

Item 7b.**Sunfish Lake Engineer's Report for January 7, 2020**

By: Jeff Sandberg, PE
City Engineer

Date: December 27, 2019

1. Engineering Activities Undertaken in the Month of December.

The following Engineer's Report reflects the Engineering activities undertaken this past month.

- A. Review City Snowplowing Policy. In light of concerns from the public regarding the city's current policy and snow plowing budget, staff has been requested to provide a review of the policy and offer options for a more robust snow plowing effort. SEE ATTACHMENT.
- B. Discussion on Salem Church Road and Delaware Ave Intersection. Staff has requested that Dakota County make improvements to this intersection due to safety concerns. SEE ATTACHMENT.
- C. City Map Update – Each year staff provides to the City Council a map of the city showing property information that is updated to include residents that have moved to the city. SEE ATTACHMENTS.

2. Building and Site Reviews in the Month of December.

- A. No Building or Site Reviews were conducted in December

3. Public Works Activities Undertaken in the Month of December.

- A. The fire marker on Charlton Road has been replaced, per the direction of the City Council at the December meeting.
- B. Staff has been working with the snow clearing contractor to keep roads clear and as safe as possible. Residents can email the contractor directly regarding unsafe conditions at sunfishlakesnow@gmail.com. Please copy Jeff Sandberg on any correspondence at jsandberg@wsbeng.com.

4. Anticipated Engineering/Public Works Activities for the Month of January.

No other Engineering/Public Works activities are anticipated for the month of January.

The above constitutes the Engineering Report for the City of Sunfish Lake for January 7, 2020.

Respectfully submitted,

WSB



Jeffery S. Sandberg, PE
City Engineer

Item 7b. ATTACHMENT 1Aa.



Memorandum

To: Honorable Mayor and City Council
City of Sunfish Lake

From: Jeff Sandberg, PE
City Engineer

Date: December 27, 2019

Re: Review of Snow Removal Policies
City of Sunfish Lake, MN

INTRODUCTION

As requested, staff brings this item to the City Council for discussion and consideration of options to “beef-up” the snow removal efforts in the city.

At the October meeting, the City Council awarded the snow removal contract for the 2019/2020 season to Executive Contractors, Inc., of Inver Grove Heights, MN. Their lump sum quote of \$36,000 was based on their past experience with snow clearing in the city to meet the city Snow and Ice Removal Policy criteria (see attached policy).

DISCUSSION

Craig Kromrey, the Owner of Executive Contractors, has been extremely responsive with his plowing when it snows and when concerns are brought to his attention via the email address that he set up for residents to alert him of problem areas. That email address again is sunfishlakesnow.com. Residents should also copy the City Engineer with those concerns at jsandberg@wsbeng.com.

Staff has spoken to Mr. Kromrey about how he approaches clearing roads within the city. While the city policy states that roads should be cleared after 2” of snow is received, Mr. Kromrey often clears the roads when smaller events occur, or if roadway conditions are such that additional salt and sand treatment is needed. In a typical event, the contractor first clears the roads within the city, and applies salt and or sand only as needed. Once the snowfall stops and blowing and drifting abates, the contractor goes back out and clears the roadways of snow and spreads salt and/or sand at all intersections and other noted/ routine troublespots. Mr. Kromrey noted that it does not do much good to apply salt and sand on the first pass of plowing, because anything that was spread will get scraped off the roads when he comes through for the second pass.

The contractor stated that they do place a heavier dose of salt and sand where there are noted trouble areas, especially along Salem Church Road and at the Delaware intersection. On occasion when needed, a treated salt with magnesium chloride has been sparingly used which will burn through snow and ice. This treatment has been sparingly used because of the higher cost but moreover because of the detrimental effects on the environment when used excessively.

Despite our best efforts, we still receive a lot of complaints about snow and ice covered roads, with Salem Church Road (SCR) being the roadway that gets more complaints than any other road in the city. SCR has several factors that contribute to the challenges of keeping it free of snow and ice. First, much of the roadway is shaded by overhanging trees. This does not allow

sunlight to penetrate through snow and ice and to allow the salt to penetrate to the asphalt surface. Second, both ends of SCR have physical characteristics that create challenges for winter driving. The grade from SCR down to Robert Street is steep with a sharp turn at the bottom of the hill, and at the other end of the road, as SCR intersects with Delaware, there is a steep grade with a sharp angle/ turn on to Delaware. This intersection has proven to be one of the most problematic intersections within the city, especially during the winter months.

Following a recent snowstorm, staff spoke with Mr. Kromrey about options to better clear SCR. He said that the whole road could be treated with a heavy dose of sand and treated salt. He said the added cost for the city would be \$190/ ton, and estimated that it would take 3 tons of treated salt to cover the length of SCR for each snow event. Staff inquired how much treated salt it would take if it was only spread at the Delaware intersection and on the steep grade going down to Robert Street. Mr. Kromrey estimated that it would take approximately 1 ton for each snow event. He again cautioned that using too much treated salt can be detrimental to the environment, causing burned vegetation and issues in receiving waters (ponds, wetlands, streams). See Attachment 1A that discusses the impact of excess chloride on natural resources.

The City Council has stated that public safety is the highest priority, and has established the Snow and Ice Clearing policy as a guideline for how snow and ice clearing should be approached within the city. The policy provides a balance between keeping streets safe for travel to the extent practicable, and protecting the environment. Due to the city's size and tax base, resources available are limited for snow and ice clearing activities.

The annual engineering budget for 2020 included \$38,000 for snow removal and \$1,700 for street sweeping. As mentioned above, the snow removal contract awarded to Executive Contractors is \$36,000, which *includes* spring street sweeping. This provides a potential surplus of \$3,700 in the city budget for 2020 that could be used for a more robust snow removal program.

