



U.S. Department of Homeland Security

DAMS SECTOR SPECIFIC AGENCY CURRENT ACTIVITIES

By:

Cris Hughes

Michelle Yeziarski

Dams Sector Branch

Sector-Specific Agency Executive Management Office

Office of Infrastructure Protection



2009 Dams Sector Exercise Series Columbia River Basin (DSES-09)

Objective:

Develop an integrated regional disaster resilience and preparedness strategy for the Tri-Cities area that can be utilized for the broader Columbia River Basin region.



Tri-Cities:

Richland, Washington

Pasco, Washington

Kennewick, Washington



2009 Dams Sector Exercise Series Columbia River Basin (DSES-09)

Major Cooperative Effort Involving:

Federal Agencies – DHS, USACE, Bureau of Reclamation, NWS, FEMA

State Agencies – Washington Emergency Management Division

Local Agencies – County EMAs, Public Utility Districts, Private Sector Stakeholders

Canadian Agency – BC Hydro

Sponsors:



Homeland
Security



*Pacific NorthWest
Economic Region*



US Army Corps
of Engineers®

**State of Washington
Emergency Management**



2009 Dams Sector Exercise Series Columbia River Basin (DSES-09)

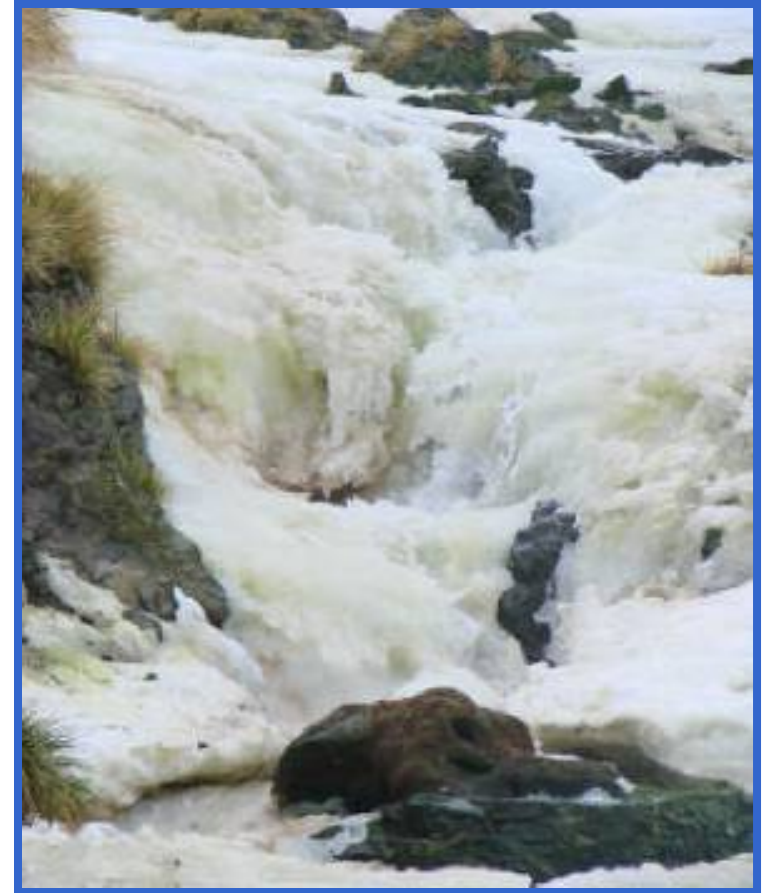




Exercise Organization, Planning, and Execution

Initial planning began in late 2008:

- o HSEEP guidelines utilized - Concepts & Objectives Meetings; Planning Conferences, Seminars, Workshops, Tabletop Exercises.
- o Objective – Develop an integrated regional disaster resilience and preparedness strategy.
- o Scenario – A severe rain-on-snow flood event affecting a large portion of the Columbia River Basin, taxing the levee system in the Tri-Cities area.



Timeframe is approximately one year and calls for the completion of DSES-09 in December 2009.



Exercise Organization, Planning, and Execution

Organized in Five Separate Tracks:

Track 1: Inundation Modeling and Mapping

Track 2: Pre-Disaster Operational Response

Track 3: State and Local Preparedness/Emergency Response

Track 4: Long-term Restoration/Economic Resilience

Track 5: Integrated Regional Strategy



Key Conclusions To Date

Areas to Sustain:

- Owners are familiar with their Emergency Action Plans (EAP)
- Meaningful collaboration with other owners
- Operational framework of the Columbia River Treaty Flood Control Operating Plan
- USACE NWD's Reservoir Control Center (RCC) control of water management



