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Are You Ready for Winter?

Time to get your home and car ready for cold and snow

(MADISON) – It is time to face the inescapable truth, winter is coming to Wisconsin. We all need to brush up on our winter driving skills and cold weather preparedness.

Governor Scott Walker has declared November 14-18, 2016 as Wisconsin's Winter Awareness Week. The annual campaign, sponsored by Wisconsin Emergency Management (WEM), Wisconsin Department of Transportation (WisDOT), and the National Weather Service (NWS), reminds us now is the time to get ready before the snow and cold hit.

"Make sure you have an emergency supply kit in your car – it could save your life," says Major General Don Dunbar, Adjutant General and Wisconsin's Homeland Security Advisor. "If you slide off into a ditch and are stranded during a storm, food and other items in your kit could help keep you and your family safe until emergency help arrives."

The emergency vehicle kit should contain items such as flashlight, first aid kit, booster cables, emergency flares, water and snack food along with extra gloves, hats, scarves and blankets. In addition, make sure you have a shovel and a bag of sand or kitty litter to help provide traction if you get stuck.

Every winter in Wisconsin, officials say approximately 50 people are killed and more than 4,900 are injured in crashes on icy or snow-covered roads. Many of those crashes are caused by driving too fast in winter conditions.

"The posted speed limit is based on dry pavement and good driving conditions. But the posted limit may be too fast for conditions when a road is snow covered and slippery," says David Pabst, director of the WisDOT Bureau of Transportation Safety. "During severe winter storms, the safest decision is to not drive until conditions improve. Law enforcement officers frequently respond to vehicles in the ditch and chain-reaction crashes when motorists should not have attempted to travel. Slowed or stalled traffic on slippery roads also delays tow trucks and snowplows, which are trying to get roads cleared, as well as emergency responders."

In addition to getting your vehicles winterized and putting together an emergency vehicle supply kit, now is also good time to get your home ready for the cold months ahead. Put together an emergency preparedness kit for your home that contains a three-day supply of non-perishable food and water in case there is no power during a winter storm. Also make sure your flashlights have new batteries and you have a NOAA Weather Radio to receive any emergency alerts.

For more information visit ReadyWisconsin at http://ready.wi.gov. You can also follow ReadyWisconsin on Facebook, Twitter and Instagram.

Winter Driving In Wisconsin

Know before you go this winter season with the 511 Wisconsin Traveler Information System. By downloading the free 511 Wisconsin Smartphone app, following @511WI on Twitter, or visiting www.511wi.gov you can access these current statewide travel resources:

- Road conditions
- Travel times
- Traffic delays
- Incident alerts
- Construction closures
- Traffic cameras

511 Wisconsin is a 24/7 travel service provided through the Wisconsin Department of Transportation.

Driving Tips from the Department of Transportation:

- In the last five years, Wisconsin has averaged 18,000 motor vehicle crashes during the winter months when roads are covered with ice, snow or slush.
- On average, 50 people are killed and more than 4,900 injured in Wisconsin each winter season in crashes when roads are covered in ice, snow and slush.
- Many crashes are caused by "driving too fast for current conditions." Also, when the first blast of winter arrives, motorists often need to "re-learn" how to drive in slippery conditions.
- Be gentle with both the accelerator and brake. Don't use cruise control in wintery conditions. Don't be overconfident in your four-wheel drive vehicle. You may get going quicker than others but you can't stop faster. Four-wheel drive vehicles can lose traction as quickly as two wheel drive.
- Always wear your safety belt. You and your passengers absolutely need this protection even in low-speed "fender-bender" crashes that frequently occur on slick roads.
- Leave plenty of room for snowplows. By law, you must stay back at least 200 feet from the rear of a snowplow.
- Obey the "Move Over" Law, which requires drivers to shift lanes or slow down in order to provide a safety zone for a law enforcement vehicle, tow truck, ambulance, fire truck, highway maintenance vehicle, or utility vehicle that is stopped on the side of a road with its warning lights flashing.
- If your vehicle slides off the road, gets stuck, or becomes disabled, stay inside it if at all possible with your seat belt fastened until a tow truck or other help arrives. If you're inside your vehicle

and buckled up, you have protection against out-of-control vehicles. There's no protection outside your vehicle.