OPTIONS

Staff has developed four options for the City Council to consider:

- 1) Add treated salt to be applied throughout the city in all storm events.
- 2) Apply treated salt along the entire length of SCR in each storm event.
- 3) Apply treated salt only in problematic locations on SCR.
- 4) Continue to perform snow removal throughout the city to the requirements of the current city snow removal policy.

Option 1: Add treated salt to be applied throughout the city in all snow events

This option will provide the highest level of snow and ice removal throughout the city, however, it will be the most expensive option and will cause the highest level of degradation to private property and the city's natural resources. The estimated additional cost of this option, assuming 15 snow events per season, is **\$20,475**. Please see Attachment 1A for information on environmental impacts likely with this option. This option may also require an update to the City's Snow and Ice Removal Policy.

Option 2: Apply treated salt along the entire length of SCR in all storm events

This option has an estimated additional cost of **\$8,775**, assuming 15 snow events per season. Please see Attachment 1A for information on environmental impacts associated with this option. There is justification to a higher level of service on this road because it is one of two designated Collector Streets in the city, with higher volumes of traffic.

Option 3: Apply treated salt only in problematic locations on SCR in all storm events

This option is estimated to cost an additional **\$2,925** assuming 15 snow events per season. This option targets the two trouble spots on SCR, one being the intersection at Delaware and the slope and curve as it connects to Robert Street on the east end. Like Option 2, there is justification to a higher level of service on SCR because of its Collector Street designation.

Option 4: Continue to perform snow removal throughout the city to the requirements of the city snow removal policy

This option essentially is addressing problem areas on a case-by-case basis as we are doing today. Treated salt is included with this option, but would be applied sparingly at the discretion of the city engineer and in accordance with the city's current snow plowing policy. This option would have **no additional cost** to the current snowplowing services. This option has the least amount of environmental impact of all of the options identified.

Staff has been working with Executive Contractors to find ways to cost-effectively improve our snow clearing efforts within the current city snow removal policy. Executive Contractors recently purchased the equipment needed to pre-treat the roadways with a liquid salt-brine. This technology is being used by MnDOT and many Counties and some Cities with proven success. It has been shown that applying a salt brine to the road surface before a snow event helps to prevent the snow from sticking and forming into ice, making the surface easier to clear. It has also been shown that less road salt needs to be used to keep the roads clear.

Executive Contractors will be testing this out on all of the roads in Sunfish Lake. If the pre-treatment saves enough on additional chemicals that otherwise would be applied, this technology may be able to be implemented on all of the roads throughout the city at no additional cost. This is yet to be determined.

Staff Recommendation:

Staff recommends either Option 3 or Option 4. Since the City did realize a \$3,700 savings in the way the snow plowing contract was structured this year, that money is available to cover the cost of providing a higher level of service on Salem Church Road, a designated Collector Road, than what is outlined in the current city snowplowing policy. It is the opinion of staff that the benefit of increased safety outweighs the minimal negative impact on the environment with Option 3. Option 3 may be prudent to implement each year until improvements are made to the intersection at Delaware to address the current safety issues.

Attachments

SUNFISH LAKE SNOWPLOWING POLICY

1. Introduction

The City of Sunfish Lake believes it is in the best interest of the residents for the City to assume basic responsibility for control of snow and ice and removal of debris or fallen trees prohibiting vehicular travel on city streets. Reasonable ice and snow control and debris removal is necessary for routine travel and emergency services. The City will provide such control in a safe and cost effective manner, keeping in mind safety, budget, personnel, and environmental concerns. The City will use private contractors to provide this service.

2. When will the City start snow or ice control operations?

The Mayor or City Engineer will decide when to begin snow or ice control operations. The criteria for that decision are:

- a. Snow accumulation of 2 inches or more;
- b. Drifting of snow that causes problems for travel;
- c. Icy conditions which seriously affect travel; and
- d. Time of snowfall in relationship to heavy use of streets.

Snow and ice control operations are expensive and involve the use of limited personnel and equipment. Consequently, snowplowing operations will not generally be conducted for snowfall of less than 2 inches.

Debris or tree removal prohibiting vehicular travel will commence as soon as work forces can be mobilized after reports of the incident and passing of the storm.

1. How snow will be plowed

Snow will be plowed in a manner so as to minimize any traffic obstructions. The center of the roadway will be plowed first. The snow shall then be pushed from left to right. The discharge shall go onto the boulevard area of the street. When a plow goes on a bridge, the driver shall slow down so that snow does not go over the bridge if possible. In times of extreme snowfall, streets will not always immediately be able to be completely cleared of snow.

City streets must be passable to allow normal traffic flow and emergency vehicles to respond to all areas within the City. The City; however, does not guarantee bare, dry pavement after each snowfall or that streets will be totally free of ice and snow or driving hazards common to Minnesota winter weather.

City streets will generally be plowed within 24 hours from the start of a 2" or more snowfall. This requires 6-8 hours of operations for a normal snowfall of two to six inches. Delays may occur due to equipment breakdowns and or extreme weather conditions.

2. Snow removal

The City Engineer will determine when snow will be removed by truck from the area. Such snow removal will occur in areas where there is no room on the boulevard for snow storage and in areas where accumulated piles of snow create a hazardous condition. Snow removal operations will not commence until other snowplowing operations have been completed. Snow removal operations may also be delayed, depending on weather conditions, contractor availability and budget availability. The snow will be removed and hauled to a snow storage area. The snow storage area will be located so as to minimize environmental problems.

