

2012/2013 Snow Removal & Ice Control Preparedness



City of Lawrence
PUBLIC WORKS

Executive Summary

11/20/2012

Presented by

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Assistant Director Public Works

What Happened to the Snow Last Year?

The main culprit for the overall lack of cold and snow is called the "**Arctic Oscillation**" (**AO**). When it is positive, pressure over the northern latitudes stays relatively low keeping bitterly cold air bottled up. This provides much of the country with a steady dose of mild Pacific air. Conversely, negative values of the Arctic Oscillation translates to colder air plunging southward into the United States. December 2011 saw the AO jump into record positive territory, while the very cold Decembers in recent years saw sharply negative AO values.

- 42 separate record weather related events
 - November 2011 to November 2012
- Record Report as of 3:13 PM CST on January 05, 2012
 - a record high temperature of 70 degrees was set at Topeka KS today. This breaks the old record of 69 degrees set in 1956.

Typical Numbers for Lawrence

- Average Snowfall per year = 21”
- Average number of snow events = 7
- Record monthly snowfall = 21.9” in January 1985
- Record single event = March 23rd 1912 – 20”
- Typical snow months December thru March



Comparison Last Two Seasons

	<u>2010/2011</u>	<u>2011/2012</u>
● Snowfall	33.8"	2.5"
● Number of events	11	4
● Salt consumption	3,362 tons	749 tons
● Sand consumption	2,997 tons	583 tons
● Man-hours	\$196,093	\$33,900
● Equipment	\$179,336	\$12,972
● Materials	<u>\$250,240</u>	<u>\$48,735</u>
● Total cost	\$625,670	\$95,608

