



Maintenance GIS Innovations



Sarah Linn, GIS Professional
Maintenance Bureau

Guiding Question

How can we use GIS resources to improve Maintenance data accessibility and streamline Maintenance processes?

Methods

We interviewed Maintenance operations personnel to identify antiquated or ineffective data management processes. We then worked with stakeholders across the Agency to mobilize available GIS technology to fulfill data needs using standardized methods that are integrated across Districts.

Example 1: Morning Report

The Morning Report Application was developed to enable Maintenance Garage Supervisors to easily communicate each days' planned maintenance activities (Fig. 1, left) to the District General Manager. General Managers may then access this information on a GIS Dashboard (Fig. 1, middle and right). This data is also accessible to the public through 511, thus giving notice of road closures or other relevant information.

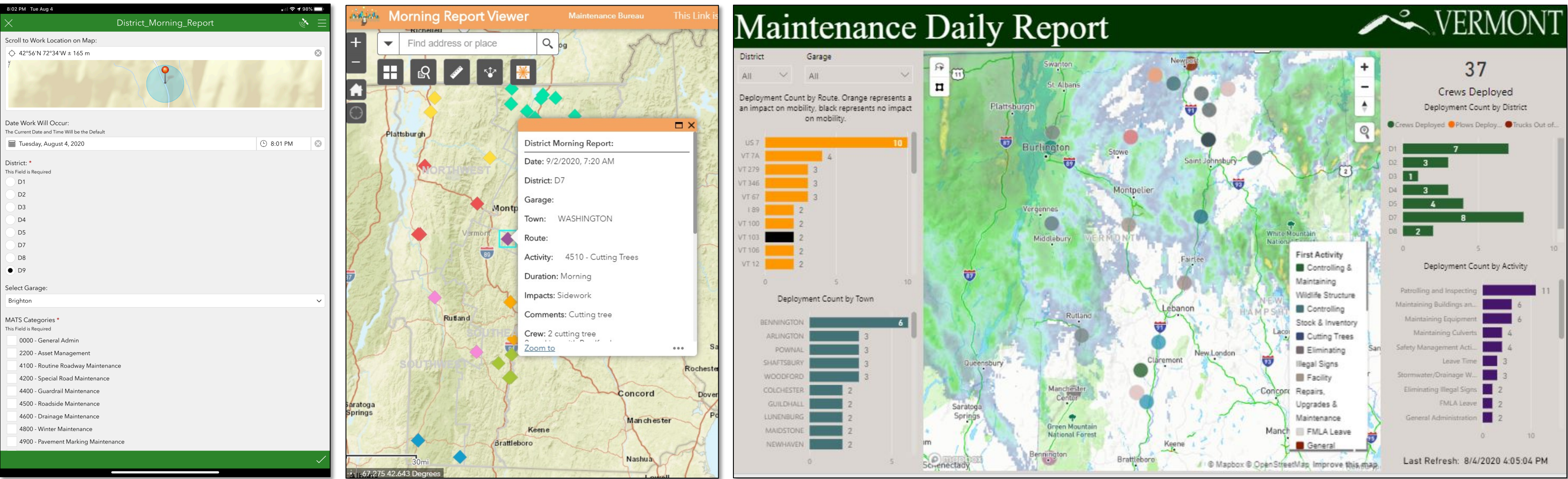


Figure 1. Morning Report Tools

Example 2: Storm Damage Assessment

The roadway infrastructure Storm Damage Assessment process uses the Survey123 GIS application to enable roadway damage assessors to quickly identify storm damage and generate accurate cost of repair. This data is again viewable using a GIS Dashboard, allowing decision-makers to access real-time accurate data.

