

Office Memorandum

DATE: December 7, 2012

TO: MPCA Citizens' Board

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SUBJECT: MPCA Board Continuous Improvement Symposium

When Governor Dayton took office in January of 2011, one of his key initiatives was to help Minnesota government work better for its citizens, and for its employees. In his first State of the State address, the Governor talked about the need for government, in a time of growing demand for services and declining budgets, to work even harder at improving the efficiency as well as the quality of services we provide.

The Continuous Improvement effort, including Minnesota Pollution Control Agency's (MPCA) Six Sigma journey and now including Lean, began during the previous administration. But Governor Dayton's view, this is a non-partisan issue. Good ideas are good ideas, no matter where they come from.

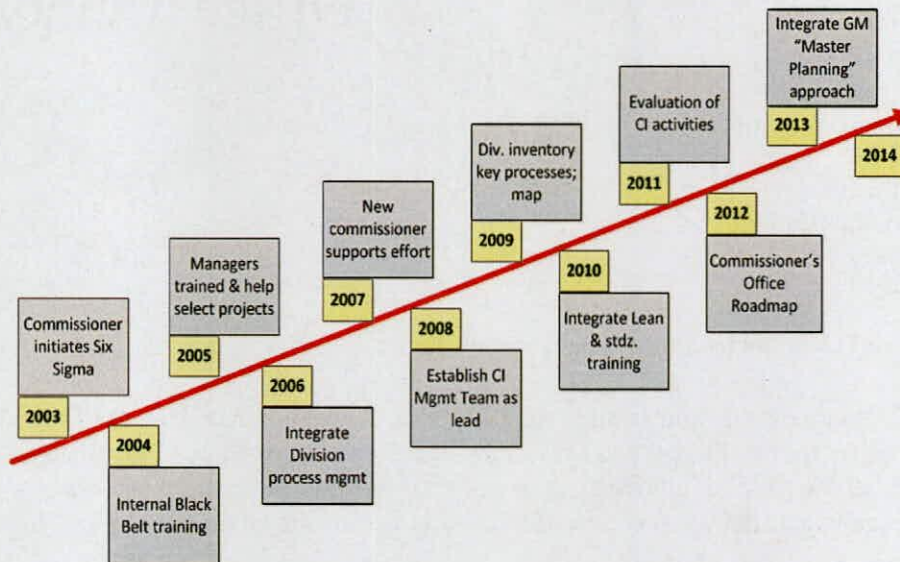
What is Continuous Improvement and how is it implemented at the MPCA?

Continuous Improvement is a process of Six Sigma and Lean adapted by MPCA that includes

- Systemic, not random, acts of improvement
- Customer input
- Reliance on data to make decisions
- Using process controls to sustain results

Six Sigma definitions vary by business, but it's generally considered to be near-perfection in meeting customer requirements—a measure of reducing variation to increase quality. Lean is a set of principles that accelerates the speed of processes across the enterprise by focusing on value and reduce wasted time, motion, and complexity.

These improvements have been applied at the strategic, core business process and support levels of which the attachments highlight one project from each Division. The timeline below illustrates our Continuous Improvement (CI) Journey at MPCA. The approach started with a centralized, strategic and formal system and through the years became more decentralized, tactical and informal.



In 2012, a "CI Roadmap" was created to move to the center of this continuum with a higher percentage of strategic-level projects, more involvement from Senior Managers, clearer expectations for leadership skill development, management of projects as a portfolio in the Divisions, and better development and communication of results from our improvements.

The MPCA supports continuous improvement activities across the agency with two full time staff and a supervisor that are certified Six Sigma Black Belt and trained in Lean, and an additional three trained staff that spend part of their time supporting continuous improvement. A cross-agency management team assists in direction-setting for continuous improvement activities in the agency through an annual deployment plan.

The MPCA is also active in the state's Lean Enterprise Management System, <http://www.lean.state.mn.us/>, which supports continuous improvement activities among state agencies. The Lean Enterprise Steering Team includes past and present Directors of Continuous Improvement from General Mills, as part of a partnership agreement with the State of Minnesota.

Over the next two years, the MPCA will be modifying our continuous improvement deployment to adopt the General Mills "Master Planning Process" that is being piloted by our sister agency, Department of Natural Resources, starting this month. The Master Planning Process is expected to affect selection of improvement project areas, since it is based on financial value/staffing investment (focus on higher strategic value), and also requires leadership to be an expert and serve as an agency-wide staff coach for at least one continuous improvement tool.