Key Conclusions To Date

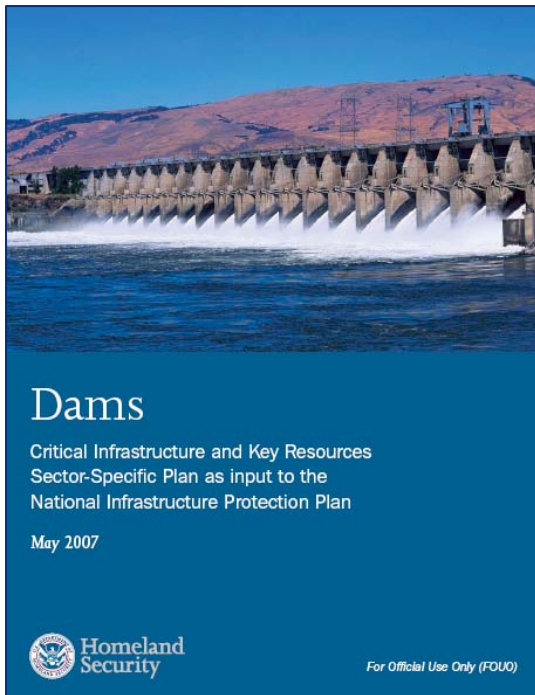
Areas to Improve:

- Updated inundation maps
- Flood coordination mechanisms with State and local Emergency Managers
- Flood impacts on Critical Infrastructure and Key Resources (CIKR)
- Review EAP notification of some agencies
- Regional synchronization of agency plans
 - Integrated Regional Strategy



Consequence-Based Top Screen

The Dams Sector consists of a very large number of assets.



An effective screening methodology is needed to minimize the resources required for detailed risk assessments.

The Consequence-Based Top Screen Methodology was developed and is being used for the current assessment.



Consequence-Based Top Screen

- CTS approach does not consider structural condition, deficiencies, vulnerabilities, or likelihood of the consequence-triggering event.
- CTS procedure based on indicators of potential impacts associated with severe damage, failure, or mission disruption.
 - **Human Impacts**: Impacts on human health and safety caused by inundation of downstream populated areas, industrial areas, and other critical infrastructure assets
 - **Economic Impacts**: Direct economic impacts associated with destruction, damage, or loss of benefits.
 - **Impact on Critical Functions**: “Capacity” parameters used as global indicators of potential indirect consequences, interdependencies, regional effects, impacts on public confidence, etc.

