

NORTHERN VIRGINIA SNOW BRIEFING

Metropolitan Washington Council of Governments

Lauren Mollerup, P.E., CCM, District Maintenance Engineer

November 1, 2022



Northern Virginia District Background

- **Fairfax, Loudoun, Prince William, and Arlington***
** Arlington maintains own network (secondary roads)*
- **Population: 2.2 million**
- **Commuter lots: 24**
- **Bridges/large culverts: 2,159**
- **Traffic signals: 1,520**
- **VDOT employees: 900**



Total lanes miles: 14,198

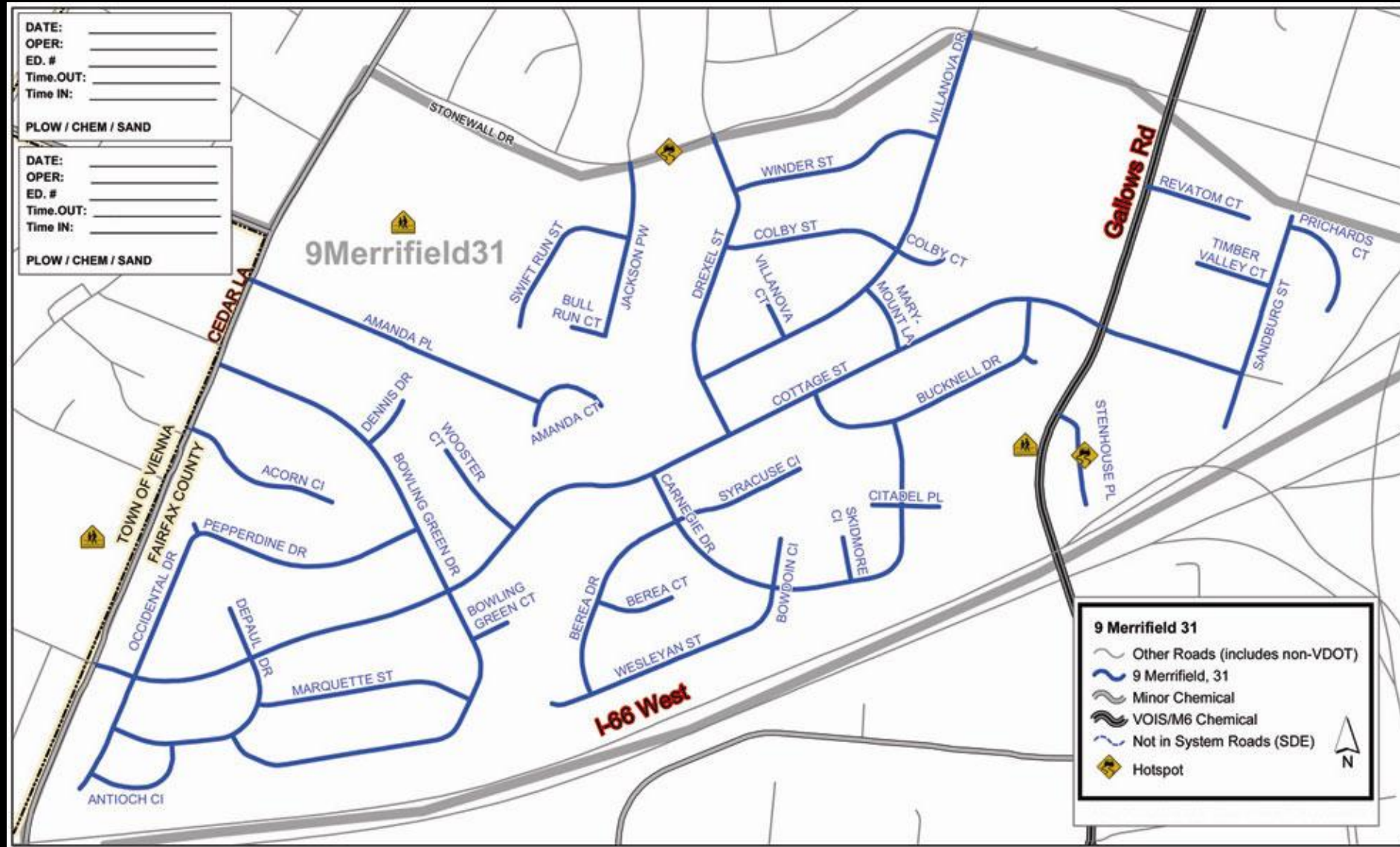
- **Interstate: 802**
- **Primary: 1,687**
- **Secondary: 11,634**
- **Gravel: 573**
- **Frontage: 75**
- **Total subdivision streets:
17,246**

