

CAPITOL RESEARCH

● ● ● TRANSPORTATION

High Costs of Winter Road Maintenance, 2013–14

The winter of 2013–14 was a record-breaking one in many states and led to record-breaking expenditures on road maintenance.

- » After spending \$100.3 million on winter expenditures for fiscal year 2013 and just \$65.5 million for fiscal 2012, the Michigan Department of Transportation estimates winter expenditures for fiscal year 2014 of between \$135 million and \$136 million. The 2014 numbers factor in costs for salt—\$31.73 million for 645,860 tons, which were respectively 18 percent and 28 percent increases over the previous year. The department used 75 percent more liquid to treat the roads and 50 percent more sand. In addition, 24 percent more fuel was used for department vehicles and 23 percent more was spent on fuel. Workforce overtime hours and expenditures both saw a 98 percent increase over the year before.¹
- » Between Oct. 1, 2013, and April 30, 2014, the Ohio Department of Transportation spent more than \$119.8 million in labor, materials, equipment and other costs dealing with winter weather. During the same period in the winter of 2012–13, the state spent just \$80.8 million. The average annual statewide cost of winter during the past 10 years was only \$62 million. The more than 1 million tons of road salt used also dwarfed the 731,547 tons used last year and the 630,000 ton average over the past decade.²
- » The Pennsylvania Department of Transportation, which had \$189.2 million budgeted for the 2013–14 winter, spent \$284 million.³
- » The New Jersey Department of Transportation reported that it spent a record \$138 million to keep state roadways clear of snow and ice—about what it cost for the three previous years combined. The New Jersey Turnpike Authority, which operates the New Jersey Turnpike and Garden State Parkway, reported snow removal costs of \$42.1 million in 2014, compared to \$23.7 million in 2013. Storm-related costs for state, county and municipal roads combined could approach \$500 million for 2014, New Jersey transportation officials said in May.⁴
- » Kansas experienced its most costly winter since 2008, according to state DOT officials. The department spent \$22 million on materials, labor and equipment usage to keep highways clear; that's \$8.50 per registered vehicle in the state. The state spent \$18.6 million in 2013 and just \$6.9 million in 2012.⁵
- » Illinois officials said in February their total cost for snow and ice response was 225 percent of the average for the previous three years.⁶
- » Indiana Department of Transportation officials estimated its yellow plow trucks logged more than 8.7 million miles during the winter months—the equivalent of 353 trips around the earth or 11 round trips to the moon. Snowplow drivers worked alternating 12–16 hour shifts for weeks or in some cases, months. The department invested \$57 million in operational resources, up from an average of \$33.8 million over the past five years.⁷
- » Kentucky spent more than \$68 million on snow and ice removal in dealing with more than 30 winter events—about one-and-a-half times what it spends in a more typical winter.⁸
- » Virginia budgeted \$157 million for snow removal and expected to exceed it by \$150 million, which transportation officials said was probably the most the state has ever spent for that purpose.⁹
- » Maryland's expenses hit \$130 million, nearly double its five-year average of \$70 million.¹⁰





- » North Carolina had \$40 million budgeted and spent more than \$60 million.¹¹
- » Bloomberg reported in February that about three-fourths of U.S. states and many cities outspent their maintenance budgets for the year dealing with extreme weather. Chicago and Indianapolis, for example, exhausted most of their snow-clearing budgets in December and January, respectively, with months of winter remaining.¹² Milwaukee spent nearly 70 percent more than it spends in an average winter.¹³ One transportation association official called the pothole season “one of the worst in memory.” Indianapolis Mayor Greg Ballard said his city received 4,500 more complaints about potholes this year compared with last year. Crews in New York City in February reported they had filled a record 113,131 potholes this year, up from 50,434 at the same point in 2013.¹⁴

States used voluminous amounts of salt to treat roads, which often left it in short supply.

