



## Panel 1: King County & Washington State ESF for Critical IT Structure

- Participants
  - Don Miller, Washington State Emergency Support Function
  - David Mendel, King County Public Safety & Emergency Radio Communications
  - Steve Reinke, Valley Communications
  - Daryl Hunt, King County Institutional Network Service (I-Net)
  - Bill Eckel, King County Facility Moves
- Mitigation Status and Overview
- Questions and Answers

# Green River Utilities and Communication Infrastructure Meeting

October 27, 2009

**Company Name:** King County Radio Communication Svcs  
Valley Communications Center

**Participant Name:** David Mendel  
Steve Reinke

## Current Mitigation Status

Operationally speaking, general mitigation was achieved with the initial installation and programming of the 800 MHz Emergency Radio System by virtue of having a single Emergency Radio System which public safety responders can use for both private and mutual aid talk group discussions. Other regional radio system partners, as well as local jurisdictions, have cross-programmed radios to be compatible with responders from outside the county. Some time ago, an interconnection capability was added to regional radio systems called the Tri-County Regional Interoperability System (TRIS). TRIS allows 2 talk groups to be patched between disparate radio systems such as the Washington State Patrol (WSP), all the Tri-County regional dispatch centers, the Port of Seattle, and the Federal IWN radio network. Various radio caches exist in the region and state to augment communications during flood response efforts as well. These caches have been reviewed for current maintenance, programming and point of contact information. Additionally, a new radio cache to be held by the City of Seattle is on order and will be obtained in the coming weeks. Once programmed, these radios will be available as a regional asset.

Radio System Infrastructure has redundant equipment and signal routing to build in inherent survivability. This is true for both the radio system equipment itself and the supporting accessory equipment. Commercial power is backed up with onsite generators and fuel storage tanks.

Not only are there physical redundancies, but there is a carefully engineered overlapping of radio signals throughout the county. This allows for the loss of an individual simulcast site without the loss of significant coverage. Some degradation of coverage would naturally occur should a site go off the air, but it would not be catastrophic.

Ongoing mitigation work is occurring in several key areas:

At one 800 MHz radio site (Cambridge, on the Western side of the Kent Valley), the diesel generator has a very small fuel tank, which if left unattended, could only provide fuel for approximately a day and a half. Because of concerns over the availability of fuel in a flooding emergency, steps are being taken to replace the small tank with a 2,000 gallon permanent fuel tank. These efforts are being led by Valley Communications, which is responsible for the Cambridge Radio site. A tank of this size that has a full tank of fuel in it, will likely fuel the radio site for several weeks. Completion of this change is expected by mid to late December.

King County is working with the WSP to program two sets of radios to increase interoperability between state and local agencies. In one instance, a small group of portable radios will be pre-programmed with essential mutual aid talk groups for use in an emergency situation by troopers in the Kent Valley. Additionally, efforts are currently underway to implement a newly signed MOU between the King County Regional Communications Board and WSP to allow for similar functioning radios in WSP aircrafts. Both of these efforts will increase the abilities of responders to interact with state and local officials during any flooding event in the region. These efforts should be completed by mid November.

King County is working to build out a radio "Gateway" device which will also increase interoperability between disparate radio systems such as WSDOT, WSDNR, and WSP. A Gateway is a device that must be carefully managed so as to NOT be problematic, but acts as a bridging device between disparate radio systems when used properly. This is not expected to be online and available until after the start of the year.

One of the most important efforts is training radio users in proper operational procedures. With proper operational procedures adhered to, the features and functionality of the emergency radio system are then fully enabled and allow

for efficient use of the infrastructure with minimal outside management. In essence, this allows users to be able to talk when they need to talk and with whom they need to talk to. To that end, the county is putting together a detailed multi-media training program which is expected to be implemented during 2010.

### **Dependencies**

**Power Sources.** Primary radio facility power is derived from commercial power sources. Each radio site has diesel generators and battery back-up sources along with onsite fuel storage.

**Phone Land Lines.** One site on the periphery of the flood basin has a fire alarm system that is dependent upon phone land lines for notification purposes.

**Vendor Support.** Other dependencies are more general to vendor support needed for the emergency radio system. Most of the critical support is provided by Motorola and business is transacted through parcel delivery service to facilities that are located in other regions of the U.S. outside the northwest. Because of this, a definite dependency exists with UPS to both pick up and deliver parts going between KCRCs and a depot repair facility. Other vendors in the immediate area provide support services for the 800 MHz radio system such as generator, HVAC, battery stack maintenance, fuel delivery, and miscellaneous part supply support. Some of these vendors could be impacted by potential flood scenarios.

