHaRP please contact:



Erin Catherall
SHaRP Media/Public Relations
sharpmediapr@gmail.com
778-846-0547



Semiahmoo Fish & Game Club

1284 - 184th Street,
Surrey, BC
V3S 9R9
604-535-8366

September 14, 2009

Sharp Agricultural Stewardship
2nd Floor Engineering Dept.
Attention: Liana Ayach
14245 56th Ave.
Surrey, B.C., V3X 3A2

Dear Sharp Team:

On behalf of the Semiahmoo Fish & Game Club we thank your organization for the installation of a new barbed wire fence to prevent cattle from getting into the Little Campbell River. Your team also removed a quantity of invasive plants from the river banks. These jobs were done under extremely hot weather conditions and I must say your people did an admirable job. Perhaps in the future we will again avail upon you to do some other environmental jobs for our organization.

Thank you again from all of us.

A handwritten signature in cursive script, appearing to read "Bob".

Bob Oswald
Hatchery Manager
Semiahmoo Fish & Game Club

FILE REGISTRY COPY		
4809-901		
SEP 16 2009		
TO	BY	DATE
LA	LR	

1.0 GENERAL INFORMATION

Site Reference No.	Kiyo Park	Date Visited	June 29, 2009
Watercourse/Class	King Creek (Class A Watercourse)		
Site Location	9050 140 th Street		
Site Access	Park on the east shoulder of 140 th Street, just north of 90 th Avenue		
Land Owner	City of Surrey		

2.0 PROPOSED RESTORATION WORKS

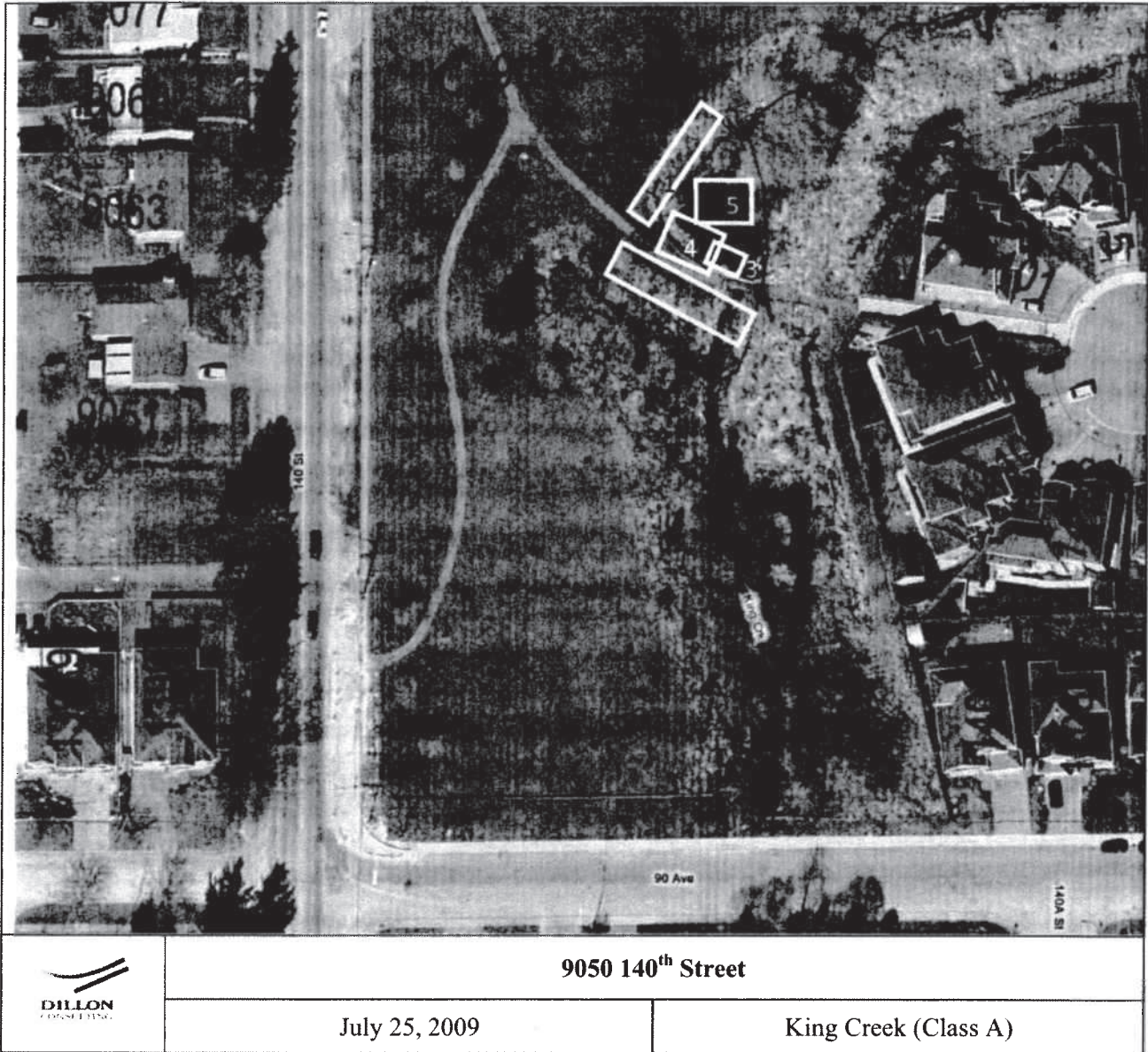
Proposed Works	<p>Instream Works:</p> <ul style="list-style-type: none"> ❖ A root wad (large woody debris) will be installed in the southwest corner of the pond, just west of the large boulders on the west side of the bridge. The root wad will be lashed to existing large boulders on the west bank of the pond to ensure its stability. ❖ A bush bundle approximately 1 metre by 0.75 metres by 0.4 metres will be created from larger dead sticks and branches and will be anchored to the root wad. The bush bundle will be partially submerged to allow for additional complexity within the pond. ❖ A dip net salvage within the root wad location will be conducted by two individuals before placement of the root wad and bush bundle. ❖ Install ten (10) wetland grasses (<i>Scirpus microcarpus</i>) in the northeast corner of the pond in order to increase diversity and complexity of the aquatic habitat. Installation of the wetland grasses will help to shade out encroaching reed canary grass (<i>Phalaris arundinacea</i>). Wetland grasses will be installed with one individual standing in-stream, with assistance from other crew members standing on the north bank of the pond. <p>Vegetation Installation:</p> <ul style="list-style-type: none"> ❖ Install forty-five (45) trees and one-hundred and fifteen (115) shrubs within the boundaries of polygons 1, 4 and 2 (see site location map). Shrubs will be planted in clusters to prevent encroachment of invasive species.
-----------------------	--

