

# **PASCOAG: LESSONS LEARNED**

## **Part Two: Interviews with Officials**

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## BACKGROUND

In early September 2001, the Pascoag Utility District (PUD), water supplier to approximately 1200 households in the northern Rhode Island village of Pascoag, announced that the village's public drinking water supply was contaminated with the gasoline additive methyl tertiary-butyl ether (MTBE). What followed was more than four months during which Pascoag residents were advised not to drink or cook with the water, to use ventilation while showering, and to sponge-bathe young children. As state and local officials grappled with the situation, MTBE-laden water continued to flow to Pascoag homes. Residents began reporting a wide range of health symptoms that they attributed to their water.

The first phase of this study involved interviewing 100 Pascoag residents in April and May 2002 to gather their perceptions and attitudes concerning this contamination event in their lives and the life of their community. The findings of these interviews, as well as further background information, are summarized in the August 2002 executive summary **Pascoag: Lessons Learned, Part One: Interviews With Residents.**

**Part Two** expands the study to incorporate the roles played by local and state officials in responding to the Pascoag contamination. As the situation unfolded in September, an interdepartmental committee of officials from Governor Almond's office, the Rhode Island Department of Health (HEALTH), the Rhode Island Department of Environmental Management (DEM), the Rhode Island Water Resources Board (WRB), the Pascoag Utility District and other involved parties was formed. **This report, based on in-depth interviews with key officials involved in the state and local response, analyzes and identifies how those officials perceived their roles and responsibilities pertaining to the contamination event.** The report concludes with recommendations aimed at prevention and preparedness in the event of a similar situation in the future.

### Sources

The primary source of information for this report consists of in-depth interviews and documents from senior leadership of the following agencies and organizations:

The Rhode Island Department of Health (HEALTH)  
The Rhode Island Department of Environmental Management (DEM)  
The Rhode Island Water Resources Board (WRB)  
The Rhode Island Underground Storage Tank Financial Responsibility Fund Review Board  
The Office of Governor Lincoln Almond  
The Office of United States Senator Jack Reed (D-RI)  
State Representative Scott Rabideau (R-Burrillville)  
State Senator Paul W. Fogarty (D-Burrillville, Gloucester)  
The Pascoag Utility District  
The Burrillville Town Council

Additional background information was obtained from the Fall 2001 archives of the *Providence Journal* and the *Woonsocket Call*.

## A CONFLUENCE OF FACTORS

In piecing together the events that took place in Pascoag in the fall of 2001, it quickly becomes apparent that **numerous factors combined to create a situation that most officials interviewed described as "unprecedented."** Engineers at DEM, HEALTH and the PUD agreed that the nature of the Pascoag contamination was exceptional not only in the relatively large distance the contaminant traveled from the source of the gasoline release, but also in the speed with which contaminant levels rose in the water supply. Several factors contributed to the seriousness of the contamination:

- **The chemical composition of MTBE.** Methyl tertiary-butyl ether, added to gasoline in significant quantities beginning in 1992 following amendments to the US Clean Air Act of 1990, is highly water-soluble. When a gasoline release occurs, MTBE often moves significantly farther and faster than the other chemical constituents of gasoline.
- **Topography and geology.** Engineers at the PUD and DEM noted the downhill gradient from the Mobil station to the wells as a contributing factor in the contamination. Some also suggested that fractures in the bedrock that predominates in the region of the wells might have provided a conduit for the contaminant to move rapidly. The high-yield Pascoag wells, pulling upwards of 500 gallons of water per minute, may also have contributed by drawing the contaminant toward the groundwater aquifer.
- **Lack of redundancy of well source.** Although the Pascoag Utility District had installed a second well in February of 2001, this well was housed in the same building as the first well and located just ten feet away. According to PUD General Manager Ted Garille, the district believed that the wells, though very close together, drew from separate aquifers. Nonetheless, both wells were found in September to be pumping MTBE-contaminated water.
- **Underground Storage Tank facility within the Wellhead Protection Area (WPA).** The Wellhead Protection Area Program, required by the US EPA and administered in Rhode Island by the Department of Environmental Management, prohibits the installation of new underground storage tank facilities within a designated area surrounding a well source. This area is determined by a formula that incorporates well capacity, local geology and other factors. **The Main Street Mobil Station pre-existed the WPA rules and lies within the Pascoag wellhead protection area, approximately 1700 feet from the wells.**
- **Historically non-compliant gas station operator.** The Main Street Mobil Station, owned by Mary Ellen and Robert Lavardiere and operated by Robert S. Potter, had a long history of non-compliance with DEM regulations. Numerous

Notices of Violation (NOVs) were issued to Potter and the Lavardieres dating back to 1994.

