

2008 State Damage Prevention Program Grants Progress Report
Funding Opportunity Number: DTPH56-08-SN-0001
CFDA Number: 20.720

Award Number: DTPH56-08-G-PHPS13

Project Title: Vermont State Damage Prevention Program Grant

Date Submitted: December 31, 2008

Submitted by: GC Morris, VT Dept of Public Service Gas Engineer

Specific Objective(s) of the Agreement

Under this grant award Vermont Department of Public Service will perform a study on the scope and effectiveness of the underground utility damage prevention system within the state of Vermont. The study will help to gain a better understanding of the system in place, identify deficiencies, and foster the relationships necessary for effective implementation of programs addressing the nine elements.

Workscope

Under the terms of this agreement, the Grantee will address the following elements listed in 49 USC §60134 through the actions it has specified in its Application.

Element (1): Participation by operators, excavators, and other stakeholders in the development and implementation of methods for establishing and maintaining effective communications between stakeholders from receipt of an excavation notification until successful completion of the excavation, as appropriate.

Element (2): A process for fostering and ensuring the support and partnership of stakeholders, including excavators, operators, locators, designers, and local government in all phases of the program.

Element (3): A process for reviewing the adequacy of a pipeline operator's internal performance measures regarding persons performing locating services and quality assurance programs.

Element (4): Participation by operators, excavators, and other stakeholders in the development and implementation of effective employee training programs to ensure that operators, the onecall center, the enforcing agency, and the excavators have partnered to design and implement training for the employees of operators, excavators, and locators.

Element (5): A process for fostering and ensuring active participation by all stakeholders in public education for damage prevention activities.

Element (6): A process for resolving disputes that defines the State authority's role as a partner and facilitator to resolve issues.

Element (7): Enforcement of State damage prevention laws and regulations for all aspects of the damage prevention process, including public education, and the use of civil penalties for violations assessable by the appropriate State authority.

Element (8): A process for fostering and promoting the use, by all appropriate stakeholders, of improving technologies that may enhance communications, underground pipeline locating capability, and gathering and analyzing information about the accuracy and effectiveness of locating programs.

Element (9): A process for review and analysis of the effectiveness of each program element, including a means for implementing improvements identified by such program reviews.

Accomplishments for this period (Item 1 under Agreement Section 9.01 Progress Report: “A comparison of actual accomplishments to the objectives established for the period.”)

The Vermont Department of Public Service (VT DPS) is working with a team of researchers from the University of Vermont (UVM) to complete the objectives detailed in our grant application. This team received final contract approval to commence work on September 4, 2008.

Over the past four months, the team has completed the tasks listed in the numbered items below. These are grouped according to headings developed with the VT DPS and are designed to fulfill the activities included in the PHMSA grant application. As we discussed in our PHMSA grant application addendum, we recognize many of the 9 elements are related to one another. Our approach combines relevant outreach efforts whenever possible. For example, stakeholder interviews with utility employees are designed to cover issues related to all 9 elements at once to avoid duplicate interview sessions. Public outreach efforts undertaken to assess public knowledge have resulted in education opportunities and distribution of public education materials provided by Dig Safe Systems Inc. to equipment rental companies and the public at large.

This work is proceeding according to our plans. Deliverables scheduled for review in this period are complete.

Project Management

1. Three coordination and oversight meetings between Vermont Department of Public Service staff and the UVM team.
2. Creation of a website for public education regarding this research project and general underground utility safety issues. This is available at <http://www.vt811.org/>
3. An outline of the anticipated final report was drafted and reviewed by the VT DPS oversight group.

Interview and Survey Stakeholders

4. Regular communication and outreach with the Vermont chapter of MUST (Managing Underground Safety Training), including attendance at a state chapter meeting to solicit

in-person feedback on potential improvements to all aspects of the 9 elements of effective damage prevention programs.

5. Direct interviews with key stakeholders completed in this period include:
 - a. Vermont Gas Systems
 - b. Dig Safe, Inc (the one call center)
 - c. Green Mountain Power
 - d. Central Vermont Public Service
 - e. Burlington Electric Department
 - f. Comcast cable company
 - g. Verizon
 - h. On Target (a contract locator)
 - i. Vermont Electric Co-op
6. Many additional stakeholders have participated in the interview process. In particular, several individuals in the excavation contracting community have been contacted.
7. Creation and execution of a survey to measure the general public's understanding of Vermont's Dig Safe system and gather user feedback. This survey was conducted in person at two Home Depot stores across the state as well as online. The online survey was linked through a local homeowner email listserv for neighborhood discussions known as Front Porch Forum <http://www.frontporchforum.com>. Approximately 350 completed surveys are under review.
8. Creation and execution of a survey to measure municipal public works officials' understanding and experience with underground utility damage prevention programs. This survey was distributed at a statewide municipal official conference held by the Vermont League of Cities and Towns in Killington, VT and has also been directly emailed to public works managers in communities around the state. Approximately 20 surveys have been completed to date.
9. Creation of a survey to measure construction contractor experience with underground utility damage prevention program issues. The project team worked with the Vermont Association of General Contractors to distribute this survey to companies operating in Vermont. Approximately 30 surveys have been completed and returned as of this progress report.
10. Creation of an interview questionnaire for locating firms under contract to Vermont utilities to provide one call locating services. This has been distributed to several locating firms operating in the state as well as utilities with their own locating staff. One of the major regional locating contractors has responded to this questionnaire.
11. A representative from the research team attended the Northeast Gas Association Damage Prevention Workshop in Saratoga, NY from 10/23-10/24/2008. In attendance were utility representatives from New York, Connecticut, New Jersey, Massachusetts, Rhode Island, and Maine. This workshop provided excellent opportunities to learn more about underground utility damage programs in surrounding states, ideas for improving damage prevention initiatives, and networking opportunities for future inquiries. Of particular interest contact was made with Kevin Hopper, operations manager of Dig Safely. New York, and Steven Blaney of the New York Public Service Commission.

