

2015 YEAR IN REVIEW

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Watershed Program Overview:

Formed in 2005, the Fraser Valley Watershed Program is a joint partnership between the Fraser Valley Regional District (FVRD) and the Fraser Valley Watersheds Coalition (FVWC), receiving additional support from Fisheries and Oceans Canada (DFO). It is a unique and effective partnership between government and a non-profit society **to improve the health of watersheds in the Fraser Valley.** By using mostly grants and in-kind contributions, the Watershed Program works towards this goal through habitat enhancement projects, environmental monitoring, community stewardship, watershed planning, and partnership building.

Watershed Program Projects:

This report provides a summary of the activities and projects undertaken in 2015 as a result of the Fraser Valley Watershed Program. The Fraser Valley Watershed Program was active across the FVRD in 2015, with notable projects and activities occurring in the District of Mission, the City of Abbotsford, the City of Chilliwack, and the District of Kent/Agassiz. Specific projects and activities are described in more detail in the summary table (Table 1) and in subsequent sections of this report.

Across the Fraser Valley in 2015:

- 20,812 trees and shrubs were planted
- 27,637 m² instream habitat was created/restored
- 150 volunteers participated in FVWC planting events

Specific details on restoration achievements are described below.

Watershed Program activities are classified into one of four categories that help us improve the health of the watersheds in the Fraser Valley:

- 1. Habitat Enhancement and Restoration Program** focuses on implementing on-the-ground action to increase functional healthy watersheds that support healthy communities. It consists of riparian plantings, in-stream restoration, invasive species management, guarding and assessing vegetation stock, and using bioengineering techniques to enhance waterways and watersheds and increase habitat complexity for increased biodiversity.
- 2. Environmental Monitoring and Mapping Program** helps to identify the statuses and trends of waterways in the Fraser Valley, and the challenges and potential opportunities to enhance or restore these waterway systems (including identifying priority areas). It consists of conducting sensitive habitat inventory mapping (SHIM), water quality monitoring, fish, amphibian and bird surveying and ground-truthing habitats.
- 3. Community Stewardship education and Outreach Program** educates and connects communities to the importance of healthy watersheds and offers hands-on-training and experiences. This includes addressing challenges that can impact our air-water and soil. It consists of offering public lecture series, bringing in non-local community training opportunities and training university and high school students.
- 4. Environmental facilitation Watershed Planning/Conservation Partnership Program** coordinates and collaborates on shared watershed health initiatives across the region with local governments, regional governments, First Nations, other sectors and community groups for shared visioning and strategizing.

Table 1. Summary of Watershed Program Activities, Outcomes and Partners.

Project or Initiative	Project Objectives and Details	Partner Organizations
Habitat Enhancement Projects		
Stave River tidal wetland in-stream habitat and replanting	Created 20602m ² new in-stream off-channel habitat at Stave River. Completed archaeological assessments and bio-inventories at Stave River.	<ul style="list-style-type: none"> ● Fisheries and Oceans Canada ● BC Hydro FWCP ● Ducks Unlimited ● District of Mission
Vedder River Floodplain Rewatering -Instream and Riparian habitat restoration	Restored and replanted native trees and shrubs. Over 3,660 native trees and shrubs were planted. Vedder River floodplain re-watering included over 3,705m ² in stream restoration. Sections of Salwein Creek and Stewart creek were also restored as a part of this project.	<ul style="list-style-type: none"> ● Fisheries and Oceans Canada ● City of Chilliwack ● Cultus Lake Parks Board ● Yarrow ECO Village ● RFCPP ● Pacific Salmon Foundation ● TDFEF ● HRDC
Maclure Willband enhancement	Replanted trees and shrubs in Willband wetland. Securing long term permanent access for FVC conservation property and engaged the community on the importance of functional wetlands.	<ul style="list-style-type: none"> ● FVC ● AMNC ● COA ● NWCF



Environmental Monitoring & Mapping		
Water Quality/ fish sampling at Silverdale wetlands & S.E. Trib / Chilqua Slough (Mission)	Quarterly fish sampling and water quality monitoring for year (status & trend info)	<ul style="list-style-type: none"> • Fisheries and Oceans Canada • Ministry of Transportation
Maclure Willband Enhancement	Monitoring water quality to understand water patterns at Maclure Wetland.	<ul style="list-style-type: none"> • FVC • AMNC • COA • NWCF
Salish Sucker and Oregon Spotted Frog habitat maintenance and enhancement	Managing invasive species in Eastern Fraser Valley.	<ul style="list-style-type: none"> • MOE • Pearson Ecological • FVC • Balance Ecological • HSP
Community Engagement & Stewardship		
Community Presentations	Sharing information on FVWC programs and projects. Environment Canada guest presenter.	<ul style="list-style-type: none"> • UFV • AMNC • FVRD • EC
Earth Day Event	Attended Yarrow earth day celebration.	<ul style="list-style-type: none"> • FVIPC
Rivers Day Event	Jointly hosted a rivers day tree planting event with Fraser Valley Invasive Plant council. #'s of trees and shrubs were planted along the banks of Sweltzer creek (at Cultus Lake).	<ul style="list-style-type: none"> • Fraser Valley Invasive Plant Council • CLASS
FVWC General Public Meetings, and attendance at community hosted events	Hosted 5 public meetings with numerous keynote speakers to engage the public and membership. Events included Envirothon, Communities in Bloom Site Tour, City of Abbotsford volunteer appreciation day and Nature connections. Hosted 6 community planting events	<ul style="list-style-type: none"> • Chilliwack Senior Secondary • FVC • Mission communities in bloom • UFV • HMCOL • COA
Official opening of Browne Creek Wetlands	Organized 400 person community engagement event at Browne Creek Wetlands. Endorsed by politicians, Rotarians, and local school group.	<ul style="list-style-type: none"> • See Vedder River Floodplain rewatering
Watershed Planning or Conservation Initiatives		
Lower Stave River Off channel habitat restoration	Project planning includes partnering with Kwantlen First Nation and BC Hydro Fish Wildlife Compensation program conducting further archaeology assessments prior to restoration.	<ul style="list-style-type: none"> • Fisheries and Oceans Canada • Kwantlen First Nations • BC Hydro FWCP
Partnering with Le'qa:mel First Nation	Restoring and supporting the Nicomen Slough Watershed	<ul style="list-style-type: none"> • Le'qa:mel First Nation
Partnering with the Agriculture industry	Ongoing partnership building; working to promote healthy environments and sustainable agriculture.	<ul style="list-style-type: none"> • ARDCORP • AEI • FBC



