

# Pavement Monitoring at Iowa DOT

Salt Symposium, August 2024

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IOWA | DOT



## About Us

### **24-Hour service on State and Federal Highways in Iowa**

About 24,500 lane miles

### **Approx 1,100 full-time staff**

Report to 101 garages across Iowa

### **Average salt use of ~140,000 tons**

Always accompanied by brine. We use ~31M gallons annually

### **Average snowfall ~32 inches**

Although freezing rain and blowing snow are also significant parts of our typical winter season



# Pavement Monitoring Tools

- Traditional RWIS
  - ~80 locations statewide
  - “Flagship” system, used in a lot of applications
- Mini RWIS
  - 15 locations statewide
  - Cheap and easy, helps fill in the gaps
- Dash Cams
  - Picture is worth 1000 words!!



# Frost Solutions Mini RWIS

Battery and solar powered. Non-contact pavement sensor. Data viewing website as part of subscription. Just find a pole and turn it on.



At a Glance 0 Frost Vision

Group: Iowa DOT

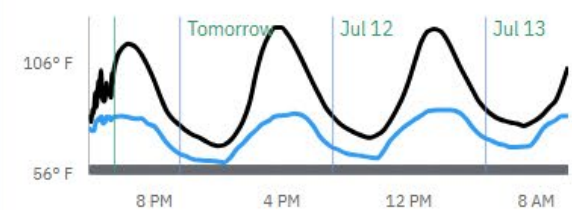
Search Forecast 72 hrs

D1WS503-Grinnell

FORECAST: - Partly Cloudy Dry



Air: 81.8°F Sur: 101.5°F H: 63.6% D: 68.7°F W: 4mph NW



D1WS503-Grinnell

FORECAST: - Partly Cloudy Dry

BEGIN WORK: Capture readings & photo before you begin work, and then again after for proof of work.

REQUEST PHOTO: Request an on-demand photo. Images typically take a few minutes to load.

START EVENT: Storm Mode requests photos every 20 mins for 4 hrs. You'll only need this outside of the winter or if you haven't installed your upgraded camera.

RUN DEFROSTER: The Defroster heats up the camera window and takes a photo after the defroster runs. Caution: Frequent defrosting will impact battery life.

BACK



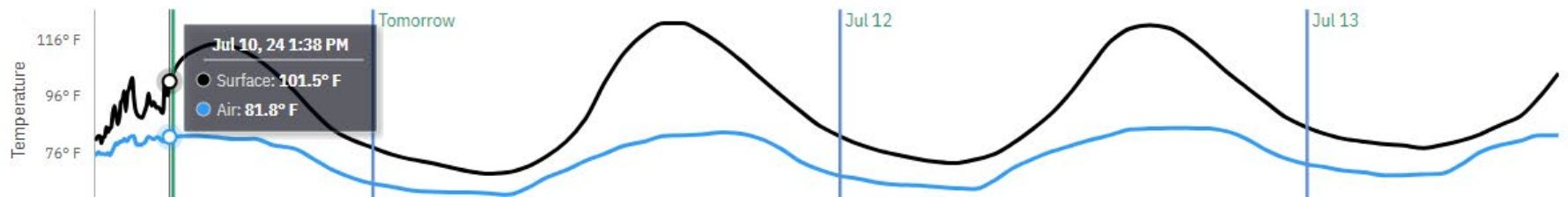
Air: 81.5°F Sur: 95.2°F H: 64.3% D: 68.7°F W: 7.3mph



D1WS505-Williams

FORECAST: 0.08 in rain over next 2 hours

Moderate Rain Wet 1 hr 17 mins



# Plow Cams

Front facing camera inside the cab. Still shots every 5 minutes.  
Very “relatable” to many users



# Benefits

- Mini RWIS
  - Provide the most critical data, for cheap
  - Has its own website – no need for your own
  - Can be used for special projects, then easily moved to new location
- Dash cams
  - Useful for just about anything – public info, treatment monitoring, claims, social media...
  - Can now get through telematics subscription plans



## Lots of Good Options

- New sensors and products on the market each year
- Fancy is nice, but simple is sometimes ideal
- No single system does everything, find what fits



# Thanks!

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