### **WHAT ABOUT THE REST OF RHODE ISLAND?**

Although the Pascoag contamination was unparalleled in the experience of DEM and HEALTH officials, this should not be taken to imply that the contamination faced by Pascoag was an improbable event. **Several of the same factors that devastated Pascoag's public water supply exist in dozens of other towns and villages across Rhode Island.** These include, but are not limited to:

- **A large number of small public water supplies with limited financial resources.**
- **Non-compliant underground storage tank owners**
- **Inexperienced, unlicensed underground storage tank operators**
- **Underground storage tanks in close proximity to drinking water sources**

According to statistics from HEALTH, as of July 2002 there were **389,858 Rhode Island residents served by water systems with known underground storage tanks located within half a mile of the well source.** This estimate does not account for the unknown number of abandoned or unregistered USTs. Although EPA mandate has required that all underground storage tank systems installed after 1988 be upgraded or replaced with non-corrosive materials by December, 1998, officials believe that some tank owners have failed to comply with the regulation. According to EPA, “even a small corrosion hole can leak hundreds of gallons of petroleum into the surrounding environment over a year.”<sup>1</sup>

**Most state and local officials interviewed believe there is a high probability that another similar contamination event will occur in Rhode Island; some described such an event as inevitable.** According to a senior advisor to Governor Almond, the next contamination in Rhode Island is not a question of “if” but of “when.”

Given the acknowledged likelihood of future contamination events in Rhode Island, it is prudent to analyze what occurred in Pascoag with the goals of prevention and greater preparedness for the future.

### **RESPONSE TO PASCOAG**

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<sup>1</sup> EPA LUST homepage, <http://www.epa.gov/swerust1/fsprevnt.htm>. Accessed August, 2002

The nature of the Pascoag contamination required the coordination and cooperation of numerous government agencies and both public and private entities at all levels of government. (See Timeline for detailed history of events).

### Local Response

The response to the Pascoag water contamination on the local level was complicated by a number of financial and political factors.

- **Limited local resources.** The PUD, with an annual operating budget of approximately \$100,000, was completely unprepared for the financial realities of a large-scale contamination and clean up. (As of July, 2002, DEM engineers estimate that total clean up and remediation costs will exceed \$2 million.<sup>2</sup>) In October, 2001, the Burrillville Town Council approved a plan to advance an anticipated \$200,000 Community Development Block Grant to the Pascoag Utility District. This relatively small amount of direct financial support brought forth at the local level made PUD officials immediately aware that, according to Garille, “we needed help.”
- **“Small-town politics.”** Nearly all officials at the state and local levels, as well as numerous residents (see **Part One: Interviews With Residents**) referred to “small-town politics” and “turf wars” as serious barriers to resolving the water situation. **Resistance to the proposed merger** of the Harrisville and Pascoag water districts was seen primarily from Pascoag residents unwilling to agree to the condition that Pascoag residents would not have representation on the Board of the new district. One member of the PUD Board of Commissioners who opposed the merger expressed a steadfast belief that Pascoag should maintain autonomy over its district, despite acknowledging that this might not be feasible in the long term.

### State Response

Most state officials interviewed believed that their respective agencies or offices had done a “good job” of navigating the unfamiliar territory of a serious MTBE contamination. They tended to view the Pascoag response as a learning experience, and some identified areas for potential improvement in the future. However, many were frustrated by the lack of recognition and outright criticism levied by the Pascoag residents. One state official noted, “This was a local issue. We went out of our way.”