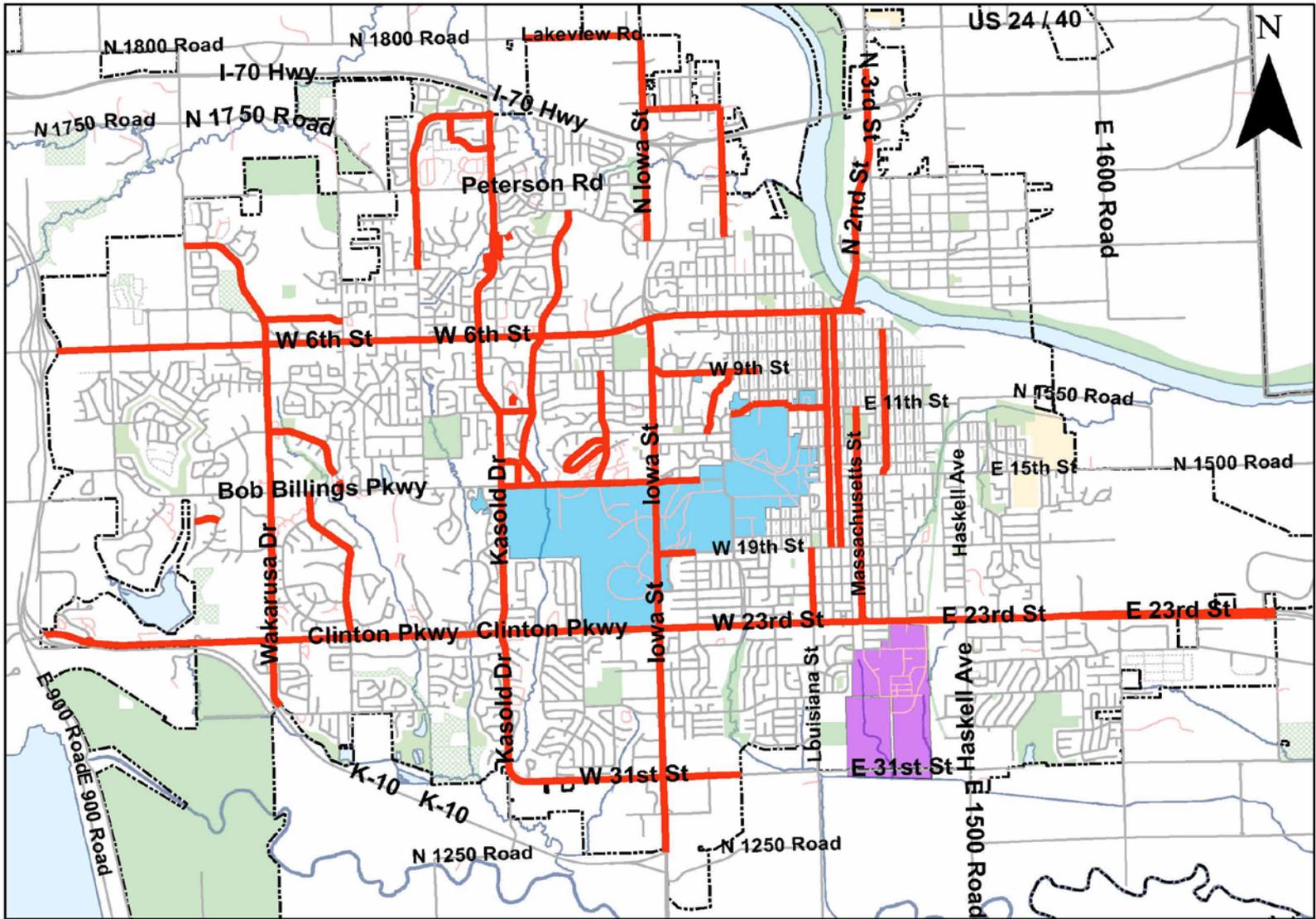
Snow / Ice Control Plan

- The city is divided into 5 areas
 - Using Iowa St. & Bob Billings Pkwy. as the dividing line
 - There are 16 specific routes
 - Routes follow priority order from most traveled to least traveled
 - Criteria
 - Traffic counts, bus routes, schools, major employment centers, and hospitals.
 - Plowing begins at a snow depth of 3”
 - Treatment begins prior to event

