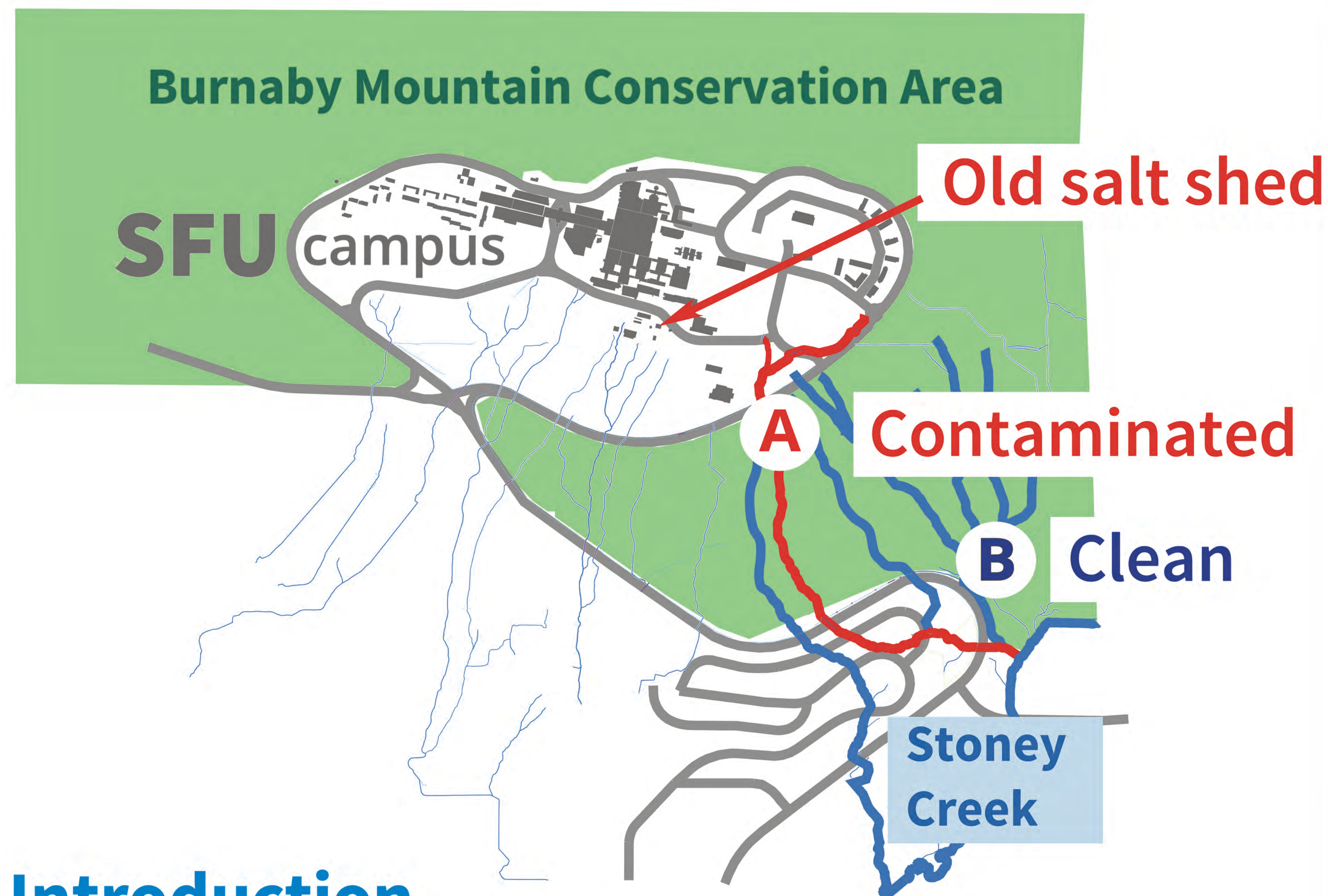


Is road salt killing your fish?