**The interviews with residents and officials reveal a sharp contrast between how local officials and residents viewed the role of the state and how state officials viewed their own roles in response to the contamination.** In the absence of sufficient response and resources at the local level, village residents unquestioningly looked to their state officials and elected representatives to resolve the situation. However, state officials expressed reluctance to become involved in what many viewed as a local problem to be dealt with on the local level. This gap between the state official’s perceptions of their roles and responsibilities and the expectations of the residents led to a great deal of resident dissatisfaction, as illustrated in **Part One: Interviews with the residents.**

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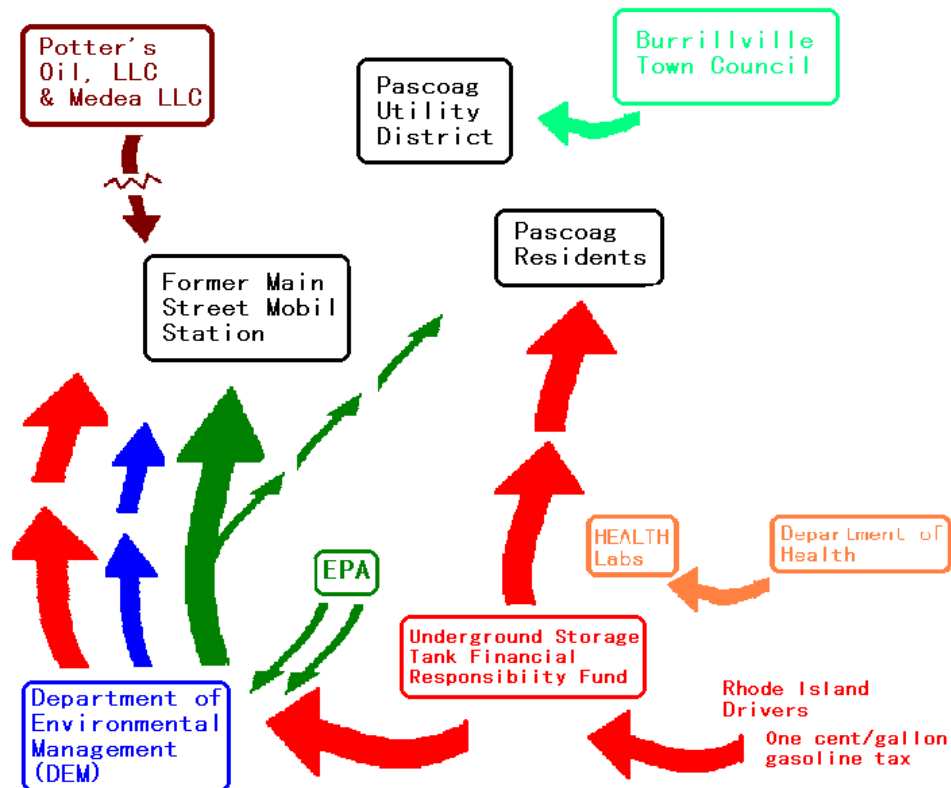
<sup>2</sup> DEM report to the Burrillville Town Council, July 28, 2002.



### The Money Factor

Whether they referred to it as the “big pot of money,” the “big bag of money” or the “extra money lying around for a rainy day,” nearly all state officials interviewed emphatically stated that such money does not exist in the state government. Several of these officials **expressed frustration at what they perceived as the general public’s misperceptions about the state’s financial resources.** All of the officials interviewed noted that the question of which agencies, individuals or relief funds would finance the Pascoag response and clean up was of utmost concern. The owners and operator of the Main Street Mobil station, Potter’s Oil LLC and Medea LLC, were placed into court receivership in late September, 2001 and declared bankruptcy shortly thereafter, leaving DEM with the responsibility for the clean-up of the site.

Money for Pascoag relief and remediation efforts came from a variety of sources. DEM, after some public confusion about the origins of the money and pressure from community members, committed the entirety of its EPA Leaking Underground Storage Tank (LUST) Trust Fund grants from 1996 and 1998, totaling \$400,000. DEM also used funds from the DEM Underground Storage Tank Program. These funds were used to purchase and deliver bottled water for the residents of Pascoag during the fall, conduct site investigation, and expedite the digging of new wells in Harrisville that would eventually allow clean water to flow to Pascoag in January.



