2003-2004 STATE INNOVATION GRANT PROGRAM: INNOVATION IN PERMITTING

PROJECT SUMMARY

Project Title:	"Beyond ERP" Phase I Project Assistance
Location:	Commonwealth of Massachusetts
Applicant:	Massachusetts Department of Environmental Protection
Project Contact:	Steven DeGabriele, Director; Business Compliance Division; Bureau of Waste Prevention; Massachusetts Department of Environmental Protection 1 Winter Street; Boston, MA 02108 Phone: (617) 556-1120 Fax: (617) 556-1063 Email: Steven.DeGabriele@state.ma.us
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Is the project being executed in cooperation with or funded by another federal program?	No
Regulatory Flexibility Needed:	MA DEP does not anticipate needing regulatory flexibility at this time.
Statement of Support:	The Commissioner of MADEP supports this application

PRE - PROPOSAL NARRATIVE: INTRODUCTION

The Massachusetts Department of Environmental Protection is requesting support for the first phase of DEP's "Beyond ERP" initiative. "Beyond ERP" is an innovative risk based effort designed to ensure that DEP is focusing its limited resources on the most significant environmental problems, and is using those resources as effectively as possible. It involves dividing the entire universe of sources we regulate into sectors or groups, and systematically over time assessing each sector's environmental risks, developing environmental performance indicators and performance targets, assessing performance, and working with internal and external stakeholders to adjust our oversight strategy (e.g. the mix of self certification, assistance, incentives, reporting, inspections, permitting etc.) as needed to achieve or maintain the desired performance levels. Inherent to this initiative is ongoing, periodic performance assessment of the sector and evaluation of the costs (to the state and to the regulated sources) of developing and implementing the different "oversight strategies" and their relative effectiveness. In the first phase of "Beyond ERP", MA DEP plans to substantially expand its existing ERP Program to include up to 5 additional sectors encompassing several thousand facilities. We are requesting assistance from EPA for sector workbooks/outreach, data systems, and to prepare a final report that summarizes our findings. The requested assistance will greatly accelerate the "roll out" of the new sectors and the analysis of environmental results, and most importantly, make it possible to share our findings on the relative costs and effectiveness of the different ERP/non permitting strategies with other environmental agencies. Thus this project will serve two ends: improving environmental quality AND furthering innovation by providing environmental regulators with improved information about when and how various non permitting alternatives can be used to best effect. Exhibit 1 summarizes each sector, the key environmental concerns being addressed, and DEP's preliminary thoughts on the "ERP Model" to be used, assessment, design and implementation timeline and some of the innovation lessons to be learned.

PROJECT SCHEDULE AND TIMELINE

DEP will use the same basic approach (outlined below) for each sector. However, the timelines will vary, depending upon the sector's complexity, available information, and current status. See Exhibit 1 for sector-specific timelines.

Step I: Evaluation In this step, DEP will collect the information about the sector including size, environmental threats and risks, baseline environmental performance and compliance (and beyond compliance) status, the level of environmental expertise at the facilities, stakeholder perceptions and concerns, any existing trade organization, and other factors that MA and other states have identified as relevant to the design of an appropriate oversight strategy for the group. DEP will use this information to work with internal and external stakeholders to develop environmental performance indicators and performance targets for the sector. This step will be completed by Summer of 2004 for most sectors.

Step II: Non Permitting Oversight Strategy Design In this step, DEP will review the information about the sector, along with our own experience (such as our prior ERP and municipal EMS work) and that of other regulatory agencies and work with stakeholders (including industry representatives, trade organizations, environmental groups, as appropriate) to design the most effective oversight strategy. Exhibit 2 shows the range of strategies that are in DEP's "toolbox" that can be used on their own or in conjunction with ERP and EMS to obtain the necessary environmental performance from individual facilities and entire sectors. The selected oversight strategy, which can be voluntary or mandatory, may include any one or combination of techniques such as self or third party certifications with or without compliance workbooks, Environmental Management Systems, or incentives, such as reduced oversight or the publication of environmental performance data. In general this step will be done by Summer 2004.

Step III: Building the Selected Strategy This step involves identifying the universe; promulgating the regulations; developing and delivering the necessary outreach and technical assistance materials such as