Proposed Works	<u>Prescribed Vegetation:</u>			
	Species Name	Common Name	Quantity	Pot Size
	Trees			
	<i>Alnus rubra</i>	Red alder	30	5
	<i>Acer macrophyllum</i>	Broadleaf maple	5	5
	<i>Populus balsamifera trichocarp</i>	Black cottonwood	10	5
	Total Trees		45	
	Shrubs			
	<i>Cornus sericea</i>	Red-osier dogwood	10	5
	<i>Rubus parviflorus</i>	Thimble berry	20	2
	<i>Rosa nutkana</i>	Nootka rose		
	<i>Salix sitchensis</i>	Sitka willow	10	2
	<i>Salix lucida</i>	Pacific willow	20	2
	<i>Spiraea douglasii</i>	Hardhack	10	2
	<i>Scirpus microcarpus</i>	Wetland grasses	10	1
	<i>Physocarpus capitatus</i>	Pacific ninebark	15	2
	Total Shrubs		115	
	Total Plants		160	
Justification For Works	Removal of invasive reed canary grass (<i>Phalaris arundinacea</i>) will promote growth of existing and newly installed vegetation. Installation of native shrubs will diversify and enhance riparian habitat.			
	Installing large woody debris and bush bundles will increase the complexity of the pond, providing shade and hiding places for juvenile salmonids. Installing wetland plants will provide shade for the pond and limit the encroachment of invasive reed canary grass throughout the wetland area.			


