



LEXINGTON

Snow and Ice Control Plan Winter 2017-2018



Department of Environmental Quality & Public Works

Lexington-Fayette Urban County Government
200 E. Main Street
Lexington, Kentucky 40507

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INTRODUCTION

Snow and ice removal in Fayette County is a combined effort between the Department of Environmental Quality & Public Works and the Kentucky Transportation Cabinet (KYTC). The Divisions of Streets & Roads, Water Quality and Parks & Recreation are responsible for snow and ice removal for approximately 1,317 lane miles of city and county roads. The state is responsible for plowing more than 500 lane miles of Federal, State, and County roads.

It is often difficult for the public to distinguish between city and state roadways within Fayette County. Any roadway with a United States or State Route numeric designation is a state maintained roadway (e.g., Nicholasville Road [U.S. 27] is a State-maintained road, while Man O War Boulevard is maintained by the city). The map in **Appendix 1** distinguishes between City and State maintained roadways. **During major snow events, the Division of Government Communications, via LexCall (311), will be available 24 hours a day and 7 days a week, for the public to get the latest available information concerning snow removal operations.**

Annually, representatives from the Department of Environmental Quality & Public Works, General Services and Public Safety; the Divisions of Government Communications and Computer Services along with Fayette County Public Schools, University of Kentucky, LexTran, and KYTC meet to review and update the Snow and Ice Control Plan for the upcoming winter season.

The Division of Streets & Roads coordinates the long-range planning and equipment preparation for snow removal. There are a variety of conditions that can occur during the snow and ice season within Fayette County that makes each event unique, including the following:

- *The rate and accumulation of snowfall,*
- *moisture content,*
- *presence of sleet and freezing rain,*
- *temperature variations - during and after the storm,*
- *wind velocity,*
- *time of day or night,*
- *storm duration, and*
- *intervals between storms.*

These various factors are considered when establishing procedures and protocols for snow and ice removal and when evaluating their effectiveness in minimizing a storm's impact on the community.

LFUCG Snow Plan Communications Workflow



KEY DIVISION CONTACT NUMBERS

LFUCG

Streets & Roads

Contacts: Albert Miller, Rob Allen
(Hours of Operation – 7:30 a.m. to 4:00 p.m.)

258-3451
311 (After hours)

Department of Environmental Quality & Public Works

Contact: Chester Hicks

258-3400

Water Quality

Contacts: Rod Chervus, Rob Clay
(Hours of Operation – 7:30 a.m. to 4:00 p.m.)

258-3424
311 (After hours)

Traffic Engineering

Traffic Management Center
Contact: Chris Quan
David Filiatreau, P.E.

258-3830
258-3499
327-8231

Parks and Recreation

Contact: Ed Chaney

277-8703 / 489-9725

Engineering

Contact: Todd Lockhart

425-2214

Police (Traffic Section)

Contact: Commander Doug Pape

258-3666
258-3600 (After hours)

Lexington Fire Department

Contact: Battalion Chief Phil Buettner
On-Duty Platoon Commander

231-5625
231-5667

LexCall – (Operational 24/7 during major Snow Events)

Contact: Pat Tatum
Kendra Carter

311 / 425-2255 (7 digit number)
361-1663
420-7545

Public Information Office

Contact: Stacey Dimon

258-3306 / 859-317-1550

Emergency Operations Center (EOC)

