

Geospatially Enabling Community Collaboration
for Protecting Critical Infrastructure
*Pilot Project Series – City/County of Denver, CO and the
Front Range Communities*



In cooperation with the Department of Homeland Security
and the Federal Geographic Data Committee

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The National Geospatial Initiative for Critical Infrastructure Protection

In response to a request from the Department of Homeland Security's (DHS) Office of Geospatial Management, GITA established a Critical Infrastructure Protection (CIP) Task Force to create a proposal and work plan to develop a framework for a National Geospatial Initiative for Critical Infrastructure Protection through a series of pilot projects. Since January 2004, this proposal and work plan have been reviewed and refined on several occasions by representatives of DHS, the Transportation Security Administration (TSA), the National Geospatial-Intelligence Agency (NGA), the Open Geospatial Consortium (OGC) and several other public and private organizations.

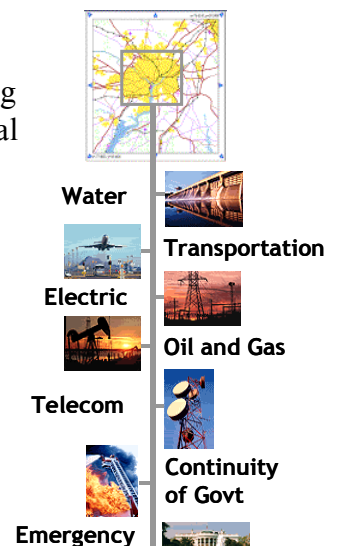
The primary purpose of these pilot projects is to facilitate an interactive dialogue among infrastructure stakeholders in a defined geographic area to address collaboration and data sharing issues that inhibit effective response and recovery in times of emergency. Specifically, these pilots would serve as interactive, cooperative forums for collecting and analyzing information to determine:

- Data requirements (type, currency, accuracy, etc.);
- Intra- and inter-organizational process requirements;
- Interoperability and enterprise architecture requirements; and
- Technology requirements.

The ultimate goal of these pilot projects is to develop a unified national geospatial framework for protecting critical infrastructure. The successful outcome of the pilot projects will be based upon a coalescence of the needs and directions of a diversified group of public and private organizations working together in their respective communities to develop a pragmatic approach for addressing the protection of critical infrastructure necessitated by man-made and natural events.

Protecting Our Critical Infrastructure is a National Priority

Homeland security has been made a national priority by our government and will likely remain a primary focus for the foreseeable future. But beyond the obvious impact of potentially successful terrorist attacks, it is important to remember that the results of natural disasters are just as serious. Tornadoes, earthquakes, floods and fires occur with unpredictable regularity and significant cost in lives and property. Damage to our underground infrastructure by excavators occurs on a daily basis. While most of this accidental damage goes unnoticed on the national level, the aggregate effect on economy is staggering, and the number of lives lost tragically unnecessary.



Courtesy of OGC, Inc.

No matter the root cause of the emergency – terrorism, natural occurrences or unintentional human error – the methods of responding to, mitigating and ideally preventing reoccurrences are based in a common approach: the coordinated use of geospatial information. This cannot happen without the many mutually dependent agencies and organizations charged with protecting our nation’s citizens and infrastructure being able to efficiently and effectively share their geospatial data. There are obstacles that need to be overcome before this collaboration can occur, however, and that is the primary impetus behind GITA’s CIP Pilot Series, now known as “Geospatially Enabling Community Collaboration,” or “GECCo” for short.

From a GECCo perspective, critical infrastructure is vital to a community that depends on it for such things as economic security, quality of life, delivery of service and governance. Disruption of one or more of these assets would have a profound negative effect on both the public and private sectors within that community.

As a result, it is important to identify the interconnectivity among a community’s critical infrastructure and its supporting systems, in order to understand not only its vulnerabilities, but also its ability to withstand and recover from disruptions. The importance of understanding critical infrastructure interactions and vulnerability has taken on a new urgency due to the increase in terrorist activities. This is why the GECCo pilot project series is so important. These pilots will provide key information, identify data exchange and collaboration models, and define technical solutions that will assist communities in meeting the challenges associated with protecting their critical infrastructure.

