

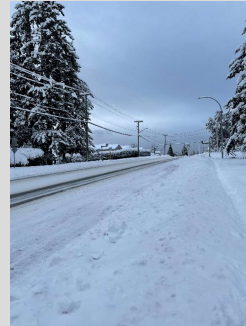
## Introduction and Overview

- Level of Service
- Scope of Services
- Practice and Procedures
- Equipment
- Budget
- What happened last winter?
- Operational Challenges and Adjustments
- Communications and FAQ



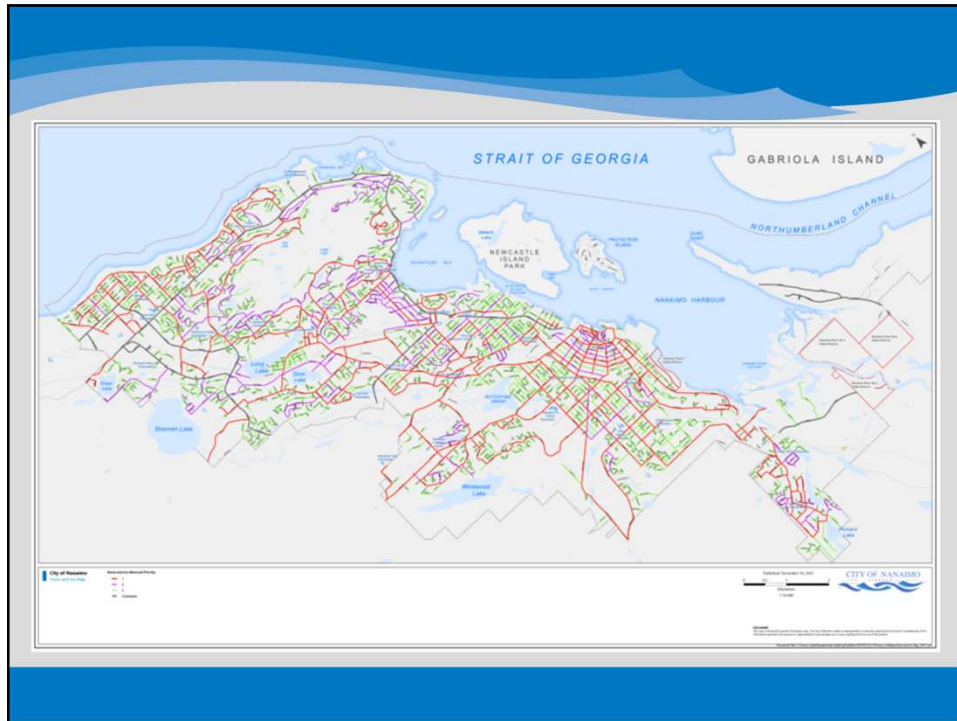
## Level of Service

- Provide safe passage for emergency services, public transit, and the travelling public
- Carried out in a manner that balances public safety and City resources
- Reflective of best practices and established procedures



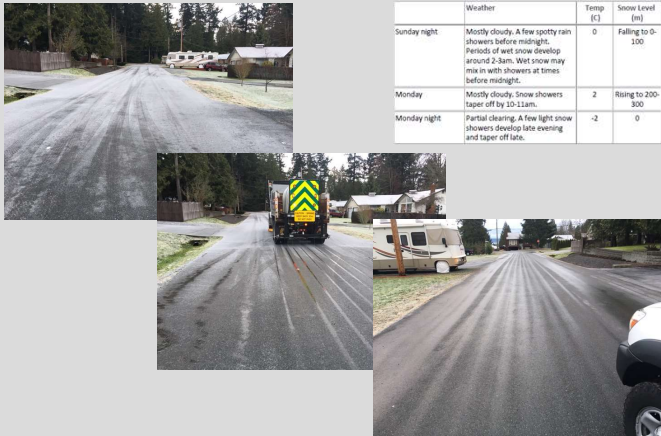
## Scope

- Pre-event actions based on forecasts
- Commence operations at 25 or 50mm accumulation
- 560km of roadways over 90km<sup>2</sup>
  - Including >750 cul-de-sacs and dead ends
- 132 discrete activities at 107 city facilities and the downtown area (parks, parking lots, civic facilities, trailways, etc.)
  - Including >5km of downtown sidewalk, >6 hectares of parking lot, and new bike infrastructure
- Select transit shelters
- Not in scope:
  - Private frontages
  - laneways



## Practices and Procedures

- Resourcing and tactical approach based on historical experience
  - Typically consists of ~3 day long events followed by warming
  - Early morning snap freeze
  - Public Works: 2 shifts of 20 trucks (i.e. min. 40 staff req'd)
  - Parks Operations: 1 shift, 6:00am thru 6:00pm, 15 pieces of equipment
  - Most residential areas are within 300m of Priority 1 route
- Climate change driving longer, more intense events
  - Staff burn-out
  - Increased impact of equipment breakdowns
  - Reduced opportunities to replenish supplies/competition for constrained resources



	Weather	Temp (C)	Snow Level (in)	Road Snow (in)	F	I	S
Sunday night	Mostly cloudy. A few spotty rain showers before midnight. Periods of wet snow develop around 2-3am. Wet snow may mix in with showers at times before midnight.	0	Falling to 0-100	2-7	Green	Yellow	Red
Monday	Mostly cloudy. Snow showers taper off by 10-11am.	2	Rising to 200-300	2-5	Green	Green	Red
Monday night	Partial clearing. A few light snow showers develop late evening and taper off late.	-2	0	2-4	Green	Red	Red