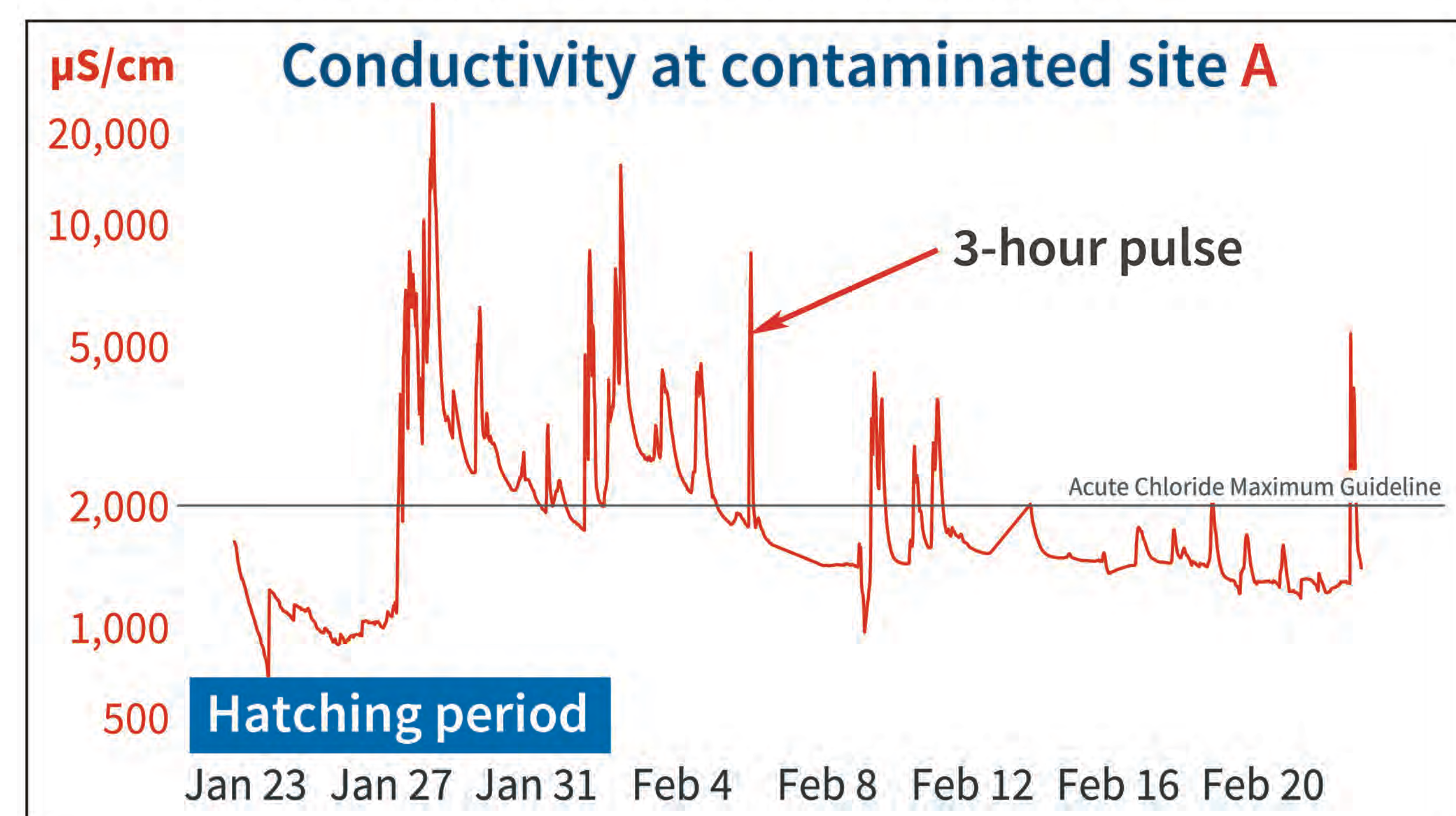
Introduction



For over 15 years, volunteer citizen scientists have monitored water quality in Stoney Creek. Using conductivity measurements, we found chloride contamination coming from this open road salt storage area on the Simon Fraser University (SFU) campus.

