



# Lean Government

## South Carolina Stormwater Permit Process Lean Event Case Study

### Summary

The South Carolina Department of Health and Environmental Control (SCDHEC) administers the State's stormwater management program and manages the National Pollutant Discharge Elimination System (NPDES) permitting program. The NPDES program requires all construction sites disturbing more than one acre to obtain stormwater permit coverage.

In September 2009, with support from U.S. EPA Region 4, SCDHEC conducted a Lean value stream mapping (VSM) event to streamline the construction stormwater permitting process and improve the completeness and accuracy of submittals. In the existing process, the State was receiving incomplete and inaccurate construction permit applications resulting in multiple phone calls, emails, and meetings between the permit applicant and SCDHEC staff and thereby increasing the time it takes to approve or permit a project. Since incomplete applications were accepted by SCDHEC, applicants had become accustomed to submitting incomplete data.

The objectives of the three-day VSM event were to: clarify the stormwater permit process, design a more standardized process for staff and applicants, meet the needs of the applicants, and meet the needs of SCDHEC staff. During the Lean event, participants identified process improvements that will reduce lead time from its current state of 8-47 days down to a future state of 5-10 days. They created standardized templates to improve submittal accuracy as part of the improved future state, which is anticipated to reduce application submittal backlog from 90 to 25.

### Results

The new process developed in the event is anticipated to yield the following **results**:

- Reduced **lead time** for processing of applications from 8-47 days to 5-10 days
- Increased **employee satisfaction** with the process from an average rating of 4.7 to 9.5 out of 10
- Reduced the **backlog** of application submittals from 90 to 25
- Increased the percentage of **value-added time** from 1.7-3 percent to 9-18 percent

During the event, the team developed **standardized templates** to support the new process, including:

- A completely new and more standardized application form as well as an application guide to assist developers
- A standard review template for application reviewers that includes key questions to look for to verify the accuracy/completeness of an application

### Scope of the Lean Project

**Project Scope:** NPDES Construction Site Storm Water Permitting Permit Process from the receipt of a permit application to approval of the application

### Goals of the Lean Event

- Increase quality of submittals from 0 percent correct and accurate to 90 percent
- Reduce overall lead time from as much as 47 days to less than 20 days
- Improve employee morale

## Process Changes

During this VSM event, SCDHEC participants developed “current state” and “future state” maps of the process and an implementation plan. Participants came up with the following key process improvement areas for the NPDES construction site storm water permitting process.

- **Improve the submittal accuracy by developing clear templates** that serve to standardize the way the submittal is assembled and to request that the applicant provide all of the necessary information needed for SCDHEC review and approval.
- Work with the IT professionals to enable **direct import of data from the permit application into the SCDHEC database, Environmental Facilities Information System (EFIS)**. The database can be modified so that staff can better organize incoming data and see samples of required data in permit applications. These changes will significantly improve the quality of the data quality coming in.
- **Standardize the review process** and provide the project managers a clear standardized way to review the submittal. Staff and permit applications are interested in knowing that the process is repeatable and predictable—no matter who submits an application or application type, or no matter who in SCDHEC is reviewing the application, each time the process will be the same.
- Work with **no more than two submittals at a time** and **meet daily for 10 minutes** to discuss any issues or problems that arise.
- **Develop visual status boards** to measure and track performance and status.
- **Explore electronic submission, e-signature and e-payment** in order to streamline the process, improve data quality; reduce paperwork, paper and time; and, improve customer and employee satisfaction.
- Develop a **standardized Coastal Zone Consistency (CZC) certification** that will become part of the submittal package. The CZC only applies to applications that affect coastal waters and this is an added review process to the application. This certification will enable developers to quickly indicate whether there are any coastal zone consistency issues.

## Implementation

As of March 2010, six months after the Lean event, the SCDHEC teams had completed a template for their Stormwater Management and Sediment Control Plan, were working on the CZC template, and were continuing to work on EFIS. Other implementation activities include stakeholder outreach with frequent permit applicants to review the templates and explain the streamlined process. These activities were underway as of March 2010.

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