18 maintenance headquarters

- **Arlington: 1**
- **Fairfax: 9**
- **Loudoun: 4**
- **Prince William: 4**



The district is divided into **648 snow maps** to include interstates, primary, and secondary roads.



2022-2023 Snow Removal



Materials at start of season:


- Salt: 120,000 tons
- Sand: 25,000 tons
- Brine: 250,000 gallons

Pieces of equipment:

- 3,500 (*mostly contracted*)

Planning, Preparations, & Training



- 
- A photograph of a snowy road scene. In the foreground, a red fire hydrant is visible on the left side of the road. A white pickup truck with a snowplow attachment is driving on the road in the distance. The background shows a line of trees and a utility pole. The road is covered in snow, and there are some tire tracks visible.
- **Forecast reviews** with National Weather Service (weather.gov/washington/winter) and Iteris
 - **Mobilization plan** determined, including if incident command will be activated
 - **Message is shared with residencies** including counties and interstates

VDOT MOBILIZATION PLAN VDOT MOBILIZATION PLAN
Start Time: TBD – End Time: TBD
EVENT #16; AU1 # NVSNW1916

Weather Summary:
 The DME has declared an local emergency at 0:00 M on //19.

Fairfax

Day Shift Residency Manager
Jerry Himes 571-969-0538

Night Shift Residency Manager
Paul Matticks - 703-975-5027

Area	Day Shift Mgr.	Mobile	Night Shift Mgr.	Mobile	Snow Room#
102 Merrifield	Melvin Riser	571)749-8058	Craig Detwiller	703)638-8795	703-259-2317
103 Chantilly	Justin Springhetti	571)749-8870	Keith Wester	703)268-0121	703-259-2317
104 Clifton	Russell Dodson	571)749-8072	David Klink	571)749-8045	703-259-2317
105 Van Dorn	Harry Lagree	703) 774-2803	Howard Stewart	571) 238-7091	703-259-2317
106 Lorton	Howard Akers	571)749-8061	Shane White	703)656-1520	703-259-2317

NOVA 4:00am Status Report 3/8/19

Area	Air Temps	Surface Temps	Precipitation/Accumulation	Current Weather Conditions (Clear/Fair/Poor/Moderate)	# of VDOT Trucks	# of M7B Trucks	Service Contract Trucks	# M7B Loaders/Heavy Equipment	Monitors	SWAS Updated?	TOC/VA-511 Road Closures	Issues/Comments
Interstate/Arlington	34-39	34-38	0	Clear	4	2	43	4	1	yes	None	None reported
Fairfax	34	35	0	Cloudy / Rain	31	444	0	8	4	Yes	N/A	N/A
Loudoun	32-35	33-35	0.0 in east 2-inches Hillsboro	Cloudy	14	57	70	2	10	SWAS Updated at 2:00am	None At this time	Icing out in western areas
Prince William	33-34	33-37	wet / 0	Cloudy	19	13	0	1	0	yes	0	No issues and on standby

Gainesville AHQ	Kevin Kraus	571 220-5272	Billy Manow	571 722-4979	571 261-3690
Lake Ridge	Mike Collier	571 749-8056	Bill Cornell	571 571 220-5282	703 590-5131
Manassas AHQ	Glenn Gill	571-221-6074	Darren Dodson	571-220-5278	703 366-2033

Day Shift Residency Manager Jimmy Coleman (571) 259-5813

Night Shift Residency Manager (7 PM - 7 AM)

