## CITY OF SPARKS 2020 - 2021 SNOW and ICE CONTROL PLAN





Prepared by:

**Public Works Maintenance Division** 



## **Snow & Ice Control Plan**



## CITY OF SPARKS PUBLIC WORKS MAINTENANCE DIVISION

#### **SNOW & ICE CONTROL PLAN**

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# SNOW & ICE CONTROL PROCEDURES

#### **Snow & Ice Control Procedures**

#### <u>Purpose</u>

The purpose of this plan is to annually review the snow and ice control procedures, guidelines and methods to ensure all work is performed in a safe, efficient, and environmentally sound manner. The outcome of this planning effort is to provide safe and accessible travel on priority streets within the City of Sparks during snow and ice

events. Finally, because the Truckee Meadows is considered a non-attainment area for air quality, the annual plan must be designed to meet the 2004 District Board of Health regulations governing air quality management.

#### **Background**

The City of Sparks roadway network consists of 736 lane miles and is divided into 6 snow routes. Priority is given to arterial and collector streets along with school zones and bus routes. Residential streets generally are not sanded and/or plowed during average snow events due to the level of effort and resources needed on Priority 1 and Priority 2 roadways. During major or emergency snow events, residential streets are cleared as resources become available.

#### **Snow and Ice Control Crews**

Each year (October through March), the Public Works Manager and Maintenance Crew Supervisors begin the daily monitoring of weather forecasts for any approaching winter storms. Based on the forecast, they will determine the necessary requirements for staffing and equipment. Depending on the size of the storm, work shifts can be changed, or crews may work alternating 12-hour shifts in order to provide safe, efficient, and effective snow and ice control for each storm event. Generally, a crew will consist of one crew supervisor, seven truck drivers and one mechanic.

#### **Average Storm Events**

During an average snowstorm, one truck will be assigned in each of the designated snow routes to spread sand & salt mixture and/or plow. (See IV. Weather Monitoring & History.) In addition, a rover truck will be assigned to the route(s) with heavier accumulations of snow and respond to calls from Sparks Police Dispatch. During certain conditions, the plow trucks will be assigned to plow priority one main routes in echelon or staggered formation to expedite clearing those roads.

#### Major/Emergency Storm Events

During periods of heavy snow accumulation, crew supervisors and crews will work alternating 12-hour shifts. Each crew will consist of one crew supervisor, seven truck drivers, one heavy equipment operator and one mechanic. In addition to the field staff, the Maintenance Services Center will be staffed with administrative personnel on each shift to support field operations. When possible, the alternating 12-hour shifts will be from 12:00 a.m. to 12:00 p.m. and 12:00 p.m. to 12:00 a.m. with the rotation continuing until the storm event is over and roadways are clear. When the snow depth has reached six inches with a forecast of continued snow, the City Manager or his designee will make the determination to hire contractors. In cases where the snow depth has reached ten inches, the City Manager or his designee will consider declaring a Snow Emergency.

#### **Use of Contractors During Major Storm Events**

When the City Manager has authorized the use of contractors to assist in snow removal, Public Works Engineering and Maintenance will coordinate city and contractor efforts through the use of strike teams. Strike teams clearing major routes will generally be made up of one Public Works strike team leader, one Public Works truck driver with snow plow/sander, and contracted equipment including two motor graders and two front-end loaders with equipment operators. The strike teams will clear all Priority 1 snow routes first. After the Priority 1 roadways are cleared, the strike team leaders will realign the strike teams to include one Public Works plow/sander working with one contracted motor grader and front-end loader with operators. The strike teams will start clearing Priority 2 roadways and residential streets in the higher elevations working toward the lower elevations. The severity of the storm, available funding and resources will determine the number of streets cleared in residential areas.

#### **Declared Snow Emergency**

The Inter-local Agreement for Emergency Snow Removal Plan gives local jurisdictions, including the City of Sparks, the ability to coordinate resources in the event of a snow emergency. (See III. Inter-local Agreement.) When weather conditions severely impede vehicular traffic in the Truckee Meadows, the County and City Managers can jointly declare a snow emergency. The three agencies can then pool resources to ensure the continuation of emergency and public safety agency operations on designated snow routes. The Regional Snow Routes include those streets which are major routes carrying heavy traffic volumes, provide primary access, or are otherwise essential for rapid movement and response to the community by emergency vehicles.

#### **Emergency Operations Center (EOC) Activation**

Anytime a storm event exceeds or has the potential to exceed the capabilities of the Maintenance Division resources and additional support staff is required, the City Manager or his designee will be informed, and a decision will be made to activate the Emergency Operations Center. During a Public Works event, the EOC will be staffed with an EOC Director designated by the City Manager, an Operations Section Chief, a Planning Section Chief from Public Works, and additional EOC staff as required. The EOC hours of operation will be determined by the level of support required for the event.

#### **Information/Communication**

During average storm events the Maintenance Manager and/or Maintenance Crew Supervisors will notify and update the City Manager, Assistant City Managers, Assistant Community Services Director & City Engineer, Emergency Manager, and Public Information Officer of snow and ice control operations. When the Emergency

Operations Center is activated, supervisors and/or strike team leaders will keep the Operations Section Chief informed of snow and ice control field operations and provide the EOC with an Operating Period Resource List at the start of each shift. The Operation Section Chief will keep the EOC Director, Assistant Community Services Director & City Engineer, Emergency Manager, and Public Information Officer informed of field operations and prepare an Incident Action Plan (IAP) for each operational period. The Public Information Officer will provide press releases to keep the public and elected officials informed during the event.

#### **Available Equipment and Staff**

Public Works has a total of eleven dump trucks with sand spreaders and snowplows. (See V. Equipment.) This includes six 10 cubic yard (CY) dump trucks, one multifunction 10 yard "hook" truck equipped with sander, brine applicator, front plow and bottom mounted ice scraper, two 5 CY dump trucks and two one-ton dump trucks that are equipped with salt spreaders and plows, and the 10 CY asphalt patch truck is capable of spreading sand and can be used as a backup. Also available are four front-end loaders, three bobcat loaders, one skip loader and three quads with v-plow. There are 48 Public Works and Parks maintenance employees trained and qualified to operate snowplows and 8 employees trained and qualified to operate heavy equipment. There are 5 equipment mechanics to support snow and ice control operations.

