

# WINTER OPERATIONS PLAN FOR ANCHORAGE PARKS RECREATION



January 2025

Municipality of Anchorage



# TABLE OF CONTENTS

**01**

---

EXECUTIVE  
SUMMARY

**02**

---

INTRODUCTION

**03**

---

WINTER  
SEASON  
PREPERATION

**04**

---

STORM  
RESPONSE

**05**

---

STANDARD  
WINTER  
OPERATIONS

**06**

---

AGENCY  
COORDINATION

**07**

---

CONCLUSION

**08**

---

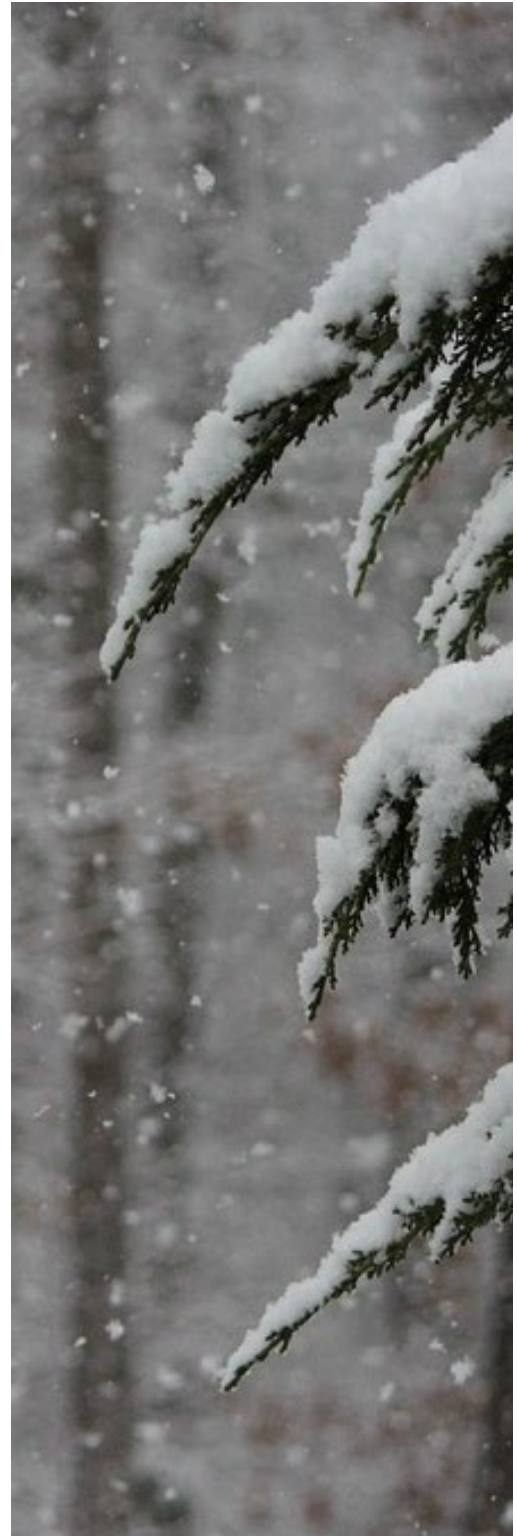
APPENDIX:  
I-VI

# EXECUTIVE SUMMARY

Anchorage’s Parks and Recreation Department is vital in supporting the city’s recreational opportunities and active transportation networks during the winter months. The Winter Operations Plan for Parks and Recreation (WOPPR) ensures that park facilities, pathways, trails, and recreational areas are safe and accessible through an organized and efficient winter maintenance program. This plan encompasses storm response, standard operations, and collaboration with local and state agencies for non-motorized transportation snow removal. Key elements of the WOPPR include:

- *Winter Preparation*: Pre-winter inspections and equipment servicing are conducted to prepare facilities for snow and ice conditions.
- *Public Communication*: The department uses online platforms, including an Esri StoryMap, to provide real-time updates on trail and ice conditions and collaborates local user groups for grooming updates.
- *Storm Response and Standard Operations*: The plan addresses snow removal, trail grooming, and ice rink maintenance, ensuring timely and flexible storm response alongside regular upkeep of recreational areas.
- *Cross-Agency Collaboration*: The plan emphasizes coordination with municipal and state maintenance teams to manage shared routes and improve efficiency in snow removal efforts for non-motorized transportation paths.

By maintaining flexible operations to adapt to Anchorage’s unpredictable winter weather, the WOPPR prioritizes public safety, recreation, and access, ensuring Anchorage’s parks and trails remain usable throughout the winter season.



# INTRODUCTION

Anchorage is a winter city, and the Parks and Recreation Department provides residents with a wide range of outdoor recreational opportunities made possible by a well-defined operations plan and a skilled maintenance division. The WOPPR identifies maintenance tasks and responsibilities related to snow removal, winter recreation, sanitation, and event support as it relates to regular operations and storm response.

- **Purpose:** Outline the winter operations plan for maintaining park facilities, trails, and recreational areas during the winter season.
- **Scope:** This plan covers storm response, standard winter operations, and coordination with local and state agencies for effective non-motorized transportation snow removal.

## STORM RESPONSE VS. STANDARD OPERATIONS

Winter in Anchorage is dynamic and ever-changing. Some years bring cold temperatures and lots of snow, while others are milder with icy conditions and minimal snowfall. This variability makes operational planning difficult, and flexibility is critical to success. To manage the dynamics of seasonal variability, it is important to have a well-defined winter operations plan.

## GOAL

As a supplement to the Municipality of Anchorage Snow and Ice Control Plan, this document provides detailed information for winter operations in the Anchorage Bowl. Our department is committed to maintaining safe, welcoming, and well-cared-for public spaces year-round. During the winter months, our goal is to have snow cleared from designated corridors and routes within 84 hours after a storm ends. This target aligns with the Street Maintenance Division's goal of 84 hours, depending on snow volume, and allows for effective coordination with other divisions and agencies, ensuring a well-sequenced snow removal process and minimizing duplication of efforts.

## PROPOSED METRIC TARGETS\*

SNOW ACCUMULATION	PARKS AND RECREATION PRIORITY AREA	NORMAL DEADLINE
LESS THAN 4 INCHES	First pass with focus on all routes.	24- 84 hours
4-15 INCHES	First pass with focus on high traffic routes. Second pass cleanup and widening efforts.	84 -108 hours
> 15 INCHES	Adapt to circumstances.	120 hours or more

\*Please note that the Parks and Recreation Staff is responsible for a combination of trails, pathways and sidewalks, and where we clear snow depends on routing, staffing, and availability of equipment. We will always clear snow as fast as we can, and one can estimate completion based on the following timelines and scenarios. Once the first pass has been completed, our department will aim to do a second, and at times, a third pass of routes and corridors.

# WINTER SEASON PREPARATION

## PRE-WINTER ASSESSMENTS

The Parks and Recreation Department strives to inspect all parks, trails, and recreational facilities to ensure winter readiness. These inspections typically occur in September, October, and November and include the following:

- Assessing structural fitness of recreational facilities and ensuring snow removal methods are suitable for existing conditions.
- Identify areas for snow removal and address any hazards to equipment before snow covers those obstacles.
- Mark hazards for removing snow, delineate the golf course, assess haybales at sledding hills, brushing and sweeping trails.
- Remove bollards after the first snowfall for access and delineating the bollard bases.
- Service and maintain equipment used for winter operations (studded tires for select equipment, trackless, plows, snow blowers, ATVs). This is done in partnership with parks maintenance staff, and fleet maintenance depending on the type of equipment and its condition.
- Inventory and fill materials and supplies:
  - De-icing, traction sand, hand spreaders, winter gloves, (various) shovels, cleats, headlamps, torches, hand warmers, ice picks, ice chippers, and windshield scrapers.
  - Winter-specific PPE including traction devices, sno-go helmets, headlamps, and reflective gear.