258-3970

Environmental Services

Contact: Susan Plueger
Angela Poe
John Saylor

425-2800 / 227-6677
258-3586 / 608-9218
983-7349

STATE

Kentucky Transportation Cabinet - District 7

Contact: Matthew Bland

246-2355

Kentucky State Police

(502) 227-2221

State Highway Hazard Information

goky.ky.gov

FCPS

Fayette County Public Schools

Contact: Marcus Dobbs, Brad Daniel

381-3868/333-5597
381-3859

Department	Roles and Responsibilities				
	DIVISION	TASK	CONTACT	FUNCTION	WORK PHONE
Administration	Mayor's Office	Declares Snow Emergencies / Operations Oversight	Mayor	K,I,S,D,A	258-3100
	Mayor's Office	Declares Snow Emergencies / Operations Oversight	CAO	K,I,S,D,A	258-3130
	LexCall	Operations Oversight (Communications / Information)	Pat Tatum	K,I,S,D	311
	PIO	Information Distribution	Stacey Dimon	I,S	258-3306
Environmental Quality / Public Works	Commissioner's Office	Declares Snow Emergencies / Operations Oversight	Dowell Hoskins-Squier	K,I,S,D,A	258-3400
	Commissioner's Office	Prepares Snow and Ice Control Plan EOC Coordination	Chester Hicks	K,I,S,D	258-3407
	Streets & Roads	Operations oversight (snow removal)	Albert Miller Robert Allen	K,I,S,D,A	258-3451
	Streets & Roads	Monitors weather conditions and assigns drivers to routes	Rob Allen	K,I,S,D	258-3451
	Water Quality	Operations oversight (snow removal - Area 7)	Rod Chervus	K,I,S,D,A	425-2408
	Water Quality	Assigns drivers to routes (snow removal - Area 7)	Robert Clay	K,I,S,D	425-2448
	Water Quality	EOC Coordination	Robin Wright	K, I, S	425-2419
	Traffic Engineering	Traffic Management Center	David Filiatreau	K, I, S	258-3491
	Traffic Engineering	Traffic Management Center	Chris Quan	K, I, S	258-3499
	Environmental Services	Sidewalk Snow Removal	Susan Plueger	K,I,S,D,A	425-2888
	Environmental Services	EOC Coordination	Louise Caldwell-Edmonds	K, I, S	425-2804
	Environmental Services	Information Distribution	Angela Poe	I, S	258-3586
Planning & Development	Engineering	Contract management / operations oversight (as requested)	Todd Lockhart	I,S	425-2214
Public Safety	Commissioner's Office	Operations oversight / EOC Preparation	Ronnie Bastin	K,I,S,D,A	258-3280
	Police	Traffic Control / Operations oversight	Doug Pape	K,I,S,D	258-3666
	Fire	Emergency Response / Operations oversight	Kevin Devine	K, I, S, D	231-5641
	DEM	EOC Coordination / Operations / Response / Communication	Pat Dugger	K, I, S, D	258-3784
General Services	Parks & Recreation	Operations oversight (Parks)	Chris Cooperrider	K, I, S, D, A	277-8703
K = Know, I = Inform, S = Support, D = Do, A = Approve					

EXTERNAL COMMUNICATIONS

Prior to the beginning of the snow season, a copy of the Snow and Ice Control Plan is [posted on the City website](#) for the media and the general public to learn about notification and operating procedures. During a snow event, the Government Communications team will post updates on the City website homepage: <https://www.lexingtonky.gov/>

Should conditions dictate that the Mayor or the Commissioner of Environmental Quality & Public Works declare a snow emergency; the media will be notified by LFUCG's Division of Government Communications.

The LFUCG Traffic Management Center (TMC) also keeps the media notified of street conditions and traffic movement. The TMC sends information out continuously via the Internet and social media. The TMC gathers traffic information from a variety of sources: the computerized traffic signal control system, video surveillance cameras, LFUCG Police dispatch, State Police dispatch, State Department of Highways, AAA, Kentucky Utilities, local schools, LexTran, Bluegrass Airport, and LFUCG's Divisions of Streets & Roads, Government Communications, Engineering, and Water Quality. The Traffic Management Center also gets information from the National Oceanic & Atmospheric Administration (NOAA), which is a weather band on a scanner that signals when weather conditions threaten to become severe.

The public can check local road conditions on the TMC Website as well as view real-time camera images of city streets. The public can also obtain information on accidents, lane blockages, and snow and ice trouble spots and road closures on the @LexWrecks Twitter feed and the Real-time traffic ticker: <https://www.lexingtonky.gov/traffic-ticker>

Link to Live Traffic Cameras: <https://trafficvid.lexingtonky.gov/publicmap/>

WEATHER MONITORING

During the snow and ice season, the Division of Streets & Roads continuously monitors the weather using national and regional weather tracking systems, which provides detailed weather forecasts as well as the ability to speak with a regional meteorologist for specific information. The weather-radar system tracks wind directions, the velocity of an impending storm, and the type of precipitation (snow, rain, sleet, etc.). In addition, Streets & Roads also relies on temperature gauges staged throughout the State along roadways to track roadside temperature conditions.

