RIVER RECREATION AND CONSERVATION: LESSONS FROM COLORADO’S 2013 FLOODS

SORP | RMIS
May 2016
Agenda

• Why Are You Here?
• Land Use Resiliency
• Public Outreach Dialogue
• Recreation and Land Conservation for Rivers
Paradigm Shift

“The good life of any river may depend on the perception of its music; and the preservation of some music to perceive.”

- Aldo Leopold. Song of the Galivan essay in Sand County Almanac.

“To those who know the speech of hills and rivers straightening a stream is like shipping vagrants—a very successful method of passing trouble from one place to the next. It solves nothing in any collective sense.”

- Aldo Leopold, For the Health of the Land: Previously Unpublished Essays And Other Writings
Paradigm Shift

“The principal waterway in Boulder is Boulder Creek, and its principal function, from which there is no escaping, is to carry off storm-water which runs into it from the territory which it drains….

If, lulled by the security of a few seasons of small storms, the community permits the channel to be encroached upon, it will inevitably pay the price in destructive floods.”

- Frederick Law Olmsted Jr., 1910 Flood Control Plan for City of Boulder
Paradigm Shift: No money for an ounce of prevention
Altruism
Altruism

• If we really wanted to really help…
• Mercy and tough love
Lasting Impact
Big Thompson Canyon Pre-Flood
Colorado’s Floods

1976 Flood

2013 Flood - Idlewylde Dam
Colorado’s 2013 Floods

*Pre-Flood*

Morey Natural Area

*Post-Flood*
Colorado’s 2013 Floods

Pre-flood
Loveland West+ Big Thompson Multi-Use Trail

2013 Post-flood
Colorado’s 2013 Floods
Colorado’s 2013 Floods

2013 Flood

Narrows Park

2015 photo showing height of debris left in trees
Colorado’s 2013 Floods

Forks Park and Upper Drake Area

2013 Flood. Source: CDOT

2013 Post-flood
Colorado’s 2013 Floods

Pre-flood
Fishing Pier

Post-flood
Colorado’s 2013 Floods

2013 Flood. Source: CDOT

Cedar Cove + Trailhead/Trail

2015 photo post clean up
River Restoration Master Plans – In Scope

Rivers addressed
- Big Thompson River
- Upper Big Thompson River
- Little Thompson River
- Fish Creek & Fall River
- South Platte River
- Boulder Creek
- St Vrain River
- Left Hand Creek
- Upper Coal Creek
- Fourmile Creek

Prioritized the most critical interventions river-wide

Driven by:
- Public safety
- Protection of public infrastructure
- Protection of private property
- Aesthetics
- Ecological function
- Water quality
- Fisheries and recreation
- Fiscal resilience
River Restoration Master Plans – Out of Scope

Land Use Resilience
• Removing at-risk private investments from rivers
• Incentives to encourage permanent relocation
• Updating floodplain mapping (51% of structures destroyed were outside of the 100-year floodplain)
• Revising floodplain regulations

Regional Dialogue
• River Coalitions chaired by those with a vested interest in preserving their self-interest (status quo)
• Dialogue typically limited to those most financially or emotionally traumatized

Land Conservation
• Watershed Scale
• Parcel prioritization
• Funding sources

Recreation Demand and Opportunities
• River access
• Trail corridors
Lasting Impact: Land Use Resiliency in Floodplains

- Comprehensive Plan
- Corridor Studies
- Zoning
- Floodplain Regulations
- Update Floodplain Mapping
- Map Fluvial Hazard Zones (lateral + erosive + inundation)
- Hazard Mitigation Plans
- ULI and APA Workshops

- Fiscal Impact Models
- Resiliency Plan
- Political Will: NFIP Regulation’s “Shall” often gets ignored
- Remove Market Subsidies
Public Outreach Dialogue

- History of flooding and attempts at consensus building

- Change of circumstances creates a change in conservation
Types of Stakeholders

- Landowners
- Coalitions
- Agencies
- Recreational users
- Political leaders

Types of Outreach

- Community meetings
- One-on-one meetings
- Interactive Workshops and Mapping
- Surveys (Resources and needs)
Factors that Influence the Stakeholder Process

- Agency capability
- History of trust and relationships
- Demographics/Land use
- Extent and type of flood damage
- Resource availability
## Depth of Participation

<table>
<thead>
<tr>
<th>Extent of Damage</th>
<th>Level of Resources</th>
<th>Depth of participation</th>
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<tbody>
<tr>
<td>Higher</td>
<td>Exceeds capacity</td>
<td>Multi-sector and in-depth deliberative process</td>
</tr>
<tr>
<td>Lower</td>
<td>Exceeds capacity</td>
<td>Narrow, sector specific but with varying levels of outreach</td>
</tr>
<tr>
<td>Lower</td>
<td>Within capacity</td>
<td>Limited to no public participation</td>
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Boulder, Longmont, Lyons, Loveland, Estes Park, Evans, Greeley

Source: Albright and Crow, Urban Climate, 2015
A BIGGER VISION FOR THE BIG T:
A RECREATION AND CONSERVATION ASSESSMENT
“The Big Thompson River corridor will be a renowned resource that combines abundant wildlife and high quality scenery with access via public property to river-related recreation opportunities. Strategic recreation and conservation investments along the Big Thompson River and its tributaries will mitigate flooding impacts, strengthen tourism, improve and restore a resilient river ecosystem, and benefit the people who live in and visit the Big Thompson Canyon.”
Public feedback themes – Conservation

Identified conservation opportunities focused on fisheries and restoration of a healthy river ecosystem. Other comments highlighted the importance of restoring vegetation and protecting floodplains from encroachment through the use of conservation easements and other protection strategies.
Funding Opportunities & Challenges

- FEMA Hazard Mitigation
- CDBG-DR
- NRCS Restoration
- Great Outdoors Colorado
- Help Preserve Open Space Tax
“We shall never achieve harmony with the land, anymore than we shall achieve absolute justice or liberty for people. In these higher aspirations the important thing is not to achieve but to strive.”

- Aldo Leopold, Round River: From the Journals of Aldo Leopold