#### **Material Sites**

The City of Sparks has a main material site and two satellite material sites for the storage and distribution of deicing materials. (See VII. Material Sites map.) The main material site is located at Gandolfo Arena off Vista Blvd. This main material site generally has stockpiles to include 1000 tons of mixed sand and salt, 1000 tons of straight sand and 60 tons of straight salt. The second material site at the Maintenance Services Center, located at 215 South 21st Street, has storage capacity for 100 tons of mixed sand and salt. The third material site at Golden Eagle maintenance yard off Vista Blvd. has the storage capacity for 100 tons of mixed sand and salt. A front-end loader will be located at each site for loading materials. In addition to the City of Sparks material sites, there is one Washoe County material site located at the Lazy 5 Regional Park on Pyramid Highway and an NDOT material site on Galletti Way. These sites can be used by the City of Sparks during storm events.

#### **Sanding and Plowing Procedures**

Snow and ice control material for sanding and plowing operations includes Brine and a mixture of sand and salt. The sand and salt are mixed one-part salt to three parts sand. Trucks with manual controls for adjusting the amount of sand/salt put down on the

streets will be calibrated at the beginning of each season and checked monthly. When a major storm has been forecasted for the Northern Nevada area, crews will be divided into two shifts. During average snow events or conditions that cause slick roads, crews will be scheduled to allow for sanding and/or plowing before morning and/or afternoon commutes. For those storms that are not in the forecast and no crews are scheduled, Public Works relies on Sparks Police Dispatch to advise and/or request snow and ice control. Crew supervisors will assign each truck driver a snow route. During all storm events, Sparks Police Dispatch will be contacted by the crew supervisor once the crew is on the road and trucks are available for response. Each designated snow route identifies where sand and salt will be spread on each street. The focus is to spread sand and salt in the areas leading up to intersections, curves and hills. The use of snowplows will be determined by the crew supervisor and truck drivers; this is generally when the accumulated snow depth reaches 3 or more inches. Truck drivers will focus on sanding and plowing Priority 1 and Priority 2 roadways. During scheduled school days, they will also focus on sanding and/or plowing school zones before the start of school. Drivers will plow from the center or inside lanes to the curb side. Sanding and/or plowing will continue until the storm has ended and all Priority 1 and Priority 2 roadways are cleared and safe. (See VI. Snow Routes maps.)

Using weather forecasting, crews will be assigned to pretreat Priority 1 and Priority 2 roadways with a saltwater brine solution 24 to 48 hours in advance of storm. Brine will be applied at a rate of 50 gallons per lane mile. Application equipment consists of (5) (4) 10 cubic yard dump trucks equipped with 1800-gallon tanks, one multi-use hook truck with an 1800 gallon tank, and (2) 10 cubic yard dump trucks equipped with 1400-gallon combination spreader units.

#### Level of Service

During average storm events, Priority 1 and Priority 2 roadways will be sanded and/or plowed within six hours. During major or emergency storm events, Priority 1 and Priority 2 roadways will be cleared and sanded by strike teams within 12 to 14 hours.

#### **Post Storm Procedures**

At the completion of the storm event, the material storage bins at the Maintenance Services Center and Golden Eagle maintenance yard will be restocked with mixed sand and salt. The drivers will wash, grease and complete maintenance on all snow and ice control equipment. In the event of any equipment malfunction, the drivers will fill out a vehicle repair slip and immediately notify Equipment Services and the crew supervisor. This notification will expedite repairs on the snow and ice control equipment prior to the next storm event. It is the responsibility of the crew supervisors to keep the main material site and satellite material sites stocked. If needed, after each storm event, sand and salt will be delivered to the main material site. Enough mixed sand and salt, straight sand and straight salt will be stockpiled to meet the requirements of the Snow & Ice Control Plan.

#### Parks, sidewalks, and City buildings

During snow events it is the responsibility of the Public Works Maintenance Division to keep many of the sidewalks, pathways, trails, and parking lots throughout the City clear of snow and ice.

Parks crews will address snow and ice removal according to the following priorities:

- **Priority 1** City facilities and high traffic City locations.
- **Priority 2** High traffic sidewalks.
- **Priority 3** City Parks and low traffic sidewalks.

#### Standard overnight snow event (trace to 2 inches)

- Priority 1 -Locations open for business will be cleared within 3 hours of the start of shift. Checked the following morning for any issues.
- Priority 2 Cleared within 4 hours of start of shift on any scheduled workday.
   Known problem areas checked the following scheduled workday.
- Priority 3 Will be checked and cleared (if not melted) by the end of the following scheduled workday.

#### Ongoing snow event (snow throughout a single day)

- Priority 1 -Locations open for business will be initially cleared within 3 hours of the start of shift. Continual monitoring of the locations throughout the day. Checked the following morning for any issues.
- Priority 2 Initial clearing within 4 hours of start of shift on any scheduled workday. Continual monitoring of the locations throughout the day. Known problem areas checked the following scheduled workday.
- Priority 3 Will be checked and cleared (if not melted) by the end of the second scheduled workday.

#### Ongoing multi-day snow event

- Priority 1 -Locations open for business will be cleared daily within 4 hours of the start of shift. Continual monitoring of the locations throughout the day. Checked the morning following the last day of the event for any issues.
- Priority 2 Daily clearing by the end of shift if crews are available. Known problem areas checked the first scheduled workday following the end of the event.
- Priority 3 Will be checked and cleared (if not melted) as soon as crews become available.

#### Major snow event (Multi-day heavy snow and ice)

• Staff will be assigned according to priorities set by the Community Services management team.

(CLEARED AREAS WILL HAVE A TWO FOOT MINIMUM WALKING PATH)
(ALL TIME FRAMES LISTED ABOVE ARE DEPENDENT ON AVAILABLE EQUIPMENT)



## **Air Quality Requirements**

#### **Air Quality Requirements**

#### Storm Cleanup

After a storm event, street sweepers will be sent out to remove all applied sand/salt materials as expeditiously and safely as weather and road conditions permit. In order to comply with the District Board of Health air quality regulations, Northern Nevada agencies have four days after the end of a storm event to have all sand/salt materials removed from the roads. The City of Sparks currently has five street sweepers. The number of street sweepers required will be dependent upon the amount of salt/sand spread and the number of areas covered. The Maintenance Division standard operating procedure for sand sweeping is to utilize all five street sweepers by assigning temporary sweeper operators to meet the four-day requirement. This could include scheduling back-to-back shifts with the street sweepers running 16 hours each day. Once crew supervisors have a better understanding of the number of street sweepers required for meeting the District Board of Health air quality requirement, the street sweeping will be modified based on weather conditions and according to good business practices.