### **Identified Impacts under different flood scenarios**

Availability of commercial power sources remains the largest concern for management of issues related to potential flooding. Despite the best maintenance efforts related to preventative maintenance on diesel generators, the occasion does develop when the generators fail. Battery back up systems are not designed to function more than a few minutes (the amount of time to transition safely from commercial power to generator power) and therefore all faith rests in the generators ability to start properly and hold the load without human intervention. In parallel with these concerns is the ability of diesel fuel suppliers to maintain adequate inventory levels to resupply critical infrastructure fuel sources in the event of protracted generator operations. Most radio facilities have between 1,000 and 7,000 gallons of fuel. It is difficult to predict exactly how storage capacity equates to hours of operation because the level of operation dictates the burn rate. With that said, for planning purposes, each 1,000 gallons should equate to approximately 13 days of use at 3 gallons per hour.

Aside from power related concerns, the biggest real impact to the radio system is the impact on local road conditions and the ability of Radio system maintenance staff to transit the area. The Kent Valley has several major highways that are often used to transit between radio sites. With the potential loss of these and increase of traffic in surrounding bi-ways, it may make timely response to radio system casualties problematic.

Lastly, if usage spikes on the radio system occur, some general government functions may be prohibited from using the radio system. By Interlocal Agreement, the radio system is intended and guaranteed to be available only to primary users, defined as "public safety responders." All other secondary users are on a first come first serve basis. Careful management of the radio system may be necessary to preserve public safety user rights.

### **Concerns**

We are confident that we have mitigated both the operational, technical, and physical effects that may occur with large scale flooding in the Green River Valley. Fortunately none of our infrastructure is located in likely flooding areas, but several of the sites are on the periphery of the effected area and may be affected by commercial power outages. With generator back up power in place and commitments from other regional partners to provide back up generators should they be needed, the risk to the emergency radio system is considered very low at this time.

### **Company Representative at King County Emergency Operations Center during a flood**

Trever Esko is the KCIT/Enterprise Business Solutions EOC Representative.

# Green River Utilities and Communication Infrastructure Meeting

October 27, 2009

**Company Name:** King County / I-Net

**Participant Name:** Darryl Hunt, KCIT Customer Services  
Manager

## Current Mitigation Status

In our mitigation due diligence, we have identified a limited number of customers within the mitigation area; these customers are using I-Net fiber for critical business communications and life safety services. For customers within the mitigation area, we have established additional fiber connectivity to their alternative operations sites to ensure business continuity and operations.

We continue to work with customers to establish fiber connectivity to alternative sites as requested.

## Dependencies

As part of the I-Net lease agreement, the I-Net fiber infrastructure and all hub facilities are part of the Comcast fiber system. I-Net monitors the network and Comcast has responsibility for maintenance and repair of its fiber plant and hub facilities, such as power, security, and air conditioning. As a result, of the Comcast I-Net partnership, I-Net is dependent on Comcast in to repair any damaged I-Net fiber.

## Identified Impacts Under Different Flood Scenarios

In identifying possible impacts to I-Net under different scenarios, we have been informed by Comcast that there are no critical hub infrastructure within the Green River flood zone and underground fiber is shielded to withstand water submersion and floods.

## Concerns

Customers losing physical access to their operations facility and business systems which depend on I-Net. Planning for I-Net services to alternative sites will improve odds for continued service after a flood.

## Company Representative at King County Emergency Operations Center during a flood

The KCIT representative will represent I-Net at KCEOC.

Please contact King County Command Center on a **24 x 7** basis to report all critical incidents or critical support issues that require an immediate response:

**Voice call : (206) 263-7000**

**E-Mail address:** [inet.operations@KingCounty.gov](mailto:inet.operations@KingCounty.gov)

Or Contact Darryl Hunt @ 206 276-9340

# Green River Utilities and Communication Infrastructure Meeting

October 27, 2009

**Company Name:** King County Facilities Management  
Division

**Participant Name:** Bill Eckel

## Current Mitigation Status

Five Owned Facilities – The prevention levels assume the 17,600 CFS

Maleng Regional Justice Center – Kent – In construction of various styles of walls and earthen berms to prevent infiltration of water, which will be backed up by a manned pumping system for any water that migrates through the system. Size of backup pumps yet to be determined. Sheltering in space is planned as a contingency.