The other significant change is training all staff about continuous improvement and the methods used at a basic level. The MPCA is leading a collaborative effort among 6 state agencies to develop and implement this training, which will then be made available to all state agencies.

A 2011 external evaluation of our continuous improvement activities indicated that "*MPCA should be congratulated for the longevity of its CI approach. A formal CI system has been in place in the agency for at least nine years, which is rare. Especially since the MPCA has had four commissioners in the last ten years and the state has experienced severe economic challenges.*" The MPCA continues to view continuous improvement as a journey to gain value, and trust, for society and stakeholders inside and outside the agency.

Attachments

MB/CBM:rm

PROJECT NAME

Closed Landfill Program - Program Redesign

PERFORMANCE MEASURE BASELINE

Land Use Plans for closed landfills were not being developed and useful information about landfill risks (groundwater contamination, methane gas migration) was not being provided to local government units (LGUs) as required by statute.

THE IDENTIFIED PROBLEM

Land Use Plans were not being developed and useful information about landfill risks was not being provided to LGUs because:

- » The Closed Landfill Program (CLP) had been designed initially to focus on constructing remedies at landfills to address risks with the State’s solid waste rules as a guide; and
- » CLP management and staff were uncertain about how to develop Land Use Plans and provide useful information to LGUs.
- » Land-use planning, and how it integrates with site cleanups, was foreign to the Remediation Division.

VOICE OF THE CUSTOMER

Internal and External Standardization Project Research 2006: Feedback on land use planning

- » A survey of CLP staff, CLP management, and the Attorney General’s Office determined that they did not understand the Land Use Plan/LGU information part of the statute and were uncertain of the process to complete this work, including staff roles and responsibilities.
- » The CLP held forums with 12 LGUs throughout the State and discovered that the LGUs wanted maps showing the location of the groundwater and methane gas impacts, with narratives explaining these risks at each landfill. The CLP also learned that, if the CLP data was reliable, the LGUs would likely adopt land use controls to help protect the public from these risks.

RESULTS

- » The standardization project – focusing on land use planning – resulted in the understanding that land use planning at and around closed landfills helps manage the risk to the health and safety of those living near or occupying land at and around the landfills.
- » It became understood that “Managing the risk” is the mission of the CLP since all of the Program’s work is about managing the risk at the landfills; and that land use planning is one tool, in addition to constructing remedies, to manage this risk.
- » This new understanding resulted in the standardization project becoming a Redesign of the CLP so that the CLP could take a more holistic approach to managing risk at the landfills long term.
- » The “Risk Management Cycle” was created as the foundation of the Program: 1) understanding the risks (monitoring); 2) determining a risk score for each landfill to help prioritize the CLP’s work; 3) determining the best remedy or response to address the risks (including land use planning); 4) measure the effectiveness of the responses taken.
- » A process was created for developing Land Use Plans and providing LGUs the information on landfill risks, including the development of maps showing groundwater and methane gas areas of concern at each landfill.
- » To date, Land Use Plans, as well as risk information, have been presented to LGUs for 90 landfills. In addition, these critical partnerships have been started to assist LGUs in adopting necessary land use controls to protect the public from these risks.
- » “If you can’t take the risk away from the people, take the people away from the risk”. Incorporating land use planning as a tool to help manage the risk has resulted in the need for less remedial construction, thereby resulting in a financial savings to the CLP and the State.



Continuous Improvement

PROJECT NAME

Accounts Receivable - Operations Division/ Fiscal Section

PERFORMANCE MEASURE BASELINE

- » About 12,000 annual permit invoices sent to regulated parties with payments received and processed by outside vendor generating \$20.5 million in fee revenue
- » \$9.32 unit cost for vendor to process payments; \$112,000 annually
- » 16 days on average for MPCA to receive payment file and update customer accounts.
- » Most customers pay by check

