

# Public Works Report January 2017

**Ice Road Trucking:** Every winter our gravel roads become covered with a thick layer of ice due to the rain freezing instantly upon landing on sub freezing road surface. That glacier of ice continues to build until we get weeks of warm weather. Plowing and sanding these hilly ice roads requires special equipment and skills. Sometimes the rain creates ice so fast that we have to sand the roads in reverse because it is too slippery to drive forward. Our crew equips the trucks and heavy equipment with studded snow tires and very hard, aggressive tire chains to give us the traction and control we need to stay safely on the roads during the worst conditions. Occasionally even the most highly skilled and best equipped drivers end up sliding into the ditch and need rescue from other crewmembers to be able to continue their plowing mission.

**More Main Breaks:** No surprise here but winter brings water main repairs to the next level of difficulty. The bitter cold conditions make finding and getting to the break site a real challenge. Most often the water does not come to the surface due to several feet of frost depth. Average frost depth is between 3 and 6 feet most winters. Sometimes during particularly cold winters the frost can be down around and below the water main depth. Chiseling through that rock hard frost adds many hours to the repair.

In order to find the exact leak locations we use several methods. One of which is high tech ground microphones that we use to hear the water gushing into the ground from the split in the main. It can be very time consuming especially on ice covered roads that create substantial background noise and make pinpointing the leak that much more difficult. Without that equipment it would be virtually impossible to locate and repair those leaks that don't come to the road surface.

On New Year's Day we had a break on Sunset Drive in Waterboro that was affecting the water pressure in that entire neighborhood. Our crew had been out all night plowing snow and had just barely got home when the call came in. The crew came back right away to fix the problem. We have had many breaks there over the years. That day we got lucky. We located the leak in about an hour then started jack hammering and ripping the frost to access valves and the break. We had it fixed about 8 hours after the first call.



The second break this month was on Clearview road in Limerick. We got the call for low water pressure Thursday evening and had our crew out looking for the break first thing Friday. By that afternoon they had figured out what road it was on and had located where they thought the break was with the listening equipment. By nightfall they had ripped through 3 feet of frost and had got down to the main. No water and no leak there. Frustration was setting in... Saturday morning we went back in the 2 degree weather and started listening again. Eight hours later we had found and fixed the leak just 12' from where they were the day before. Winter main breaks are tough going even for the seasoned professionals.

**Heavy Vehicle Maintenance:** Our mechanics and crew have been busy as always keeping our trucks and equipment operational and safe to use. The past months repairs include: Rear suspension rebuild on the International, teardown and reseal the clutch on the Champion grader, replace failed carrier bearing and U-joint on the L-8000, repair torsion suspension and replace block heater on the GMC 3500 and some minor snow plow repairs, etc.

**Water Production for December 2016 was 9.1 Million Gallons.**