3.0 COMPLETED RESTORATION WORKS

Completed Works	Dates of Completed Works	August 19, 2009																																																																				
	<ul style="list-style-type: none">❖ Wednesday, August 19, 2009 – Forty-five (45) trees and one-hundred and fifteen (115) shrubs were installed throughout polygons 1, 2, and 4, while wetland plants were installed in polygon 5. The root wad and bush bundle were placed and anchored in the southwest corner of the pond, within polygon 3.❖ Invasive reed canary grass (<i>Phalaris arundinacea</i>) was removed within the terrestrial area to allow for the installation of riparian shrubs. Mulch was applied around newly installed plants to minimize erosion of exposed soil.❖ Four truckloads of invasive species were disposed of at the Surrey Operations Yard. In addition, a shopping cart and a metal coffee table were removed from the wooded area.																																																																					
	<u>Installed Vegetation:</u>																																																																					
	<table><tr><th>Species Name</th><th>Common Name</th><th>Quantity</th><th>Pot Size</th></tr><tr><td colspan="4">Trees</td></tr><tr><td><i>Alnus rubra</i></td><td>Red alder</td><td>30</td><td>5</td></tr><tr><td><i>Acer macrophyllum</i></td><td>Broadleaf maple</td><td>5</td><td>5</td></tr><tr><td><i>Populus balsamifera trichocarp</i></td><td>Black cottonwood</td><td>10</td><td>5</td></tr><tr><td colspan="2">Total Trees</td><td>45</td><td></td></tr><tr><td colspan="4">Shrubs</td></tr><tr><td><i>Cornus sericea</i></td><td>Red-oiser dogwood</td><td>10</td><td>5</td></tr><tr><td><i>Rubus parviflorus</i></td><td>Thimble berry</td><td>20</td><td>2</td></tr><tr><td><i>Rosa nutkana</i></td><td>Nootka rose</td><td></td><td></td></tr><tr><td><i>Salix sitchensis</i></td><td>Sitka willow</td><td>10</td><td>2</td></tr><tr><td><i>Salix lucida</i></td><td>Pacific willow</td><td>20</td><td>2</td></tr><tr><td><i>Spiraea douglasii</i></td><td>Hardhack</td><td>10</td><td>2</td></tr><tr><td><i>Scirpus microcarpus</i></td><td>Wetland grasses</td><td>10</td><td>1</td></tr><tr><td><i>Physocarpus capitatus</i></td><td>Pacific ninebark</td><td>15</td><td>2</td></tr><tr><td colspan="2">Total Shrubs</td><td>115</td><td></td></tr><tr><td colspan="2">Total Plants</td><td>160</td><td></td></tr></table>			Species Name	Common Name	Quantity	Pot Size	Trees				<i>Alnus rubra</i>	Red alder	30	5	<i>Acer macrophyllum</i>	Broadleaf maple	5	5	<i>Populus balsamifera trichocarp</i>	Black cottonwood	10	5	Total Trees		45		Shrubs				<i>Cornus sericea</i>	Red-oiser dogwood	10	5	<i>Rubus parviflorus</i>	Thimble berry	20	2	<i>Rosa nutkana</i>	Nootka rose			<i>Salix sitchensis</i>	Sitka willow	10	2	<i>Salix lucida</i>	Pacific willow	20	2	<i>Spiraea douglasii</i>	Hardhack	10	2	<i>Scirpus microcarpus</i>	Wetland grasses	10	1	<i>Physocarpus capitatus</i>	Pacific ninebark	15	2	Total Shrubs		115		Total Plants		160
Species Name	Common Name	Quantity	Pot Size																																																																			
Trees																																																																						
<i>Alnus rubra</i>	Red alder	30	5																																																																			
<i>Acer macrophyllum</i>	Broadleaf maple	5	5																																																																			
<i>Populus balsamifera trichocarp</i>	Black cottonwood	10	5																																																																			
Total Trees		45																																																																				
Shrubs																																																																						
<i>Cornus sericea</i>	Red-oiser dogwood	10	5																																																																			
<i>Rubus parviflorus</i>	Thimble berry	20	2																																																																			
<i>Rosa nutkana</i>	Nootka rose																																																																					
<i>Salix sitchensis</i>	Sitka willow	10	2																																																																			
<i>Salix lucida</i>	Pacific willow	20	2																																																																			
<i>Spiraea douglasii</i>	Hardhack	10	2																																																																			
<i>Scirpus microcarpus</i>	Wetland grasses	10	1																																																																			
<i>Physocarpus capitatus</i>	Pacific ninebark	15	2																																																																			
Total Shrubs		115																																																																				
Total Plants		160																																																																				
Mitigation Plan	Standard mitigation measures will be implemented on site to control sediment and minimize impacts to surrounding vegetation.																																																																					
Fish Salvage	N/A																																																																					
Additional Comments	Contact the City of Surrey for vehicle access through park ballads, as a key is required.																																																																					