Area	Day Shift Mgr.	Mobile	Night Shift Mgr.	Mobile	Snow Room#
401 Arlington	Henry Williams	571 369-8798	Russell Graham	571-748-8823	703-486-3393
402 I-66	John Carter	571-722-5342	Ron Hickman	571-437-2564	703-486-3393
403 I-95	Roy Campbell	571-384-0384	Bill Ludke	571-749-7871	703-486-3393
404 - Beltway (495)	Robert Red	571 238-0347	Stanley Newman	571-220-5315	703-486-3393

2021-2022 NOVA Mobilization Levels

Weather Forecast	Mob. Level	Response Plan	SALT Application Rate*	Applied Lane Miles		Equipment Required (based on VDOT single axle truck carrying)				Staffing	Reports
				Area	Miles	Area	Liquid	Salt	Total		
Precipitation: 20% or Greater Accumulation: Ice/Snow Possible Ambient or Pavement Temp: 30-36	Anti Ice	Treatment of Critical Structures & Locations	Application Liquid: 50 gal/ln mi Application Salt: 325 lbs/ln mi	FFX	1520	FFX	50		50	State and Hired Anti-Ice Units	
				PW	250	PW	13	7	20		
				LDN	700	LDN	30		30		
				INT	400	INT	10	14	24		
				DISTRICT	2870	DISTRICT	103	21	124		
Precipitation: 20%-49% or Greater Accumulation: Snow Possible Ambient or Pavement Temp: 30-36	Skeleton Crews	Spot Treatment of Critical Structures & Locations Respond to Icy Conditions as Needed	325 lbs/ln mi	FFX	1520	FFX		121	121	Maintenance Crews	SWAS updates, HETTS data input
				PW	570	PW		14	27		
				LDN	700	LDN		20	20		
				INT	400	INT		24	24		
				DISTRICT	3190	DISTRICT		179	192		
Precipitation: 20%-49% or Greater Accumulation: Snow Possible Ambient or Pavement Temp: 30-36	1	Springfield Interchange, Spot Treatment of Other Critical Structures & Locations	325 lbs/ln mi	FFX	5857	FFX		492	492	Maintenance Crews, Contractors, Limited support staff	SWAS Updates and HETTS time entries within two hours of check-in
				PW	570	PW		19	32		
				LDN	700	LDN		89	89		
				INT	900	INT		47	47		
				DISTRICT	8027	DISTRICT		647	647		
Precipitation: 50%-100% Chance Accumulation: Up to 1 inch of Snow Ambient or Pavement Temp: 25-29	2	Light Salting Operation; Limited Work in Subdivisions - Includes Cold Spot Treatment in Subdivisions & Gravel Roads	400 lbs/ln mi	FFX	5857	FFX		992	992	District Monitors, District Support Team	SWAS Updates, Idle Time Alerts, Lost Power Alerts
				PW	1223	PW		127	140		
				LDN	1811	LDN		136	136		
				INT	900	INT		94	94		
				DISTRICT	9791	DISTRICT		1349	1349		
Precipitation: 50%-100% Accumulation: Up to 2 inches of Snow or 1/10 inch of Ice Ambient or Pavement Temp: 20-24	3	Salting Operation; Potential for Plowing; Includes Cold Spot Treatment in Subdivisions & Gravel Roads	475 lbs/ln mi	FFX	8024	FFX		1938	1938	Mechanics on Site Call Center Open, Snow Rooms Open, VA Traffic	SWAS reports@8am,2pm, 8pm,2am, Idle Time Alerts, Lost Power Alerts, Geo Fence Violation Alert, Exception Report
				PW	3680	PW		339	352		
				LDN	3137	LDN		371	371		
				INT	1894	INT		130	130		
				DISTRICT	16735	DISTRICT		2778	2791		
Precipitation: 50%-100% Accumulation: Up to 6 inches of Snow or 1/4 inch of Ice Ambient or Pavement Temp: 15-19	4	Salting/Plow Operation; Includes Plowing Subdivisions & Sanding as Necessary	550 lbs/ln mi	FFX	8024	FFX		2220	2220	All of the Above	SWAS reports@8am,2pm, 8pm,2am, Idle Time Alerts, Lost Power Alerts, Geo Fence Violation Alert, Exception Report
				PW	3680	PW		520	525		
				LDN	3137	LDN		511	511		
				INT	1894	INT		241	241		
				DISTRICT	16735	DISTRICT		3492	3492		
Precipitation: 50%-100% Accumulation: Up to 6 inches of Snow or 1/4 inch of Ice Ambient or Pavement Temp: 10-14	5	Salting/Heavy Plow Operation; Includes Plowing Subdivisions & Sanding as Necessary ALL RESOURCES ARE DEPLOYED	625 lbs/mi	FFX	8024	FFX		2341	2341	All of the Above, Heavy Equipment and Possibly HERT Teams	SWAS reports@8am,2pm, 8pm,2am, Idle Time Alerts, Lost Power Alerts, Geo Fence Violation Alert, Exception Report
				PW	3680	PW		646	659		
				LDN	3137	LDN		580	580		
				INT	1894	INT		422	422		
				DISTRICT	16735	DISTRICT		3989	3989		

