

# POTHOLES

How they form and how we repair them.

# CAUSE AND EFFECT

Potholes are formed when water infiltrates through cracks in the pavement, freezes, and expands, lifting the asphalt causing more failures in the surface.



## Other causes of potholes

- Poorly installed utility patches.
- Insufficient thickness of the roadway.
- Poor subbase material, or material installation.
- Poor drainage.

# HOW DPW REPAIRS POTHOLES





# MATERIALS USED FOR REPAIR

- Bituminous concrete. (Asphalt) - DPW stockpiles up to 40 tons of asphalt in the fall before the local asphalt plants close. DPW breaks the cooled asphalt with our hydraulic jackhammer into smaller manageable pieces and covers to keep snow and ice from contaminating the material.
- When weather permits we load our trailer with the pieces of broken asphalt to be reclaimed, and set the timer to come on the night before we anticipate filling potholes. Overnight the asphalt will be reheated to 370+/- degrees. When crews arrive at 7am the mix will be ready to apply to potholes.
- Cold patch, or cold mix. ( Purchased through local asphalt company where they mix the asphalt liquid solution with stone aggregate to create cold patch mix.
- Cost comparison of materials. Asphalt - \$65.00/ton. Cold patch - \$123.00/ton.

# EQUIPMENT



# PROACTIVE NOT REACTIVE

- Crews proactively milling this past fall, areas with damaged asphalt to mitigate potholes during the winter/spring months.
- Also part of our being proactive, we have recently started stockpiling 40 tons of asphalt in the fall for reclaiming. This enables us to fill potholes in the winter/spring months while the asphalt plants are closed. (Asphalt is considerably cheaper and more effective than cold patch.)



## FY'20 TO DATE AT A GLANCE

- Total amount of asphalt used to fill potholes - 100 Tons @ \$65.00/ton.
- Total FTE and PTE employee hours spent filling potholes - 549Hrs.
- Total cost to fill potholes - \$45,588.00
- During the pothole season we try to respond within 48hrs of a report of a pothole. This response time can change due to weather conditions such as snow storms or other priorities such as sewer breaks or other unforeseen failures.

# WORK FLOW

## (How is DPW notified of potholes)

- See Click Fix - In calendar year 2019 there were about 600 resident initiated pothole complaints.
- Answering service - We have a full time employee on call on a rotational basis 24/7. Dangerous potholes and unsafe road conditions can be called in and an employee will respond. It is not uncommon to have employees called in on the weekend to fill potholes.
- Employees on their way to and from work.
- The Streets Maintenance Manager will ride around and check historical problem areas and create a pothole list.
- (Pothole filling operations are very weather dependent as we still have plowing operations at times, and severe cold dictates the materials we use).

THANK YOU FOR YOUR TIME

