

# B. C. TAP WATER ALLIANCE

Caring for, Monitoring, and Protecting  
British Columbia's Community Water  
Supply Sources

Email – [info@bctwa.org](mailto:info@bctwa.org)  
Website – [www.bctwa.org](http://www.bctwa.org)



## THE MOUNT POLLEY “TAILINGS STORAGE FACILITY”: Landsat 8 Satellite Imagery, 2009 - 2014

On August 17, 2014, the [NASA Earth Observatory](http://www.nasa.gov) website featured an article, [Dam Breach at Mount Polley Mine in British Columbia](#), with two comparative before (July 29) and after (August 5) higher resolution satellite images. The article included a link to the [Operational Land Manager](#) website which, in turn, includes a data link to the USGS [Landsatlook Viewer](#).

The USGS Viewer has extensive archived satellite (low resolution) imagery of North America. For the Mount Polley mine area are about 230 images, some of which were selected for this pictorial report. The chosen images feature the Mount Polley's Tailings Storage Facility from 2009 onward, showing the amount of water area (shown in blue, or in white during winter months) in the Facility at different dates during the second phase of accelerated mine operations by Imperial Metals.

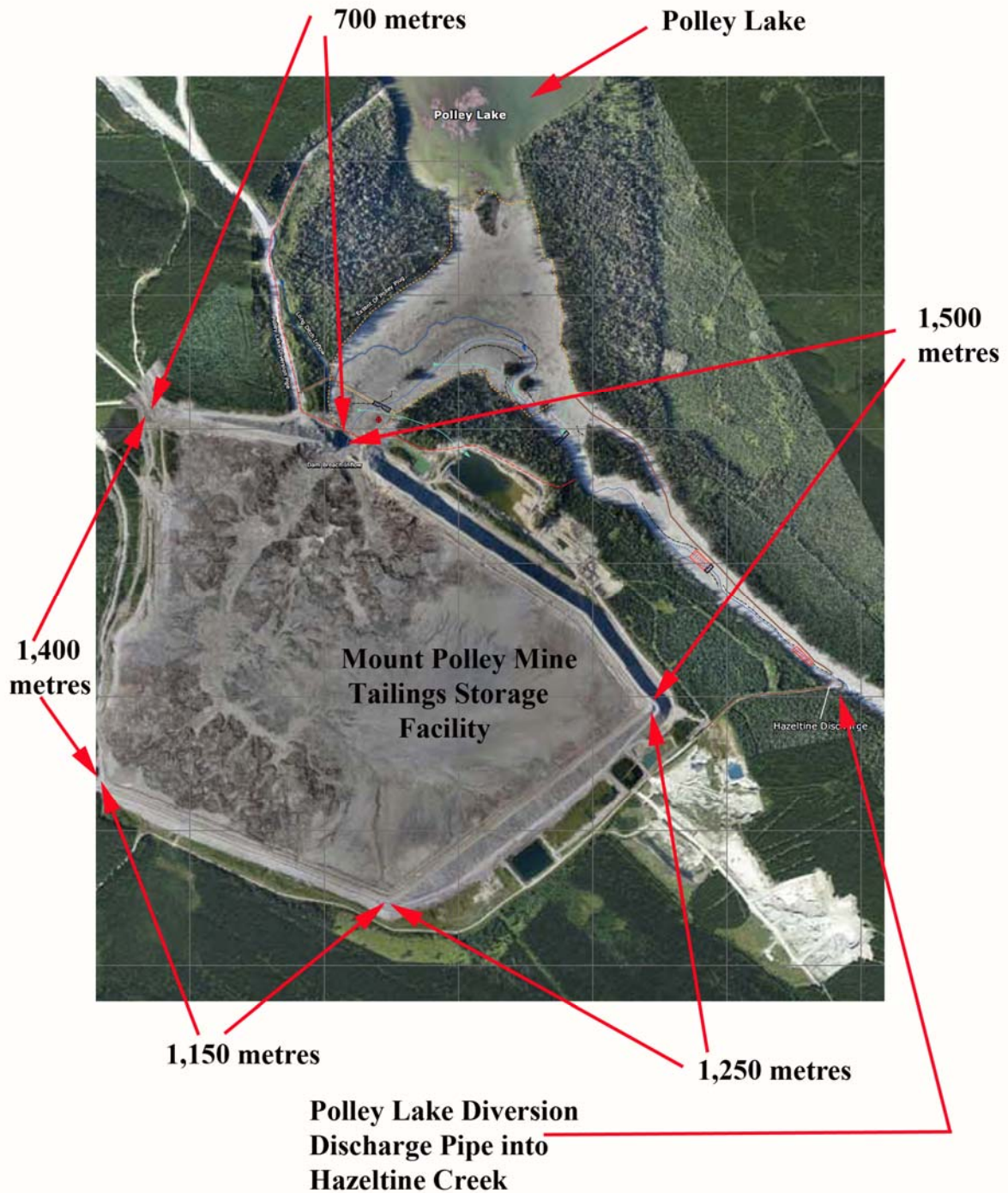
What is not shown (or known) in the images is the relative height of the Storage Facility (earthen dam) perimeter over time, information which would help determine the relative depth or height and volume of the untreated water body present for each image. Water infiltration to the Tailings Storage Facility over time included precipitation (rain & snow), industrial mill waste, and unidentified groundwater rates and sources. No detailed accounting of these water sources and rates have been released to the public, merely estimates and assumptions.