#### **Other Sand Reduction Methods Used**

- 1. Using brine solution to pretreat roads and prewet salt/sand.
- 2. Using proposed sand specification (mandatory, NDOT SAND SPEC. "D").
- 3. Using electronic/computer monitored spreaders/application equipment.
- 4. Calibrating the equipment used for sand application annually.
- 5. Using Enhanced Sweeping Strategy and Equipment (less than four days).

#### **District Board of Health Air Quality Requirements**

Because air quality in Washoe County has not met EPA Standards, the District Board of Health has mandated regulations to improve air quality. These mandates affect how snow and ice control programs are conducted. The goal of the program is to 1) reduce the amount of sand spread on City, County and State roads for snow and ice control by fifty percent, 2) reduce the time required to sweep up the sand after a storm event, and 3) change the specification of sand used to a harder material. The effect of this rule will be to reduce the amount of **PM** 10 entrained in the ambient air as a result of blowing winds, roads drying out, and vehicles traveling over sand.

#### **Snow and Ice Control Sand Specifications**

All sand used for snow and ice control will meet the following criteria:

- 1. Durability index must be greater than 75.
- 2. The Hardness Index must be less than 33%.
- 3. The content of material smaller than 100 mesh sieves must not exceed 4.0% fines by weight.
- 4. The content of material smaller than 200 mesh sieves must not exceed 2.5% fines by weight.

#### **End of Year Sand Use Reporting Requirements**

The Maintenance Division will complete and submit a report to the District Board of Health no later than June 30 each year, with the following information:

- 1. The total number of lane miles to which sanding materials are applied for traction control in the City of Sparks.
- 2. The total amount of sanding material, salt, and other deicing or anti-icing agents used.
- 3. Verification that a laboratory, independent of the supplier, tested the material used and proof that the material met the requirements specified in Section 040.031.A.
- 4. The number of dates of each sanding deployment.
- **5.** Any additional lane miles where sanding materials were applied because of requests by law enforcement agencies.

#### **End of Year Reporting for Sand Removal**

The following identifies District Board of Health Air Quality Record Keeping and Reporting Requirements.

The Maintenance Division will complete a report and submit it to the District Board of Health no later than June 30 each year with the following information regarding street sweeper deployment:

- 1. Dates List each day necessary to sweep all lane miles where sanding materials were applied, or until there is another sanding event.
- 2. Number of street sweepers used to sweep up sand.
- 3. Number of lane miles swept each day.
- 4. Type of equipment used (recorded as a percentage of lane miles swept per type of street sweeper).
- 5. Equipment malfunctions, if any.

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## SPARKS MUNICIPAL CODE

#### SNOW ROUTES.

#### Sections:

10.50.010	Definitions.
10.50.020	Declaration of snow emergency.
10.50.030	Parking on snow routes.
10.50.040	Removal of vehicles.
10.50.050	Snow route priorities and route designations.
10.50.060	Regional emergency snow removal operations.

#### 10.50.010 Definitions.

As used in this chapter, the following terms shall have the following meanings, unless the context clearly indicates that a different meaning is intended:

"Snow emergency" means actual or forecasted weather conditions which require the absence of parked vehicles and other obstructions on snow routes to facilitate plowing and traffic flow.

"Snow routes" means those streets generally traversing the entire city or a major part thereof and are considered essential to the rapid movement of emergency vehicles and normally carry the heaviest traffic volumes.

"Snow route priority" means a numerical system for ranking designated snow routes in two service levels: primary and secondary access routes. (Ord. 1804, 1993: Ord. 1684, 1991.)

#### 10.50.20 Declaration of snow emergency.

- A. Whenever the assistant community services director & city engineer finds, based on falling snow, sleet or freezing rain, or on the basis of a forecast by the United States Weather Bureau or other meteorological data indicating the threat of snow, sleet or freezing rain, that weather conditions could severely impede vehicular traffic in the city, the assistant community services director & city engineer shall declare a snow emergency.
- B. A snow emergency shall automatically go into effect on any part of any snow route on which there has been an accumulation of snow or ice of six inches or more.
- C. The assistant community services director & city engineer shall cause each declaration of a snow emergency to be publicly announced by means of broadcasts or telecasts from stations with a normal operating range covering the city and may cause such declaration to be further announced in newspapers of general circulation when feasible.

  (Ord. 1684, 1991.)

#### 10.50.030 Parking on snow routes.

- A. While a snow emergency is in effect, owners and operators of vehicles are encouraged not to park vehicles on snow routes and to remove any vehicle or other obstruction from a snow route.
- B. Once in effect, a snow emergency under this section shall remain in effect until terminated by announcement of the assistant community services director & city engineer, except that any street area which has become substantially clear of snow and ice from curb to curb for the length of the entire block shall be automatically excluded therefrom.

#### 10.50.040 Removal of vehicles.

- A. During a snow emergency, a police officer or other government employee whose duty is to clear snow routes is authorized to order the immediate removal of any vehicle which is parked or disabled in a position which obstructs a travel lane or impedes the safe and expeditious clearing of snow on a snow route. If the owner or operator of such vehicle fails or refuses to comply immediately with such order, the vehicle may be immediately removed from the snow route to the nearest place where the vehicle will not obstruct a snow route.
- B. The owner or operator of a vehicle removed from a snow route pursuant to this section shall be responsible for all costs incurred as a result of the removal of the vehicle. (Ord. 1684, 1991.)