**A large portion of the DEM expenditure was later reimbursed by the Underground Storage Tank Financial Responsibility Fund.** The fund, consisting of the proceeds of a one-cent per gallon tax on gasoline sold in Rhode Island, exists as a means for Rhode Island Underground Storage Tank owners to comply with an EPA mandate that tank owners have at least \$1,000,000 insurance in case of a release. The fund also pays reimbursement claims to third parties affected by a tank release. Some Pascoag residents who dug private wells or installed home filtration units due to the contamination were eligible for reimbursement. In May, 2002, the EPA granted an additional \$1,000,000 to be used by DEM in the ongoing remediation efforts.

According to the officials interviewed and Fall, 2001 press coverage in the *Providence Journal* and *Woonsocket Call*, the scarcity of funds at the state and local levels was a source of tension between the Pascoag community, state and local agencies, and other involved parties. Several officials noted the tendency for officials at the state and federal levels to claim undue credit for “finding” funds, or to publicly commit other agencies’ money.

#### **COMMUNICATION: DISCONNECT BETWEEN OFFICIALS AND RESIDENTS**

A previous portion of this ongoing project involved interviewing 100 Pascoag residents from April 12 through May 1, 2002 to compile their thoughts, feelings, and experiences regarding the water contamination. Building from that base of research, the project was expanded during summer 2002 to interview official parties involved in the governmental response to the contamination. The goal of this phase of the project was to identify perceptions of officials and relate them to perceptions of Pascoag residents.

We found that there are several areas where perceptions of officials and residents regarding each other's actions and motivations were drastically different. We define these as areas of "disconnect."

Analysis of interview data collected allowed us to break down this disconnect into several main areas of contention. Data on resident perceptions comes from the Spring 2002 portion of the study; data on officials comes from interviews during Summer 2002. As will be discussed later, these disconnects arise primarily from inadequate or non-existent communication between these parties.

#### **Responsibility of Government**

**Residents:** Residents generally felt that officials at some level (either local, state, or both) dealt inadequately with the contamination either by failing to prevent it from happening or not providing sufficient aid once the problem was discovered. Residents said that, initially, officials generally should have been monitoring for this type of problem.

Regarding the official response to the problem, some residents said that their local officials either couldn't deal with it or had their hands tied. Many residents said that they were dissatisfied with the state response, and that the state should have stepped in more quickly and contributed more to helping to solve the problem.

**Officials:** Local officials' perceptions on this issue varied. Some indicated that specific state agencies had the responsibility to do more than they did, while others said that the responsibilities for dealing with the problem were adequately met. State officials almost uniformly perceived that the state through its involved agencies went above and beyond its mandated duty in dealing with this situation. They believed that this was a local problem and not within the purvey of state authority, but that they provided massive amounts of assistance despite their lack of true jurisdiction. Some state officials perceived that residents incorrectly understood the extent of state responsibility in the situation; some expressed frustration over the residents' ingratitude towards those who had put so much time and effort into the problem. This perception on the part of state officials could also be related to the organizational culture of the various agencies. The agencies involved perceive themselves as regulatory agencies, whose role it is to tell the regulated body that something is wrong. In this scenario, then, that regulated body would correct the problem, not the regulator. In this case, the regulated bodies (the PUD and the Main St. Mobil) were in no position to be able to deal with this problem, and so the regulating agencies (HEALTH and DEM) had to take a large role. Because of this underlying view of their duties, officials then perceived their actions as well beyond what they were required to do.

### **State of emergency**

**Residents:** Many residents strongly believed that the governor should have declared a state of emergency. They thought that had he done so the federal government would have become involved and perhaps contributed resources and funding to getting the water cleaned up faster. Moreover, the residents simply expressed that 5000 people without water constitutes an emergency. Since the contamination manifested itself as an emergency to them, they wanted the governor to recognize what they were going through and declare it an emergency.

**Officials:** During the contamination, some local officials publicly called on Governor Almond to declare a state of emergency. However, the vast majority of the officials we spoke with during the summer confidently stated that declaring a state of emergency would not have helped to obtain for Pascoag any resources it wasn't already being given. Some stated that they weren't sure, but that they thought that no federal resources would have been forthcoming. Officials generally perceived that this was an important point for the residents of Pascoag. Some officials perceived that this was an area of disconnect, and said that they had certainly not anticipated this. They said that public confusion about this idea of a state of emergency spun out of control before they could convey to residents why they had chosen not to declare one. A source in the governor's office said that the governor did not consider declaring a state of emergency because no additional monies would have been gained and he would not take an action unless it could achieve what it

was meant to achieve; for the governor, according to his office, this issue was a matter of integrity.

