

Snow Warriors Fact Sheet
With Updated Salt Supplies As Of October 21, 2010

- ◆ Tons of salt used/cost/per ton in past years
 - 2010-11: 11,077 tons on hand as of 10/1/10 (\$59 per ton since the City joined an ODOT-led consortium, which helps lower the price of salt)
 - 2009-10: 31,455 tons (\$1.9 million total/\$63.34 per ton)
 - 2008-09: 26,109 tons (\$1.08 million total/\$54 per ton)
 - 2007-08: 37,957 tons (\$2.24 million total/\$47.58 per ton)
 - 2006-07: 22,901 tons (\$846,416 total/\$41.71 per ton)
 - 2005-06: 11,346 tons (\$1.5 million/\$40.95 per ton)

- ◆ Salt purchases 2010-11: Saving taxpayer dollars
 - Beginning with the 2010-11 winter season, the City of Columbus is a member of an Ohio Department of Transportation-led consortium of the state and Ohio municipalities, counties, townships and villages
 - ODOT bids out salt purchases for the consortium
 - The consortium's size gives ODOT and participating local governments the leverage to buy salt at a lower price, saving taxpayers money
 - Thanks to the consortium, the City of Columbus is paying \$59 per ton of salt at the beginning of the 2010-11 winter season, compared to \$63.34 one year ago

- ◆ Number of drivers, plus those cross-trained
 - 2010-11: 112 Equipment Operators (plus 35 cross-trained)
 - 2009-10: 112 Equipment Operators (plus 33 cross-trained)
 - 2008-09: 118 Equipment Operators (plus 27 cross-trained)
 - 2007-08: 122 Equipment Operators (plus 17 cross-trained)
 - 2006-07: 121 Equipment Operators (plus 5 cross-trained)

- ◆ The City has 6 salt barns

- ◆ Snow routes priorities
 - Priority 1: Freeway system (Portions of State routes 315, 33 and 104. ODOT is responsible for I-71, I-70, I-670 and I-270)
 - Priority 2: Arterial streets (Examples: High Street, Broad Street, Morse Road)
 - Priority 3: Collector residential streets (Examples: Oakland Park Avenue, Courtright Road, Hague Avenue, Weber Road)
 - Priority 4: Residential streets (*Plowed only after four inches of snow are on the ground and after freeways, arterials and collector residential streets have been plowed and treated*)

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- ◆ When the City of Columbus does plow residential streets
 - The goal is to make residential streets passable
 - Plow trucks *do not* plow down to bare pavement on residential streets
 - Residential streets typically are not plowed the entire curb-to-curb width
 - On cul-de-sacs, plow trucks plow enough of the cul-de-sac “bulb” allow vehicles to turn around, rather than go right to the cul-de-sac bulb curb

- ◆ Columbus’ Snow Warriors are responsible for 227 square miles, much more than their counterparts in other Ohio cities:
 - Cleveland: 82 square miles
 - Toledo: 80 square miles
 - Cincinnati: 79 square miles
 - Dayton: 57 square miles

- ◆ Plow crews in Columbus’ suburban communities are able to plow their residential streets sooner than Columbus because their cities are much smaller
 - Dublin: 26 square miles
 - Grove City: 16.2 square miles
 - Gahanna: 12 square miles
 - Reynoldsburg: 12 square miles
 - Hilliard: 11.5 square miles
 - Pickerington: 9.58 square miles
 - Worthington: 5 square miles

- ◆ Columbus’ Snow Warriors are responsible for more than 6,300 lane miles of roadway, more than any other Ohio city (or, 2,053 linear miles, approximately the distance between Columbus and Las Vegas)
 - Cleveland: 3,000 lane miles
 - Cincinnati: 2,986 lane miles
 - Toledo: 2,700 lane miles
 - Dayton: 1,600 lane miles
 - Dublin: 502 lane miles
 - Westerville: 409 lane miles
 - Reynoldsburg: 270 lane miles
 - Worthington: 176 lane miles
 - Gahanna: 140 lane miles

- ◆ All Snow Warriors’ trucks are equipped with GPS systems known as COMBAT (Central Ohio Management Based Applied Technology)
 - A joint project with Franklin County Engineer’s Office
 - \$4.1 million project (City share of total is \$522,000)
 - COMBAT is on snow plow trucks, anti-icers, tractor mowers and street sweepers
 - Allows the City to track locations of trucks
 - Can track work trucks are doing (plow is up or down; salting or not)
 - Helps the City be more efficient and effective in plowing and treating streets