THREE STAGES OF SNOW EMERGENCIES

When conditions become so severe that traffic flow and parking must be restricted for snow plowing and other snow-removal efforts, the Mayor will declare a snow emergency. A snow emergency consists of 3 stages:

- | | |
|-----------------|--|
| Stage 1: | No parking will be permitted on designated snow emergency routes. |
| Stage 2: | No parking permitted on designated snow emergency routes plus parking restrictions on residential roads. Parking permitted on alternate sides of the street - even house numbered side on even numbered days and odd numbered side on odd numbered days. |
| Stage 3: | No travel permitted on designated snow emergency routes unless vehicle is equipped with snow tires, tire chains, or four-wheel drive, or is an emergency vehicle or vehicle approved by the Mayor. |

Stage 1 through **Stage 3** snow emergencies are declared by the Mayor. During declared snow emergencies, all unnecessary travel should be avoided during each stage of the emergency. All refuse collection services will be delayed or cancelled until such time that road and weather conditions improve.

SNOW EMERGENCY ROUTES

The Urban County Government has designated, with appropriate signs, approximately 82 miles of roadway as Snow Emergency Routes. These are roadways that have a high traffic volume and/or shoulders that are inadequate to accommodate disabled vehicles. Disabled or parked vehicles along these roadways can cause problems when snow plowing is in progress. A complete listing of the designated snow emergency routes is found in **Appendix 2**.

During a snow emergency, the Division of Police can remove, or have removed, a vehicle from an emergency route to facilitate traffic movement and snow-removal efforts. This may occur:

- When the vehicle is parked in an area declared a Stage 1, 2, or 3 Snow Emergency.
- When the vehicle is stalled or disabled on the normally traveled portion of any public roadway and the owner is not attempting to remove the vehicle.

Vehicles are moved to an area designated by the Urban County Government. Car owners can retrieve their cars by calling the Police reports desk at **258-3563**. The Division of Traffic Engineering checks snow emergency route signs annually, and missing, damaged or illegible signs are replaced.

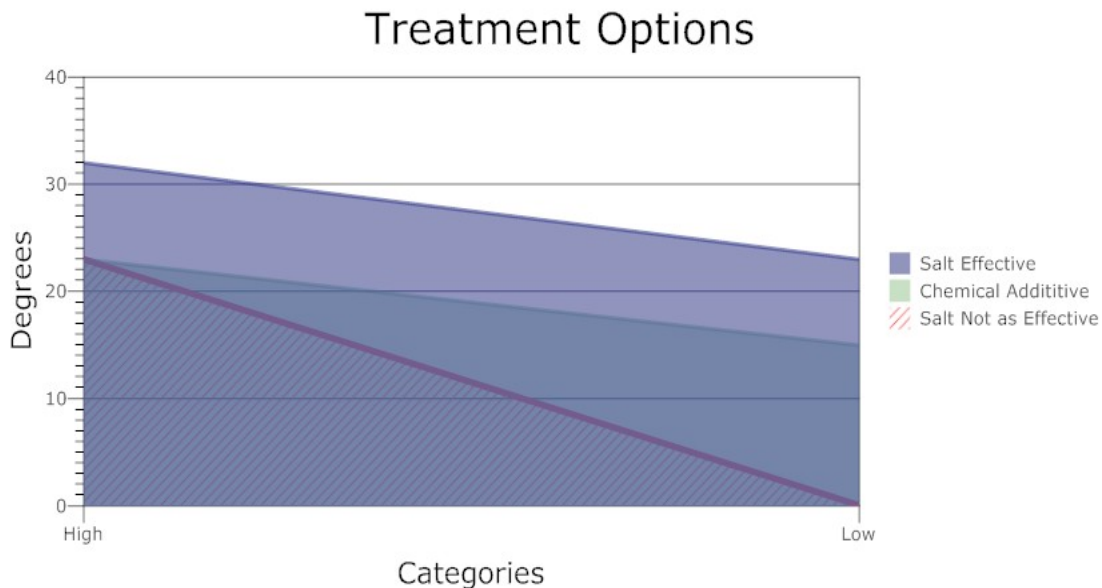
TREATING THE ROADS

Pre-treating the roads with salt brine, salt, or a mixture of salt and calcium chloride is the first step in preparing for a snow event. The LFUCG begins each snow season with approximately 3,000 gallons of salt brine, 5,000 tons of rock salt (sodium chloride) and approximately 5,000 gallons of calcium chloride.