3. Priorities and schedule for which streets will be plowed

The City has classified city streets based on street function, traffic volume, and importance to the welfare of the community. The following streets will be plowed first or have debris removed first. These are high volume routes, which connect major sections of the City and provide access for emergency fire, police, and medical services.

- Salem Church Road
- Charlton Road

Second priority streets are low volume residential streets.

- Angell Road
- Sunny Side Lane
- Windy Hill Road
- Windy Hill Court
- 55th Street West
- Roanoke Road
- Grieve Glen Lane
- Acorn Drive
- Zehnder Road

6. Work schedule for snowplow operators

Snowplow operators will be expected to work 8 hour shifts. In severe snow emergencies, operators sometimes have to work in excess of 8 hour shifts. However, because of budget and safety concerns no operator shall work more than a 12 hour shift in any 24 hour period. Operators will take a 15 minute break every 2 hours, with a half hour break after 4 hours. After a 12 hour day, operators will be replaced if additional qualified personnel are available.

7. Weather conditions

Snow and ice control operations will be conducted only when weather conditions do not endanger the safety of the operators and equipment. Factors that may delay snow and ice control operations include severe cold, significant winds, and limited visibility.

8. Use of sand, salt, and other chemicals

The City is concerned about the effect of sand and salt on the environment and will limit its use for that reason. Therefore, it is the policy of the City to utilize a sand and salt mixture in the ratio of approximately 3 parts sand and 1 part salt. This provides for traction, but is not intended to provide for bare pavement during winter driving conditions. Application of the sand and salt mixture is generally limited to priority "A" routes, steep grades, and high volume intersections. Application is limited on lower volume streets and cul-de-sacs. The City cannot be responsible for damage to grass caused by the sand and salt mixture and therefore will not make repairs or compensate residents for salt damage to turf, plantings, or trees in the street right-of-way.

9. Mail delivery

The snow plow operators make every effort to remove snow as close as practical to provide access to mailboxes for the mail delivery. However, it is not possible to provide perfect conditions and minimize damage to mailboxes with the size and type of equipment that is utilized for snow removal. Therefore, the final cleaning adjacent to mailboxes is the responsibility of each resident.

Residents are encouraged to check with the Postmaster on how to correctly install mailboxes.

10. Garbage/Recycling

Efficient snow plowing requires that garbage and recycling containers be accessible for pickup and placed off street to allow snow removal. The container(s) may have to be placed in the driveway to meet both of these requirements. It is the responsibility of the resident to see that the container(s) is not in the way of the snowplow and is also in a spot accessible to the garbage and recycling truck(s).

11. Complaints

Complaints regarding snow and ice control or damage shall be taken during normal working hours and handled in accordance with the City's normal operation procedures. Complaints involving access to property or problems requiring immediate attention shall be handled on a priority basis. Response time should not exceed twenty-four (24) hours for most complaints. It should be understood that complaint responses are to ensure that the provisions of this policy have been fulfilled and that all residents of the City have been treated uniformly. It is the City's intention to log all complaints and upgrade this policy as necessary in consideration of the constraints of our resources.

Item 7b. ATTACHMENT 1Ac.



Memorandum

To: Jeff Sandberg, PE
City Engineer

From: Brandon Movall, EIT, ENV SP
Graduate Engineer

Date: December 18, 2019

Re: Effects of Chloride on the Environment for
Review of Snow Removal Policies
City of Sunfish Lake, MN

INTRODUCTION

As requested, staff brings this item to the City Engineer to be presented to the City Council in conjunction with discussion and consideration of options to "beef-up" the snow removal efforts in the city.

DISCUSSION

Effects of Chloride on the Environment

The Minnesota Pollution Control Agency (MPCA) considers chloride (salts) to be a water pollutant and stressor. It only takes one teaspoon of chloride (salt) to permanently pollute five gallons of water. Once in the water, there is no way to easily remove the chloride – it therefore accumulates in the environment over time.

The MPCA highlights the following specific concerns with elevated chloride levels in a community:

Drinking water — Salt has contaminated groundwater in some areas of the state; 75% of Minnesotans rely on groundwater for drinking water. Excess salt could affect the taste and healthfulness of drinking water. Twenty-seven percent of monitoring wells in the Twin Cities metro area's shallow aquifers had chloride concentrations that exceeded EPA drinking water guidelines. Thirty percent of Twin Cities wells had chloride concentrations that exceeded the water quality standard.

Fish and aquatic bugs — High amounts of chloride are toxic to fish, aquatic bugs, and amphibians. Chloride can negatively affect the fish and insect community structure, diversity and productivity, even at lower levels.

Plants — Road salt splash can kill plants and trees along the roadside; plants that take up salty water through their roots can also suffer. Chloride in streams, lakes, and wetlands harms aquatic vegetation and can change the plant community structure.

Soil — Salt-laden soil can lose its ability to retain water and store nutrients and be more prone to erosion and sediment runoff (which also harms water quality).

Pets — Salt can sicken pets that consume it, lick it off their paws, or drink salty snow melt/runoff. It can also irritate their paw pads.

Wildlife — Some birds, like finches and house sparrows, can die from ingesting deicing salt. Some salt-sensitive species are particularly at risk.

Infrastructure — Chloride corrodes road surfaces and bridges and damages reinforcing rods, increasing maintenance and repair costs.

Status of Chloride Levels in Minnesota Public Waters

The MPCA has evaluated all public waters in the state for chloride levels. 50 lakes and streams have been deemed impaired by chloride, where chloride levels are too high to meet the standard designed to protect fish and other aquatic life. An additional 120 water bodies have chloride levels near the standard and are at high risk of becoming impaired.

