

Urban Snow and Ice Control

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BACKGROUND

- **May 20:** Briefing on current urban snow and ice control (SNIC) and potential improvements.
- **May-September:** Further research, including best practices and standards in similar municipalities.
- **Sept. 16:** SNIC policy review approved.
- **Oct. 9-Nov. 7:** Online survey.
- **Nov. 3-5:** Open houses.

BACKGROUND (cont.)

Terms and Definitions

- **Plowing:** Snow pushed to sides or centre of a roadway to maintain at least one traffic lane in each direction.
- **Blading:** Compacting accumulated snow to 5cm to make roadways passable or to level ruts.



BACKGROUND (cont.)

Terms and Definitions

Hauling/Removal: Snow is blown into trucks and taken to a storage site.

Anti-icing – Treatment with ice-melting chemicals before or shortly after a storm starts – to prevent or delay ice forming, or snow and ice adhering to the surface.



BACKGROUND (cont.)

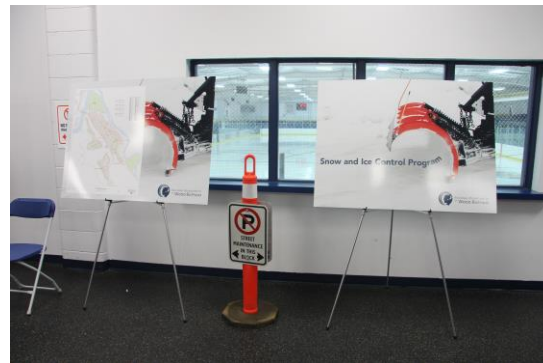
Terms and Definitions



- **De-icing** – Removal of snow, ice or frost using mechanical means or applying salt or other ice-melting chemicals.
- **Sanding** – Controlled application of sand and liquids (e.g. salt brine or magnesium chloride) to improve traction.

ENGAGEMENT

- Facebook, Twitter, radio advertising and a media luncheon with a snowplow ride-along.
- 856 surveys completed (mostly online).
- 3 open houses with 119 participants.
- Cross-section of residents.



ENGAGEMENT (cont.)

| RESPONDENTS | ONLINE | | OPEN HOUSES | | TOTAL | | % POP. |
|---------------------|--------|----|-------------|----|-------|----|--------|
| AREA | # | % | # | % | # | % | % |
| Abasand | 47 | 6 | 4 | 5 | 51 | 6 | 7 |
| Beacon Hill | 32 | 4 | 5 | 7 | 37 | 4 | 3 |
| Gregoire Mackenzie | 13 | 2 | 1 | 1 | 14 | 2 | 5 |
| Lower Townsite | 54 | 7 | 17 | 23 | 71 | 8 | 15 |
| Parsons Creek North | 21 | 3 | 0 | 0 | 21 | 2 | * |
| Prairie Creek | 18 | 2 | 1 | 1 | 19 | 2 | 1 |
| Thickwood | 198 | 25 | 13 | 18 | 211 | 24 | 23 |
| Timberlea | 396 | 50 | 31 | 42 | 427 | 49 | 45 |
| Waterways | 13 | 2 | 1 | 1 | 14 | 2 | 1 |

ENGAGEMENT (cont.)

Focus:

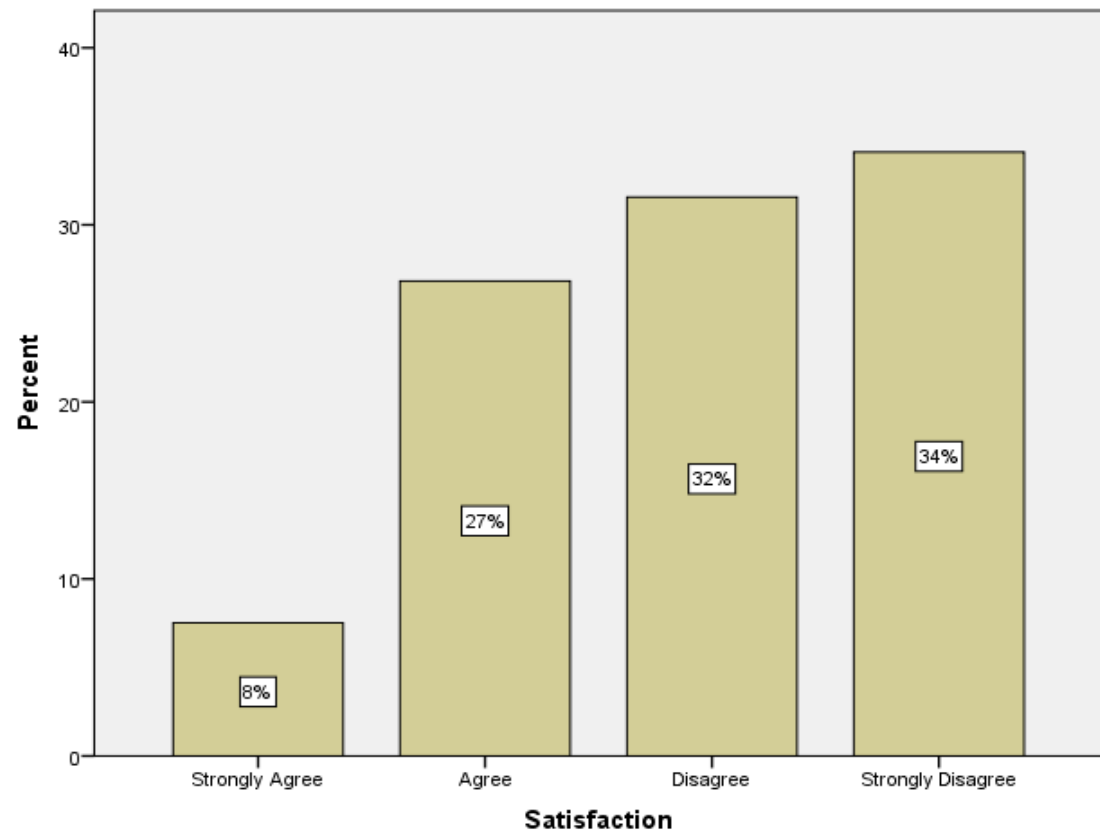


- Satisfaction with current practices.
- Plowing – primary method for SNIC?
- Parking restrictions.