Keep a Winter Emergency Kit in Your Vehicle

Carry a winter storm survival kit in the back seat of your vehicle (in case your trunk jams or is frozen shut) that includes:

- Blankets or sleeping bags
- Extra hats, socks and mittens
- Flashlight with extra batteries
- First-aid kit
- Shovel, booster cables and windshield scraper
- Water and high-calorie non-perishable food (raisins, candy bars, energy/protein bars)
- Sand or cat litter to use for traction
- Cell phone adapter

911 tips:

- If possible, call 911 on your cell phone. Provide your location, condition of everyone in the vehicle and the problem you're experiencing.
- Follow instructions: you may be told to stay where you are until help arrives.
- Do not hang up until you know who you have spoken with and what will happen next.
- If you must leave the vehicle, write down your name, address, phone number and destination. Place the piece of paper inside the front windshield for someone to see.

Survival tips:

- Be easy to find: Tell someone where you are going and the route you will take.
- If stuck: Tie a florescent flag (from your kit) on your antenna or hang it out the window. At night, keep your dome light on. Rescue crews can see a small glow at a distance. To reduce battery drain, use emergency flashers only if you hear approaching vehicles. If you're with someone else, make sure at least one person is awake and keeping watch for help at all times.
- Stay in your vehicle: Walking in a storm can be very dangerous. You might become lost or exhausted. Your vehicle is a good shelter.
- Avoid Overexertion: Shoveling snow or pushing your car takes a lot of effort in storm conditions. Don't risk a heart attack or injury. That work can also make you hot and sweaty. Wet clothing loses insulation value, making you susceptible to hypothermia.
- Fresh Air: It's better to be cold and awake than comfortably warm and sleepy. Snow can plug your vehicle's exhaust system and cause deadly carbon monoxide gas to enter your car. Only run the engine for 10 minutes an hour and make sure the exhaust pipe is free of snow. Keeping a window open a crack while running the engine is also a good idea.

It is also important to check and winterize your vehicles before the winter season begins. Make sure your car's battery is in good shape – cold temperatures can reduce the effectiveness of a battery by 50 percent. Make sure your tires are suitable for winter driving conditions.

Safety First - Stay Informed

The National Weather Service (NWS) issues winter storm warnings and watches. Here's what they mean and what you should do.

Winter Weather Advisory – There is a high confidence that a hazardous winter event will occur over a 12 hour period (e.g., 3 to 5 inches of snow) but should not become life threatening if caution is used.

Winter Storm Watch – Winter storm conditions including freezing rain, sleet, and heavy snow are possible within the next 36-48 hours. Continue monitoring the weather forecast.

Winter Storm or Ice Storm Warning – A significant winter storm is occurring or will begin in the next 24-36 hours. Heavy snow (e.g., 6 inches in 12 hours) or the combination of snow, sleet, freezing rain, and moderate winds will impact travel and outdoor activities and could become dangerous or deadly. An Ice Storm Warning is issued when mostly freezing rain is expected with ice accumulations of at least ¼ inch within a 12-hour period. When a Warning is issued, take necessary precautions – consider canceling travel plans.

Blizzard Warning – A dangerous storm with winds that are 35 mph or greater in combination with falling and/or blowing snow that reduces visibility to 1/4 mile or less for a duration of at least 3 hours. Canceling travel plans is advised.

Wind Chill Advisory – Issued for bitter cold wind chills of 20 to 34 below zero (25 to 34 below zero in the northwest portion of the state)

Wind Chill Warning – Issued with wind chills of 35F below zero (40F below zero for far NW portion of Wisconsin). Frostbite is possible when outside for 10 minutes or less.

Wind Chill Calculator - http://www.nws.noaa.gov/om/winter/windchill.shtml

NWS Windchill Chart

Wind (mph)	Temperature (°F)																	
Calm	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
5	36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63
10	34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72
15	32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77
20	30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81
25	29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
30	28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87
35	28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89
40	27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91
45	26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93
50	26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95
55	25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97
60	25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98

Frostbite Times: 30 minutes, 10 minutes, 5 minutes

$$\text{Wind Chill (°F)} = 35.74 + 0.6215T - 35.75(V^{0.16}) + 0.4275T(V^{0.16})$$

Where, T= Air Temperature (°F) V= Wind Speed (mph)

Effective 11/01/01

Keep Warm and Safe

Frostbite is damage to body tissue caused by extreme cold. Frostbite causes a loss of feeling and a white or pale appearance in extremities such as fingers, toes, ear tips or the tip of the nose. If symptoms are detected, seek medical care immediately!

