Keeping Local Waterways Clean Begins in the Streets

In Hillsboro, Oregon, street sweeping is provided by the City of Hillsboro Public Works Operations Division, which is responsible for cleaning over 460 curb miles of paved streets. In order to achieve this goal, the division partnered with the Information Services GIS team to demonstrate why completing and working together achieves data to real-time impact.

The Information Services GIS team took a data management approach to bring street sweeping data to life. As we (the City of Hillsboro’s Information Services GIS and Public Works GIS teams) integrate the AVL data into GIS, the public works team members can begin to see where else they can use this workflow,” said Kristin Judy, Public Works Operations Division.

The Information Services GIS and Public Works Operations Division, which is responsible for cleaning over 460 curb miles of paved streets, is primarily responsible for planning and maintaining a comprehensive network of public works services, including street sweeping, street maintenance, and fleet management. The team uses ArcGIS web applications and tools to track and manage data in real-time.

Layne LeBleu, a GIS and asset management technician for the Public Works Operations Division, developed user-friendly web apps. Using ArcGIS Server, Layne LeBleu published live AVL data to the Public Works Sweeping app and the Public Works Sweeping Dashboard to meet stakeholder needs.

WEB APPBUILDER, A WEB APP BUILDING TOOL, LeBleu published live AVL data to the Public Works Sweeping app and the Public Works Sweeping Dashboard to meet stakeholder needs.

Once the data was hosted on the city’s portal site using ArcGIS GeoEvent Server, the Public Works Operations Division partnered with the Information Services GIS team to demonstrate why completing and working together achieves data to real-time impact.

Gone are the days where I have to spend five hours at a time to extract the information for staff and reporting purposes,” said LeBleu. “Now I just make changes to the apps as needed. Staff can look at the app and instantly know where to sweep next.”

The Information Services GIS team also ensured that every time it receives location data in real-time, it gets incorporated into the Public Works Sweeping app and the Public Works Sweeping Dashboard to meet stakeholder needs.

The real-time sweeping app and dashboard make it easy for staff to visualize progress and analyze data. It includes sweeping all roads at least 12 times a year. To fulfill this requirement, the Information Services GIS team used ArcGIS GeoEvent Server, a capability that captures real-time data streams, to pull vehicle data directly into a static PDF in a near real-time context.

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"Get the data from the AVL device and make that data accessible to everyone," said Layne LeBleu, GIS and asset management technician for the Public Works Operations Division.

The Public Works Sweeping app and the Public Works Sweeping Dashboard complement this aspect, as they allow staff to filter down to specific areas, dates, and time frames. The Public Works Sweeping app and the Public Works Sweeping Dashboard are also 24/7 MS4 compliance reporting systems. The street sweeping workflow is also a 24/7 MS4 compliance reporting system.

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