### **Filters**

**Residents:** The discussions over the possible installation of a carbon filtration system on the wells to clean the water were long and complicated. In the end, residents understood little of the debate other than that there was a plan to put on a filter which would have gotten them clean water, then the state rejected the plan, then a temporary and less expensive filter was put on, and then that filter didn't really work. Some residents were more informed as to the progression of events, but some emphasized that the state vetoed the plan.

**Officials:** Officials presented a very different view of the filter system. Some wanted to put on a filter, but never intended it to bring the contaminant levels down to drinkable standards. Several officials indicated that they were so concerned about residents' health that they could not support the filter. Others conveyed that the filters were never the final solution, just a stopgap measure that did not warrant such a high initial investment.

### **Water Buffaloes**

**Residents:** Residents viewed the water buffaloes (large tankers owned by the National Guard that can be used to deliver water) as one important way that they could get clean water in a more convenient fashion. They wondered why the National Guard even keeps them, if the Department of Health won't allow them to be used. Some understood HEALTH's concerns and why the tanks were not used; others were just angry. Residents believed that the water buffaloes would have been a completely appropriate measure to provide them with water.

**Officials:** State officials, on the other hand, truly believed that the water buffaloes were a bad idea. They are very susceptible to bacterial contamination, and so have to be cleaned out before each refilling. In addition, they need to be guarded constantly against tampering. With these factors, and the provisions of bottled water at the PUD and free water at the Harrisville Fire House, HEALTH rejected the offer of the water buffaloes on grounds of safety, cost, and convenience. Officials noted that the residents wanted the water buffaloes; they uniformly did not.

### **\$400,000 in EPA Grant Money**

This is an issue on which no parties share the same perceptions or understanding. The EPA approval to reallocate \$400,000 from DEM's Underground Storage Tank program from two previous EPA grants to the Pascoag cleanup prompted many official parties to reach for this money for a specific cleanup task. There were comments about DEM's "hijacking" of the money, since Director Jan Reitsma initially stated that not all of this grant would go to Pascoag cleanup costs. Some officials believe that this was DEM's only funding source for the entire cleanup, and now that it has been spent there is nothing to cleanup another similar spill. (This is not true; most costs were eventually paid by the UST Financial Responsibility Fund Review Board, which comes from a \$0.01 tax on

every gallon of gasoline bought in Rhode Island.) There are differing perceptions as to what the \$400,000 actually paid for, or if it was spent at all.

### **Governor Almond**

**Residents:** The vast majority of residents were angry or upset with the governor. There was a common sentiment that the governor did not care about the well being of Pascoag. Residents based these perceptions on the fact that Governor Almond never came to visit the village, and that he only issued a few statements about the situation, the first one not until late October. One resident said that the governor was "useless...impervious to our needs and concerns. He never came to visit. I was completely unimpressed. Basically, I was disgusted with him." The governor was the state official residents mentioned by name most frequently and with the most intensity.

**Officials:** A representative from the governor's office indicated that the governor thought that he had very good reasons for not visiting Pascoag. According to this source, since officials from the state agencies charged with dealing with the problem were working on it, the governor had his best people there and there was no role for him. Regarding the potential of a visit to Pascoag by the governor, this source said, "I'm not sure what it does to go out there and say 'I feel your pain' and now I'm going back to the state house and my home where I have water."

### **Health Concerns**

**Residents:** Most residents cited health effects as their primary concern regarding the contamination. Though we never asked directly about any health problems, nearly every respondent brought up health problems that they unquestioningly attributed to the contaminated water. They expressed their concern with strong language and emotions. Some of the things they mentioned included difficulty breathing when exposed to water vapors in the shower, headaches, vomiting, rashes, and an overriding concern for the health of their children. In addition, many residents spoke about concern regarding future health effects, especially cancer. Many expressed frustration that HEALTH didn't seem to care about these effects or didn't seem to know what to do or say about them, especially in public meetings with HEALTH officials. They felt slighted by HEALTH officials' reactions to their concerns.