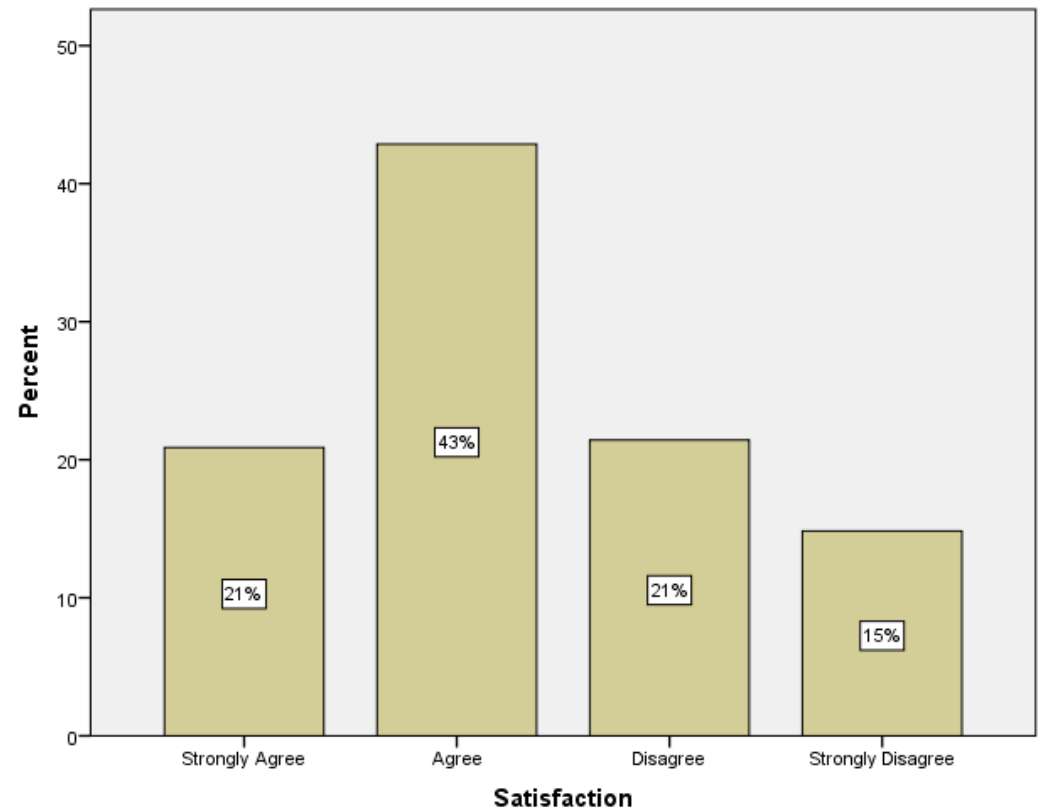
FEEDBACK

- **65%** of all respondents are **dissatisfied with current service.**



FEEDBACK (cont.)

- Respondents living on primary and secondary routes (priority) were more satisfied.



FEEDBACK (cont.)

- Primary Routes (109.1 lane km): Plowed continuously during a snow event.
- Secondary Routes (222.6 lane km) – Plowed after primary routes.
- Residential (254 lane km): Plowed as warranted by conditions.



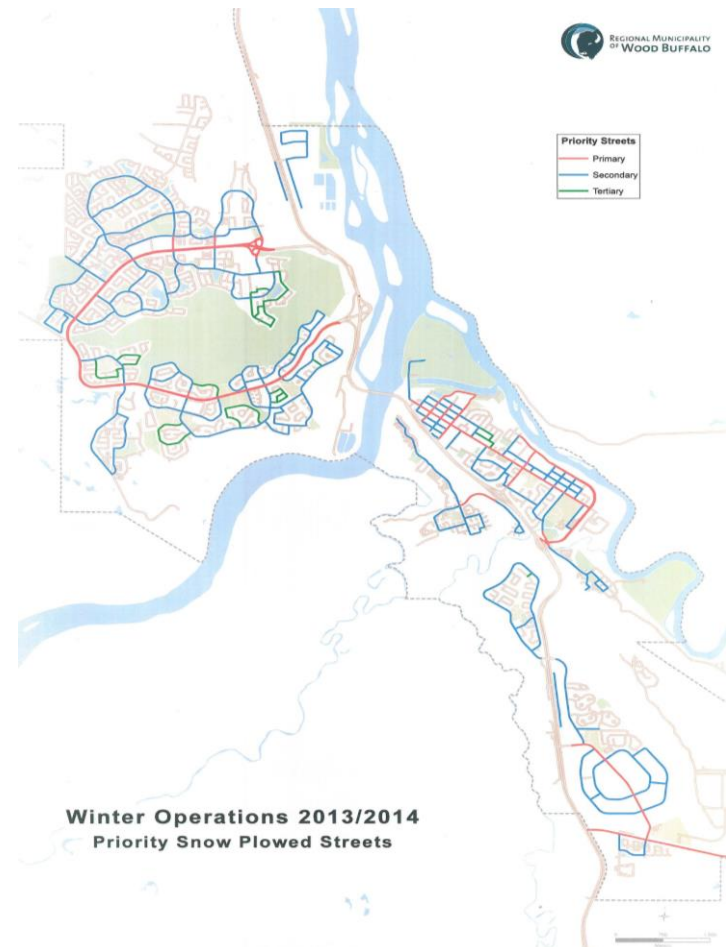
FEEDBACK (cont.)