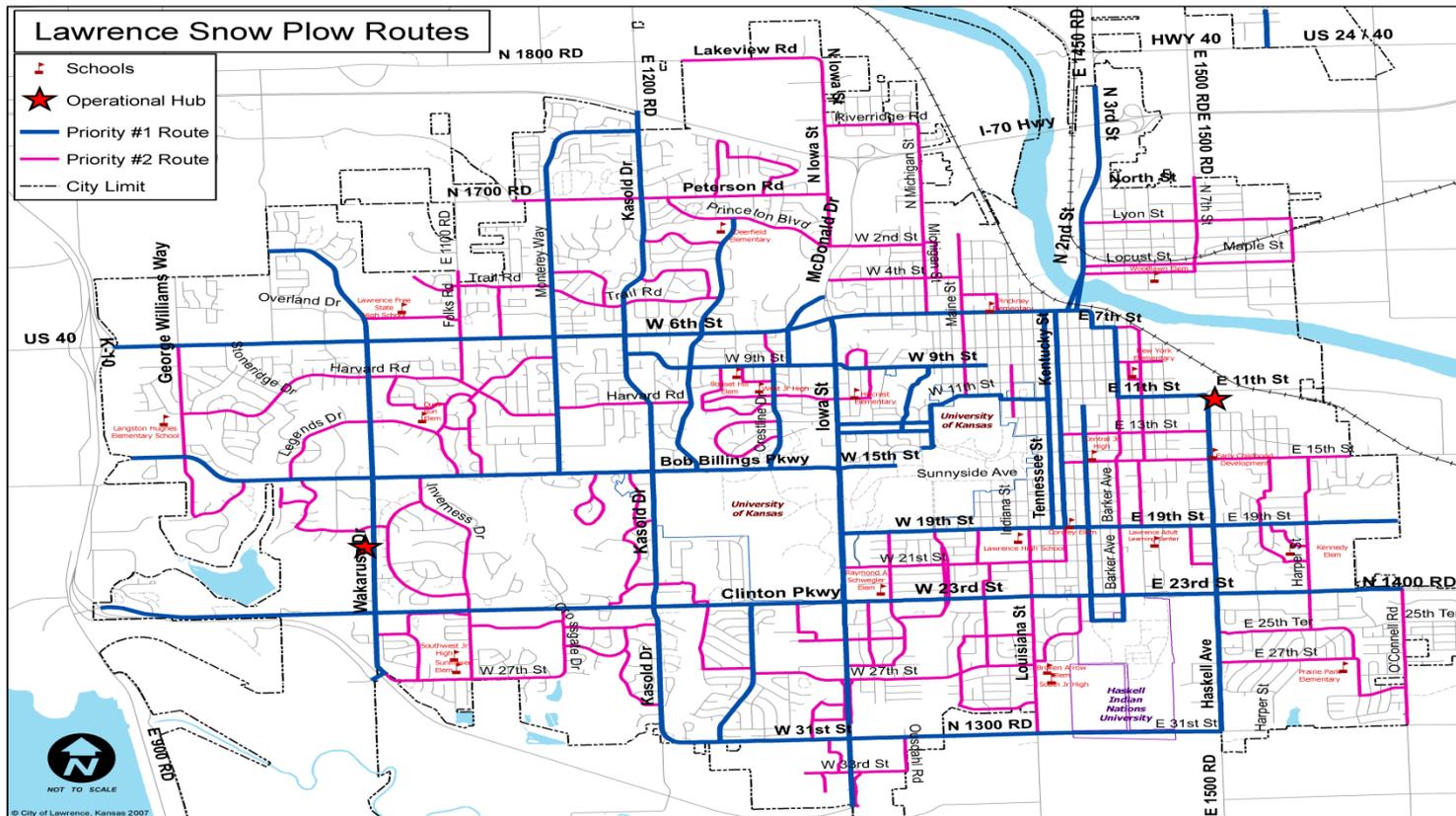
Pretreatment Plan

- Crews will go out ahead of the storm forecast during normal hours and pre-treat street.
 - Rain will eliminate the ability to do this
- Start out in select areas
- Goals
 - Shorting the clean up time
 - Reduce cost
 - Quicker response times

Liquid Pre-Treatment



Snow & Ice Control Plowing Routes



Materials



- We will start this season
 - 4,000 tons of salt
 - 1,000 tons of sand
 - 2,500 tons of salt sand mix
 - 15,000 gallons Brine
 - 2,500 tons of salt on hold order



Equipment

- 4 - Tandem axle dump trucks
- 7 - Single axle dump trucks
- 9 – 1 ton 4x4 trucks
- 1 – Wheel loader
- 2 – Motor graders
- 3 – Back-hoe
- 2 – Farm tractors
- 3 – Liquid tank spreader



Personnel

- 32 equipment operators
- 4 supervisors
- Division manger
- Administrative support
- Other
 - Communications Manager
 - Asst. Public Works Dir.
 - Police & Fire
 - Utilities
 - Parks & Recreation
 - Contractor's



Public Awareness

- Web site
 - www.lawrenceks.org
 - Links to safety and weather
- Media
 - Press releases
 - **“Snow plows hit the streets Tuesday”**
 - Live interviews before and during events
- Education
 - Parking letters

Annual Snow Training Day

The First Tuesday In November Each Year

- The annual practice provides an opportunity to review the plan, incorporate new streets, give equipment one more check and train employees





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Snow and Ice

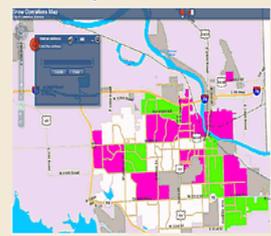
Winter 2011/2012

Use this guide as a resource for snow-related topics.

Latest Progress News Releases

- [Crews working round the clock to clear streets](#)
- [City workers a "salt" roads to prepare for in clement driving conditions](#)
- [Bikers urged not to ride in two feet of snow](#)
- [Temporary igloos being made to save electricity](#)
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Snow Map



[View Snow Map](#)



City News

- [Three local organizations come together to make a child's day special with the 'Birthday Bear'](#)
- [Carbon monoxide: a silent killer](#)
- [Take Charge Challenge results released: Lawrence loses to Manhattan](#)
- [Parks and Recreation facilities serve as a drop-off locations for coat drive](#)
- [Shelters and park restrooms closing for season](#)
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Reviewing the Plan

The [Street Maintenance Division](#) conducts a practice of the snow removal plan annually. For the 2011/2012 winter weather season, review of the plan was Nov. 1. Employees from the Street Maintenance Division inspect equipment, locate required gear, and travel assigned routes streets.