EXHIBIT 1: SUMMARY OF SECTORS INCLUDED IN MA DEP's "BEYOND ERP" PHASE 1 PROJECT

	SECTOR	Dentists	Engines and Turbines	Solid Waste Transfer Stations	Bio Tech	Industrial Wastewater Sewer Dischargers (?)	Photo Processors
Description	**Universe**	3000	3000	200	Emerging industry	15,000 +	500
	Key Environmental Concerns	Uncontrolled mercury in wastewater, hazardous waste	Uncontrolled smog precursors, fine particulate, greenhouse gasses, air toxics	Wastewater, odor, nuisances, solid waste recycling, hazardous waste management	Wastewater, smog, air toxics, greenhouse gasses, solid waste reduction, hazardous waste management	Industrial wastewater (toxic and conventional)	Silver in wastewater, hazardous waste
	Existing Regulatory Model	Individual permits (many facilities lack required permits)	Individual permits (many facilities lack required permits)	Individual permits	Individual permits (emerging sector, very few existing permits	Individual permits (many facilities lack required permits)	ERP: Self Certification
STEP	**Evaluation**	Done	Done	By Spring 04	By Spring 04	During CY 04	By Spring 04
	Design Non Permitting Strategy	Model: Voluntary certification with incentive (mandatory certification threat)	Model: One time self certification	Preliminary thought: Annual self certification & Incentives	Preliminary thought: EMS with self certification	Preliminary thought: Self certification	Preliminary thought: Reduce certification frequency / content
	Build Selected Strategy* **	Begin Spring 04	Start Spring 04	Begin Spring 04	Begin Summer 04	Begin second half CY 04?	Begin Spring 04
	Begin Implementation	During CY 04	During CY 05	During CY 04	During CY 04	During CY 05?	During CY 05
Some Innovation Lessons to be Learned		Challenges, effectiveness, & costs of voluntary certification with incentive	One time certification challenges, costs & effectiveness	Challenges, costs, & effectiveness of ERP & incentives on a sector with many municipal facilities	Using EMS & ERP to replace duplicative regulatory requirements (e.g. FDA's) and on a new industry	Challenges, costs & effectiveness of ERP when group contains varied industries	Challenges of reducing oversight & maintaining performance once environmental performance goals are reached

EXHIBIT 2

Environmental Performance Improvement & Oversight Models

Totally Private — **Totally Government**

Type of Standard-Setting

Private Certification/ System	Private/ Government Partnership	Government Performance Standards	Environmental Results Program	Licensed Third Parties	Facility-Specific Permits
• ISO • EMS • ASTM	• Mass. Environmental Stewardship • EPA Performance Track	• HW Generators • "Exempt" Recycling Facilities • 7.03 Spray Paint Booths	• Dry Cleaners • Photoprocessors • Printers • Stage II Stations • Boilers • Holding Tanks	• 21E/LSPs • TURA/TUR Planners • WWTP Operators	• Air Majors • HW/TSDFacilities • NPDES

Level of Government Oversight

• No direct involvement	• Promotes program • Sets and screens for eligibility criteria • Provides incentives	• Audits based on infrequent inspections • Imposes sanctions for noncompliance	• Requires self-certifications • Audits submittals • Conducts random inspections • Imposes sanctions for noncompliance	• Licenses professionals to provide specific expertise to private parties • Audits reports • Conducts random inspections • Imposes sanctions for noncompliance	• Sets health- and technology-based standards • Routinely reviews facility reports • Conducts frequent inspections • Imposes sanctions for noncompliance

workbooks, training, or other guidance; developing the certification forms; developing data management systems for certification, enforcement, and performance measurement; developing administrative procedures and training staff. In general, this step will be completed by Summer 2005.

The majority of the requested grant funds will be used for consultant services to develop data management systems and outreach/technical assistance material.

Step IV: Implementation Once the regulations and systems are in place, DEP will begin to implement the non permitting alternative, and measure changes in environmental performance, and where possible translate that into measures of environmental quality. In general, implementation will begin during Calendar Year 05.

Step V: Tracking Throughout the project, DEP will keep track of what is involved in developing and implementing each sector. This will include costs such as staff time (through our existing time management system), consultant and material expenses (through our existing accounting mechanisms), as well as political, technical, and administrative hurdles involved with implementing something new and how they were overcome, and unexpected or unusual policy issues. DEP will also assess the costs and savings to the regulated entities. Finally, when we are using a mix of strategies such as incentives or EMS and certifications, we will collect information about the relative effectiveness / importance of the different strategies on influencing facility behavior. This information will be tracked through summary memorandum, meeting minutes, debriefings, etc. The "lessons learned will be shared with EPA and other state as part of our national partnership.

Step VI: Final Report The last step of the project will summarize for each sector the results of the evaluation, the performance indicators and targets, expected environmental outcomes (where feasible), non permitting oversight strategy design and rationale, the costs of developing and launching the sector, estimates of the ongoing costs of managing and enforcing the sector, and, where possible in the time frame of the grant, preliminary information on the actual costs and performance improvements. In addition, the final report will examine the results across the sectors to assess relative program effectiveness under varying circumstances. The final report will be prepared by June of Calendar Year 06. However, DEP is commits to share "lessons learned" with EPA and other states as they are learned. Further, DEP will continue to track sector implementation costs and environmental performance beyond the end of the official grant period as part of its broad Beyond ERP initiative, .

