



MS4 DEPARTMENT MONTHLY REPORT

January 1, 2024 – January 29, 2024

NOTEWORTHY ITEMS

- ❖ Temperatures swung from moderate to freezing, which brought a mix of heavy rainstorms, and light, moderate, and heavy snowstorms throughout the month.
 - Maintenance team salted and plowed roadways and public sidewalks throughout the Borough during and after each storm event. THANK YOU!



- ❖ Cleared trash, debris, leaves, and skid stones out of storm drains, inlets, rain gardens, and swales prior to, during, and after storms throughout month to prevent localized flooding and reduce pollution in storm drains.
 - Cleared piles of snow off storm drains to ensure flow of stormwater into drains.

BEFORE



AFTER



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- ❖ Performed clean out storm drain, inlet, and vegetated swale at 5th St & Washington Terrace by shoveling out and clearing mud, leaves, debris, and compacted dirt.

BEFORE



AFTER



- ❖ Maintenance Staff cleared leaves, debris, and trash from tributary and stormwater inlet and outlet running through Woodside Park.

BEFORE



AFTER





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- ❖ Inspected storm drains, inlets, outfalls, tributaries, BMPs, and green infrastructure throughout the month during all weather conditions.
 - Many of our basins were full with the heavy precipitation throughout the month.



- ❖ Monitored flow of stormwater and assessed condition and performance of storm drains, inlets, outfalls, tributaries, and infiltration into swales and BMPs during rainstorms, light snow, sleet, and dry conditions.
 - High volume, high velocity stormwater flow filled our grey and green infrastructure and directed stormwater to outfalls and infiltration areas.
 - Water infiltrated within 24-72 hour timeframe after snowmelt.





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❖ January 22-26 is **Winter Salt Awareness Week!** Here are some tips to deice your paved surfaces:

“Wisconsin Salt Wise Partnership (WSWP) is a coalition of organizations working together to reduce salt pollution in our lakes, streams, and drinking water. They offer a Winter Maintenance Salt Application Guidelines and Calculator. Please click the link below to determine the appropriate amount of ice melt product for the pavement temperature. [Application Guidelines & Calculator](http://www.wisaltwise.com/application-guidelines-and-calculator) ([wisaltwise.com](http://www.wisaltwise.com))

www.wisaltwise.com/tools/application-guideline-calculator.com

We rely on salt to keep our roads safe in the winter and to soften water in our homes year-round but using more salt than is needed comes with a heavy price. It only takes 1 teaspoon of salt to pollute 5 gallons of water to a level that is toxic for freshwater ecosystems. We can all work together to use the right amount of salt! In much of the United States, chloride from salt is infiltrating into our lakes, streams and groundwater. Learn more about #thetruecostofsalt and how you can make a difference.

All deicers have environmental impacts. None are considered safe for the environment. The individual chemicals used will all combine and concentrate in bodies of water. All that runoff adds to large amounts of salt and nutrients entering local waterways.

Deicers come in several forms. Consider the best choice for your area:

- **Rock salt** (sodium chloride) is the most commonly used but contains cyanide, as an anti-caking agent that can be toxic to underwater life, and is the most harmful for plants.
- **Calcium chloride** is considered a better choice than rock salt, because it does not contain cyanide, however, it can also harm plants. Calcium chloride costs about three times more than rock salt, but you only need to use about one-third as much.
- **Magnesium chloride** is considered the least toxic deicing salt because it contains less chloride than either rock salt or calcium chloride, making it safer for plants and animals.
- **Calcium magnesium acetate (CMA)** is considered the best overall choice for safely melting ice. It is less toxic than deicers containing chloride, but can cost considerably more than rock salt.

Best management practices for deicing chemicals:

- Spread deicer before snow and ice start to accumulate.
- Remove as much snow and ice as possible before applying the deicer.
- Apply deicer only to areas where people or vehicles will be traveling.
- Follow the label directions. **If only a handful of rock salt per square yard is needed, using more isn't more effective, just more expensive.**
- Grains of salt should be roughly 3 inches apart from each other.
- Don't use rock salt within 5-10 feet of salt-sensitive plants.
- Sweep up extra salt to reuse.
- Store in a waterproof container to prevent leaks or spills.





