



# Comcast Cable

## Green River Valley Flood Planning & Response

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# Comcast in Washington State

## SERVICES

- Cable Television • High Speed Internet • Digital Voice

## INFRASTRUCTURE

- Fiber-to-node cable system architecture
- Supported by backup power systems
- Redundant fiber optic paths
- Robust and reliable distribution cable system

## PLANT MILEAGE & EMPLOYEES

- Over 21,000 miles of physical infrastructure
- Supported by over 3,300 employees in Washington



# Comcast Network Monitoring

## LOCAL MONITORING CENTER (LMC)

- Full network infrastructure surveillance
- 24 Hours • 7 Days Per Week Coverage
- Located in Everett, outside Green River Valley potential flood area

## STATUS MONITORING AT LMC

- All HUBS • Service Nodes • Power Supplies • Cable Modems
- Proactively monitor during standard operations and emergency events
- Supports senior leadership and local recovery teams during emergency events



# Comcast Flooding Experience

## PLANT AREAS IMPACTED BY FLOODING

Centralia • Chehalis • Snoqualmie • Fall City • Carnation

## PROCESS OF RECOVERY

Monitor • Assess Damage • Coordinate w/ Other Utilities • Restore

## RESULTS

- Cable system did not fail due to flooding
- Flooded road closures limited access for local recovery crews
- After power restoration, experienced minimal service impacts even though facilities were completely immersed under water



# Emergency Alert System (EAS)

## COMPLIANCE

- Built and maintained according to Federal & State law

## ACTIVATION

- All activation equipment located within primary and secondary service delivery HUBS, outside the potential flood area
- State Emergency Management responsible for activating alerts
- EAS starts once radio signals are received in secondary service HUBS



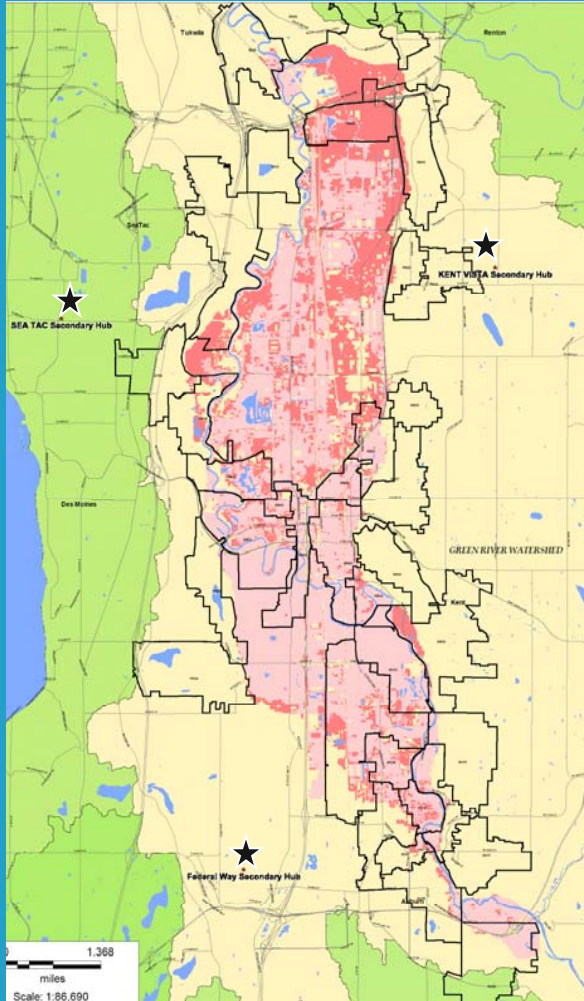
# Comcast Critical Infrastructure

## ALL COMCAST CRITICAL INFRASTRUCTURE IS OUTSIDE THE POTENTIAL GREEN RIVER FLOOD AREA

- CALL CENTERS: Fife, Lynnwood, and Everett
- LOCAL MANAGEMENT CENTERS: Lynnwood and Everett
- SERVICE DELIVERY HUBS: Primary in Burien • Secondary in Federal Way, Kent, and SeaTac
- REDUNDANCY: Primary HUB facility is fully redundant and supported by a backup HUB in Everett
- HUB BACK-UP POWER: All HUBS have diesel generators for back-up power w/ re-fueling partners in place in addition to robust DC power and UPS systems