## EMPLOYEE TRAINING IS AN IMPORTANT PART OF THE WOPPR

October and November include training for municipal crews, administrative staff, and any other personnel relating to updates and refreshers on equipment and protocol. Park Caretaker II positions are provided with specific training on the trackless equipment, and qualified staff are trained to operate other heavy equipment. Daily safety minutes occur at each shop to identify seasonal or pressing issues relating to safety. Examples of these daily safety topics include "Slips, Trips, and Falls," "Securing Your Load," and "Being Prepared for Inclement Weather." Other related topics include:

- Train staff on equipment use and safety protocols for winter operations.
  - Plowing/snow removal in parking lots
  - Stairs and walkways
  - Trackless snow removal
- Review communication protocols for storm alerts and emergency response.
  - Directors/superintendent alerting foreman and supervisors about storm
  - Creates a call-out for overtime
  - Communication happens over phone and/or text.

## PUBLIC COMMUNICATION

The Parks and Recreation Department aims to support the public and facilitate year-round operations. This includes using communication tactics in the field with staff as well as updating online platforms to provide status updates.

### *In the Field*

Anchorage Parks and Recreation supports members of the public and year-round operations while they are in the field performing work. Three primary ways that staff does this include:

- Foremen and supervisors brief staff to the best of their ability, covering field changes such as weather, environmental conditions, and construction updates.
- Ensure the Parks and Recreation logo is clearly displayed on our equipment and individuals who are completing the work.
- Maintenance cards are distributed in the field to help connect members of the public with information if staff cannot answer it in the field.

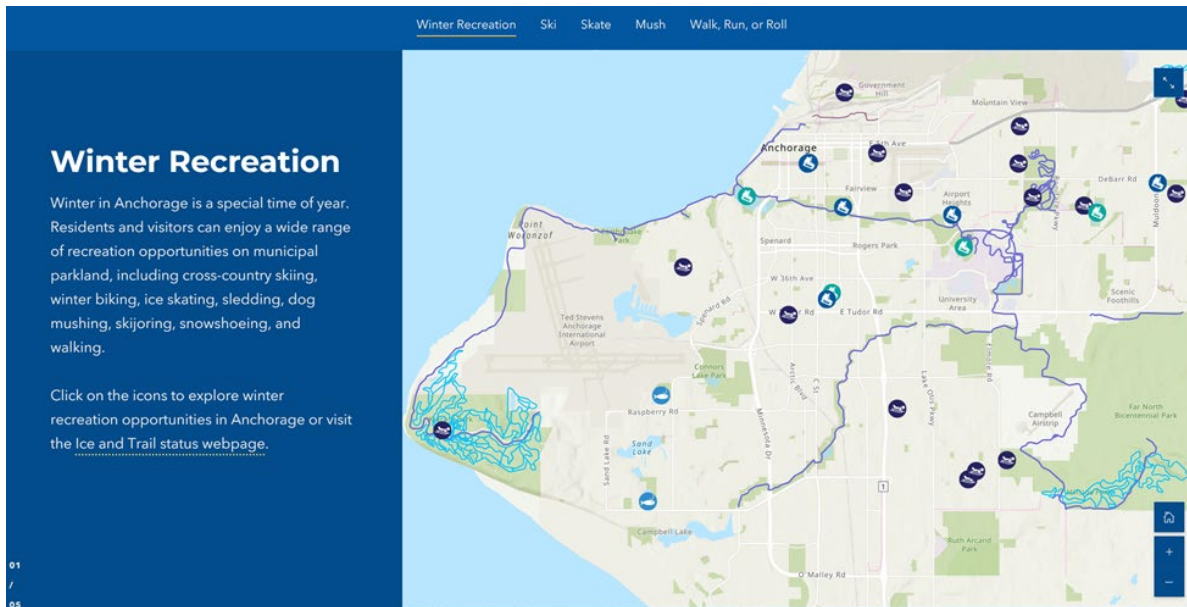


Figure 1: A screen capture of the Winter Recreation storymap, which enables the public to check the status of ice, grooming and snow removal operations completed by Anchorage Parks and Recreation and their partners.

### *Virtual Aids*

The Parks and Recreation Department currently utilizes a combination of social media and virtual outlets to describe the status of winter operations. The most consistent way that the department reports status updates is through the following municipal websites:

- Winter Recreation Storymap: [www.muni.org/Departments/parks/Pages/IceTrailStatus.aspx](http://www.muni.org/Departments/parks/Pages/IceTrailStatus.aspx)
- MOA Snow Removal Hub: [www.muni.org/plow](http://www.muni.org/plow)

# STORM RESPONSE

*Anchorage receives an average of 75” of snow per year.*

During and after a storm, the Parks and Recreation maintenance division conducts storm response operations. Storm response includes snow clearing in parking lots, as well as on stairs, walkways, sidewalks and pathways. Since each storm varies in length, temperature, and precipitation type/amount – maintenance operations are dynamic and evolving as storm response proceeds and maintenance staff transition back to standard operations.

## STORM MONITORING AND FORECASTING

Our outdoor operations staff monitors local weather forecasts and initiates storm response based on alerts from meteorological agencies. Communication between supervisors and staff typically happens in person leading up to a snow event as well as via phone and email.

## SNOW REMOVAL SYSTEM

Parks and Recreation is responsible for clearing snow and ice from various municipal facilities, sidewalks, multi-use trails, and pathways. This includes select school routes, recreation centers, memorials, and high-use parks. *The department maintains approximately 41 miles of sidewalks, multi-use trails, and pathways, as well as 95,000 square feet of stairs, walkways, and other pedestrian facilities.*



Figure 2: Trackless equipment on top with blower attachment, and on bottom with plow attachment clarifying the edges of an already blown multi-use pathway.

The snow removal team follows pre-established routes, divided into two main areas: North and South. Each area has sub-routes detailed in Appendix I and accompanied maps in Appendix II. While crews address these main routes, additional staff work on clearing stairs, walkways, and high-use parking lots. The areas slotted for snow removal in the “Stairs and Walkways” category as well as winter-maintained parking lots are both detailed in Appendix V and VI.

The snow removal process utilizes a range of equipment tailored to specific tasks. Trackless equipment, fitted with blower heads, is used to clear sidewalks and pedestrian pathways efficiently, especially in narrow or difficult-to-reach areas. Parks and Recreation maintenance also assists the Street Maintenance Division as well as the Alaska Department of Transportation (AKDOT) by clearing sidewalks and pathways across Anchorage.

For parking lots, trucks with v-plow attachments manage large accumulations of snow and ensure vehicle access to high-traffic areas. Stairs, walkways, and other pedestrian facilities are cleared manually using shovels, snow blowers, and ice melt, as these areas are often too small for larger equipment.

The goal is to clear stairs, walkways, and buildings within the hourly thresholds set forth at the beginning of the document. By coordinating efforts and using a range of specialized equipment, Parks and Recreation ensures efficient snow removal across its facilities, prioritizing safety and accessibility for the community. Snow removal also extends to lakes and ice rinks, where accumulated snow can disrupt regular operations. A small portion of the staff is dispatched on trucks with down-pressure plow attachments and a preference for studded winter tires to manage these areas.



# STANDARD WINTER OPERATIONS

## DAILY OPERATIONS SUMMARY

Between storms and during periods of stable weather, winter maintenance operations focus on outdoor recreation. This includes:

- Daily maintenance of ice rinks and lakes for skating, and grooming of trails for skiing, biking, and walking.
- Trail grooming two to three times a week to support recreation and non-motorized transportation across Anchorage.
- Routine snow clearing and de-icing with salt or traction sand of high-traffic areas, such as stairs and walkways.
- Regular inspections of facilities, parks, and trails to monitor ice buildup, fallen branches, and safety hazards.
- Maintaining access to playgrounds, trailheads, restrooms, and trashcans where possible.
- Post-storm work including widening narrow corridors, pushing back snow where it may have been pushed into the cleared thoroughfare, and removing or pushing back snow at intersections, trailheads, and parking lots.



*Photos (top to bottom): Top: Snow machine with a Ginsu attachment grooming and “setting track.” Bottom: Maintenance drilling ice on Westchester Lagoon to measure the depth of ice.*

## TRAIL GROOMING

Parks and Recreation grooms several multi-use greenbelt trails and other important connector trails to support non-motorized transportation and recreation. Grooming is accomplished with snow machines - first by rolling and compacting trails and then by pulling a hydraulic groomer to provide an even surface with comb and set track.



Figure 3: Snow Machine with a roller on the top left. A Colorado attachment, also behind a snow machine, on the right.