Black River-Renton – Most staff and contents have been removed from the first floor and relocated to the second floor. A perimeter wall will be in place consisting of water filled bags with automated generators and pumps inside the perimeter for water that may seep through the protective barriers.

Earlington – Renton – The personnel and operations have been located to a facility in the vicinity of the King County International Airport on Marginal Way. The water filled bags that will form a perimeter wall are due the first week of Nov.

Animal Shelter-Kent - Perimeter protection will be the placement of sand bags at the entrances and around the building mechanical system located at ground level. It is a concrete block building and is not anticipated to be occupied at the time of the event. If water enters the facility it is anticipated there will be minimal damage to the structure. All animals are expected to be removed before a flood event occurs.

Aukeen Court Building – Kent – Court operations are being relocated out of the flood zone. Building protection will include concrete barriers backed up by automated pump and generator systems.

Multiple Leased Facilities – Arrangements are being made to relocate the operations and staff out of the flood area by the middle of November. The King County Radio Shop is to be relocated outside the flood area and the lease is in negotiations. All operations are developing continuity plans.

## Dependencies

The actual movement of tenants in the leased facilities will depend on the signature of the lease and length of time for the required improvements for occupation. All perimeter walls are moving at the anticipated pace to allow for protection to be in place prior to flooding.

## Identified Impacts under different flood scenarios

If there is a levee breach or a significantly higher flow than the planned 17,600 CFS there could be overtopping of the protective measures that were put in place resulting in substantial flooding of the facilities. All the facilities both owned and leased are anticipated to be vacant during a flood event except for the MRJC where a skeleton staff consisting of contractors and King County staff will be onsite. There are contingency plans that if there is overtopping the staff will be able to move to higher floors which will have food, water, portable toilets and a heated area provided by an elevated emergency generator. Staff will be able to ride out the event in safety.

## Concerns

If the perimeter walls are overtopped or the roads are washed out and do not allow for access so the generators and pumps can be moved there may be a loss of the emergency equipment that was placed behind the perimeter walls. Lack of power and road washouts while the water is receding will hamper the dewatering of any facilities.

## Company Representative at King County Emergency Operations Center during a flood

A rotating list of personnel has been identified to provide consistent transfer of information.



## Panel 2: Energy

- Participants
  - Jeff Joy, Seattle City Light
  - Nelson King, Bonneville Power
  - Mark Wesolowski and John Campion, Puget Sound Energy
- Mitigation Status and Overview
- Questions and Answers

# Green River Utilities and Communication Infrastructure Meeting

October 27, 2009

**Company Name:** Seattle City Light

**Participant Name:** Jeff Joy

## Current Mitigation Status

SCL has identified several potential system vulnerabilities due to flooding. SCL is determining possible mitigation and response efforts for implementation.

- The Duwamish Substation and associated facilities and electric infrastructure.
- SCL transmission towers and footings along Duwamish River that will be impacted with flood waters and debris travel.
- Customers affected by shutdown of substations.
- Underground Electrical equipment in Tukwila and South park
- SCL Employees living in affected area, transportation issues and shelter issues for employees.

## Dependencies

SCL is dependant on bulk energy distribution. Failure of Neighboring Utility transmission towers in the Green River Valley could disrupt distribution within SCL's service area. BPA has 230kV and 500kV transmission systems that will be impacted that will cause connectivity and substation losses for SCL.

PSE has 115kV systems in the same category.

## Identified Impacts under different flood scenarios

None have been identified at this time for the impact on Seattle City Light.

## Concerns

Loss of the Duwamish substation due to unusually high flood waters would disrupt power to a large area of SCL's distribution system.

Loss of associated transmission systems from other Utilities could impact this and other Substations.

The protection of Seattle City Light employees and ability to travel to work or to have a shelter process.

## Company Representative at King County Emergency Operations Center during a flood

SCL does not send a Rep to the King County EOC unless a specific issue needs to be addressed. SCL provides a representative to Seattle's EOC and maintains contact with Puget Sound Energy's representative in the RECC.

