

**Frequently Asked Questions – Stewart Centre incident  
Stormwater Swale, Drainage Ditch, and Mill Creek  
Kelowna, British Columbia**

This Frequently Asked Questions (FAQ) sheet has been prepared to answer questions regarding environmental quality in and adjacent to the stormwater swale (between Dunn St. and Burtch Rd, south of Dickson/Bedford Aves.), the drainage ditch (between Inkar Rd. and Mill Creek, south of McInnes Ave.), and Mill Creek (between the Lindahl St. outfall and Okanagan Lake).

Our primary goal is to protect the public, including nearby homeowners and their pets, from impacts resulting from the Stewart Centre incident. Please contact the City of Kelowna for additional information should the answers below not address your concerns.

Question 1: Can I eat vegetables from my garden?

Gardens adjacent to or near the stormwater swale or drainage ditch may have been affected if the stormwater overflowed the banks and reached your garden. If this situation occurred, to protect you from any potential concerns, we recommend that you hold off on eating the vegetables from your garden and contact the City of Kelowna for further information. For gardens that were not contacted by the overflowing stormwater, including those along Mill Creek, there should be no concerns.

Question 2: I have a well in my backyard, should I be concerned?

We do not expect there to be issues considering the short duration of the event. If you do use water from a well in your backyard that is located adjacent to the stormwater swale, drainage ditch, or Mill Creek, we recommend that you contact the City of Kelowna with information on its location and screened depth, the quantity of water you pump from it, and the purpose of the water use (e.g., watering the lawn or gardens); in the interim, we recommend that you hold off on using water from it. For wells that are not located adjacent to the drain, swale, or Mill Creek, there should be no concerns.

Question 3: Can my pet swim in Mill Creek or in the open drainage ditch in my backyard?

Based on analytical data for water samples collected since the incident, the surface water in the drainage ditch, stormwater swale, and Mill Creek is safe for pets to enter. However, we do not recommend that you allow your pets to regularly swim or drink from the Lindahl drainage ditch that leads to Mill Creek.

Question 4: I have found dead birds or fish in Mill Creek, what should I do?

Please contact the City of Kelowna immediately and we will send someone to collect the birds/fish.

Question 5: What has been done since the spill occurred?

A significant amount of work has been completed at Stewart Centre following the initial emergency response efforts.

On Site, the concrete floors have been power washed and chemical products that remained after the fire have been packaged for off-site disposal.

The storm sewer system at Stewart Centre was isolated from the City network so stormwater generated on the Stewart Centre property adjacent to the affected units is managed on site and thus prevented from entering the City's storm system.

A thorough cleaning of the City's storm system, including the stormwater swales and drainage ditches, has been completed from the Stewart Centre to Mill Creek. Carbon filters that were placed upstream and downstream of the Lindahl St. outfall to protect Mill Creek during the storm system cleaning have now been removed.

Carbon filters were placed in Mill Creek immediately before Okanagan Lake and a net was installed upstream of the Lindahl St. outfall to protect fish by preventing them from swimming into the affected water. A substantial portion (about 70%) of the inflow to Mill Creek was diverted to Mission Creek through the City's stormwater management system to avoid flushing any contaminants that remained in the stormwater system into Mill Creek. Now that the stormwater system has been cleaned, the City has restored the flow. Both the net and carbon filters at the mouth of Mill Creek have been removed to allow fish to migrate up Mill Creek unimpeded.

Environmental testing has been completed with input from the B.C. Ministry of the Environment to help determine the short-term and long-term effects of the incident on Mill Creek.

Question 6: What will happen if it rains?

The storm system draining the Site was thoroughly cleaned to mitigate additional impacts to the creek. The quality of water from the storm system discharging to Mill Creek has been monitored during rain events. Water samples collected at Lindahl St. suggest that the storm system cleaning was effective and that the risk posed by residual contamination is low.

Question 7: Were all fish killed in Mill Creek?

No, only fish between the Lindahl St. outfall and Okanagan Lake were affected. During the initial response, a fish exclusion net was placed in Mill Creek upstream of the

outfall, and carbon filters were placed at the mouth of Mill Creek to prevent fish from migrating into the affected area.

Question 8: How will the Kokanee spawning (reproduction) be affected by the spill?

The fish exclusion net and the carbon filter at the mouth of Mill Creek were removed once the storm system cleaning was complete. Kokanee have been observed in Mill Creek since the removal of the barriers. A monitoring program has been designed to monitor spawning success and survival of juvenile life-stages of the Mill Creek Kokanee population.

Question 9: Were songbirds and ducks in Mill Creek affected by the spill?

Ducks and songbirds in Mill Creek were consistently observed during stream health assessment in August; however, the numbers of these birds could have been lower than usual due to the presence of personnel conducting the creek evaluations as this would likely disrupt normal patterns of bird use. Approximately 50 mallard ducks have been observed per survey in Mill Creek. Songbirds have been consistently observed since the incident; most are common inhabitants of urban streams such as black-capped chickadee, European starling, house sparrow, northwestern crow and black-billed magpie, and are present in high numbers. Other birds observed include house finch, fox sparrow, Stellar's jay and osprey.

Question 10: Have the beavers / raccoons in Mill Creek survived?

Yes, our surveys have noted the presence of two raccoon families (female and young) along Mill Creek and one beaver. Muskrats also remain present. Signs of wildlife including footprints have also been consistently observed.

Question 11: What chemicals were spilled in Mill Creek?

Water used to extinguish the fire mixed with products stored at the Stewart Centre and traveled through the storm water system and Mill Creek. Herbicides and pesticides, and to a minor extent, petroleum-based compounds have been detected in the water in Mill Creek. Water quality improved rapidly after the spill and is now similar to water quality in unaffected upstream sections of Mill Creek. With only one exception, concentrations of herbicide, pesticide, and petroleum-based compounds meet applicable water quality guidelines and all compounds are expected to meet applicable guidelines soon.

Question 12: What sort of environmental testing has been done?

For ten days after the fire, water quality samples were collected on a daily basis from the Lindahl St. outfall, near the mouth of Mill Creek, and Okanagan Lake (see Sampling Location PDF available at <http://www.kelowna.ca/CM/Page2786.aspx>). After

reviewing the initial data, the B.C. Ministry of the Environment approved a shift from daily to weekly sampling.

In addition to the water quality program, a stream health assessment was initiated on August 5. The stream health assessment included a benthic invertebrate and fish survey and the collection of water and sediment samples.

There were three sampling locations in the storm outfall system, seven locations along Mill Creek, and five locations along the shore of Lake Okanagan near the mouth of Mill Creek (see Sampling Location PDF). Toxicity tests were run on surface water and sediment samples from Mill Creek, the mouth of Mill Creek, and Okanagan Lake. Invertebrate toxicity tests were conducted on both sediment and surface water and Rainbow trout toxicity tests were conducted on surface water.

Water quality monitoring has shown that herbicide and pesticide concentrations are now similar to those in unaffected upstream sections of Mill Creek and, with only one exception, meet applicable water quality guidelines. Guidelines are expected to be met soon. The water in Mill Creek was found not toxic to Rainbow trout or to invertebrates.