Hypothermia is a condition that develops when the body temperature drops below 95˚F. It is very deadly. Warning signs include uncontrollable shivering, disorientation, slurred speech and drowsiness. Seek medical care immediately!

Overexertion is dangerous. Cold weather puts an added strain on the heart. Unaccustomed exercise such as shoveling snow or pushing a car can bring on a heart attack or make an existing medical condition worse.

Pets also need extra care when the temperatures fall. They should be brought inside when the temperature reaches 30˚F with wind chill. Dogs and cats can get frost-bitten ears, nose and feet if left outside during bitter cold weather. Chemicals used to melt snow and ice can also irritate pets' paws – be sure to keep anti-freeze, salt and other poisons away from pets.

Be Prepared At Home

Some of the dangers associated with winter storms include loss of heat, power and telephone service and a shortage of supplies. To help protect your family, now is the time to put together a disaster supply kit. Here are some items to include:

- Flashlights and extra batteries
- Battery-powered NOAA Weather Radio and a commercial radio
- Bottled water and non-perishable food that requires no cooking
- First-aid supplies
- Fire extinguisher, smoke detector and carbon monoxide detector
- If appropriate, extra medications and baby items
- If you have an emergency heating source such as a fireplace or space heater, make sure you have proper ventilation
- Make sure pets have shelter and plenty of food and water

For additional information, contact your county or tribal emergency management office, the National Weather Service or ReadyWisconsin.wi.gov.

Check Carbon Monoxide Detectors

Carbon monoxide is the leading cause of accidental poisoning deaths in the United States, according to the Centers for Disease Control. On average, carbon monoxide poisoning sends about 450 people per year to the emergency room in Wisconsin, according to the Wisconsin Environmental Public Health Tracking Program.

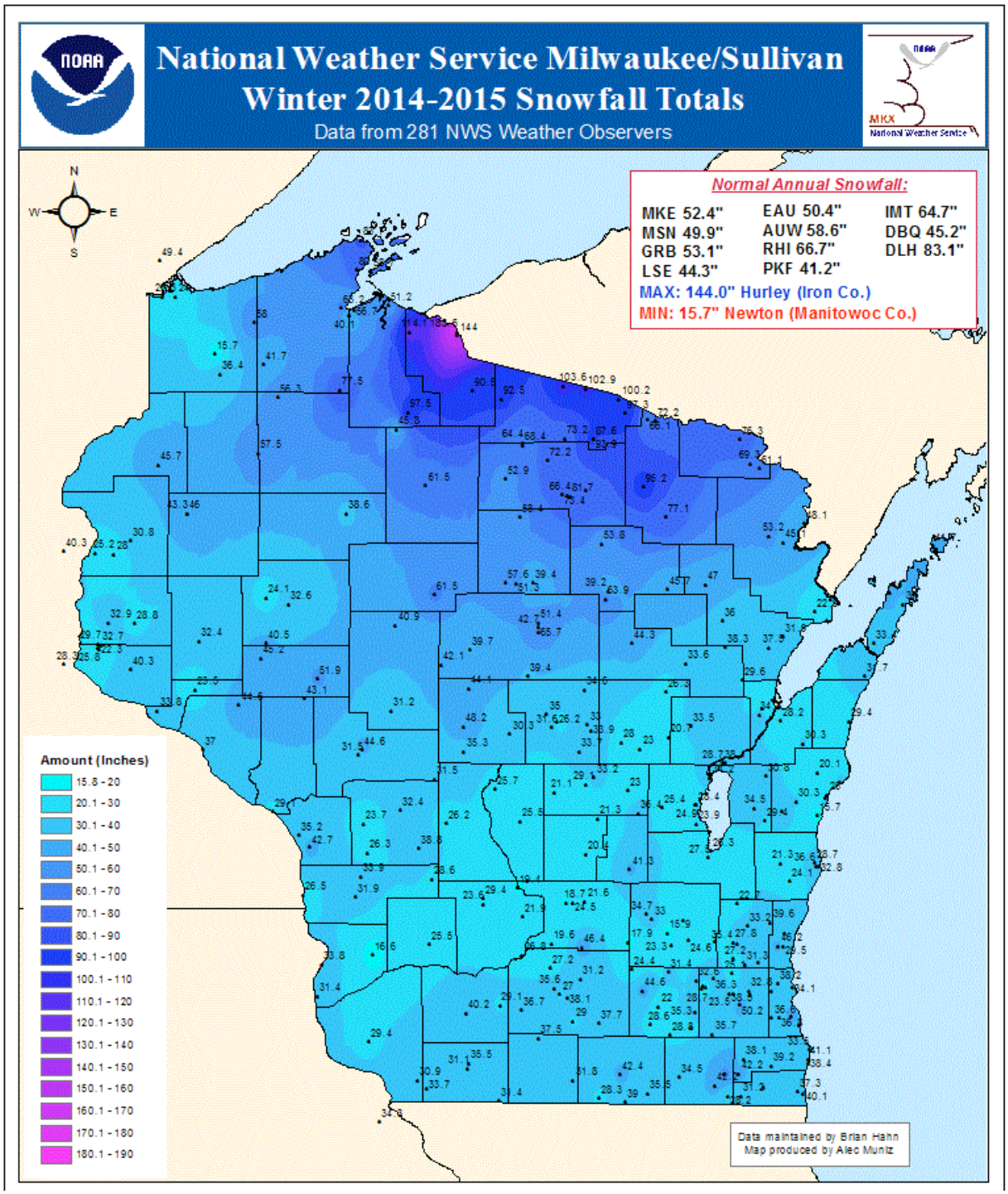
To protect your family from carbon monoxide, follow these simple safety tips:

- **Make sure you have working CO detectors.** All homes and duplexes in Wisconsin are required to have CO detectors on every level including the basement, but not the attic or storage areas.
- **Have your furnace or wood-burning stove inspected annually** to make sure it is structurally and functionally sound and vents properly to the outside of your home.
- **Never run a gasoline or propane heater or a grill (gas or charcoal) inside your home or an unventilated garage.** Any heating system that burns fuel will produce carbon monoxide. Use a battery-powered detector where you have fuel burning devices but no electric outlets, such as in tents, cabins, RVs, and boats with enclosed cabins.
- **Never run a car in an enclosed space.** If a vehicle is running, you must have a door open to the outside.
- **Generators should be run a safe distance from the home.** Never run a generator in the home or garage, or right next to windows or doors.

Breathing carbon monoxide displaces the oxygen in the blood and can cause death within minutes at high levels. Symptoms of overexposure to carbon monoxide are often mistaken for the flu and include headaches, fatigue, dizziness, shortness of breath/chest pain, nausea/vomiting, and confusion. If you experience any of these symptoms, or your carbon monoxide detector sounds an alarm, head outside immediately for fresh air and call 911.

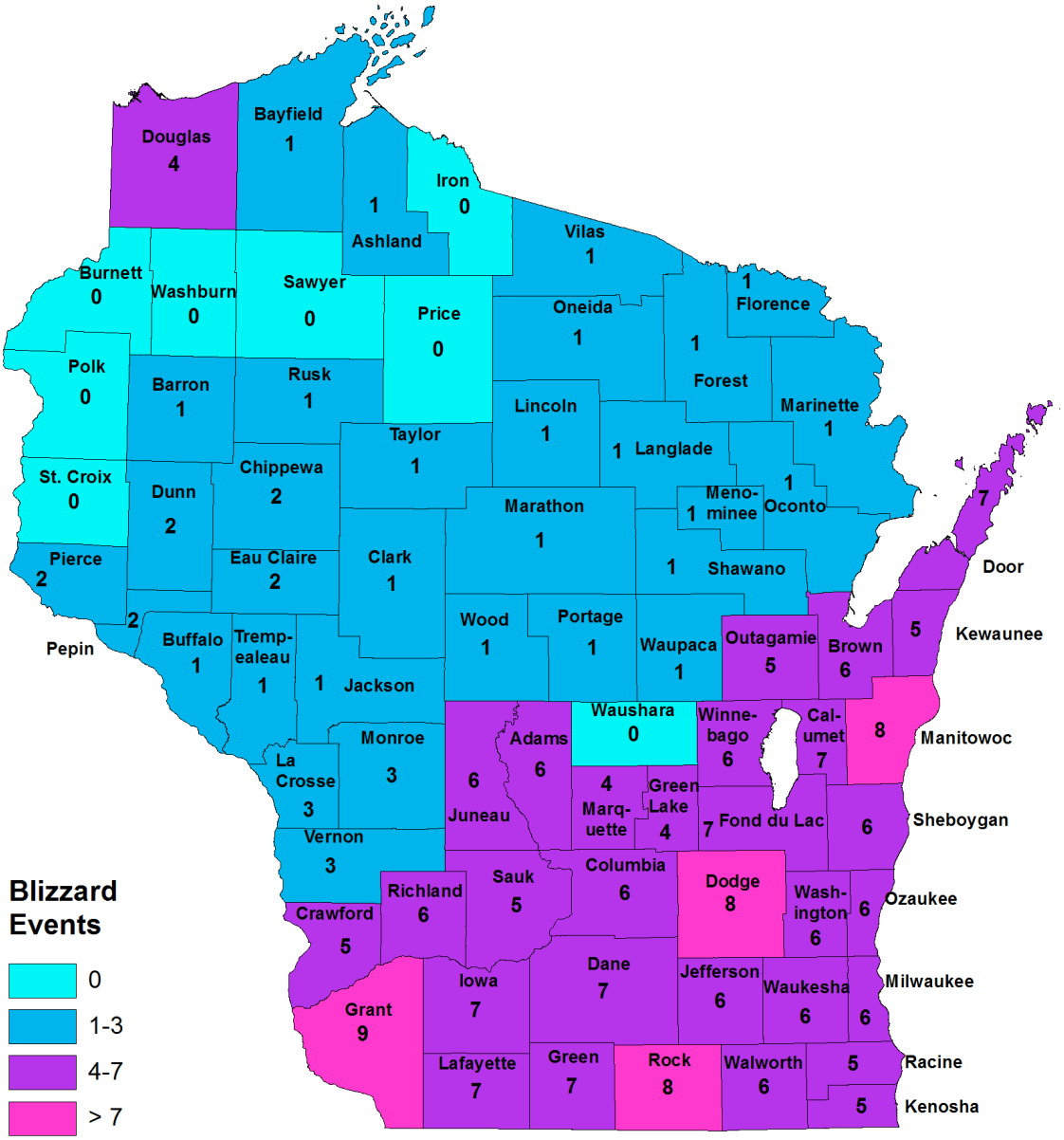
For more information on carbon monoxide poisoning, visit: https://www.dhs.wisconsin.gov/air/co.htm

(place holder for new map)


National Weather Service Milwaukee/Sullivan
Winter 2014-2015 Snowfall Totals
Data from 281 NWS Weather Observers
MKX
National Weather Service
Normal Annual Snowfall:
MKE 52.4"
MSN 49.9"
GRB 53.1"
LSE 44.3"
EAU 50.4"
AUW 58.6"
RHI 66.7"
PKF 41.2"
IMT 64.7"
DBQ 45.2"
DLH 83.1"
MAX: 144.0" Hurley (Iron Co.)
MIN: 15.7" Newton (Manitowoc Co.)
N
W
E
S
Amount (Inches)
15.8 - 20
20.1 - 30
30.1 - 40
40.1 - 50
50.1 - 60
60.1 - 70
70.1 - 80
80.1 - 90
90.1 - 100
100.1 - 110
110.1 - 120
120.1 - 130
130.1 - 140
140.1 - 150
150.1 - 160
160.1 - 170
170.1 - 180
180.1 - 190
Data maintained by Brian Hahn
Map produced by Alec Muniz

