How Can We Test Whether Road Salt is Entering the Water Supply?

Engage students in a discussion on how to test the relationship between roads and the amount of salt found in area streams.

Discussion

Key Idea: Salt enters water systems through runoff.

Question: Now with a better understanding of Dr. Kaushal and his work, how might you test to see if salt added to roadways after snowstorms enters the water supply?

Answer: Answers will vary, but should include testing water supplies before and after salting of roads.

Question: If salt enters water sources, how would you expect stream water in an area with a lot of roads (like New York City) to compare to stream water in an area like a forest without any roads?

Answer: Streams in areas with more roads will be saltier than streams in areas without roads. (Shorthand: More roads → More Salt)

Question: Why?

Answer: Salt is used to melt snow and ice on roadways, so more salt will have to be used in areas with more roadways. This salt will then dissolve into the melt water and runoff into local area streams.

Teachers guide and all materials for this lesson can be found on the web at http://www.amnh.org/explore/curriculum-collections/ecology-disrupted/winter-roads