



## PROTECTING WATER QUALITY FOR DRINKING, SWIMMING, AND FISHING

### EXAMPLES OF WHERE IT IS HAPPENING

**FRASER VALLEY\*:** In April 2016 a mushroom farm was charged for discharging contaminated waste directly into Abbotsford creeks.<sup>79</sup> This same company also faced charges in 2008 for depositing harmful substances into the water, violating the *Fisheries Act*. Groundwater quality is a major concern in the Fraser Valley; water quality studies in the Hopington Aquifer in Langley, for instance, have consistently shown elevated levels of nitrates during the last decade.<sup>80</sup>

**COMOX:** Residents of Comox have faced recent boil water advisories due to high sedimentation and turbidity in the water. While no conclusive links have been established, some residents attribute the sediment flows to extensive logging in the watershed.<sup>75</sup> The Vancouver Island Health Authority is proposing an \$80 million water filtration plant to address the problem, while the Comox Lake Watershed Protection Plan suggests an alternative source protection approach, which is not only cheaper, but ultimately more sustainable.<sup>76</sup>

**SHAWNIGAN LAKE\*:** In a highly controversial scenario, the Ministry of Environment issued a permit for South Island Aggregate to dump contaminated waste soil into a quarry located in the headwaters of Shawnigan Lake, a source of drinking water for local residents. In March 2016 the B.C. Supreme Court ruled that contaminated soil treatment is not a permitted use for the property.<sup>74</sup>

\* These rivers are also on the Outdoor Recreation Council of British Columbia's 2016 endangered rivers list.

This map is taken from the report: Simms, R. & Brandes, O.M. (2016, September). *Top 5 Water Challenges that will Define British Columbia's Future*. Victoria, Canada: POLIS Project on Ecological Governance, Centre for Global Studies, University of Victoria. Available at <http://poliswaterproject.org/topfivechallenges>. See full report for citations for each of the issues noted on the map.

**GULF ISLANDS:** A recent analysis of groundwater chemistry data collected on the Gulf Islands between 1963 and 2012 found that saltwater intrusion impacted 17 per cent of the 795 wells sampled. This same study assessed vulnerability and risk of saltwater intrusion, finding that pumping hazards are significant on many islands, in particular Gabriola and Mayne Islands, which have high well density ratings.<sup>77</sup>

**MT. POLLEY:** In August 2014 a tailings pond breach from the Mount Polley mine released 25 million cubic meters of contaminated water and mining waste into creeks and rivers in the Quesnel watershed. The mine began operating again one year later with a conditional permit, still without a long-term water management plan in place.<sup>81</sup>

**SPALLUMCHEEN:** The Steele Springs Waterworks District has been under a "do not drink" advisory since March 2014. Nitrate levels in the Hullcar Aquifer, which lies beneath farm fields and provides drinking water for Spallumcheen residents, exceed the maximum allowed under the Canadian Drinking Water Guidelines.<sup>78</sup> The Ministry of Environment has now placed an order prohibiting manure spreading over the aquifer.

**ELK RIVER VALLEY:** There has been active coal mining in the Elk River area for over 100 years, resulting in high concentrations of selenium in the water system, which affects bird and fish development and survival. According to the Auditor General, the Ministry of Environment has been monitoring selenium levels in the Elk Valley for over 20 years and has noted dramatic annual increases of selenium in the watershed's tributaries. Only recently did the Ministry take substantive action to control pollution through permits under the *Environmental Management Act*.<sup>82</sup>