Rock salt is the most widely used de-icing agent in the United States because of its cost and effectiveness. When the temperature is above 25 degrees Fahrenheit, salt can melt several inches of snow and prevent or reduce the bonding of compacted snow to the pavement surface. Salt is less effective at temperatures below 25 degrees and/or when traffic volumes are too light to activate the chemicals (**See Figure 1**). For lower temperatures, a ratio of 9 gallons of liquid calcium chloride to every ton of sodium chloride (salt) is used to treat the pavement. The calcium chloride reacts with salt to create melting at temperatures to 20 degrees below zero.

Depending on the expected conditions, the Division of Streets & Roads will be proactive and apply salt brine to streets to try to keep ice and snow from bonding to the pavement. Streets & Roads has hand-held pavement thermometers and truck-mounted infrared thermometers to test the temperature of the pavement. The temperature of the pavement helps determine which method of snow-and-ice control to use.

Figure 1



A fog-and-ice-detection system, which detects the amount of moisture present on the pavement and determines the exact point at which it freezes, is in place on the Clays Ferry Bridge. When freezing begins, a signal is sent to the Kentucky Transportation Cabinet in Frankfort and to Lexington's Traffic Management Center. In most cases, when snow reaches a depth of one inch, snow plowing is initiated.

STREETS PLOWED BY RANK

The ranking plan for snow removal was developed by identifying a basic system of roads essential to the continuation of traffic movement. While developing this plan, the realistic capabilities of the Lexington-Fayette Urban County Government, such as equipment and personnel, were kept in mind. Routes have been ranked based on traffic volume, access to: public transportation, emergency services, Fayette County Public Schools, and the efficiency and effectiveness of snow removal operations. The ranked streets are defined as follows:

Rank 1

These streets are the primary arteries in and out of the city, such as Main Street, Nicholasville Road, Richmond Road, etc. These streets are given first priority since they provide the interconnecting link from all corners of the City. Also included are streets that provide access for emergency services such as fire stations, hospitals and the Police Department. School Zones in the city are also considered Rank 1 during normal opening hours. Rank 1 streets will be maintained for all snow events.

Rank 2

These streets are the major connecting streets, such as Red Mile Road and Loudon Avenue. Also included are streets that provide access to major office areas and business areas such as grocery stores and service stations.

Rank 3

These roadways are major collector streets and are generally streets that connect major arterial streets to residential streets.



Rank 4

These streets are local streets within residential areas, which allow residents access to the main roads. This plan allows all residences to be in close proximity of a plowed street in the shortest amount of time. The City will address the remaining residential streets as time permits and weather conditions warrant.

As of September 2017, there are approximately 1,089 lane miles of **ranked** streets in the city. (Lane miles are the number of lanes along a road multiplied by the distance.) This rank plan is divided into 9 areas of responsibility for work crews. Each area is assigned to a supervisor who is given trucks, plows, and salt spreaders. Crews start with Rank 1 streets (Emergency Routes) and then

proceed through all of the ranked streets. Once these streets have been plowed one time, the crews return, by rank, to the streets that need to be re-plowed. While crews are plowing streets in the urbanized area of Fayette County, other city crews are also plowing county roads. Removal efforts continue until safety hazards caused by a snow or ice emergency have been eliminated.

The amount of snow, the type of snow and/or ice, and the duration of the storm affect the time it takes to complete work on each ranked street. Therefore, a specific completion time cannot be given.

SERVICE LEVELS AND SNOW ACCUMULATION

Snow events will be categorized into one of three basic service levels. The response to the event is different for each of the different service levels. A description of each service level is provided below:

- **Level 1: 1" to 4"**
Our Streets & Roads Snow Removal team will operate under the defined Rank 1-4 plan.
- **Level 2: 5" to 8"**
Additional streets will be added, including residential streets that connect to collector streets.
- **Level 3: 8" and above**
Streets & Roads will attempt to plow as many streets as possible.

BRIDGES, HILLS & INTERSECTIONS

Because of the increased danger to the public caused by snow and ice on bridges, hills, and intersections, these are given special attention. Many of these are located on priority routes, so they are handled at the same time as general salting and plowing. At the beginning of the snowfall, small salt trucks are sent to treat bridges that are located in the downtown area or adjacent to it. Crews check each bridge, hill, and intersection periodically to check for snow and ice accumulation.

Some of the bridges and hills are listed below.