Ready for Snow and Ice Readying the Plan

Routes follow a priority order from most traveled to least traveled streets. In general, winter operations progress from:

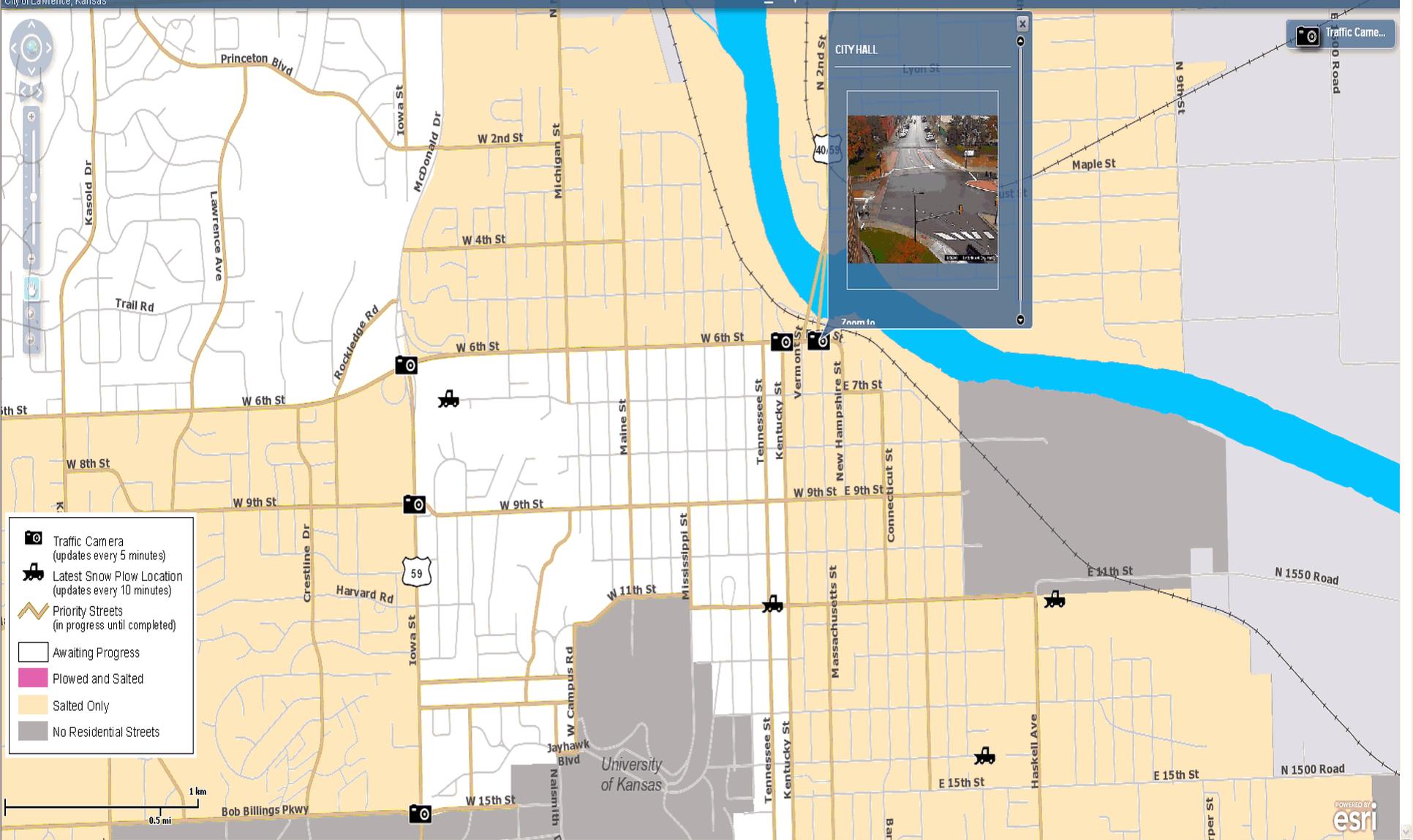
- Arterials**, high-capacity areas of travel such as Iowa Street or 6th Street
- Collectors**, low, to moderate-capacity streets that



[Spreading Routes Map \(PDF, 455 KB\)](#)

Snow Operations Map

City of Lawrence, Kansas





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Welcome: mthiel
Central Daylight Time