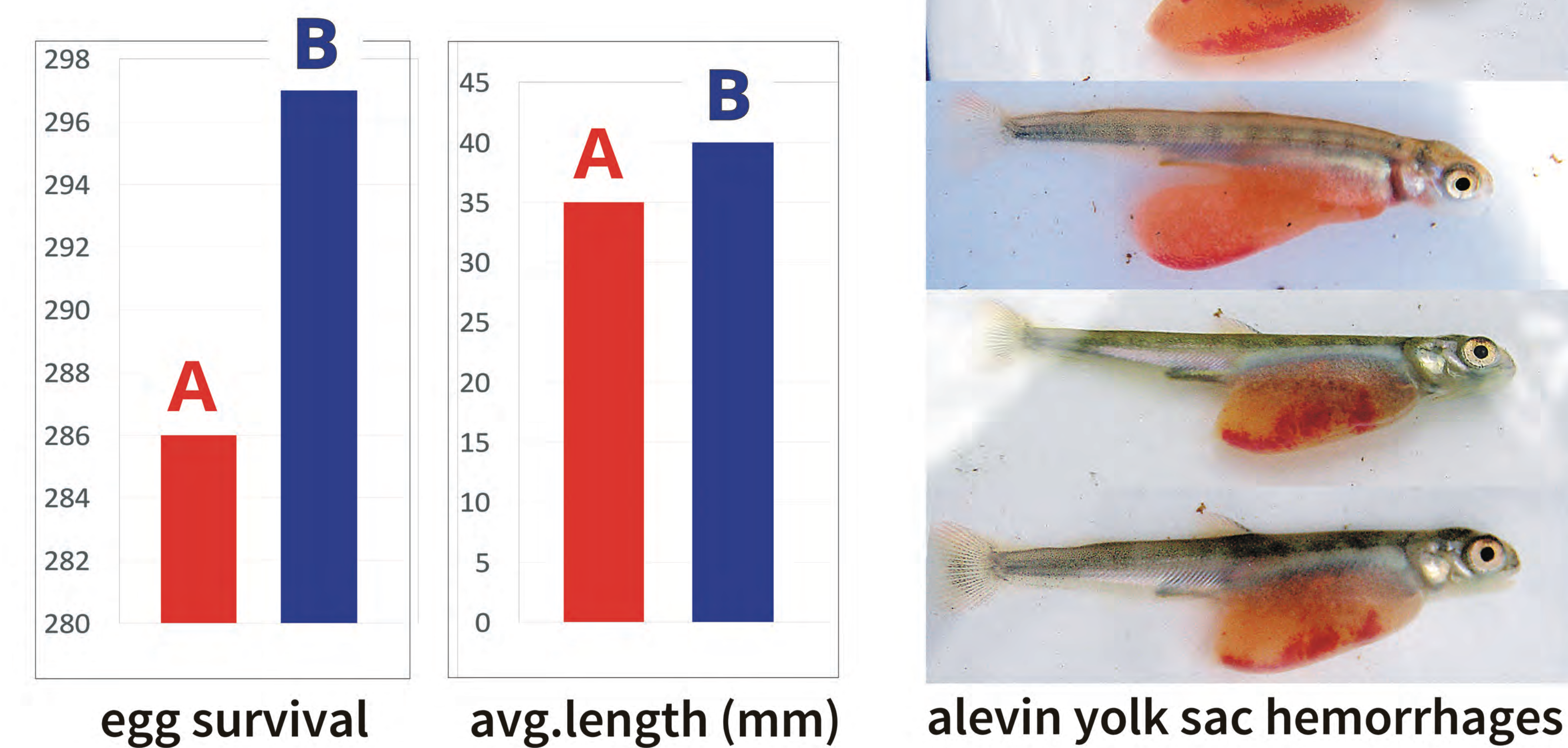
Does road salt harm salmon?

To find out, we placed 300 Chum salmon eggs in incubation trays in the contaminated tributary **A** and 300 more in clear tributary **B**. We monitored the hatching and developing fish in early 2009 and recorded mortalities and abnormalities.