Trails are groomed two to three times per week and include the following:

- Tony Knowles Coastal Trail (10.6 miles)
- Lanie Fleischer Chester Creek Greenbelt (3.7 miles)
- Campbell Creek Greenbelt (7.7 miles)
- Chester-Campbell Trail Connection (2.4 miles)
- Russian Jack Springs Park (8.2 miles)
- NE Connector Trail (1.0 miles)
- Delaney Park loop (.5 miles)
- Goose Lake loop (.75 miles)
- East High School loop (.2 miles)

**Total mileage groomed by Parks and Recreation is 34.6 miles.** Typically, this distance is completed with “two passes” and multiple snow machines at one time, so actual mileage traversed during grooming can be upwards of 120 miles. As of 2023, the average costs per mile to groom is: \$100/mile of trail per trip (see Appendix II).

The Anchorage Parks and Recreation Department has relationships with non-profits in the area who help facilitate winter trail maintenance. This includes the following

- The Nordic Ski Association of Anchorage (NSAA) provides a high level of grooming for Nordic skiing in Kincaid Park and Far North Bicentennial Park (Hillside Trails and Tour of Anchorage Trail). NSAA uses both snow machines and piston bully groomers to groom trails. NSAA grooms daily from November to April. NSAA also grooms the Tour of Anchorage Route in preparation for the popular annual city-wide event.
- Single Track Associates (STA) maintains a series of trails in Far North Bicentennial Park (Hillside Single Track, Rover's Run, Moose Meadow, and Black Bear) as well as Kincaid Park (Bowling Alley, Middle Earth). STA also grooms South Fork Rim and Hemlock burn in partnership with Chugach State Parks.
- The Alaska Sled Dog and Racing Association (ASDRA) provides grooming on dog mushing trails in Far North Bicentennial Park and BLM Campbell Tract.

*Winter grooming for trails refers to the process of managing and maintaining snow-covered trails to ensure they are suitable for various winter activities, such as cross-country skiing, snowshoeing, fat biking, and walking.* The grooming process involves several specific steps to ensure optimal conditions for various trail uses, including multi-use trails, classic ski routes, and soft surface trails. Snow type and environmental conditions guide the timing and frequency of each grooming stage, with paved multi-use trails are prioritized second to snow removal as weather, staffing and resources allow.

- **Rolling:** Once approximately 12 inches of snow has accumulated, our team begins rolling the trails. The "12 inches" guideline can vary based on snow characteristics:
  - **Dry, fluffy snow:** For light, powdery snow, around 12 inches is typically ideal for the first rolling pass.
  - **Moist, compact snow:** When snow is slightly moist and more compactable, rolling may begin once eight or more inches of accumulation are present. This type of snow compacts well and forms a solid base with less coverage.
- **Grooming:** After initial rolling, staff transition to grooming, often using a specialized tool called a Ginsu groomer. This step smooths and refines the trail surface to create a consistent base suitable for skiing, walking, and other trail activities.
- **Setting Track:** Setting track refers to creating two parallel tracks for classic skiing, positioned along the outer edge of the trail. This process generally follows the first round of rolling to ensure the track holds well, providing a reliable route for skiers.
- **Regular Maintenance:** Depending on environmental factors, such as temperature and snowfall, trails are typically groomed two-to-three times per week. After significant snowfall events, additional passes are made to maintain and clean up the set tracks, ensuring a high-quality experience for all trail users.

When possible, the department will provide a first pass to soft surface trails before moving to paved trails, depending on weather, staffing, and resources. These trails, primarily located in Russian Jack Springs Park, include a mix of unpaved pathways and groomed tracks over open lawn areas. Special caution is taken here to prevent damage to golfing greens, fairways, tee-boxes, and putting greens, preserving them for summer use.

This approach balances efficiency and quality, delivering trails that support diverse recreational activities as the seasons and uses change.

*Keep in mind – it is possible to overgroom with certain types of equipment. It is possible to break teeth on the Ginsu if the snow is not deep enough. This is more likely to occur if the snow has insufficient depth or has been “overgroomed” and the surface has become hardpacked snow.*

## LAKES AND ICE RINKS

Parks and Recreation maintains several lakes, rinks, and other facilities for ice skating from November/December through March. Ice maintenance occurs daily at most facilities and is an important element of winter recreation in the Anchorage Bowl. Typical maintenance operations includes snow removal, surface scraping, and hot mopping the surface. The department also works with private contractors to maintain additional ice-skating facilities.

Prior to the season, Parks and Recreation maintenance sweeps rinks and makes needed repairs to boards, goals, gates, and fencing. Ice development begins when temperatures drop to consistently below freezing. Ice rinks are plugged, and then flooded to begin the process of building up a solid base of ice usually several inches thick. Once ice has developed to a complete layer and enough thickness, the ice is hot mopped several times to facilitate an even surface, and the rink is open for use.

Parks and Recreation provides daily maintenance of ice-skating rinks at the following locations:

- Tikishla Park - Scotty Gomez Hockey Rink
- Chanshtnu Muldoon Park – Ice Ribbon
- Delaney Park - Hockey Rink
- Delaney Park - Family Skate Rink

Private contractors provide maintenance two or three times a week at the following locations:

- Chester Creek Sports Complex - Bonnie Cusack Memorial Rinks (two rinks)
- Cuddy Family Midtown Park – Speedskating Oval
- Town Square Park – Ice rink (*as funding allows*)

Measurement of lake ice begins in November and continues throughout the season. Once ice thickness reaches 12”, plowing begins, and skating areas are defined. At Westchester Lagoon and Cheney Lake, this includes a large open skating area, two hockey rinks, and an oval/skating ribbon. Once the surface has been plowed and scraped, trucks apply hot water and mop to create a uniform skating surface. Environmental conditions might require that the area is flooded to increase the ice thickness and facilitate a more even surface for hot mopping and skating. Following a snowstorm, the maintenance operations revert to the process of snow removal, surface scraping, and hot mopping the surface. Parks and Recreation also provides burn barrels at Westchester Lagoon that need periodic maintenance and delivery of wood.

Parks and Recreation provides daily maintenance at Westchester Lagoon and Cheney Lake and maintenance one or two times a week at the Cuddy Pond:

- Westchester Lagoon

- Cheney Lake
- Cuddy Family Midtown Park – Pond

## **FACILITY MAINTENANCE**

Anchorage Parks and Recreation manages several facilities, ranging from recreation centers to maintenance buildings. Park maintenance and horticulture teams provide support in making sure that these facilities are safe for staff and the general public to utilize during the winter months.

Facilities open to the public include:

- Kincaid Chalet
- Lidia Selkregg Chalet
- Mann Leiser Greenhouse
- Fairview Recreation Center
- Spenard Recreation Center

Facilities maintained for internal and staff purposes:

- Horticulture Facilities at Russian Jack Springs Park
- North Maintenance Shop
- South Maintenance Shop
- Old City Hall in Peratrovich Park
- Oscar Anderson House/Pioneer School
- Pete’s Gym on the Delaney Park Strip
- Bartlett Pool

Our staff ensures that facilities are in working order and safe for visitation of MOA staff in the following locations

- Goose Lake Shelter (boiler)
- Tikishla Park (boiler)
- Mulcahy (boiler)

Regular checks of these facilities by staff include assessing heating systems in shelters and buildings, checking park lighting systems, and ensuring exits and entrances are free of snow and have sufficient egress for emergency situations. In years with higher levels of snowfall, structures with flat roofs, such as the horticulture facilities at Russian Jack Springs Park, need to be cleared of snow throughout the winter to reduce structural loads.

## **EVENT PREPARATION AND SUPPORT**

Winter brings some of the most anticipated and popular events of the year. This includes Fur Rondy, the Winter Solstice Festival, the Westchester Lagoon Family Skate events, and the Jewel Lake Jamboree. Park maintenance provides critical support to these events that help ensure their success.



Figure 4: (left to right) Winter Solstice at Cuddy Family Midtown Park, Ice Fishing at Jewel Lake, and a Family Skate event at Westchester Lagoon

**Winter Solstice Event:** The Winter Solstice Event at Cuddy Family Midtown Park is an annual event that requires maintenance support to prepare the site for vendors, activities, and the public. Maintenance tasks include parking lot and pathway clearing, hot mopping of the Cuddy Pond, trail grooming, transportation of equipment, burn barrels, and flagging of key infrastructure to minimize the risk of damage.

