

SALT IS KILLING VALLEY CREEK !



- ✎ Salt (sodium chloride, NaCl) used in winter de-icing is dramatically increasing the salinity of Valley Creek and many other streams in Chester County.
- ✎ Ecosystems as we know them have already begun to change with the loss of aquatic insects and plants, which are being replaced by more salt-tolerant species.
- ✎ Salt increases corrosion of our concrete and steel infrastructure, which itself costs us more for maintenance.
- ✎ This isn't just a Valley Creek problem. This is an urbanization, ice belt, and world problem.

What Can We Do?

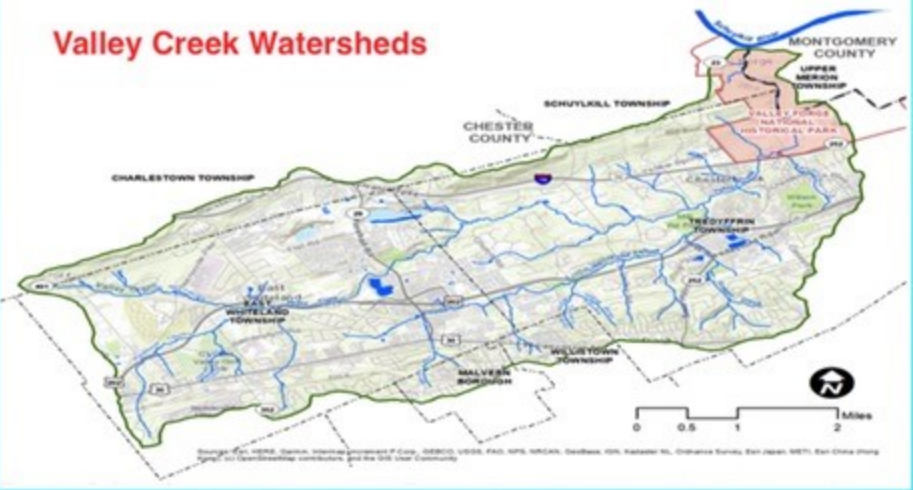
Studies of watersheds similar to Valley Creek have found that parking lots can contribute up to 50% of the salt that enters nearby streams. Roads and salt storage piles have been identified as other major sources.

Can We Manage the Problem? YES - if we follow Best Management Practices for winter weather management.

Can We Mitigate the Problem? YES - but only if we adjust our cultural expectations for clear, ice-free streets, parking lots and sidewalks.

We Need To Use Less Salt !