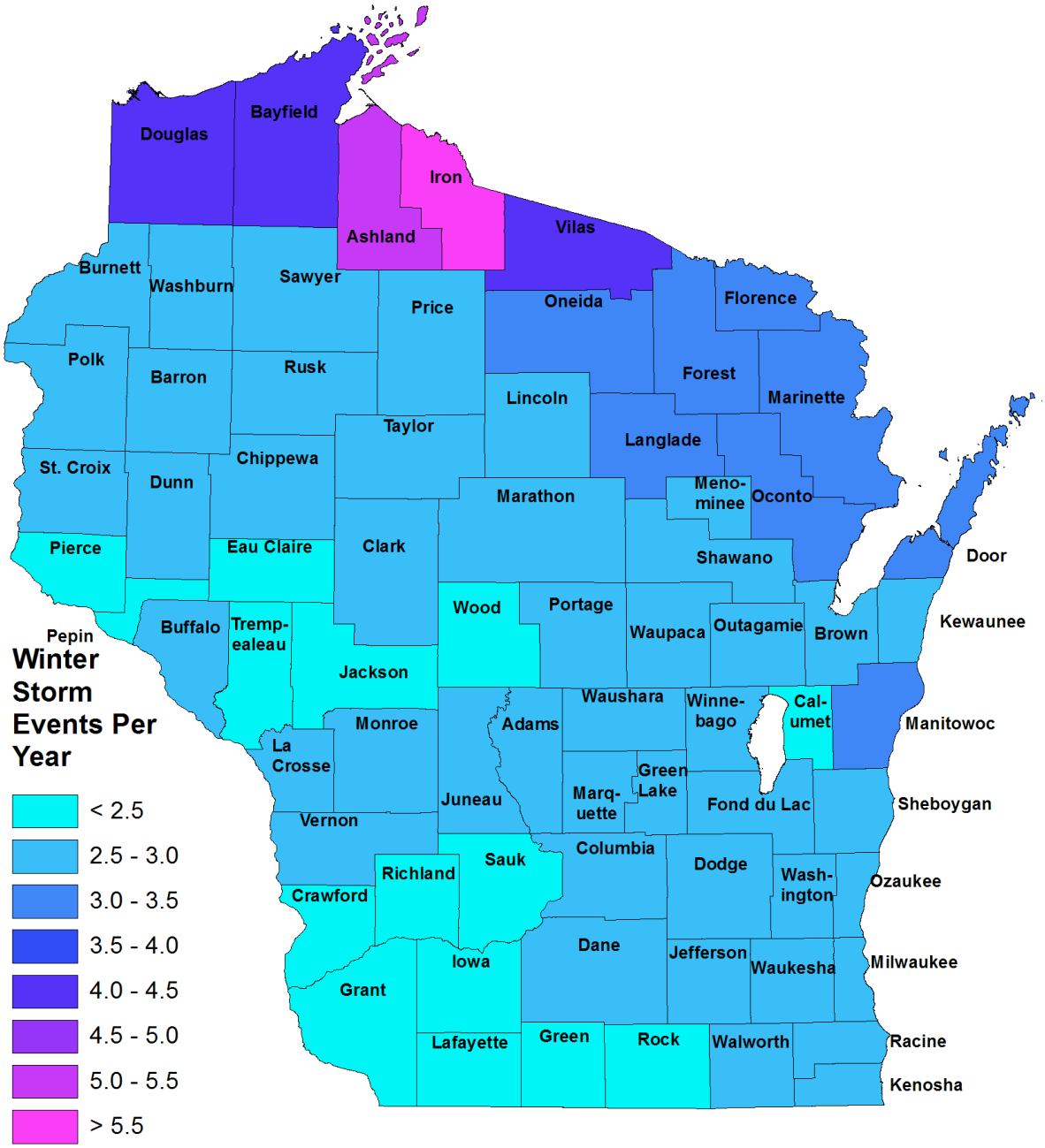
Wisconsin Blizzard Events

Winter 1982-83 - Winter 2015-16