4.0 SITE MAP

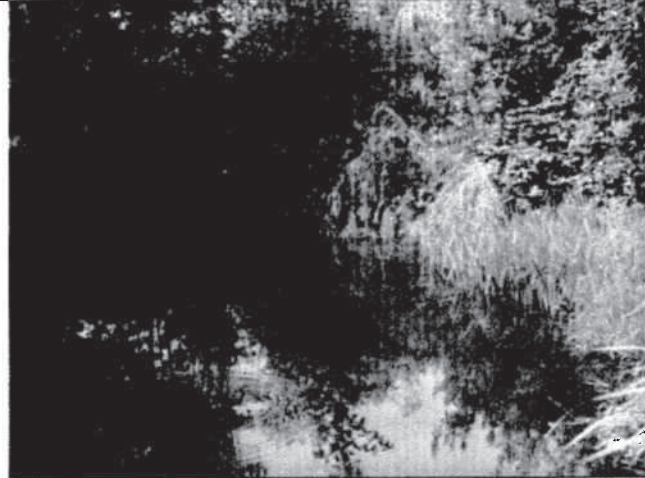


5.0 PHOTOS

Condition of the Site Before Implementation of the Proposed Works	
Photo 1: Looking northwest at the pond and surrounding vegetation. Photo taken from the bridge.	Photo 2: Looking northwest at the southwest bank of the pond and proposed location of large woody debris placement.
	
Date: June 30, 2009	Date: June 30, 2009
Photo 3: Looking north at the northeast bank of the pond and proposed wetland planting site. Photo taken from the pedestrian path, 2 metres west of the bridge.	
	
Date: June 30, 2009	

Condition of the Site After Implementation of the Proposed Works

Photo 1: Looking north at the installed wetland plants near the north end of the pond. Photo taken from the bridge, 100 metres east of 140th Street.



Date: August 19, 2009

Photo 2: Looking west at the northern planting area (Polygon 1). Photo taken from twenty (20) meters west of the bridge.



Date: August 19, 2009

Photo 3: Looking down toward the pond from the pedestrian pathway, standing three (3) meters west of the bridge. The large woody debris and bush bundle were anchored securely to surrounding rocks.



Date: August 19, 2009

Photo 4: Looking south at the planting area south of the bridge, east of fence. Photo is taken from the bridge.



Date: August 19, 2009



SHaRP 2009 Summary Report

***November 2009
Dillon Consulting Limited***



TABLE OF CONTENTS

1.0	INTRODUCTION	1
2.0	PROJECT TEAM	1
2.1	Program Management	1
2.2	Student Participation	2
3.0	PROJECT ACCOMPLISHMENTS	2
3.1	Agricultural Stewardship	2
3.2	Community Education	3
3.3	Industrial Education	3
3.4	Media/Public Relations	4
3.5	Watershed Enhancement	4
4.0	STUDENT SUGGESTIONS FOR FUTURE SHARP PROGRAMS	5
4.1	Agricultural Stewardship	5
4.2	Community Education Team	5
4.3	Industrial Education Team	6
4.4	Media and Public Relations	6
4.5	Watershed Enhancement	6
5.0	PROGRAM MANAGEMENT CONCLUSIONS AND RECOMMENDATIONS	7

APPENDICES (STUDENT AUTHORED)

Agricultural Stewardship:	Appendix I
Watershed Enhancement Report:	Appendix II
Industrial Education Report:	Appendix III
Community Education Report:	Appendix IV
Media/Public Relations Report:	Appendix V

1.0 INTRODUCTION

This year marked the fourteenth consecutive year of the Salmon Habitat Restoration Program (SHaRP). Since 1996, the City of Surrey Engineering Department has led this successful summer environmental enhancement program that employs, and relies on, high school and post-secondary students. For the past fourteen years, Dillon Consulting Limited (Dillon) has effectively worked with the City of Surrey (City) to develop and deliver this program.

Since its inception, SHaRP has promoted environmental stewardship, completed riparian planting and invasive species removal, conducted erosion control and bank stabilization works, preformed water quality monitoring, and carried out industrial and community education. These initiatives were once again the focus of the 2009 program. This year's program again operated under "Nature Matters", the City's year-round environmental education program umbrella. Under this umbrella, several SHaRP initiatives and events were organized with the Surrey's Natural Area Partnership (SNAP) Program.

Over the course of the last fourteen years, the SHaRP program has offered a unique experience for local youth through its broad scope and commitment to career-oriented and leadership training. The 2009 program employed 29 students and offered over 10,000 hours of valuable work experience. SHaRP has provided considerable environmental and social benefits to the City through the protection and enhancement of its urban watersheds, through the education of its residents and businesses, and through the employment of local youth.

In 2009, SHaRP was comprised of the following five components or "teams":

- Agricultural Stewardship
- Community Education
- Industrial Education
- Media & Public Relations
- Watershed Enhancement

This report provides an overall summary of the SHaRP 2009 program. Objectives and accomplishments of each component of the 2009 program are presented in the student-authored Final Team Reports which are appended to this Program Summary Report.

2.0 PROJECT TEAM

2.1 Program Management

For the fourteenth consecutive year Dillon, on behalf of the City, managed the SHaRP program. This year, the Dillon Project Team included Paul Schaap (Program Manager), Laura Dilley (Project Coordinator), and Administrative Support. Input from Technical Specialists was obtained from within Dillon in regards to health and safety and natural sciences. The Dillon Project Team worked closely with various staff of the City's Engineering Department including Carrie Baron (Program Sponsor), Liana Ayach (Program Coordinator), and Tracy Sutherland (Program Assistant).

2.2 Student Participation

SHaRP 2009 provided career-oriented work experience for post-secondary and secondary school students in various aspects of environmental enhancement and resource management. Students received training on various topics such as workplace safety, team building, leadership, public relations, professionalism, community and industrial education, fish habitat restoration, invasive plant removal, bioengineering, and restoration planting techniques.

A total of 29 students were hired as part of SHaRP 2009. Eight post-secondary students served as project Team Leaders for the 2009 program and were employed from April 27th to August 28th, 2009. This year, Dillon received 227 applications for the 8 post-secondary roles, 174 more than in 2008. Interviews were conducted with 24 students from a variety of post-secondary institutions. The 8 Team Leaders hired were selected from the following institutions:

- University of British Columbia (3 students)
- Simon Fraser University
- Providence College
- University of Victoria (2 students)
- Thompson Rivers University

Twenty-one Surrey high school students served as Crew Members for the 2009 program. Crew Members were employed from July 2nd to August 26th, 2009. Dillon received 147 applications for the Crew Member positions, 79 more applicants than in 2008. Forty-six individuals were interviewed by the Team Leaders in mid-June. The 21 high school students selected for the 2009 program were from the following secondary schools:

- Earl Marriott
- Elgin Park
- Guildford Park
- LA Matheson
- Semiahmoo
- Enver Creek
- Frank Hurt
- Johnston Heights
- North Surrey
- Robert Bateman (Abbotsford)
- Fleetwood
- Fraser Heights
- Kwantlen Park
- Princess Margaret
- Sequam (Delta)

The large number of applicants and high calibre of the Crew Member candidates was attributed to a solid investment in recruiting at local high schools by the Team Leaders.

3.0 PROJECT ACCOMPLISHMENTS

A brief review of the objectives and key accomplishments of each SHaRP 2009 program component is presented in the following sections.

3.1 Agricultural Stewardship

The 2009 Agricultural Stewardship Team was comprised of 2 Team Leaders and 6 Crew Members.

This year, the Agricultural Stewardship Team was focused on completing restoration projects within the City's agricultural community. The Team completed restoration works at 5 Long Term Monitoring (LTM) sites and 9 General sites. Of the 9 General sites, 5 were located on agricultural properties which

helped the Team build on existing relationships with several agricultural landowners. The Team also completed 1 garbage clean-up site and 2 roadside invasive spot removal sites. A total of 935 native plants were planted and 13 pickup truckloads of invasive plant material were removed.

A highlight of this year's Agricultural Stewardship Team was the restoration project completed at the Little Campbell Hatchery. The Team partnered with the Little Campbell Hatchery and the Semiahmoo Fish and Game Club to install 46 metres of livestock exclusion fencing along the Little Campbell River. The fencing project was promoted by the Media and PR Team and the project was featured in the Peach Arch News. During the two-day project, the Team also removed invasive plant species along the banks of the Little Campbell River.