# Green River Utilities and Communication Infrastructure Meeting

October 27, 2009

**Company Name:** Bonneville Power Administration (BPA)

**Participant Name:** Nelson King,  
Transmission Systems Emergency Manager

## Current Mitigation Status

- Have reviewed potential risks to BPA assets, and have identified areas requiring mitigation
- BPA is now in the process of:
  - Ballasting footings on selected transmission line towers
  - Improving access roads to selected transmission line towers to support heavy equipment access in the event that emergency repairs are needed
  - Familiarizing itself with key personnel at other agencies to plan, prepare and respond jointly if systems are compromised
- Preparing an event-specific incident response plan
- Locating spare parts and other equipment (such as generators) that may be required to support operation of the bulk transmission grid
- Conducting training and briefings for executives, incident management personnel and response personnel
- Coordinating with Puget Sound Electric (PSE) to identify risks to local transmission and distribution assets and develop work-around scenarios for:
  - Continuing load service throughout the greater Seattle metropolitan region
  - Wheeling power along the I-5 corridor.

## Dependencies

- Station electrical service for BPA substations is provided by local utilities

## Identified Impacts under different flood scenarios

### Minor Flooding

- No direct impacts with the exception of possible traffic delays to normal activities

### Major Flooding conforming to USACE flood prediction maps

- No impact to substations or transmission lines

### Major Flooding and loss of station electric service to BPA facility(s)

- Affected substations on emergency generators

### Major Flooding and significant icing and high winds

- Increased potential for failure of tower footings for structures located in flooded areas

## Concerns

- Extended requirements for backup generators at BPA substations
- Challenges in moving equipment and personnel in and through impacted areas
- Competition for resources within the impacted area

## Company Representative at King County Emergency Operations Center during a flood

No current plan to provide a BPA agency representative. Will coordinate through local utilities.

# Green River Utilities and Communication Infrastructure Meeting

October 27, 2009

**Company Name:** Puget Sound Energy

**Participant Name:** Mark Wesolowski

## Current Mitigation Status

PSE has begun construction of HESCO barriers around two transmission stations and is looking to add similar barriers around the perimeter or station control houses at several other distribution stations located within the valley.

PSE is installing five additional switches on our distribution system to minimize the number of customers affected by proactive system de-energization action.

To ensure continued availability of materials, PSE is reallocating certain warehouse stock to other PSE operating locations. In parallel, additional warehouse space outside of the inundation area is being actively pursued to help address longer term storage needs.

PSE is re-activating a dormant service center in SE King County and will use this location as our temporary fleet services hub.

PSE business units located in Kent are preparing employees for possible relocation. Alternate work locations and supporting technology have been established for most employees within the affected buildings.

## Dependencies

PSE is somewhat dependent upon land line and local wireless telephone services. Company radios will support PSE's primary communications needs.

To some degree, PSE is dependent upon evacuation coordination with the cities and county. It is important for us to coordinate our operations response with the overall evacuation process.

Additionally, PSE is dependent upon the credentialing process to ensure our ability to move around with the affected areas immediately prior to flooding and after flood waters have receded.

## Identified Impacts under different flood scenarios

At flows up to 17,600CFS, impacts are primarily to PSE's electric underground distribution system. Electric outages are anticipated to occur where there is substantial accumulation of water. In this scenario, PSE hopes to be able to contain electric outages to the affected areas.

In the worst case scenario, (flows of 25,000CFS), there is a possibility of outages to occur outside of the immediate valley. PSE's mitigation actions are focused on minimizing the impacts of flood water at this level.

In both scenarios above, PSE's natural gas distribution should perform fairly well. Most impact is anticipated to be a the point of service delivery (meter/regulator and customer equipment).

## Concerns

## Company Representative at King County Emergency Operations Center during a flood

TBD, but for now may be Mark Wesolowski and/or Mary Robinson.



## Panel 3: Fuel Supply & Transportation

- Participants
  - Neil Norcross, Olympic Pipeline
  - Grant Jensen, Williams Pipeline
  - Roland Hackney, Burlington Northern Railroad
  - Jim Moore, Sound Transit
- Mitigation Status and Overview
- Questions and Answers

# Green River Utilities and Communication Infrastructure Meeting

October 27, 2009

**Company Name:** Olympic Pipe Line Company

**Participant Name:** Neil Norcross

## Current Mitigation Status

- The safety of our employees, contractors and neighbors remains our top priority. Olympic is doing everything we can to help ensure reliable pipeline product supply with no environmental impact if a significant flood occurs along the Green River.
- Olympic has upgraded a back up control center that will enable the pipeline to be operated remotely if Renton Station is not accessible or does not have power.
- Olympic is developing a Damage Minimization Plan to prevent or minimize damage during a flood event. This plan includes protecting our critical facilities with a HESCO Barrier, removing hazardous waste, relocating spare parts, equipment, files and records.
- Olympic has developed evacuation plans that are designed to safety shut down, secure the facilities, and evacuate all employees.
- Olympic has developed Business Continuity and Rapid Recovery Plans designed to restore operations as soon as possible after a flood event.
- Olympic has developed communication plans to notify our shippers, refiners and terminals of the potential flood scenario.