**Westchester Lagoon Family Skate Events:** Every Saturday in January and February, Parks and Recreation hosts the Westchester Lagoon Family Skate Event. In addition to this, a special Valentine Skate is also held by our recreation staff. Regular ice maintenance and parking lot plowing are completed as ongoing maintenance. Burn barrels are provided and stocked with wood by Parks and Recreation Maintenance. Occasionally, event staff will request assistance in the preparation and breakdown of the events.

**Fur Rendezvous Festival:** Since 1935, “Fur Rondy” has drawn visitors and residents to downtown Anchorage and into our parks. The festival takes place throughout February and into early March. Many of the events occur in parks and require significant support from maintenance staff. Tasks vary from year to year but commonly include parking lot plowing, pushing back snow berms in downtown parks, and the moving of bleachers on the Delaney Park Strip for parades.

**Jewel Lake Jamboree:** The Jewel Lake Jamboree, held annually in early February and hosted by The Bait Shack, is a family-friendly event aimed at bringing families together for a day of ice fishing. With fishing holes, rods, and bait provided, the event offers a welcoming environment for anglers of all ages to enjoy time on the lake. Anchorage Parks and Recreation further supports the event by removing snow and testing ice thickness on Jewel Lake leading up to the event.

## AGENCY COORDINATION

The Parks and Recreation Maintenance Division works closely with the MOA Street Maintenance Division to ensure efficient, coordinated snow removal efforts throughout the winter. Through this collaboration, both teams take shared responsibility for clearing snow from bike paths and pedestrian walkways that connect parks with urban streets.

The two departments have been working together more to maximize efficiency and reduce costs across the overlapping maintenance areas. This includes coordinating the use of snow-clearing equipment as well as collaborating on procurement to streamline operations.

The Anchorage Right of Way (ROW) department also assists with strategic snow removal such as assisting elderly and disabled populations with driveway plow out and encroachments. Anchorage Parks and Recreation has a strong working relationship with the ROW staff to coordinate these special projects and instances.

Finally, public information is shared through joint communication facilitated by the Geospatial Data Information Center (GDIC) and the Information Technology Department (ITD) to keep the community informed about snow removal efforts, closures, and suggested alternative routes.

The Anchorage Parks and Recreation Department hopes to one day develop a multi-agency winter safety campaign to enhance awareness and safety for citizens and those relying on non-motorized paths. This comprehensive approach ensures coordinated, accessible, and safe winter pathways for all.

## CONCLUSION

The Winter Operations Plan for Parks and Recreation (WOPPR) outlines the department's approach to maintaining safe and accessible parks, trails, and recreational facilities throughout the winter months.

This plan defines key maintenance tasks, including snow removal, winter recreation support, sanitation, and event assistance.

*The objectives of the WOPPR include ensuring timely and effective storm response, maintaining standard winter operations, and coordinating with local and state agencies for non-motorized transportation snow removal.*

Cross-departmental collaboration is critical to its success, as it ensures that Anchorage's winter recreational opportunities remain safe and accessible despite the challenges posed by Alaska's dynamic winter conditions. The flexibility of the plan allows it to adapt to varying weather patterns, ensuring consistent and responsive operations.



APPENDIX I: SNOW REMOVAL ROUTE TABLES

**NORTH ROUTE ONE**

<b>DELANEY PARK</b>	9 <sup>th</sup> and 10 <sup>th</sup> Ave. – P to A St. and all cross streets
	9 <sup>th</sup> Ave. – A Street to Cordova St.
<b>FRONTIERLAND</b>	10 <sup>th</sup> Ave. to E St.
	E St. to 11 <sup>th</sup> Ave.
<b>A STREET</b>	Fireweed to 16th Ave
<b>C STREET COUPLET</b>	3rd to Government Hill along C Street bridge
<b>GOVERNMENT HILL</b>	E. Loop Rd. – W. 3 <sup>rd</sup> Ave. to Hollywood Dr., west side
	Hollywood Dr. – Ivy St. to E. Loop Rd., north side
	Hollywood Dr. – E. Loop Rd. to Elm St., south side
	E. Bluff Rd. – Overpass to Kumquat Pl., north side
	E. Bluff Rd. – E. Loop Rd. to Richardson Vista Rd., south side
	E. Bluff Rd. – Overpass to Erickson St., north side
	Suzan Nightingale – trail through park
<b>SHIP CREEK TRAIL</b>	C St. to Tyson Elementary
<b>MT VIEW DRIVE</b>	Glenn Hwy. to Commercial Dr., both sides
<b>LOUIS MIZELLE</b>	N.Bunn to N.Lane
<b>DULDIDA PARK</b>	Throughout the park
<b>WILLIAM B. LYONS</b>	Throughout the park
<b>MCPHEE PARK</b>	Throughout the park
<b>DAVIS HWY</b>	N. Pine St. to Boniface Pkwy. through tunnels
	Boniface Pkwy. to Base, both sides

**NORTH ROUTE TWO**

<b>DAVE ROSE PARK</b>	Throughout the park
<b>WONDER PARK CORRIDOR</b>	4 <sup>th</sup> Ave. to 6 <sup>th</sup> Ave.
<b>RJSP - POLAR BEAR</b>	6th & Pine, through park, sidewalks to ski trail head
<b>PINE ST &amp; DEBARR</b>	Pine St. & DeBarr to ski trail, east side
<b>E 20TH AVE</b>	E. 20 <sup>th</sup> & Russian Jack Elementary to Reka Dr.
<b>NICHOLS SPUR TRAIL</b>	Bragaw St. & 20 <sup>th</sup> Ave. to Nichols St.
<b>ARC SPUR TRAIL</b>	Nichols St. to Northern Lights Blvd. and crosswalk
<b>E NORTHERN LIGHTS</b>	Chugach Substation to Wesleyan Dr. South side N.Lights
<b>MULDOON FITNESS TRAIL</b>	Muldoon to Patterson
<b>PATTERSON TRAIL</b>	Chester Valley Elementary to E. Northern Lights Blvd & offshoots
<b>MULDOON OVERPASS</b>	both sides, 36th & Muldoon to overpass
<b>CHUGACH FOOTHILLS</b>	36 <sup>th</sup> Ave. through Chugach Foothills Park
<b>SCENIC PARK TRAIL</b>	36th Ave to Scenic Park Elementary

<b>CHANSHTNU PARK</b>	All trails through and between upper & lower parks
<b>CREEKSIDE PARK TRAIL</b>	10 <sup>th</sup> Ave to 6 <sup>th</sup> Ave & offshoots
<b>NUNAKA WEST</b>	Boniface & Perry to 20 <sup>th</sup> Ave. East side of Boniface
<b>NUNAKA SOUTH</b>	Craig St. by elementary school through park to Beaver St.
<b>NUNAKA NORTH</b>	Beaver St. to Atkinson Dr.

<b>NORTH SPECIAL AREAS</b>	
<b>SITKA PARK</b>	15th & Orca through Sitka Park

### SOUTH ROUTE ONE

<b>JOHNS PARK</b>	Bree - Timberlane & throughout park
<b>KFQD</b>	Bayshore Drive - Admiralty Bay Drive
<b>CRANBERRY ST.</b>	90th north to Boom Circle
<b>P.J. LOWERY</b>	Arlene - Ascot - Northwood
<b>SAND LAKE</b>	Caravel – Dock Area
<b>MICHAEL SHIBE</b>	Linden Street - W. 71st, 71st - W. 72nd. & offshoot to Brandywine St.
<b>POP CARR</b>	All trails throughout park
<b>RED BRIDGE</b>	Taft St. to 45th
<b>FISH CREEK TRAIL</b>	Northwood to 32nd. & all offshoots (including Woodland & Barbara Park)
<b>TAKU LAKE PARK</b>	C St. from Dimond into Taku and back out to C St.
<b>NEW SEWARD</b>	Dimond Blvd - Scooter Ave (North side offshoot to Old Swd.) (South side offshoot from Old Seward) Scooter Ave-Omalley & Old Swd.)

