

**1. What are the charges that Teck has resolved?**

- Teck has resolved charges under the federal Fisheries Act in connection with the release of selenium and calcite from the Fording River and Greenhills steelmaking coal operations in the Elk Valley in 2012.

**2. How exactly did these releases of selenium and calcite occur?**

- In order to reach underground steelmaking coal seams, the mining process generates large quantities of leftover rock that contains naturally occurring substances such as selenium.
- Water from both precipitation and runoff flows through these rock piles and carries selenium into the watershed.
- In addition to selenium, leftover rock leachate contains dissolved calcium and carbonate, which can result in the formation of calcite on stream and river bottoms.
- Like the release of selenium, calcite occurs naturally, but its formation can be accelerated by runoff water from mined rock.

**3. What impact does selenium and calcite have on aquatic health?**

- Selenium is a naturally occurring element that is essential for humans and animals.
- If present in high enough concentrations in the watershed, selenium can adversely affect aquatic health and negatively interfere with reproductive processes in egg-laying vertebrates.
- Calcite is a hard mineral that can form on streambeds and is the same as the buildup that forms in tea kettles or water heaters in homes with hard water.
- It is not a human health concern, but excessive calcite build-up can change the characteristics of streambeds by cementing rocks together and affecting habitat for fish and invertebrates.

**4. What has Teck done to date to address this challenge and protect water quality?**

- Although there has been coal mining in the Elk Valley for more than 120 years, it was not until 2010-2012 – through independent research commissioned by Teck – that we began to understand the full extent of the impacts of selenium and calcite releases on water and aquatic health in the valley.
- Through this work we learned this was an extraordinarily complex, long-term challenge that required a long-term approach using science and technology.
- As a result, in 2013 Teck consulted with the Government of B.C., Ktunaxa Nation, scientists and local communities to develop the Elk Valley Water Quality Plan, which was approved by the Province in 2014.
- Teck is implementing the plan, which to our knowledge is the largest water quality management program of its kind anywhere in the world.
- The goal of the plan is to stabilize and reverse the trend of selenium and other water quality issues and ensuring the health of the watershed.
- We have spent more than \$1 billion so far to implement the Elk Valley Water Quality Plan; between now and 2024 we plan to invest up to a further \$655 million in work to protect the watershed.

**5. What progress has Teck made in addressing water quality in the Elk Valley so far?**

- We have made significant progress and the plan is working – we have water treatment facilities operating now that are successfully improving water quality with more facilities planned and under construction.

- Additionally, we are applying calcite mitigation technology that prevent further spread of calcite formations while we remediate waterways impacted by calcite.
- We currently have two water treatment facilities operating now that are successfully removing selenium from up to 27.5 million litres of water per day, with further facilities under construction and planned.
- By the end of 2021, we expect to have capacity to treat more than 54 million litres of water per day, nearly three times our 2020 treatment capacity with expected significant reductions in selenium and nitrate concentrations throughout the watershed as a result.

**6. What is Teck doing to prevent calcite?**

- Teck has built five treatment facilities that use an antiscalant-based calcite mitigation technology that prevents further spread of calcite formations that is being installed on tributaries in the area.
- We are also working towards remediating tributaries affected by calcite to restore habitat.

**7. Have fish populations been affected by selenium?**

- Teck is conducting ongoing study and monitoring of water quality and aquatic health, including monthly sampling at over 100 locations.
- Overall, monitoring confirms that the targets established in the Elk Valley Water Quality Plan for selenium and other substances are appropriate and protective of aquatic life.
- Based on scientific understanding of selenium, the current concentrations are not expected to impact fish populations.
- An investigation into an identified population decline of Westslope Cutthroat Trout in the Upper Fording River is ongoing; however, preliminary findings indicate water quality constituents, including selenium, were not a primary contributor to the decline.

**8. How will the penalties paid by Teck be utilized?**

- The \$60 million penalty includes fines of \$2 million and \$58 million into the Environmental Damages Fund (EDF).
- The EDF portion will go towards:
  - One or more First Nations in the Kootenay Region for projects designed to enhance restore or conserve fish or fish habitat;
  - One or more First Nations in Canada outside the Kootenay Region for the same purposes;
  - One or more educational institutions to be used for research, development or studies related to the understanding of issues related to the enhancement, conservation, or restoration of fish or fish habitat; and,
  - Projects designed to enhance, restore or conserve fish or fish habitat in BC.