1. Habitat Enhancement Projects:

a) *Stave River In-stream and Riparian habitat restoration (Mission)*



In partnership with Department of Fisheries and Oceans Canada (Resource Restoration Unit), Recreational Fisheries Compensation Partnership Program), and BC Hydro's Fish Wildlife Compensation Program- a total of **20,602 m²** of salmon habitat was restored and/or enhanced in 2015. The works involved use of heavy machinery to create new off-channel habitats and re-contouring the existing wetland. Replanting took into consideration tidal influences, river fluctuations and overall survivorship in this system. Habitat enhancement included planting **12,550** trees,

shrubs and aquatic sedges and rushes, creation of new over wintering channels, re-watering of historical channels and maintenance of existing habitat.

b) *Vedder River Floodplain Re-watering –In-stream and Riparian habitat restoration (Chilliwack)*



In partnership with Department of Fisheries and Oceans Canada, RFCCP, and the Pacific Salmon foundation among many others, the Vedder River floodplain re-watering project included over **7,035m²** in stream restoration and a total of **3,660** native trees and shrubs were planted in 2015. The Vedder River floodplain re-watering project also included Restoration works at Salwein and Stewart creeks.

c) *Salwein Creek –In-stream and Riparian habitat restoration (Chilliwack)*



In partnership with DFO, City of Chilliwack and a local dairy farmer, restoration was completed along the Jackson Irwin reach of Salwein Creek. Invasive reed canary grass was removed from the channel and large woody debris was added. The banks of Salwein creek were planted with native trees and shrubs to help improve habitat value and water quality. In total **2,758 m²** of riparian plantings were completed.



d) Stewart Creek -In-stream and Riparian habitat restoration (Chilliwack)



In partnership with the Yarrow ecovillage and Department of Fisheries and Oceans Canada (Resource Restoration Unit) **572 m²** of Stewart Creek was restored in 2015. Invasive reed canary grass was removed from the channel and large woody debris was added. Volunteers replanted the banks with **2,140** native trees and shrubs.

2. Environmental Monitoring:

Environmental monitoring allows us to assess the current status of the environment and to evaluate trends over time. From this information we can observe specific issues that are of concern and identify actions needed for to best manage the watershed. We are currently monitoring water quality and fish presence throughout the region:

- along Silverdale Creek and the Silverdale Wetlands in Mission;
- along Norrish Creek Watershed and Chilqua Slough in Mission;

The sampling, which is conducted by the Fraser Valley Watersheds Coalition, also provides an excellent stewardship training opportunity.

3. Community Engagement and Stewardship:

In addition to the community engagement and hands-on training offered to participants at our planting events or our environmental monitoring opportunities, our Watershed Program participated on numerous additional stewardship activities in 2015. These included:

- Hosting a series of public lectures and information sessions to discuss issues and projects amongst local stewards, identify opportunities for collaboration, and have guest speakers share research results or projects;
- Providing regular project updates, announcements, and volunteer opportunities to the community via email distribution list (~400 people), the FVWC website (www.fvwc.ca) and Facebook page
- Continuing to provide guidance and capacity-building to local residents, organizations, and school groups interested in our watersheds.
- Connecting with the biology department of UFV to offer students partial credit for participating in hands-on restoration activities.



4. Environmental facilitation, Watershed Planning/Conservation Partnership:

Support from BC Hydro’s Fish and Wildlife Compensation Program and partner DFO for conducting restoration within the Lower Stave River to increase off channel habitat for coho salmon is currently being planned. A portion of this project will involve close partnership with Kwantlen First Nations and will require an Archaeology Impact assessment. Works are expected to occur in 2016.

2016 and Beyond:

2016 is shaping up to be another busy and productive year for the Watershed Program. Not only will we be continuing with many of our current projects, we are always in pursuit of additional opportunities that will help improve the health of Fraser Valley watersheds. Expected projects and tasks for 2016 include:

- Continue restoration enhancement and monitoring in Chilliwack, Abbotsford and Mission;
- Continue participation on watershed planning and conservation initiatives in the region;
- Continue to engage, train, and educate the community about our watersheds;
- Continue assistance on FVRD activities and operations;
- Pursue other projects and partnerships as opportunities arise.

Acknowledgements of Funders and Partners:

