



CWCB Board Meeting Sept 14, 2010

Overview of the 2010 Colorado Flood Hazard Mitigation Plan Update

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Overview: Plan Update Highlights



- Revised in accordance with State Hazard Mitigation Plan Update, Disaster Mitigation Act requirements
- More comprehensive vulnerability assessment
- Revision of state flood mitigation goals
- Assessment of progress made on existing mitigation actions
- New mitigation actions

Flood Mitigation Advisory Committee



| Name | Organization |
|-------------------|--|
| Iain Hyde | CDEM |
| Victoria Smith | CDEM |
| Steven Griffin | CDOT |
| Tom Schreiner | CDOW |
| Robyn Koons | CDPHE |
| Cindy Lair | CO State Dept of Ag, State Conservation Board |
| Wendy Ryan | Colorado Climate Center |
| Chris Sturm | CWCB |
| Cristina Martinez | CWCB |
| Joe Busto | CWCB |
| Kevin Houck | CWCB |
| Thuy Patton | CWCB |
| Tom Browning | CWCB |
| Barry Cress | DOLA |



Vulnerability Assessment



More comprehensive, detailed vulnerability assessment based on

- FEMA Level 1 HAZUS 100 year flood analyses by County
- Effective DFIRMs
- Risk Management Facilities data – geolocated by CDEM for State Hazard Mitigation Plan
- Local Mitigation Plans
- NFIP claims/Repetitive Loss properties
- Levee databases
- Consequence/Impact Analysis
- Recent flood events



Relative Risk Rankings



Total Direct Economic Building Loss

1. Denver
2. Arapahoe
3. Boulder
4. Larimer
5. Adams
6. El Paso
7. Pueblo
8. Jefferson
9. Weld
10. Eagle

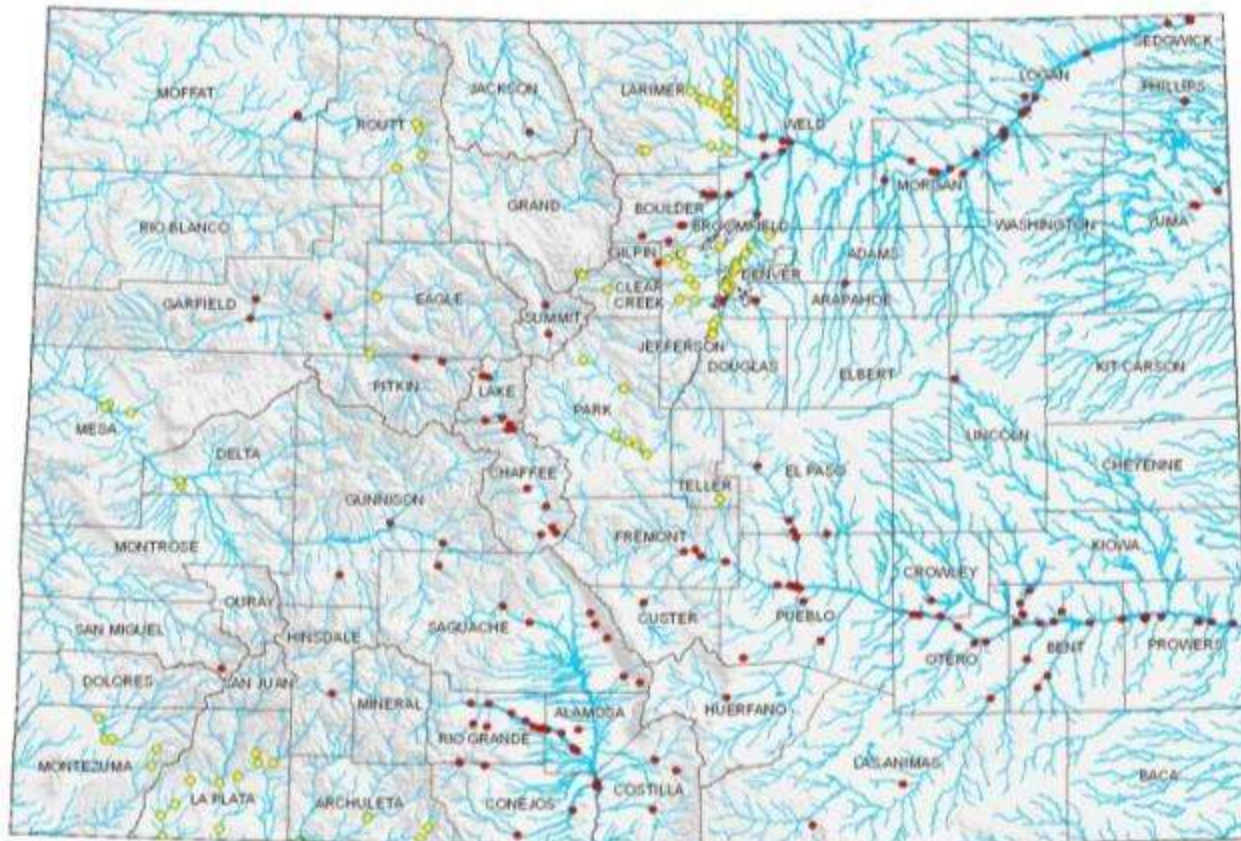
Total Per Capita Loss

1. Prowers
2. Phillips
3. Mineral
4. Eagle
5. Hinsdale
6. Summit
7. Clear Creek
8. Pitkin
9. Morgan
10. Moffat

State Facilities Risk Assessment



Colorado HAZUS 100-year Floodplains and State Assets Potentially at Risk to Flooding