#### 10.50.050 Snow route priorities and route designations.

- A. Due to the specialized equipment, logistics, timing and limited resources available for snow removal operations only certain city streets are designated as snow routes. To further improve our efficiency each snow route is assigned a snow removal priority. Snow removal priority classifications are established to guide city snow removal operations on designated streets as referenced on the City of Sparks snow routes map. Maps are available at <a href="https://www.cityofsparks.us">www.cityofsparks.us</a> or the Public Works Department. Streets with the highest numerical priority shall have the priority for service and on-going efforts will be maintained to keep higher priority streets open to the maximum extent possible. The following roadways are hereby established as snow routes and assigned a snow removal priority.
- 1. Priority 1 roadways are designated as primary snow routes. This designation indicates that the roadway will be plowed to maintain continuous all-weather access within the maximum capabilities of the city.
- 2. Priority 2 roadways are designated as secondary snow routes. This designation indicates that the road will be plowed to provide reasonable all-weather access as time, available funds and human resources permit.
- B. All streets not referenced on the City of Sparks snow route map as Priority 1 or Priority 2 roadways included in section A are designated as non-snow routes. The City of Sparks snow removal operations are limited to Priority 1 and Priority 2 roadways referenced in section A, unless the assistant community services director & city engineer determines that emergency access or other special snow and ice conditions are present which require the utilization of city snow removal operations. (Ord. 1851, 1995: Ord. 1804, 1993: Ord. 1684, 1991.)

#### 10.50.060 Regional emergency snow removal operations.

The assistant community services director & city engineer is hereby authorized to direct the use of city resources in cooperation and coordination with the City of Reno and Washoe County to improve regional snow removal operations on major streets and to participate in emergency snow removal operations as needed to achieve regional emergency vehicle access. (Ord. 1804, 1993.)



## INTERLOCAL AGREEMENT

## EMERGENCY SNOW REMOVAL PLAN

#### INTERLOCAL AGREEMENT FOR EMERGENCY SNOW REMOVAL PLAN

#### I PARTIES

The Parties to this mutual assistance plan are the City of Reno, City of Sparks, Washoe County, Regional Transportation Commission of Washoe County, Nevada Department of Transportation, Truckee Meadows Water Authority, Washoe County School District, and Washoe County Search & Rescue / AGC Contractors Auxiliary. (Parties)

#### II DEFINITIONS

Snow Emergency-means weather conditions which severely impede vehicular traffic in the Truckee Meadows and require the pooling of resources by the Parties in order to ensure the continuation of emergency and public safety agency operations on designated snow routes.

Snow Routes-include those streets depicted on Exhibit "A", the Regional Emergency Snow Route Map, to provide primary access and are otherwise streets essential for rapid movement, and response to the community by emergency vehicles.

Snow Emergency Commanders-implement, manage and supervise all snow removal activities as set forth herein. The contact information for Snow Emergency Commanders and Contractors is included in Exhibit "B", Regional Snow Emergency Commanders and Contractors-contact list. Snow Emergency Commanders (or their successors) are hereby designated as follows:

City of Reno

Maintenance Manager

Crew Supervisor

City of Sparks

Maintenance Services Manager

Maintenance Supervisor-Streets/Traffic

Washoe County

Roads Director

Roads Supervisor

Regional Transportation Commission of Washoe County

Facility Maintenance Supervisor

Maintenance Specialist

Nevada Department of Transportation

Maintenance Manager

Asst. District Engineer - Maintenance

Truckee Meadows Water Authority

Distribution & Generation Manager

Distribution Supervisor

Field Coordinator

Washoe County School District
Plant Facilities Administrator
Plant Facilities Director

Snow Emergency Contractors-provide the use of private contractor equipment for utilization during snow removal activities. Snow emergency contractors are not limited to AGC Contractors Auxiliary.

Snow emergency contractors (or their successors) are hereby designated as follows:

Washoe County Search & Rescue / AGC Contractors Auxiliary

Washoe County Sherriff - Search and Rescue

Sergeant

Deputy

Associated General Contractors

Safety Coordinator

**Executive Director** 

#### III SNOW EMERGENCY RESPONSIBILITIES

#### Snow Emergency Commanders:

- Coordinate with counterparts to determine the status of the situation throughout the Truckee Meadows area.
- Activate and implement the plan, following a consensus determination that a snow emergency exists.
- Advise own organization's chain of command, including emergency management personnel.
- Provide resources as requested through public safety dispatch to assist in responding to medical emergencies.
- Coordinate the use of snow storage areas with government agencies and Snow Emergency Contractors.
- Decide when the snow emergency has abated, and cancel the plan, following a consensus determination.

#### City/County/State Management and Emergency Management Personnel:

- Monitor overall impacts of weather event and progress of emergency snow removal.
- Provide public information, news releases.
- The roll of Public Information Officer will be rotated annually between each government agency.
- Advise elected officials of emergency snow removal plan activation.

• If applicable, declare an emergency within their jurisdiction, including restrictions on snow emergency routes which may be invoked; advise state of formal declaration; activate emergency operations center (EOC).

#### **Snow Emergency Contractors:**

- Coordinate the use of private contractor equipment with snow emergency commanders.
- The Associated General Contractors will provide updated equipment rental rates annually to be included in the Interlocal Agreement For Emergency Snow Removal Plan. Use of contractors will not be limited to the contractor list provided by the Associated General Contractors.

#### IV CONDITIONS OF AGREEMENT

The Parties to this Interlocal Agreement do hereby agree as follows:

#### 1. Conditions for Implementation of Emergency Snow Removal Plan

A snow emergency will be declared under the following conditions:

 Whenever a majority of the Snow Emergency Commanders meet, confer and agree to mobilize due to impending weather forecasts and/or on the basis of falling snow, sleet or freezing rain, that weather conditions could severely impede vehicular traffic on designated snow routes (see Section II, Definitions), thus threatening the continuation of emergency and public agency operations.

#### 2. Declaration Process

- a. Snow Emergency Commanders will monitor conditions and have the authority to establish that the level of resources needed to address the snow conditions necessitate activating the Regional Snow Emergency Response Plan. City/County/State Management will declare a snow emergency, according to established emergency management procedures and will only declare a Regional Snow Emergency by consensus.
- b. City/County/State Managers will contact each other regarding implementation and any fine tuning necessary to meet needs of event
- c. City/County/State will handle announcement according to individual Emergency Plans.

#### 3. Snow Emergency Routes/Procedures

The Regional Emergency Snow Route Map supersedes all individual agency snow route maps during a declared Regional Snow Emergency.

Exhibit "A" depicts designated regional emergency snow routes under this plan and assigns responsibilities for snow clearing within the indicated areas. These

snow emergency routes will be those first plowed and kept open by the entity to which responsibility has been assigned.

Upon completion of each area, meaning that the designated regional routes are open and passable by emergency vehicles, the responsible entity may reassign its resources to other areas of responsibility (either another area designated by Exhibit "A" or to streets maintained by the entity which are not so designated). Each entity will be responsible for keeping the routes assigned by Exhibit "A" open until the snow emergency is canceled.