- » Connecticut Gov. Dannel Malloy declared a state of emergency in February due to a salt shortage and appealed to the federal government for help in finding new sources of road salt. When the governor announced the state had prepared a relief package for municipalities facing salt shortages, 121 communities sent in requests for assistance.¹⁵
- » The New Jersey Department of Transportation went through 496,000 tons of road salt in 2014, nearly twice the amount used in 2013. A salt shortage at one point was blamed on a century-old maritime law that kept a 40,000-ton supply purchased by the state bottled up in a Maine port. The maritime industry in turn blamed poor planning by the state DOT for the shortage and delivery delays.¹⁶
- » The Pennsylvania Department of Transportation used slightly more than 1.2 million tons of salt across the state, 26 percent more than what was used during the previous winter.¹⁷ Gov. Tom Corbett issued an emergency proclamation Feb. 3 and emergency salt deliveries of 20,000 tons and 35,000 tons were made to particularly hard hit

areas of the state. PennDOT worked closely with the Pennsylvania Motor Truck Association and issued emergency, low-bid contracts for five haulers to pick up salt supplies from a port in Delaware and deliver it to the department’s maintenance yards.¹⁸ PennDOT reported salt shortages across almost all their suppliers and had to purchase salt as far away as Chile and Peru.¹⁹

- » In early February, Ohio Department of Transportation officials asked salt companies to offer bids to supply 150,000 tons of road salt for use in communities that had depleted their supplies. After a 10-day bid period, the department received none. At that point in the season, the state DOT had used more than 880,000 tons of salt on the roadways.²⁰
- » State officials in Wisconsin debated the costs of ordering additional salt versus hiring trucking companies to take salt from areas of high supply to places with salt shortages. Indiana had to schedule extra salt deliveries but found that supply and demand had increased prices.²¹
- » Kentucky transportation officials reported spreading more than 438,000 tons of salt—244,000 tons more than the previous winter. The state completely used up its reserve salt pile at the Mega Cavern in Louisville.²²
- » Georgia Department of Transportation officials accused a subcontractor of price gouging for salt coming out of the Port of Charleston, S.C.²³
- » CNBC reported that in some hard hit parts of the country, prices for road salt doubled or tripled.²⁴

States employed innovative strategies to deal with winter weather.

- » For the past 15 years, the Minnesota Department of Transportation has partnered with farmers in the central and southwestern parts of the state to keep many rural roads safe and open for drivers during winter weather, saving commute time and taxpayer dollars that would have gone to plowing and road maintenance. MnDOT asked several farmers to leave a minimum of six rows of corn on fields adjacent to rural roads during winter months. The corn stalks break the force of wind and collect snow around them, preventing it from drifting onto roadways. Farmers participating in the program enter into a formal agreement with the department and are reimbursed using a formula based on yield, production, costs, inconvenience factors and price of corn. According to MnDOT, the program returns \$14 in savings for each dollar invested from plowing, equipment use and labor. The department had more corn stalk participation than ever before.²⁵
- » Tennessee is among the states that this winter made use of a substance called Magic Salt to help melt ice and snow. The product is made from potato juice and is biodegradable, noncorrosive and environmentally friendly.²⁶ Other biodegradable products used by transportation agencies to treat roads included beet syrup, tomatoes and a corn-based product.²⁷

- » Some counties in Wisconsin used a homegrown product this year in tandem with road salt to help control snow and ice: liquid cheese brine. The brine reportedly helps salt stick to the road, speeds melting and allows the counties to use up to 40 percent less salt, saving thousands of dollars in the process.²⁸
- » Rising prices for salt and decreasing funds during the past decade prompted the Michigan Department of Transportation to implement what it calls “sensible salting” procedures. The department has set application guidelines for winter conditions, used weather stations to better target areas that will benefit most from salt, required pre-wetting of salt so it sticks to the road and starts working faster, and slowed plow trucks down to 25 mph when applying salt to prevent it from bouncing and scattering off the road. The department said these guidelines help conserve overall salt use, save money and make sure more of the salt that’s applied gets to where it does the most good.²⁹
- » As they dealt with dwindling salt stockpiles this year, Kentucky transportation officials introduced conservation efforts to preserve salt supplies for an emergency and encouraged the 12 highway districts around the state to share their supplies.³⁰

States have made pothole repair and winter recovery priorities in the wake of the winter of 2013–14.

