

# REGIONAL SNOW AND ICE MANAGEMENT MEMORANDUM OF UNDERSTANDING FOR THE OCARTS AREA

## 1. PURPOSE

The purpose of this Memorandum of Understanding (MOU) is to facilitate coordination and collaboration between agencies in the Oklahoma City Area Regional Transportation Study (OCARTS) area in an effort to minimize weather-related disruption to public safety and welfare, business and commerce throughout the region between the dates of October 15 and April 15 each year.

The method for achieving this goal of minimum disruption is for all snow response agencies in the metropolitan area to communicate, coordinate, consult, and cooperate with each other in snow emergency matters, such as open/close decisions, common public messages, and demand management during the response and recovery phases.

## 2. ASSUMPTIONS

This MOU was developed using the following assumptions:

This plan addresses only a **regional** response to severe winter snow and ice storms. Local plans are assumed to be in place for responding within their respective jurisdiction.

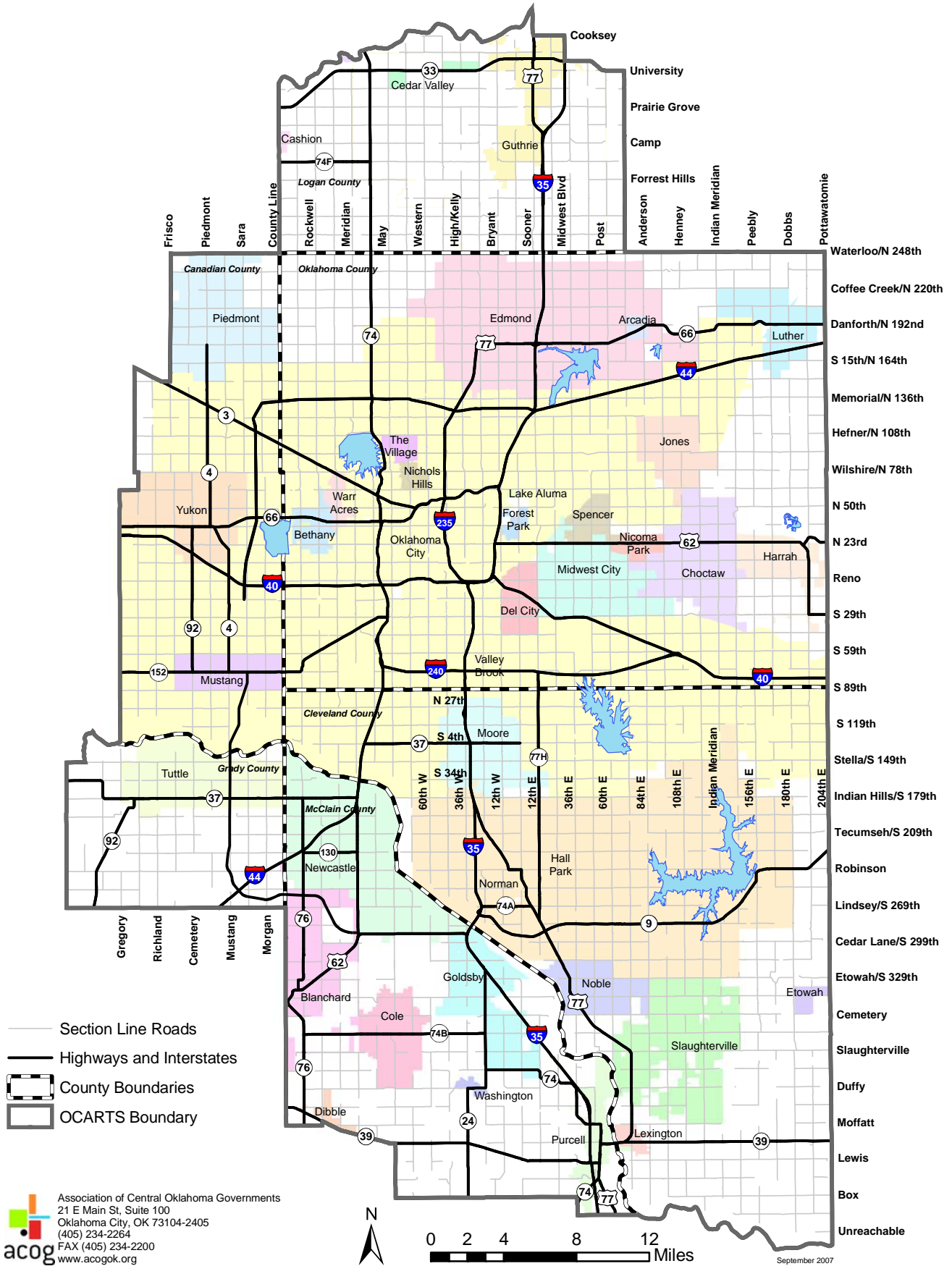
All local jurisdictions, state, and federal agencies will retain their **prerogative of self-determination** in selecting an appropriate response to any emergency encountered. However, for the overall well-being of the metropolitan area, each jurisdiction and agency is encouraged to communicate, coordinate, cooperate, and consult, as required, with surrounding jurisdictions/agencies to prevent working at cross purposes.