## Dependencies

Renton is a hub for the Olympic Pipeline System. There are two main lines coming into Renton Station, and three lines exiting, one to Harbor Island, one to SeaTac Airport and one to Tacoma, Vancouver and Portland markets. If Renton station is submerged, the pipeline will shut down. Once waters recede and pipeline integrity is assessed, it may be possible to restart. OPL has conducted hydraulic modeling and determined it is possible to bypass the pumps at Renton Station and deliver product to SEATAC, the South Sound and Vancouver / Portland Markets at a decreased rate.

If the Pipeline is shutdown, Olympic cannot make deliveries to its customers at SEATAC, Harbor Island, Tacoma, Vancouver and Portland. Olympic and the Port of Seattle have been communicating regarding the potential flood scenario and working to address the potential supply issues SEATAC may encounter. Olympic is working to notify our shippers, refiners and terminals of the potential of flooding.

If the station is not submerged in floodwater, but power is not available, the pipeline may continue to operate, and deliveries may continue, albeit at a reduced rate as the pumps at Renton will not be operational.

## Identified Impacts under different flood scenarios

The pipeline currently runs under several rivers, streams, and in areas where the ground water is often high. We do not expect an integrity problem on the pipeline simply due to high water. We do expect that some repairs will be necessary for pumps, motors, instrumentation and electrical equipment submerged in the floodwaters at Olympic's Renton facility.

## **Concerns**

Concerns about water/sewer issues and contamination in the event the station building is flooded, as this will increase time needed for recovery.

Access to the Renton facilities if the area is declared an evacuation zone. Early access to the facility will be needed to assess potential damage after a flood.

PSE Substation that provides power to Olympics Renton Station.

## **Company Representative at King County Emergency Operations Center during a flood**

Tim Barrett, Neil Norcross, Steve Maulding, Pam Brady,

# Green River Utilities and Communication Infrastructure Meeting

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**Company Name:** Northwest Pipeline, A transporter of Natural Gas

**Participant Name:** Grant Jensen

## Current Mitigation Status

Geotechnical Consultant Studying stream bed and banks at crossing location.

It should be noted that the Northwest Pipeline facilities are located three miles upstream of the City of Auburn. And based on the flood projection maps it's located outside the major flood area.

## Dependencies

Keeping the roads open and passable so personnel can check crossing and access valve sites on either side of the river.

## Identified Impacts under different flood scenarios

At the very highest flood level we could get 2-3 feet of water in the valley at our crossing location. Our pipeline is located six feet below the river bed and has a 4" concrete coating.

## Concerns

Our concerns are with the following: added water flow past our crossing location; the changes in water level through out the winter season; the velocity of the water at this crossing and impacts these changes could have on bank erosion and streambed scour.

## Company Representative at King County Emergency Operations Center during a flood

Jeff Oberbillig or Francis Roemer

# Green River Utilities and Communication Infrastructure Meeting

October 27, 2009

**Company Name:** BNSF Railway

**Participant Name:** Terry Finn / Roland Hackney

## Current Mitigation Status

BNSF Railway currently has in place necessary communication, operational and response processes (Emergency Flood Response Plan) intended to offset various impacts from a major flooding event of the Green River, as it correlates with Howard Hanson Dam releases.

## Dependencies

The response plan incorporates state, local and various agencies and sectors.

## Identified Impacts under different flood scenarios

Phase 1- 5,000 c.f.s	No impact
Phase 2- 7,000 c.f.s	No impact
Phase 3- 9,000 c.f.s	Minor impact
Phase 4- 12,00 c.f.s	Medium impact
Phase 5- 12,500 + c.fs.	High potential impact (BNSF to activate Flood Plan)

## Concerns

Advance notification and/or communication between King County/US Army Corps and BNSF Railway concerning the potential release of water flow from the H.H. Dam, which may cause potential flooding in key areas. Recovery efforts re-establishing service to our customers and community with expediency.