**Officials:** HEALTH officials point to the available literature on MTBE, which shows no definitive links to any health effects. Their position is that some of the health effects reported come from the stress associated with the unpleasant taste and odor of MTBE and the emotional stress of the contamination, but not as a health effect caused by the chemical in the water. They know that residents see their symptoms as coming from the water, and they do not believe that they can persuade them otherwise.

### **Health Tracking Study**

**Residents:** Many of the residents we spoke with feel that they are guinea pigs regarding MTBE's effects on the human body. They want to be studied. They would like HEALTH or some other authority to track their health over time, to assess if any later health

problems might arise from MTBE exposure. The residents who spoke of this regarded it as a straightforward matter, something HEALTH could be expected to conduct.

**Officials:** Many officials at HEALTH noted the difficulty of performing such a study and the expense involved. They also noted the poor odds of such a study revealing any definitive results, since it would be difficult to attribute any later health effects solely to MTBE exposure. No official seemed to consider this undertaking a likely possibility.

### **Speed of Overall Response**

**Residents:** Many residents wondered why it took over 4 months for clean water to be flowing to their faucets again. They attributed this slow response to lack of preparation or knowledge regarding this type of problem, to lack of money, and to lack of caring on the part of the state. Many perceived the length of time for the resolution of the problem to be inordinately long.

**Officials:** Most officials think that they were working as fast as they could, and that not much could have been done to speed up the process. Drilling a new well and creating an interconnection takes time, as does installing a filter system and testing it. This perception was shared by local and state officials. There seemed to be a serious disconnect between the experiences of those living and working in a community without potable water and the experiences of those living and working through a regulatory and bureaucratic public health and political system.

### **"If it had happened in. . ."**

**Residents:** The vast majority of residents believed that if a similar contamination event had happened in a community with different characteristics, the response of officials would have been much different. The following are direct quotes from residents, with each bullet representing a new speaker.

*"We felt like we weren't an important town in the state. We felt like we didn't even live in the state, we weren't part of the state, that's how bad it was. Totally ignored."*

*"We weren't a big enough town to justify a state of emergency. All [the governor] had to do was ask, and the Feds would have come in. It pisses me off."*

*"I just feel the north-west corner of the state is always left out. I'm sure if it was Lincoln something would have been done."*

*"The big shots in Providence don't care about us--we're a hick town."*

*"They think of us as blue-collar workers. I'm frustrated that the government puts us down."*

**Officials:** Officials said that this perceived discrimination was just that. Some were shocked that residents expressed this sentiment. They insisted that the governmental response would have been of the same caliber and at the same speed regardless of the impacted community. According to one state official, this type of perception problem is common in towns other than the historically monied towns in Rhode Island.

**How did these disconnects occur?**

It is clear that these contrasting perceptions, these disconnects between officials and residents, largely occurred because of poor or non-existent communication throughout the period of the contamination.

Communication between officials and residents occurred in several ways:

Meetings, held during town meetings and at special information meetings (handout from 9/25/01 meeting)

Mailings, issued twice (11/16/01 and 12/20/01) by HEALTH

Agency websites (see state page under "Officials" for links)

This, however, was not enough. Many residents indicated that they received most of their ongoing information during the water contamination event from other sources, such as the media and informal means including word of mouth. Since there were infrequent media briefings and no centralized media point of contact, newspaper stories were sometimes contradictory or not fully representative of the events.

The communication that did occur did not satisfy resident needs. This communication problem will be explored further in the ongoing project, but several issues are outlined below.

Though officials were present at meetings and attempted to convey information to residents, they did not adequately respond to community concerns.

- Mailings issued were too infrequent and not at an appropriate level for comprehension.
- Information was often available solely on the agency websites.
- There was no "point person" for residents to contact with questions or concerns.