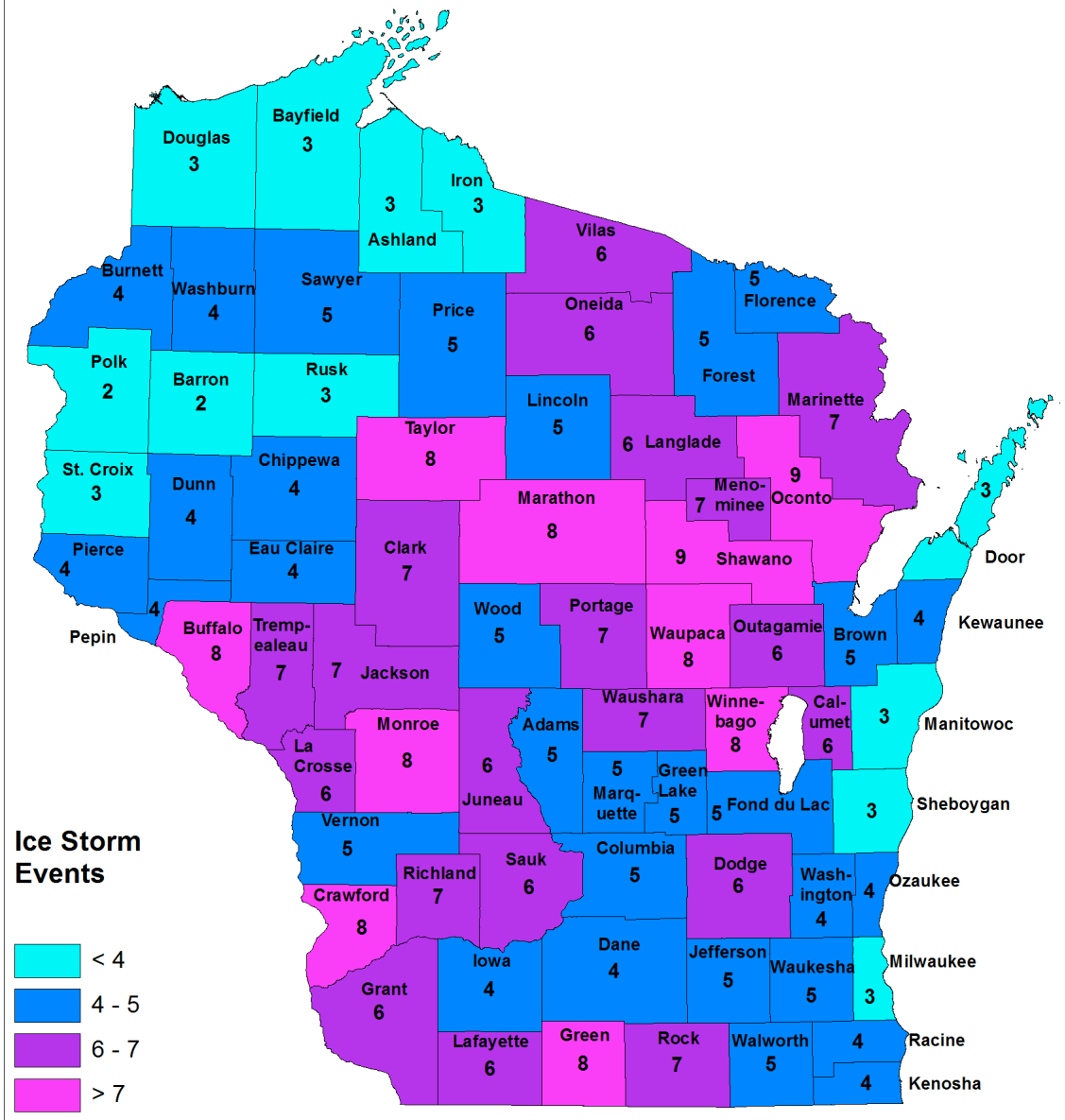
Yearly Average Winter Storms Per WI County