### SOUTH ROUTE TWO

<b>KLATT</b>	Klatt @ Johns Rd. - Old Seward Hwy (South side) East Klatt - Labar Street (Industry Way)
<b>HUFFMAN</b>	Old Seward to Brayton (North & South side) Brayton to Elmore (South side)
<b>ELMORE</b>	Huffman to DeArmoun (West side)
<b>DEARMOUN</b>	McDonald Rd. - Old Seward (North side)
<b>BRAYTON</b>	DeArmoun Rd. - Legacy Drive
<b>RABBIT CREEK</b>	Tradewind Drive - Westwind Drive Seafarer Loop - Rabbit Creek Elementary
<b>HAMILTON PARK</b>	Specking Ave. - Elmhurst Drive
<b>DEARMOUN</b>	Old Seward - Lake Otis (South side)
<b>BIRCH</b>	DeArmoun & Crestview Dr. - Omalley Road Omalley Rd heading East to Roakcridge Dr. West side of Rockridge Dr. into Forsythe Park

<p><b>ABBOTT</b></p>	<p>Omalley Rd. - Abbott Rd. (only one side of overpass bridge crossing Abbott)</p> <p>Trailside Elementary - Abbott Rd.</p> <p>From Service High School entrance - Lake Otis (North side)</p>
<p><b>SOUTH SPECIAL AREAS</b></p>	
<p><b>CUDDY PARK</b></p>	<p>All throughout park - reference ArcGIS</p>

## APPENDIX II: GROOMING CALCULATION

The following calculations and assumptions pertain to grooming the **Coastal Trail**, characterized by its minimal spurs, flat terrain, sparse vegetation, and straightforward maintenance requirements. In contrast, trails like those in **Russian Jack Springs Park** demand additional expertise and multiple passes at reduced speeds, leading to increased costs per mile.

### ASSUMPTIONS:

#### Summary:

- Employee Hourly Rate: \$50/hour
- Grooming Time: 5 hours for 11 miles
- Travel and Prep Time: 2 hours per trip

#### Grooming Sessions per Year:

- Assuming 50 sessions per year
- Maintenance Costs: \$1,000 per season

#### Equipment:

- Ginsu Groomer: \$10,000
- Snowmachine: \$20,000

#### Fuel:

- Fuel Efficiency: 10 miles per gallon
- Fuel Cost: \$4 per gallon

### CALCULATIONS:

#### Employee Labor Costs:

- Grooming Time: 5 hours  $\times$  \$50/hour = \$250
- Travel and Prep Time: 2 hours  $\times$  \$50/hour = \$100
- Total Labor Cost per Session: \$250 + \$100 = \$350

#### Equipment Costs:

- Total Equipment Cost: \$10,000 (Ginsu) + \$20,000 (Snowmachine) = \$30,000
- Annual Depreciation: \$30,000 / 5 years = \$6,000 per year
- Depreciation per Session: \$6,000 / 50 sessions = \$120

#### Maintenance Costs:

- Maintenance per Session: \$1,000 / 50 sessions = \$20

#### Fuel Costs:

- Total Miles (including travel): 11 miles (trail) + 11 miles (return) = 22 miles
- Fuel Consumption: 22 miles / 10 mpg = 2.2 gallons
- Fuel Cost per Session: 2.2 gallons  $\times$  \$4/gallon = \$8.80

### SUMMARY TABLE:

EXPENSE CATEGORY	COST PER SESSION (\$)
LABOR	350
EQUIPMENT DEPRECIATION	120
MAINTENANCE	20
FUEL	8.80
TOTAL COST PER PERSON PER SESSION	498.80

### **COST PER MILE:**

- Cost per Person per Session: \$498.80
- Cost per Person per Mile: \$498.80 / 11 miles ≈ \$45.35 per mile

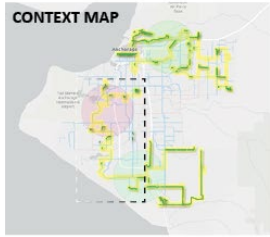
### **FINAL ESTIMATE:**

Grooming the 11-mile Coastal Trail (with an 11-mile return) is estimated to cost approximately \$498.80, equating to about \$45.35 per mile. **Each trip requires two staff members, which then equals \$90.70 per session.**

Note: These calculations are based on the provided assumptions. Actual costs may vary depending on specific operational details and efficiencies.

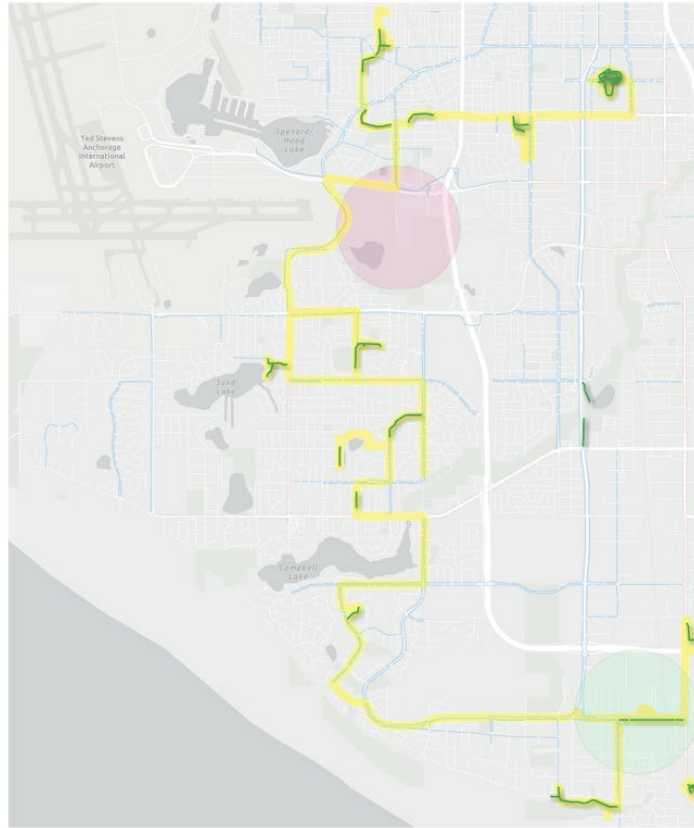
For trails like those in Russian Jack Springs Park, which require additional expertise and multiple passes at reduced speeds, the investment per mile is higher due to increased labor and equipment usage.

# APPENDIX II: SNOW REMOVAL ROUTES MAPPED

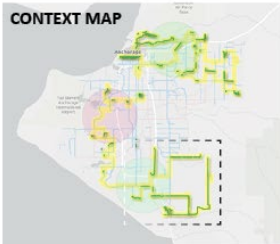


### LEGEND

- Street Maintenance
  - AKDOT
  - Parks Snow Removal
  - Parks Trackless Routing
  - Other
- Parks South Facility
- Street Maintenance Facility