The availability of information about critical infrastructure affects its vulnerability, as well as the ability of a community to function, meet the needs of its citizens, and grow. The disruption of critical infrastructure by either natural or man-made events can change the fundamental characteristics of the community, depending on the community’s response. The information related to critical infrastructure may be considered an independent data set in and of itself because of its importance to the community. Both content and access must be protected. Limitation of access to data about critical infrastructure must be balanced against the need for access required to protect the critical infrastructure.

Important data must be gathered, research conducted, and policies and agreements addressed in order to protect and enhance the critical infrastructure of a community. An important ongoing debate involves concern over how much information should be readily available among stakeholders when planning for and responding to an event. This debate centers around the limits that should be placed on access to and sharing of information involving critical infrastructure to reduce the vulnerability to terrorism, and competitive and safety aspects associated with the protection of both public and private infrastructure within the community.

Finally, the cost of protecting critical infrastructure could overwhelm a community if good decisions are not made concerning the allocation of resources and effort. Moreover, adequate steps need to be taken to reduce the risk of disruption, assess vulnerability, and develop methods for responding to, mitigating, and preventing occurrences. This requires a new understanding of the processes that affect or are affected by critical infrastructure, the dynamic nature of natural or man-made threats, and the data and information needed to build robust mitigation, readiness, response, and recovery capabilities to make the community more

resilient. GITA has responded with a call to action on behalf of the infrastructure management community to lead the development of a national initiative for critical infrastructure protection through the GECCo pilot project series.

The Denver and Front Range GECCo Pilot Project

Immediately following the first successful GECCo workshop in Honolulu earlier in the year, the CIP Task Force felt it was important to identify additional potential workshop sites. The selection of Denver and the Front Range was an obvious choice for the second pilot project site, given the wide variety of local contacts available to GITA, the fact that GITA is headquartered in the Denver metropolitan area, and the general high level of interest among local stakeholder groups. Initial indications of support from the City & County of Denver, Xcel Energy, Denver Water, the University of Denver and the Utility Notification Center of Colorado were key elements in proposing the second GECCo workshop. Representatives from the Federal Geographic Data Committee (FGDC) also expressed support, and hosted the workshop at the Denver Federal Center.



The workshop to propose and discuss a Denver and Front Range GECCo pilot project took place on November 18 and 19, 2004. The GITA Pilot Workshop Team included Past President and FLAG Chair Dave DiSera; from EMA, Inc.; At Large Board Members Brent Jones, James W. Sewall Company and Peter Batty, Ten Sails; GITA Present-elect Peter Gomez, Xcel Energy; and Bob Samborski GITA Executive Director.

The thirty-one workshop participants were senior managers with a good understanding of their organization's operations and emergency management functions. They also knew how GIS and other technologies can be used to manage and protect corporate assets and critical infrastructure. A wide variety of organizations responded to our invitation to participate: individuals represented various departments from the City & County of Denver, the State of Colorado, USGS, Air Force Space Command, Xcel Energy, the Utility Notification Center of Colorado, Denver Water, representatives of seven regional municipalities, several military organizations, and quite a few other public and private entities, utilities and first responder and emergency management organizations.

The workshop team provided the participants an overview of why geospatial technology is such a key tool for supporting CIP and emergency management efforts. GITA's National Geospatial Initiative for CIP was also reviewed and discussed. But the bulk of the workshop was devoted to interactive sessions in which all the participants defined the barriers to effective collaboration among their respective organizations. The group addressed these issues and many other barriers to data sharing. A survey of security-related initiatives underway in the Denver area, the Front Range communities, and around the State of Colorado was also taken.