**Each response agency** can effectively carry out its responsibilities within its jurisdiction for snow and ice control, i.e. it possesses the equipment and personnel. Any deficiency immediately will be brought to the attention of that jurisdiction's or agency's governing body for resolution. If resolution of the deficiency is beyond the capability of the jurisdiction or agency, then it should be raised to the next higher level within the state or federal government for possible assistance.

Jurisdictions and agencies are encouraged to **coordinate their response operations** in the vicinity of inter-jurisdictional boundaries and on bridges. When the opportunity exists, timing, direction, and number of lanes to be plowed should be coordinated among all concerned agencies to prevent choke points.

The **primary focus** of any jurisdiction's snow and ice management should be implementation of their local plan, which is a component of the overall Regional Snow Routes snow and ice management effort.

Figure 1: OCARTS Area



Association of Central Oklahoma Governments  
 21 E Main St, Suite 100  
 Oklahoma City, OK 73104-2405  
 (405) 234-2264  
 FAX (405) 234-2200  
 www.acogok.org

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**Mutual aid** is expected to be very **limited** during winter storms. Agencies are free to request mutual aid from their neighbors but the expectation of it being provided would be low. All snow response agencies initially will be simultaneously engaged in snow operations and not capable of providing mutual aid.

**Federal government agencies** located within the OCARTS area do not possess a reserve of snow removal equipment and therefore are **not in a position to assist local governments**.

### **3. GEOGRAPHICAL AREA COVERED BY PLAN**

This MOU applies to major, local roads located within the OCARTS area, as shown in Figure 1. The OCARTS area encompasses 35 local governments, as well as two transit agencies operating within the same area.

State and federal roads are the responsibility of the Oklahoma Department of Transportation (ODOT).

### **4. DECLARATION OF A SNOW AND ICE EMERGENCIES**

There is no uniform procedure for declaring a snow or ice emergency throughout the metropolitan area. Each entity will respond to snow and ice events as local conditions warrant.

### **5. REGIONAL SNOW ROUTES**

Each jurisdiction or agency designates which roadways are categorized as snow routes within their jurisdiction.

