



# Lean Government

## Region 3 Clean Water Act Section 404 Aquatic Resources Regulatory Permit Review Lean Event Case Study

### Summary

The Aquatic Resources Regulatory Permit Review program manager and team leader identified the §404 Aquatic Resources Regulatory Permit Review program as a process that needed standardized work to help improve the quality and efficiency of EPA review comments. Under Section 404 of the Clean Water Act, EPA reviews and comments on permit applications for development and infrastructure projects that will involve the discharge of dredging or fill materials into U.S. waters. This Lean event, held in January 2014, covered EPA’s review of §404 permits for the U.S. Army Corps of Engineers (COE). It sought to standardize and improve the quality of the permit review process, identify feedback opportunities, and clarify management expectations. The changes identified will improve the quality of the reviews and allow Region 3 to review permits in a timelier manner.



**Figure 1: Mountain top mining is just one example of a project requiring a CWA §404 permit**

The team reduced the scope to just one branch of the permit review process and held a 3.5-day value stream mapping Lean event. Since the event, the team has held meetings and office hours to improve communication between management and staff, and has begun developing team operating procedures.

### Results

The improvements in the new process are expected to reduce lead time in permit review by 72 percent. The new process will also create new opportunities for staff learning and feedback.

Metric	Old Process	New Process	Percent Change
Lead time (low end)	183 hours	100 hours	↓45%
Process steps	37	24	↓35%
Handoffs	17	14	↓18%
Value added process steps	10 (27%)	12 (48%)	↑21%
Non-value added steps	10 (27%)	3 (12%)	↓15%
Processing time (low end)	25 hours	7 hours	↓72%
Rolled process quality	7%	TBD	TBD

*\*Results are anticipated based on the new process design*

# Scope of the Lean Project

**Project Scope:** Region 3’s Aquatic Resources Regulatory Team’s reviews of §404 permit applications from receipt of notification from the COE through sending final EPA comment. Since the review process has multiple branches of varying complexity, the scope was further limited to the most common branch that covers Individual Permits.

## Goals:

The event sought to improve the efficiency of the permit review process through the following goals:

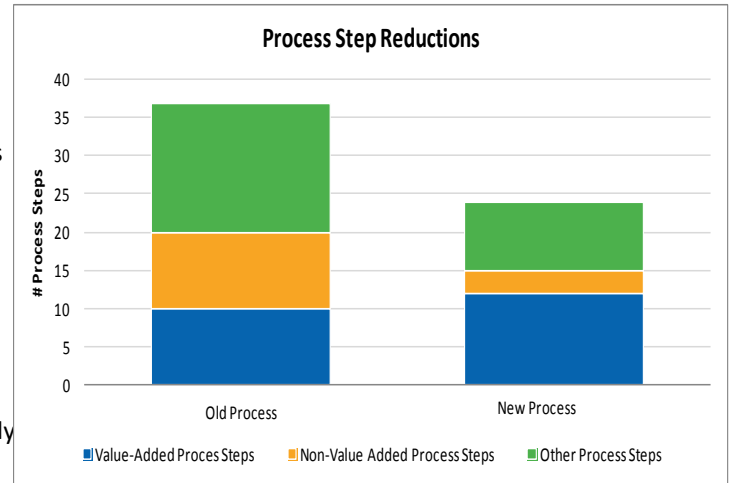
1. Clarify the process and program expectations.
2. Map the existing and future §404 permit application review process and program expectations.
3. Identify mechanisms, including staff-management feedback, to improve the quality of EPA comments by focusing on the technical aspects of the review and preparation of consistent and clear comments.
4. Identify significant issues/projects early in the application review period.
5. Identify development and/or training needs and opportunities to improve the quality of the reviews.
6. Identify feedback opportunities within the permit review process.
7. Develop a process within 30 days after completion of Team Operating Procedures (TOP) to determine efficacy and success of procedures.

# Process Changes and Improvements

Participants in the Lean event mapped the current §404 permit review process, analyzed the process to identify waste, brainstormed solutions and opportunities for improvement, and streamlined the process to create a new, desired future state process for Individual Permits. Lessons learned could be applied to other branches of the §404 permit review process.

The event team identified the following process changes:

- Enhance communication and feedback in the permit review process with the addition of management office hours and weekly meetings to ensure permit application notification and assignments are ‘in sync’ between the staff and management
- Create opportunities for collaboration and improve the quality of comments through a peer review option for comment letters and a shared library of completed letters.
- Establish one channel for reviewers to receive notice of public comment on §404 permits using the COE Public Notice email distribution list.
- Reduce the number of handoffs in the process.
- Develop team operating procedures to standardize the steps in the new process.