BRIDGES and HILLS

(Areas likely to freeze first)

Bridges

Alumni Dr
Clays Mill Rd
Citation Blvd
Henry Clay Blvd
Jefferson St
Loudon Ave
Man-O-War Blvd
Martin Luther King Blvd
Seventh St
Pasadena Dr
Tates Creek Rd
Versailles Rd
Virginia Ave
W Main St
Wilson Downing Rd

Hills

Albany Rd
Armstrong Mill
Beacon Hill
Castleton Way
Clays Mill Rd
DeLong Rd
Emerson Dr
Fontaine Rd
Forbes Rd
Fourth St
Gainesway Dr
Lakeshore Dr
Lane Allen @ Parkers Mill
Lansdowne Dr
Malibu Dr
N Upper St
Oxford Circle
Pasadena Dr
Pebble Lake Dr
Reynolds Rd
Roanoke Dr
S Broadway
S Mill St
S Upper St
Shriners Ln
Trent Blvd
Zandale Dr

HELP FROM OTHER DIVISIONS

The Division of Water Quality clears a significant portion of lane miles, using its personnel, dump trucks and 4x4 pickup trucks. Also, the Divisions of Waste Management, Parks & Recreation, Traffic Engineering, and Engineering provide equipment and personnel. Some normal operations of these divisions, such as refuse collection, may be suspended or curtailed as equipment and personnel are reallocated to the snow removal effort.

The Division of Fleet Services puts its staff on a 24-hours-a-day, 7-days-a-week schedule in severe weather to service and repair snow-removal equipment. Personnel from the Divisions of Streets & Roads and Water Quality are often activated to unclog storm-water basins and maintain stormwater sewers during snow emergencies.

SIDEWALK CLEARANCE

In an effort to ensure mobility for pedestrians, as well as motorists, LFUCG includes sidewalk clearance as a part of snow removal operations. Sidewalk snow removal must be coordinated with roadway plowing, as re-covering by plowed snow can occur where sidewalks are directly adjacent to the traveled way. Viaducts and ADA ramps at intersections are particularly susceptible to this problem.

There are over 72 miles of sidewalks that fall under LFUCG's responsibility for snow removal. The city divisions involved in sidewalk clearance are: Facilities, Parks & Recreation, and Environmental Services. Similar to snow and ice removal for our streets, sidewalks will be assigned one of three rankings.

Sidewalk Rank and Area	Area Size	Service Level
Rank 1 City-owned facilities, corridors (viaducts), and city-maintained sidewalks Sidewalks @ Service Open Parks Facilities	12.25 Sidewalk Miles	Clearance within 24 hours of snow end.
Rank 2 Specific city-maintained sidewalks on arterials and collectors in high density areas (i.e. Man O' War, Alumni Dr., etc.) Sidewalks @ Service Closed Parks Facilities& near Bus stops	36 Sidewalk Miles	Clearance within 48 hours of snow end.
Rank 3 City-owned parcels in lower density residential areas Perimeter sidewalks of Parks - High density areas to have a higher priority than low density areas	24.5 Sidewalk Miles	Partial Clearance within 96 hours of snow end.

RURAL AREA PLAN

The rural area snow plan designates snow removal responsibilities to the Lexington-Fayette Urban County Government and the Kentucky Transportation Cabinet. Currently, the LFUCG is responsible for salting and plowing 111 miles (222 lane miles) of rural roadways, while KYTC provides snow removal for approximately 500+ miles of Fayette County's roadways.

The LFUCG rural snow plan divides the county into two sections that are separated by Leestown Rd./Main St./Richmond Rd. The direction the snowfall is moving dictates which sections of the county crews begin plowing first. All designated roads are basically of equal priority, with the exception of hilly areas near the Kentucky River. **Appendix 3** provides a complete listing of the county roadways that are the responsibility of the LFUCG.

KENTUCKY TRANSPORTATION CABINET (KYTC) RESPONSIBILITIES AND PROCEDURES

Because of the joint responsibility for roadways in Fayette County between the KYTC and the Lexington-Fayette Urban County Government, it is imperative to include KYTC in the countywide snow plan. **Appendix 3** contains a map highlighting state and county routes, information on KYTC, and a list of state-maintained roads by priority.