- **Anti-icing treatment most effective during first hour** of weather event
- **Reduces bonding** to asphalt and concrete surfaces
- **Piloting brine treatments during storms** when conditions are favorable

Depending upon the storm and the window of time, we may perform a **partial or full treatment of all bridges, overpasses, elevated surfaces, primary and/or secondary roads.**





Crews work interstates, major roads and main subdivision roads in priority order.

Passable lane goals:

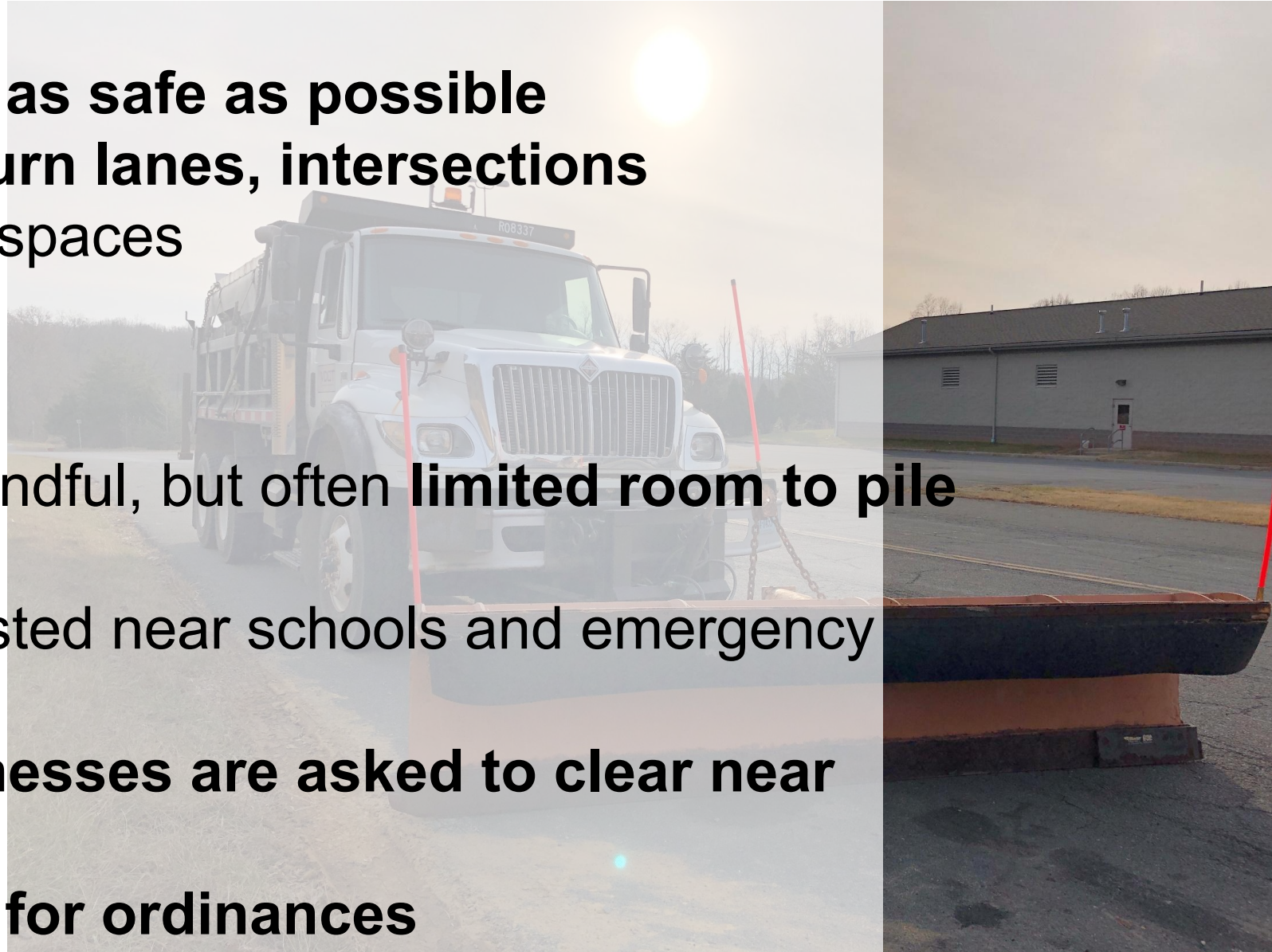
- **2-4" of snow: 24 hours**
- **4-6" of snow: 48 hours**
- **6"+ of snow: 72+ hours**