THE IDENTIFIED PROBLEM

- » Incompatible duties: non-fiscal staff able to generate and adjust invoices, or close accounts
- » Vendor: high cost, unreliable service, requires Fiscal staff involvement
- » Lag time between customer payment, payment processing and updating customer accounts resulted in many problems:
 - » Fiscal staff sent late notices to customers who'd paid
 - » Unhappy customers contacted Fiscal to complain
 - » Vendor performance was barrier to Fiscal staff improving customer service
 - » Too much time was spent manually updating, correcting customer account information
 - » Vendor deposited funds incorrectly
 - » Too much time was spent reconciling transactions between systems

VOICE OF THE CUSTOMER

- » Customers want to be confident their account is accurate and up-to-date
- » Customers want to view current account balance online
- » Customers want payment options: check, credit card or e-check

RESULTS

- » New payment processing vendor; unit cost dropped to \$0.30. Annual savings: \$105,000
- » One-day turnaround from payment processing to customer account update
- » Customers view account statement online and choose to pay by check, credit card or e-check
- » Payment by check is imaged and stored in a secure system
- » Reconciliation tasks streamlined



PROJECT NAME

Cumulative Levels and Effects Analysis in the Context of Air Permitting

PERFORMANCE MEASURE BASELINE

The Minnesota Legislature enacted a new requirement in 2008 for the MPCA to analyze and consider cumulative levels and effects of proposed air permit actions within a specific geographic area of South Minneapolis; at the time of enactment, there was no available method to comply with this new requirement.

THE IDENTIFIED PROBLEM

- » Available data suggested that cumulative effects of pollutants presented a potential environmental justice concern.
- » A defensible, repeatable method was needed to comply with the new review requirement for projects in the designated area of South Minneapolis.
- » There was no national guidance or model to draw on to develop such a method; to our knowledge, this remains a nationally unique requirement.

VOICE OF THE CUSTOMER

- » With input from diverse stakeholders, the MPCA developed a methodology to implement a cumulative levels and effects analysis. A Process Document was created defining explicit steps.
- » The stakeholder engagement/input included informal technical check-ins, large public meeting and open house for discussion and input, extended formal public comment period, and e-mail updates.

RESULTS

- » The MPCA developed technical expertise in the analysis of cumulative risk and the communication of cumulative risks to potentially impacted communities.
- » The new analysis method allows MPCA to consider the potential impacts from a proposed project with an expanded look at all existing impacts in an area, including chemical and non-chemical stressors on a neighborhood, including access to health care, socioeconomic factors, existing health issues such as asthma incidence, etc.
- » The method and case studies were accepted for peer reviewed publication
- » There is increased understanding among the interested South Minneapolis community regarding the role of the MPCA in environmental protection, the differences between modeling and monitoring and the value of modeling, and the significance of mobile sources as a contribution to existing conditions.
- » A scientifically defensible process was developed that can be used in South Minneapolis
- » The MPCA is able to meet its statutory duty when issuing air permits in South Minneapolis.
- » Outreach elements that can be used in South Minneapolis and in other areas as needed
- » Two permits have used the method: one permit is in final review, one permit has been issued. The allowable limits of the issued permit are below those set by MPCA air registration permit rules and the review process yielded reduced emissions from the project proposers.



Continuous Improvement

PROJECT NAME

Electronic Enforcement Document Routing

PERFORMANCE MEASURE BASELINE

- » Consistency of Use
- » Time Spent in Routing
- » Time spent to enforcement document delivery
- » Amount of paper used
- » Efficiency
- » Potential for use in routing of other MPCA documents

THE IDENTIFIED PROBLEM

Need to streamline enforcement processes and automate document routing using electronic tools.

VOICE OF THE CUSTOMER

- » Internal: MPCA staff frustration with time taken to route enforcement documents and not knowing who had it
- » External: Minnesotans (regulated parties, legislators, citizens, etc.) want effective and timely resolution of enforcement actions and a return to compliance.

RESULTS

- » The OnBase workflow was created to route enforcement documents electronically both within St. Paul and between regional offices.
- » Everyone involved can see the “real time” status of documents.
- » Decreased time spent routing with receipt averaging 4 days for regional actions; 1.7 days for St Paul actions.
- » Decreased FTE time by 250 hours per pay period.
- » Decreased use of approximately 864 sheets of paper each calendar year.
- » The workflow continues to evolve. For instance, as a result of the Fiscal/ Enforcement Kaizen, invoices for penalties due will be developed and routed through the workflow.



