



# State Innovation Grant Program: Washington

## Washington State's Lean and Green Assistance Program (2009 Competition)

### The State Innovation Grant Program

In 2002 EPA introduced the State Innovation Grant Program to support efforts led by state environmental agencies to test innovative approaches for achieving better environmental results and improved efficiency in permitting programs. Between 2002 and 2009, the State Innovation Grant program competition awarded over eight million dollars to support 40 state projects that test permitting innovation for a variety of regulated entities including several small business sectors. A summary of the awards by year appears in the table below.

State Innovation Grant Program Statistics, 2002-2009			
Competition Year	Proposals Submitted	Proposals Selected	Total Program Funding (\$)
2002/2003	29	6	\$618,000
2004	33	9	\$1.526 Million
2005	26	7	\$1.528 Million
2006	25	6	\$1.355 Million
2007	17	7	\$1.644 Million
2008	12	3	\$830,000
2009	26	2	\$590,000
<b>Cumulative Total</b>	168	40	\$8.091 Million

"Innovation in Permitting" has been the theme of the State Innovation Grant competition since its inception. In the last three competition cycles states received awards for projects in the following three categories:

- **The Environmental Results Program (ERP)** is an innovative approach to improving environmental performance based on a system of the interlocking tools of compliance assistance, self-certification (sometimes, where permissible, in lieu of permitting), and statistically-based measurement to gauge the performance of an entire business sector. The program utilizes a multimedia approach to encourage small sources to achieve environmental compliance and pollution prevention. (See: <http://www.epa.gov/permits/erp/>)
- **Environmental Management System (EMS)** is a system involving a continual cycle of planning, implementing, reviewing and improving the processes and actions that an organization undertakes to meet its business and environmental goals. EMSs provide organizations of all types with a structured system and approach for managing environmental and regulatory responsibilities to improve overall environmental performance and stewardship. (See: [www.epa.gov/ems/info/index.htm](http://www.epa.gov/ems/info/index.htm))

NCEI has provided awards also for projects testing watershed-based permitting, and for permit process streamlining in past competitions. For more information on the history of the programs, including information on solicitations, state proposals, and project awards, please see the EPA State Innovation Grants website at <http://www.epa.gov/innovation/stategrants>

### Project Background:

The Washington State Department of Ecology (Ecology) is proposing a lean manufacturing and environmental assistance demonstration program. The program's goal is to improve environmental and operational performance of industrial and commercial entities.

Ecology, Washington Manufacturing Services (WMS) and other partners conducted three Lean and Environmental Pilot Projects in 2007-2008 that saved businesses over \$1.5 million, reduced pollution by over 800,000 pounds, and avoided two major permits. The Pilots also confirmed EPA's research findings that environmental considerations and tools can be effectively integrated into lean methods to reduce wastes, improve operational efficiency, and support continual improvement efforts at facilities. Ecology and WMS jointly delivered lean and green services to three manufacturing facilities; lean and environment training, value stream mapping events, and several kaizen events to implement process changes and measure results.

The Lean and Green Assistance Program will use the lessons learned from the initial pilot projects, other recent lean and green projects, and EPA's Lean Toolkits to support the "next generation" of demonstration projects. These streamlined and strategic lean and green projects that will allow Ecology and its partners to develop a framework for self-sustaining, efficient, and effective lean and environmental technical assistance program infrastructure. It is anticipated that these demonstration projects and the associated program infrastructure will be more readily scalable and transferable than were the initial pilot projects.



## Project Description

This request for federal funding is to develop and implement a lean manufacturing and environmental technical assistance program to improve environmental and operational performance for industrial and commercial entities. The goal is to build on already successful Lean and Environment Pilot Projects and create an on-going, self-sustaining "Lean and Green" service that produces measurable environmental and business-operational results. Integrated lean and environmental technical assistance offers a compelling way to deliver significant, sustainable environmental results, improve operational efficiency, and foster a continual improvement culture focused on eliminating waste. Activities will include conducting lean and green program development; training, marketing and recruitment of facilities; testing and refining lean and environment integration approaches; integrated, site-specific lean and environmental service delivery; and measurement, documentation, and dissemination of results.

To accomplish project goals, programmatic and project-specific objectives have been formulated. Programmatic objectives include improving the partnerships and quality and effectiveness of joint services and to recruit and complete at least 3-4 lean and green projects per year for three years. Project-specific objectives are geared towards helping facilities identify and address their current and future environmental compliance and permitting requirements, and maximize operational and environmental benefits for the facilities and the public.

Ecology estimates that the 9-12 lean and green projects with small to medium sized manufacturing facilities would result in the following total cost and environmental savings:

- \$1-2 million cost savings to businesses
- 250,000-500,000 pounds of hazardous substances used
- 100,000-200,000 pounds of hazardous waste
- 200,000-400,000 gallons of water used

- 200,000-400,000 pounds of air emissions
- 4,000-8,000 tons greenhouse gases
- 100-200 million cubic feet of natural gas

For all completed lean and green projects, Ecology will measure and report the estimated and actual amount of financial savings, wastes, and pollution reduced. Baseline data will be collected before and during the current state value stream mapping event and at the start of lean implementation events. Ecology staff will work with lean facilitators and facility staff to analyze performance data at the end of each kaizen event for the report-out presentation and the facility will complete a NIST Manufacturing Extension Partnership (MEP) survey one year after the end of the project.

## Connection to EPA's Goals:

The Lean and Green Assistance Program support EPA's Strategic Plan, including Goal 5: Compliance and Environmental Stewardship, with an emphasis on pollution prevention, sustainability and business assistance. Ecology's multi-media approach addresses all five goals included in EPA's Strategic Plan. Multi-media aspects are incorporated into the Lean and Green Assistance Program, including (i) using lean and green assistance to improve compliance and multi-media environmental performance (ii) encouraging lean and green implementation as a path to reduce multi-media permitting and other regulatory requirements, and (iii) developing methods that encourage participant facilities to incorporate sustainability into their operations.

## Project Contacts:

For more specific information on the Washington State Innovation Grant, please contact one of the individuals below:

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