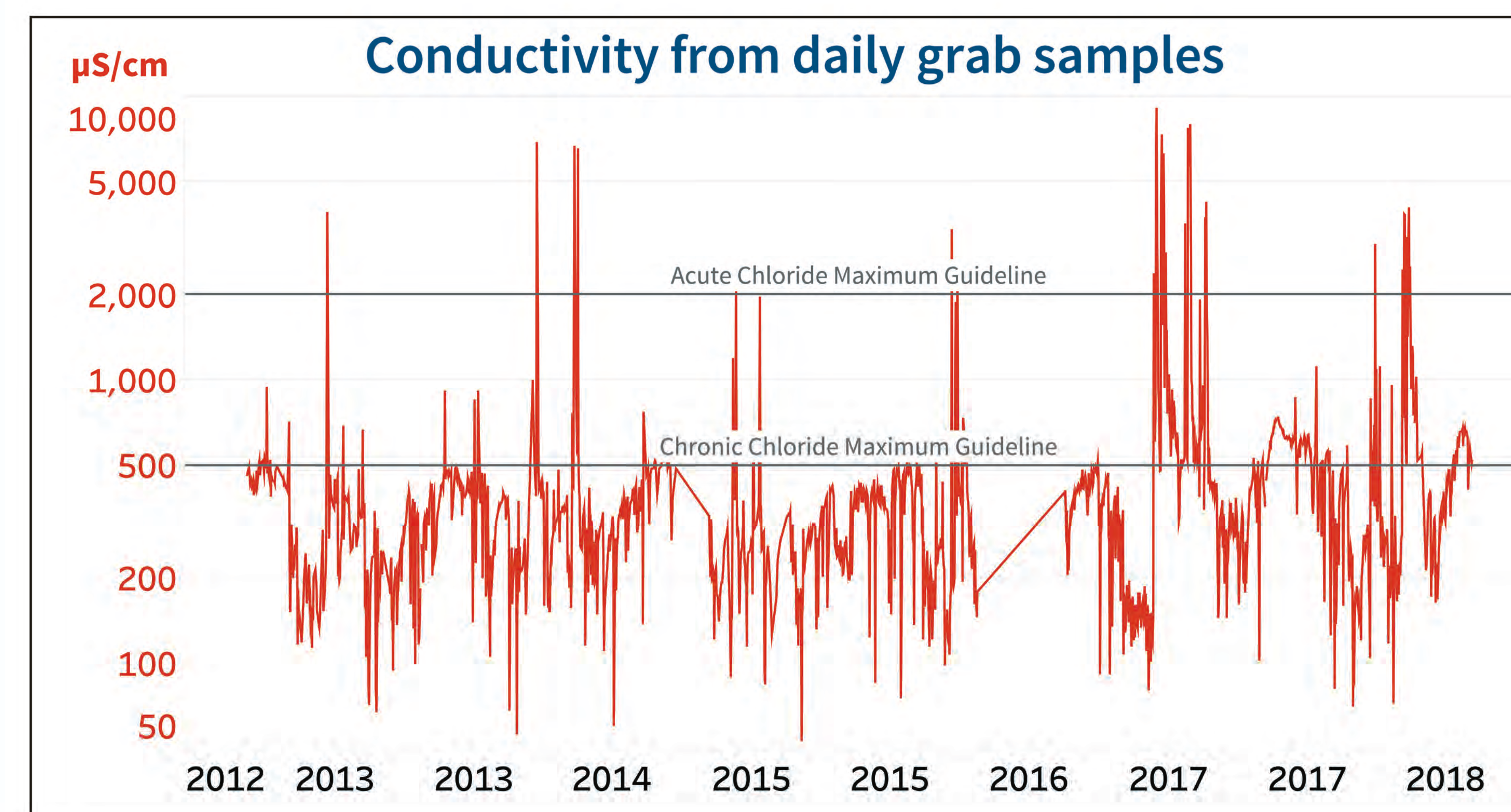
We recorded conductivity with a data logger. High spikes are from road salt applied during snow events after January 27.

