

Local Government Efficiency Program Project Results

Project/Event Title	Code Enforcement Division - Community Development Department
Agency	City of Springfield
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Event Type	Other Lean Six Sigma Yellow Belt Project
Consulting Firm	Strategic Leadership Solutions
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Start and end dates of project	October 2014 - November 2015

What is the Process this Project is intended to Improve?

The Code Enforcement (CE) weed violation process was evaluated during this project. Generally, the process is as follows: 1) CE receives a complaint and assigns it to an officer. 2) CE officer validates complaint and creates violation. 3) CE issues orders to property owner. 4) If owner does not comply, case is given to contractor to be mowed. 5) Contractor mows lot and case is closed.

Business Case (What is the background? Why did you select this project)

The City of Springfield has seen a dramatic increase in vacant and abandoned lots. Overall, the City has seen a continuous rise in weed complaints and weed cases since the mid 1990s. Weed inspections constitute more than half of CE's total inspections. In 2014 it took an average of 49.5 days to resolve weed violations. This frustrates neighbors and leads to costly junk and trash violations.

Problem/Opportunity Statement:

In 2014, it took an average of 49.5 days for weeds to be mowed on CE weed violation cases. This data also revealed extreme instances of more than 150 days before some cases were mowed by contractor. When weeds cases go unresolved, the lot often gathers junk and trash or becomes a prime location for illegal dumping - all adding to the initial expense of mowing the property in violation. This creates duplicate phone calls and complaints to CE, the City Manager's Office, and elected officials, as well as dissatisfaction of neighboring residents. The City has seen an overall rise in weeds complaints, inspections, and cases since the mid 1990s. The weeds budget has been relatively flat since 2009, and weeds expenditures have only increased if supplemented with General Funds.

SCOPE (DEFINE BOUNDARIES)

First step in the process:

The process begins with CE receiving a complaint about tall grass/weeds on a property.

Last step in the process:

The process ends with the contractor completing (mowing) the property in violation.

Goals and Objectives: What are the three intended outcomes for this Project?

The primary goal is to reduce the time it takes for mowing grass on weed violations from an average of 49.5 days to 25 days. Additional goals were to reduce internal time to 19 days for the first cut and 12 days for the second cut. This will decrease number of complaints, increase resident satisfaction, reduce employee frustration, increase consistency, and reduce errors.

What potential issues could become roadblocks to success for this Project?

Potential roadblocks are the lack of a full-time secretary for the CE division, temp/seasonal secretary's lack of knowledge of City streets/neighborhoods, lack of funds (specifically a decrease in CDBG funding) for mowing contracts, inability of a single mowing contractor to mow all weeds violation cases.

Can this project be leveraged in another area or department?

Some aspects of this project can be leveraged in CE's junk and trash violation proces as well as other violations. Being proactive in identifying violations can have positive impacts on the number and frequency of complaints.

Who are the primary customers of the process?

The primary customers are CE officers, the CE manager, property owners, and the mowing contractor.

Who are the major stakeholders of the process?

Stakeholders of this process include property owners, residents, the City's mowing contractor, CE officers, the CE manager, the Community Development Director, the City Manager's Office, and elected officials.

Definition of the defect (if applicable)

The defect is the amount of time it takes for a weeds violation to be resolved (mowed). Time is measured from date complaint received to date the violation is resolved (mowed). Violations can be resolved by the property owner. If the property owner does not resolve violation within 7 days, then the case is given to a contractor to be mowed.

Performance Metrics: What measures will tell you if you are successful.	Performance Metrics			
	Current 2014	Goal	Final 2015	% Change
Average numbers of days to from complaint to mow	49.5	25	48.8	-1%
Internal process time for first mow	17	19	28	65%
Number of weeds complaints	4037	n/a	3251	-19%
Number of lots mowed	2559	n/a	4349	70%
Cost per mow	\$37.96	n/a	\$24.55	-35%

Provide any available baseline data relating to the following additional measures as applicable	Data			
	Current 2014	Goal	Final 2015	% Change
Days from complaint to mow, % exceeding 25-day goal	89%	n/a	83%	-7%
Number of mows given to contractor	1531	n/a	1852	21%
Number mowed by contractor - weeds violations	1347	n/a	1622	20%
Number mowed by contractor - abandoned lots	1212	n/a	2727	125%
Cycles mowed of abandoned lots	4	n/a	9	125%
Cost per mow - weeds violations	\$35.00	n/a	\$35.00	0%
Cost per mow - abandoned lots	\$38.88	n/a	\$18.34	-53%

Intangible Benefits

Using a single contractor allowed CE officers spend less monitoring contractors and more time proactively identifying violations. Because abandoned lots were being maintained by the City Service Department, CE officers could focus their attention on weeds violations. Citizen satisfaction was improved. The CE division, City Manager's Office, and City Mayor received several comments from residents about the improved appearance of neighborhoods, especially areas with high numbers of abandoned and vacant lots.

Financial Benefits

Cost per mow decreased by 35%, allowing for an increase in City services to mow more often.

At completion of project: What changes did you make to the process that resulted in the measureable improvements?

The following is a list of changes that were made as a result of the Lean Six Sigma project:

- 1) This project focused on weeds violations cases, not abandoned lots (the 300+ lots in the City that have been forfeited to the state or for which there is no responsible property owner). Until 2015, CE's mowing contractor mowed all abandoned lots and weeds violations. Abandoned lots are typically easier to mow, so the contractor would mow them first, further delaying mows on violation cases. In the past, the City spent about \$50,000 each year mowing abandoned lots. However, in 2015, CE paid the City Service Department \$50,000 (\$18.34/lot/mow) to maintain all abandoned lots, including mowing and junk and trash removal. In 2013 and 2014, CE's mowing contractor mowed the abandoned lots 4 times throughout the mowing season. Last year, the Service Department mowed all 303 lots 9 times between April and October at a cost of about \$18.34/lot/mow. Many of these cases would have led to junk and trash violations as well, but this was absorbed in the Service Department's maintenance costs. One month before City crews began mowing abandoned lots, they removed 92 bags of trash and 15 small dump trucks of trash. By the end of the mowing season, crews were removing only one bag of trash per week.
- 2) Used a single mowing contractor instead of multiple contractors. Historic data showed that one contractor was mowing most of the cases at a faster rate.

- 3) Standardized the complaint intake process so that complaints were received and entered into database in a timely manner and with all the necessary information.
- 4) Standardized inspections for CE officers so that officers were consistent in determining violations.
- 5) Assigned CE officers to regions instead of all four officers driving all around town for inspections.
- 6) CE officers were proactive instead of reactive when identifying violations. If an officer identified additional violations in the same vicinity as an existing violation, he would process them all at once so the mowing contractor could mow them together instead of remobilizing.
- 7) Created field forms in iWorQ instead of another software.
- 8) Front loaded \$20,000 to the fund before mowing season so that lack of funding did not delay mowing contractor.
- 9) Extended mowing hours to 7AM - dusk, Monday - Friday. Previous hours were 8AM - 5PM, Monday - Friday.

Lessons learned:

- Contractors lists were too large and not in the same geographic location. Lists should consist of about 20 lots in the same region/neighborhood.
- The CE officer's field forms were compiled in one bin. It would be helpful for forms to be separated by region and route prior to going in bin.
- The single contractor started off good. An extreme rainy season, put the contractor behind. It would have been helpful to have a second contractor during this time.
- Three of the four CE officer regions were more proactive, resulting in a significant reduction in citizen complaints. Contractor noted that when officers were not proactive, it made mowing more difficult and time consuming for contractor. Next year all officers need to be proactive.