The decision to hire private forces to assist with snow removal in any area of this plan will be made by, authorized by, and chargeable to the Party within whose jurisdiction the area is located.

#### 4. Second Phase of Assistance

If an agency (or agencies) continue to have streets which are impassable to emergency vehicles while other agencies have completed snow removal operations, a second phase of assistance may be granted under this Agreement in accordance with the following:

Additional assistance for streets not shown on Exhibit "A" of this Agreement may be granted if all snow commanders determine this action is needed due to extraordinary weather conditions to provide emergency vehicle access. Additional assistance may be requested only when an agency's (or agencies') resources are totally committed to emergency access snow removal operations and when additional resources are needed to improve emergency access. Agencies providing support shall have completed operations in accordance with their snow removal plan and will then make available additional resources to improve emergency access within the requesting agency.

### 5. Emergency Operations Center (EOC) / Regional Field Operations Center

The ESR Plan does not automatically call for operation of an EOC. The Parties may operate out of one Emergency Operations Center if City/County Management agrees that such an arrangement would facilitate implementation of the ESR Plan. If the Parties decide to operate out of one EOC, each Party will have a representative at the Center at all times.

To coordinate Emergency Snow Removal efforts and resources, the initial phase will include activating the Regional Field Operations Center, located in the main conference room at the City of Reno, Public Works Service Center, 1640 Commercial Row, Reno, Nevada.

## 6. Signing of Snow Emergency Routes; Enforcement of Operations Restrictions

Signing of snow emergency routes and the enforcement of operations restrictions and/or controls, if any, is the responsibility of the jurisdiction in which each route is located. Each jurisdiction will immediately cause to be cleared, as practicable, any vehicle parked or disabled in a position obstructing a travel lane, or otherwise impeding the safe and expeditious clearing of snow on designated routes.

During a declared snow emergency law enforcement can enforce travel restrictions throughout the region.

#### 7. Termination-Emergency Snow Removal Operations

This plan shall remain in effect until canceled, by mutual agreement of the Snow Emergency Commanders, who shall subsequently notify City/County/State Management that emergency snow removal operations are complete. City/County/State Management will make corresponding public announcements according to their emergency plans, or other protocols.

#### 8. Liability

Each Party to this agreement will be responsible for the actions of its employees regardless of the jurisdiction in which the accident occurs or a problem arises, and to the extent allowed by law hold the other parties harmless as indicated in this section. If a claim is filed with one of the public entity parties, the agency within whose jurisdiction the loss occurred will immediately contact the party whose employee was involved and provide all records and information related to the incident. Contractors performing snow removal activities during a regional snow emergency are required to provide certificates of insurance to the agency they are performing the work for.

#### 9. Workers' Compensation

All Parties to this agreement are responsible for providing workers' compensation coverage for their respective employees.

#### 10. Post-Incident Report

Each Party shall keep track of costs associated with this ESR Plan's implementation, including personnel, fuel, equipment maintenance and contracting expenses, for inclusion in a Post-Incident Report. This will be accomplished by utilizing maintenance management systems and appropriate Incident Command System forms.

#### 11. Reimbursement

No Party shall be obligated to reimburse any other Party on account of any action taken or aid rendered under this Agreement, or for any use of material or damage to equipment incurred in the course of rendering emergency assistance as provided under this Agreement.

#### 12. Annual Review / Training

The Parties will review this Agreement annually to determine any needed changes or modifications to both the procedures outlined under this Agreement and to Exhibit "A", the map depicting designated snow routes.

The Associated General Contractors will provide an updated equipment rental rate for review.

Participating agencies will send employees to the Regional Snow and Ice Control Workshop to be held in September or October of each year. When possible, agencies will work together to provide cross-training opportunities for maintenance personnel and supervisors.

#### 13. Term of Agreement

This Agreement shall be effective upon passage and approval by the respective governing body of each Party to this Agreement. Any Party may withdraw from this Agreement by giving a thirty (30) day notice in writing to the other Parties.

IN WITNESS THEREOF, the Parties hereto have executed this agreement as of the day and year appearing by the signatures below:

CITY OF RENO,

By and through its City Council

By: Date: 6-26-06

Mayor, City of Reno

Attest: Date: 6-26-06

Reno City Clerk

Approved as to Form:

Reno City Attorney

CITY OF SPARKS, By and through its City Council
By: Mayor City of Sparks  Date: 6/21/06
Attest Khoine Standard Date: 6/21/06
Attest Klavine Salan Com Date: 6/21/06
Sparks City Clerk
<b>©</b> 1000
Approved as to Form:
Tard Creeks
Sparks City Attorney
Sparks City Attorney
COUNTY OF WASHOE,
By and through is Board of County Commissioners
a Valent Marker - AMINGION
By: Chairperson, Washoe County Date: 07/03/06
Beard of Commissioners
Attest: My / awey Date: 07/03/06
County Clerk
Approved as to Form:
Approved as to Form.
melance 105to
District Attorney
REGIONAL TRANSPORTATION COMMISSION
REGIONAL TRANSPORTATION COMMISSION
By: Date: 8-18-06
John R. Mayer, Chairman
Approved as to Form:
Approved as to Form:
_ U Jhy - 120
RTC Legal Counsel

#### TRUCKEE MEADOWS WATER AUTHORITY

By: Sou Williams Date: 6/21/06
Approved as to Form:
TMWA Legal Counsel
WASHOE COUNTY SCHOOL DISTRICT
By and through its Board
By July Date: 7-27-06 Chairperson
Approved as to Form:
WCSD Legal Counsel
REFUSED TO SIGN NEVADA DEPARTMENT OF TRANSPORTATION
By: Date:
Approved as to Form:
Denuty Attorney General



## WEATHER MONITORING

#### **Weather Monitoring**

#### **Weather Monitoring and Forecasts**

The Public Works Department utilizes many sources for weather forecast information. Public Works staff monitors weather forecasts from the National Weather Service, severalseveral web based forcasting sites, and local news forecasts.