**Other Contributing Factors**

Other factors that should be examined as contributing to this disconnect include:

Financial constraints. At the beginning of the contamination event, it was difficult to see where the tremendous sum of money required to ensure that clean water would flow to Pascoag and to remediate the contaminated site would come from. Agencies were understandably reluctant to commit large sums of money, and the small size of the water supplier dictated that the PUD would not have the financial resources necessary to deal with contamination of this magnitude. Financial conservatism also contributed to the choice of the temporary, smaller carbon filtration system-officials didn't know if the system would be effective, so they purchased the less expensive alternative. In short, state officials said that they did not have a "big bag of money" to spend on Pascoag. Residents, however, assumed that the state would have the funding or the means to get the funding to deal with the situation.

State vs. local politics. At the local level, citizens and officials expressed the understanding that with a problem this big and this expensive, the state and state agencies would play a major role in dealing with the event. However, officials at the state level almost unanimously viewed contamination events as being under the jurisdiction of the water supplier. This view does not mean that these agencies did not play a major role in dealing with the Pascoag contamination; it means that they often viewed themselves as going "beyond the call of duty" in the time, effort, and financial resources they contributed to dealing with the problem. State agencies were also concerned with the precedent that would be set if state funding went to "bail out" a private non-profit corporation that serves only its ratepayers (the PUD).

Organizational cultures. The state agencies who dealt with the contamination are regulatory agencies, and they perceive their mission as regulators in a strict sense: we heard mention of the "mandate" of the various agencies, and the inability to act outside that proscribed mandate. Their organizational culture confined their activities to those for which precedent had been set and for which agency policies had been clearly defined.

### **How disconnect altered actions and behaviors**

Residents did not understand officials' actions, and officials did not understand residents' perceptions of them. Since neither side understood the other, trust and confidence eroded. Many residents explicitly stated that they no longer trust many public officials. This was also expressed in their reported water uses: in April, at the time of our interviews, 67% of respondents were still not drinking the town water.

### **RECOMMENDATIONS**

The following recommendations, based on identification of key problem areas brought out by Fall 2001 Pascoag water contamination, are aimed at two goals:

- **Prevention** of similar water contaminations in the state of Rhode Island
- **Preparedness** in the event of a future contamination.



## Prevention:

1) Increased accountability for gas station operators and owners. Operators of underground storage tank systems are required to register their tanks with the Department of Environmental Management and comply with DEM's standards for system operation. However, **no license is required to operate a gas station in the state of Rhode Island.** The events in Pascoag and in other towns across the United States clearly indicate that gas station owners and operators are engaged in a business with a high level of potential risk for surrounding communities. **This high level of risk must be matched by a high level of accountability for operators and owners of underground storage tank facilities.** The Department of Environmental Management's Underground Storage Tank Program would oversee the following requirements, which place primary responsibility on the tank operators:

- **Training and licensing of UST operators.** Tank owners would be required to obtain training and certification from a DEM-approved independent licensor.
- **Reconciliation of product balance sheets.** Station operators would be required to maintain careful records of the amount of product delivered to their tanks and the amount of product sold. Regular reconciliation of these figures would serve to alert tank operators of lost product if discrepancies exist beyond an established margin of error. DEM would establish a cycle for submission of balance reconciliations and conduct random audits.

2) Increased Resources for the Rhode Island Department of Environmental Management. Currently, the DEM is on a seven-year cycle for the inspection of underground storage tank facilities. According to Terry Gray, Chief of the DEM Office of Waste Management, this is "completely unacceptable." However, DEM has been subject to recent budget cuts that curtail the agency's ability to adequately carry out its regulatory duties and follow up on known violations. Measures to increase accountability of UST owners and operators must come in conjunction with a commitment of additional funds to DEM.

3) Public notification of non-compliant facilities

Residents have a right to know when facilities in their area pose a threat to the safety and well being of their community. Therefore, non-compliant tank owners and operators should be required to notify the surrounding communities when they are cited for violations by the Department of Environmental management. The recipient of the violation would be responsible for placing notice in a local newspaper that includes an explanation of the violation and steps being taken to remedy the situation.

4) Incentives for the merging of small water districts

The state of Rhode Island, whenever possible, should encourage the consolidation of small water suppliers. Economies of scale allow larger water supply systems to save

money, providing for increased resources in the event of an emergency. Consolidation of suppliers also reduces the inherent risk in depending on just one well source to supply a community. Incentives in the form of state grants and loans for water suppliers who agree to consolidate would represent a prudent investment in insuring the water security of Rhode Island.