Grant funds will be used to hire a consultant to assist in the preparation of the final report, which will be shared with other states and EPA.

PROGRAM CRITERIA

Targeting Environmental Priority Issues: As shown in Exhibit 1, DEP's proposal directly targets *smog, greenhouse gasses, and restoring and maintaining environmental quality.* In addition, to the extent that work in the dentist, IWW, transfer station, biotech, and photo processing sectors reduces discharges to POTWs, it *lowers the treatment and sludge disposal costs.* Similarly reductions in toxic discharges to surface and groundwater *reduce the drinking water infrastructure costs* by preventing the need for treatment. "Beyond ERP" will also further the DEP PPA goals of solid waste minimization (transfer stations) proper hazardous waste management (dentists and transfer stations and photo processors).

Likely Improvement Results from Project Implementation: This project is designed to reduce emissions of smog precursors and greenhouse gasses and discharges of toxic and conventional water pollution discharges, through the installation of required controls and improved compliance rates. It will also improve hazardous and solid waste management, and increase waste reduction *(5.2.2.3).* These benefits will be documented by identifying specific environmental indicators and performance targets for each sector which will be evaluated using valid statistical methods. One lesson we have learned from past

work on ERP sectors is the importance of establishing the environmental indicators and performance targets and building the data management systems up front. Doing so will greatly improve the efficiency of managing the certification and the efficiency, timeliness, and accuracy of the performance measurement. In addition DEP will rely heavily on the lessons it and other states have learned in prior ERP, Innovations or conventional programs as it designs each sector's non permitting strategy *(5.2.2.2).*

The project is expected to result in significant administrative and cost efficiencies for the state and the regulated entities. With the exception of the photo processors sector which is already in ERP program, individual permits are presently required for each of the sectors included in this proposal, and we anticipate substituting self certifications, with or without other techniques such as incentives and environmental management systems for some or all of the existing permits *(5.2.2.1).*

Efficiencies will be gained in different ways depending on the sector *(5.2.2.4 &5).* For those programs in which the permits are presently being issued routinely (solid waste transfer stations, engines and turbines, and the few existing biotech facilities) both DEP and the facilities will be spared the time and costs of issuing / obtaining the permit, while achieving equal or better environmental performance. This is particularly true for the engines and turbines sector because DEP inspectors frequently find unpermitted engines and turbines during multi media inspections and then must initiate enforcement actions that are costly for both DEP and the regulated entity. For those programs in which we do not actively enforce the permit requirement (dentists, industrial wastewater), DEP expects to achieve significant environmental improvements with a relatively small investment of resources and minimal administrative costs on the part of the facilities. Finally, in the photo processing sector, which we believe may have achieved the desired environmental performance target, we expect that DEP's and the facilities' administrative costs will decline to the extent that we reduce the certification requirements in response to their performance.

Measuring Improvement and Accountability: As described in the Project Schedule and Timeline section, specific environmental indicators, performance targets, and baseline performance will be established during Phase I of the project for each sector, and environmental performance measurement will begin the year following implementation and continue thereafter *(5.2.3.1-4).* (The indicators and targets will be shared with EPA, other states, and the public as they are developed. The specific schedule for each sector can be found in Exhibit 1.) Based on past experience, we expect that most of the environmental improvements will occur in the first few years following implementation (post 2005) *(5.2.3.5 & 6).* For photo processors we will pay particular attention to whether the benefits "hold" following decreased oversight. However this assessment will be made several years out.

The administrative costs and savings, challenges, hurdles, etc. of developing and managing the sectors will be tracked throughout the project, and presented in the final report along with the assessment of the relative effectiveness of different strategies. The final report will be completed by mid 2006. Sector management costs (and savings) will continue to be tracked beyond the life of the grant *(5.2.3.5 & 6).*

Transferring Innovation: This project will foster innovations in several ways. The sectors chosen are ubiquitous and present the same challenges throughout the country. Other agencies will be able to use or adapt the strategies included in the final report. The Final Report also will provide information about the relative costs and effectiveness, challenges and how those challenges were overcome of implementing innovative programs. This information will be particularly valuable to other agencies as they design and launch similar programs, and should help them avoid pitfalls. *(5.2.4.1 & 2).* DEP also will continue its tradition of assisting other states throughout the project *(5.2.1.4).* Finally, each time DEP adopts an innovative approach, it works collaboratively with internal and external stakeholders in the design, implementation and evaluation of the initiative. This process opens internal and external stakeholders' minds to new possibilities, fosters habits of trust and innovation, and makes the next innovation project that much easier to implement *(5.2.4.3).*

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PROPOSAL BUDGET SUMMARY

State: Massachusetts

Agency: Massachusetts Department of Environmental Protection

Project Title: "Beyond ERP" Phase I Project Assistance

Location: Commonwealth of Massachusetts

<Budgetary Information Withheld by U.S. EPA>