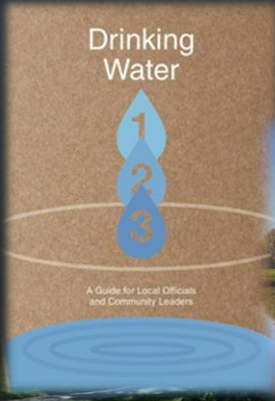


# Metropolitan Planning Council

## Drinking Water 1-2-3 Academy Chloride Reduction Strategies for Local Government July 23, 2019

1



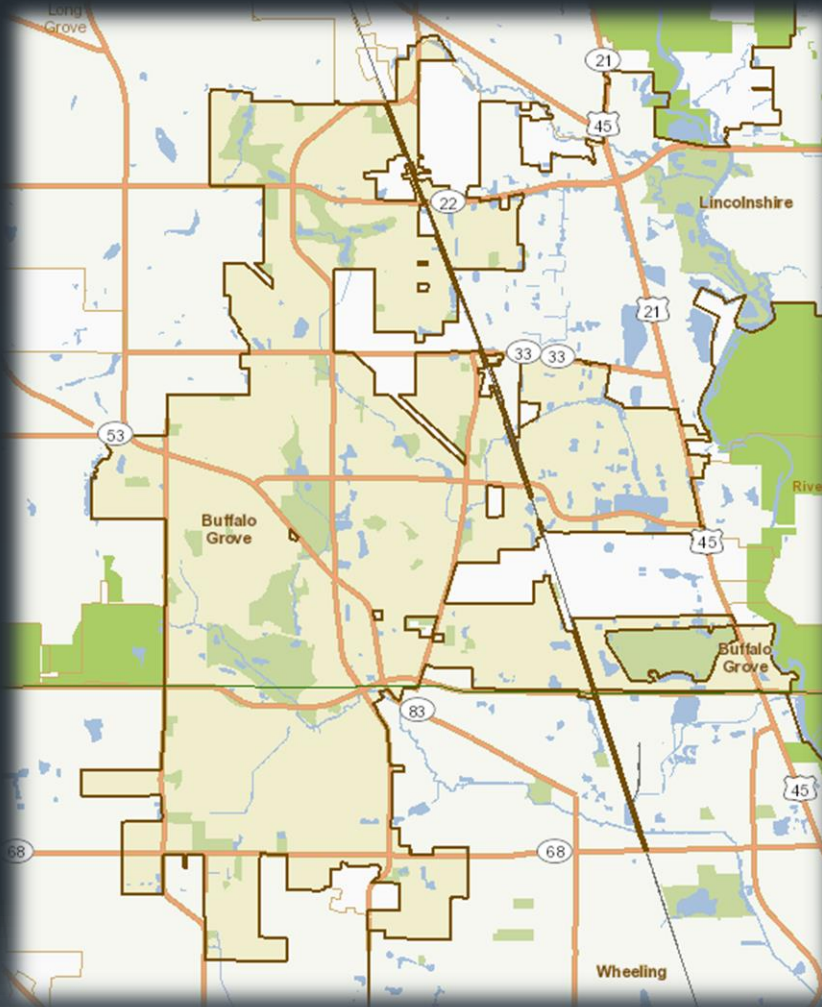
Presented by : Mike Reynolds, MPA, CFP, CPWP-M  
Director of Public Works





# Community - Overview

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- Incorporated in 1958
- Located 25 miles northwest of Chicago in Two Counties:
  - 22% Cook County
  - 78% Lake County
- 41,778 Population
- 16,997 Households
- 9.3 Square Miles
- 115 Miles of Streets
- 138 Miles of Storm Sewer
- 39 Stormwater Detention Facilities
- 11 Miles of Streams
- 5 Watershed Areas (BC, AC, IC, MC & DPR)





# Public Works - Overview



- First Accredited in 2004
- 16<sup>th</sup> Accredited Agency, 3<sup>rd</sup> in Illinois
- Currently One of 6 Agencies in Illinois



- 59 Employees
  - 50 Full Time
  - 9 Part Time/Seasonal
- Three Divisions:
  - Engineering
  - Maintenance (Street, Central Garage, Building Maintenance and Forestry & Grounds)
  - Utilities (Water, Sewer & Drainage)
- Annual Budget:
  - Operating: 21 Million
  - Capital: 9.6 Million