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Deicer is not the only choice. Alternatives for small areas or thin areas of ice include:

- Warm water mixed with table salt or water conditioning salt
- Pickle brine solutions
- Sand
- Kitty litter
- Bird seed
- If you can anticipate the forecast, cover small areas (such as your steps) with heavy, waterproof plastic or a tarp.

Make sure to use all deicing chemicals and alternatives in as small quantities as possible. Even the environmentally friendlier options will still pose environmental problems.”

Deicing Winter Maintenance Strategies

WI Salt Wise Partnership

General Tips

Deicing is the practice of applying products to melt snow or ice during or after the storm

- For best results remove as much snow and ice as possible before applying deicers.
- Deicers are not intended to melt all of the snow or ice.
- Deicers are best used to reduce the bond of snow and ice to the pavement so that the surface can be mechanically cleared.
- Before reapplying deicer, make sure you have given it time to work.
- Granular salt can only melt in areas where the snow is touching the granule.
- Calibrate equipment to ensure accurate application rates.
- Deicers work slower when it is cold yet they retain the same ice melt capacity.

How to Use the Chart

- For warming pavement temperatures use lower end of application rates
 - (i.e. as in the morning as the sun comes out for the day)
 - In March, the sun angle warms the pavement more, and less material may be needed to have the same effect.
- For cooling pavement temperatures use higher end of application rates
 - (i.e. as the sun sets in the late afternoon)
 - In December and January, the pavement temperatures typically do not warm up as much during the day with the sun at a lower angle in the sky, so more materials may be needed.
- For cold end of the pavement temperature range use the higher rates
- For warm end of the pavement temperature range use the lower rates
- If you have anti-iced, use the low end of the chart if more melting is needed.
- After your first pass, applications of less product are often effective, so try using somewhere between half and all of your initial application rate.

Deicing Winter Maintenance Strategies

WI Salt Wise Partnership

Product Tips

All deicers have impacts. None are safe for the environment.

Liquid

- Liquids melt faster than granular products. They also help jump-start the granular products if used in combination.
- Pre-wet rates assume 6-12 gallons per ton. If you apply liquid at a higher ratio you can further reduce your rates and increase your speed of melting.
- "Rock Salt wet with other liquids" column in the chart covers a range of products, thus producing a wide range of results. It is intended to be a column that provides ice melt capability at lower pavement temperatures than the "Rock Salt wet with Salt Brine" column.

Granular

- Granular products have more melting power than liquids.
- Salt with a coarser gradation will penetrate compaction better than finer salt.
- Salt with a finer gradation will work faster than coarser salt.
- "Winter Sand" does not melt snow or ice.
- "Winter Sand" contains just enough salt to keep the pile from freezing.
- Stockpiles ≥ 1000 lbs of salt or salt/sand mix (> 5% salt), see Trans 277 storage guidance.

Other Chlorides

- Magnesium Chloride (MgCl₂) and Calcium Chloride (CaCl₂) do not melt as much snow and ice as rock salt, but melt faster than rock salt at colder temperatures.
- MgCl₂ and CaCl₂ are hygroscopic. They pull moisture from the air to the pavement. If over-applied or applied in warm or humid conditions, they may create a slippery surface.
- Potassium Chloride (KCl) works at a similar temperatures as rock salt.

For Compacted Snow and Ice

- For black ice, sleet, freezing drizzle, or freezing rain, use high end of recommended rates and apply more frequently.
- For frost or frost prevention, liquid applications are most efficient.
- If you have compacted surfaces you have lost the battle. Low rates will no longer work. Figure out what went wrong and adjust for the next event. Do not try to melt all of the compaction. Attempt to get melting under the compaction so that you can physically remove snow/ice.





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- ❖ Removal of dead and diseased trees in Negley, Woodside, and Fraser parks
 - Maintenance Team and hired professionals removed dead and diseased trees to safeguard passing pedestrians & motorists, the health of nearby trees, and the integrity of the soil.
 - Replacement trees will be planted throughout Borough in Spring 2024.



- ❖ Construction Inspections, 1200 block Hummel Ave
 - Erosion and sediment control measures are currently in place on site.
 - New stormwater basin is being excavated and graded.
 - No illicit discharge detected at times of inspections.