Additional priorities:

- Getting the roadways **as safe as possible**
- **Shoulders, ramps, turn lanes, intersections**
- **12,000** park-and-ride spaces

Sidewalks and Trails

- Crews asked to be mindful, but often **limited room to pile snow from roads**
- Special care is requested near schools and emergency facilities
- **Residents and businesses are asked to clear near their property**
- Check with **localities for ordinances**



VDEQ Salt Management Strategy (SaMS)

- Since January 2018, VDOT has participated in the Salt Management Strategy (SaMS) development coordinated by the Virginia Department of Environmental Quality (VDEQ)
- Stakeholders working to balance public safety and impacts of salt use
- Aims to raise awareness of salt use; share how individuals, businesses, and organizations can participate; and provide voluntary guidance for potential monitoring and research
- SaMS Tool kit finalized March 2021- Details:
<https://www.novaregion.org/1399/Northern-Virginia-Salt-Management-Strate>



Sustainable Winter Management (SWiM)

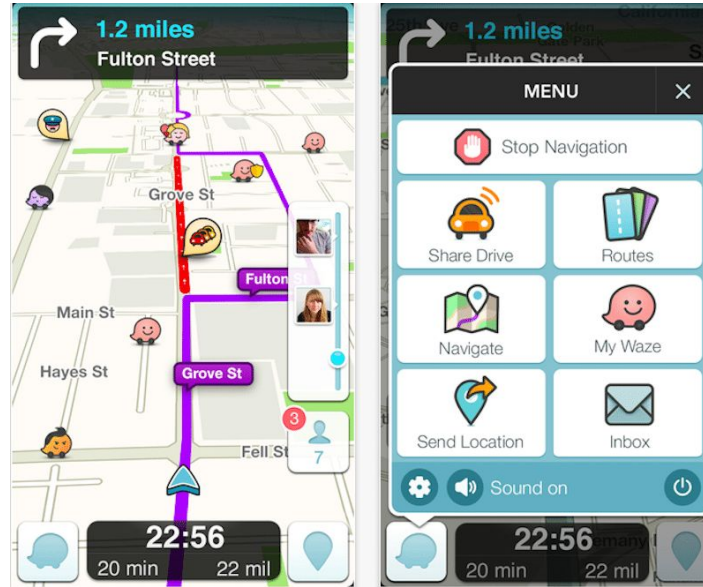
VDOT will continue working with WIT Advisers for the next 2 winter seasons on additional evaluation of current salt use, management with specific staff/contractor(s) and development of salt sustainability training.

Past seasons work supported the VDEQ SaMS study including focusing on areas within the Accotink Watershed (I-95 and Route 1 corridor) as well as select areas in Loudoun and Prince William counties. In this current phase, we are targeting a focused corridor in Fairfax County and contractor to administer specific training regarding salt sustainability and management. Additional training will be developed this season with the goal of being implementable Districtwide in 2023 -2024 season.

