

Delta Risk Management Strategy



California Bay-Delta Public Advisory
Committee
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Sacramento-San Joaquin Delta



The Legal Delta:

738,000 acres
~ 60 islands/tracts
1,115 miles of levees

- 3 State Highways
- Major Rail Lines
- Major Water and Natural Gas Pipelines
- 1 Critical Natural Gas Reservoir
- 2 Deep Water Ports
- Major Power Transmission Lines



Delta Services

- Supplies water to more than 22 million Californians, industry and agriculture
- Water supply supports \$400 billion state economy
- Home for more than 400,000 people
- Habitat for 500 species
- Highways, pipelines, power distribution, railroads, and deep water ports



Development of DRMS

- **2000: CALFED ROD Called for Risk Assessment of Delta Levees**
- **2005: Levee Risk Analysis Team**
 - Did Preliminary Work (Seismic only)
 - Developed Project Scope for DRMS
- **2005: AB 1200 Enacted**

AB 1200

DWR Shall Evaluate Potential Impacts on 50, 100, 200-year projections on possible impacts to Delta from:

- Subsidence
- Earthquakes
- Floods
- Climate Change
- Combination of above

AB 1200

DWR to Determine Principal Options for Delta to:

- Prevent Disruption of Water Supplies**
- Improve the Quality of Water Supplies**
- Reduce Salts, Maintain Water Quality**
- Preserve, Protect, Improve Delta Levees**
- Protect Water Rights/Environments of River Systems**
- Protect Infrastructure within Delta**

Report Due – January 2008

DRMS Contract

URS Corporation, Oakland, CA

- Over 20 subcontractors**
- Approved by DGS - March 6, 2006**
- 3-year contract**

DRMS Technical Memoranda

- Seismology (PSHA)
- Ecological Impacts (Ecosystem)
- Subsidence
- Levee Vulnerability
- Flood Hazard
- Wind Wave Analysis
- Climate Change
- Water Analysis Module (Hydrodynamics)
- Geomorphology
- Impact to Infrastructure
- Economic Consequences
- Emergency Response & Repair
- Risk Assessment (Available 3/16)

DRMS Phase I

- **Risk Analysis to Evaluate the Impact to Delta Levees from:**
 - Floods
 - Earthquakes
 - Subsidence
 - Normal Conditions
 - Climate Change
- **Consequences to Economy & Eco-System based on Risks**
- **Draft Risk Assessment Report submitted May 2007**
 - Public Draft mid-June 2007
 - Independent Review by CALFED – June – August '07

Summary of Key Findings

Probability of flood-related levee failure

- increases by 10% in 2050
- Increases by 24% in 2100

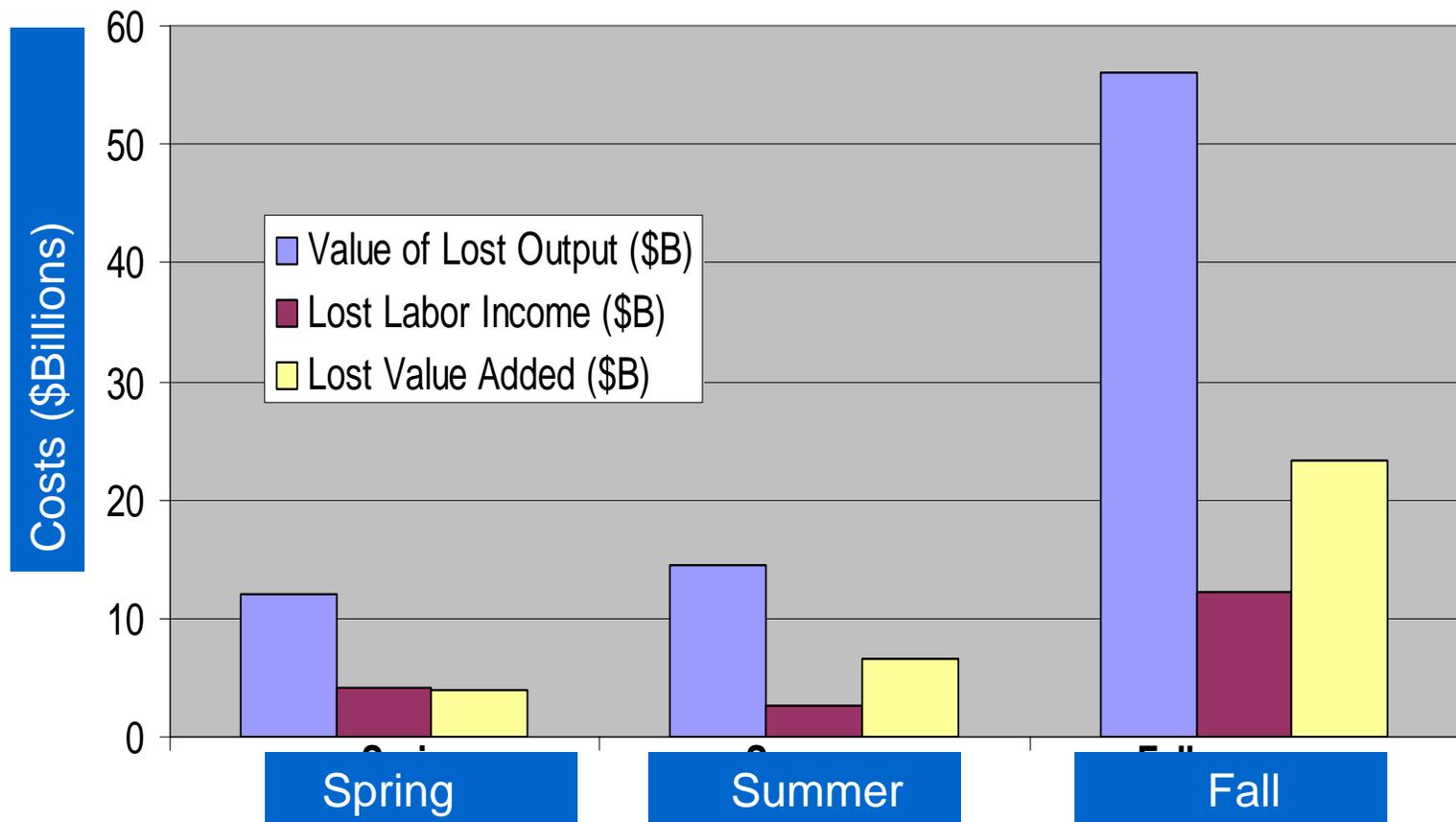
Probability of seismic-related levee failure

- increases by 12% in 2050
- increases by 27% in 2100

3 feet of sea level rise would push the salt line about 3 miles to the east

Economic Impacts

Analysis Case 6 (30 Flooded Islands, 6 Damaged)



DRMS Phase II

- **Development of Risk Reduction/Risk Management Strategies for Long-Term Management of Delta**
 - Draft Final Report Due August '07
 - Public Review Draft – Oct '07
 - Independent Review by CALFED – Oct – Nov '07
 - DRMS Final Report – November 2007
- **Recommendations for future work/studies in the Delta**

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