# Snow & Ice Control - Overview

4

## Village of Buffalo Grove

### SNOW & ICE PLAN



Public Works Department

Operation Division

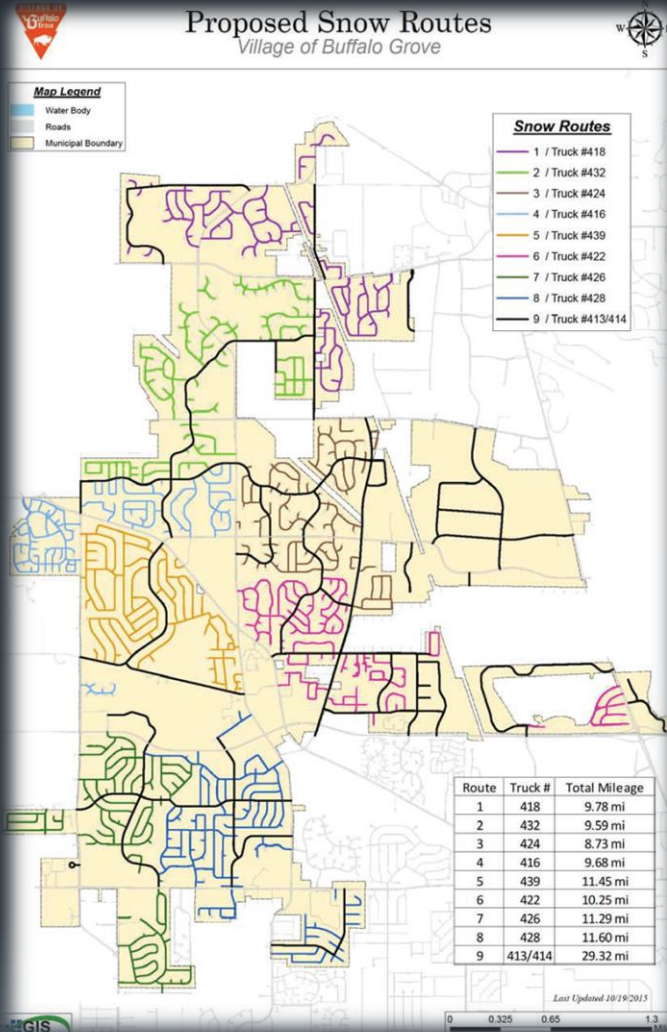
2016 – 2017

- Pre/Post Season Preparations
- Pre/Post Storm Preparations
- Anti-Icing Program
- Route Assignments & Mapping
- Response Levels
- Performance Goals & Objectives
- Pace/Metra & Municipal Campus
- Equipment
- Sidewalk Snow Removal
- Staffing & Assignments
- 5-Year Plan
- Materials & Handling
- Municipal Code Applicability



# Snow & Ice Control - Overview

5



- 9 Salt/Plow Routes
- 115 Center Line Miles of Streets
- 526 Lane Miles
- Sidewalk Snow Removal for 28 Miles of sidewalks
- Snow Removal at Pace/Metra
- Municipal Parking Lots





# Chloride Reduction - Overview

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## Why Reduce Chlorides?

- Environmental Stewardship
- Compliance Requirements (NPDES, MS4)
- Reduce Operational Costs
- Increase Public Awareness



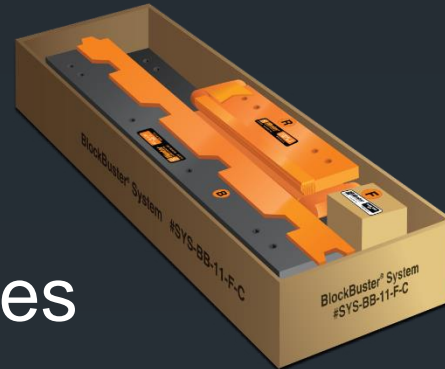


# Chloride Reduction - Overview

7

## Chloride Reduction Efforts

- Use of More Liquids
- Pre-Wetting
- Anti-Icing
- Vehicle Technology
- Carbide Cutting Edges
- Wing Plows





# Chloride Reduction - Overview

## Chloride Reduction Efforts



Old Salt Storage Facility – 1,850 Ton Capacity

- New Salt Storage Facility (2015 - \$319,900)
- Increased Capacity
- Reduced Supply Chain Dependency

- 1997 - \$28/Ton
- 2007 - \$40/Ton
- 2008 - \$129/Ton
- >2010 - \$55-\$70/Ton



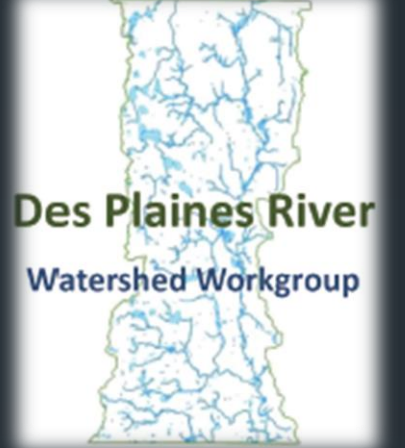
New Salt Storage Facility – 3,700 Ton Capacity





# Chloride Reduction - Overview

- Industry Involvement





# Chloride Reduction - Overview

## Public Outreach

- PW Open House (May 18, 2019 10:00 – 1:00)
- Farmer's Market
- Newsletter
- Social Media
- Village Website – vbg.org



### Snow Plowing

**❄️ Help! My mailbox was knocked down.**

Submit an online request to have Public Works staff to inspect your downed mailbox. Select "Streets" then "Damaged Mailbox" in the next window.