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- ◆ COMBAT provides a record of streets that have been plowed
 - City also can verify whether a street has been plowed by checking maps that have been completed by plow truck drivers. The drivers check off streets on their maps as they plow the streets assigned to them.
- ◆ Addition of a swing shift (3:30 p.m. to 12 a.m. Midnight) in the winter of 2009-10 added eight to 10 plow trucks to the City snow fighting efforts during weekday evening rush hour
 - Helped Snow Warriors get into residential streets faster during three back-to-back-to-back heavy snow storms in February 2010—they started plowing residential streets within 48 hours of the first snowflake falling, thanks in part to the swing shift's work
 - Day and night-long heavy snow storms in February 2010 forced Snow Warriors to plow and re-plow arterial and collector streets multiple times. Without the swing shift working, plowing of residential streets during those unusually heavy storms would have been delayed at least one or two days.
- ◆ Every winter storm is different, so strategy in responding to a specific storm may vary from that of another storm
- ◆ Because every storm is different, there is no standard or set time span for the Snow Warriors to plow Columbus streets
 - Long, uninterrupted snow falls require freeways, arterial and collector streets to be plowed and/or treated repeatedly until the snow stops. These long, uninterrupted snowfalls that drop more than four inches of snow will affect how soon the Snow Warriors can begin to plow residential streets
 - Colder temperatures, wind, and cloudy conditions after a storm can lengthen the time it takes to treat and plow streets
 - Wet, heavy snow also often increases the time needed to plow and treat streets
- ◆ The City of Columbus/Department of Public Service does not plow and treat specific streets upon requests by residents or media. The 311 Customer Service Center is unable to provide estimates as to when a specific street will be plowed and treated.
- ◆ Streets, including residential streets, are plowed in a systematic order
 - At the beginning of each shift, each driver is given a stack of maps
 - The driver plows and treats streets one map area at a time, then returns to the maintenance yard to get a fresh set of maps and works until his or her shift is completed
- ◆ As Columbus has more than 200,000 private driveways, moving plowed snow from private driveway aprons would add weeks to each plowing effort
 - City would have to purchase dozens of tractors at \$75,000 each, which would add millions to the City budget to purchase and maintain

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- ◆ Columbus' Snow Warriors use different treatments for streets depending on the conditions
 - Salt, Calcium Chloride: Melt snow and ice under most conditions. *Salt loses its effectiveness in extremely low temperatures, especially on lightly-traveled streets.*
 - Brine (a mix of salt and water): Pavement is pre-treated with brine prior to a storm. Brine helps prevent snow and ice from bonding to pavement.
 - Rock Salt or Salt mixed with Calcium Chloride: Applied to road with highest traffic volumes and highest speeds during and after snow falls

- ◆ Residents also have a role during and after snow storms
 - Drive with extra care and leave additional distance between you and the vehicle in front of you
 - Maintain a distance of no less than 100 feet behind a snow plow truck
 - Avoid passing snow plow trucks because the drivers cannot always see a smaller car about to pass
 - Follow snow emergency laws when a snow emergency is declared
 - When possible, park vehicles in driveways or parking lots and off streets to give plow trucks room to plow
 - Check on senior citizens, shut-ins and other neighbors with mobility impairments
 - Whether a home or business, shovel your sidewalk, driveway apron and any wheelchair ramps in front of your home or business
 - Pile snow in yards. Never shovel snow into the street or sidewalks
 - Apply salt, sand or cat litter to icy steps and paths
 - When the snow begins to melt, clear snow from in front of catch basins by shoveling the snow into storm sewers. The heat of the storm sewer will melt the snow and allow other melting snow and ice to flow freely into storm sewers

- ◆ Snow Warriors' fleet: Cost per vehicle to buy new
 - Tandem-Axle Dump Truck, with 10-Cubic-Yard Dump Body and 11-Foot Snow Plow Blade: \$145,500
 - Single-Axle Dump Truck, with 6-Cubic-Yard Dump Body and 10-Foot Snow Plow Blade: \$136,500
 - Mid-Size Dump Truck, with 4-Cubic-Yard Dump Body and 9-Foot Snow Plow Blade: \$66,060 (*Note: This was the cost in 2000, the most recent purchase of this vehicle*)
 - 1-Ton Pickup Truck with 500-pound capacity salt spreader and 8-Foot V-Blade Snow Plow: \$42,700
 - Tractor, with 8-Foot Snow Plow blade: \$56,000
 - Anti-Icer equipment:
 - Pump driven Anti-Icer truck, with 2,200 gallon capacity tank (Carries liquid calcium chloride or brine): \$123,800
 - Gravity Feed Anti-Icer dump truck attachments (Carry liquid calcium chloride or brine)
 - Five with 650 gallon capacity each: \$1,500 each
 - One with 2,000 gallon capacity: \$4,000 each

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- ◆ Columbus Snow Warriors have other job responsibilities including, but not limited to
 - Patching potholes
 - Street cleaning
 - Alley surfacing treatment
 - Mowing
 - Underpass cleaning
 - Graffiti removal

- ◆ Because our Snow Warriors need to be focused on doing the work to make streets safer while they are behind the wheel during and after snow storms, the City does not grant media and residents' requests to do ride-alongs with Snow Warriors

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