PROJECT NAME

Pollution Prevention (P2) Program / P2 Integration

PERFORMANCE MEASURE BASELINE

- » Results from the evaluation checklist (first round) by program managers set the baseline. Annual evaluations are planned.
- » Results from annual reports will allow us to measure change and determine where change is not applicable.

THE IDENTIFIED PROBLEM

The MPCA was not fully advancing pollution prevention as a way to meet environmental outcomes.

VOICE OF THE CUSTOMER

Internal analysis, surveys, and focus group results highlighted the need for the following to be implemented:

- » Integrate pollution prevention into the agency's goals, strategies, and activities
- » Develop a clear and common understanding of the term "pollution prevention"
- » Develop a measurement framework for pollution prevention activities that demonstrate results
- » Increase staff capacity to provide pollution prevention technical support

RESULTS

- » Two thirds of MPCA programs have integrated P2.
- » Ten programs show full integration; nine show partial integration; eight show no integration.
- » Improvements were made to the evaluation checklist for 2013 reporting.
- » A P2 strategy question was asked of program managers as part of their program plan updates.
- » Working to ensure programs get credit for their P2 integration work
- » Assistance available for tracking performance measures.
- » Where P2 is already occurring it is being recognized as annual evaluations and report outs occur.



PROJECT NAME

Watershed Contracting Process Improvement

PERFORMANCE MEASURE BASELINE

A watershed contracting cycle time report was created and showed it took on average approximately 150 days to submit and finalize a contract work plan.

THE IDENTIFIED PROBLEM

MPCA staff expressed frustration and concerns to agency leaders about the confusing and time-intensive watershed contracting process.

VOICE OF THE CUSTOMER

- » A staff survey to assess the five key areas showed significant dissatisfaction and frustration.
- » A core group of team members traveled to each regional office and held “listening sessions” where dialogue focused on moving toward improvement and change.
- » This approach successfully helped glean valuable information from internal stakeholders.
- » Common themes such as the need for better communications, training and guidance, and knowledge and trust in the roles we all play, were repeatedly heard across the regions and further confirmed the direction of the CI team’s priorities and work.

RESULTS

- » Communication: Create a new, interactive One-Stop Shop intranet page.
- » Guidance: Finalized work plan contract template that integrates watershed program elements.
- » Process: Made improvements to the Watershed Program’s contract work plan review and approval process. The cycle time report reflects a 50% decrease in the average number of days taken to submit and finalize a contract work plan.
- » Roles and Responsibilities: Finalized watershed contracting roles and responsibilities matrix for staff and management.
- » Training: Will develop a sustainable and consistent internal training program that meets staff needs both in content and delivery variety. Expect work to be implemented in FY13.
- » A new Project Manager Advisory Group was established to help facilitate the creation and implementation of remaining CI Teams recommendations.



Continuous Improvement

PROJECT NAME

Point Source Program – Wastewater Permitting

PERFORMANCE MEASURE BASELINE

In April 2003, the program only issued 9.42% of its permits within 180 days.

THE IDENTIFIED PROBLEM

The MPCA was unable to issue water quality permits fast enough to keep up with new, modified and expiring permit applications.

VOICE OF THE CUSTOMER

- » Survey mailed to permittee's consultants, MPCA staff, citizens, other governmental units, environmental groups, funding agencies, DNR, EPA, and legislators.
- » Survey results confirmed the backlog of permits was nearing 50% and the Agency's credibility as a whole was decreasing.
- » To further flesh out what steps were important to the people who directly used the permits, phone interviews were conducted with permittee's, consultants, and MPCA staff.
- » From these interviews the primary, secondary, and tertiary needs were identified. Timeliness was identified as a primary need from all three areas.

RESULTS

- » At the midpoint of the project, the number of permits issued in less or equal to 180 days jumped to 54% with the 90% goal being achieved in 2005.
- » Several process changes resulted from this project. They include but are not limited to:
 - » permit assignments determined prior to application receipt
 - » early effluent limit review
 - » updated permit manual
 - » standardize permitting for noncompliance
 - » changes in permit language and format
 - » all permit writers are required to issue 1.5 permits per month or 18 permits per year
- » Have maintained a 81-94% success rate through continual minor process improvements since.
- » Creating a cross-media permitting staff team to evaluate the current permit application review process and explore opportunities to improve communication, consistency, and efficiency.