MAP VEHICLE FLEET REPORTS ADMIN SUPPORT

VEHICLE LIST

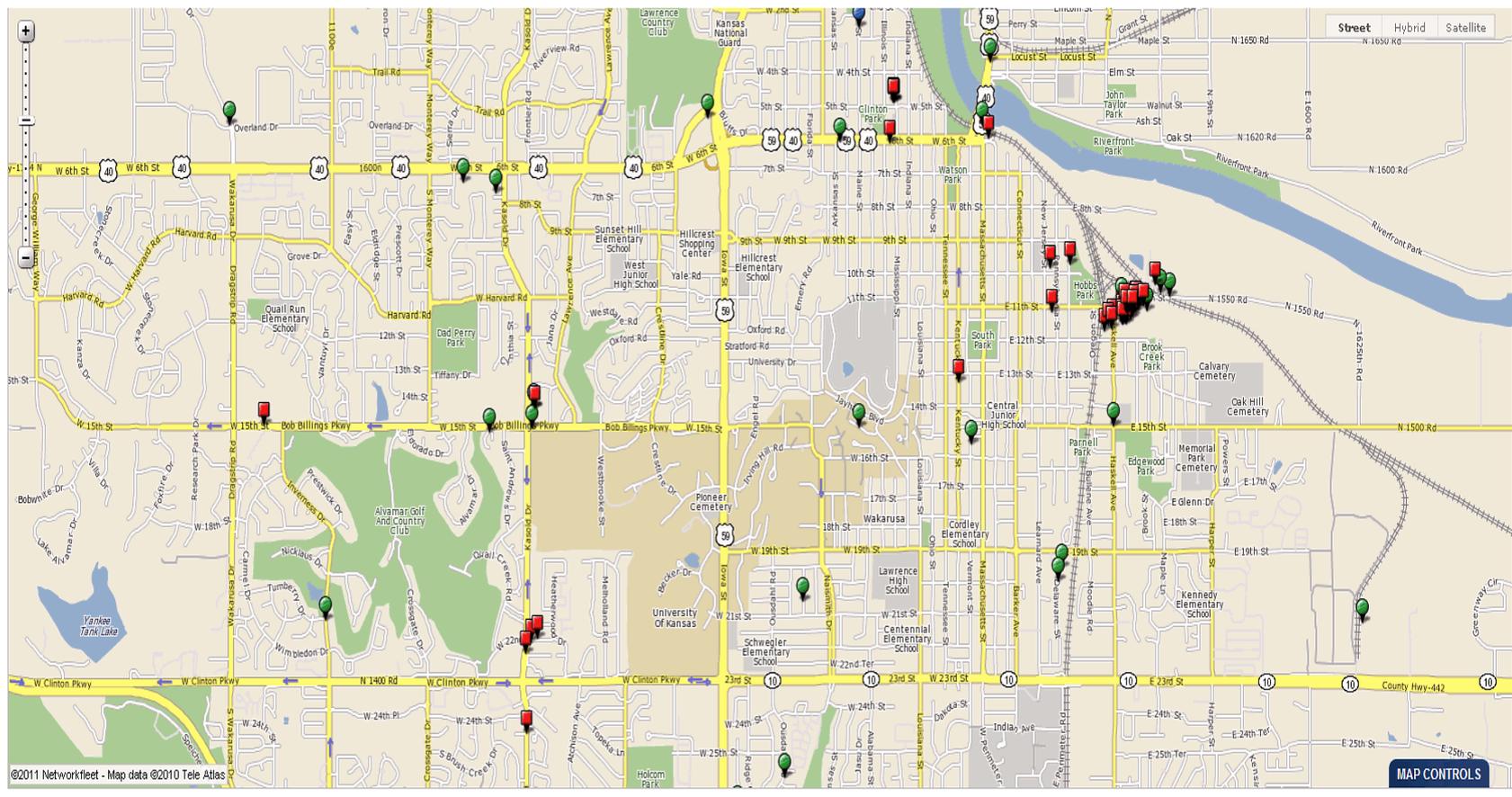
Group: - ALL GROUPS
Attribute: All Attributes
View by: Vehicle Label
Refine:

Select a Vehicle

- 302 - SUPERVISOR PICKUP (TC)
- 304 - SUPERVISOR PICKUP (BN)
- 320 - 1-TON PICKUP
- 323 - SUPERVISOR PICKUP (BC)
- 326 - DUMP TRUCK
- 327 - DUMP TRUCK
- 328 - DUMP TRUCK
- 329 - DUMP TRUCK
- 330 - DUMP TRUCK
- 331 - DUMP TRUCK
- 332 - DUMP TRUCK
- 334 - DUMP TRUCK
- 335 - DUMP TRUCK
- 336 - FLATBED
- 337 - FLATBED
- 343 - FLATBED
- 345 - FLATBED
- 361 - SWEEPER
- 364 - SWEEPER
- 366 - FLATBED
- 368 - SWEEPER
- 377 - PATCH TRUCK
- 396 - FLATBED
- 397 - FLATBED
- 401 C1500 PUSB
- 402 F150 PUSB
- 403 C1500 SB
- 405 F350 FLATBED
- 406 F150 AB
- 407 F150 CP
- 408 C1500 MA
- 409 F150 MG
- 424 SB RL
- 450 SB RL
- 453 SB RL
- 454 SB RL