Urban Service Area

Red = Primary

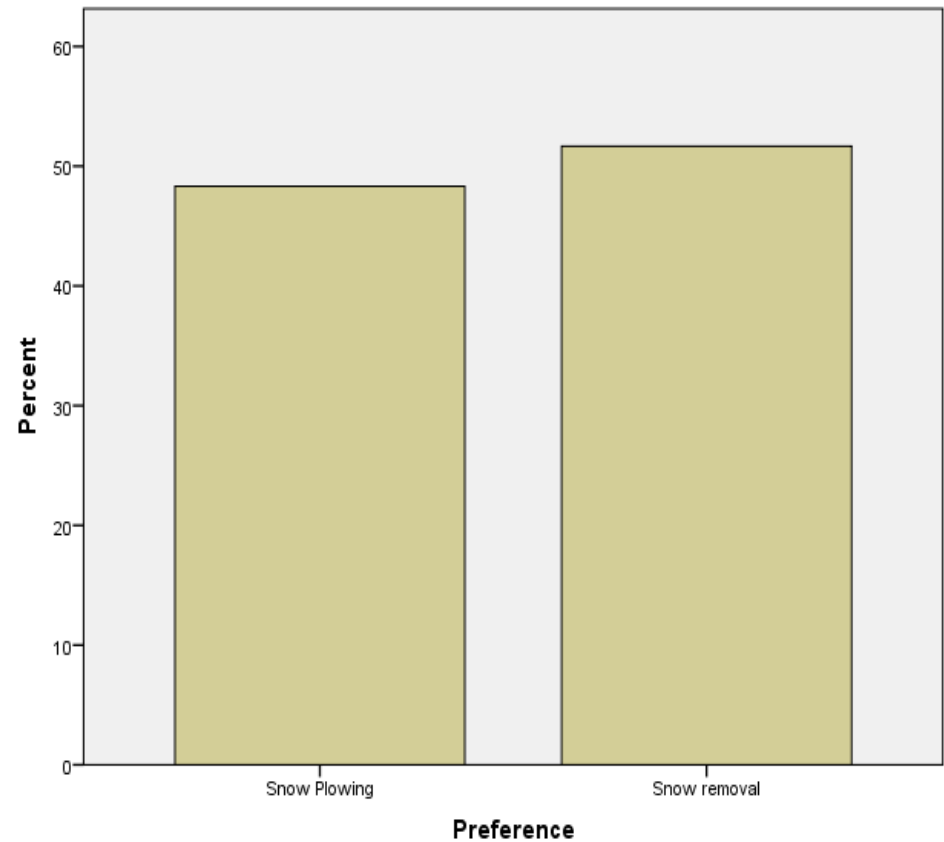
Blue = Secondary

Green = Tertiary



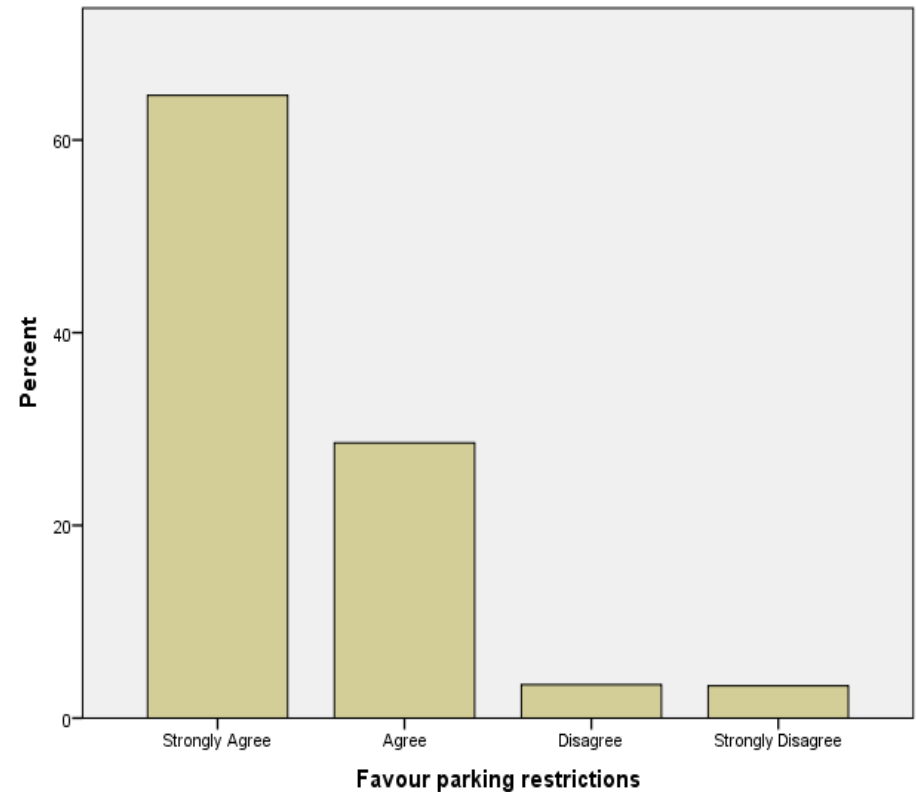