#### **Weather History**

The Desert Research Institute Western Regional Climate Center provides historical weather information dating back sixty years. The reports included are from data collected at the Reno-Tahoe Airport. The data from this site is the most accurate, and the only source of official information in the region. The report for number of days per month with snowfall at varying thresholds and the report for maximum daily snowfalls by month provide an average for snow accumulations. The data shows that an average snow event is three inches of snow accumulation or less per event. The majority of snow events Public Works will respond to are average snow events. Major Snow Events are snow accumulations of six inches or more. A Snow event with accumulations of six inches of snow occurs about once every two years. These are the snow events that stretch the resources of the Public Works Department. The use of private contractors should be considered when snow accumulations reach six inches or more and there is a forecast for continuing snow and/or freezing temperatures. The City Manager or his designee will be informed of the need for additional resources and a decision will be made to authorize the use of private contractors. Emergency Snow Events are when snow accumulations reach ten inches with a forecast for continuing snow and/or freezing temperatures. A Snow event with accumulations of ten inches of snow occurs about once every six years. The City Manager or his designee will be informed of snow operations and a decision to declare a Snow Emergency will be made by the City Manager or his designee.



## SNOW & ICE CONTROL EQUIPMENT

## **Snow & Ice Control Equipment**

UNIT #	YEAR	UNIT DESCRIPTION
503	2007	Sterling 10 CY dump truck (sander & 11 ft. snowplow & 2000-gallon brine applicator)
524	2007	Sterling 10 CY dump truck (sander & 11 ft. snowplow & 2000-gallon brine applicator)
536	2007	Sterling 10 CY patch truck (sanding capability)
512	1999	International 10 CY dump truck (sander & 11 ft. snowplow)
514	1999	International 10 CY Dump Truck (sander & 11 ft. snowplow)
5702	2015	International hook truck (sander & 11 ft. snowplow & 2000-gallon brine applicator & bottom mounted ice scraper)
511	1996	International 5 CY dump truck (sander & 10 ft. snowplow)
513	1996	International 5 CY dump truck (sander & 10 ft. snowplow)
5101	2013	International 10 CY dump truck (sander & 11 ft. snowplow & 2000-gallon brine applicator)
5102	2013	International 10 CY dump truck (sander & 11 ft. snowplow & 2000-gallon brine applicator)
515	2005	Ford F450, small dump truck (sander, 8.5 ft. plow)
542	2005	Ford F450, small dump truck (sander & 8.5 ft. plow)

733	2000	Caterpillar front-end loader
736	1998	Caterpillar front-end loader
723	2001	Caterpillar loader/backhoe
744	2011	Skip loader
7625	2014	Bobcat front-end loader
7628	2015	Doosan loader

#### **Available Equipment for parks and sidewalks**

8140	2012	Toro 4WD mower w/broom and plow
8141	2017	Toro 4WD mower w/plow
7620	2012	Caterpillar skid-steer w/broom
7626	2012	Bobcat skid-steer w/plow
767	1998	Bobcat skid-steer w/plow
903	2006	Side-by-side w/plow
9601	2013	JD Gator w/plow
9602	2013	JD Gator w/plow
9603	2013	JD Gator w/plow
8400	2015	Hurricane riding blower
923	1993	Snapper walk behind snow blower
924	1993	Snapper walk behind snow blower
7601	2013	JD Utility tractor w/bucket

### **Snow & Ice Control Equipment**



10 CY Dump Truck with sander & snow plow

5 CY Dump Truck with sander & snow plow



Front-end Loader

Backhoe/loader



Quad with V-plow

**Bobcat loader** 

## **Street Sweeping Equipment**

UNIT #	YEAR	UNIT DESCRIPTION
726	2007	Sterling Elgin Eagle Sweeper (High dump)
729	2007	Freightliner Elgin Eagle Sweeper (High dump)
739	2006	Sterling Elgin Eagle Sweeper (High dump)
738	2005	Sterling Elgin Eagle Sweeper (Waterless high dump)
732	2001	Sterling Elgin Eagle Sweeper (High dump)
500	2002	Freightliner Water truck (3,600 gallon tank)



**Tennant Centurion Sweeper** 

Elgin Eagle Sweeper



Freightliner Water Truck



## **SNOW ROUTES**

**Routes by Street Name** 

#### CITY OF SPARKS SNOW ROUTES BY STREET

#### **PRIORITY 1 ROADS**

#### Route 1

Cleanwater Way Greg Street So. 21<sup>st</sup> Street

Freeport Blvd: intersections

E. Glendale Avenue: intersections

Meredith Way at Glendale

Franklin Way at Greg and Spice Island Drive

Spice Island Drive: curves and shady spots; intersections S. Stanford: from McCarran Blvd. to Glen Carran Cir.

S. Rock Blvd: from Mill St. to Prater Way

Victorian Ave. Nugget Ave.

Victorian Plaza Circle

C St: intersections; behind old bus waiting area

4<sup>th</sup> Street: Victorian to Prater

Lincoln Way

Howard Drive: intersections Marina Gateway Drive Industrial Way Nichols Blvd

#### Route 2

Prater Way: Galletti Way to 6th Street

El Rancho Drive Sullivan Lane Rock Blvd

Sun Valley Blvd: intersections

2<sup>nd</sup> Avenue: Sun Valley Blvd to Whittemore Way

Whittemore Way to McGuffey Road – past Allen Elementary

1<sup>st</sup> Avenue: McGuffey Road to Sun Valley Blvd Silverada Blvd: E. 9<sup>th</sup> to Wedekind; intersections

Wedekind Road: curves and intersections

Byrd Drive

18<sup>th</sup> Street: Byrd to York

Greenbrae Drive: Silverada to Pyramid; main intersections

York Way: intersections

G Street: El Rancho to Sullivan; 15th to 12th

F Street: Sullivan to 18<sup>th</sup> 15<sup>th</sup> Street: D Street to Rock 12<sup>th</sup> Street: F Street to Oddie 1<sup>st</sup> Avenue: intersections 2<sup>nd</sup> Avenue: intersections Behind Alice Maxwell School

Wildcreek Drive: Fairway to City View

Off Emerson: Valley Forge, Holman, Bunker Hill, Wilma

Queen Way: Farr to Gwenelle

#### Route 3

Prater Way: Pyramid to Sparks Blvd

Greenbrae: 5<sup>th</sup> to Prater Way 1<sup>st</sup> Street: Pyramid to Prater

4th Street: Wright Way to Puccinelli

Richards Way

York Way: intersections; Pyramid to Goldy

Gault Way: Florence Drake School Emerson Way: Montecito to N. Truckee Penny Way: behind Lena Juniper School