Map compiled 7/2010; intended for planning purposes only
Data Source: FEMA Region VIII, HAZUS-MH MR2,
Colorado Division of Emergency Management

0 25 50 Miles

- DFIRM Flooded State Assets
- HAZUS Flooded State Assets
- HAZUS 100-year Flood
- Counties

472 facilities in
HAZUS 100 year
floodplain value of
\$828 M

802 (654 owned, 148
leased) Total in
DFIRM and HAZUS
floodplains
\$1.1 Billion

Greatest exposure:

- Dept of Education facilities
- Dept of Corrections facilities
- Residences/Housing

Local Capabilities and Actions



- 26 local and regional hazard mitigation plans encompassing 42 counties were reviewed for trends in current capabilities and proposed mitigation actions

| Current Mitigation Capability | # of Counties |
|--|---------------|
| Enforcement of bldg codes, development regulations, etc. | 30 |
| Early warning systems | 24 |
| Participate in NFIP | 23 |
| Outreach and education | 19 |
| Channel modifications, storm drainage improvements, etc. | 19 |
| Hazard studies and mapping | 16 |
| Erosion and sediment control | 15 |
| Critical facilities protection | 10 |
| Elevation and floodproofing | 9 |
| Designated StormReady | 6 |
| CRS Participation | 4 |
| Property acquisition/relocation | 3 |

| Proposed Mitigation Action | # of Counties |
|---|---------------|
| Conduct hazard studies/new mapping | 39 |
| Channel modifications, storm drainage improvements, etc. | 37 |
| Outreach and education | 33 |
| Critical facilities protection | 30 |
| Improve early warning systems | 29 |
| Continue NFIP Compliance | 29 |
| Encourage further NFIP participation | 18 |
| Adopt/revise building codes, land development regulations, etc. | 15 |
| Property acquisition/relocation | 14 |
| Erosion and sediment control | 11 |
| Pursue StormReady designation | 10 |
| Elevation/floodproofing | 9 |
| Consider joining CRS | 2 |
| Improve CRS rating | 1 |



Revised Flood Mitigation Plan Goals

1. Reduce flood impacts to Colorado's economy, people, state assets, and environment
2. Promote awareness and education of flood hazards and watershed protection
3. Promote the development of hazard mitigation plans with multiple objectives
4. Coordinate and provide technical assistance for State, local and watershed planning efforts
5. Continue to update and develop floodplain maps for risk assessment, planning and awareness applications
6. Promote and encourage the adoption of model codes and higher standards that emphasize hazard mitigation

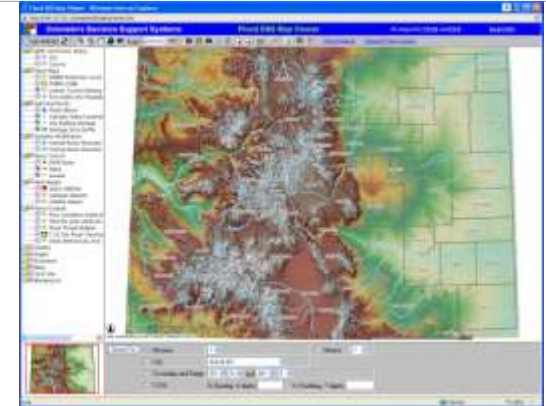


Progress on Mitigation Initiatives



■ Flood DSS Development

- Provides organized database of statewide flood hazard information. Intended to provide users with clearer, timelier information to enable improved decision-making



- Development and approval of a state-wide criteria manual for floodplain and stormwater management
- Implementation and progress associated with the Flood Map Modernization Program/RiskMAP
- Floodplain management training workshops and seminars presented by the CWCB CAP Coordinator
- Increase in NFIP policies and coverage
- Funding and Technical Assistance supporting local flood mitigation and watershed protection projects

New Mitigation Projects in 2010



- Floodplain Rules and Regulations Revision and promotion of higher floodplain standards
- CDOT 'scour critical' bridge identification and mitigation
- Community outreach and education
 - Develop a K-12 curriculum for youth flood education
- Develop floodproofing manual for local officials and property owners
- Develop Certified Floodplain Manager online review course
- Mobile radar truck
 - localized radar will improve storm prediction and early warning capabilities
 - Also includes expanding the network of stream gages across the State
- Develop benefit-cost analysis for proposed floodplain rules and regulations
- Develop a statewide CRS strategy



Questions?



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