“Green” Transportation Technologies
ODOT’s Road & Weather Information System (RWIS)
Background
1992 Columbus Area (18 Sites)
1994 Cleveland Area (19 Sites)
1996 Toledo Area (34 Sites)
Problem
RWIS System Design

*Statewide Expansion
  - All Counties and Major Corridors

*Manageable Costs
  - Communications/Maintenance

*Minimal Environmental Impact
  - Green Friendly Technology

……and Protects ODOT’s $7.5m Existing RWIS Investment!
Solution
Statewide Deployment of Environmental Sensing Station Sites

Features:
- New, Green Friendly RWIS
- Retrofit Older Systems
- Wind/Solar Powered
- Wireless Communications
- Removable Hardware
- Flat Communication Costs
Equipment
RWIS with Groundhog Sensors

- Operates on Solar Power
- Communicates via radio to pavement sensors
- Has a separate battery compartment
- Can operate for 5 day with no sun
- Can operate for 10 days with little to no sun
Weather Sensors

- Air Temperature
- Wind Direction
- Wind Speed
- Dew Point
- Relative Humidity
- Precipitation Type
- Precipitation Rate
- Visibility
Pavement Sensors

* **Wireless**
  (No Trenching, Cabling)

* **Removable**
  (Extends Equipment Life
  No Hazardous Materials Left Behind)

* **Multi-Functional**
  (Pavement Condition & Vehicle Activity)
- Wind Turbine
- Cell Antenna
- Solar Panels
- Sensor Antennas
- Atmospherics
- Ultrasonic Snow Measurement
- Auger Base
- (No Concrete Pad)
General Benefits

• More Sites
• More Data
• More Flexibility
• Lower Costs
• Cleaner Environment
THANKS!

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