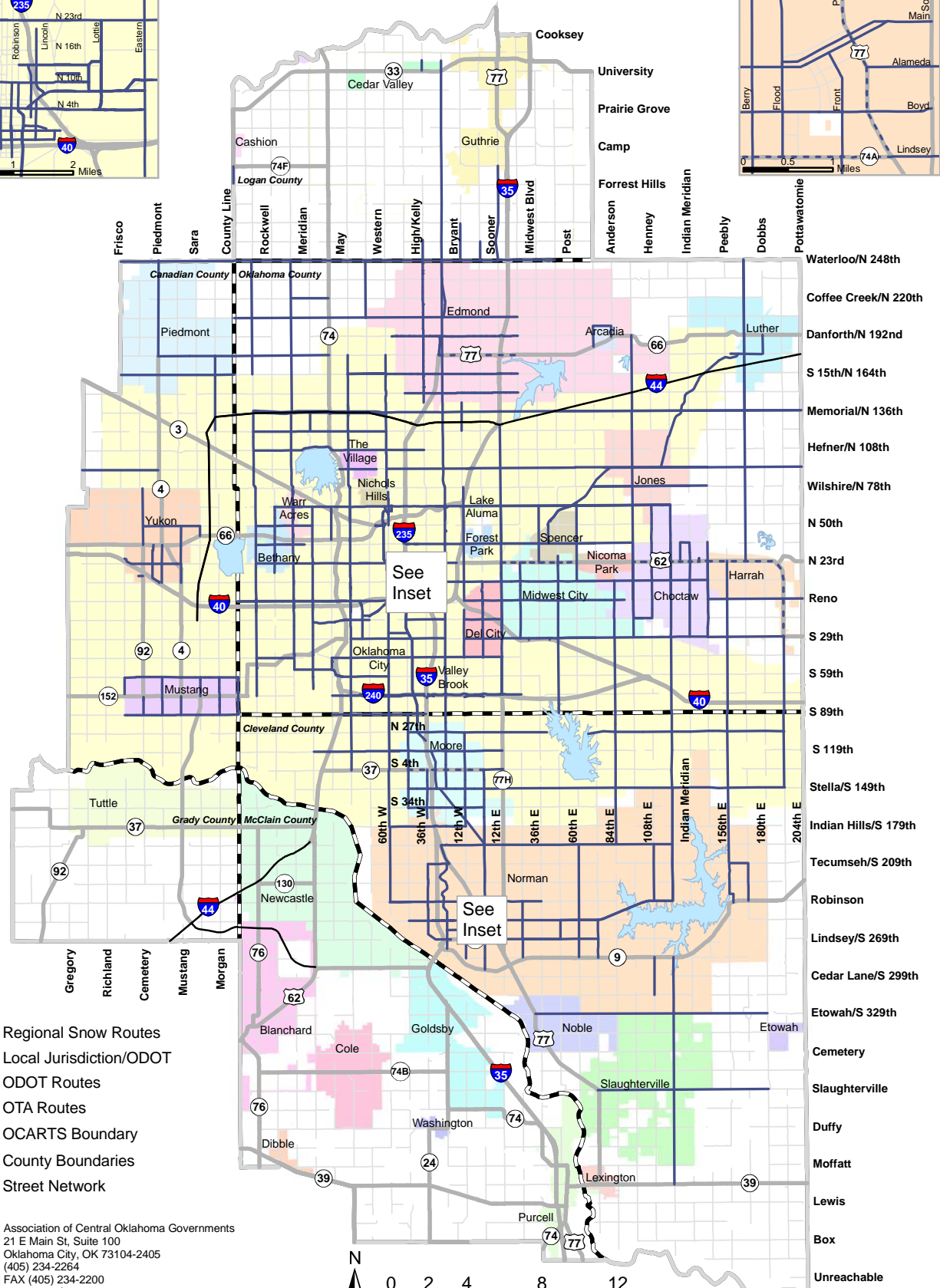
Overlaid onto these local snow routes, the OCARTS area regional snow routes were cooperatively developed and are based on the input of the regional stakeholders. Figure 2 depicts the regional snow routes within the OCARTS area.

The regional snow routes are generally roads where stopping and parking are discouraged in order to maintain the flow of traffic for public safety purposes and to permit snow plows unimpeded access to the roadways.

### **6. FEDERAL RESPONSE**

The typical federal response to an emergency is to either provide resources or financial assistance or both. However, for winter weather emergencies, financial help comes only after a state declaration of an emergency or major disaster declaration only for very limited purposes as defined in the Code of Federal Regulations, and therefore is not available in advance for planning purposes. Likewise, federally owned resources such as snow removal equipment are in short supply in the OCARTS area can not be planned for in advance, either.

Figure 2: OCARTS Area Regional Snow Routes



- Regional Snow Routes
- - - Local Jurisdiction/ODOT
- ODOT Routes
- OTA Routes
- ▭ OCARTS Boundary
- ▭ County Boundaries
- ▭ Street Network

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As of November 2007

## **7. CONCEPT OF OPERATIONS**

### **A. Plan Implementation**

A weather forecast calling for any accumulation of snow or ice in the OCARTS area will initiate this plan. The concept of operations is to take selected actions in four distinct phases of snow operations in response to expected or actual snow, sleet, or ice accumulation. These snow phases are identified as: Alert, Readiness, Operations, and Recovery.

### **B. Plan Termination**

This plan will be terminated when all entities' snow and ice management operations have been completed.

### **C. Alert Phase**

Step 1.

NWS Issues Winter Storm Watch/Warning Over NAWAS

As weather conditions warrant, the Norman Office will issue a Winter Storm Watch or Warning over the National Alert Warning System (NAWAS). Local jurisdictions/agencies that subscribe to commercial weather services may also be alerted from these sources.

Another source of information on changing weather conditions is the local roadway weather information systems in use throughout the metropolitan area.

### **D. Readiness Phase**

Step 2.

Activation of Operations

The Readiness Phase begins at the conclusion of, or simultaneously with, the alert phase. Local jurisdictions and agencies should consider taking management actions to place operations centers and key personnel on telephone standby or begin minimum staffing. Work/shift schedules should be set up and contract plow operators should be alerted for possible service.

Step 3.

