

## Case Study

# Parking Lot Run-Off Treatment and Discharge - Blaine/Surrey

Project Manager: Van Der Zalm and Associates Inc.



The "Peace Arch" border crossing is located on the US/Canada border between Washington State and British Columbia. The installation involved STAR Water Solutions collaborating with Cascade Envirotech,

Yardworks Supply Ltd and Van der Zalm + associates inc (Landscape Designers) to design and install gardens and bio-swales containing STAR Water Solutions Reactive Filter Media.

Prior to the project commencing an investigation was undertaken on pollution profiles contained within run-off from the site. Upon analysing the information a mix was designed that could treat nutrients, hydrocarbons and metals that accumulated at the site from heavy traffic flows. The design was based on data attained from the lengthy research program that allows us to confidently predict removal rates and media lifespan. The media design also had input from in-house horticulturists that advised on plant species selection that could provide additional treatment through phyto-remediation.



*Garden areas containing reactive filter media*

The raw materials required to develop the specific media was sourced across North America and manufactured by Yardworks Supply Ltd. under supervision from Cascade Envirotech. The installation occurred in late February 2009 prior to the opening of the refurbished Visitor Center. The use of recycled components in the media gained valuable points towards the Gold LEED status awarded to projects with a high level of sustainability.

Porous paving materials were used in the design to allow infiltration and treatment to occur. The treated run-off is then supplied to a neighbouring golf course and also flows into nearby waterways. The reactive filter media is expected to last for many years without needing to be replaced or amended.



*Swale section containing reactive filter media*