

Snow removal costly, even when it's light

WINTER maintenance of highways and streets is expensive. During the 1985-86 winter season, ice and snow removal in Michigan cost approximately \$92 million.

Michigan's 83 counties spent a total of \$40 million. Its 534 cities and villages spent the remaining \$32 million.

Last season's biggest spenders were: Detroit, \$5 million; Oakland County, \$4 million; and Wayne County, \$3.5 million.

AL ISOLAR of the Local Service Division of Michigan Department of Transportation (MDOT) said the expenses are a fact of life. "Winter maintenance is an enormously expensive business, and the costs are here to stay," he said.

The cost for snow and ice removal has little relation to the amount of snowfall. "Wayne County averages 30 inches of snowfall per year, while Loughton County in the Upper Peninsula averages 290 inches of snow per year and spends a \$1 million on keeping roads open," Isolar said.

Highway snow and ice removal spending is pegged to traffic volume, labor rates and equipment costs, Isolar said. "Oakland County with the largest county road system in the state spends more money because traffic volumes are large and doing the job is so difficult."



our land
Penny Wright

DENNIS PAJOT, spokesman for the Oakland County Road Commission, said the county's growing urbanization makes winter highway maintenance difficult.

"Two-thirds of the county is classified as urban area. These areas are subjected to massive traffic volumes that are critical to an urban environment. It is a tough job to keep the roadways clear," said Pajot. The Oakland County Road Commission is responsible for clearing a total of 2,375 miles of pavement. Of these, 818 miles are primary roads, and 613 miles are local roads. Subdivision streets total 944 miles.

The plan for maintaining the county's roadways is like a military campaign.

At the forecast or onslaught of bad weather, Oakland County Road Commission's 87 salt trucks equipped with scrapers move into action from garages in Waterford, Lake Orion, Davisburg, Milford, Southfield and Troy.

CRITICAL ROUTES — those carrying 5,000 to 40,000 vehicles a day — get first attention.

Depending on snow or ice accumulations, crews salt or plow roads until they achieve 75 percent bare pavement — pavement cleared enough for traffic to travel at normal speeds safely.

Trucks then move to lesser priority routes, such as roads used by school buses, and last subdivisions. In extreme conditions, additional equipment can be brought into service for a total force of more than 100 vehicles.

Salt and sand used on state highways and county roads in Oakland County cost an average of \$1 million a year. A ton of rock salt will cost about \$15.92 this year, down from last year's average of \$19.45. Some 61,000 tons are expected to be needed.

ABOUT HALF of the costs of Oakland's winter maintenance bill are for state highways, Pajot said. These costs will be reimbursed by MDOT, which contracts with the road commission for service of its 299 miles of trunklines in the county.

The rest of the winter maintenance costs are paid from a state highway fund allocations obtained from vehicle gasoline and weight tax revenues.

"The Road Commission budgets on a safety first priority. That means money will be set aside for snow and ice removal even if it means having less money for repairing and building new roads," said Pajot.

"Cities and villages often supplement winter maintenance funds with added taxes. We don't do it," he said.



BILL BRESLER/staff photographer

Snow-shoveling tip: Move piles to the RIGHT side of the driveway, so the snowplow won't push it back and block you in.



Driveway holds tons of snow

THE FARMER'S Almanac predicts record snowfalls for much of the snowbelt this winter.

Four inches of snow on a 50-foot, two-car driveway can weigh as much as four tons. So homeowners should "proceed with caution" when shoveling.

Each year at this time I vividly remember two good friends who died while shoveling snow, one a college professor, the other a physician. I also recall reading that nine men collapsed and died while clearing snow near their homes in one day.

As a reminder of the potential danger of snow shoveling, cut out and past this label to your snow shovel.

WARNING: Use of this instrument for snow removal may be hazardous to your health.

Here is why.

THE ASSOCIATION between snow shoveling and heart attack or sudden death is probably no coincidence. Snow shoveling is an extremely strenuous activity. It combines pushing, lifting, turning and throwing.

Depending on the weight of the snow and the shoveling rate, snow shoveling requires between six and 15 times the resting energy expenditure, equivalent to playing singles tennis or running at 9 mph pace, respectively.

For people who are out-of-shape and unaccustomed to vigorous physical activity, these levels of exertion may require maximal or supramaximal efforts.

IN ADDITION to the high levels of energy expenditure, snow shoveling puts excessive demands on the heart. Four factors increase these demands:

- The labor of upper extremity exercise.
- Straining to lift or push heavy loads.
- breath holding.
- inhalation of or exposure to cold air.

These factors markedly increase the heart rate and blood pressure responses to effort. As a result, people with known or latent heart disease may experience insufficient oxygen



fitness
Barry Franklin

delivery to the heart muscle, chest pain or potentially dangerous heart rhythm disturbances.

HERE ARE several recommendations to people who are considering clearing their walks or driveways of snow:

- Hire someone to do it for you. Elderly people, individuals with high blood pressure or those with heart disease simply should not shovel snow.
- Pace yourself. Speed is not the essence when shoveling. Adopt an interval or work-rest approach. Take frequent breaks.
- Start gradually. Avoid sudden strenuous exertion — it may result in excessive strain on the heart.
- Use your arms and legs, not just your arms, and lift modest amounts of snow at a time.
- Wear a cold weather breathing mask or scarf to avoid inhaling cold air or exposing the face and neck to it.
- Avoid large meals, alcohol and tobacco both before and after shoveling.
- Dress in several light layers rather than one heavy layer. This allows you to add or subtract clothing as you work.
- Wear a hat while shoveling. A great deal of body heat is otherwise lost through an exposed head.
- Take extra precaution when the wind is blowing. Temperature alone is not a reliable index of the cold. The cooling effect may be considerably lower when the "wind chill factor" is considered.

Barry A. Franklin, Ph.D. is director of cardiac rehabilitation and exercise laboratories, William Beaumont Hospital, Royal Oak, and associate professor of physiology, Wayne State University School of Medicine.

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