Sunfish Lake has been evaluated for chloride by the MPCA, and they have determined that the lake is not impaired by chloride and is not at a high risk of becoming impaired at this time.

More Information

For more information about the environmental impacts of chloride, please visit the following links:

<https://www.pca.state.mn.us/water/chloride-101>

<https://www.pca.state.mn.us/water/statewide-chloride-resources>

<https://www.dot.state.mn.us/maintenance/research.html>

<https://clearroads.org/materials-deicers/>



EFFECTIVELY DEICING WITH THE ENVIRONMENT IN MIND

Old Man Winter is officially upon us, and with plenty of gifts to share; frigid temperatures, blankets of snow, and of course, sheets of ice. In 1942, it was estimated that the United States spread about 5,000 tons of salt across highways nationwide. Today, that number is closer to 20,000,000 tons, averaging over 120lbs for every American. The use of salt, also known as sodium chloride, to melt ice works quickly and effectively. Put simply, the salt interferes with the water molecules, and lowers the temperature at which water turns into ice.

SO IF SALT WORKS SO WELL, WHAT'S THE PROBLEM?

Freshwater bodies are being tested and monitored across the US, and the results being found are concerning. In 2014, the US Geological Survey found that 84% of urban streams studied showed rising levels of sodium chloride. Excess salt that doesn't react on streets, sidewalks, and driveways will find a way into the city's storm drains. These drains will eventually lead into fresh bodies of water, and deposit the saline solution. Once the salt is introduced into the local ecosystem, it is almost impossible to remove. Not only will vegetation struggle in these environments, but aquatic life and other animals will too. With decades of excessive use, the sodium chloride can eventually enter into the natural water table, affecting humans as well.

HOW DOES WEST ST. PAUL HANDLE DE-ICING?

Our city's Public Works Department is utilizing innovative ways to not only de-ice effectively, but to also reduce the environmental footprint we leave. Public Works staff attend conferences and receive continuous education on de-icing processes, products, and application techniques. We use a brine solution to pre-treat roads when there is a high chance of snow and ice accumulation. This solution contains significantly less sodium chloride, but provides a better result. By pre-treating the roads, we are creating a barrier on the surface that will resist ice accumulation and bonding. Another technique used is pre-wetting the salt with the same brine solution before spreading it. This process will activate the salt in the truck, and start the melting process faster once applied. On top of everything else, the city calibrates its spreader trucks. This calibration will help ensure that only the correct amount of salt and brine will be used on the public streets, limiting waste and contamination.

HOW CAN RESIDENTS HELP THE ENVIRONMENT WHEN DE-ICING?

The initial step is always education. By understanding the negative effects to the environment that excessive salting causes, we can learn ways to limit the contamination.



HERE ARE A FEW POINTERS WHEN DE-ICING YOUR SIDEWALKS AND DRIVEWAYS.

1. Always manually remove as much snow and ice as possible. Salt is not meant as a traction source, and will not react sufficiently when thrown on snow. The more ice you are able to remove by shovels and scrapers, the less salt that needs to be applied. By applying less salt, you have already reduced the environmental impact your de-icing will cause.

2. Be prepared to use only the amount of salt that is necessary. One pound of salt will melt around 250 square feet of area. More salt does not mean more melting! If the temperature will not reach 15 degrees Fahrenheit, most salts will not activate. Skipping salt on these days will reduce the chance of contamination.

3. The last thing to do here is to spread the knowledge of over salting, and the regional impacts that it causes to the environment. Reach out to a friend or neighbor, and spark the conversation about how to properly de-ice your sidewalks and driveways. Discuss the impacts that sodium chloride has to wildlife, humans, and vegetation. Help protect our world's most precious resource - freshwater, which only accounts for about 2% of all the water in the world.



West St. Paul Plowing and Snow Tips

- West St. Paul's Public Works Department takes great pride in snow removal, please give them room to work and stay back at least 150 feet from plows.
- A fully loaded snowplow weighs around 28,000 pounds so it also takes longer for them to come to a complete stop.
- Make sure snow stays on your property, pushing it into the street is illegal
- Keep your garbage can on your driveway, behind the curb, to avoid the snow from the plow pushing it over
- For the safety of our pedestrians and compliance with City Ordinance, remember to clear your sidewalk within 12 hours of a snowfall
- Help the environment by shoveling early and often and avoiding the use of salt
- Stay connected and sign up for Snow Emergencies at www.wspmn.gov/list.aspx to know when you need to have your car off the street

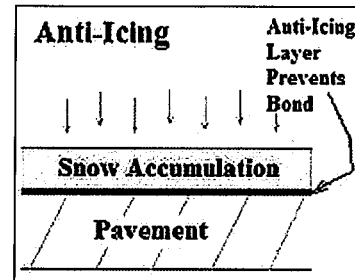
I. Why Anti-Icing?

1. What is Anti-Icing?

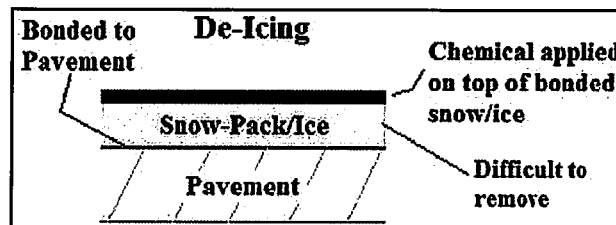
Anti-icing is the technique of applying a thin liquid chemical layer/coating on the pavement surface.

The application is often done before or early in the event.

The chemical is applied to a surface that does not have snow accumulation or ice/snowpack formation.