Queen Way: Dawn to N. Truckee Probasco Way: Prater to Queen

Rocky Ridge

Teglia

N. Truckee Lane: Queen to Glen Meadow Baring Blvd: McCarran to Sparks Blvd

Sparks Blvd: Prater to Disc

Spanish Springs Road at N. Truckee, Goldy, Vintage Hills, Sparks Blvd

Howard Drive: intersections

O'Callaghan Drive: Greenbrae to Sparks Blvd

Libero Drive Vintage Hills Pkwy Calle Myriam Drive

Disc Drive: Sparks Blvd to Pyramid

South East Connector from Greg to Pembroke Drive

#### Route 4

Sparks Blvd: Greg to Prater Greg Street: Sparks Blvd to Vista Lincoln Way: Sparks Blvd to Lillard Lillard Drive to Brierley, Brierley to Vista Vista Blvd: Larkin to S. Los Altos Pkwy Prater Way: Sparks Blvd to Westview

Pleasant View Drive, Pleasant View Place, Westview

Primio Way: by Marvin Moss School also Prater Baring Blvd: Sparks Blvd to N. D'Andrea Pkwy

Del Rosa: by Diedrichsen and Mendive

Whitewood Drive Blossom View Drive S. D'Andrea to N. D'Andrea just past Novarra

Shadow Lane: Sparks Blvd to Baring

Waterfall Drive by Jerry Whitehead School

Loop Road to Gandolfo

Kleppe Lane: Sparks Blvd to Greg by bus yard

Larkin Circle at Greg Los Altos at Vista

Vista Blvd: Vista Luna Drive to S. Wingfield Pkwy

Wingfield Hills Road: Rolling Meadows Drive to S. Wingfield Pkwy

Singing Hills Drive

Old Waverly Court, Old Waverly Drive

Ambush Ridge Drive

Solstice Drive

Falcon Ridge Drive

Single Foot Court

Oxley Drive

Ten Mile Drive

**Banestone Road** 

Poco Bueno at Wingfield Springs Road

Wingfield Springs: Silverton to Calle De Oro

South Florentine Calle De Oro Pkwy

Jacinto Avenue

Highland Ranch Parkway from Pyramid Highway to Midnight Drive

#### Route 5

Vista Blvd: S. Los Altos Pkwy to just past Vista Del Rancho Pkwy

Vista Del Rancho Pkwy

Halley's Court Golddust Drive Satellite Drive Giannotti Drive

Disc Drive: Sparks Blvd to just past Vista

Shoppers Way Galleria Pkwy

N. Los Altos Pkwy: Pyramid to Vista Blvd Sparks Blvd: Disc Drive to Pyramid Hwy

Kiley Pkwy Sawgrass Way Turnberry Drive

Vista Del Rancho Pkwy

Henry Orr Pkwy

Erin Drive

Vista Blvd: S. Wingfield to Campello Drive Campello Drive: Hubble to Generation Hubble Drive: Quantum Court to La Posada La Posada: Hubble to Desert Vista Eagle Nest Road at La Posada

Desert Vista Drive
Bareback Court
Bareback Drive
Desert Fox Drive
Cobra Court
Barbados Drive
Tobago Drive
Jacmiel Court
May Pen Drive

#### Route 6

Disc Drive: Vista to Pyramid Los Altos Pkwy: Vista to Vista

Belmar Drive Santa Barbara Southview Drive Canyon Pkwy Vista Terrace Lane

Vista Height Drive

Earthstone Drive

Desert Stone Drive

Talladega Drive

Talladega Court

Desert Highlands Drive

Goodwin Road

Vista Mountain Drive

Watervale

Culpepper

Granville

Vanguard

Burlington

Madrid Drive

Spandrell Circle

Vecchio Way

Wingfield Hills Road

#### **PRIORITY 2 ROADS**

#### Route 1

Marietta Way
Coney Island Drive
Deming Way
6th Street at Victorian and C Street
PW Maintenance Yard: entrance and exit
Street leading to Mental Health Institute

#### Route 2

View Street

1st Street
Merchant Street
Commerce Street
Capurro Way
Tyler Way
Prospect Avenue
Oxford Avenue
11th Street
Holman Way
Lepori Way
Farr Lane
Emerson Way at Sprout Way

#### Route 3

6<sup>th</sup> Street at Prater
Keogh Drive
Milroy Lane
MacArthur Street
1<sup>st</sup> Street: Prater to Richards
Northwood Drive
Libero Drive
Robbie Way: Howard to La Via
Fargo Way
Express Street
Station Street

Station Street
Pullman at Prater
Coachman Drive
Vintage Hills Pkwy
Whitney Circle
Roundstone Drive

#### Route 4

Salomon Circle

Wabash Circle

Frisco Court

Jitney Drive

Sycamore Glen

Sorensen Way

Del Rosa Way: Fieldcrest to Vista

Round Mountain at Baring

Clan Alpine at Shadow Lane

Alpland at Vista

**Novara Drive** 

Milano Drive

San Marino at Cintona Drive

Antella Court

Sorrento Lane

Tuscan Way

Firenze Drive

Angua Drive

Garzoni Drive

#### Route 5

**Laser Drive** 

Promedio Pkwy

Mesa Meadows

Pradera Street

Painted Desert

Montero Drive

Desert Peak

Village Meadows

Ion Drive

Pah Rah Drive

Cathedral Peak

Panama Drive

**Sweet Briar Lane** 

Silver Coyote Drive

Eagle Pass Road

Falcon Ridge Drive

**Grosmont Drive** 

**Astronomer Drive** 

Cielo Circle

Ten Mile Drive

Banestone Road

Peppergrass Drive

Russian Thistle Drive

Silverton Way

Capriolate Drive Darby Rose Lane **Emblem Street** Bambey Drive Hibernica Lane Ivory Ann Drive Marbee Drive Poco Bueno Island Queen Drive Little Easy Street Little Easy Court General Thatcher Drive Poco Rey Drive Rey Del Sierra Court Ulysses Drive at Hubble Europe Drive at Hubble