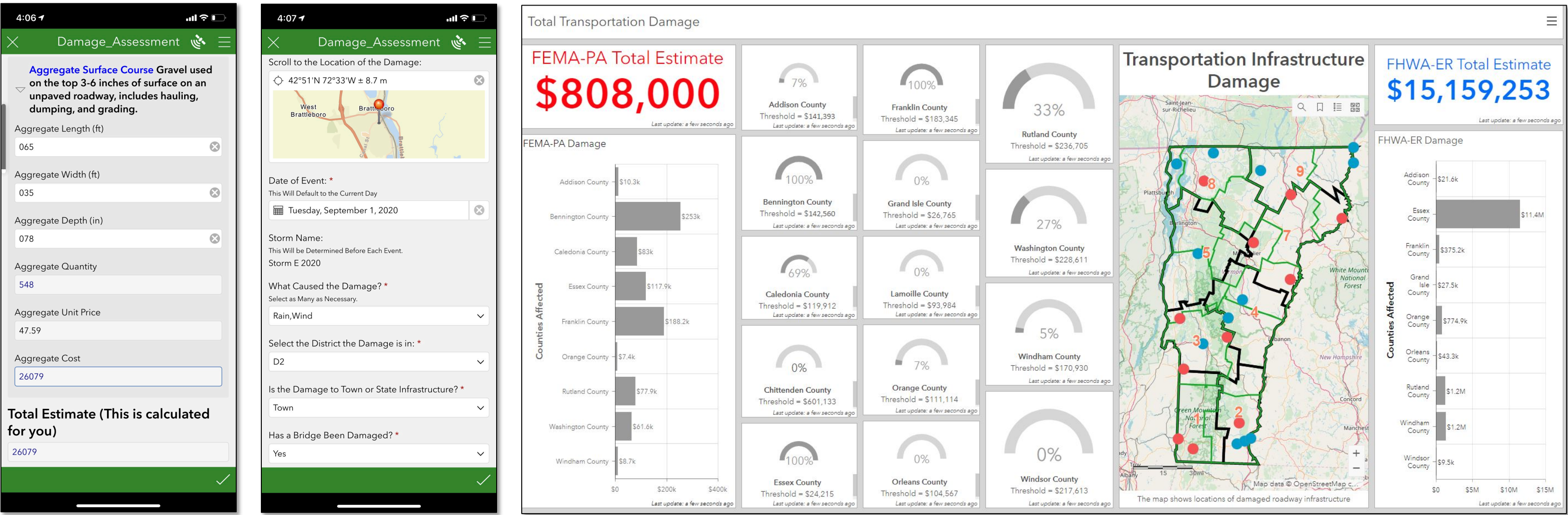


Figure 2. Storm Damage Assessment Tools

Example 3: Guardrail Damage Assessment

The Guardrail Damage Identification Application enables the Maintenance Bureau to track damaged guardrail, repair needs and costs, and the guardrail status at any given time.

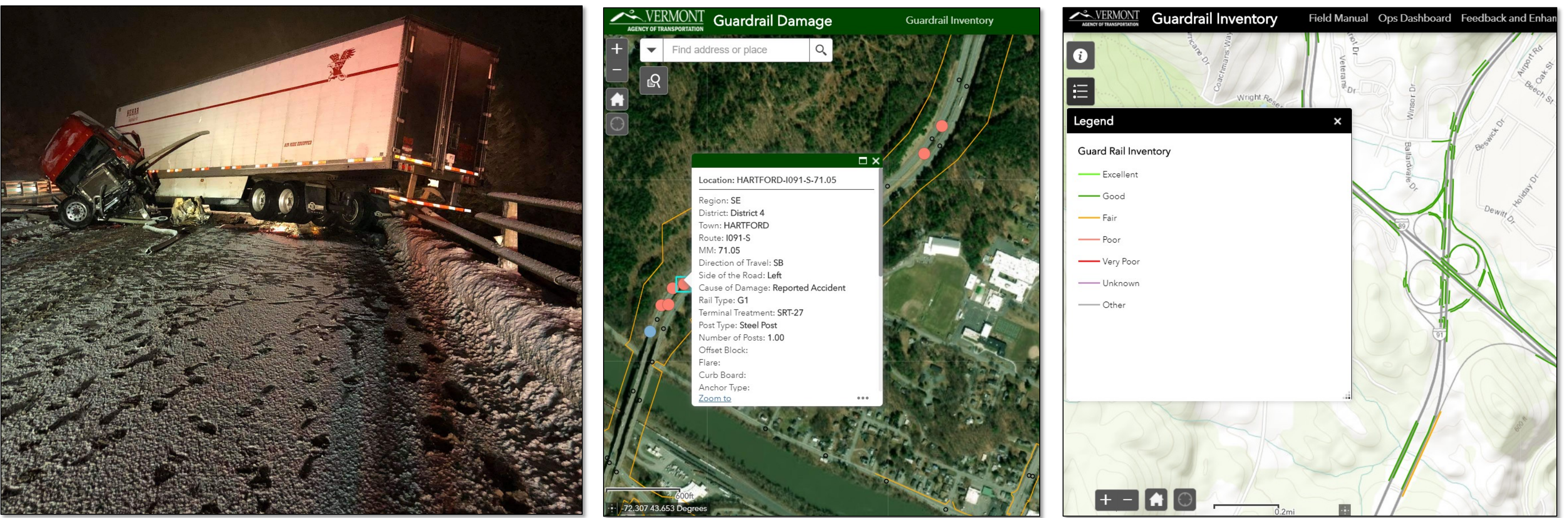


Figure 3. Guardrail Damage Assessment Tools

Conclusion

GIS technology enables Maintenance personnel to create and share quality geospatial data. This facilitates maintenance planning and implementation while helping to control costs. This technology should be further implemented to improve processes.

Acknowledgments

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