Establishing Winter Standard Operating Procedures

Achieving Consistency
(Or how to do your job without getting canned!)

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Why?

Everything is **perfect** at the shop, Right?
Where do I Start?

• Identify Assets
  • Roads
  • Bridges
  • Equipment
  • Material
  • People
Where do I Start?

• What do I need?
• Input & Support
  • Commissioners
  • Council
  • Public
  • Employees
Where do I Start?

Focus on your top 3 complaints

What do you Believe the Solution is?

Sell it!
Do it!
Fix It!
Things We did Right

Sought out Complaints

Asked for Help

Prioritized Training

Embraced Technology
  • Weather Service

We Got Started! (Document!)
If We knew then, What We Know Now!

AVL / GPS Vehicles

Selling it on the Back End
Results

Reduced Complaints
• 100+ to maybe 10 an event.

30% Reduction in Plow Routes
• Eliminated 20 Routes
• Consistent Service
• Consistent Route Times
  • Limited to < 4 hr Routes

35% Reduction in Salt Usage
(1300/2200/1500)

Equipment Calibration

Have Backup Plows & Drivers
Definitions – Talk the Same Language

• Pavement Temperature – the actual temperature of the Road, this is what determines what works.

• Salt – Sodium Chloride, melts snow & ice, works great to 15°F, but we will use it down to 5.

• Sand – Melts NOTHING, abrasive provides traction for about 3 passing cars.

• Brine – liquid salt, that we spray on the roads prior to a storm event up to 48 hrs in advance at 60 gallons/lane mile, will use down to 5F.

• SuperMax – brine mixed with beet juice, that we spray on roads prior to a storm event up to 5 days in advance at 25 gallons/ lane mile, will use down to -15F.
Definitions – Talk the Same Language

• Level of Service – This is the goal pavement condition for a type of road after a certain amount of time has passed after a storm event.

• This is a mental picture you should have of what the different kinds of roads will look like on your route after a certain number of shifts.

• Example = Gravel Road has been opened by the end of the shift.
Level of Service Definitions

Bare Pavement

Bare Wheel Paths
Level of Service Definitions

Passable

What is it?
Mains

Are any of the following:

- Multi-lane Roads
- Have more than 5,000 VPD
- Main Through Route
- Level of Service
- Bare Pavement
- 48 hours (2 Day Shifts)
- Treatment
- Salt/Brine entire lane/Plow
Secondaries

Are any of the following:
- Chip Seal Roads
- Interior Subdivision Roads
- Cul-de-Sacs or Dead Ends

Level of Service
- Bare Wheel Paths
- 48 hrs (2 Day Shifts)

Treatment
- Plow
Hot Spots

Are any of the following:

- Roundabouts, Bridge Decks, Curves, Hills, Intersections, Drifting Areas, Flooding Areas, In front of Schools, Hospitals, Police Stations, Fire Stations, & Highway Garages

Level of Service

- Passable
- 48 hrs (2 Day Shifts)

Treatment

- Salt/Brine/Plow/Sand
Gravel

Are Gravel!

Level of Service
Passable
8 hrs (1 Day Shift)

Treatment
Plow
Sand if necessary to find road
End of Roads

Are any of the following:

- Cul-de-Sacs
- Turn Arousnds
- Dead Ends

Level of Service

- Passable
- 48 hrs (2 Day Shifts)

Treatment

- Plow
Other Considerations

Sidewalks
• Adjacent to Road or off roadway multi-use Paths
• Level of Service is Bare Pavement in 1 week (ADA)
• Plow

Inlets
• Inlets, drain decks, storm drains
• Level of Service is open in 1 week.
When Does Level of Service Start?

**During Storm**
- Plowing everything once in and once out, trying to keep every road open.
- Plows will be down, but you might not run material, that is the Supervisors call.
- Only in declared State of Emergencies are we working 15 hrs.
- Goal is to be everywhere once in and once out in 4 hours.

**After Storm**
- Level of Service Starts the moment the Storm ends.
- Plowing, material per Supervision.
- 12 Hours Max, if someone finishes before everyone else they help out.
CAN WE GO HOME NOW?

8 Hours
• Mains are Bare Wheel Paths
• Hot Spots are Passable
• Secondaries are Passable
• Gravel Roads are Passable
• End of Roads are Passable

12 Hours
• Mains are Passable
• Hot Spots are Passable
• Secondaries are Passable
• Gravel Roads are Passable
• End of Roads are Passable
CAN WE GO HOME NOW?

Sundays & Holidays
• Mains are Passable
• Hot Spots are Passable
• Secondaries are Passable
• Gravel Roads are Passable
• End of Roads are Passable

Nights
• Mains are Passable
• Hot Spots are Passable
Brining is Anti-Icing

**Where?**
- Mains
- Round-a-bouts
- Bridge Decks
- Schools
- Fire Stations
- Hospitals
- Highway Garages
- Hills
- Curves
- Intersections

**What do I do?**
- Put the plow down
- Look in the mirror
- Is it working?
- Yes – Keep on Trucking
- No – Salt or Sand
Subdivisions

Secondaries
• Entrance Plowing – pull clear through the approach then back up and make the pass in.
• Extra Wide Roads – Make Second pass if there are homes on it and more than 3’ from curb
• Normal Roads – Keep Trucking
• Hot Spots

End of Roads
• Cul-de-Sacs get plowed backwards and cleaned out later with pickups, superduties, backhoes, and payloaders
What If?

• There’s a White Out – Pull Off Road and radio your Supervisor
• An Accident not involving you – call 911.
• An Accident involving you – Call your Supervisor
• There’s a car parked in the road – plow around it, note address for Supervisor

• You damaged a mailbox – Let your Supervisor know
• Someone asks you to plow their drive – NO!
• We use someone’s drive as a turn around – Turnaround with the plow down.
Calibration

Why?

Using the right tool the right way tends to get the job done, better, quicker, and cheaper.

And we’re all taxpayers.