Anti-icing (preventing-icing) is pro-active, compared to de-icing (removing-icing) which is reactive.



2. Why Anti-Ice?

Anti-icing prevents the formation of frost and bonding of snow and ice to the pavement. This can result in safer road surfaces and savings in material and time.

Frost

Anti-icing prior to forecasted frost events helps to eliminate or minimize frost formation. Under some conditions, one anti-icing treatment has proven effective for multiple days and over weekends, and can sometimes treat two frost events.

Snow

Anti-Icing prior to forecasted snow events helps to prevent the formation of bonding between snow and ice and pavement which eases snow plowing.

Wasted Energy and Money

The rule-of-thumb is that removing ice or snowpack after it forms (de-icing) takes ten times more energy than preventing the formation (anti-icing).

Minimizing Impacts

All of the effective roadway chemicals have a negative effect of some kind to the environment. These include impacts to vegetation, wildlife and water quality. They also have a negative effect of some type on the infrastructure. Salt brine is known to corrode steel. It is suspected that the non salt-brine chemicals may have a more severe negative effect on concrete.

The best overall approach to minimize impacts is through **efficient chemical usage**. Anti-icing has proven an effective tool to help optimize chemical usage while improving road conditions.

3. Anti-Icing Coverage Advantage

The following table and graphic illustrates why only a thin layer of liquid is required on the roadway while providing a lot of coverage.

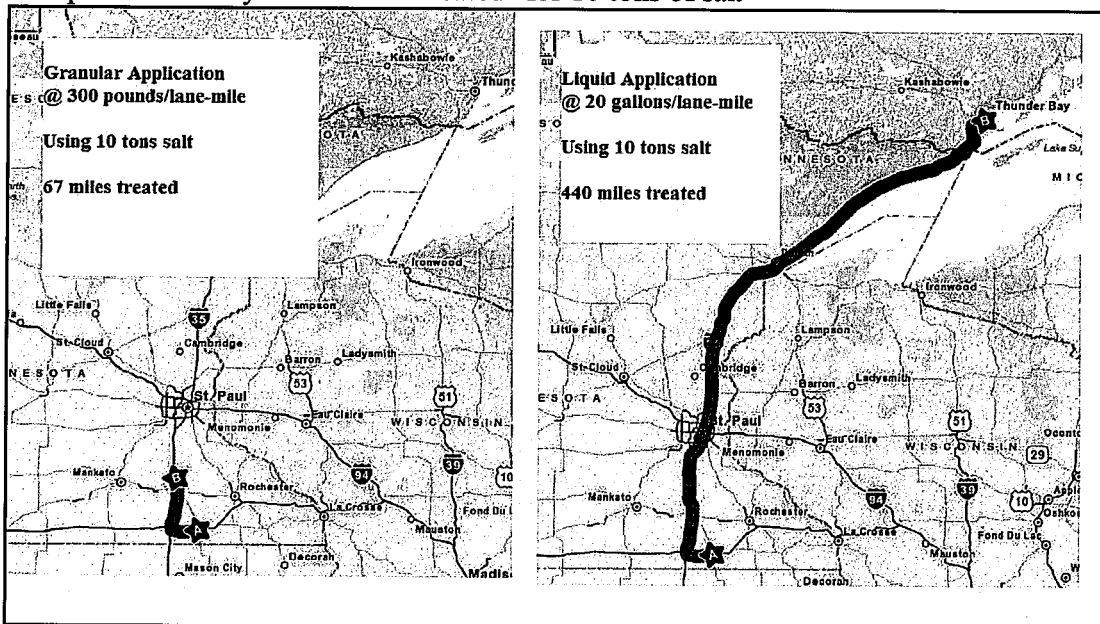
Illustration of Anti-Icing Coverage

Compare "Roadway Lane-Miles Treated" for 10 tons of salt

Type	Roadway Lane-Miles Treated	Example of Distance
Liquids @ 20 gal/lane-mile (20 gal/lb-mi = 45.44 lb/lb-mi)	440 miles	Austin, MN to Thunder Bay, Canada
Granular @ 300 lb/lane-mile	67 miles	Austin, MN to Faribault, MN

Graphic to Illustrate Anti-Icing Coverage

Compare "Roadway Lane-Miles Treated" for 10 tons of salt



Note that the above illustration assumes continuous roadway anti-icing. Targeted anti-icing (trouble-spot) will provide even more coverage.

Item 7b. ATTACHMENT 1Ba.



Memorandum

To: Honorable Mayor and City Council
City of Sunfish Lake

From: Jeff Sandberg, PE
City Engineer

Date: December 27, 2020

Re: Safety Improvements at Salem Church Road and Delaware Ave Intersection
City of Sunfish Lake, MN

INTRODUCTION

The current configuration of the Salem Church Road (SCR) and Delaware Ave intersection has contributed to significant challenges in snow and ice removal and the intersection has seen numerous accidents over the last several years. Staff has recently brought this issue up to Dakota County officials and this memo discusses that correspondence and potential next steps in potential safety improvements for the intersection.

DISCUSSION

Salem Church Road is a city Collector Road that intersects with Delaware Avenue, a County Road. SCR has a 3 – 5.5% grade as it slopes to the west, and it intersects Delaware at a 146 degree angle (typical intersections are at 90 degrees) (See attachment). These two factors create dangerous conditions for drivers, especially in the winter months. This intersection has proven to be very challenging to keep free of snow and ice because it is shaded by overhanging trees. Delaware is posted for a 45 MPH speed limit in both directions, and vehicles traveling west on SCR must stop and yield to traffic on Delaware. When icy, the slope on SCR as it intersects with Delaware can prove treacherous, and vehicles struggle to stop before entering on-coming traffic on Delaware.