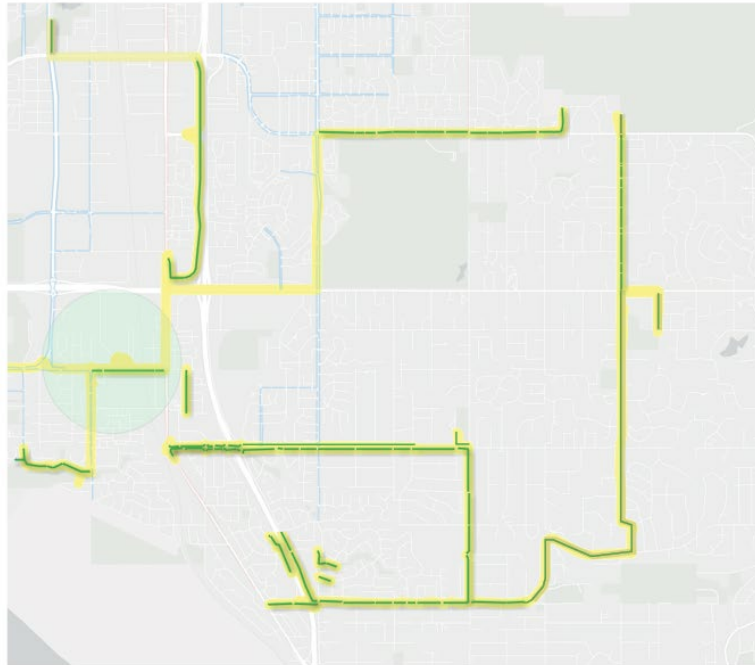


## SOUTH TRACKLESS ROUTE ONE

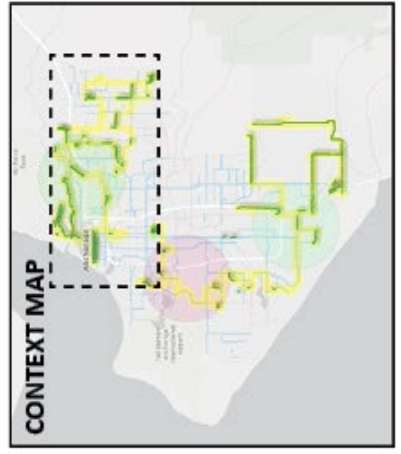
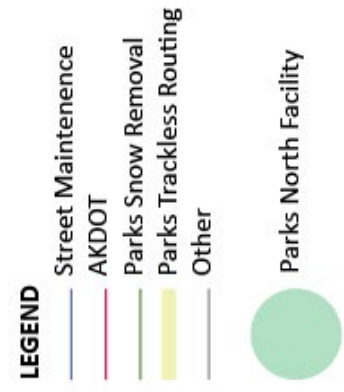
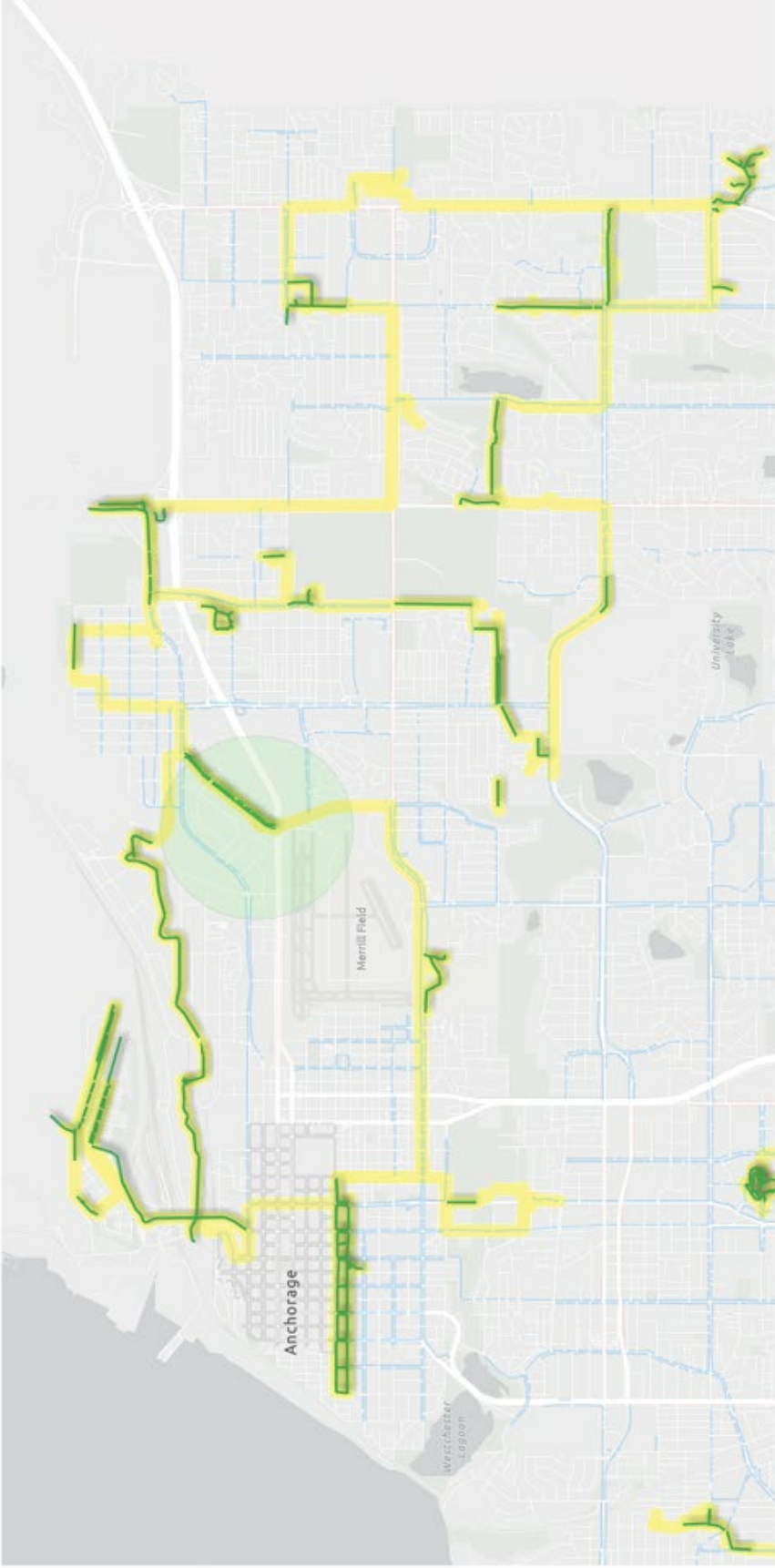


### LEGEND

- Street Maintenance
  - AKDOT
  - Parks Snow Removal
  - Parks Trackless Routing
  - Other
- Parks South Facility



## SOUTH TRACKLESS ROUTE TWO



# NORTH TRACKLESS ROUTES ONE & TWO

## APPENDIX III: GUIDELINES FOR ICE THICKNESS AND SAFETY CONSIDERATIONS

Maintaining safe ice conditions is essential for public safety during winter operations. Several factors impact the stability and strength of ice, such as temperature, snow cover, water currents, springs, and fish. Ice thickness can vary widely across the same body of water—it may be two feet thick in one spot and only an inch thick a few yards away. The following guidelines give general recommendations for ice thickness required to support different loads. These apply only to clear, solid ice; white or slushy ice needs extra thickness due to its reduced strength.





## Recommended Ice Thickness for Load Bearing\*

LOAD TYPE	MINIMUM ICE THICKNESS (INCHES)
ICE FISHING OR OTHER ACTIVITIES ON FOOT	4 inches
SNOMOBILE OR SMALL ATV	5 - 7 inches
PASSENGER CAR (2-TON GROSS)	9 - 10 inches
LIGHT TRUCK (2.5-TON GROSS)	11 - 12 inches
MEDIUM TRUCK	13 inches
HEAVY TRUCK	16 - 17 inches

\*General ice thickness guidelines. Minnesota Department of Natural Resources. (2023, March 1).

<https://www.dnr.state.mn.us/safety/ice/thickness.html>



**Note:** These recommendations are for clear, sound ice only. Ice thickness should be doubled for white ice conditions, as white ice (formed when snow melts and refreezes on top of lake ice) is only about half as strong as new, clear ice.

**Example Application:** For example, if the ice is comprised of 10 inches of white ice and 6 inches of clear ice, the effective strength is approximately 11 inches of clear ice. This thickness would support a passenger car but would not support a vehicle with a gross weight of 7-8 tons. Note that these guidelines do not apply to stationary, parked loads.

**Safety Considerations** Beyond thickness, other environmental factors can influence ice safety, including:

- Sun, shade, air temperature, and wind exposure
- Snow cover and ice surface conditions
- Streams, springs, or narrow channels that may weaken ice

Dispersing load for safety to maximize safety on ice, always aim to distribute weight over a larger area to reduce localized stress.