Results

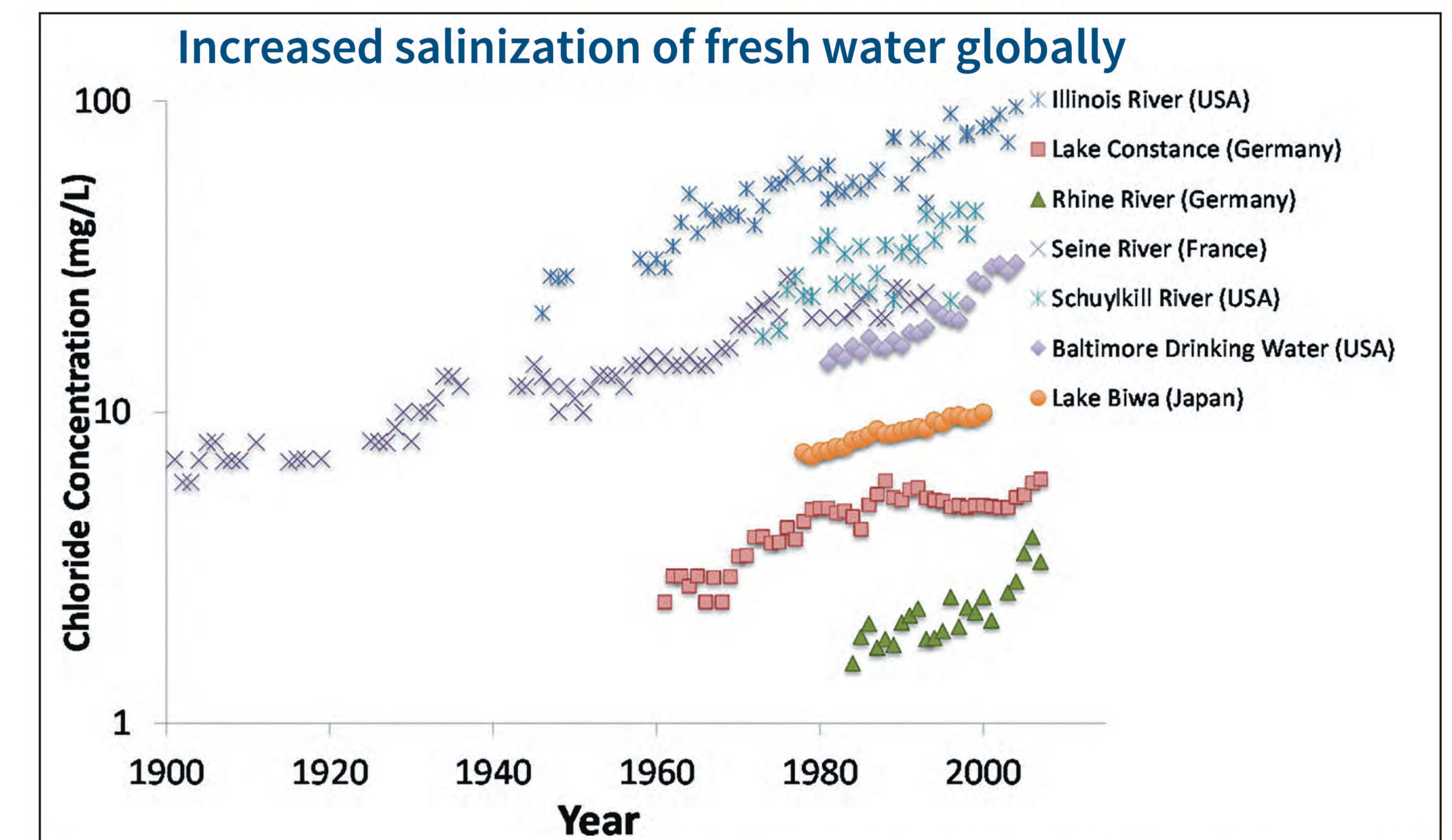
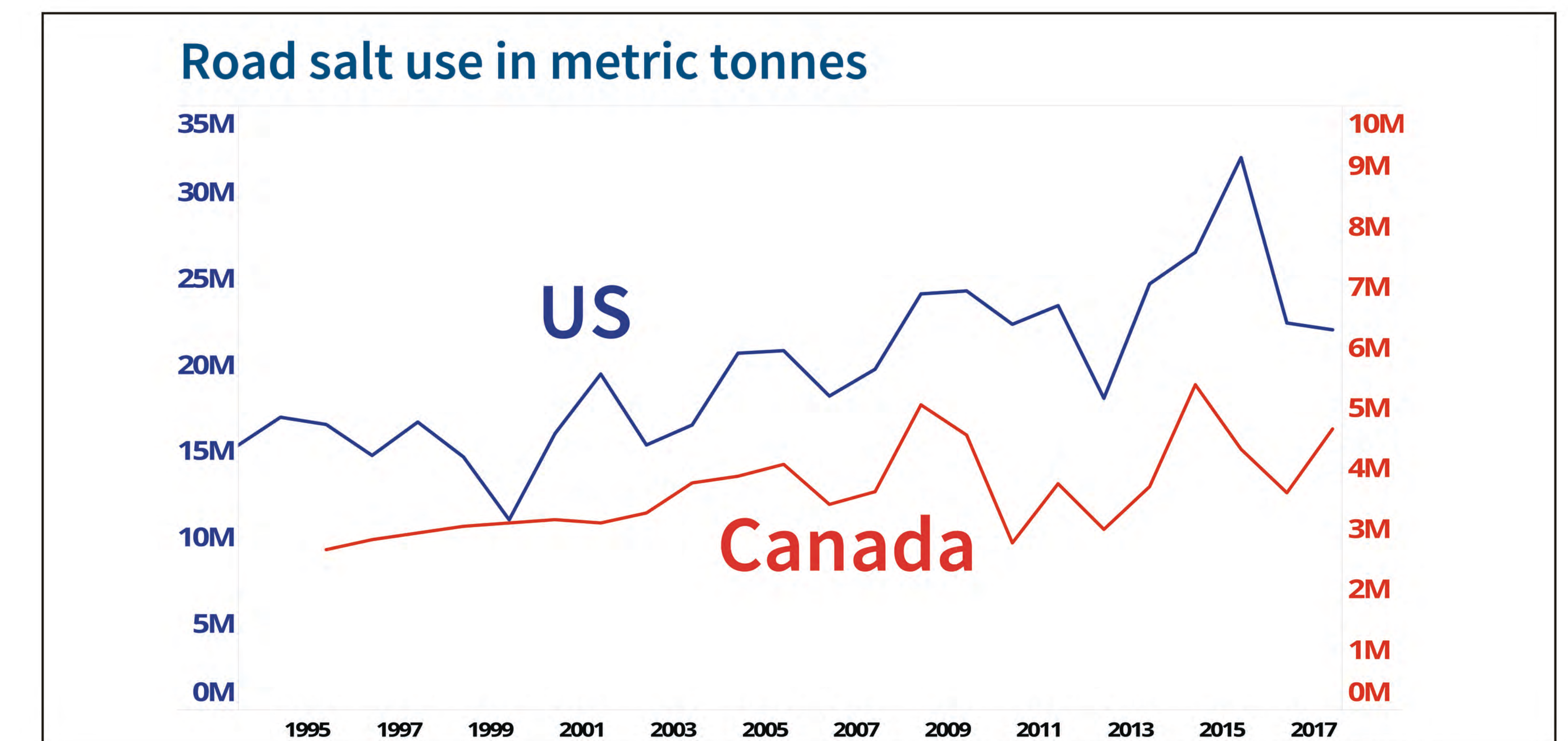


Conclusions

We believe the higher mortalities and hemorrhages in the alevins from the contaminated tributary were caused by the rapidly changing chloride concentrations immediately after the fish hatched. In 2011, as a result of this study, SFU moved road salt from the open shed to a closed storage facility and improved their winter road maintenance practices. But salt spread in the winter and salt still in the groundwater continue to impact Stoney Creek.



In 2001, Environment Canada and Health Canada determined: **... road salts that contain inorganic chloride salts ... should be considered "toxic" under the Canadian Environmental Protection Act 1999 because of tangible threats of serious or irreversible environmental damage.** But, for reasons of road safety and industry lobbying, the government declined to ban road salt outright. Its use is increasing in both Canada and the US.



What can you do?

Recommend research on

- effects of pulse contamination on other fish
- long-term survival of salmon with yolk sac hemorrhages induced by high concentrations of road salt

Advocate

- for stricter regulations on the use of road salt
- for certification for road salt applicators

Join

- a streamkeeping group



Full report:
scec.ca/salt

Thanks to: Alan James, BSc, MA
Vladimir Soukhachev, PhD
John Templeton
and other streamkeepers from:

