

# USDA Forest Service Payments for Watershed Services



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Exec Director  
Office of Sustainability & Climate Change



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# Our mission

“To sustain the health, diversity, and productivity of America’s forests and grasslands for the benefit of present and future generations.”



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# USDA Forest Service Snapshot

- Manages 193 million acres in 44 States and territories
- 154 National Forests, 20 National Grasslands and nine National Monuments
- FS programs restored or enhanced more than 4.7 million acres of public and private forest lands in FY 2015, making them more resilient to the effects of wildfire and other stressors



Flathead National Forest, Montana



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# Watershed Services

- The National Forest System of the U.S. Forest Service (USFS) provides drinking water to more than 60 million Americans
- Estimated value of watershed services from National Forests and Grasslands: \$3.7 billion annually
- Watershed health important for:
  - ▣ Water quality and supply,
  - ▣ Minimize sedimentation load
  - ▣ Enhance ecosystem health,
  - ▣ Maintain recreational values
  - ▣ Public safety.



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# Connecting Providers & Beneficiaries

## Determine:

- ❑ Ecosystem service benefits & value
- ❑ Who delivers the value
- ❑ Who benefits



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# US Forest Service Role

- Ecosystem service provider for public benefits
- Financer of ecosystem services
- Conduit between fund exchange and services
- Catalyst of innovative solutions