FEEDBACK (cont.)

- By a small margin, more residents put an emphasis on removal vs. plowing.

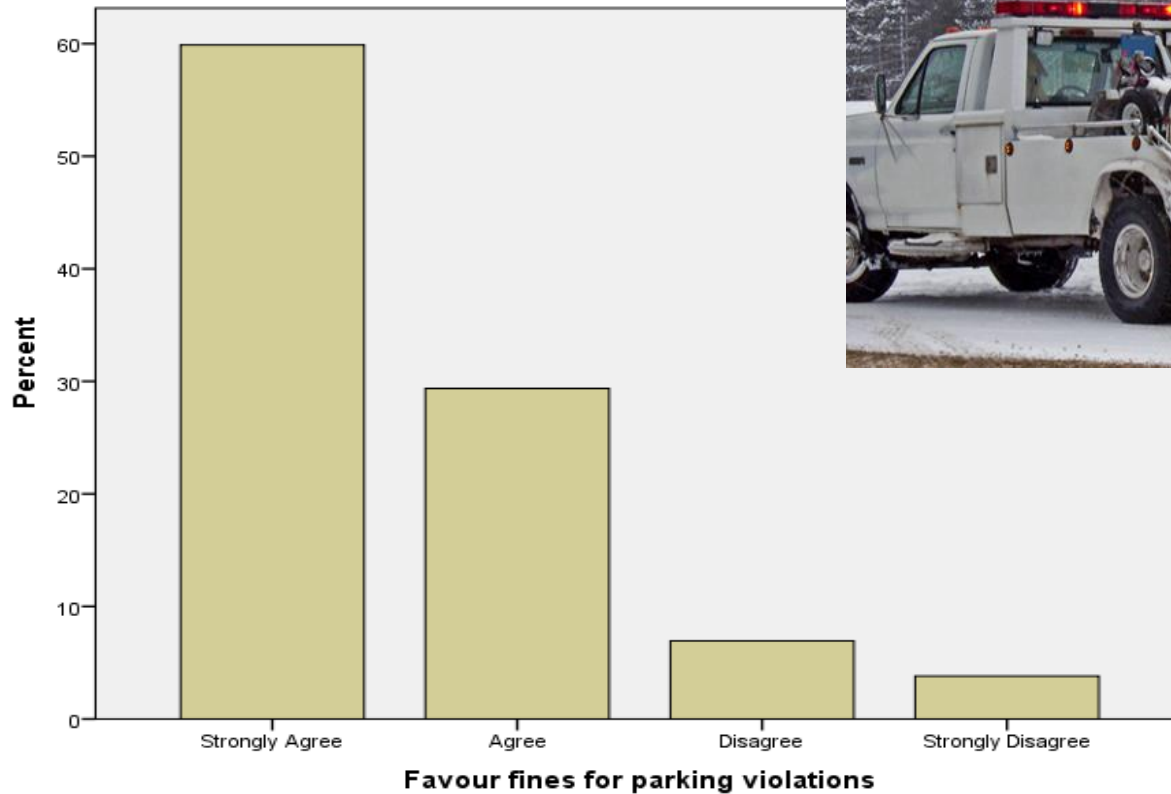


FEEDBACK (cont.)