- ❖ Worked with Rettew to file comprehensive MS4 Pollutant Reduction Plan Final Implementation Report to the PA DEP. The acceptance of this report by the PA DEP successfully completes our requirements for Lemoyne Borough's 2018-2023 MS4 Pollutant Reduction Plan.
- ❖ Bare Root Tree Grant from TreePennsylvania
 - Invited to apply for Spring 2024 grant cycle.
 - Previous grant cycles allowed 10-20 trees; currently allowing requests from 10-30 trees.
 - Submitted initial grant application, follow up requests, & provided all documentation necessary.
 - Received approval for first round!
 - Awaiting next steps from TreePennsylvania to move into second round.





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❖ Tree City USA:

- Reviewed requirements for Tree City USA designation.
- Researched and provided documentation for all requirements.
- Worked with staff and elected officials to achieve approvals and signatures needed.
- Submitted application and all pertinent documentation for Tree City USA 2023 to DCNR State Forester and Arbor Day Foundation / Tree City USA.



WHY BECOME A TREE CITY USA COMMUNITY?

“A thriving urban forest offers many advantages to communities. Here are just a few:

- Trees help absorb the sounds of traffic in urban areas by 40%.
- Neighborhoods with trees are seven to nine degrees cooler than those without.
- Trees reduce energy costs up to 25% by shading buildings and protecting them from winter winds.
- Homes with trees have higher property values.
- Green space plays a major role in improving mental and physical health.
- Planting and maintaining trees absorbs carbon dioxide in the atmosphere, mitigating the effects of climate change.

The Tree City USA program provides communities with a [four-step framework](#) to maintain and grow their tree cover. It also gives them an avenue to celebrate their work, showing residents, visitors, and the entire country that they're committed to the mission of environmental change.

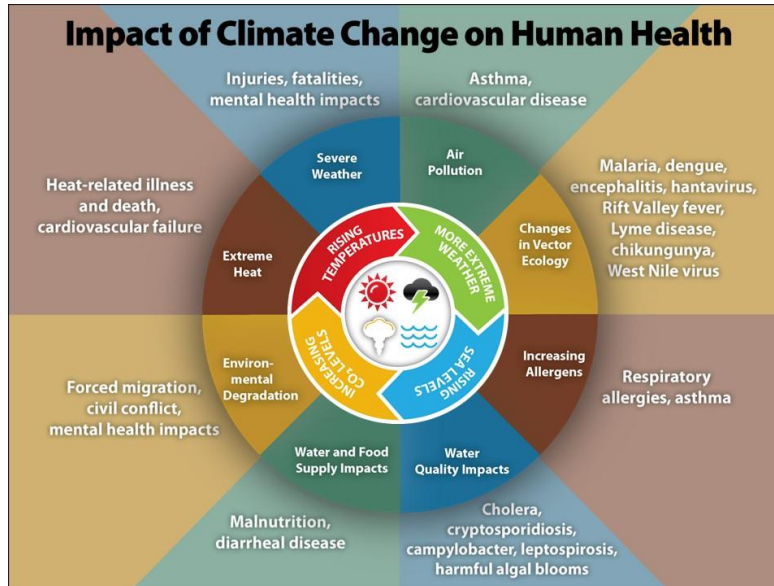
Publicly demonstrating your commitment to the environment is a great way to build pride among residents, as well as position your community as an attractive place to live. The benefits trees bring to urban environments are endless — and by earning Tree City USA recognition, your community can experience them firsthand.”

- ❖ Participated in Roundtable with Chesapeake Bay Partners and Subject Matter Experts to review & assess the technical merit of 68 stormwater proposals throughout the Chesapeake Bay Watershed.
 - We will receive credit on our Annual DEP MS4 report for this collaboration.



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- ❖ Attend PA GreenGov Council meeting – Climate & Environmental Health



❖ ARBOR DAY FESTIVAL 2024!

- **WHEN:** Saturday, 4/27/2024 from 10:00 am – 2:00 pm
- **WHERE:** Memorial Park (30 Peach St, Lemoyne, PA 17043)
- **WHAT:** FREE activities, including – Live Animals, Vendors, Arts, Crafts, Prizes, Giveaways, Hands-On STEM Activities, & More!
- **WHO:** Kasha Griva, kgriva@lemoynepa.com, (717) 317-1412

- ❖ Event is rain or shine – all activities under tents! All day fun for adults and children!
- ❖ If you would like to sponsor, volunteer, or participate, please contact Kasha Griva at the contact information listed above!