## APPENDIX IV: LIST OF SNOW EQUIPMENT

DIVISON	AMOUNT	DESCRIPTION
MAINTENANCE	4	Trackless w/ blower head + (2) Scraper attachments
MAINTENANCE	12-14	Trucks w/ Boss V Plow for parking lots
MAINTENANCE	3-4	Trucks w/ Snoway Plow for rinks and lakes
MAINTENANCE	2	John Deere 420 Tractor with scrape blades & broadcasters
HORTICULTURE	1	John Deere 311 Tractor with blower head
MAINTENANCE	1	Argo w/ Plow
MAINTENANCE	1	Toolcat 5600 w/ blower head, bucket, and broadcaster
MAINTENANCE	1	John Deere 304J Loader with V Plow, snow bucket, and bucket
MAINTENANCE	1	Cat 420F Backhoe with bucket
HORTICULTURE	1	Bobcat skid steer with bucket
MAINTENANCE	1	Vermeer ATX530 Mini Articulated Loader
MAINTENANCE	6	Trucks with water tanks and hot mops
MAINTENANCE	1	Thompson Ice Edger
MAINTENANCE	1-2	Trucks with Broadcasters/Sanders
MAINTENANCE	1	Bosch Jack Hammer
MAINTENANCE	4-8	Skidoo Snow machines
MAINTENANCE	3	Snow Machine Grooming Attachment - Ginsu
MAINTENANCE	4-5	Snow Machine Grooming Attachment - Colorado
MAINTENANCE	4-6	Snow Machine Grooming Attachment - Roller
MAINTENANCE	2-4	Snow Machine Grooming Attachment - Sled
MAINTENANCE	8-10	Walk behind snow blowers
MAINTENANCE/HORTICULTURE	Various	Stihl backpack blowers
MAINTENANCE/HORTICULTURE	Various	Stihl Chainsaws
MAINTENANCE/HORTICULTURE	Various	Water Pumps
MAINTENANCE/HORTICULTURE	Various	Generators
MAINTENANCE/HORTICULTURE	Various	Shovels
MAINTENANCE/HORTICULTURE	Various	Ice Chippers
MAINTENANCE/HORTICULTURE	Various	Pry Bars
MAINTENANCE/HORTICULTURE	Various	Hand/push broadcast spreaders
MAINTENANCE/HORTICULTURE	Various	Hand pull behind sleds
MAINTENANCE/HORTICULTURE	Various	Torches (hand held & weed burners)
MAINTENANCE/HORTICULTURE	Various	Drills with auger bits to take ice depths

**APPENDIX V: STAIRS AND WALKWALKS**

**NORTH - STAIRS AND WALKWAYS – ALL HANDS**

<i>PRIORITY</i>	<i>LOCATION</i>	<i>SPECIAL INSTRUCTIONS</i>
1	<b>FAIRVIEW REC CENTER</b>	Perimeter of block. All doors and fire exits. Landing and steps to bus top.
2	<b>BEN CRAWFORD / PIONEER SCHOOL</b>	All walks and stairs around building, including walk between building and wheel stops.
2	<b>ELDERBERRY / ANDERSON HOUSE</b>	All walks around and through park. East and west all around Anderson House

**NORTH - STAIRS AND WALKWAYS - ROUTE 1/WEST**

<i>PRIORITY</i>	<i>LOCATION</i>	<i>SPECIAL INSTRUCTIONS</i>
1	<b>FAIRVIEW REC CENTER</b>	Perimeter of block. All doors and fire exits. Landing and steps to bus top.
2	<b>BEN CRAWFORD / PIONEER SCHOOL</b>	All walks and stairs around building, including walk between building and wheel stops.
2	<b>ELDERBERRY / ANDERSON HOUSE</b>	All walks around and through park. East and west all around Anderson House
3	<b>SHIP CREEK OVERLOOK</b>	Observation deck-
1	<b>DELANEY VET MEMORIAL</b>	East side steps and top around pole, all walkways, paths, steps -- no salt or ice melt, sand only
2	<b>MARTIN LUTHER KING MEMORIAL</b>	Entire memorial and all pathways
1	<b>SUNSET PLAZA (TEQUILA 61)</b>	Entire platform, around planters. Push ALL snow into road for streets to take away.
2	<b>PERATROVICH PARK</b>	Around front doors, sidewalks up to building down to 4th. Delineiated section along side walk
3	<b>VALLEY OF THE MOON</b>	Clear dog park gates so they can open
1	<b>FAIRVIEW REC CENTER</b>	Perimeter of block. All doors and fire exits. Landing and steps to bus top.
2	<b>BEN CRAWFORD / PIONEER SCHOOL</b>	All walks and stairs around building, including walk between building and wheel stops.
2	<b>ELDERBERRY / ANDERSON HOUSE</b>	All walks around and through park. East and west all around Anderson House

**NORTH - STAIRS AND WALKWAYS - ROUTE TWO/EAST**

<i>PRIORITY</i>	<i>LOCATION</i>	<i>SPECIAL INSTRUCTIONS</i>
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1	<b>BARTLETT POOL</b>	Pool building only. Walk on west side, ALL doors and stairs to fire exits. Plow around to back entrance
1	<b>CREEKSIDE PARK STAIRS</b>	Stairs and walk to Jordt. Also at bottom of stairs 20' out for Trackless to back into
1	<b>PTARMIGAN ELEMENTARY</b>	Entire path East to West - (Norman-Staedem stairs) Do not blow snow of fencing
1	<b>PTARMIGAN ELEMENTARY</b>	Pathway to school from Towne CT.
1	<b>BAXTER RAMP</b>	Ramp at crosswalk on west side of Baxter. Walkway to Donington.
2	<b>LOWER CHANSHTNU</b>	ALL surrounding areas to the park and rink- under the benches cleared.
3	<b>UPPER CHANSHTNU</b>	Clear dog park gates so they can open
2	<b>RUSSIAN JACK - LIDIA SELKREGG CHALET</b>	Doors, ramps, steps and patio to east of the chalet; pull snow away from building.
3	<b>BRAGAW TUNNEL</b>	Stairs and 10 x 10 platform at bottom of stairs
3	<b>PINE ST. &amp; 6TH AVE.</b>	Little stair set off 6th Ave.
1	<b>BARTLETT POOL</b>	Pool building only. Walk on west side, ALL doors and stairs to fire exits. Plow around to back entrance
1	<b>CREEKSIDE PARK STAIRS</b>	Stairs and walk to Jordt. Also at bottom of stairs 20' out for Trackless to back into

### SOUTH - STAIRS AND WALKWAYS - ALL

<i>PRIORITY</i>	<i>LOCATION</i>	<i>SPECIAL INSTRUCTIONS</i>
1	<b>KINCAID CHALET</b>	Stairs & Sidewalks - Exits and walkways around Chalet and "Waxing" Bunker. ALL HANDS
1	<b>SPENARD REC CENTER</b>	Sidewalks & Exits (north & south of building)
1	<b>NORTHWOOD ELEMENTARY</b>	Stairs - Northwood @ Aspen - Clean entrance, top and bottom leading to streets, and other walkways
1	<b>RABBIT CREEK OVERPASS</b>	path from landing to trail, both sides
3	<b>WALDRON TUNNEL</b>	Stairs - E. side Lake Otis Blvd @ Waldron Dr
1	<b>I STREET &amp; 16TH AVE</b>	16 <sup>th</sup> to Stairs - Clean Approaches, top and bottom leading to streets, or other walkways
1	<b>12TH AVE &amp; "P" STREET</b>	Stairs - Clean Approaches, top and bottom leading to streets, or other walkways
2	<b>A"" STREET &amp; 22ND AVE</b>	Stairs W. Side of "A" Street
2	<b>"A" STREET &amp; 15TH AVE</b>	Stairs - East Side of "A" Street & path to 15 <sup>th</sup> ave.
2	<b>QUIYANA STAIRS</b>	Upper and lower set of stairs through the center of park
2	<b>EISENHOWER MEMORIAL</b>	Entire memorial platforms and pathways