The Agricultural Stewardship Team organized SHaRP's involvement at a variety of community events, such as the Cloverdale Rodeo and Flavours of Surrey, and also had the opportunity to work with various environmental organizations including Ducks Unlimited and A Rocha.

Additional information on the Agricultural Stewardship Team is presented in Appendix I.

3.2 Community Education

The 2009 Community Education Team was comprised of 2 Team Leaders and 4 Crew Members.

As in previous years, the main objective of the Community Education Team was to increase community awareness of SHaRP, salmon habitat enhancement across the City, and to empower and encourage the public to become stewards of their environment.

The Team successfully delivered their stewardship message to many across the City by attending 22 community events throughout the summer. The Team visited 6 day camps a total of 17 times over the course of the summer. To engage the community in new and exciting ways, this year's Team created a variety of new educational materials which included 5 new crafts, 8 new games, and 4 new puppet shows. The new "Catch-A-Coho" game was extremely popular at community events, drawing in both adults and children to the SHaRP display area.

The Community Education Team also had the opportunity to conduct field work over the summer, completing 2 wetland planting sites, 2 LTM sites, and 2 General sites. As part of their restoration efforts, the Team installed 180 native plants across the City and also assisted the Agricultural Stewardship and Watershed Enhancement Teams with a total of 7 sites. During the month of August, the Team completed two days of field work with the Cougar Creek Streamkeepers.

Additional information on the Community Education Team is presented in Appendix II.

3.3 Industrial Education

The Industrial Education Team of SHaRP 2009 was comprised of 1 Team Leader and 3 Crew Members.

This year's Industrial Education Team focused on garbage clean-up, storm drain marking, and educating local businesses and industries about the importance of environmental stewardship and the role they can play in protecting fish and fish habitat.

This year, the Industrial Education Team completed 9 garbage cleanup sites, installed 856 storm drain metal plate markers, marked 190 yellow fish, and conducted 6 educational campaigns in which 214 businesses and 13 residential homes were contacted. Approximately 250 of the City's new Best Management Practices brochures were distributed during the education campaigns. The Team also attended 6 community events and gave storm drain making presentations at 6 elementary schools.

The Industrial Education Team completed work at 9 General Sites, removing 8 pickup truckloads of anthropogenic debris and 2 pickup truckloads of invasive plant material. This year, the Industrial Education Team organized the high school training and orientation week.

Additional information regarding the Industrial Education Team is presented in Appendix III.

3.4 Media/Public Relations

The Media and Public Relations (PR) Team was comprised of 1 Team Leader.

This year's Media and PR Team successfully maintained SHaRP's well-known profile through local media outlets. The Media and PR Team had several objectives which included: organizing the high school student recruitment campaign; creating and updating media kits, media advisories, brochures and press releases; assisting with the preparation and delivery of various community events; and planning the SHaRP wrap up celebration. The Media and PR Team helped to successfully share SHaRP's message through newspaper articles in the Peace Arch News (2 articles), the NOW Newspaper (2 articles), and the Surrey Leader.

Instead of having an early summer "Nature Matters SummerFest", the City decided to hold several joint events between SHaRP and SNAP under the Nature Matters banner. As part of the Mud Bay and Kiyo Park events, the Media and PR Team worked closely with the SNAP Coordinator to create media materials to be distributed to local newspapers, media organizations, and the public.

Additional information regarding the 2009 Media and PR Team is provided in Appendix IV.

3.5 Watershed Enhancement

This year's Watershed Enhancement Team was comprised of 2 Team Leaders and 8 Crew Members.

The primary objective of the Watershed Enhancement Team was to enhance salmon habitat within the City of Surrey. The Watershed Enhancement Team built upon the successes of previous years and tackled several new and large-scale sites in 2009. This year, the Team focused on invasive species removal, riparian planting, and instream works.

The Watershed Enhancement Team completed 7 LTM sites and 7 General Sites. A total of 3551 native plants, including 562 trees, 2979 shrubs, and 10 wetland plants were installed across the City and 71 pickup truckloads of invasive plant material were removed. As part of the LTM requirements for several sites, the Team installed 168 beaver protection fences around newly planted trees.

During the month of August, the Team had the opportunity to complete a number of interesting instream projects in various locations across the City. The Team removed an organic debris jam, installed rip rap on the banks of 2 creeks, installed large woody debris, relocated gravel from a culvert outlet, and removed filamentous algae and watercress from a watercourse. All of the instream works were completed by hand and with the use of hand tools.