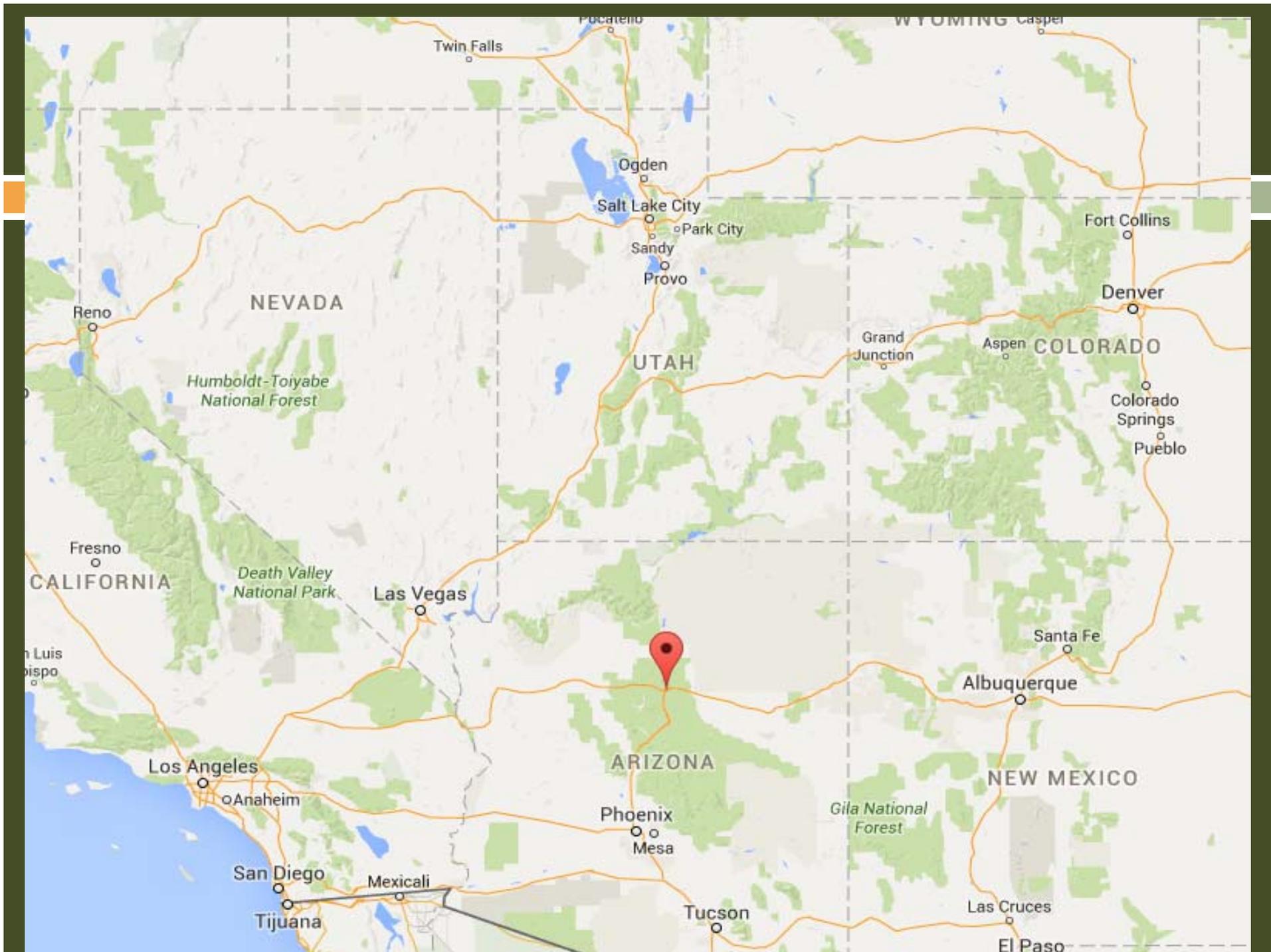


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# The Flagstaff Watershed Protection Project: A Unique Partnership

Erin Phelps  
USDA Forest Service





# Schultz Fire -2010



ERI-Issues in Forest Restoration

## A Full Cost Accounting of the 2010 Schultz Fire



 NORTHERN ARIZONA  
UNIVERSITY  
Ecological Restoration Institute

 NORTHERN ARIZONA  
UNIVERSITY  
The W.A. Franke College of Business



Arizona Rural Policy Institute—Northern Arizona University

Estimated total impact: **\$133 million - \$147 million**. The major costs and drivers explored are the following:

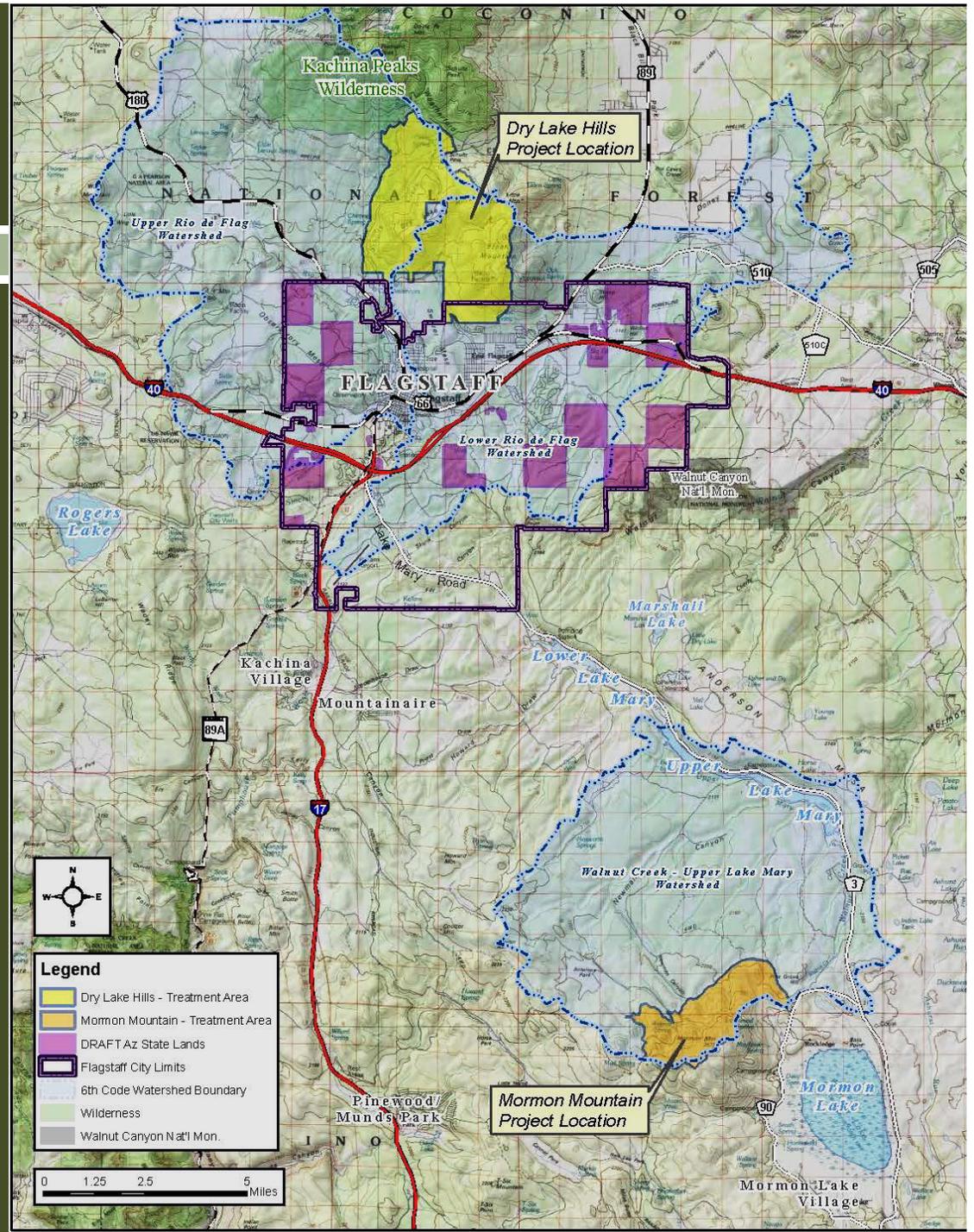
- Loss in personal wealth due to reduced property values: \$59,353,523
- Official expenditures of government agencies and utilities: \$59,104,394
- Destruction of habitat: \$400,000–\$14,200,000
- Loss of life: \$6,000,000
- Structural damage: \$3,097,978
- Cleanup: \$1,825,127
- Unpaid labor: \$1,516,103
- Armoring against flooding: \$823,100
- Fire evacuation costs: \$223,572
- Flood Insurance Premiums: \$198,034

# FWPP Area

10,544 acres total on federal land (USFS):

- 7,569 acres in the Dry Lake Hills
- 2,975 acres on Mormon Mountain

140 acre Navajo Nation parcel  
3,000 acres AZ State  
Portions of City land



# Framework for City/FS Cooperation

## **Two Memorandums of Understanding (MOU)**

- documenting cooperation between agencies
- establishing Cooperating Agency status for the City

## **Master Participating Agreement (financial)**

- **Supplemental Project Agreements**

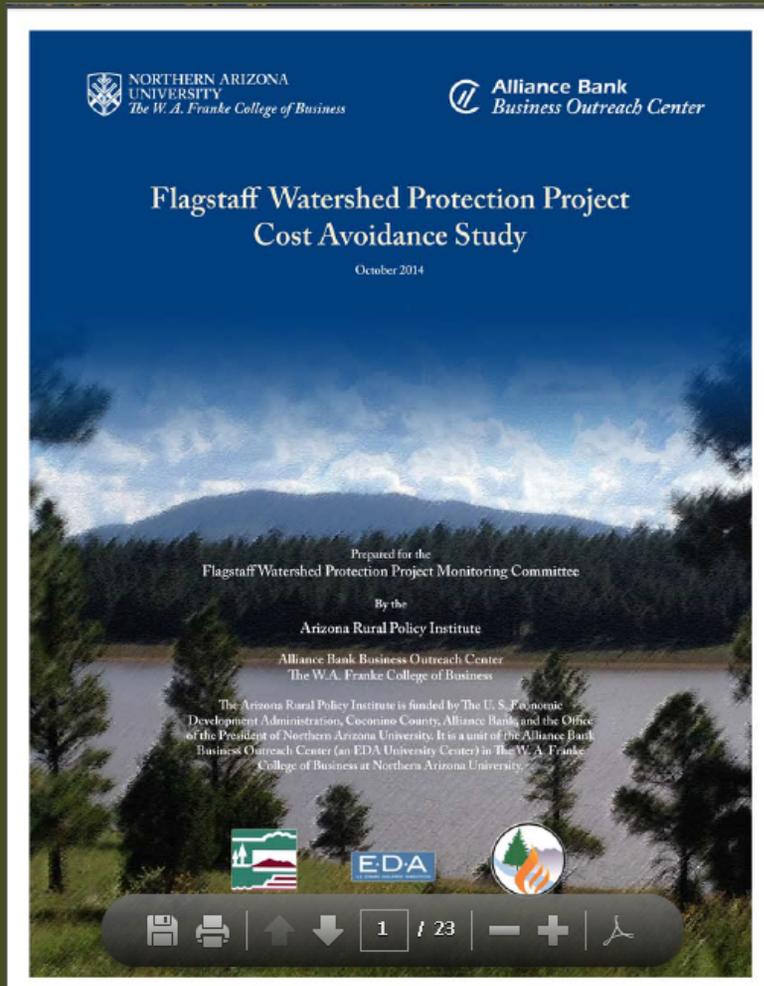
## **Joint Community Outreach Efforts**

- Communication Group
- Tribal Involvement Group
- Implementation Group

# Project Timeline:

- **November 2012:** \$10m bond passed by Flagstaff voters with 74% approval rate
  - ▣ Planning (NEPA) team established
- **April 2013:** NOI published/Proposed Action released for 30-day scoping period
- **July 2014:** DEIS published, 45-day comment period
- **December 2014:** Biological Assessment submitted to USFWS
- **July 2015:** FEIS and draft Record of Decision published
- **Sept 2015:** Objection Resolution Meeting
- **October 2015:** Final Record of Decision signed

# Connecting Providers & Beneficiaries



Cost avoidance:  
**\$573 million to  
\$1.2 billion**

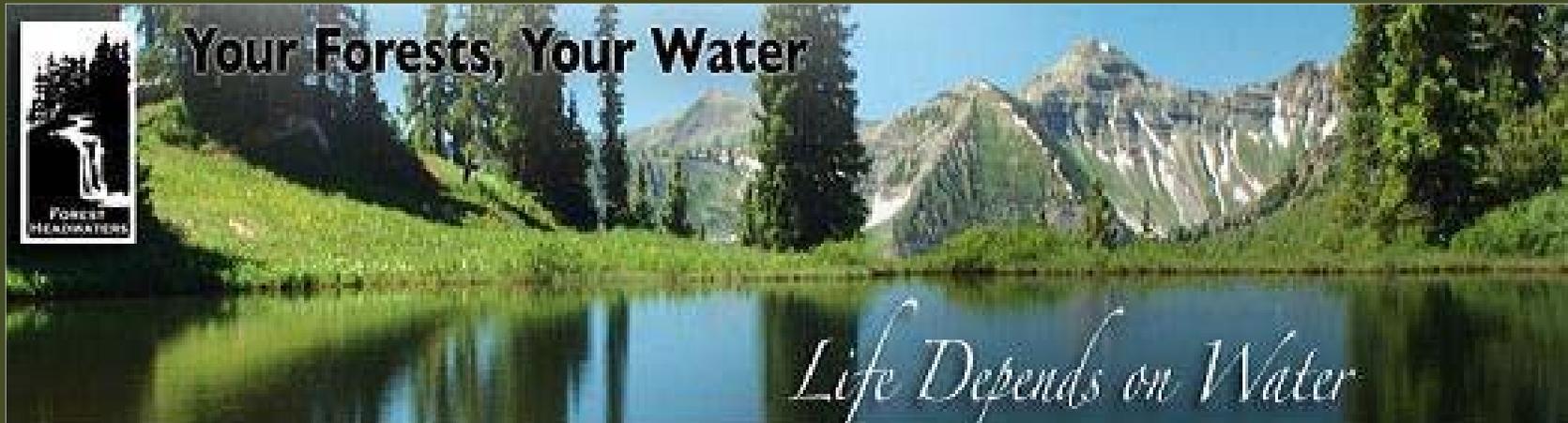
# US Forest Service Restoration Projects

<http://www.fs.fed.us/restoration/CFLRP/results.shtml>



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# Forest to Faucets Partnership: Denver Water Project

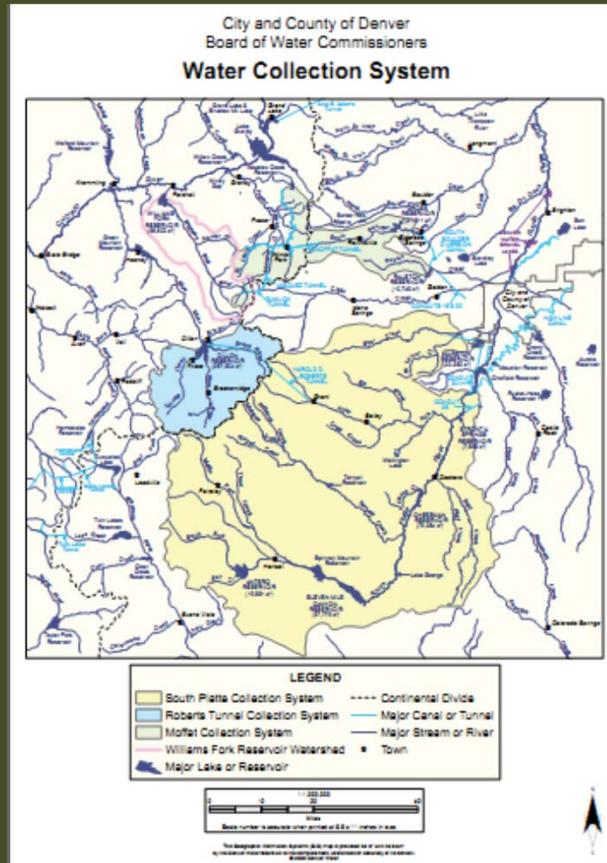


- Denver watershed provide water for 1.3 million people
- Hayman Fire in 1996 added \$10 million in costs for water treatment alone after heavy rain flushed > 1 million cubic yards of sediment in single reservoir
- Fire suppression and millions of acres of bark beetle infestations increased future fire risk



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# The Need



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# The Partnership

- Denver Water
- US Forest Service
- CO State Forest Service
- US Bureau of Land Management
- CO Dept. of Public Health & Environment
- US Natural Resources Conservation Service
- Colorado Forest Restoration Institute, Arbor Day Foundation, Colorado Springs Utilities, Front Range Roundtable, Rocky Mountain Tree Ring Research, Coalition for the Upper South Platte, Waldo Fire Recovery Group)



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# The Project

- Each partner agreed to invest \$16.5 M each over 5 years to complete projects
- Denver Water instituted mandatory rate increase of approximately \$0.14 per bill over duration of partnership
- Project activities occur across 38,00 acres in zones of concern
- Partner leverage of US Forest Service investment 1:10



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# Corporate Beneficiary: Coca Cola

Partnership between USFS, Coca-Cola, the National Fish and Wildlife Foundation, and the National Forest Foundation

- Federal dollars spent on these projects have been matched two-to-one

## Completed projects:

- Stream channels rehabilitated to help provide clean water for Denver area
- California's Sierra Nevada Mountains - restore natural flow through a meadow to improve the watershed that supplies the East Bay area.

## New projects:

- Near Chicago, restore drained wetland to help replenish aquifer.
- Removal of invasive weeds on California's Angeles NF to improve Los Angeles water supplies.
- Restore natural flow of a New Mexico stream to improve water quality and groundwater storage.



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# Summary

- Federal agencies play a role in connecting water providers and beneficiaries
- Water users determine the value of water services and investments
- Financing innovation allows investments to occur. Many models.



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# Thank you



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