A central element of the workshop involved a scenario-based exercise designed to test participants' ability to respond to a realistic emergency event. In this case, the event was the

contamination of the Denver area water system during the Thanksgiving holiday. Small group breakouts facilitated by the workshop team resulted in identifying what internal and external data was needed to plan for or respond to an emergency event, and also identifying what organization was responsible for that data. The groups were also asked to identify those issues involving the access or exchange of data to support CIP during the event (i.e., “Existing internal rules do not allow for sharing of data with external organizations”). Finally, the groups were asked to classify these issues by type (the categories included Technology, Practices/Organization, and Data). The workshop concluded with the group engaged in discussion to identify the primary keys to pilot success.

The information obtained in this pilot project workshop will enable local and state critical infrastructure stakeholders to begin addressing the key themes that were identified through the workshop process during the next phase. The goal is to develop a framework by which these organizations can better collaborate in order to protect the critical infrastructure of stakeholders in the Denver metropolitan area, the communities of the Front Range, and ultimately, the State of Colorado.

The following sections include a listing of the workshop participants, the barriers to collaboration, pilot project needs, keys to a successful pilot project, and next steps in carrying the pilot project forward. This material is based on the workshop findings in Appendix A.

Pilot Project Workshop Participants

The following is a list of the workshop participants and the organizations they represented.

Name	Organization
Steve Hick	University of Denver
Greg Baca	University of Denver
Steve Kroeker	US NORTHCOM
Martin Mead	UNCC
Phil Trujillo	UNCC
Dan Jackson	RTD
Bill McAllen	City of Northglenn
Brenda Reum	Denver Water
Jim Kelley	Denver Water
Dave Murray	City of Westminster
Mark Krapf	West Metro Fire Protection District
Eric Henson	West Metro Fire Protection District
Arvilla Kirchhoff	North Front Range MPO
Sharon Shin	FGDC
Donna Boreck	DHS/FEMA
Deb Wilson	City of Thornton
Brian Goodack	Air Force Space Command
John Robillard	Air Force Space Command
David Luhan	City/County of Denver
Heather Hicks	CO Dept. Natural Resources
David Ferderer	USGS, Central Energy Team
Bill Lucatuorto	Xcel Energy
Brian Sullivan	City of Greeley, Public Works
Karen Brandt	City and County of Broomfield
Carlos Vulgamott	City of Lakewood
Kevin Corzine	City of Lakewood
Jodi Flory	Northwest Council of Governments
Susan Stitt	USGS
Tom Charkut	City of Lakewood
Mark Eaton	
Jon Gottsegen	State of Colorado

Barriers to Collaboration and Coordination

The following includes a summary of a number of the major barriers to existing collaboration among public and private that were identified during the workshop by the participants.

- Legal issues of dissemination of information; laws that force data sharing do not exist
- Liabilities issues associated with providing data to external organizations
- Limited data available to the right time and place to properly respond
- Only certain data is currently made available to external organizations regardless of the circumstance
- External organizations are unwilling to sign agreement to share data
- Security issues about data getting into the wrong hands
- Competitive information gets in the way of sharing data when planning for and responding to an event
- Vulnerable infrastructure assets are not easily identifiable or available for emergency events
- Same data different formats and accuracies, including the data format issues between software vendors
- The best way to deliver this information to field personnel
- Determining what data needs to be shared; we can't share everything
- Confusion regarding who is doing what about coordination
- How the data is to be used once it's given to an external organization
- Data is usually not complete or up-to-date so it makes it more difficult to know if you are making the right decisions at the time
- Data accuracy varies widely among organizations within the community, in some cases accuracy is off 100'
- No protocols in place to share information depending on degree of sensitivity
- Emergency response plans are out of date and do not leverage GIS technology

The Denver Metropolitan area and Front Range Communities includes a variety of public and private organizations, including governmental agencies (local, state and federal levels), public utilities, transportation, private utilities, telecommunication and cable organizations, businesses, service contractors, military organizations, emergency services/first responders, as well as other organizations. The ultimate goal of the GECCo initiative is to develop an environment that will allow these organizations to better collaborate in responding, mitigating, and preventing to both man-made and natural events.

Pilot Project Needs

In our discussions and working exercises with the local, regional, state, federal and private sector organizations participating in workshop, seventeen (17) major needs repeatedly emerged. These needs have been organized into four major themes including: Data and Database Management, Interoperability and Accessibility, and Practices and Processes.

Collaboration and Support Theme

- Establish data sharing agreements among essential public and private organizations.
- Establish advanced contracts for data collection, such as the use of remote sensing technology for incident management.
- Develop predefined list of GIS and other technical personnel and vendors required to support an event.
- Funding support

Data and Database Management Theme

- Predefine all critical infrastructure data necessary to support planning for and responding to an event.
- Establish a back-up data center
- Consolidate multiple datasets of duplicate data into a single environment.
- Create predefined database model to support emergency response.
- Create/share single, common georeferenced landbase (e.g., buildings, utilities, street and building addresses).
- Develop predefined metadata standards to ensure the best possible datasets are used for decision making.

Interoperability and Accessibility Theme

- Establish guidelines for shared data with the media during and after an event.
- Develop interoperability standards to enable the integration and exchange of related critical infrastructure protection data.
- Develop mobile mapping capabilities for both taking data in the field and collecting it during and after an event

Practices and Processes Theme

- Establish a process to organize and integrate both internal and external data together and distribute it.
- Establish emergency map production capabilities in more than one location:
- Establish coordination of map production across agencies (Federal, State, City, private organizations).

- Establish data collection responsibilities among multiple agencies (e.g., environmental monitoring, building inspections)

Each of these needs is described in more detail below. This information will be used to focus the work plan during the next phase of the pilot project.

Collaboration and Support

Establish data sharing agreements among essential public and private organizations.

Ensure that proprietary agreements are in place so that critical infrastructure protection data is protected from becoming part of the public domain.

Utilize these agreements as a means of reducing and ultimately eliminating the capture of redundant data among data sharing participants.

Collaboration and Support

Establish advanced contracts for data collection, such as the use of remote sensing technology for incident management.

The ability to collect and record real-time data via remote sensing enables a service provider to isolate a crisis location. As such, it is crucial to those possessing this ability that this data is protected and that potential data sharing partners agree to the proprietary nature of this data.

This also serves as a means of limiting if not eliminating the collection of redundant data by data sharing partners.

Collaboration and Support

Establish funding mechanisms to support the operational pilot project.

The access to funding in order to support the planning, design, and implementation of the operational pilot project.

Funding sources include federal, state, local and private sectors. Communities would be willing to provide in-kind support.

Collaboration and Support

Develop predefined list of GIS and other technical personnel and vendors required to support an event.

Each stakeholder possesses internal emergency response plans that can be quickly implemented when warranted. In these plans, key subject matter experts are identified.

The consolidation of the GIS portion of these plans will enable a comprehensive strategy to be implemented without starting from scratch.

Data and Database Management

Predefine all critical infrastructure data necessary to support planning for and responding to an event.

Develop emergency preparedness plans to support disaster recovery processes.

Maintain back-up systems as appropriate to support disaster recovery processes.

Develop and maintain quality assurance programs to ensure accuracy and timeliness of critical infrastructure protection data.

Data and Database Management

Establish a back-up data center.

Similar to the need to provide redundant map production sites, a back-up data center is critical in the event of an emergency. Access to a common secure data server by all members will enable this process to be coordinated at the various member sites.

The State's Office of Homeland Security or the city's emergency management group will serve as the overall data steward. This will be further defined during the pilot.

Data and Database Management

Consolidate multiple datasets of duplicate data into a single environment.

This is one of the first challenges to be addressed. There are a number of redundant data sets that exist within and among agencies and private sector organizations. A good example of this overlap is redundant street and address information.

The State's Office of Homeland Security or the city's emergency management group will serve as the overall data steward. This will be further defined during the pilot.

Data and Database Management

Create a predefined database model to support emergency response.

A key pilot outcome is the development of a database model identifying critical data needs and the sources of that data.

