PROPOSAL
Accelerate restoration and improve management across the watershed.
Over $145 million in costs since 1996 and 2002 fires

- $30 million dredge primary reservoir
- $42 million + fire suppression costs
- $37 million restoration costs
- $39 million destroyed structures
“We’ve realized the water does not come from the streams, it comes from the forest.”

-Denver Water Board member
Fire: Current Conditions
Primary Goals of the Project

• Calculate the avoided costs of increasing forest treatments in high fire risk areas and compare to current conditions

• Identify treatment scenario for most net benefits (benefits minus costs) to maximize net benefit of treatment

• Develop an investment platform to quantify and track environmental improvement within the watershed

• Encourage new investment in forest treatment to increase pace and scale

• Connect users of ecosystem services, such as water, to its source
Core Team:
• US Forest Service Region 5
• The Nature Conservancy
• Sierra Nevada Conservancy

Advisory and Technical Teams:
• East Bay Municipal Utility District
• Pacific Gas & Electric
• Eldorado National Forest
• Stanislaus National Forest
• Bureau of Land Management
• Sierra Pacific Industries
• Environmental Defense Fund
• Native American Community
• Foothill Conservancy
• Sustainable Conservation
• Department of Water Resources
• CALFIRE
• Department of Water Resources
• Local Fire Districts
• Amador and Calaveras Counties
Results: Hillslope scale erosion predictions for current land cover (No Fire)
Inputs: Flame length predictions reclassified to burn severity

For the Mokelumne Basin
12% of the area predicted not to burn
41% predicted to burn at low severity
29% moderate severity
18% high severity
How Much Is That?

- Unit # 103 on the previous map is approximately 2,000 acres in size.
- Average estimated erosion from that unit is 200 megagrams per hectare.
- If that unit was struck by fire and then eroded, how many dump trucks would that eroded sediment fill?
How Much Is That?

Each one of these can carry 50,000 lbs

Have a length of 32.5 feet

If all of the eroded sediment from that unit filled these trucks to their max capacity and they were set end to end, how far would it stretch?
If parked end-to-end, it would fill enough dump trucks to stretch from the conference center to the Emigrant Gap exit on I-80, just over 40 miles.
Treatment Area Selection Process

- Stakeholder driven – both location and type/intensity of treatment;
- High-level perspective – 100,000-acres covered, overlooks many implementation obstacles;
- Designed to highlight areas where treatments are most effective to guide future work; and,
- Future work will focus on smaller areas with more realistic boundaries and treatments.
Next Steps

- Complete modeling process
- Calculate the Avoided Costs
- Determine strategic areas where the cost/benefit is greatest to design more specific and realistic sized-treatments