[Click Here](#)

#### Who's Listening?



**Bryan Beitzel**  
MAINTENANCE SUPERINTENDENT

The Public Works Department has established a 8 hour cycle time for each snow route. This means that every street maintained by Buffalo Grove should be plowed from the center line to the curb every 8 hours during a snow event. The goal for completion of snow and ice control activities is within 8 hours of the end of the storm. Various emergencies and equipment issues could cause a delay in these response goals, but they help set the departmental pace.

**Damaged Mailboxes:** During snow removal efforts, mailboxes may unfortunately be damaged or even knocked down by snowplows. But there is a way to address this issue. If the damage was caused by Buffalo Grove Public Works, the Department will repair or replace mailboxes and support posts that have been damaged. Until the time that these repairs or replacements can be completed, Public Works will provide a temporary post and mailbox so the resident can receive mail.

- 555 S. Touhy Blvd  
Buffalo Grove, IL 60089
- PH: 847-459-2345
- Hours: 7:00 am - 3:30 pm Monday - Friday
- Emergency



## Buffalo Grove Enews

Your Weekly Bulletin from the Village of Buffalo Grove



Winter Snow Removal and Maintenance

**DID YOU KNOW?**

The snowplow operator is responsible for the safety of the public. The operator must be trained and certified. The operator must also be aware of the weather conditions and the road conditions. The operator must also be aware of the location of the snowplow and the location of the other vehicles on the road. The operator must also be aware of the location of the snowplow and the location of the other vehicles on the road.



### Anti-Icing Efforts in Preparation for Weekend Snow



Due to light snow and below freezing temperatures in the forecast this weekend, the Buffalo Grove Public Works Department has begun anti-icing activities on all streets owned or maintained by the Village. The anti-icing process will leave 'stripes' on the surface of the road when completed. This activity will be completed over the next couple of days, prior to the arrival of the forecasted weekend snow. The liquid used for anti-icing is a blend of several chlorides and blended sugar carbohydrates to help the material adhere to the pavement. The product is safe to drive and walk on, but may leave a light residue on shoes and tires, which can easily be cleaned with water. Any questions or comments regarding the anti-icing process should be directed to the Public Works Department during normal business hours, 7:00 a.m. until 3:30 p.m. at 847-459-2345.



Monday 7:00 a.m. - 3:30 p.m.  
Tuesday 7:00 a.m. - 3:30 p.m.  
Wednesday 7:00 a.m. - 3:30 p.m.  
Thursday 7:00 a.m. - 3:30 p.m.  
Friday 7:00 a.m. - 3:30 p.m.  
Saturday 7:00 a.m. - 3:30 p.m.  
Sunday 7:00 a.m. - 3:30 p.m.

[www.vbg.org](http://www.vbg.org)



# Chloride Reduction - Benefits

- Reduced Lane Mile Coverage Requirements
  - 526 TPM to 394 TPM - 26% Reduction
  - Ultimately will be reduced to 350 TPM - 34% Reduction
- Reduced Material Application Costs
  - \$11.42 per lane mile to \$7.83 per lane mile – 31%
- Reduced Overall Program Costs
  - \$14.67 per inch, per lane mile to \$13.12 per inch, per lane mile – 11% Reduction (\$40,000 Annually)





# 2016 APWA Award

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American Public Works Association

## Excellence in Snow and Ice Control Award

Nomination Form & Supporting Data



THE VILLAGE OF  
**Buffalo Grove**  
ILLINOIS

Public Works Department

51 Raupp Blvd.  
Buffalo Grove, IL 60089  
Ph: 847-459-2547

February 1, 2016

- Materials & Handling
- Equipment
- Training
- Efficiency
- Community Outreach
- Technical
- Environmental



# Village of Buffalo Grove Public Works Department

Mike Reynolds, MPA, CFPF, CPWP-M  
[mreynolds@vbg.org](mailto:mreynolds@vbg.org)  
vbg.org  
847-459-5537

# Thank You!