- Deliver awareness and technical training regarding road salt use
- Assess current practices and identify anomalies (continue Discovery)
- Measure and verify salt application rates
- Conduct salt calibration training
- Assist decisions when to use anti-icing/brining; less granular application
- Observe pre–season preparations for VDOT staff and contractors
- Installation of salt tracker devices on Route 50 contractor vehicles
- Analyze Route 50 level of service (LOS) from RWIS Cameras



INNOVATION



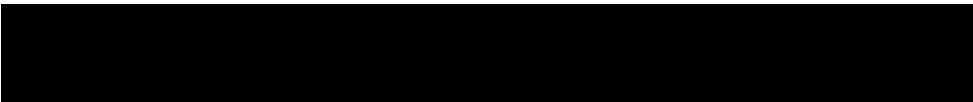
WAZE application

Innovation Updates

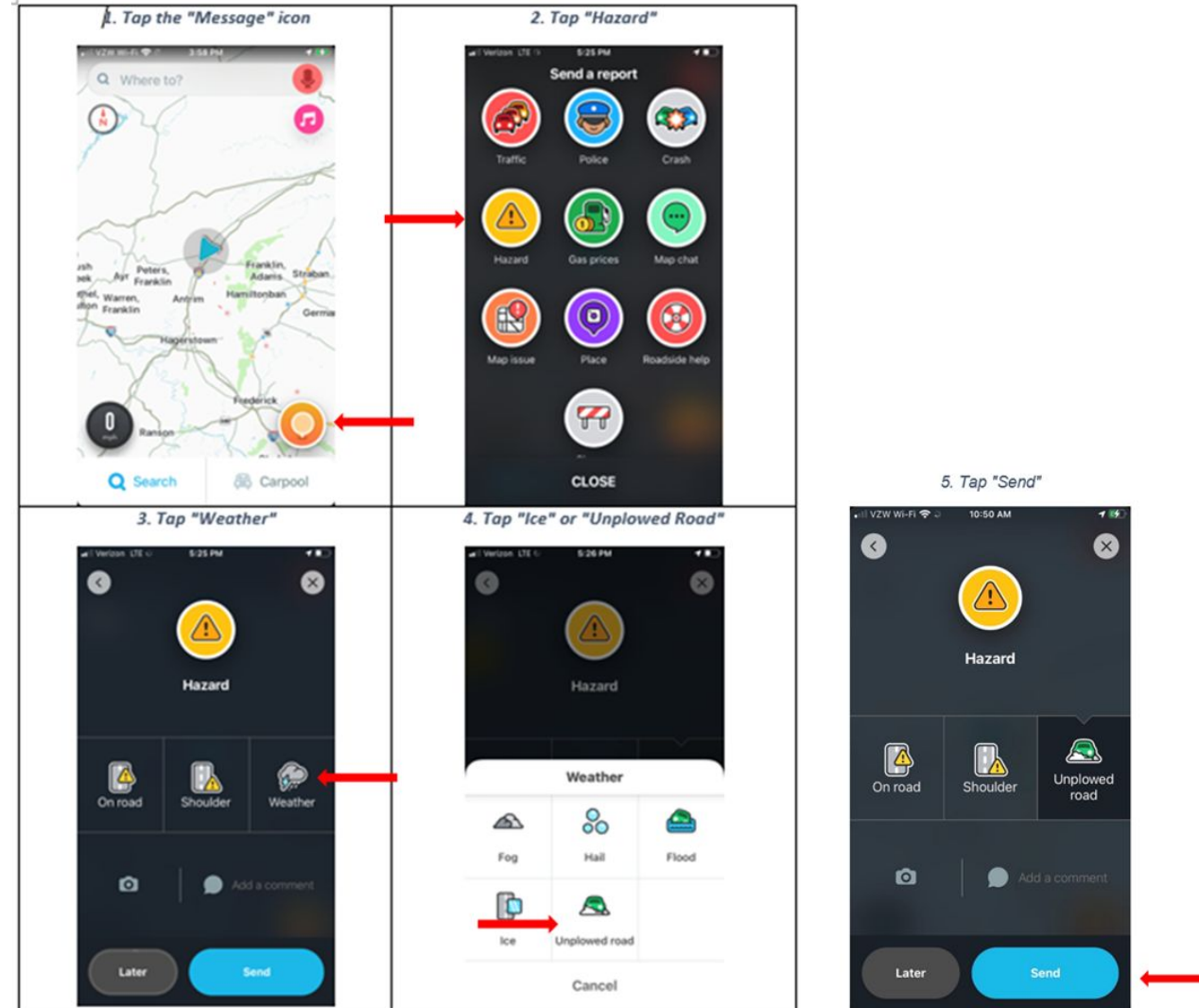
2022-2023 Plan

•Road Monitors use Waze to report road condition (real-time & optional)