## Company Representative at King County Emergency Operations Center during a flood

BNSF Railway Network Operations Center and Northwest Division Command Center

# Green River Utilities and Communication Infrastructure Meeting

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**Company Name:** Sound Transit – Service Planning

**Participant Name:** Jim Moore

## Current Mitigation Status

- Bus service rerouted around potential flood area if SR-167 is closed (via SR-18/I-5/I-405)
- Alternative transit options for existing Sounder riders if BNSF railway needs to cease operations through Kent and Tukwila
- Removal or protection of critical electrical components at Kent Station and Tukwila Station

## Dependencies

- BNSF: They will make the determination on whether trains will be able to operate through Kent Valley
- Pierce Transit: Provide additional resources for alternative service between Tacoma, Puyallup, Sumner and Auburn
- King County Metro: Provide additional resources for alternative service, especially if light rail is unable to operate between Rainier Beach Station and SeaTac/Airport Station

## Identified Impacts under different flood scenarios

- Potential closure of SR-167
- Potential closure of BNSF railway

## Concerns

- PSE power feed to light rail substations and station facilities

## Company Representative at King County Emergency Operations Center during a flood



## Panel 4: Telecommunications

- Participants
  - Terry Davis, Comcast
  - Kathleen Miller, Qwest
  - Dave Kilker, AT&T
  - Tony Martwick and Scott Charlston, Verizon Wireless
  - Harvey Salzberg, Sprint Nextel
- Mitigation Status and Overview
- Questions and Answers

# Green River Utilities and Communication Infrastructure Meeting

October 27, 2009

**Company Name:** Comcast Cable

**Participant Name:** Terry Davis, Director of Franchising and Govt. Affairs.

## Current Mitigation Status

Comcast's Washington Market maintains a detailed up-to-date business continuity plan (BCP). We work in coordination with city and state authorities and other utility companies to restore services and maintain safety and security for our customers and employees alike.

### Comcast action plan for Green River Valley flooding:

1. Comcast will monitor Green River flooding via local emergency management resources and National Weather Service.
2. As flooding occurs, Comcast will assess impacted cable system facilities and restore services, if local access is available.
3. Comcast will use existing working relationships with local utilities to allow for close coordination and restoration of services as quickly as possible.
4. Comcast will restore services as it is safe, electrical service is restored, and roads are opened by local jurisdictions.

The entire Comcast cable system is supported and monitored by our Local Monitoring Center (LMC), which is responsible for 24 x 7 x 365 coverage, and is capable of full network infrastructure surveillance. The LMC monitors the entire cable system in a proactive manner during standard operations and emergency events.

## Dependencies

- Local Access: Needed for our recovery crews to restore impacted cable plant
- Power: Our cable system needs power to operate. Comcast keeps our cable system operating by maintaining back-up power systems at our HUBS (diesel) and in our nodes (battery). For long duration outages, we deploy portable power generators to maintain power in our nodes.
- Coordination: Our existing working relationship with local utilities allows for close coordination and restoration of services as quickly as possible.

## Identified Impacts under different flood scenarios

- Minimal Flooding = Localized cable service interruptions as power outages occur. Road closures may limit access and is the biggest impact in our ability to restore services.
- Major Flooding = Widespread cable service interruptions in flooded areas due to long duration power outages and limited access. These types of outages will be tracked and prioritized as we coordinate with local utilities to plan our restoration efforts.
- North Auburn Fulfillment Office Closure (due to flooding or levee breach) = Local and Regional Management Teams have addressed and communicated our specific plans for managing facility/equipment risks and relocation plans, if impacted by flooding.

## Concerns

- Local Access for recovery crews
- Safety Issues in flooded area: contaminants, etc.
- Long duration power outages

## Company Representative at King County Emergency Operations Center during a flood

No representative is planned at this time.

However, the following telephone numbers will serve as vital communication links to Comcast:

- Residential and Business Customer Issues 1-800-Comcast (266-2278)
- Public Agencies/First Responders Reporting Cable Plant Damage 1-888-824-8289
- City & County Institutional Network Issues 1-888-824-8289
  
- Government Affairs Terry Davis, Comcast GA Director 253-261-1586  
Janet Turpen, Comcast VP of GA 425-741-5750
- Media Relations Walter Neary, Comcast Public Relations Director 253-405-7706  
Steve Kipp, Comcast VP Communications 425-471-0685

# Green River Utilities and Communication Infrastructure Meeting

October 27, 2009

**Company Name:** AT&T

**Participant Name:** Jim McWhirter

## Current Mitigation Status

### Network Resiliency by Design

AT&T's goal is to build and maintain a reliable, survivable, and recoverable network by design:

- AT&T designs extensive redundancy into its network elements, including duplication of vital hardware and voice and data transport paths.
- All AT&T Central Offices are equipped with permanent generators with automatic failover and as well as fully redundant battery back up.
- All cell sites in the flood area are equipped with battery back-up. Additionally, AT&T has the capability to deploy enough portable generators necessary to support sites affected by power loss at the cell sites in the flood area.
- The entire network is provisioned with alarms indicating faults at any and every point.
- The network is monitored 24 x 7 x 365 by the Mobility Network Reliability Center and the Global Network Operations Center.