# Comcast In Green River Valley



## PLANT MILEAGE

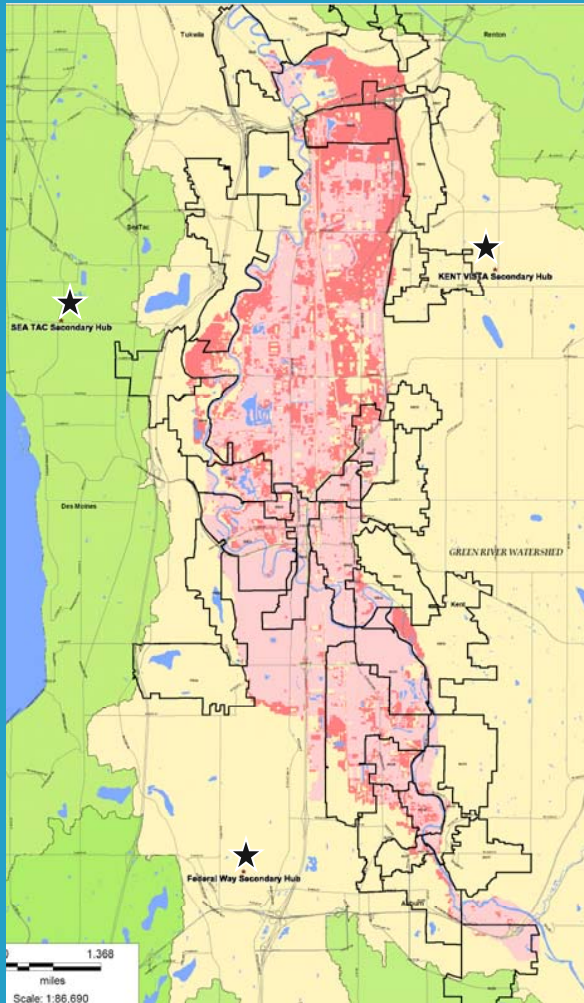
Total Fiber & Cable = +/- 120 miles

## NUMBER OF CUSTOMERS

Cable = 22,900 Subs



# Comcast In Green River Valley



## SERVICE NODES

- 37 Nodes within the total flood area
- Built according to strict engineering standards, including moisture resistance
- Node power supplies have 8-hour battery generated back-up power
- Generators are deployed for power outages beyond 8-hour battery life





# Comcast In Green River Valley

## FLOODING EXPOSURE

1. Local road closures limiting our local recovery crew's access to support impacted nodes and power supplies in flooded areas
2. Long-Term Power Outages in potential flood area serving nodes
3. Evacuation and closure of our Auburn Fulfillment Office located in North Auburn (identified risk of flooding 0-24-inches)
4. Employees living within the potential flood area



# Comcast In Green River Valley

## ACTION PLAN

1. Monitor flooding risk from local resources and National Weather Service
2. As flooding occurs, assess impacted cable facilities and restore services, if local access is available
3. Use existing working relationship with local utilities to allow for close coordination and restoration of services as quickly as possible
4. Restore services as it is safe, electrical service is restored, and roads are opened by local jurisdictions



# Comcast In Green River Valley

## AUBURN FULFILLMENT OFFICE EVACUATION PLANNING EFFORT

- Comcast Washington Market maintains a detailed up-to-date business continuity plan (BCP)
- Local and Regional Management Teams have addressed and communicated our specific plans for managing facility and equipment risks and relocation plans, if impacted by flooding



# Comcast In Green River Valley

## COMCAST CUSTOMER SERVICE

Impacted Residential and Business customers

communication line to report service issues or billing

questions:

1-800-Comcast (266-2278)



# Comcast In Green River Valley

## COMMUNICATION

- 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
- Media Relations:
  - Walter Neary, Comcast Public Relations Director -- 253-405-7706
  - Steve Kipp, Comcast VP Communications -- 425-471-0685
- Government Relations:
  - Rhonda Weaver, Comcast State Director of GA -- 360-357-1215
  - Terry Davis, Comcast Director of Franchising and GA (local) -- 253-261-1586
  - Janet Turpen, Comcast VP of GA -- 425-741-5750