2	<b>3rd &amp; H STREET STAIRS</b>	Stairs and handicap ramp at the bottom
2	<b>HOSTETLER MEMORIAL</b>	Sidewalk from alley on 3rd around corner to parking lot on L St. & Memorial pathway- no salt and sand
2	<b>RESOLUTION OVERLOOK</b>	Upper deck and sidewalk along 3rd, and L St. along wooden fence
3	<b>WHISPER FAITH KOVACH PARK</b>	Gates to the dog park
3	<b>ARCTIC BENSON</b>	Gates to the dog park
3	<b>SOUTH ANCHORAGE SPORTS PARK</b>	All entrances & exits, around buildings, prep for snow removal in yard
3	<b>SOUTH MAINTENANCE SHOP</b>	Gates, and all "Person Doors"
1	<b>KINCAID CHALET</b>	Stairs & Sidewalks - Exits and walkways around Chalet and "Waxing" Bunker. ALL HANDS
1	<b>SPENARD REC CENTER</b>	Sidewalks & Exits (north & south of building)
1	<b>NORTHWOOD ELEMENTARY</b>	Stairs - Northwood @ Aspen - Clean entrance, top and bottom leading to streets, and other walkways
1	<b>RABBIT CREEK OVERPASS</b>	path from landing to trail, both sides
3	<b>WALDRON TUNNEL</b>	Stairs - E. side Lake Otis Blvd @ Waldron Dr
1	<b>I STREET &amp; 16TH AVE</b>	16 <sup>th</sup> to Stairs - Clean Approaches, top and bottom leading to streets, or other walkways
1	<b>12TH AVE &amp; "P" STREET</b>	Stairs - Clean Approaches, top and bottom leading to streets, or other walkways
2	<b>A"" STREET &amp; 22ND AVE</b>	Stairs W. Side of "A" Street
2	<b>"A" STREET &amp; 15TH AVE</b>	Stairs - East Side of "A" Street & path to 15 <sup>th</sup> ave.
2	<b>QUIYANA STAIRS</b>	Upper and lower set of stairs through the center of park
2	<b>EISENHOWER MEMORIAL</b>	Entire memorial platforms and pathways
2	<b>3rd &amp; H STREET STAIRS</b>	Stairs and handicap ramp at the bottom
2	<b>HOSTETLER MEMORIAL</b>	Sidewalk from alley on 3rd around corner to parking lot on L St. & Memorial pathway- no salt and sand

**APPENDIX VI: LIST PARKING LOTS MAINTAINED IN WINTER**

**NORTH – ROUTE ONE (EAST SIDE)**

<b>PRIORITY</b>	<b>LOCATION</b>
2	CHENEY LAKE PARK
1	RUSSIAN JACK CHALET - SELKREGG DRIVE (HORT)
2	GOOSE LAKE PARK
1	UNIVERSITY LAKE PARK
3	ARNOLD MULDOON PARK
1	LOWER CHANSHTNU MULDOON PARK
1	UPPER CHANSHTNU MULDOON PARK
3	PENA - SATELITE ONLY
2	CHUGACH FOOTHILLS PARK
2	RUSSIAN JACK - POLAR BEAR
2	FAR NORTH BICENTENNIAL
2	FAR NORTH- NORTH BIVOUAC
2	FAR NORTH- SOUTH BIVOUAC
2	NUNAKA VALLEY SOUTH - (MORE ST)
2	NUNAKA VALLEY SOUTH - (ATKINSON DR)
2	NUNAKA VALLEY SOUTH - (CRAIG DR)
3	DAVENPORT FIELDS
3	DAVIS PARK EAST
3	DAVIS PARK WEST
3	CENTENNIAL CAMPGROUND (REQUEST)
3	NORTH MAINTENANCE YARD
2	CHENEY LAKE PARK
1	RUSSIAN JACK CHALET - SELKREGG DRIVE (HORT)
2	GOOSE LAKE PARK
1	UNIVERSITY LAKE PARK
3	ARNOLD MULDOON PARK
1	LOWER CHANSHTNU MULDOON PARK
1	UPPER CHANSHTNU MULDOON PARK
3	PENA - SATELITE ONLY
2	CHUGACH FOOTHILLS PARK
2	RUSSIAN JACK - POLAR BEAR

**NORTH – ROUTE TWO (WEST SIDE)**

<b>PRIORITY</b>	<b>LOCATION</b>
1	VALLEY OF THE MOON PARK
2	CUDDY FAMILY MIDTOWN PARK

2	DAVID GREEN PARK
1	BEN CRAWFORD / PIONEER SCHOOL
1	FAIRVIEW RECREATION CENTER
2	FAIRVIEW LIONS
2	EASTCHESTER / WOODSIDE PARK
2	SITKA PARK
1	TIKISHLA PARK
2	WESTCHESTER - SPENARD (DUCK POND)
3	SHIP CREEK OVERLOOK
2	HARVARD PARK
2	SUZAN NIGHTINGALE MCKAY PARK
2	SUNSET PARK
3	K-FIELDS PARKING LOT
3	K-FIELDS CULDESAC
3	NORTH MAINTENANCE YARD
1	TOWNSQAURE (W/ STAIRS & WALKWAYS)

#### SOUTH – ROUTE ONE (NORTH SIDE)

<b>PRIORITY</b>	<b>LOCATION</b>
1	KINCAID PARK - CHALET (UPPER LOT)
3	KINCAID PARK - CHALET TO BUNKERS
1	KINCAID PARK - STADIUM (LOWER LOT)
2	KINCAID PARK- WORLDCUP START ROAD
1	KINCAID PARK - RASPBERRY LOT
3	KINCAID PARK - LITTLE CAMPBELL LAKE
2	KINCAID PARK- JODHPUR
2	POINT WORONZOF
2	EARTHQUAKE PARK
2	LYN ARY PARK
2	BALTO SEPPALA PARK
3	SPENARD LAKE PARK
3	FISH CREEK PARK
3	WOODLAND PARK
3	WEST HIGH OVERLOOK
3	WEST HIGH POOL
1	WESTCHESTER LAGOON (EAST)
1	WESTCHESTER LAGOON (WEST)
2	SPRINGER PARK
3	CAMPBELL CREEK PARK
2	WHISPER FAITH KOVACH PARK
3	SOUTH MAINTENANCE YARD

**SOUTH – ROUTE TWO (SOUTH SIDE)**

<b>PRIORITY</b>	<b>LOCATION</b>
1	SPENARD RECREATION CENTER
1	CONNORS BOG
2	DELONG LAKE
2	JEWEL LAKE (88TH AVE)
2	EMERALD HILLS (DIMOND PLAY FIELD)
2	JEWEL LAKE (DIMOND BLVD)
3	CAMPBELL CREEK ESTUARY
2	TAKU LAKE PARK (STORMY PL)
2	TAKU LAKE PARK (76TH AVE)
3	BITNER HOUSE
2	CHUCK ALBRECHT FIELDS
2	ABBOTT LOOP COMMUNITY PARK
2	RUTH ARCAND
1	HILLSIDE TRAILHEAD
3	HILLTOP PARKING LOT
2	FORSYTHE (BIRCH RD)
2	FORSYTHE (ROCKRIDGE ROAD)
3	CROSS PARK
3	STORCK PARK
2	SOUTH ANCHORAGE SPORTS PARK
3	SOUTH MAINTENANCE YARD



## APPENDIX VII: RECOMMENDATIONS FOR OPERATING DURING OUTDOOR PUBLIC WINTER EVENTS

Anchorage Parks and Recreation hosts various winter events. To prioritize safety for staff and the public, we have developed temperature-based operational guidelines. The following scenario focuses on the Westchester Lagoon Saturday Skate but can be applied to other winter events. Please note the temperature scale should take into account the reported windchill for that day.

<b>Temperature</b>	<b>Event Details</b>
<b>Above 10°</b>	Staff will run a normal event
	Two members of staff both working unless taking a break
	All event equipment will be placed out
	Seals will be used with seal cards
	Ice skates available for use
	Live Music will be at the event
	Food Trucks, if scheduled, will be at the event
<b>0° to 10°</b>	Hot drinks will be provided
	Staff will run a modified
	Staff will be present, using rotating schedule for warming up.
	All event equipment will be placed out (tents, tables, benches, rugs, etc)
	Seals will be released freely, must have own helmet
	The use of ice skates will be determined on the day of the event
	Music will be available as vendor/equipment allows
Food trucks will be available as vendor/equipment allows	
<b>-10° to -20°</b>	Hot drinks will be provided
	Staff will run a modified
	Lead staff will be present with second staff to set up
	Partial equipment setup including one beverage table, rug and trash can
	Seals and benches may be left if staff chooses, must have own helmet
	No ice skates
	Music, if scheduled, will be determined by vendor
No food trucks, unless vendor agrees to operate	
<b>-20° and below</b>	One table will be set out with hot drinks
	<i>Event cancelled</i>