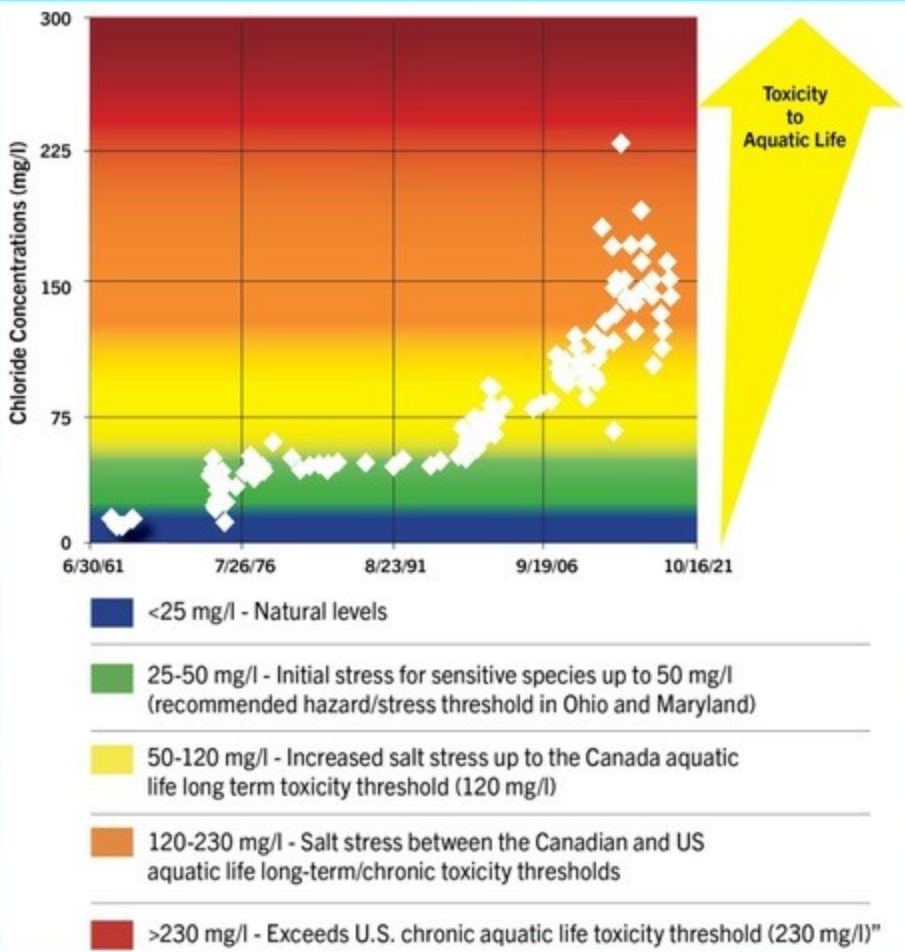
Valley Creek Watersheds



Our Valley Creek Watershed is home to a "Class A" Wild Brown Trout Fishery. This is a virtual miracle in an urban setting! It is designated by Pennsylvania's Department of Environmental Protection as "Exceptional Value" subject to anti-degradation protections ... yet ...

2021 Valley Creek salt (chloride) data shows 140mg/l - the highest among Chester County Streams!

Salt in Valley Creek Near PA Turnpike (USGS):



What can we do? Once salt has entered the environment, there is no effective way to remove it. The best solution is a widespread, decreased use of road salt. New development inherently results in increased salt pollution.

What Must We Do?

Here Are Proven Measures That Have Been Adopted In Some Salt Belt States:

For Everyone:

- Adapt the de-icing response to the weather forecast.
- Manually remove snow and ice as frequently as possible – use plows (“live edge” if possible) and shovels and shift away from the “chemical” (i.e., salt) solution. Be efficient with salt usage. Know how much salt is needed. *More is not better.* Clean up and reuse excess.
- Leave unused and rarely used areas of parking lots unplowed and unsalted – let the snow and ice melt on its own.

State & Municipal Actions:

- Brine. Consider making brine an integral component of pre-storm AND during-storm treatment.
- Apply pre-wetted salt at approved rates for the conditions.
- Consider application efficiency - evaluate equipment calibration and function to potentially reduce waste and over application.
- Consider developing training programs or updating existing ones – plan for the long term.
- Get the word out to contractors, businesses, and homeowners. Salt pollution is getting worse. Drinking water and stream health are in danger.

Private Contractors

- Brine if equipment is available. Upgrade equipment if possible.
- Apply pre-wetted salt at approved rates for the conditions.
- Store salt properly under permanent shelters.
- Reach out to clients and local government to creatively reduce salt application while keeping people safe.

Homeowners

- Use the right amount; one 12 oz. cup of salt per 20 feet of driveway or 10 sidewalk squares.
- Consider mixing sand or crushed limestone 1:1 with the salt or even just using the abrasive.
- Don't use products containing urea, Kitty Litter or ashes.
- Clean up and reuse excess salt.
- Be the eyes of Valley Creek – report an unprotected salt pile or excessive salt use to your township.

Salt Jeopardizes The Ecological Health of Valley Creek!

This Affects Both Our Health And Cost of Living!

Road Salt's Environmental Impacts:

- **Drinking water** becomes contaminated.
- **Health and wellbeing** are negatively affected by the loss of ecosystem functions and services.
- **Aquatic Life** – small freshwater invertebrates are most sensitive; small changes in the food web have cascading effects. Once ground water is contaminated, salt is impossible to remove.
- **Vegetation and Soil** – changes the characteristics of soil and water, which impacts plant health above and below ground.
- **Infrastructure** – vehicles and bridges corrode; sodium chloride (rock salt) leaches out lead in pipes. Salt can mobilize toxic heavy metals into drinking water.

STOP VALLEY CREEK FROM BEING "A-SALT-ED"



For additional details and information go to:

<http://www.valleyforgetu.org/>

Or contact:

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Stroud Water Research Center provided science and data support for this information.

<https://stroudcenter.org>