This issue has been brought up with County staff, the first time at a meeting on November 18th with Mark Kresbach, the Dakota County Engineer, and Scott Peters, the Dakota County Senior Transportation Planner. Staff was meeting to discuss the County 2040 Transportation plan and the issue of safety at this intersection was brought up. At that time, the County indicated that if accident data showed that the intersection was a safety issue, the County would initiate a project to improve the safety at no cost to the City.

Following that meeting, County staff reviewed their records for crash data and found no record of incidents at the intersection. City staff requested crash data from Police Chief Sturgeon. Chief Sturgeon was able to find crash data on the state database (see attached). Also attached is my follow-up email to Dakota County that provides the crash data we found and again requests that the County initiate a safety improvement study/ project for this intersection.

OPTIONS

Staff has developed the following options for the City Council to consider:

- 1) Pass a resolution to request safety improvements be made by Dakota County

- 2) Order a study to be prepared by city staff for identifying options for safety improvements to the intersection.

Staff Recommendation:

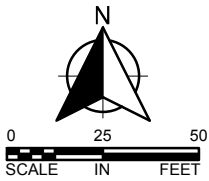
Staff recommends Option #1, for the City Council to pass a resolution requesting Dakota County make necessary safety improvements to the intersection at Delaware Avenue and Salem Church Road.

Attachments

LEGEND:

ROADWAY EDGE

STRIPING



Item 7b. ATTACHMENT 1Bc.

Jeff Sandberg

From: Jeff Sandberg
Sent: Tuesday, December 17, 2019 9:32 AM
To: Peters, Scott; Krebsbach, Mark
Cc: Daniel O'Leary; Brian Sturgeon
Subject: FW: Sunfish Lake Snowplowing Problems
Attachments: DELAWARE-HWY 62 ACCIDENTS Mendota Heights.XLSX; Accidents on Delaware and Salem Church.xlsx

Good morning Mark and Scott,

Thank you again for meeting with me and our city planner on November 18th to discuss the County 2040 Transportation plan. At that meeting, I had brought up concerns regarding the configuration of the intersection at Delaware and Salem Church Road, and I stated that the City of Sunfish Lake has been made aware of numerous accidents, especially in the winter months, due to the angle of the intersection that is compounded by the severe slope where the two roads meet. At the meeting, you offered to pull crash data to see if a project may be warranted to make the intersection safer. Since our meeting, you had looked at your records and were not able to find any crash data.

The attached is crash data that WSP Chief of Police Brian Sturgeon had found on the state database. I am not sure where the disconnect is between the county information and the state information, but I am thankful that we were able to find something that somewhat backs up what I've observed over the last couple of years. This intersection has been extremely difficult to clear and keep safe in the winter months. The severe slope on Salem Church down to Delaware gets compacted with snow and ice, and shading from trees does not seem to allow us to get to bare pavement for many of the winter months, no matter how much salt and sand we apply. I have been inundated with calls from residents outlining how hazardous that intersection is, and have heard several complaints from people that either can't stop going down the slope to the intersection (and end up in the ditch), or that cannot get up the slope due to the icy conditions. I get several calls each winter from the WSP police department regarding accidents there that resulted in people in the ditch and/or our street signs getting knocked down. I have heard of some services (garbage and delivery) that refuse to attempt to access Salem Church Road from Delaware in the winter due to the habitual icy conditions.

The dialogue below is between Chief Sturgeon and SFL Mayor Dan O'Leary, and provides some clarification of the data as well as anecdotal knowledge from Chief Sturgeon. The snow clearing efforts and the unsafe configuration of this intersection is going to be a topic of discussion at the January 7th City Council meeting. I plan to advise the City Council that I have initiated discussions with you on this matter. I will let you know what the outcome is from the City Council meeting, but I would request that we meet again with this intersection as the focus and discuss options for moving something forward to make this intersection safer before we have a tragedy occur here.

I appreciate your consideration and look forward to working with you to get to a resolution on this matter.

Regards,

Jeff Sandberg, PE
Sunfish Lake City Engineer

Jeff
651.286.8474

From: Brian Sturgeon <BSturgeon@wspmn.gov>
Sent: Monday, December 16, 2019 9:01 AM
To: Daniel O'Leary <olearytriallaw@yahoo.com>
Cc: Jeff Sandberg <JSandberg@wsbeng.com>
Subject: RE: Sunfish Lake Snowplowing Problems

Good morning Mayor,

A cad call is a call the officer receives from dispatch. Most calls officers receive do not generate a case file. These could be motorist assists, some non-criminal incidents. They also could be cars in the off the roadway that do not involve property damage or injuries in which no report was generated, meaning they called for their own tow to pull them out. The CAD calls are over and above the report calls.

In reviewing the other intersections along Delaware with both our information and Mendota Height records, Salem Church Rd does appear to have more crashes than other intersection. In order to truly understand crash data, one must look at traffic studies as well. Basically what are the vehicle count numbers at each of these intersections and comparing crash data with similar counts. We do not have those numbers. However, it would make sense that Delaware and Mendota Heights Rd would have much higher vehicle counts due to the school on Mendota Heights Rd and it is more of an arterial street. Crash counts are less here. One could then come to a conclusion that Salem Church Rd has issues.

I hope this helps.

Sorry it took so long to get back to you. With our building renovation I had to move to a different location last week and lost my computer access for a bit.