### Event Preparedness

Construction of a system that is completely impervious to all events is impossible; therefore, AT&T has detailed preparation, response and recovery plans in place to prepare for and respond to given situations. Plans are reviewed, updated and tested to ensure the highest level of accuracy and effectiveness. Activities executed in preparation for the possible Howard Hansen Dam include:

- identifying locations that could be affected by flooding (retail stores, device support center, cell sites, network nodes);  
NOTE: There are no AT&T Central Offices in potential flood zone
- rerouting voice & data traffic around affected area where possible;
- identifying microwave restoration solutions and procuring appropriate equipment;
- identifying cell sites immediately outside of flood plain for augmentation;
- identifying areas for mobility restoration equipment if necessary;
- evaluating protection versus relocation of physical network nodes for longer term solutions.

### Enterprise Response

AT&T has established Regional Crisis Management Teams and a Global Emergency Management Center (GEMC) to ensure a single, cohesive response across the enterprise. These organizations allow each business unit, including the Network Operations organization, to focus on their critical business processes.

The RCMT/ GEMC structure includes Organization Business Response Planning (OCBPs) within every organization in AT&T. Each organization updates and tests these plans and executes pending threat and response procedures as appropriate for the organization to ensure key personnel or alternates are available to support business continuation.

AT&T Enterprise response includes:

- accounting for all employees
- managing impacts to employees and providing for employee needs;
- providing consistent informational communication internally;

- providing consistent communication to customers (retail and business);
- providing community support (type and level determined by the situation);
- providing security to personnel and staged equipment and supplies.

### **Network Disaster Recovery (NDR)**

The local market has numerous resources that it can deploy for an emergency response. AT&T also employs a Network Disaster Recovery (NDR) Team and these resources are utilized in situations where additional resources are needed beyond those that can be supplied by the local market.

The NDR Team that is composed of AT&T managers, engineers, and technicians who have received special training in the physical recovery of the AT&T Network to respond to a network impacting event. Team members (AT&T employees from across the United States) volunteer for this assignment. Members participate in several recovery exercises each year to sharpen and practice their skills using the disaster recovery equipment and processes.

#### **The Technology:**

AT&T deploys mobile cellular equipment to recover network capacity or to increase network capacity following an event. The mobile equipment provides a self-sufficient cell site that can be used while a damaged site is repaired or replaced. In disaster recovery deployments, COLTs and COWs can be used to provide wireless communications capabilities to support the recovery efforts of first responder organizations, local Emergency Operations Centers, government agencies and our customer network. Some COLTs can connect to the AT&T Network via a satellite link allowing them to establish cellular communications in areas where all local telecommunications infrastructure has been destroyed or is otherwise unavailable.

Portable Radio Towers are used to establish microwave repeater or terminal sites for locations where cable cannot be used.

## **Dependencies**

### **Utilities:**

#### Local Exchange Carriers (LECs):

Loss of a LEC Central Office or transport node could result in the inability to deliver traffic through sites not directly impacted by a flood.

AT&T has established communication and escalation procedures with LECs and will work with the LECs to ensure voice traffic is routed around affected LEC Central Offices as quickly as possible.

#### Electric:

Every site requires power to maintain the ability to carry traffic. Cell sites have a limited supply of battery back up. In this scenario, power outages could extend beyond the flood zone impacting sites outside the flood area.

### **Natural Resources:**

#### Crude Oil/ Fuel:

Fuel is needed to continue to power both generators and vehicles of employees key to business response and continuation. AT&T does have the ability to bring in fuel to support generators and vehicles of key employees.

## **Transportation**

### Roadway Infrastructure:

The ability to transport equipment and supplies into and throughout an affected area is crucial to any response both internally and for the community. While some network elements can be managed remotely, some work must be done onsite.