- Open Waze App
- Click Report Button in bottom right corner
- Select yellow Triangle hazard icon
- Select weather type
- Select unplowed road option
- Tap send to finalize your report, icon will appear on the map



User Coaching



SWAS Insurance Expiration & VDOT Alerts

Map No	Status	Assigned To	Last Edited/Verified
01	Unassigned		03/01/2021 8:40 AM
02	Unassigned		03/01/2021 8:40 AM
03	Unassigned		03/01/2021 8:40 AM
04	Unassigned		03/01/2021 8:40 AM
05	Unassigned		03/01/2021 8:40 AM

Think, Share and Collaborate

Mass Notification Time and Effort Saver Selected

 **Leon.Treutle**
03/Feb/21 11:17 AM

This idea came from Emergency Snow Duty but the solution can be used on a Statewide level for multiple agencies. The problem is the amount of time it takes one or two people to physically call every single snow plow consultant to notify them that they are either in Push or Standby mode. This issue can easily be solved by simply furnishing the points of contact in the Area Headquarters with iPhone's that have the capability of sending group texts. The contact person can easily send a group text to all of the consultants in seconds to begin plowing operations or cease operations until they are re-activated. This would not only save time and effort on the Department's part but also get our consultants on the go faster when valuable time is spent finding them or otherwise contacting them, when sudden snow storms cover the roads quickly, possibly leaving the driving public in peril. It also helps the consultants who can take a break from their plowing operations to re-fuel, re-load or from a safety standpoint, take a well deserved rest from their vigorous shift.

VDOT SWAS Vehicle Registration Expiration Inbox x

scott1.brown@vdot.virginia.gov
to me

4:05 PM (9 minutes ago)

The vehicle registration for the below-listed vehicles will be expiring within the next 30 days. Please submit updated vehicle registration as soon as possible.

In order to work a snow event for VDOT, all vehicles must have valid registration from the State where the vehicle is registered. Please send updated registration or any questions to scott1.brown@vdot.virginia.gov.

Days	Plate Number	Vehicle Description
EXPIRED	TX298744	1995 INTERNATIONAL 4700 *7
EXPIRED	TX276699	1999 GMC C6500 *7
EXPIRED	4769TB	2007 CHEVROLET C4500 *12
17	UA23948	2005 CHEVROLET C4500 *12
EXPIRED	UA60274	2007 GMC C7500
EXPIRED	UYW4646	2018 JEEP GRAND CHEROK *39

References to scott1.brown@vdot.virginia.gov will be replaced with residency email and vendor email addresses.

NOVA - FAIRFAX (Merrifield) - **Emergency Snow Duty Mode** External Inbox x

VDOT Alert <noreply@everbridge.net>
to Candice.Gibson@VDOT.Virginia.gov

Thu, Oct 28, 2021, 1:48 PM

This is an important message from the Virginia Department of Transportation (VDOT) ALERT System.

[Please click here to acknowledge receipt of this message](#)

All **Emergency Snow duty** consultants Please begin "PUSH" operations. If your designated route does not have 2 inches or more to plow/treat, please contact your AHQ Shift Manager the time is now 13:28 on 10-28-2021.

This system is maintained by the Virginia Department of Transportation (VDOT) Office of Safety, Security & **Emergency** Management.

Reply Forward

Stay Informed



- virginiadot.org/novaemergency
One-stop shop for links to news releases, Twitter feed, status updates, VDOT Plows, customer service, FAQs and other resources



- [@vadotnova](https://twitter.com/vadotnova) for updates



- 511virginia.org for road conditions and traffic cameras



VDOT Plows

- vdotplows.org for status of subdivisions once 2" have fallen



QUESTIONS?