- » Indiana Gov. Mike Pence in February announced the state department of transportation had initiated a “strategic blitz” to get potholes filled as quickly as possible.³¹ The department used 14,000 tons of asphalt, 183,000 man hours and the equivalent of \$6.4 million in operational resources as part of the blitz. That compares with the five-year average of 9,700 tons of material, 129,000 man hours and \$4.4 million in operational resources. Following an assessment of winter damage, department officials said they were reprioritizing \$42 million from their state and federal construction program for additional pavement patching and repairs across the state.³²
- » The administration of Massachusetts Gov. Deval Patrick in April announced the 2014 Pothole and Winter Recovery Program, a \$40 million, one-time program to assist municipalities and the state department of transportation in accelerating and performing repair of potholes and other winter damage. The state allocated \$30 million to municipalities and \$10 million to MassDOT for interstate highways and state roads. The program is funded through existing fiscal year 2014 authorizations.³³
- » New York Gov. Andrew Cuomo announced in May that more than \$100 million would be spent to allow for the acceleration of resurfacing projects along 300 lane miles of the worst winter-ravaged roads on Long Island.³⁴
- » In April, Illinois Gov. Pat Quinn announced that \$100 million from the Illinois Jobs Now construction program would go toward repairing municipal and township infrastructure in the state. The

funding will help communities fix potholes and make other critical infrastructure repairs, the governor said.³⁵

- » The Michigan Department of Transportation announced in April it would spend \$61 million for cities, counties and villages across the state to help restore road maintenance budgets depleted by winter weather. The funding was part of a \$100 million supplemental appropriations bill for special winter road maintenance that Gov. Rick Snyder signed into law in March.³⁶
- » Connecticut Gov. Dannel Malloy announced in May he would ask the state bond commission to approve an additional \$11.9 million to pay for the state’s annual maintenance and road resurfacing program. Together with \$57 million that was previously approved, the funds will allow 264 miles of primary roads to be fixed.³⁷
- » Pennsylvania’s transportation funding plan, Act 89, which Gov. Tom Corbett signed in November 2013 has allowed the state to undertake an expanded paving program and fully cover their winter pothole costs, transportation officials report.³⁸

Many expect the winter of 2013–14 to have lingering effects in many states.

- » The Associated Press reported in March that as a result of high winter road maintenance costs, state and local road agencies planned to delay repaving projects, cut back on roadside mowing and summer hires, dip into rainy day funds and make do with battered equipment instead of buying more this year.³⁹
- » The city of Bethlehem, Pa., planned to delay a downtown streetscape project to replace sidewalks, benches and trees after more than doubling its usual winter maintenance costs.⁴⁰
- » Kentucky transportation officials said in April the amount of money used to combat snow and ice would result in less money to do spring maintenance on state roads. They said tree trimming, pavement patching, panel sign repairs and some drainage structure issues might be deferred until money became available.⁴¹



» The Michigan Department of Transportation took its case to the public this winter with a feature on their website called “Transportation Reality Check” to demonstrate that pothole repair takes time and resources. Responding to the concern DOT officials heard from Michiganders that road crews are just throwing asphalt into potholes and they need to fix them right the first time so problems don’t recur, department officials counter “the best way to prevent potholes is to keep roads in better condition in the first place. That will require far greater investment than we’re making today.” The website likens patching potholes to putting a bandage on a gaping wound and argues that fixing a pothole to last with a more labor-intensive technique would involve tying up and diverting traffic more significantly. “Because of the sheer number of potholes that need repairs, crews work as fast as they can to shove quality cold-patch (asphalt) into as many holes as they

can while minimizing the impact on traffic,” the feature said.⁴²

» The national transportation research group TRIP noted in a February news release that the harsh winter and high road maintenance costs came during a particularly inopportune year, one in which states could begin to see declines in the federal road funding they receive. The balance in the highway account of the federal Highway Trust Fund is expected to drop below \$1 billion this summer, which would trigger delays in federal reimbursement to states for road, highway and bridge projects. If Congress fails to address dwindling trust fund revenues, funding for transportation improvements could be cut by \$44 billion for the next fiscal year. “America’s already deteriorated road conditions are only going to get worse if greater funding is not made available at the local, state and federal levels,” said Will Wilkins, TRIP’s executive director.⁴³

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