The KYTC contracts the majority of snow removal on I-75, I-64, and New Circle Road, so its crews can concentrate on keeping the other routes in Fayette County salted and plowed. To help with response time, the state calls the Lexington Division of Police when snow moves into the counties within 30 miles of Fayette County. KYTC's snow and ice priority maps are available online:

<http://transportation.ky.gov/maintenance/pages/snow-and-ice-priority-maps.aspx>

HOURS OF OPERATION

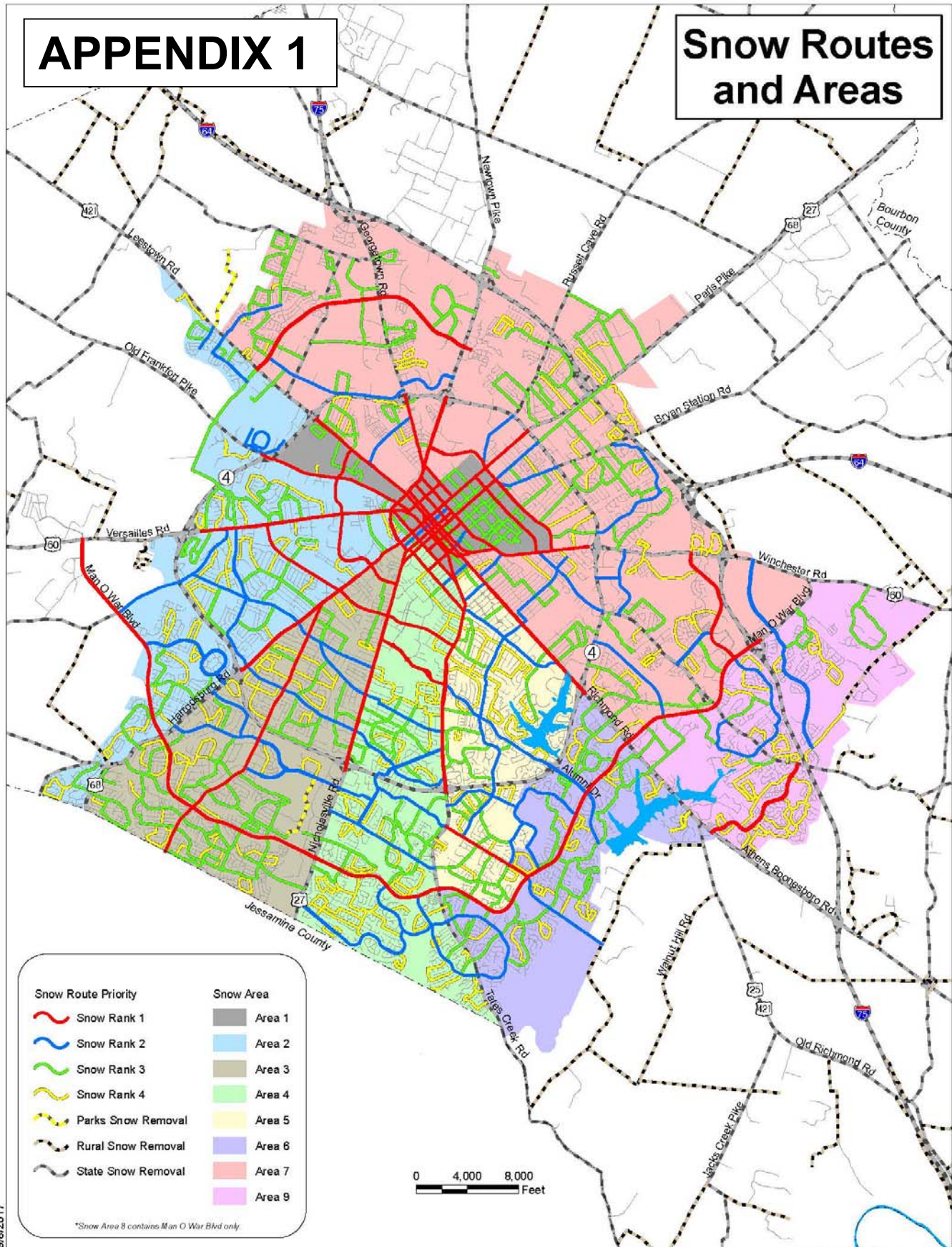
During the snow season, Streets & Roads supervisors are on-call 24 hours a day, 7 days a week, on a rotating basis. If the Division of Police determines that slick or icy spots are developing on roadways, they alert Streets & Roads on-call personnel and salt trucks are dispatched to the trouble spots. In a snow emergency, crews from Streets & Roads and Water Quality work 12-hour shifts around-the-clock until the priority roads are cleared.