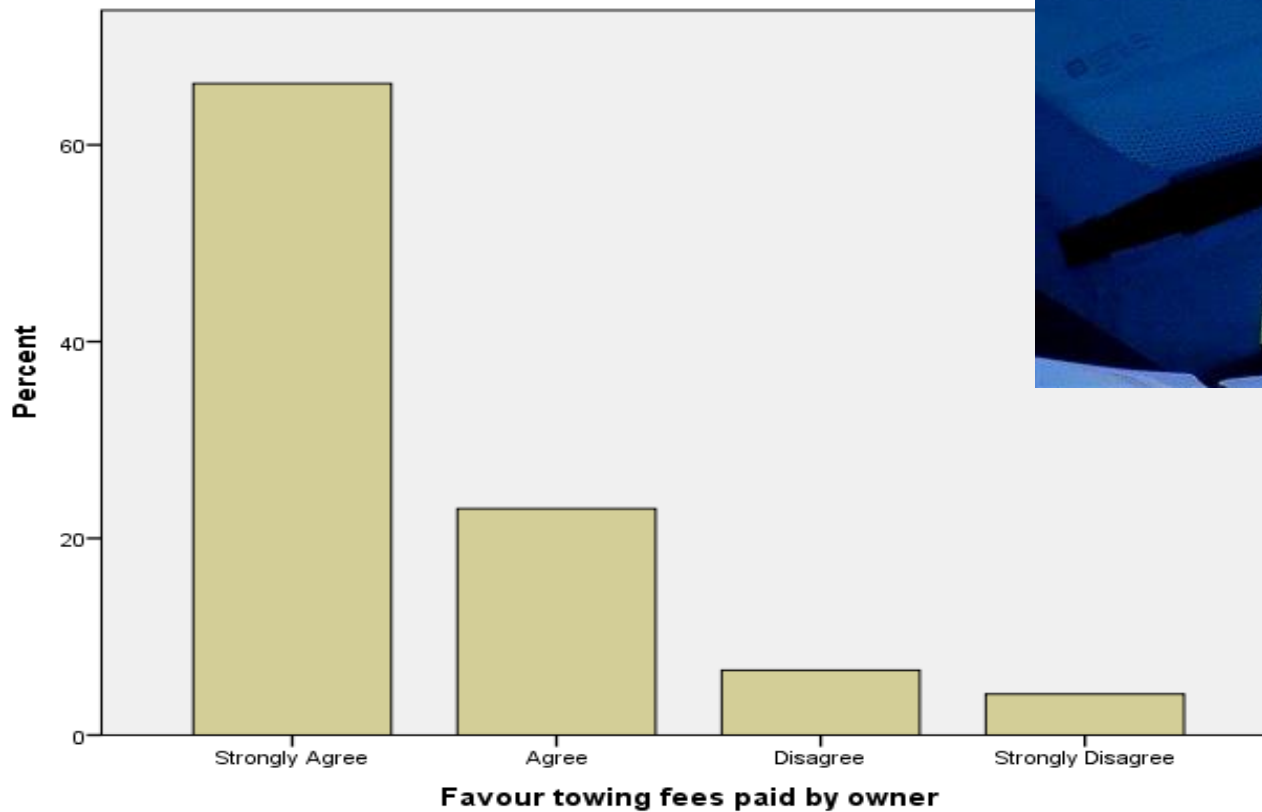
- Residents strongly support parking restrictions.
- They want bans enforced with penalties and towing.