Best Practice Analysis

12. Review of various damage prevention publications, including PHMSA's recent DPAP publication (Sept 2008) to ensure recommended best practices are considered in this study.
13. Analysis of Vermont underground utility damage incident data available through the CGA DIRT application and Vermont state data sources.
14. Peer state regulators in New England have been contacted to inquire about best practices related to enforcement and other issues.
15. Common Ground Alliance staff were contacted to solicit information on CGA best practices and specifically whether any quantitative studies of best practice benefits and costs have been completed. We heard from CGA they are not currently aware of any benefit/cost studies related to their best practice guidance.

Quantifiable Metrics/Measures of Effectiveness (Item 2 under Agreement Section 9.01 Project Report: "Where the output of the project can be quantified, a computation of the cost per unit of output.")

1. Contacted 45 stakeholders and interviewed 25 individuals through a direct outreach process targeted to members of VT MUST and other key groups.
2. Received 350 completed public surveys.
3. Distributed 50 and received 18 completed municipal official surveys.
4. Distributed 255 contractor surveys and received 40 responses.
5. Reviewed 1,428 records in the VT DPS incident database for complete excavator type data and updated records based on incident descriptions when possible.

Issues, Problems or Challenges (Item 3 under Agreement Section 9.01 Project Report: "The reasons for slippage if established objectives were not met. ")

The grant effort has encountered several schedule related issues leading to an extension request to PHMSA. The delay in grant allocation by PHMSA from an expected announcement in May 2008 to late June 2008, postponed the estimated start time for grant related research and analysis by an initial thirty days. Further, Vermont's internal process for receiving legislative authority to accept the grant deferred the start date for initiation of the contract between the Vermont Department of Public Service (DPS) and the University of Vermont (UVM) by an additional thirty days. The contract between DPS and UVM was fully executed on September 4, 2008.

Due to this series of delays, the UVM team has determined that it requires an additional three months to carry out its program analysis. This additional time will allow us to fully complete the stakeholder survey and interview process necessary to analyze the efficacy of Vermont's existing damage prevention program. We intend to carry out surveys and interviews between now and Dec 2008, and complete our analysis, process review and program improvement recommendations in the early months of 2009. We are satisfied with our stakeholder responses to date, but we have encountered some difficulty soliciting feedback from all our intended

parties. We will continue to reach out to these individuals and groups to better inform our recommendations.

Other pertinent information including, when appropriate, actions taken to address the recommendations PHMSA provided in correspondence dated [Different for each] (Item 4 under Agreement Section 9.01).

In accordance with PHMSA's June 5, 2008 Grant Conditions Recommendations, a series of quality controls are in place for the completion of the work tasks. Professor Larry Shirland is UVM's principal investigator and is overseeing all aspects of work, including UVM's financial expenditures related to grant activities. The Vermont Department of Public Service is overseeing the work of the UVM team, including work tasks, deliverables, and financial reimbursements. GC Morris, Gas Engineer and Hans Mertens, Director of Engineering Services and Chief Engineer for VT DPS are participating in regular coordination meetings with the UVM team to review progress. Additional UVM PhDs are consulting with Dr. Shirland and the UVM research team. In particular, Professor Jim Sinkula has provided support with survey design and review. David Attig, Safety Manager at Vermont gas, MUST Chairperson, and Dig Safe Systems Inc. executive board member has provided mentoring and material support in connecting the UVM team with stakeholder groups, and educating the team about damage prevention issues. In addition, the MUST stakeholders have offered further insight as to avenues of investigation and potential study recommendations.

Regular communication between the UVM team and VT DPS has further enhanced quality control in our grant activities.

Mid-term Financial Status Report

The mid-term financial report has been sent as a separate attachment sent to the AA.

Plans for next period (remainder of grant)

The remainder of grant activities will follow our prescribed workplan and will include: continued stakeholder interviews and outreach with peer groups; analysis and compilation of survey and interview data; further investigation into peer state programs; and analysis of previously filed damage incident data. These activities will culminate in the production of a comprehensive report detailing the status of Vermont's underground utility damage prevention practices, recommendations for improvement, and a plan for implementation of all recommendations.

Requests of the AOTR and/or PHMSA

None at this point in time.