LFUCG GARBAGE COLLECTION POLICY IN SNOW OR ICE EVENTS

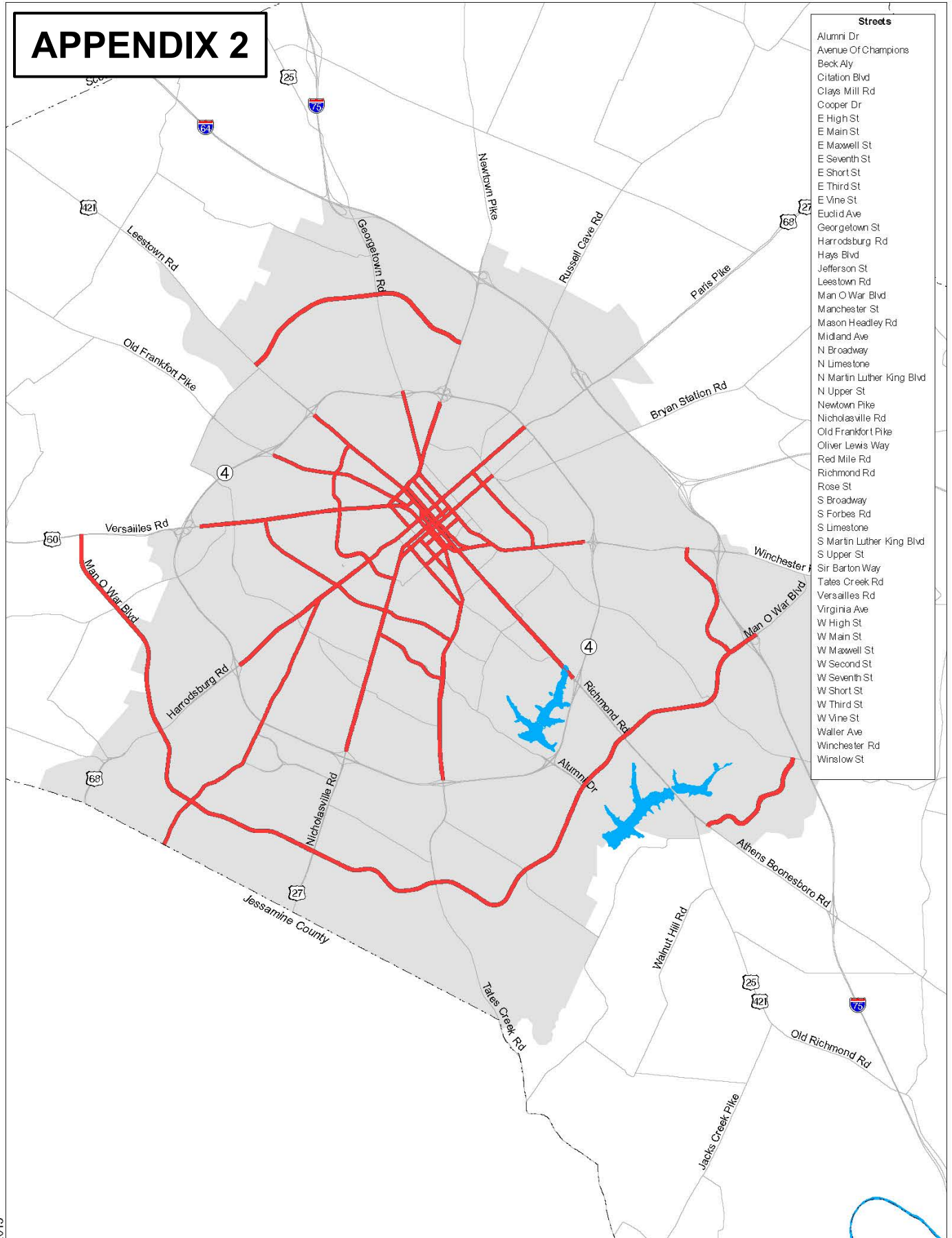
Municipal regulations and public health protection require that the Division of Waste Management provide garbage, recyclables, and yard waste collection regardless of weather conditions. The exception is in emergency situations such as heavy snow and ice when management, for the safety of its employees and the public, can suspend all collections to keep its heavy vehicles off the streets until road conditions improve. When collections are temporarily suspended, LexCall and the LFUCG's Government Communications office are notified to provide information to the public.

APPENDIX 1

Snow Routes and Areas



APPENDIX 2



County and State Snow Routes

- Rural Snow Removal
- State A Snow Removal
- State B Snow Removal
- State C Snow Removal

0 1 2 4 Miles