Overview Map Location Detail Track Vehicle

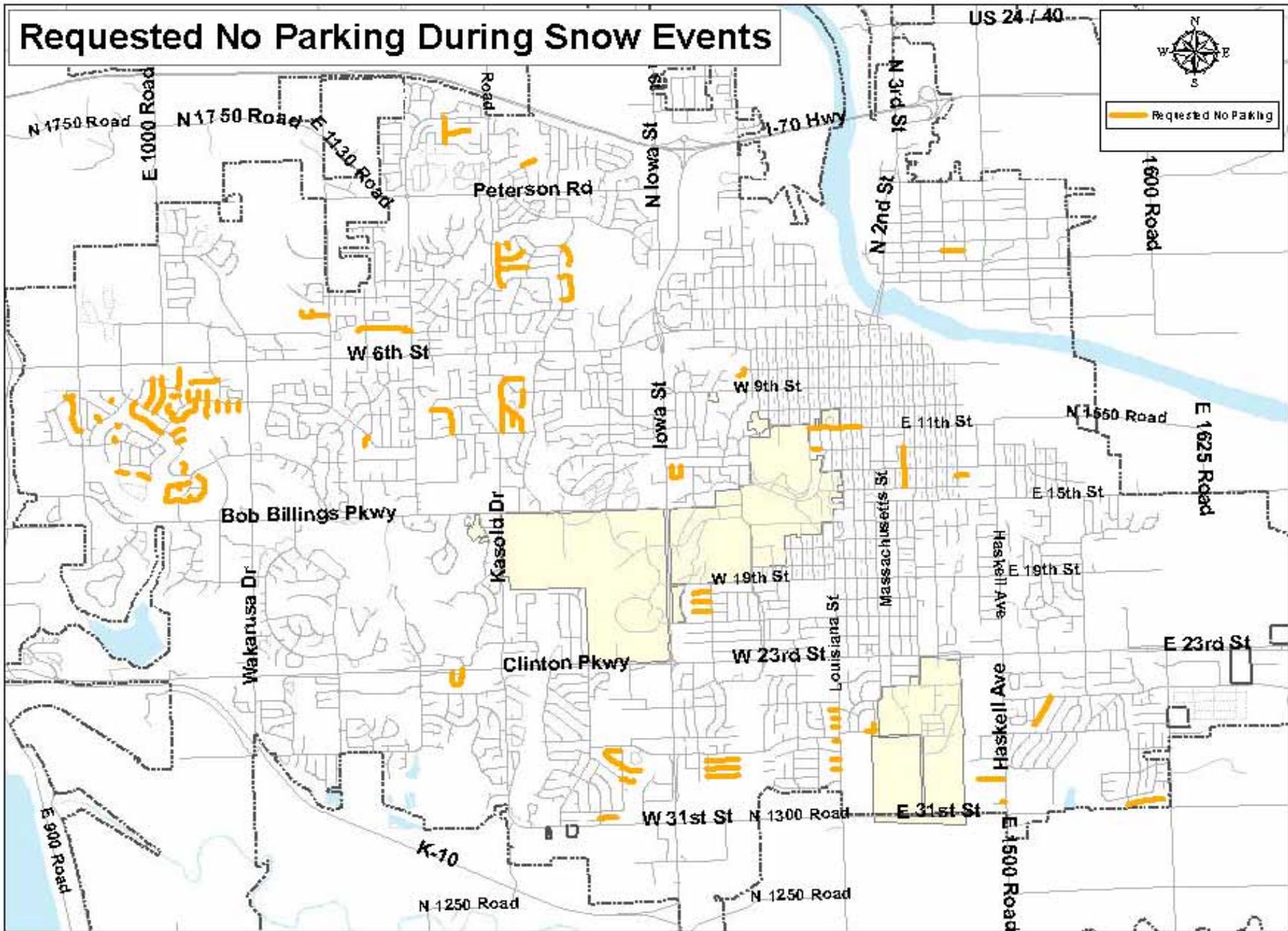
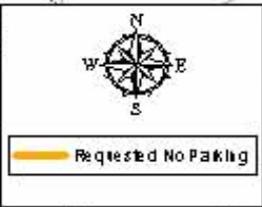
Overview Map