Brian Sturgeon || Chief of Police
West St. Paul Police Department

We Serve with Honor and Integrity
1616 Humboldt Avenue
West St. Paul, Minnesota 55118
651-552-4202 || BSturgeon@wspmn.gov

From: Daniel O'Leary <olearytriallaw@yahoo.com>
Sent: Thursday, December 12, 2019 10:28 PM
To: Brian Sturgeon <BSturgeon@wspmn.gov>
Cc: Jeff Sandberg <jsandberg@wsbeng.com>
Subject: Re: Sunfish Lake Snowplowing Problems

Thanks, Chief. And again congratulations on the great news you have officially been named Chief. Well deserved and we are thrilled!

Thanks so much for the charts. Help me out here. What is a "CAD Call?" So each year we have between 2 and 8 accident reports is that correct? The average is 5.55 accidents per year correct? (Total of 50 accidents divided by 9 years = 5.55/year.)

CAD calls total 21 divided by 9 years = 2.33/yr.

Now if you could put this in context for me? Are these high numbers for an average intersection or average numbers or low numbers? Thanks again!

Warmest regards.

Dan
Daniel B. O'Leary, Esq.
MANSUR & O'LEARY, P.A.
10 Windy Hill Road
Sunfish Lake, MN 55077
(651) 222-2731

WARNING:

This e-mail, including any attachments, contains legally privileged, confidential information intended only for the use of the recipient(s) named above. If you are not the intended recipient, you are hereby notified that any reading, copying, dissemination, distribution or taking any action in reliance upon the contents of this e-mail is strictly prohibited by law. If you are not the addressee, contact us immediately via e-mail or at 651-222-2731, or we will assume you are the intended recipient of this message.

On Thursday, December 12, 2019, 08:47:51 AM CST, Brian Sturgeon <bsturgeon@wspmn.gov> wrote:

Good morning Mayor,

I have seen issues at this intersection that go back years. Due to the grade and design, the intersection does become a concern during snow events. I have slipped/slided many times coming onto Delaware or turning onto Salem Church Rd over the course of my career.

I just sent Jeff the crash numbers and I have attached them here too. There are two excel documents, one from Mendota Heights and one from us. The crash data includes all crashes along that stretch of Delaware but you can see exactly where the crashes occurred.

The document from our department includes a graph which indicates the number of crashes specifically at Delaware and Salem Church Rd and on Salem Church Rd near Delaware.

Let me know if you have any questions. Thank you and have a good day.

