



Northern Virginia Snow Briefing

Metropolitan Washington Council of Governments

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Agenda

Who We Are

Our Resources

How We Prepare and Deploy

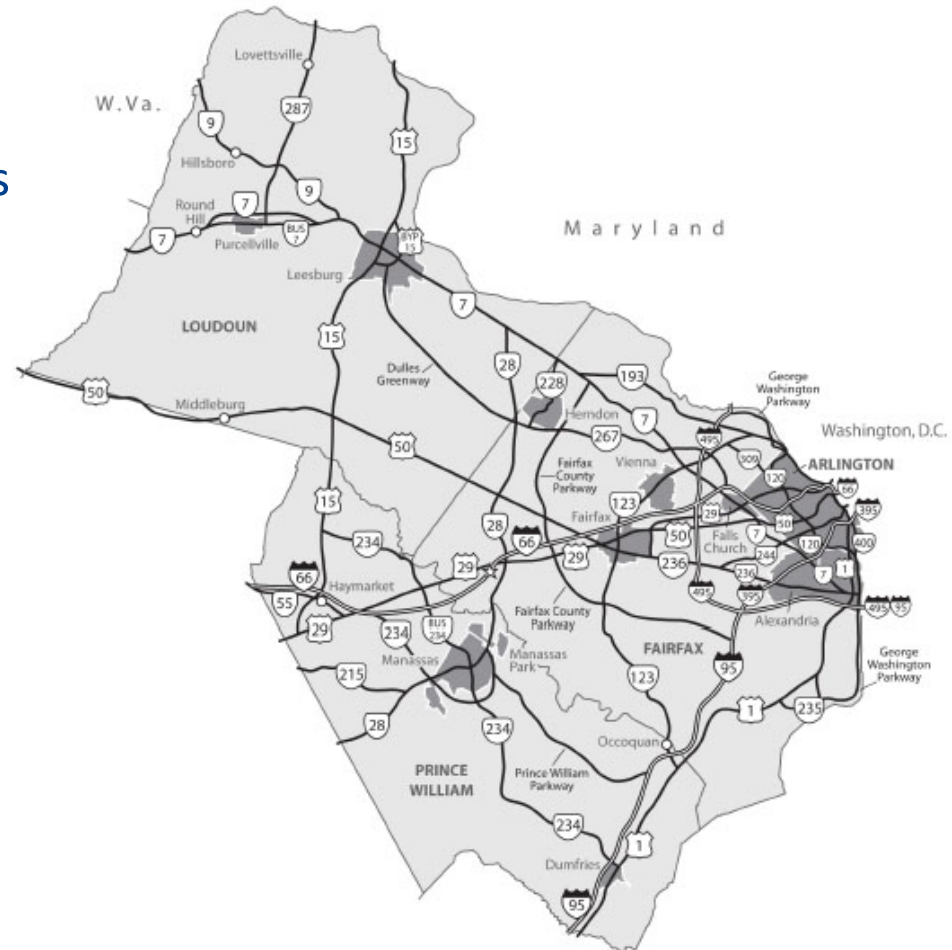
Lessons Learned 2015-16

What's New 2016-17

Information Resources

Northern Virginia District

- Fairfax, Loudoun, Arlington* and Prince William
- *Arlington maintains own network (secondary roads)
- Population: 2.2 million
- Total lanes miles: 13,413
 - Interstate: 725 lane miles
 - Primary: 1732 lane miles
 - Secondary: 10,878 lane miles
 - 318 miles gravel
 - 16,000 subdivision streets
 - Frontage: 78 lane miles
- 24 commuter lots
- 2,000 bridges/large culverts
- 1,400 traffic signals
- 753 VDOT employees



Our Resources

- **18 maintenance headquarters:**
9 in Fairfax, 4 in Prince William, 4 in Loudoun, 1 in Arlington
- **Snow removal budget 2016-17: \$82.7 million**
- **4,564 pieces of equipment (state and contracted)**
- **Materials**
 - Salt
125,155 tons
 - Sand
20,338 tons
 - Brine
44,705 gallons



How We Prepare

- **Forecast reviews** with National Weather Service, Iteris (weather.gov/washington/winter)
- **Mobilization plan** decided
- **Anti-icing** critical locations (as conditions allow)
- **Mobilizing for smaller events:** 12-18 hours prior to forecasted start

Large events: 18-24 hours prior to forecasted start

- Contractors equipped, stocked, pre-deployed
- Trucks staged along major routes (subdivisions if needed)
- **Incident command** activated for larger events