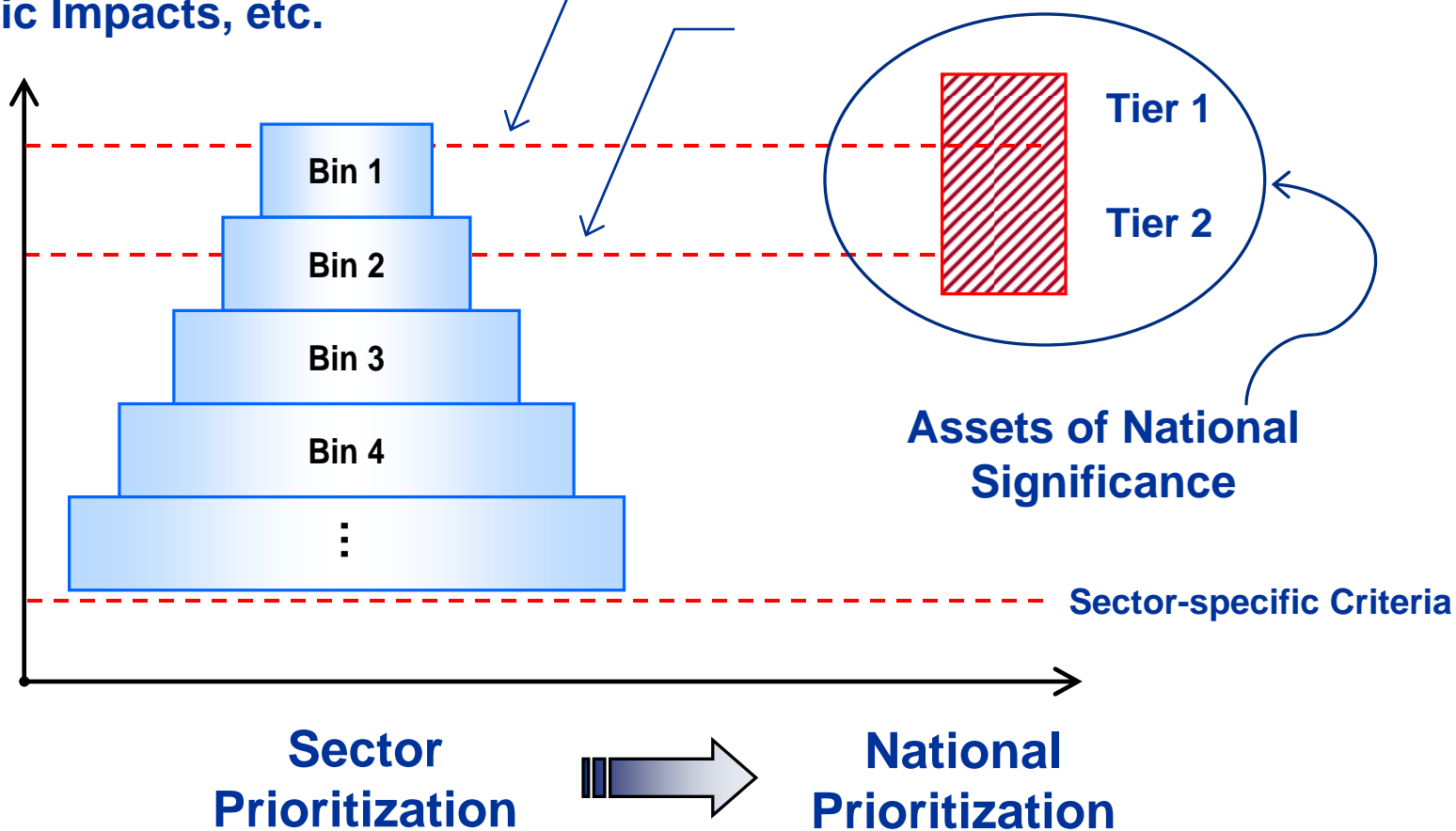


Sector Prioritization & Tier 1/2 Program

Consequence Scales:
Human Impacts,
Economic Impacts, etc.

Tier 1 criteria are common to all sectors

Tier 2 criteria are common to all sectors





Web-Based CTS Implementation

Homeland Security
Dams Consequence-Based Top Screen (D-CTS)

GRAND COULEE

Human Impact

Population at Risk (PAR)

Please use the following reports and maps to aid you in answering questions below:

- Report on Population Density
- Map of Population Density (Day Time) within 0 to 3 miles
- Map of Population Density (Night Time) within 0 to 3 miles
- Map of Population Density (Day Time) within 3 to 7 miles
- Map of Population Density (Night Time) within 3 to 7 miles
- Map of Population Density (Day Time) within 7 to 15 miles
- Map of Population Density (Night Time) within 7 to 15 miles
- Map of Population Density (Day Time) within 15 to 60 miles
- Map of Population Density (Night Time) within 15 to 60 miles

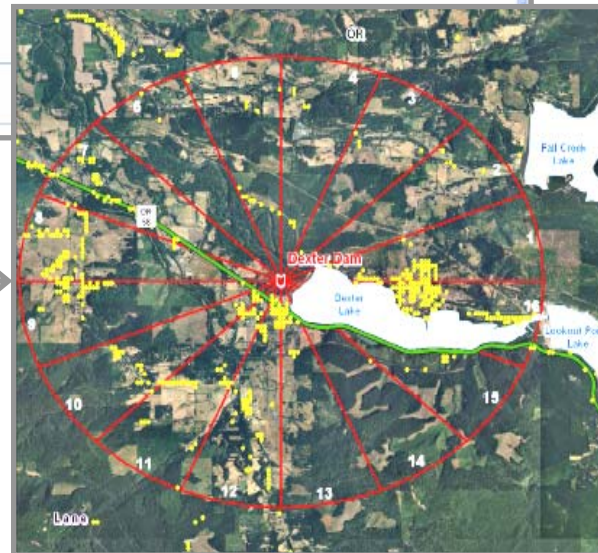
Provide an estimate for the Population at Risk within the distance specified from the facility occupying permanent residences, commercial buildings, and recreational areas located within the inundation area associated with the worst reasonable case scenario by selecting the appropriate range.

PAR 0-3 miles downstream

0

Remarks on determination of PAR within 0 and 3 miles:

- Interactive questionnaire, addressing general facility information, contact information, and potential impacts.
- Access to local/regional GIS-based analyses.



Area	Day Population	Night Population
1	117	368
2	22	267
3	19	182
4	22	141
5	26	251
6	3	35
7	429	312
8	103	250
9	71	143
10	62	180
11	93	206
12	130	767
13	48	221
14	2	23
15	10	26
16	799	533
Total	1,956	3,905



Web-Based CTS Implementation

- **Web-based CTS tool available until 24 June 09:**
 - **Available to owners and State dam safety offices.**
 - **Collected data will directly lead to initial development and validation of the 2009 list of critical assets for the Dams Sector.**
- **Will we capture all of the “important” facilities?**
 - **Not the first year.**
 - **Process to be conducted annually.**



Homeland Security

For Additional Information:

dams@dhs.gov