

US EPA ARCHIVE DOCUMENT

## EPA 2009 State Innovations Grant April – June 2014

Washington State Department of Ecology – Lean and Green Assistance 7-21-2014

### **Part 1 Synopsis of Accomplishments during the Reporting Period**

#### Projected Activities from Last Quarterly Report

1. Any full individual projects (i.e. VSM and 3 Kaizens) to occur for this grant must have signed contracts by about June 30.
2. Determine if University of Texas training has the appropriate mix of Lean and P2 training for Washington. If so, complete an interagency agreement with the University to bring the training to Washington facilities.
3. Contact any last Lean consultants we find about incorporating environmental waste into their work.

#### Actual activities

April - June	Impact Washington completed one last marketing push for individual projects. Letters were sent to 100 of the largest hazardous waste generators in the state. This time a third party was hired to make follow-up phone calls and schedule in-person appointments. Forty appointments were scheduled. The effort was successful in obtaining a single contract (signed in June). Western Chemical, a chemical manufacturing facility, will develop current and future state process maps of the manufacturing process, evaluate opportunities to optimize inputs, outputs and process parameters, and put best practices into effect.
May - June	Ecology talked with several internal staff as part of the last marketing push. As a result of that, internal staff suggested three facilities that might meet the criteria and we followed up with the most likely candidate, a metal fabrication and assembly plant. They currently use Lean techniques to some degree, but were interested in the chance to train a number of staff and work in depth with Ecology. A contract was signed in June.
May	One Ecology staff person attended a Lean and P2 training put on by University of Texas staff. Ecology elected not to use L&G funds to bring this to Washington state because the trainer's expertise was more P2 than Lean.
June	The Prevention Resource Center (PPRC) gave a demonstration of VirtualPaint training equipment to Ecology, Puget Sound Clean Air Agency, and South Seattle Community College staff. The equipment provides initial spray training to apprentices without use of paint and effectively reduces paint and hazardous substance use.

### **Part 2 – Narrative Discussion**

#### Projects

Western Chemical manufactures an anesthesia for fish. They were initially interested in getting certified for Good manufacturing practice (GMP), part of the quality assurance for medicines in the European Economic Area (EEA). During discussion with the company, they raised the specific issue of wanting improved process efficiency and chemical waste reduction.

The project will include processing diagramming (current state) and evaluation of opportunity to reduce chemical inputs and waste. Due to the technical nature of the problem, Impact Washington hired a consulting chemical engineer to assist rather than the standard Lean VSM facilitator. Two site visits were completed in June for initial data collection.

The second contract is with National Industrial Concepts in Woodinville, WA near Seattle. Potential opportunities include water and chemical use reduction in baths, paint and powder coating material reduction, energy reduction, and wastewater treatment optimization. There will be a one-day Lean 101 training, a VSM for the entire process for one or two representative products, and a Kaizen focused on the metal surface prep and finishing lines.

#### Training

Ecology sent one staff person to attend a University of Texas 3 day training on P2 and Lean to evaluate whether the training contained an effective blend of P2 and Lean training for Washington State facilities. Ten people attended the training in Denver; 5 from facilities, 3 from Manufacturing Extension Partnerships (Colorado, Wyoming, and Montana) and two state P2 staff (Washington and Wyoming). The strength of the trainer was primary in P2, whereas Ecology was looking more for an emphasis on Lean since we have internal P2 expertise. Ecology elected not to use L&G funds for this training.

However, the Pollution Prevention Resource Center (PPRC) in Seattle elected to bring a two day version of the training to Seattle in October in conjunction with their regional annual P2 workshop.

#### Equipment

PPRC staff provided a demo of VirtualPaint to Ecology, the local air regulatory authority and a community college. Ecology continues to believe that the equipment would be a valuable implementation tool to reduce paint/hazardous substance use. This is based on the Woodfold Lean project in Oregon, results provided by PPRC on more recent training, and general knowledge of spray transfer inefficiencies.

The current proposal is to pursue purchase of the VirtualPaint equipment using 100% state funds. Ecology management approval is pending. If the equipment is purchased or equipment can be borrowed from Oregon, short (1-2 day) VSMs and (1-2 day) Spray Efficiency Trainings may be offered to WA production paint and spray industries.

#### Final report

Consultants Ross Strategic and PPRC submitted a draft final report and Lean Toolkit tech memo. Ecology is currently reviewing them and will submit both to EPA by September 30, 2014.

#### Lean consultants

Ecology discussed potential collaboration with an independent Lean consultant who contracts with Impact Washington. The idea was to work together on the consultant's other contracts separate from Impact Washington. The consultant believed it would be difficult due to the nature of their relationship with Impact Washington to work separately with Ecology. Also, much of his work is Training Within Industry, (TWI) courses aimed at developing supervisors' skills.

**Part 3 – Projection of Activities, Accomplishments, and Major Expenditures for Next Quarter Report**

1. Complete project work.
2. Market and sell small, short-term projects.
3. Complete final report and tech memo.

**Part 4 – Financial Report**

This report has been removed from the document, due to it being classified as Confidential Business Information (CBI).