



The City of



Performance & Analytics

FACT SHEET

Strengthening Responses to Storm Water Violations

The City of San Diego is responsible for monitoring storm drains and issuing violations to residents and business owners who cause or allow pollutants to reach the storm drain system. As part of a strategic initiative to improve the City's handling of these Storm Water Conveyance System Violations, the project lead advised a working group from the Transportation & Storm Water Department – Storm Water Division to shorten the time it takes to process violations. This black belt project followed the Lean Six Sigma DMAIC (Define, Measure, Analyze, Improve, Control) methodology to achieve \$113,000 in annualized savings, eliminate root causes for inventory buildup and remove non-value added steps from the process.

Define. The process involves the reporting of storm drain conveyance system violations within the City of San Diego, the documenting of the reports, the investigation of the possible violations, the issuance of notices of violation as necessary and the collection of fines. The process was not streamlined nor fully documented from end-to-end. Some challenges with the process included a large backlog of case files, large amount of overtime necessary to address the backlog and fragmented communication flow to code compliance officers.

Measure and Analyze. A Value Stream Map and Supplier-Input-Process-Output-Customer (SIPOC) Chart were used to measure the lead time and cycle time of the processes. The data was analyzed using a Cause and Effect Diagram and Control Charts. The data showed that improvement could be made in the processing time to investigate violations, filling out the required forms and sending the gathered information to code enforcement staff.

Improve. After measuring and analyzing the data, improvements were validated and implemented, specifically:

- Conducted a Value Stream Mapping event which communicated the need to add a printer at the administrative staff front desk, to redirect a position to handle non-process related tasks and to incorporate the use of tablets in the field.
- A thorough review of the required forms was conducted and unnecessary fields were eliminated, a standardized process was developed for filling out the forms and digital folders were created.
- Studied three variables using historical data to determine the cause of lengthy time on the phone with customers and time it takes to fill out the required forms.

Control. A formal Control Plan was created to monitor the inputs and outputs of the process. Standard operating procedures were put in place, and staff was trained on the revised procedures. Process inputs and outputs will be audited quarterly by management.

Overall project benefits include:

- Achieved \$113,000 annualized savings;
- Eliminated three root causes for inventory build up;
- Cut overtime by 100 percent; and
- Increased revenue potential by 11 percent.