**Figure 2: Process Step Reductions**



**Figure 3: The Lean event team in action.**

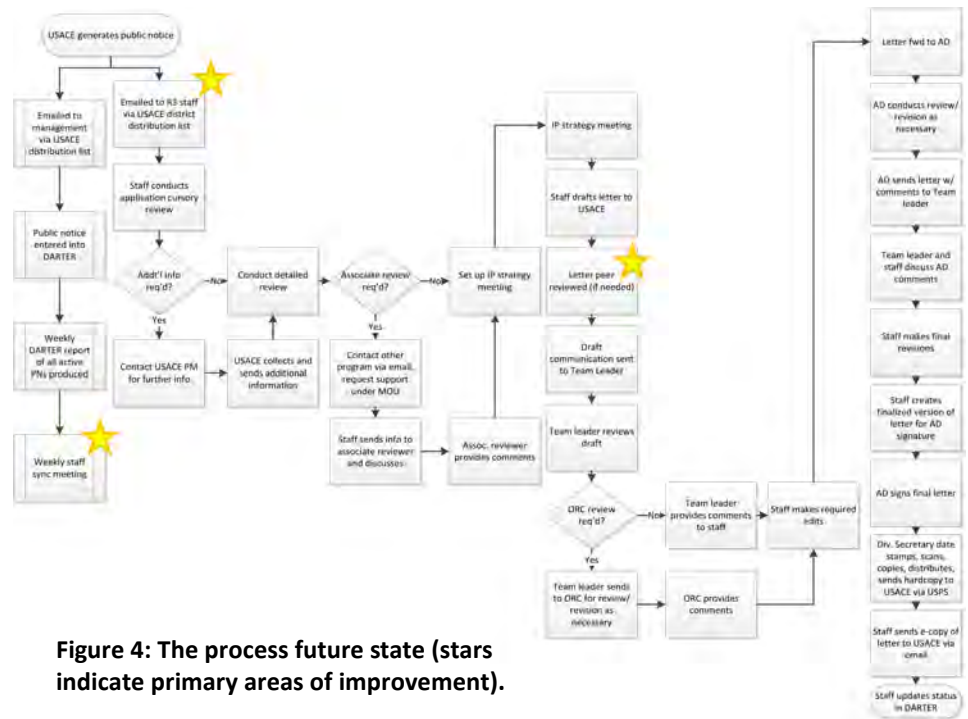
## Implementation

As of August 2014, the team has implemented the following process improvements:

- Streamlined receipt by registering all review staff for the COE's Public Notice e-mail distribution list.
- Scheduled meetings and management office hours for the permit review team.
- Standardized cursory review of permits.
- Standardized staff roles and responsibilities for entering data into DARTER (Data on Aquatics Resources Tracking for Effective Regulation), which tracks permits reviewed by EPA.

In addition to these process changes, internal workgroups developed preliminary drafts of team operating procedures, and will use team meetings to report on progress and solicit feedback. At the time of this case study, the team had held a 120-day check-in meeting.

Implementation of the process changes is in place and the process continues to be evaluated for future improvements.



**Figure 4: The process future state (stars indicate primary areas of improvement).**

## Event Reflections

- The Lean team found facilitation essential to identifying waste and reaching a streamlined future value stream map.
- The group was motivated for improvement and learned about the process and each other.
- Preliminary mapping work enabled a smoother Lean event and identified future areas for improvement.
- Team members began the event with different levels of enthusiasm for process improvement. While some team members were reluctant, most saw that giving a “fresh look” at the process through a kaizen event was a bold step to be proud of.

The goal of improving the efficiency of the permit review process was met by:

- Clarifying the process for team.
- Improving the efficiency of the review process, giving more time for the technical review.
- Identifying feedback opportunities within the permit review process.

### For More Information:

#### Lean Event Contacts:

David Byro, Facilitator, (215) 814-5563, byro.david@epa.gov

Barbara Rudnick, Team Leader, (215) 814-3322, Rudnick.barbara@epa.gov

#### EPA Lean Government Initiative:

Kimberly Green-Goldsborough, EPA Office of Policy, (202) 566-2355  
green-goldsborough.kimberly@epa.gov

<http://www.epa.gov/lean/government/>