### **County/ State EOC:**

- Provide coordinated access plan across municipalities, counties, etc to ensure the means for critical employees to access restricted or secured areas.
- Provide situational information (maps of flooded area, alternate transportation routes, power restoration estimates, etc)
- Facilitate communication between AT&T and other utilities as well as support escalations with other utilities where normal business process may not be effective
- Provide supplemental security and aerial surveying assistance as needed

## **Identified Impacts under different flood scenarios**

AT&T has identified the network infrastructure in the potential area of impact and is working to reroute of traffic, protection of the offices and determination of the long range plan should the offices need to be moved. AT&T is prepared for an appropriate, progressive response should the situation escalate.

## **Concerns**

AT&T has mitigated potential impacts and is prepared to manage event response as the situation dictates. The right teams are in place to assess escalating situations and execute additional planned actions as necessary and contingencies are in place to minimize impacts based on dependencies.

Should significant flooding occur, the greatest inhibitor to immediate response would be impacts to the transportation (roadway) infrastructure. Detailed information regarding flooded areas and available roadways as well as a single method (credential, letter, etc) for response personnel to access affected areas across municipalities needs to be made available for a more efficient response.

## **Company Representative at King County Emergency Operations Center during a flood**

Jim McWhirter, Government Account Manager

[Jim.mcwhirter@att.com](mailto:Jim.mcwhirter@att.com)

206-580-7752

Additional AT&T Government Support Resources

National Business Services 800-999-5445

Kim Lowry, Sales Support

425-580-7743

Catherine Cordova, Service Manager

425-580-7763

# Green River Utilities and Communication Infrastructure Meeting

October 27, 2009

**Company Name:** Verizon Wireless

**Participant Name:** Scott Charlston, Anthony Martwick

## Current Mitigation Status

Verizon Wireless has the largest and most reliable network and a proven track record of running to a crisis, most recently the Naches, WA landslide. Regarding the Green River flooding/Howard Hanson dam situation, VZW has prepared action plans for various flooding scenarios that could result in loss of power and communications sites in the valley. We have mitigation/response plans in place to enable critical wireless communications and are making adjustments as more information is received.

VZW Government teams have been working closely with State, County, City, Utilities, Regional first responders and Large/Small Businesses sharing our experience from national/regional level of Continuity of Operations and Disaster Recovery and support resources to ensure open communications.

Verizon Wireless will be sharing more specific details of our network mitigation plans on Oct 27th.

## Dependencies

## Identified Impacts under different flood scenarios

## Concerns

## Company Representative at King County Emergency Operations Center during a flood

# Green River Utilities and Communication Infrastructure Meeting

October 27, 2009

**Company Name:** Sprint

**Participant Name:** Harvey Salzberg, Steve Lieberman

## Current Mitigation Status

**Cellular:** We have 6 sites that potentially get wet in the 17.6 scenario; 4 are 0-2 feet and 2 are at 2-6 feet. All sites have been surveyed and mitigation plans have been established and put into place. We are sourcing COW's/SatColt's for the wet sites. We will be deploying generators to sites that are not class 1 sites (fixed generator) and deploying COW's (Cell On Wheels) to replace any damaged equipment.

**Wireline facility:** Safe no action required

**Regen Facility:** We do not have electronics at this location only splice through. Potential damage to facility and since it is a shared facility with Verizon and Qwest. Facility will be sandbagged to protect Qwest electronics.

Training Sprint/Nextel customers on the use of Direct Talk (off network radio) and Direct Connect (on network radio). Upgrading all units to the Direct Talk Handsets. Will supply ERT Go Kits as soon as the Governor declares a State of Emergency at no charge for a period of two weeks by calling ERT Hot Line 888-639-0020.

Working with Sprint Emergency Response Team and Business Continuity Team in following ICS protocol. Identified local response team and trained team in August.

## Dependencies

Power 90%

Telco 10%

Access to flooded area for response and recovery

Fuel

## Identified Impacts under different flood scenarios

Cellular: 17,600 4 sites are 0-2 feet of water, 2 sites are 2-6 feet of water  
25000 all sites are under water.

Wireline: no impact on either scenarios

## Concerns

Access authorization for Response and Recovery Teams into closed areas. Access for Assets into closed areas for deployment. When there is water on the ground.

Knowledge of where Shelters are going to be for evacuees to insure that we have adequate service or BR at cell sites

Power to sites that are outside of the valley and to sites that are in valley but are dry, when will the power be shut off in the whole valley at what point in the flooding?

Hazardous or corrosive material in water in the flood zone could limit recovery time.

## Company Representative at King County Emergency Operations Center during a flood

Harvey Salzberg

Dean Anderson

Cindy Pladson