The sophistication of this model will vary for each location based on the data available from individual stakeholders. The underlying database model will be a common denominator among the participants during the pilot.

Data and Database Management

Create/share a single, common georeferenced landbase (e.g., buildings, utilities, street and building addresses).

The ability to provide a single data warehouse is critical in the event of an emergency. Access to a common secure data server by all members will enable this process to be coordinated at the various member sites.

The State's Office of Homeland Security or the city's emergency management group will serve as the overall data steward. This will be further defined during the pilot.

Data and Database Management

Develop predefined metadata standards to ensure the best possible datasets are used for decision making.

A good example of how common predefined metadata standards have been implemented is the National Pipeline Mapping System (NPMS). This will need to be developed for the pilot as well.

The foundation for this would again come from a GECCo's operational pilot project.

Interoperability and Accessibility

Establish guidelines for sharing data with the media during and after an event.

The dissemination of accurate and timely data during an emergency situation is critical to inform customers/constituents of key facts.

The time interval (hourly, etc.), of information updates is a key requirement.

When sharing data with the media, data accuracy is critical; coordination among the various participating organizations' media relations groups is a key success factor.

Interoperability and Accessibility

Develop interoperability standards to enable the integration and exchange of related critical infrastructure protection data.

A common data-layering scheme is critical to the development of a data sharing program.

It is critical to determine which data is to be shared (i.e., street data from one source, address data from another, facility data from yet another, etc.). This is a key component of developing a comprehensive data sharing program.

Interoperability and Accessibility

Develop mobile mapping capabilities for both field data collection and data collection during and after an event.

The ability to capture and relay operational information in a timely manner is facilitated by the incorporation of mobile solutions.

Mobile solutions eliminate the need to create paper map products which can become quickly outdated in an emergency situation.

Practices and Processes

Establish a process to organize and integrate both internal and external data together and distribute it.

This is a topic that many believed to be the goal and responsibility of the State's Office of Homeland Security.

Although the State has this office identified within its government hierarchy, its duties are unclear. Until this role is clarified, it is essential that the data sharing partners develop key contacts among themselves to serve as focal points in organizing and integrating various data sources into a common product that can be quickly disseminated to fellow members as needed.

Practices and Processes

Establish emergency map production capabilities in more than one location.

The ability to provide redundant map production sites is critical in the event of an emergency. Therefore, access to a common secure data server by all members will enable this process to be coordinated at the various member sites.

The State's Office of Homeland Security or the city's emergency management group will serve as the overall data steward. This will be further defined during the pilot.

Practices and Processes

Establish coordination of map production across agencies (federal, state, city, private organizations).

The ability to provide redundant map production sites is critical in the event of an emergency. Access to a common secure data server by all members will enable this process to be coordinated at the various member sites.

The State’s Office of Homeland Security or the city’s emergency management group will serve as the overall data steward. This will be further defined during the pilot.

Practices and Processes

Establish data collection responsibilities among multiple agencies (e.g., environmental monitoring, building inspections).

The ability to assign data collection responsibilities among stakeholders after an event is critical. This will help eliminate redundant data collection efforts and increase efficiency and cost savings among stakeholders.

One of the deliverables of the pilot will focus on data collection responsibilities after an event. This will also serve as a means of identifying and addressing data gaps.

Key to Pilot Project Success

The following includes the keys to pilot project success that were identified during the workshop by the participants.