Weather Forecast	Mob Level	Response Plan	Salt Application Rate*	Applied Lane Miles		Trucks Required**			
						Liquid	Salt	Total	
Precipitation: 20% or greater Accumulation: Ice/Snow possible Ambient or Pavement Temp: 30-36	Anti-Ice	Mixing Bowl; Spot Treatment of Crit Structures & Locs	App Liquid: 36 gal/ln mi App Salt: 325 lbs/ln mi	Ffx	853	Ffx	13	13	26
				PW	250	PW	5	7	12
				Lou	610	Lou	9	5	14
				Int	300	Int	8	16	24
				District	2,013	District	35	41	76
Precipitation: 20-49% or greater Accumulation: Snow possible Ambient or Pavement Temp: 30-36	Skeleton Crews	Spot Treatment of Crit Structures & Locs; Respond to Icy Conditions As Needed	325 lbs/ln mi	Ffx	853	Ffx	13	27	40
				PW	570	PW	5	14	19
				Lou	610	Lou	9	17	26
				Int	300	Int	8	26	34
				District	2,333	District	35	84	119
Precipitation: 20-49% or greater Accumulation: Snow possible Ambient or Pavement Temp: 30-36	1	Mixing Bowl; Spot Treatment of Crit Structures & Locs	325 lbs/ln mi	Ffx	853	Ffx	13	36	49
				PW	570	PW	5	18	23
				Lou	610	Lou	9	20	29
				Int	300	Int	5	37	42
				District	2,333	District	32	111	143
Precipitation: 50-100% chance Accumulation: Up to 1" snow Ambient or Pavement Temp: 25-29	2	Light Salting Operation; Limited Work in Subdivisions; Cold Spot Treatment in Subdivisions & Gravel Roads	400 lbs/ln mi	Ffx	3,200	Ffx	13	207	220
				PW	2,630	PW	5	88	93
				Lou	1,831	Lou	9	61	70
				Int	1,894	Int	1	79	80
				District	9,555	District	28	435	463
Precipitation: 50-100% chance Accumulation: Up to 2" snow or up to 1/10" ice Ambient or Pavement Temp: 20-24	3	Salting Operation; Potential for Plowing; Cold Spot Treatment in Subdivisions & Gravel Roads	475 lbs/ln mi	Ffx	8,024	Ffx	13	318	331
				PW	3,507	PW	5	139	144
				Lou	2,547	Lou	9	150	159
				Int	1,894	Int	3	115	118
				District	15,972	District	30	722	752
Precipitation: 50-100% chance Accumulation: Up to 6" snow or up to 1/4" ice Ambient or Pavement Temp: 15-19	4	Salting/Plow Operation; Plowing Subdivisions & Sanding as Needed	550 lbs/ln mi	Ffx	8,024	Ffx	13	652	665
				PW	3,507	PW	5	241	246
				Lou	2,547	Lou	9	250	259
				Int	1,894	Int	7	221	228
				District	15,972	District	34	1,364	1,398
Precipitation: 50-100% chance Accumulation: > 6" snow or > 1/4" ice Ambient or Pavement Temp: 10-14	5	Salting/Heavy Plow Operation; Plowing Subdivisions & Sanding as Needed; ALL RESOURCES ARE DEPLOYED!	625 lbs/ln mi	Ffx	8,024	Ffx	13	1,236	1,249
				PW	3,507	PW	5	733	738
				Lou	2,547	Lou	9	725	734
				Int	1,894	Int	11	455	466
				District	15,972	District	38	3,149	3,187

VDOT Mobilization Levels

Anti-Icing

- Up to 48 hours prior to storm
- Most impactful first 45 minutes of weather event
- When pavement temps are above 20 degrees, and event does not begin as rain
- Critical locations - ramps, bridges, overpasses
 - Interstates: 350 lane miles - liquid magnesium chloride
 - High-volume roads: 500 lane miles - salt brine



Objective

- For a typical 2-4 inch snow, goal is one lane passable in all subdivisions within 24 hours after storm ends
- For a typical 6-inch snow, goal is one lane passable in all subdivisions within 48 hours after storm ends
- Greater than 6 inches will take more than 48 hours after storm ends



How We Clear Roads

Crews work interstates, major roads and main subdivision roads concurrently.

Interstates

66/95/395/495
made passable, then
bare pavement,
where possible

High-volume routes

(1, 7, 28, 50, etc.)
made passable, then
bare pavement,
where possible

Subdivisions

Main roads made
passable, then
remaining streets and
cul-de-sacs.

Additional priorities:

- Shoulders, ramps, turn lanes, intersections
- Moving snow where there is no storage (I-95/395 HOV lanes, construction areas)
- 12,000 park-and-ride spaces

Neighborhoods

- Drivers assigned 613 snow maps across northern Virginia
- Plows staged in subdivisions when 2+ inches forecasted
- Main thoroughfares plowed during storm after 2+ inches
- Crews then work streets, cul-de-sacs



Neighborhoods

- **Goal:** Reach the most residents as quickly as possible
- One pass for typical storms; multiple passes and heavy equipment needed for major storms
- Hills, curves, intersections sanded to help provide traction
- Driveways, hydrants: crews asked to be mindful but blocking is often an unintended consequence.