Brian Sturgeon || Chief of Police

West St. Paul Police Department

We Serve with Honor and Integrity

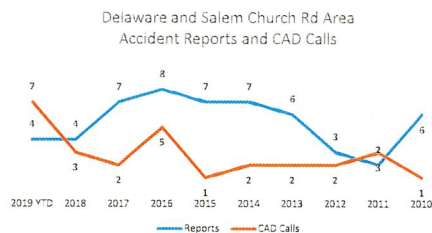
1616 Humboldt Avenue

West St. Paul, Minnesota 55118

651-552-4202 || BSturgeon@wspmn.gov

Address	Disposition	CAD Number
Delaware Ave / Salem Church Rd	SD	19-025045
Delaware Ave/Mendota Heights Rd	RPT	19-023976
Delaware Ave/Hwy 62	SD	19-022998
Delaware Ave / Huber Dr	PND	19-021080
Delaware Ave/Hwy 62	SD	19-020692
Delaware Ave/Copperfield Dr	RPT	19-018887
Delaware Ave / Salem Church Rd	PND	19-014246
Delaware Ave/Hwy 62	SD	19-013859
Delaware Ave / Mendota Heights Rd	PND	19-011285
Delaware Ave/Salem Church Rd	SD	19-002914
Delaware Ave/Hwy 62	SD	19-001718
2050 Delaware Ave	SD	18-026547
Salem Church Rd / Delaware Ave	SD	18-025917
2050 Delaware Ave	CLR	18-019685
2148 Delaware Ave	SD	18-016882
Delaware Ave/Salem Church Rd	RPT	
1080 Delaware Ave	SD	18-014801
Delaware Ave/Marie Ave W	RPT	
Delaware Ave/Charlton Rd	RPT	18-002861
Delaware Ave/Marie Ave W	SD	17-026013
Delaware Ave/Abbey Way	SD	17-024527
343 Salem Church Rd	RPT	17-013730
Delaware Ave/Mendota Rd W	RPT	17-008402
Mendota Rd W/Delaware Ave	RPT	17-004575
Delaware Ave/Heights Rd	SD	17-002788
Delaware Ave/Hwy 62	SD	17-002697
Delaware Ave/Hwy 62	RPT	17-002194
116 Salem Church Rd	RPT	17-001240
Delaware Ave/Hwy 62	SD	16-024542
Delaware Ave/Dodd Rd	RPT	16-022714
Delaware Ave/Dodd Rd	SD	16-022678
2050 Delaware Ave	RPT	16-022215
Delaware Ave/Dodd Rd	RPT	16-007261
Salem Church Rd/South Robert Trl S	SD	16-020410
Delaware Ave/Dodd Rd	RPT	16-020265
Delaware Ave/Hwy 62	SD	16-019995
Delaware Ave/Hwy 62	SD	16-017542
Deer Run Trl/Delaware Ave	RPT	16-008347
Delaware Ave/Dodd Rd	SD	16-001235
Delaware Ave/Marie Ave W	SD	16-000531
Delaware Ave/Huber Dr	CAN	16-000456
2580 Delaware Ave	RPT	15-024190
Delaware Ave/Hwy 62	PND	15-021474
2410 Delaware Ave	RPT	15-015666
Betty Ln/Delaware Ave	PND	15-010301
Delaware Ave/Ellen St	PND	15-008943
Delaware Ave/Dodd Rd	PND	15-005301
Delaware Ave/Mendota Rd W	PND	15-004300
341 Salem Church Rd	SD	15-002601
Delaware Ave/Hwy 62	SD	14-027573
Delaware Ave/Hwy 62	RPT	14-026896
Betty Ln/Delaware Ave	RPT	14-025671
Delaware Ave/Marie Ave W	PND	14-023696
Delaware Ave/Mendota Heights Rd	RPT	14-023574
Delaware Ave/Salem Church Rd	RPT	14-021864
2050 Delaware Ave	RPT	14-021733
Delaware Ave/Marie Ave W	PND	14-021123
Delaware Ave/Marie Ave W	CAN	14-004058
Delaware Ave/Marie Ave W	SD	13-025691
Delaware Ave/Hwy 62	CAN	13-022893
Delaware Ave/Marie Ave W	PND	13-022042
Delaware Ave/Marie Ave W	PND	13-018975
Delaware Ave/Marie Ave W	RPT	
Charlton Rd/Delaware Ave	PND	13-007107
Delaware Ave/Mendota Rd W	SD	13-005534
Delaware Ave/Hwy 62	SD	13-001974
Delaware Ave/Marie Ave W	SD	12-017541
Charlton Rd/Delaware Ave	SD	12-011122
2050 Delaware Ave	PND	12-010267
Delaware Ave/Hwy 62	PND	12-007759
Salem Church Rd / Delaware Ave	SD	12-000014
Deer Run Trl/Delaware Ave	RPT	11-023884
Delaware Ave/Hwy 62	SD	11-022227
Copperfield Dr/Delaware Ave	SD	11-021928
2050 Delaware Ave	PND	11-014836
Delaware Ave/Marie Ave W	SD	11-009927
Delaware Ave/Hwy 62	PND	10-025847
2584 Delaware Ave	RPT	10-024612
Delaware Av/Mendota Heights Rd	RPT	10-024552
Delaware Ave/Ellen St	RPT	10-018656
Delaware Ave/Marie Ave W	RPT	10-011157
Delaware Ave/Staples Ave	RPT	10-002437
Robert Trl S/Salem Church Rd	RPT	10-000576
200 Salem Church Rd	RPT	09-018159
Delaware Ave/Hwy 62	RPT	09-010970
Delaware Ave/Hwy 62	RPT	09-003188
Charlton Rd/Delaware Ave	SD	08-023523
Delaware Ave/Huber Dr	RPT	08-022291
Delaware Ave/Marie Ave W	RPT	08-019243
Delaware Ave/Marie Ave W	RPT	08-010711
Delaware Ave/Marie Ave W	RPT	08-006606
Delaware Ave/Hwy 62	RPT	08-005767
Delaware Ave/Hwy 62	RPT	08-005757
2050 Delaware Ave	RPT	08-002180
Charlton Rd/Delaware Ave	RPT	07-021240
Copperfield Dr/Delaware Ave	RPT	07-010613
2050 Delaware Ave	RPT	
2148 Delaware Ave	RPT	07-005295
Delaware Ave/Mendota Rd W	RPT	07-001688
Robert Trl S/Salem Church Rd	SD	07-000465
Delaware Av/Mendota Heights Rd	SD	06-015772
425 Salem Church Rd	RPT	06-014523

	2019 YTD	2018	2017	2016	2015	2014	2013	2012	2011	2010
Reports	4	4	7	8	7	7	6	3	2	6
CAD Calls	7	3	2	5	1	2	2	2	3	1
	11	7	9	13	8	9	8	5	5	7



Juris	Reported Date	Case#	Charge / Offense	Location	Prime	Case Status	CA	Report	Reviewed	Map
MH	05/20/2019 17:15	19-000396	9440-Property Damage Accident	DELAWARE AVE / MENDOTA HEIGHTS RD	MHCW01	Inactive		YES	No	Yes
MH	05/10/2019 15:25	19-000355	9440-Property Damage Accident	Salem Church Rd / Delaware Ave	MHCW01	Exceptionally Cleared		YES	No	No
MH	01/26/2019 10:29	19-000068	9440-Property Damage Accident	Delaware Ave / Huber Dr	MHJL01	Exceptionally Cleared		YES	No	No
MH	10/11/2018 13:31	18-000799	5404-DUI - LIQUOR	Delaware Ave/Huber Dr;MH	MHRY01	Adult Arrest		YES	No	Yes
MH	08/23/2018 15:21	18-000639	9440-Property Damage Accident	Mendota Heights Rd/Delaware Ave	MHEH01			YES	No	No
MH	11/19/2017 12:33	17-000894	9440-Property Damage Accident	DELAWARE/Huber;MH	MHJV01	Exceptionally Cleared		YES	No	No
MH	08/07/2017 07:02	17-000591	9440-Property Damage Accident	Delaware Ave/Heights Rd;MH	MHTR01	Exceptionally Cleared		YES	No	Yes
MH	06/14/2017 12:07	17-000450	9440-Property Damage Accident	Mendota Rd/Delaware Ave	MHTS01	Exceptionally Cleared		YES	No	Yes
MH	03/06/2017 15:22	17-000197	9440-Property Damage Accident	Mendota Heights Rd/Delaware Ave;MH	MHTR01	Exceptionally Cleared		YES	No	Yes
MH	02/15/2017 12:43	17-000152	9440-Property Damage Accident	Delaware Ave/Heights Rd;MH	MHJL01	Cited		YES	No	Yes

Updated December 2019



2019 City Map

City of Sunfish Lake, Minnesota

wsb

[illegible]

wsb