©2011 Networkfleet - Map data ©2010 Tele Atlas

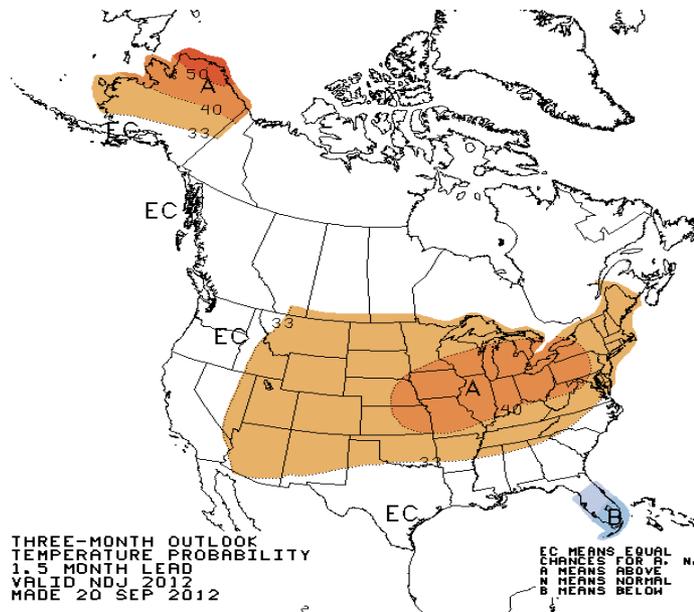
MAP CONTROLS

Requested No Parking During Snow Events

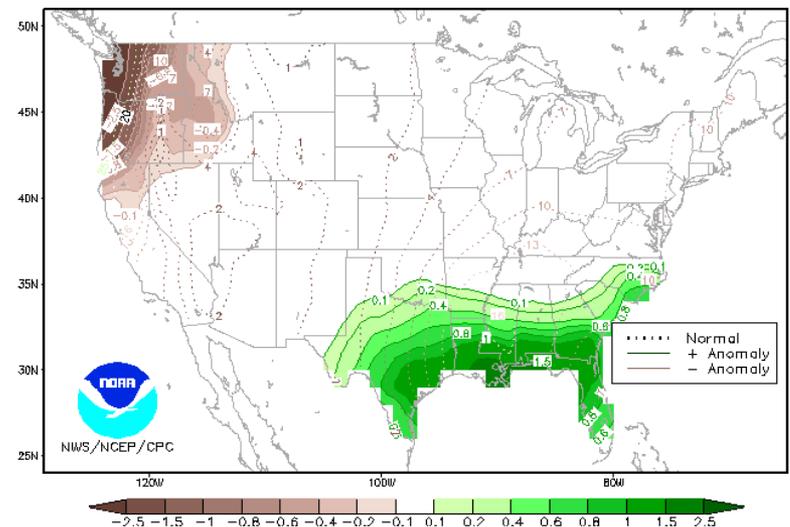


Mark's Forecast

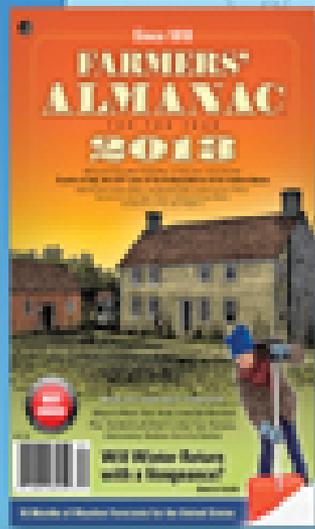
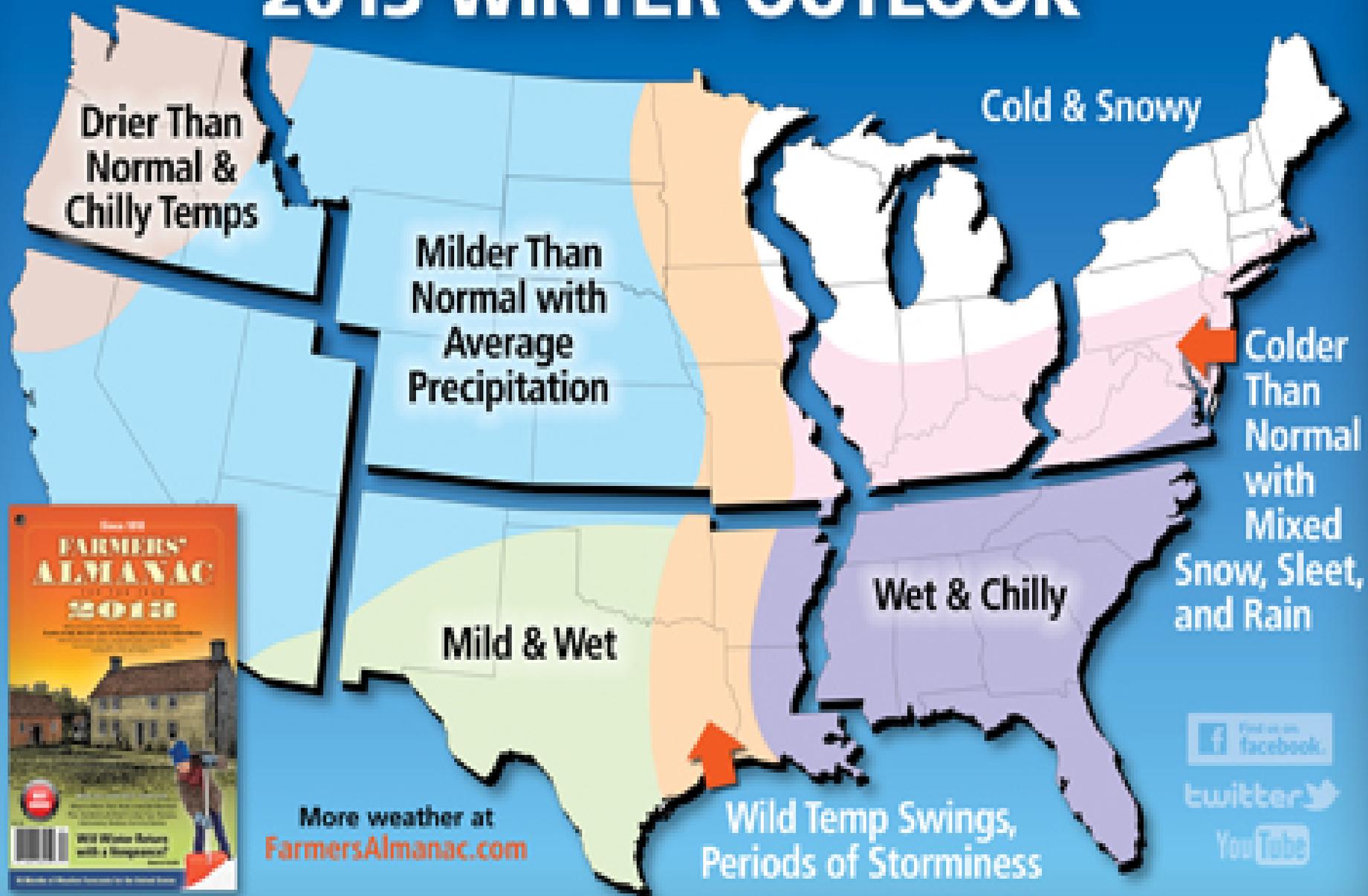
- NOAA Forecast
- Farmers Almanac



Anomaly (inches) of the Mid-value of the 3-Month Precipitation Outlook Distribution for NDJ 2012-13
Dashed lines are the median 3-month precipitation (inches) based on observations from 1971-2000. Shaded areas indicate whether the anomaly of the mid-value is positive (green) or negative (brown) compared to the 1971-2000 average. Non-shaded regions indicate that the absolute value of the anomaly of the mid-value is less than 0.1. For a given location, the mid-value of the outlook may be found by adding the anomaly value to the 1971-2000 average. There is an equal 50-50 chance that actual conditions will be above or below the mid-value. Please note that this product is a limited representation of the official forecast, showing the anomaly of the mid-value, but not the width of the range of possibilities. For more comprehensive forecast information, please see our additional forecast products.



FARMERS' ALMANAC 2013 WINTER OUTLOOK



More weather at
FarmersAlmanac.com



Summary

- Plan is updated
- Equipment is ready
- Materials are well supplied
- Staff have been trained
- Press releases are out
- Web site is updated
- We are ready to tackle what ever mother nature throws at us

Questions?