Deployment/Positioning of Equipment

Local jurisdictions and agencies should consider fully staffing operations centers; having contract plow operators report to assigned locations; mounting plows and spreaders; loading abrasives and chemicals needed in the initial phase of operations; and positioning vehicles on assigned routes.

### **E. Operations Phase**

Step 4.

Spreading Abrasives and Chemicals

Local jurisdictions and agencies should order the spreading of abrasives when precipitation begins and continue until the rate of snowfall makes this operation ineffective. Certain anti-icing chemicals should be applied before precipitation begins. Early application of salt and calcium chloride will cause a brine to form on the surface of the road; this brine will eventually make snow and ice removal easier. Icing conditions, such as sleet and freezing rain, pose a significant hazard to roadways in the metropolitan area. Response agencies should continue

salting and/or sanding operations until road conditions improve. Special attention should be given to elevated surfaces such as bridges and ramps. A final application of salt and/or sand or calcium chloride may be needed near the end of plowing operations to remove compacted ice and avert overnight refreezing.

#### Step 5.

##### Plowing

Local jurisdictions and agencies should consider plowing operations whenever abrasives and chemical applications become ineffective because of depth of snow or low temperatures. The immediate goal of plowing should be to make roads "passable," followed by "bare pavement," and then "curb to curb" clearing as time and resources permit.

##### Plowing Priorities

Initially, plowing should be concentrated on established regional snow routes or whatever name is given to the highest priority routes for snow clearing by each jurisdiction.

Furthermore, it is assumed that regional snow routes will not be FULLY cleared prior to moving to the next priority, rather cleared enough to be passable.

#### Step 6.

##### Optional: Parking Restrictions/Ticket and Towing/Odd-Even Side Parking

All jurisdictions and agencies should consider declaring snow emergencies and instituting parking bans on regional snow routes at an appropriate time before/during a storm and in sufficient time to publicize the ban in advance of the start time. Equally important is ticketing and towing vehicles that fail to comply with the ban. Where a ban is not feasible, jurisdictions should encourage vehicle owners to park in their driveways or on the same side of the street during a storm in order to give plows more room to work in clearing the street. One recommended scheme is to promote parking on the even numbered side of the street in even numbered years and on the odd numbered side in odd numbered years.

#### Step 7.

##### Bus and Rail Operations

Local bus systems should develop alternative routes that closely parallel the regional snow routes in the jurisdictions in which they operate in order to take advantage of the commitment to keep these regional snow routes open. Generally, alternative routes will avoid hilly areas and cause riders to walk greater distances to major intersections. Bus stops are considered part of the sidewalk, and therefore the responsibility of the jurisdiction or property owner, based on local ordinance. Local and state plowing agencies are encouraged to assist with bus stop clearing as time and staffing permit.

Local and/or state response agencies should assign a high priority to clearing the access roads to public transportation facilities. Bus stops should be included as time and resources permit and as the storm abates. To the extent possible, they should be cleared as roadways are cleared.

#### Step 8.

##### Sidewalks

Local governments should ask homeowners and businesses to clear sidewalks/walkways around their property. In most cases, the property owner is encouraged to clear the sidewalks/walkways within 24 hours of the end of snow accumulation. Clearing sidewalks is

important to prevent injuries to schoolchildren and to adults using public transportation, who might otherwise be forced to walk on narrow roadways and compete with motor vehicles for space.

#### Step 9.

##### Contract Plowing

The flexibility that response agencies need to deal with storms of different intensities can be obtained by contracting with the private sector for additional snow removal equipment and the personnel to operate the equipment. Competition for these scarce resources can be keen when a large number of agencies are vying for these services at the same time. Regional cooperation is needed in order to share these limited resources.

#### Step 10.

##### Removal/Dumping

At certain depths in heavy snowfalls it will be necessary to not only plow snow but also to remove it from the roadways to ensure that all travel and curb lanes are available to restore normal traffic flow. Although this type of operation is rare for the OCARTS area, agencies must be prepared for this possibility. The local transportation system and the commuting public and commerce, all of which depend on the road system, will remain in a state of chaos if curb lanes and bus stops are out of service because of snow piling.

Removal and dumping operations require different types of equipment than that routinely used by snow response agencies and therefore identifying suppliers of such equipment must be considered in advance. Contractors in the private sector can assist with dump trucks and front-end loaders at this stage of operations.

Federal environmental regulations prohibit dumping snow in waterways such as rivers and streams without a permit from the Environmental Protection Agency (EPA). Until such time as EPA permits pre-approval of designated water dumping sites, agencies must either avoid the waterways and identify other dumping sites on land, or at the time of a large storm, seek approval from EPA for waterway dumping sites. The lack of vacant and accessible land in urban and dense suburban areas and the proximity of certain waterways to the roads and highways that are being cleared of snow make the value of choosing waterways clear.