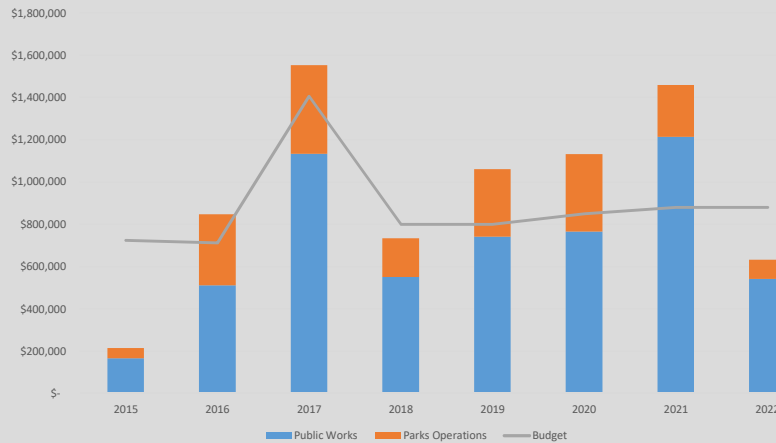
## Tools







## Budget



## What happened last year?

### • Pre-event

- Cycles of rain prevented pre-treatment from being effective
- Temperature dropped, rain turned to heavy snow, which stuck to the pavement
- Pavement temps significantly colder than air temps

Date	Daily Snowfall (cm)	Snowfall Accumulation (cm)	Avg. Air Temperature
Dec. 23	7	7.0	0.6
Dec. 24	8.2	15.2	0.9
Dec. 25	10	25.2	-1.5
Dec. 26	9	34.2	-5.5
Dec. 27	4	38.2	-7.2
Dec. 28		38.2	-5.8
Dec. 29	6.2	44.4	-4.6
Dec. 30	1.2	45.6	-3.1
Dec. 31	0.8	46.4	-5.3
Jan. 1	13.4	59.8	-4.1
Jan. 2	0	59.8	2.8
Jan. 3	0.2	60.0	1.2



## Operational Challenges

- Ice bonded very quickly to pavement → pavement temps  $-11^{\circ}\text{C}$
- Ongoing accumulations → 60cm/12 days
- Repeating events
- Residential road configurations
  - Street parking, steep slopes
- Snow clearing from private property onto roadway
- Public expectation of clearing to bare pavement
- Increasing cost of contracted service

## Operational Adjustments

- Contract for secured supply of salt
- Use heavy equipment to access difficult areas instead of snow plows
- Addition of weather stations to improve tactical information (~\$75k, not yet budgeted)

## Communications

- Consultation with ACAI
- Ongoing, pro-active communication through a variety of channels


 @cityofnanaimo  
 City of Nanaimo  
 Nanaimo Recycles App  
 Voyent Alert  
[www.nanaimo.ca](http://www.nanaimo.ca)  
 Radio  
 TV News

**CITY DEPARTMENT INFORMATION**

### SNOW & ICE CONTROL

*in the City of Nanaimo*

The City of Nanaimo prioritizes snow and ice removal to keep you safe. You can help, too, when winter makes an appearance.

ROADS	SIDEWALKS	CITY FACILITIES/PARKS
		
The City's priority is to plow and maintain emergency routes during winter events. After that, we plow major through roads, cul-de-sacs and dead ends.	The City also clears sidewalks around major City facilities, parks and bridges. A City plow operator will be around from sidewalks within 24 hours for property owner's request.	The City clears City facility parking lots, walkways, commuter trails and stairs.

**Things to Remember:**

- Listen to your local radio station or check the City's website and social media sites for updates during these weather conditions. This includes program and facility closure updates.
- The City bans vehicles when required to ensure routes are clear for emergency traffic during a snow event.
- Help us maintain your streets. Park in your driveway to allow the street to be plowed to its whole width. Where this is not possible, park on the east/northeast side of the street on odd days and the west/southwest side of the street on even days. Keep your vehicle as close to the side of the road as you can to allow equipment to reach it by your vehicle.
- We understand that it can be difficult to remove the snow from your sidewalks. Our West Coast snow is often wet, heavy and wet. By removing the snow, you are ensuring the safety of pedestrians. If you notice your neighbor is having a difficult time clearing their sidewalk, why not offer to help?
- It can be frustrating when the plow pushes snow into your freshly shoveled area. Please keep in mind that the plow cannot be lifted or stopped at each driveway as it goes. You can help cut down the amount of snow in the roadway by not shoveling or blowing your snow into the street. Try to keep the snow to the side of your driveway.

**QUESTIONS ABOUT SNOW & ICE CONTROL?**

• Roads: Public Works - [public.works@cityofnanaimo.ca](mailto:public.works@cityofnanaimo.ca) or 250-758-5222  
 • Sidewalks, City Facilities, Parks and Trails: Parks, Recreation & Culture - [parksandrecreation@cityofnanaimo.ca](mailto:parksandrecreation@cityofnanaimo.ca) or 250-756-5200