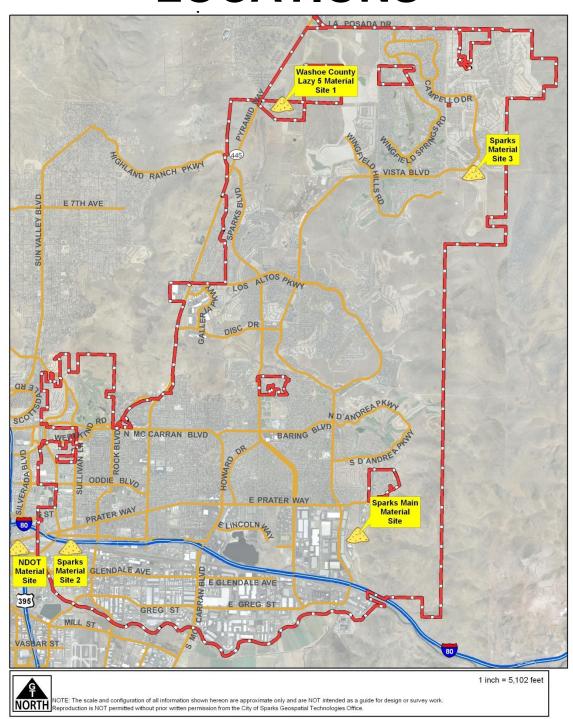
#### Route 6

Wheeler Peak Court
Cloud Peak Drive
Eagle Mountain Drive
Chipwood Drive
Fir Tree Lane
Crestside Drive
Black Oak Road
Crestside Court
Tree Top Road
Palo Alto Circle
Dry Gulch Way
Canyon Run Drive
Mesa Verde Drive
Cheatgrass Lane



#### **MATERIAL SITES**

## MATERIAL SITE LOCATIONS







Main Material Site – Gandolfo Arena (Vista Blvd. & Loop Rd.)

#### **Material Sites**



Satellite Site 1 (South 21st Street)

Satellite Site 2 (Golden Eagle Maintenance Yard)



Alternate Site 1 (Washoe County – Lazy 5 Regional Park)



Alternate Site 2 (NDOT – Kietzke Ln. & Galletti Wy.)



#### **SNOW CONTRACTORS**

Equipment List & Hourly Rental Rates

### **SNOW CONTRACTORS Equipment List and Hourly Rates**

	• •							
	Em	ergend	y Snow and	l Debr	is Removal			
On-Call List/Pricing - 2019/2020 Season								
				•	Sierra Nevada		Spanish Springs	
	<b>Granite Con</b>	struction	Q & D Constru	uction	Construction		Construction	
	Day Contact		Day Contact		Day Contact		Day Contact	
Contact 1	Taylor Polan		James Munson		Alex Faust		Leslie Skinner	
Contact 1 Phone	775-771-6385	)	775-302-6338		775-691-8383		775-233-6063	
Contact 2	Aaron Gedde	S	Roy Halliburton	l	Justin Tenpenn	У	Adam Rutherford	
Contact 2 Phone	775-223-2059	)	775-302-6342		775-842-5847		775-342-8900	
	Night Contact		Night Contact		Night Contact		Night Contact	
Contact 1	Donavin Gree		James Munson		Alex Faust		Luke Lippincott	
Contact 1 Phone	775-813-1032	<u>)</u>	775-302-6338		775-691-8383		775-342-8911	
Contact 2	Brian Roll		Roy Halliburton	1	Justin Tenpenn	У	Ken Brown	
Contact 2 Phone	775-233-5022	<u>)</u>	775-302-6342		775-842-5847		775-232-8357	
<b>Equipment Type</b>			Rate/Hour		Rate/Hour		Rate/Hour	•
			Inc. Operator		Inc. Operator		Inc. Operator	
CAT 14 Blade	\$	270.00	\$	215.00	\$	240.00		
CAT 140					\$	219.00		
CAT 320 (Excavator)							\$	160.00
CAT 329 (Excavator)							\$	195.00
CAT 330 (Excavator)	\$	280.00			\$	275.00		
CAT 336 (Excavator)							\$	245.00
CAT 930 w/Snow Blade			\$	135.00				
CAT 938 Loader					\$	181.00		
CAT 950/Volvo 110 Loader	\$	255.00	\$	155.00			\$	190.00
CAT 966 Loader			\$	185.00				
JD 210 Skip Loader							\$	135.00
JD 310 Backhoe							\$	150.00
Combo Backhoe/Loader			\$	125.00				
Front End Loader							\$	125.00
Sanding Truck (5CY)			\$	155.00				
10 Wheel Dump	\$	215.00						
10 Wheel Dump w sander	\$	240.00						
Semi End Dump Truck					\$	135.00		
l <del></del>	4	245.00	1		_			

165.00

245.00

\$

Transport



# REGIONAL AGENCY & CONTRACTOR CONTACTS

#### **Regional Snow Emergency Commanders and Contractors**

#### (Contact List)

#### **Snow Emergency Commanders**

#### City of Reno

Travis Truhill 384-7965 On-Call Supervisor 830-1122

#### City of Sparks

Ron Korman 691-9592

Mark Andersen 424-0825 / 691-1200

Police Dispatch 353-2231 (ask for on-call supervisor)

#### **Washoe County**

Sam Lair 328-2192 Office 328-2180

#### **Regional Transportation Commission of Washoe County**

Dispatch 348-0413

Simon Batter 348-0400 ext. 7129/338-3028

#### **Nevada Department of Transportation**

Brad Burge 834-8306 / 230-2964

Tracy Larkin-Thomason 702-385-6500

#### **Truckee Meadows Water Authority**

Pat Nielson 771-5530 / 834-8034 Tom Clifton 750-3941 / 834-8212

#### **Washoe County School District**

Charlie Hoppe 331-7491 / 691-2029

Scott Weiby 560-6437

Mark Kahl 691-0166 / 851-5690

#### **Snow Emergency Contractors**

#### **Washoe County Search and Rescue**

John Hamilton 772-6620 Bill Harvey 750-8779

#### **Associated General Contractors**

Craig Madole 329-6116 / 742-2441 Ashley Berriochoa 329-6116 / 276-8040

#### **Q & D Construction**

James Munson 302-6338 Roy Halliburton 302-6342

#### **Granite Construction**

Taylor Polan 775-771-6385 Aaron Geddes 775-223-2059

#### **Sierra Nevada Construction**

Alex Faust 691-8383 Justin Tenpenny 842-5847

#### **Spanish Springs Construction**

Ken Brown 232-8357 Luke Lippinott 342-8911