Each agency should identify both land and water dumping sites within their jurisdiction. Government-owned parks and vacant lots are ideal dumping sites because the ground filters out debris picked up with the snow. Besides trash, agencies need to be mindful of the chemical residue that remains after salting and applying calcium chloride on roadways and the effect that these chemicals can have on dumping sites.

Removal and dumping operations, unless managed properly, can cause extensive damage to street and road infrastructure by loosening pavement, breaking curbs, and damaging fireplugs, traffic control boxes, storm drains, and manhole covers. Such obstacles should be identified and marked. Contractors should be briefed and trained on avoiding damage to these items. It is extremely important to free storm drains of accumulating snow and ice so that melting runoff can enter the drain and avoid refreezing on the roads.

### **F. Recovery Phase**

As the storm abates and as major arteries and residential streets are cleared, agencies can move to the Recovery Phase of the Plan. Recovery consists of phasing-down operations by

terminating contractor operations; returning employees to regular work schedules; pushing-back or removing any piles of snow still hindering the normal flow of traffic such as on the shoulders of the road; cleaning and servicing vehicles and equipment; replenishing or shifting snow-related supplies; and preparing needed financial reports and any justification for reimbursement.

## 9. RESPONSIBILITIES

### a. ACOG

1. Provide staff support for MOU development and maintenance.
2. Undertake periodic reviews and initiate revisions to keep the MOU and Regional Snow Route Map updated.

### b. Norman Office of the National Weather Service

1. Issue Winter Weather Statements over NAWAS.
2. Provide updated weather information for use by the OCARTS area entities.


### c. Local, State, and Federal Agencies

1. Prepare or update local plans for snow and ice management that are specific to the jurisdiction and follow the tenets of this MOU.
2. Implement those portions of this MOU that are applicable within the jurisdiction's area of responsibility.
3. Provide an accurate self-assessment of the agency's ability to respond to snow emergencies on an annual basis.

## THEREFORE,

we the undersigned pledge to cooperatively uphold the Regional Snow Routes Memorandum of Understanding in the Oklahoma City metropolitan area. We believe coordinated snow and ice management is critical to improving safety and efficiency of our urban transportation system.

City of Bethany

  
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(Mayor)

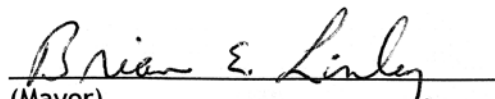
11/6/07  
Date

City of Choctaw

  
\_\_\_\_\_  
(Mayor)

11/13/07  
Date







City of Del City

  
\_\_\_\_\_  
(Mayor)

11/5/07  
Date



City of Edmond	<u>Charles Paul</u> (Mayor) Pro Tem	11/13/07 Date
City of Guthrie	<u>Chuck Burt</u> (Mayor)	11/6/07 Date
City of Harrah	<u>Sammy</u> (Mayor)	11/20/07 Date
City of Midwest City	<u>Russell Smith</u> (Mayor)	11/13/07 Date
City of Moore	<u>Glenn Lewis Mayor</u> (Mayor)	11-19-07 Date
City of Mustang	<u>Jeff</u> (Mayor)	11-6-07 Date
City of Norman	<u>Cindy</u> (Mayor)	11/13/07 Date
City of Oklahoma City	<u>Ann Sumarick</u> Vice (Mayor)	11/13/07 Date
City of The Village	<u>Scott Agne</u> (Mayor)	11/20/07 Date
City of Tuttle	<u>Henry Biddy</u> (Mayor)	11/13/07 Date
City of Warr Acres	<u>Marietta Tardif</u> (Mayor)	11-20-2007 Date
City of Yukon	<u>[Signature]</u> (Mayor)	11/6/07 Date
Town of Goldsby	<u>Reg Sultner</u> Vice (Mayor)	11/05/07 Date

Town of Jones City	<u></u> (Mayor)	<u>11-06-07</u> Date
Canadian County	<u></u> (Chairman of the Board)	<u>Nov 6, 2007</u> Date
Cleveland County	<u></u> (Chairman of the Board)	<u>11-29-07</u> Date
Logan County	<u></u> (Chairman of the Board)	<u>11-2-07</u> Date
Oklahoma County	<u></u> (Chairman of the Board)	<u>11-14-07</u> Date
Ass'n of Central Oklahoma Governments	<u></u> (Chairman of the Board)	<u>11-29-07</u> Date