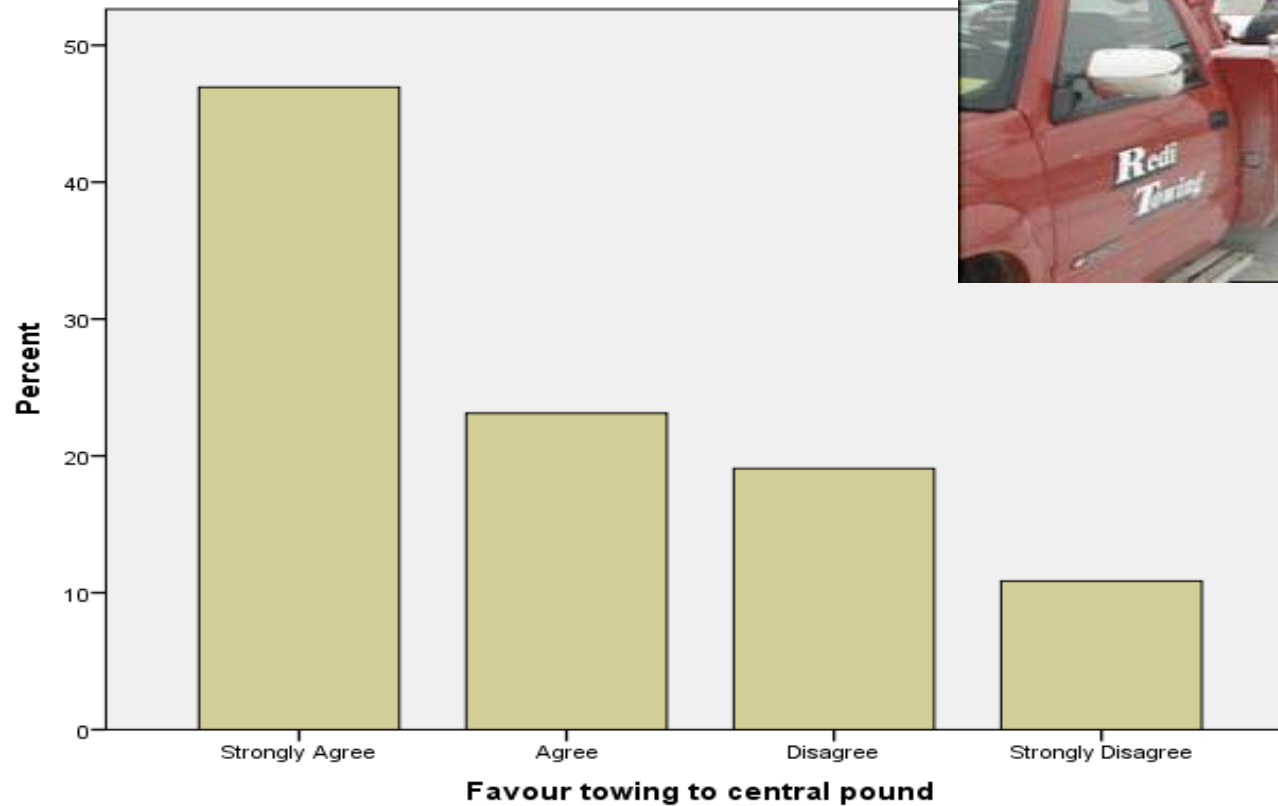
FEEDBACK (cont.)



FEEDBACK (cont.)



FEEDBACK (cont.)