## Preparedness

### 1) Coordinated Response Plan

**Many officials interviewed expressed that they often found themselves improvising their response to the Pascoag situation** due to the unprecedented nature of the event. It is therefore essential that the state of Rhode Island develop a comprehensive plan to be followed when a situation requires multi-agency response. Each unexpected event is sure to present its own unique set of problems. A response plan detailing agency coordination and designating responsibilities in the event of a water contamination is the most effective way to ensure that these problems are addressed in a timely and appropriate manner. Such a plan will prove useful for water contamination events and may also provide guidance and structure in other situations that require coordination of various parties at the state and local levels.

### 2) The Incident Command System (ICS) Approach

The ICS approach was developed in California in the 1970s in response to the challenges of managing fast-moving, unpredictable wildfires. This approach is specifically designed to facilitate coordination among multiple agencies, with clear delineation of the roles and interactions of each department and office<sup>3</sup>.

A key facet of the Incident Command System is the establishment of a **clear chain of communication**. Communication This official will be responsible for unifying information from the various agencies and coordinating the sharing of information among involved parties. The head of communications will be responsible for determining and implementing the most effective ways to communicate information to the residents of the affected town or municipality. This may include holding frequent press conferences, posting daily updates in a designated central location in town, sending out mailings, or maintaining a frequently-updated website.

**The need for frequent resident updates, even when no new information is available, cannot be overstated.** It is important for residents to be made aware on a daily basis through press conferences or posted information that their concerns are being addressed. By channeling all information to a single designated Information Officer, residents and media outlets will know where to turn for information, eliminating the confusion due to differing statements from the various involved agencies.

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<sup>3</sup> National Interagency Fire Center, "Current Wildland Fire Information." [http://www.nifc.gov/fireinfo/ics\\_disc.html](http://www.nifc.gov/fireinfo/ics_disc.html). Accessed September 1, 2002

A plan based on the ICS approach will not only facilitate effective communication and coordination among involved agencies, it will also communicate to the individuals affected by the contamination that officials have a plan of action and are working to address their concerns.

### 3) Restructuring of the USTFRFRB

The Underground Storage Tank Financial Responsibility Fund Review Board is the quasi-public agency responsible for the administration of the Underground Storage Tank Financial Responsibility Fund (see above section “The Money Factor.”) Owners of leaking tanks who are in compliance with DEM requirements and can put forth a \$20,000 deductible are eligible for reimbursement from the fund. However, the current policy allows tank owners who are non-compliant to bring their facilities into compliance in order to access the UST Fund. **In this way, the UST Fund in its current configuration provides equal assurance for compliant and non-compliant tank owners without providing any incentive for responsible operation.** It is therefore imperative for the USTFRFRB to set a deadline after which tank owners not in compliance with DEM regulations cannot access the UST Fund.

Beyond this interim measure, the UST Fund and the state should aggressively pursue transitioning to a tank insurance system that takes into account the compliance record of the tank owner. Ideally, a restructured UST insurance system will aid in preparedness as well as serve a preventative role by encouraging compliance and penalizing bad actors.

### 4) Defining a Water Emergency

Section 46-15-14 of the General Laws of Rhode Island states (emphasis added) that “The division of planning, subject to the approval of the governor, shall promulgate an adequate plan for the provision of safe drinking water for the inhabitants of the state **when a water emergency has been declared by the governor.**” The Governor opted not to declare a water emergency in response to the Pascoag contamination. (Note that “water emergency” is a separate and distinct designation from “state of emergency.”) Declaration of a water emergency in Pascoag would have brought the division of planning into a supervisory role in the response to the contamination. However, the planning division, despite having drafted the 1993 plan “Water Emergency Response Plan,” was not involved in the Pascoag response.

Communities affected by water contamination events in the future would benefit from the establishment of specific criteria to guide the declaration of a water emergency. For example, **section 46-15-14 might be amended to define a water emergency as a contamination or other event that seriously impairs the public drinking water supply of more than 500 residents.**

Standardizing and implementing the designation of “water emergency” would contribute to the coordination of efforts and resources at the state level through the involvement of the division of planning. Further, using the designation of “water emergency” when

appropriate would communicate to affected residents that their situation is being treated with appropriate seriousness.