

MISSION ANALYSIS BRIEF

Green River Basin Flooding Operational Plan Development

IA ESF 6 Conference Overview



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Mission Analysis Brief Composition

- Planning Scenario
- Regional Intent
- Specified Tasks
- Implied Tasks
- Essential Tasks
- Key Facts
- Key Assumptions
- Constraints
- Regional Administrators Green River Mission Statement



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PLANNING SCENARIO

A FEMA Hazards United States Multi-Hazard (HAZUS-MH) modeling analysis was conducted on July 23, 2009 using data and flood depth grids provided by King County, Washington. FEMA Mitigation developed a depth grid incorporating levee removal scenarios developed by King County (simulating levee failure) and a 17,600 cfs discharge from Howard Hanson Dam as recorded on the river gauge at Auburn. This has been identified by USACE as one of the potential flood scenarios using a reduced pool elevation at the Howard Hanson Dam. HAZUS-MH results for this scenario calculated approximately \$3.7 billion in economic losses, 200 substantially damaged buildings, 22,000 people displaced, and 280,000 tons of debris. This scenario is one of four, and does not represent the largest discharge modeled (19,500 and 25,000 cfs were also modeled); but for federal and state planning purposes this is the scenario selected.



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REGIONAL INTENT

Purpose:

Synchronize the federal capabilities to support the State of Washington during a flood event in the Green River Basin as a result of the risk associated with the reduced storage capacity of Howard Hanson Dam.

Key Tasks:

- Support the state with pre-identified capabilities to prepare and respond to the event.
- Prepare to provide additional capabilities beyond those pre-identified by the state.
- Coordinate federal response and recovery operations to support Washington EMD.
- Continue to implement FEMA communication and coordination strategy.
- Develop appropriate accountability and support procedures for employees in the impacted area.

End State:

FEMA provides the State with all requested support and is prepared to execute additional operations as required to minimize the suffering of citizens in effected area.



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SPECIFIED TASKS

- Deliver life-saving and life-sustaining resources to residents of the Green River Basin.
- Develop the common operational picture of Western Washington river basins and their regulation.
- Provide a clear command, control, and coordination structure for the delivery and distribution of resources.
- Document all FEMA activities and their associated timelines for reference.
- Disseminate emergency public information to State EMD to ensure accurate/adequate communication to the public from all response agencies
- Maintain regional situational awareness.
- Ensure the safety of all response/emergency management personnel.
- Identify potential assets and resources required to support the state and prioritize their execution.
- Develop comprehensive Green River Operations Plan (OPLAN) with federal and state partners.
- Develop decision matrix for CIRs.



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IMPLIED TASKS

- Task appropriate FEMA Regional Divisions to provide personnel to support possible program and technical assistance missions as requested by Washington EMD.
- Task appropriate federal agencies and ESFs to provide support under their own authorities for possible program and technical assistance missions as requested by Washington EMD.
- Identify and deploy FEMA staff to support planning efforts.
- Identify and record FEMA Logistics distribution locations.
- Complete needs assessment with Washington EMD Logistics to identify possible resource requirements.
- Report personnel and resource requirements through the Incident Action Plan (IAP) process (Forms 202/204/215)
- Attend as requested/required all program and operationally relevant meetings that relate to Howard Hanson Dam or the Green River Basin. (Lesson Learned SME/ESF6 Liaison vs. State Liaison)
- Report and record RFI's from federal and state partners through the appropriate planning branch personnel.



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ESSENTIAL TASKS

- Provide federal program support and technical assistance as requested by the state of Washington.
- Plan for and be prepared to deliver resources beyond those requested by the State of Washington to ensure suffering of the citizens is minimized.



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KEY FACTS

- Media coverage is significant.
- A Warning from the Seattle District Reservoir Control Center of a major water release will occur at least 8 hours prior to release.
- A discharge of 17,600 cfs from Howard Hanson Dam at the Auburn river gauge is used in the FEMA modeling for planning purposes.
- The Green River Valley is the 2nd largest wholesale distribution center in the West Coast.
- There are approximately 984 Businesses with 113,632 Employees of federal, state, local and private industry that may be affected during a flood. Largest employers:
 - Boeing Space Center
 - REI Corporate HQ
 - **Starbucks Roasting Plant**
 - Sysco Food Distributors Puget Sound Regional Center
 - Hexcel, Cascade Gasket (Aircraft parts suppliers to Boeing)
 - Alaska Airlines Reservations and Sales Call Center



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KEY ASSUMPTIONS

(1 of 2)

- Life saving and life sustaining efforts may be the primary mission of disaster operations.
- Historical projections indicate that multiple river basins will likely flood at the same time limiting FEMA resources.
- Current damage estimates based on HAZUS modeling are:
 - 3.7 billion dollars in the Green River Basin,
 - 200 Buildings may be substantially damaged,
 - 22,000 People may be displaced
 - 280,000 Tons (187,000 cuyd) of debris will be created.
- Low income residents may comprise up to 67% of the Green River Valley residents affected by flooding.
- Pet sheltering maybe required.
- Livestock may be impacted requiring USDA/APHIS support.
- NW wholesale and retail food chains may be affected requiring commodities support missions.