Further research using both higher resolution satellite imagery and more imagery sampling over time will be critical tools to understand and unlock the serious concerns related to Imperial Metals' controversy of increased water containment in the Tailings Storage Facility for which it was never designed, including associated concerns about unreported escapement and leakage from the tailings impoundment waters into Hazeltine Creek over time.

According to recent various sources, an assumed average of 1.4 million cubic metres excess water accrued within the Tailings Storage Facility each year. This water volume does not account for the full water balance, since evaporation and the mine mill removed water volumes from the site. Since the 2007 re-opening of the mine this issue was identified as a “problem” ... with an Imperial Metals/Mount Polley Mine Application to MoE for an effluent discharge Permit submitted in 2009, but never finalized.

On September 1, 2014, Imperial Metals released new data ([Mount Polley Update](#)), stating that an astounding 25 million cubic metres of combined waters, tailings slurry and construction materials gushed out of the Mount Polley Tailings Storage Facility from August 4, 2014 onwards.

Will Koop, Coordinator, September 1, 2014



Above: Close-up of an August 2014 satellite image posted within Imperial Metals' September 1, 2014 [Mount Polley Update](#), showing the Mount Polley mine Tailings Storage Facility. The re-rendered photo shows the perimeter distance of the storage facility, totalling 6,000 metres. **This is equivalent to an area of 2.25 square kilometres, or 225 hectares.** Below, Imperial Metals website PR photo showing the discharged piped water from Polley Lake into Hazeltime Creek.





October 20, 1999



September 24, 2009



October 10, 2009



May 15, 2010



July 18, 2010



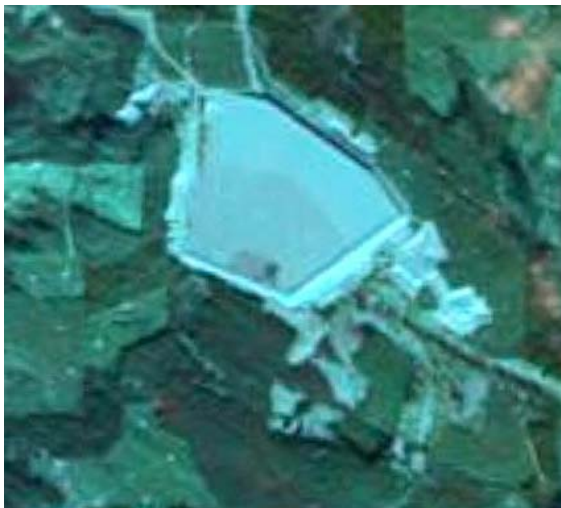
July 25, 2010



August 3, 2010



August 20, 2009



November 23, 2010 (snow & ice)



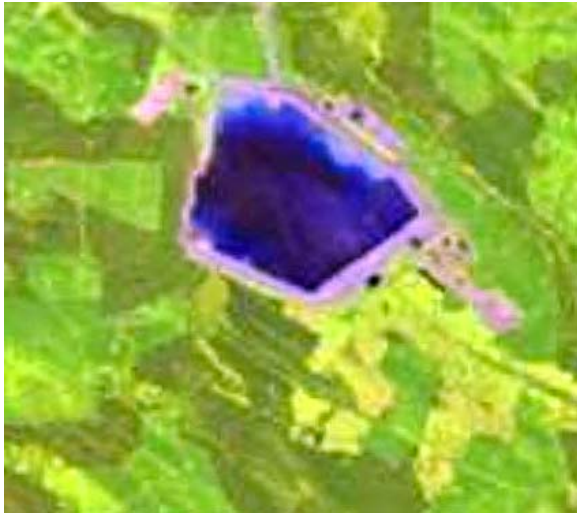
September 7, 2011



October 16, 2011



April 21, 2013



July 1, 2013



July 26, 2013



September 12, 2013



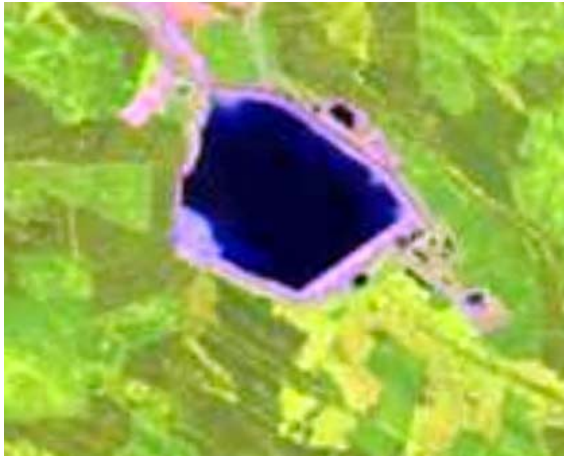
October 21, 2013



February 26, 2014 (snow & ice)



May 10, 2014



July 13, 2014



July 29, 2014



August 5, 2014