



Detailed Lean Improvement Project Report

For the June 1, 2014, through December 31, 2014, reporting period

Agency name:

Department of Ecology

Improvement project title:

Streamflow Gaging Process Automation

Date improvement project initiated:

06/01/2011

Summary:

The Department of Ecology improved the streamflow gaging process through automation resulting in fte savings of 0.2 FTE and improved data quality.

Details:

Description of the problem: Monitoring water flow in rivers and streams is a labor-intensive process, requiring frequent field data collection, development and maintenance of mathematical models, and quality assurance and review of volumes of data. In a monitoring network where data is collected continuously by instruments that are permanently deployed in the field, data accumulates very quickly. Ecology maintains about 75 streamflow gaging stations with each station reporting water height at 15-minute intervals, resulting in 7,200 values/day or 2.6 million records per year. These data are reported to the public real-time and relied upon for many critical functions across the state. It is imperative that the data are as accurate as possible.

Description of the improvement:

Ecology developed an automated data quality flagging process to assign quality flags to data that do not meet specific criteria. This saved a lot of time compared to manually reviewing the continuous dataset for poor-quality data. It also avoids the public obtaining data that doesn't accurately represent actual streamflow.

Specific results achieved:

\$20,000 in salary saved, per year, and improved data quality by mathematically assessing the data as it streams in via satellite, and assigning quality flags to data that do not meet specific criteria.

How we involved customers or stakeholders in this effort:

This project did not involve external customers or stakeholders.

Contact person/s:

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