- Dedicated and consistent team members to support the project
- Identify key decision makers in each stakeholder group
- Develop clear roles and responsibilities for everyone – i.e.: data brokers, users, etc.
- Educate and brief local legislators, council members elected officials (i.e.: the highest level decision makers) in order to obtain a commitment for resources for the project duration
- Provide a education/briefing to private and public executives (highest level decision makers) to gain support
- Tie project into National Response Plan, develop relationship to ensure compliance and assistance
- Provide continued facilitation and coordination by an organization like GITA
- Need common operating picture, including standard operating procedures for First Responders
- Define risks, vulnerabilities and hazards: help define types of data for different groups and look at interdependencies
- Involve the local disaster response, law enforcement personnel, offices – obtain buy-in
- Obtain political support – executive level
- Provide education to potential stakeholders, politicians, EMS, etc. – help them see the benefits of GIS
- Local government officials (and others) sometimes don't have any idea about GIS – limit jargon!
- Marketing effort must include first responders – include problems and solutions. Show them rapid pictures of where facilities are.
- Make sure that the GECCo integrates with other state, local efforts – must address needs of state, regional officials.
- Turn results of pilot into resources and dollars!
- Research “Project Homeland” in Colorado Springs – operational prototyping. Close gap in disparities with other similar efforts.
- Start small, scale quickly – embrace continuous improvement
- How do we maintain what we develop? Need a long range plan and concept up front.

- Benefit from successful collaborations in Colorado – leverage success
- Need ‘dog and pony’ examples to show targeted audiences. It helps if you can SEE what we are talking about!
- Consider managing organization – emergency management?
- It’s not about technology – it’s about protecting critical infrastructure
- Leverage regional coordinating organizations – COGs.
- Strengthen relationship with emergency management leaders

Next Steps

Based on the resulting pilot project workshop themes and identified issues, the work plan for the pilot project phase will be developed. It is anticipated that the initial phase of the pilot project would focus primarily on organizational collaboration requirements and basic data sharing capabilities and interoperability. Existing standards defined by the Open Geospatial Consortium and the FGDC, as well as commercial products will also be considered during this pilot phase.

This is a pragmatic approach that does not address all issues related to collaboration and data sharing, but does focus on the most important one: basic access to the best available data in the event of an emergency. It follows the 80-20 rule, delivering major benefits with relatively small effort. The pilot project will lay the foundation for future work which can address additional issues.

More complex issues that will receive some consideration during the pilot project, but that are not addressed in detail in the scope of the first phase, include:

1. **Alignment of spatial data between different spatial databases.** This is a broad and time consuming problem to address, but many useful emergency management functions can be carried out even if the data from different organizations is not precisely aligned. Use of the city/county landbase by many of the stakeholders will greatly reduce this issue for much of the spatial data. Adoption of standardized addresses will increase the efficiency of operations of and data sharing efforts among infrastructure managers, governments, and emergency responders.
2. **Data security and privacy issues for ongoing data sharing.** There are a variety of complex issues relating to privacy and security that need to be considered when organizations share data on an ongoing basis. These issues are more likely to be successfully accommodated during a state of emergency, when it is appropriate for authorized parties to have temporary access to any data belonging to local utilities, municipalities and other organizations
3. **Semantic interoperability.** Insuring interoperability of database schemas requires that an organization's application understands that a "road" object in the electric utility database represents the same thing as a "street" object in the water utility database. This is important for other more advanced applications but not needed for many basic emergency management applications.
4. **Data discovery.** Another aspect of data sharing is the ability for an organization's application to dynamically determine what data and services are available to it. In this scenario, it is generally the case that a relatively small number of known data sources are available. Consequently, this is a lower priority, but it will receive attention.

Bearing in mind these exclusions, the primary focus of the pilot project will be:

- 1) Determine appropriate collaborative models among identified organizations for sharing data during an event, including development of data sharing agreements and appropriate business practices among pilot project participants.
- 2) Apply DHS Geospatial Enterprise Architecture standards.
- 3) Apply FDGC data standards.
- 4) Install and test OGC compliant server software at data source sites. Existing software, as well as in-kind resources from commercial vendors will be used to the maximum possible extent.
- 5) Demonstrate the ability to access data from any of the participating organizations from a remote site, either individually or by overlaying data from multiple organizations.
- 6) Develop appropriate processes, and potentially prototype software, for authorizing access to data. Existing emergency management processes should provide the foundation for this project element.
- 7) Consider appropriate strategies for offsite location of backup servers.

It is anticipated that the operational phase of the pilot project will be expanded in scope based on the successful completion of the initial planning phase.