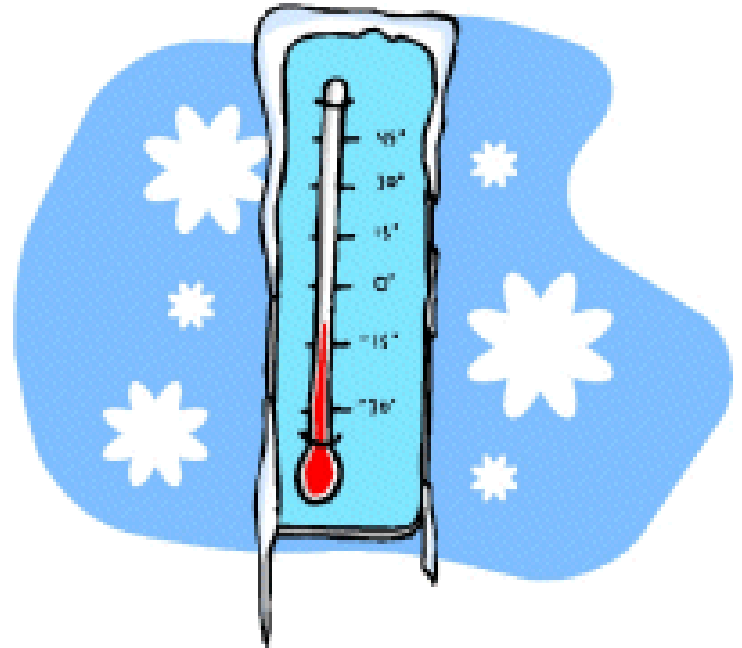
CONSIDERATIONS

- Plowing would be to the right.
- Snow placed at the base of private driveways and on lawns.
- With weekly service, property owners should find it easier to manage accumulated snow.



CONSIDERATIONS (cont.)

- Sodium chloride (salt) not used in residential areas – ineffective beyond -15.
- Replace with a sand mixture pre-treated with liquid calcium chloride. It adheres better in lower temperatures – to about -30.



CONSIDERATIONS (cont.)

- Introduce parking restrictions and install signs in Spring 2015.
- Grace period - no towing until Winter 2015.
- Enforcement is critical – further support from RCMP and Bylaw.
- Would coordinate schedules with refuse collection.
- Relatively easy and cost-effective to implement.

CONSIDERATIONS (cont.)

- Restrictions evaluated in Spring 2016, including a public satisfaction survey.
- Revised Urban Snow Clearance Policy before the 2015- 2016 winter season.

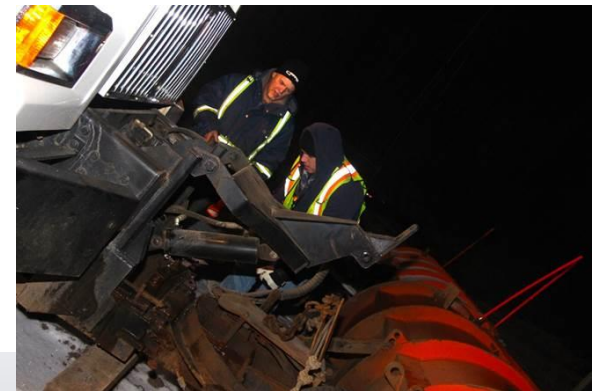


CONSIDERATIONS

Current Resources

Equipment:

- 3 graders
- 2 plow trucks
- 3 one-ton with plows
- 7 loaders/2 plows
- 16 plows with spreaders.



CONSIDERATIONS (cont.)

Current Resources

Staff

- Operating shifts: 24 hours, 7/7
- Day shift : 2 team leads; 8-12 operators
- Night shift: 1 acting/operating team lead, and 2-5 operators



CONSIDERATIONS (cont.)

Required Resources

- Staff (21 positions): **\$3.2 million** (12 Months)
 - Equipment: **\$3.3 million**
 - Training: **\$50,000**
 - Fuel: **\$130,000**
 - De-icing Material: **\$500,000**
 - Towing: **\$400,000**
- Total: \$7.6 million**



RECOMMENDATIONS



Approve weekly snow plowing and clearing in urban residential areas.



Implement parking restrictions.



Add \$2.7 million to the 2015 budget from the emerging issues reserve to hire 21 new positions.

QUESTIONS

