

# The Goldstream Spill

## The Incident

On April 16th, 2011 a Columbia Fuels tanker traveling southbound rolled over on the Trans-Canada highway. The fuel tanker leaked approximately 42,000 L of gasoline and 600 L of diesel into a drainage ditch which flowed into the adjacent Goldstream River and surrounding environment. The spill occurred within Goldstream Provincial Park, approximately 300 m south of Finlayson Arm Rd.

## Initial Response

The Langford fire department and RCMP closed the highway to ensure public safety and maintain fire suppression. The Malahat section of the highway remained closed for 24 hours to allow for the appropriate response to be completed. The Ministry of Environment provided immediate environmental emergency response to assess and document impacts. Other agencies that played key roles in addressing the initial stages of the response included Environment Canada, the Ministry of Transportation, and Columbia Fuels' personnel and contractors.



## Ecological Implications

Gasoline and diesel are toxic to life; they threaten soil, groundwater, surface water, and air. However, this fuel readily evaporates and generally has low persistence. The spill had, and continues to have ecological implications on the sensitive Goldstream ecosystem. The introduction of hydrocarbons into the Goldstream River impacted sensitive estuary vegetation, riverbank moss and woody debris, soil and sediments. Hydrocarbons in the ecosystem resulted in fish and invertebrate mortalities. There was also a noticeable absence of certain wildlife from the area.



## Monitoring

Ongoing monitoring since the spill was undertaken by Columbia Fuels and their consultants with agency and First Nation involvement and oversight to verify hydrocarbon concentrations and impact. Monitoring includes water, sediment, and soil sampling to determine the presence and levels of hydrocarbons. Tissue sampling of fish, shellfish, and other organisms. Sediment and soils were sampled and monitored for hydrocarbons from the spill site to the estuary. Visual monitoring and reconnaissance was conducted to assess impacts and the need for additional remediation. Regular surveys through the area allowed for additional biological monitoring and hydrocarbon surveys to be completed.

## Technical Working Group

A technical working group was established to provide a forum for agencies, First Nations, and stakeholders to discuss and determine response, remediation, and restoration activities. This includes short term sampling, monitoring plans, and establishing an integrated and coordinated approach to managing the long term impacts of the spill.



## **Technical Working Group**

A technical working group was established to provide a forum for agencies, First Nations, and stakeholders to discuss and determine response, remediation, and restoration activities. This includes short term sampling, monitoring plans, and establishing an integrated and coordinated approach to managing the long term impacts of the spill.

- |   |   |
|---|---|
| <b>Columbia Fuels and their contractors</b> | <ul style="list-style-type: none"><li>• Cleanup and restoration</li><li>• Provided various contractors for remediation work</li><li>• Covering costs associated with all clean up initiatives</li></ul> |
|---|---|

- |                                   |  |
|-----------------------------------|--|
| <b>BC Ministry of Environment</b> | <p>Environmental Emergency Program:</p> <ul style="list-style-type: none"><li>• Initial response</li><li>• Chairs technical working group</li><li>• Ensures appropriate clean-up and remediation is carried out by Columbia Fuels</li></ul> <p>Land Remediation:</p> <ul style="list-style-type: none"><li>• Reviews remediation techniques</li><li>• Signs off on remediation measures</li></ul> <p>BC Parks:</p> <ul style="list-style-type: none"><li>• Approval of all remediation activities within the Park</li><li>• Liaison between different agencies and public.</li></ul> |
|-----------------------------------|--|

- |                           |  |
|---------------------------|--|
| <b>Environment Canada</b> | <ul style="list-style-type: none"><li>• Key federal agency for environmental emergency response and enforcement of federal legislation</li></ul> |
|---------------------------|--|

- |   |   |
|---|---|
| <b>Saanich Nations</b><br>Malahat, Pauquachin, Tsartlip, Tsawout, and Tseycum | <ul style="list-style-type: none"><li>• Culturally sensitive and traditional territory impacted by the spill.</li><li>• Lands, waters, and natural resource base were all affected.</li><li>• Traditional, ecological, and local knowledge is very important to the remediation process and terms of reference.</li><li>• Key participant in the development and management of long term spill restoration.</li></ul> |
|---|---|

- |                             |  |
|-----------------------------|--|
| <b>Fisheries and Oceans</b> | <ul style="list-style-type: none"><li>• Regulatory agency for salmon protection.</li></ul> |
|-----------------------------|--|

- |                                 |   |
|---------------------------------|---|
| <b>Goldstream Fish Hatchery</b> | <ul style="list-style-type: none"><li>• Key technical advisor on salmon</li></ul> |
|---------------------------------|---|

- |                                      |   |
|--------------------------------------|---|
| <b>BC Ministry of Transportation</b> | <ul style="list-style-type: none"><li>• Coordinated all road closures</li><li>• Approves remediation work impacting the highway</li></ul> |
|--------------------------------------|---|

### Restoration and Future Work

Future plans include establishing a long term monitoring program, continuing in-situ remediation, and determining and implementing restoration projects to bring the river as close as possible to its pre-spill state. Regulatory sign-off on the cleanup will only occur once the contaminants of concern have been addressed.

The Ministry of Environment will also review to learn from this incident, use it as a tool in educating the public and potential spillers, and work to improve the effectiveness of spill response.



### Environmental Stewardship

You can help by:

- Reporting all spills to the provincial spill line at **1-800-633-3456**
- Reduce your use of hazardous materials and seek out non-toxic alternatives.
- Always handle and dispose of hazardous materials safely.