As in past years, the Watershed Enhancement Team hosted the Watershed Showcase Event. This year's event was a success with a number of community members attending. The Team also co-hosted and coordinated the very successful Kiyo Park Event with SNAP.

Additional information on the Watershed Enhancement Team is provided in Appendix V.

4.0 STUDENT SUGGESTIONS FOR FUTURE SHARP PROGRAMS

Following their summer of work with the SHaRP program, the Teams were canvassed for ideas to improve or enhance future SHaRP programs. A number of ideas were suggested to increase the effectiveness of the program in future years and are presented under the 5 program components that follow.

4.1 Agricultural Stewardship

The 2009 Agricultural Stewardship Team made the following suggestions for future SHaRP programs:

- In addition to the current 'Nature Matters' baseball hats, the City could also develop a 'Nature Matters' bucket/fisherman's style hat. The Team found that over the course of the summer, a wider brimmed hat could have helped to provide more sun protection, particularly for the neck;
- If possible, it may be beneficial to have more cell phones available to the Team Leaders. The Team found that when they were required to move sites or make trips to NATS, only one Leader would have a phone. Having more cell phones for the program may help the Leaders stay better connected to each other and others involved in the project; and
- Obtaining a set of the parks keys from the City could help the Teams access sites quicker, as many sites are inaccessible due to gates and bollards. Select SHaRP staff could keep the key in the SHaRP office for the duration of the summer and return it to the City at the end of the program or as needed.

4.2 Community Education Team

To build on the success of the 2009 program, the Community Education Team made the following suggestions for future programs:

- It may be beneficial for all Team Leaders to have keys that can open both the bay and office doors to the SHaRP Office. This would ensure the Leaders have full access to the doors during the summer months; and
- Consideration should be given to initiating the hiring process for high school students earlier (i.e. in mid to late May) if possible. This would allow more time to complete the hiring process sooner and allow the Team Leaders to concentrate on other activities at the end of June.

4.3 Industrial Education Team

The 2009 Industrial Education Team suggests the following ideas to help increase the effectiveness of future SHaRP programs:

- Increasing the number of Team Leaders for the Industrial Education Team to 2 would improve team organization during the summer. A second Team Leader could also help to improve team safety and functionality when visiting sites and conducting education campaigns; and
- Before the Team Leaders start at the end of April, it may be beneficial to have the computer network, printer, and fax machine networked and functioning. This would improve student efficiency and address any computer problems early in the summer.

4.4 Media and Public Relations

To build on the success of the 2009 program, the Media and PR Team suggests the following ideas for future years of SHaRP:

- It is strongly suggested that the Media and PR Leader meets with Darryl McCarron, the Manager of Marketing and Communications, and Melissa Snow, the Special Events Coordinator, at the beginning of each SHaRP year. This meeting would help to develop the skills of the Media and PR Leader, especially if the Leader is less experienced in the field; and
- During the early part of the summer, it is suggested that a meeting takes place between the Media and PR Leader and the City and Dillon Coordinators to discuss timelines for editing media materials. Such a meeting would help to ensure that all parties involved have an adequate amount of time to edit media materials over the course of the program.

4.5 Watershed Enhancement

The 2009 Watershed Enhancement Team made the following suggestions for future programs:

- The Team suggests that during the busy months of July and August, each Team Leader has access to a cell phone. For the field teams, in particular, the Team found that the Leaders were often in different places at the same time and an extra phone would help to keep the Leaders in contact;
- The trucks rented for the program would have larger beds to assist the teams in carrying larger loads. Larger truck beds would also help to lessen the number of trips made to NATS or the Operations Yard; and

- For efficiency purposes for both the City and the Team's time, it is suggested that SHaRP has a copy of the City parks key (i.e. the key that opens bollards and gates) in future years.

5.0 PROGRAM MANAGEMENT CONCLUSIONS AND RECOMMENDATIONS

The 2009 SHaRP program objectives were successfully achieved by the 5 components of the program: Agricultural Stewardship; Community Education; Industrial Education; Media and PR; and Watershed Enhancement. Through the hard work of these five teams the message of environmental stewardship and fish and fish habitat protection was effectively delivered to a large number of City businesses and residents, and existing fish habitat and natural areas were further enhanced and protected.

Base funding support for SHaRP 2009 was provided by the City's Engineering Department. Supplementary funding support for the program came from the Habitat Conservation Trust Fund, School District No. 36, the Fraser Salmon and Watersheds Program, and the Ministry of Environment. This funding helped SHaRP offer employment to 29 students, who gained valuable work experience and career-oriented training over the course of the summer. The hard work of Liana Ayach, City of Surrey, in securing funding support for the program is acknowledged.

Both the Team Leaders and Crew Members were successful in solidifying relationships with other environmental stewardship groups and initiatives in the City. The 2009 program was comprised of a variety of different restoration sites, community events, and partnerships with local groups.

Based on the experiences of the 2009 program, the following recommendations for future programs are presented for consideration by City staff:

1. If funding permits and a large number of high school students are anticipated, it is recommended the 2010 program size includes two Team Leaders for the Industrial Education Team. This year, the addition of a second Team Leader to the Community Education Team significantly increased the Team's ability to organize for events and carry out the program objectives. The Industrial Education Team could also benefit from a second Team Leader as it may help to increase Team functionality and organization.
2. The "hands on" instream works conducted as part of the 2009 program were greatly enjoyed by this year's students. It is recommended that simple instream works are again conducted by SHaRP in 2010 if the City has such sites available. The instream works helped to diversify the work load as well as provide the students with first-hand knowledge of erosion and sediment control and fisheries regulation.
3. Two main kick-off meetings were held in 2009. In March, a kick-off meeting was held between the Dillon and City Project Teams. The focus of the meeting was program logistics and the mid-program departure of Liana on her maternity leave. This meeting was valuable in that it allowed both Teams to understand the goals, scope, and issues associated with the upcoming summer. A second kick-off meeting was held between the Dillon and City Project Coordinators in early April to discuss the specific team objectives, as well as the restoration and education sites. This meeting was also valuable in that it helped to outline the priorities of the program before the Team Leaders began at the end of April. We recommend that similar meetings are held in 2010.

4. In 2009, the Project Coordinators from the City and Dillon met on a weekly basis to discuss the various activities and deadlines of each team. These meetings were most valuable and it is recommended that the weekly meetings continue during the 2010 program, starting in early May.
5. As this year was a field-focused year for the Agricultural Stewardship Team, it is recommended next year's Team conducts outreach to the City's agricultural community. The brochures and posters created by the 2008 Agricultural Stewardship Team could be distributed in early 2010 to help secure prospective restoration sites on agricultural lands.
6. Prior to the Team Leaders starting at the end of April, the City completed a renovation of the SHaRP Office to separate the Operation Save H₂O and SHaRP work areas. The separation of the office spaces and the addition of a storage loft worked very well over the course of the summer and allowed each of the programs to have their own designated space. A similar arrangement is recommended if the two programs run parallel to each other next year.
7. In early May, each Team met with the City Project Coordinator to discuss the Team's goals and objectives for the summer. At the meeting, Team Leaders were given ample information in where to direct their efforts, which helped them to prioritize tasks and meet their goals. The Dillon Project Coordinator was also present at these meetings, which helped to ensure the Coordinator was apprised of all tasks the City had originally outlined in previous meetings. It is recommended that this type of meeting occurs again next year.
8. To maintain SHaRP's profile within the City, it is recommended that the program obtains new event equipment such as a branded SHaRP program tent (i.e. a tent with the program logo) as well as stand alone banner stands. New event equipment would maintain the program's professional image when attending large scale events and help to catch the public's attention through the use of the SHaRP logo. This year, multiple tents being used by the SHaRP Team broke. Roll-out banner stands would aid in the presentation of information and games at community events.
9. During the busy months of July and August, the Team Leaders are sometimes separated during the work day to complete various team related tasks. Currently, 1 cell phone is allocated to each of the 5 teams. If the City has access to extra cell phones, it is recommended the program has either floater cell phones to use as needed by the teams, or that each Team Leader is assigned a cell phone. Having access to extra cell phones, especially during the months of July and August, could help the Leaders to stay in better contact with each other and others involved in the program.

Dillon is proud to have been given the privilege to manage the delivery of the 2009 SHaRP program on behalf of the City of Surrey. We believe that the 2009 program was, again, successful and we look forward to participating in the delivery of SHaRP's 15th consecutive year of protecting and enhancing Surrey's natural environment, promoting environmental sustainability to Surrey residents and businesses, and in supporting Surrey youth through employment and career-oriented training.