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KEY ASSUMPTIONS

(2 of 2)

- Federal agencies may initiate response/recovery operations before the state requests a Presidential Declaration based on their agencies' authorities.
- Flooding may occur during the 2010 Winter Olympics in Vancouver, BC putting a strain on available housing and transportation options.
- Air and swift water rescue SAR assets may be required.
- Medical facilities in affected area may require patient evacuation and sheltering.
- Local law enforcement, fire, and EMS facilities may be damaged and/or require additional support.
- HAZMAT materials may be released in Green River Valley requiring ESF 10 support.



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CONSTRAINTS

- Ability to provide direct support to state is limited to their request of technical assistance prior to a declaration.
- Applicability of current FEMA policy (Pre-Disaster Emergency Requests, DAP-1001):
 - Requirements do address elements specific to this incident, such as:
 - State immediately threatened by incident that could result in major disaster declaration,
 - Qualified Agency affirms a catastrophic incident is “immediately imminent”,
 - Governor declares a State of Emergency,
 - Combined population of 100k or 3 counties under mandatory evacuation **OR** FEMA determines incident would be catastrophic and direct federal assistance is necessary to meet emergency needs.
- There is a high degree of uncertainty for accurately predicting imminent threat in the Green River basin:
 - Weather projection
 - Water in-flows into reservoir
 - Corps ability to store/release water (reservoir capacity)
 - Un-regulated tributaries into the Green River
 - Longer duration of higher than normal flows on the Green River compromising levee system (failure of levees during non-flood levels).
 - Multiple flood events in the same basin over the season.
 - Multiple flood events in several Western Washington River basins limiting resources available for Green River response.



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REGIONAL ADMINISTRATOR'S GREEN RIVER MISSION STATEMENT

FEMA Region X coordinates federal support to state, local and tribal agencies as requested by Washington Emergency Management Division. FEMA Region X will also anticipate potential requirements for additional support in order to supplement Washington State's original request based on un-forecasted events associated with a flood in the Green River basin.



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Green River Basin Flood Planning Workshop

Planning and Preparedness

Group Questions

Day 1



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Planning and Preparedness Partnerships

- Evacuation
 - *What partnerships should be developed to come up with an evacuation plan?*
- Feeding
 - *What partnerships should be developed to come up with a feeding plan?*
- Sheltering
 - *What partnerships should be developed to come up with an operational sheltering plan?*



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Planning and Preparedness Tools

- Evacuation
 - *What types of tools and templates would be helpful in developing an evacuation plan?*
- Feeding
 - *What types of tools and templates would be helpful in developing a feeding plan?*
- Sheltering
 - *What types of tools and templates would be helpful in supporting the development of a sheltering plan?*



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Planning and Preparedness Triggers

- Evacuation

- *How are evacuation trigger points developed, initiated, and communicated?*

- Feeding

- *How are feeding plan trigger points developed, initiated, and communicated?*

- Sheltering

- *How are sheltering plan trigger points developed, initiated, and communicated?*



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Green River Basin Flood Planning Workshop

Planning and Preparedness

Breakout Group Summary

Day 1



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Feeding Summary

■ Partnerships

- The Multi-Agency Feeding Taskforce brought together those responsible for coordination, implementation and support at the Local, State and Federal levels. This was an innovative and highly productive partnership that established a basic model for future planning efforts.

■ Tools

- The multi-agency feeding plan provided a framework to develop a coordinated, timely and efficient feeding plan.
- Through the feeding plan process, key issues were developed and incorporated into Synchronization Matrix and Asset Deployment Matrix.

■ Triggers

- The Multi-Agency Feeding Taskforce procurement SOPs provided a structured process for the group to clearly identify common trigger points to effectively activate, employ and deactivate feeding operations.



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Evacuation Summary

■ Partnerships

- Through our planning efforts we identified the need for an evacuation planning group comprised of:
 - Emergency management points of contact who coordinate evacuations
 - Agency leads who conduct evacuation operations
 - Agency and organizations who provide support services to evacuations

■ Tools

- Evacuation Support Planning Guide /ConOps / Incident Operations Supplement, Synchronization Matrix and Asset Deployment Matrix

■ Triggers

- A Multi-Agency Evacuation Taskforce (similar to the Feeding Taskforce) can provide a structured process for the group to clearly identify common trigger points to effectively activate, employ and deactivate evacuation operations.



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Sheltering Summary

■ Partnerships

- Through our planning efforts we identified the need for a Sheltering Taskforce comprised of:
 - Emergency management leads who coordinate sheltering support
 - Agency leads who conduct sheltering operations
 - Agency and organizations who provide support to sheltering activities

■ Tools

- The Synchronization Matrix, Asset Deployment Matrix, ADA best practices tool kit, ARC Mass Care materials, FEMA Mass Care materials, IAAM Mega Shelter Guide

■ Triggers

- A Multi-Agency Sheltering Taskforce (similar to the Feeding Taskforce) can provide a structured process for the group to clearly identify common trigger points to effectively activate, employ and deactivate sheltering operations.



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