Community Collaboration is Key to Success

It is important to bring all of our geospatial resources and expertise to bear on this important national initiative. Collaborative efforts among organizations such as the Geospatial Information & Technology Association, the Association of American Geographers, the Federal Geographic Data Committee, the Department of Homeland Security, the Transportation Security Administration, the National Geospatial-Intelligence Agency, the Open Geospatial Consortium, and many others, need to be pursued and sustained. Partnerships with other federal agencies and private sector companies will be required as we work toward developing a national geospatial framework for critical infrastructure protection.

We envision the Denver and Front Range GECCo resulting in a replicable model that stakeholders in other communities can employ in constructing collaborative models for critical infrastructure protection, among other things. GITA will encourage additional GECCo initiatives in other communities that leverage the effort and experiences of preceding and/or ongoing pilots. Eventually, a growing network of GECCo sites nationwide will contribute to national programs defined by the federal government, such as the National Spatial Data Initiative (NSDI).

Appendix A

Contamination Scenario – Event Description

Water Utility

Event	Time	Description
0	Prior to contamination	Department of Homeland Security Announces National Threat Level Orange
1	9:00 AM Thanksgiving Day	The water distribution operator during his daily inspections approaches the high reservoir and pump station property and notices a tanker truck parked adjacent to the reservoir with a hose from the tanker to the reservoir vent screen. He stops before entering the property.
2	9:30 AM	A police department patrol officer arrives at high reservoir and pump station reservoir and meets with the water distribution operator to discuss the situation. No individuals are in the area. The police officer then records the tanker truck license number and notifies dispatch to run the plates. Both the police officer and the water distribution operator have no idea what the material is noting no obvious odor or color. The water distribution supervisor is in route to the site and is in phone contact with the operator requesting immediate actions to take at the reservoir site.
3	10:15 AM	The police dispatcher is receiving several customer complaints in high reservoir and pump station service area about the water's foul taste and some burning sensations. He already knows of the tanker truck discharging into the reservoir and the actions he has taken to isolate the system. The plant operator has collected 10 calls over the last 15 minutes and finally takes time to notify the supervisor, who is at the site.
4	Noon	The city/county health duty officer receives notification from downtown hospitals of patients being admitted with concerns of irritations from the water supply (drinking and bathing). The hospitals had been alerted to the potential that they may receive patients from the water supply contamination and have begun to assess the patient's symptoms to determine significance of the contaminant. They are recording additional information to help identify the patient's potential cause of the illness. The city/county health duty officer notifies the operational area emergency

		<p>manager through city/county communications with the updated information about the patients and their symptoms. The hospitals are reporting patients have potentially serious problems, but the need more time to assess. They report no concern yet for deaths and all patients are conscious. Patients have redness of the skin, difficult breathing, and burning in the throat and mouth. No elevated temperatures or stomach disorders yet. They have 75 patients in the last hour. Paramedics are reporting complaints of similar problems and are transporting 22 more to hospitals with approximately 1500 additional calls.</p>
5	1:00 PM	<p>The national television networks including CNN, NBC, ABC, and CBS have called the Mayor with questions about contaminated water in reporting in the City/County. They have helicopters over high reservoir and pump station and crews at the site with reporters asking questions. They also have reporters at downtown hospitals. The local networks are now sending reporters with cameras to the Government Center for an interview with the Mayor and experts on the contaminant cause and its impacts. The Mayor's office has directed all media requests to be handled by the Public Information Officer and scheduled a press conference.</p>
6	2:30 PM	<p>The City has received a phone call at the police department dispatch from an individual that has asked to speak to the Mayor. The police department informs the caller it is a holiday and the Mayor is not available. The caller then identifies themselves as a member of a group that is affiliated with al-Qaeda, indicating his group is responsible for the contamination of the City's water system and threatens the surrounding communities systems that many more will become sick or die if the United States does not stop its war on the Muslims. He then hangs up with the conversation lasting only 1 minute.</p>