Winter 1982-83 - Winter 2015-16



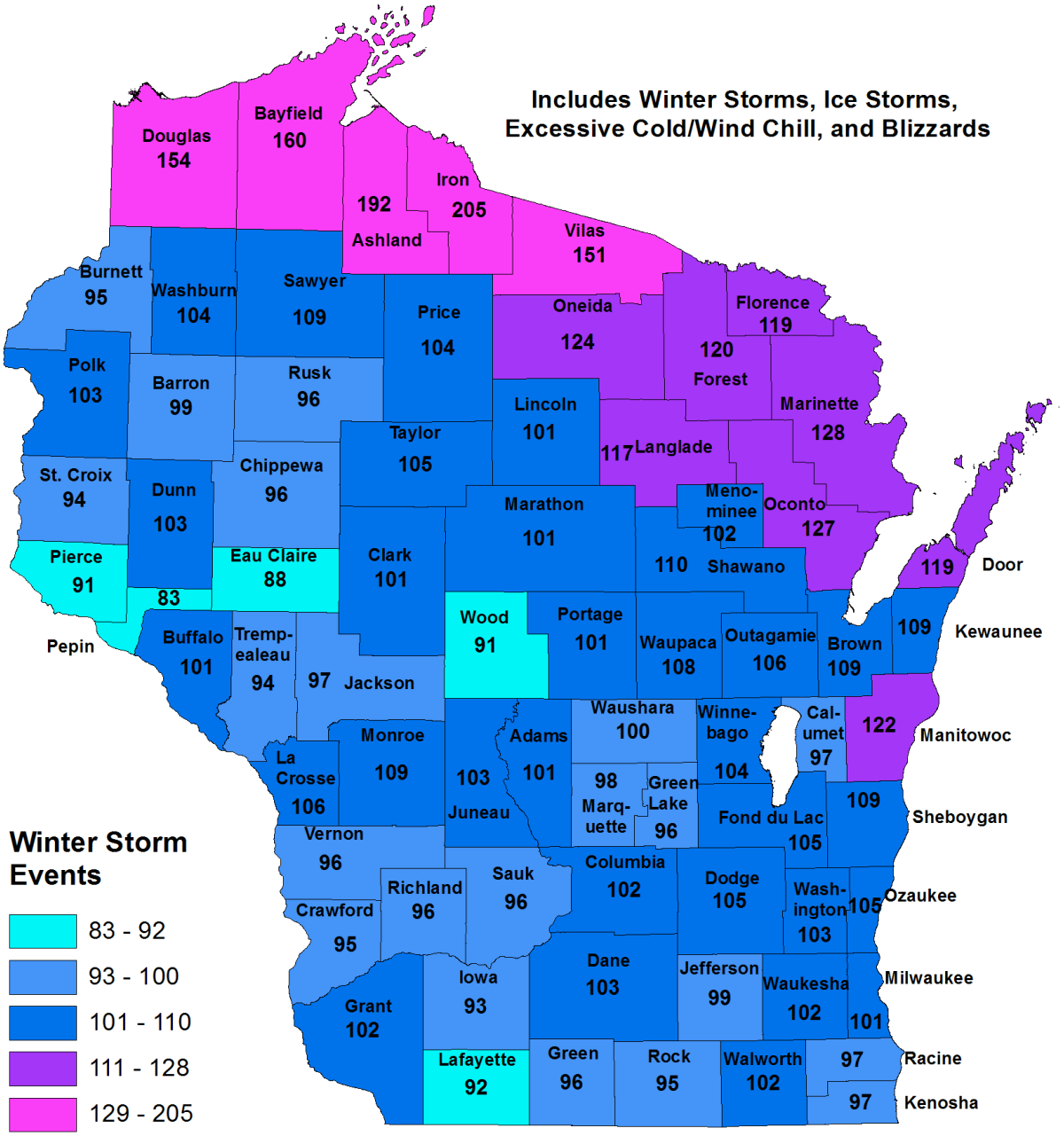
Wisconsin Ice Storm Events

Winter 1982-83 - Winter 2015-16



Wisconsin Total Winter Events

Winter 1982-83 - Winter 2015-16



- The coldest temperature in the winter of 2015-16 was -32 in Ladysmith (Rusk County) on February 14, 2016.
- Hurley (Iron County) had the most snow with 115 inches in the 2015-16 winter season.
- Greatest daily snow total for the 2015-16 season – Tie between Beloit (11-12-2016) and Green Bay Botanical (12-29-2016) at 14".
- Wisconsin's all-time, lowest temperature is -55˚F on February 2 & 4, 1996, near Couderay (Sawyer Co.). Readings of -30˚F or colder have been recorded in every month from November through April. Of course, brief readings in the 50's, 60's and 70's are possible during winter as well!
- Average annual snowfall ranges from 32 to 40 inches near the Illinois border to 135 to 168 inches in the Iron County snow-belt from Gurney to Hurley. The extremes are 31.9 inches in Beloit, Rock County to 167.5 inches in Hurley, Iron County, for the period of 1981-2010.