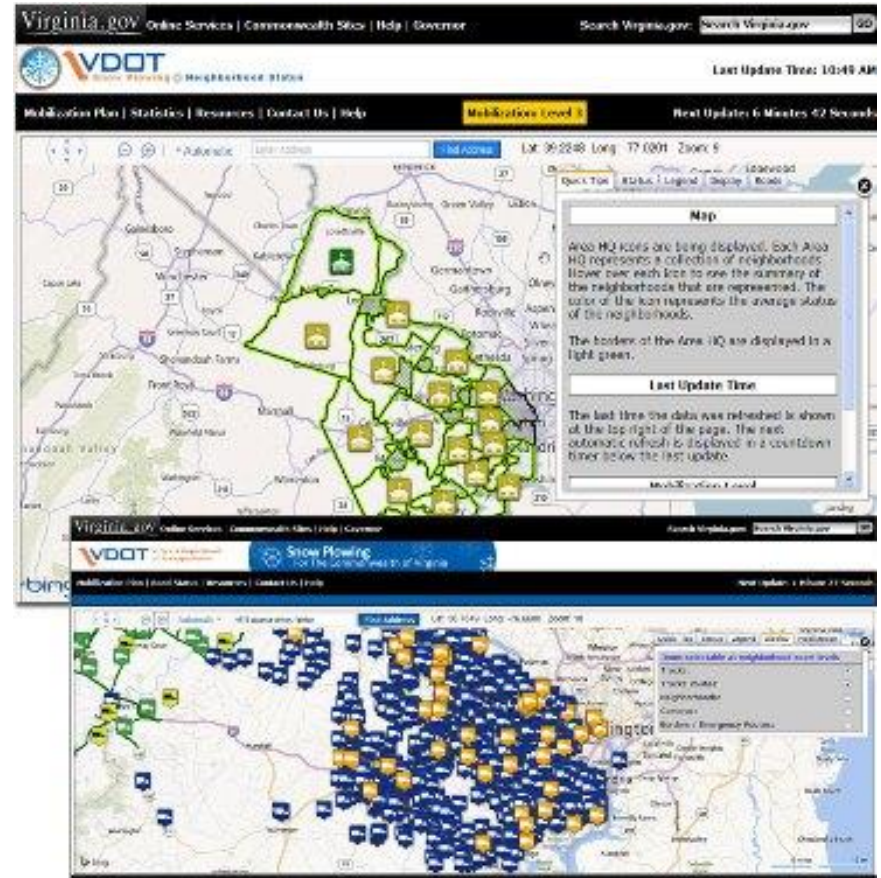
What does “passable” mean?

An 8- to 10-foot path cleared for emergency vehicle access. Drivable with extreme caution. The road remains snow-packed, will not be curb-to-curb or bare pavement.



Neighborhoods

- Monitors: VDOT staff drive routes for quality control
- Maps marked complete when a driver reports back and monitors have spot-checked
- Once passable, call center logs inquiries to investigate
- AVL plow-tracking can help verify, provide data for inquiries



Sidewalks and Trails

- Crews asked to be mindful, but often limited room to pile snow
- Particular care is requested near schools
- Residents and businesses are asked to clear near their property
- Check with localities for ordinances
- Due to limited resources, we are unable to address with roadway-clearing priorities
 - Address issues on case-by-case basis after roads are clear



Lessons Learned 2016

- Smaller/clipper storms continue to be difficult to isolate, forecast
- Extreme impacts to rush hours
- Time is a critical factor, need forecast to allow mobilization 12 hours out (or more when possible)
- Need careful and clarified risk assessment of forecasts
- Traffic congestion remains the challenge for response

New for 2016-17

- Revised reporting, risk assessment with NWS; better forecasting; continue close relationship
- Additional heavy equipment contracts procured
- Additional snow monitors
- All contract equipment with AVL
- Snow webpage – one-stop shop for all information resources

Drivers and Residents Can Help

Before and during storms

- Monitor forecasts closely
- Telework and adjust commutes, stay off roads
- Ensure enough gas, wiper fluid, proper tires, food, water and medicine when driving
- Park in driveways or on odd-numbered side of street

After storms

- Follow shoveling tips
- Give plows room
- Be patient



Resources

- **New this year: virginiadot.org/novaemergency**
One-stop shop for news releases, Twitter feed, important messages, VDOT Plows, customer service, FAQs and other resources
- **weather.gov/washington/winter** for forecasts
- **vdotplows.org** for status of subdivisions
- **511virginia.org** for road conditions and traffic cams
- **Follow [@511northernva](https://twitter.com/511northernva)** on Twitter for road conditions and accidents
- **www.VirginiaDOT.org** for news and road conditions
- **my.vdot.virginia.gov** or 800-FOR-ROAD (367-7623) to report safety concerns