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Fighting Fire with Finance

The Forest Resilience Bond

Todd Gartner; Director; Natural Infrastructure Initiative; WRI

World Water Week; Stockholm; August 28, 2018



Photo Credit: SF Gate

North Fork, Feather River, CA 1890-1993

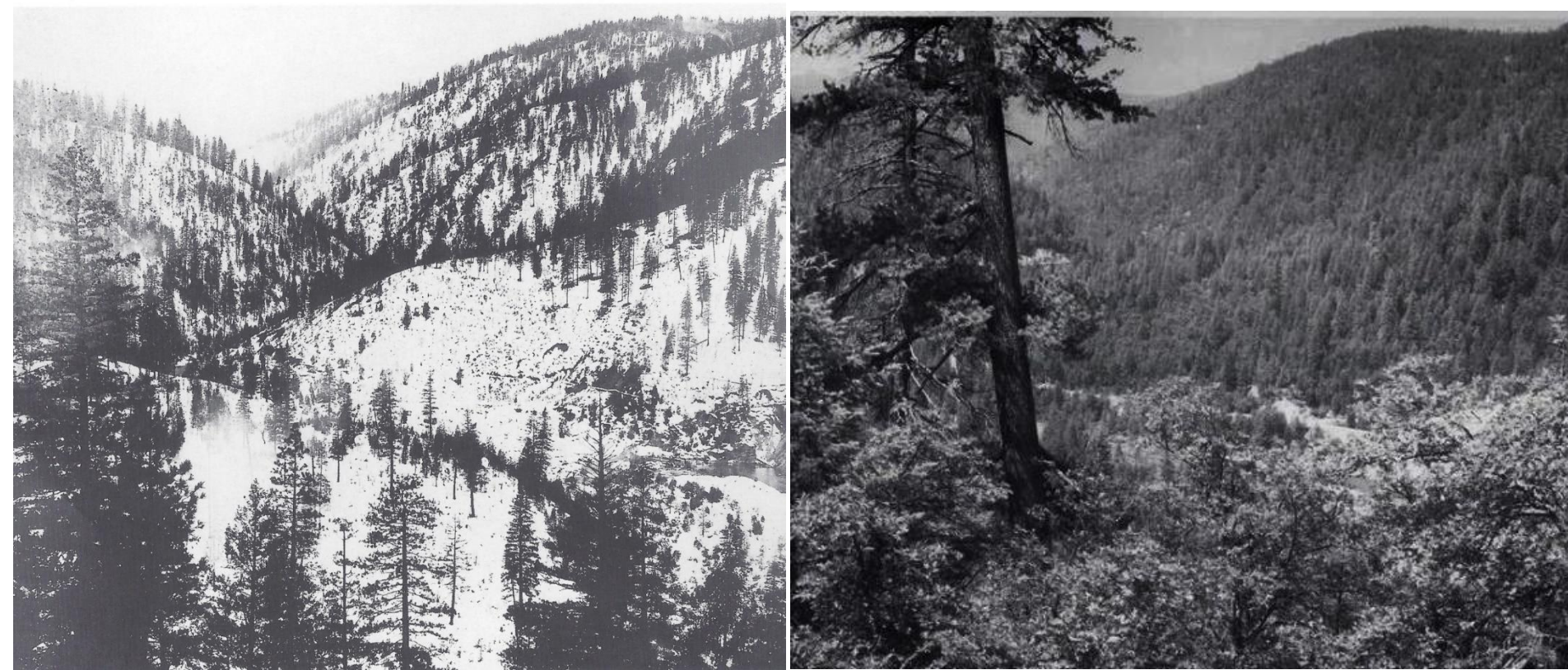


Photo Credit: George E. Gruell, Fires in the Sierra Nevada, 2001

Forest Restoration as a Solution

Overgrown



Restored



Forest Restoration Benefits

Reduced fire risk to infrastructure

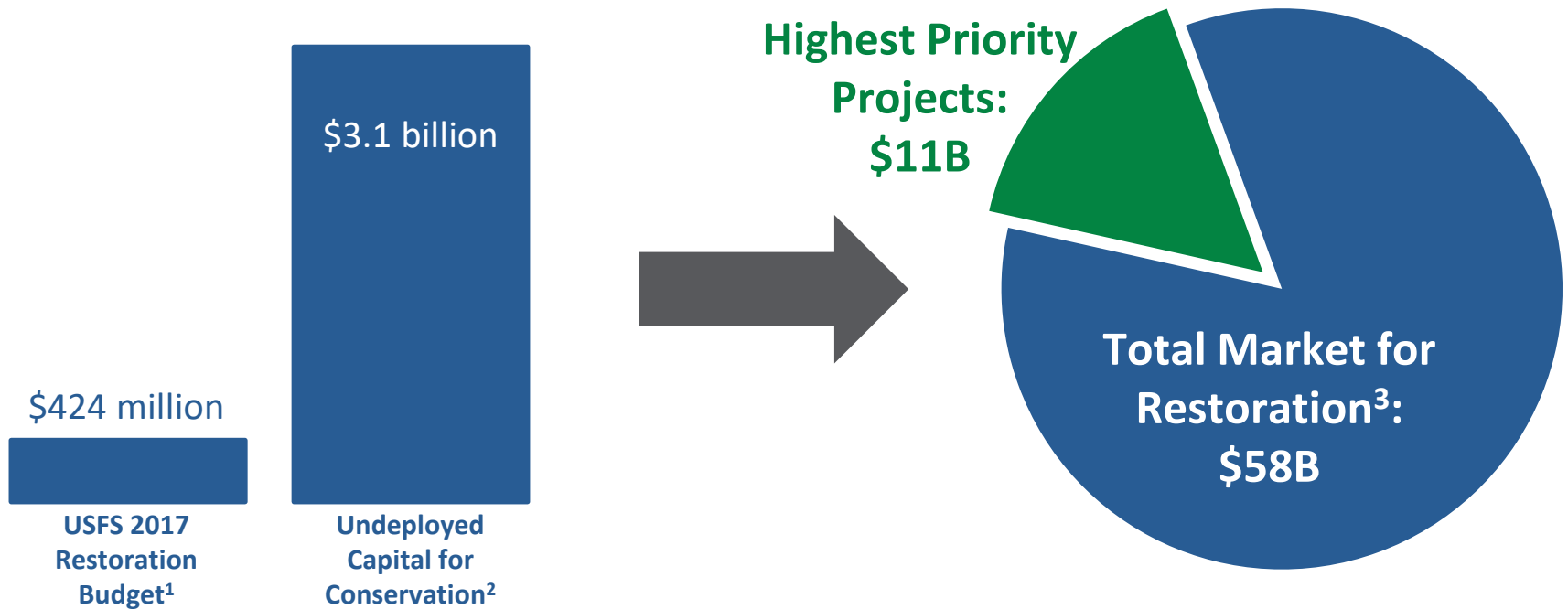
Potential to increase and sustain water quantity

Protected water quality

Job creation & economic security



Opportunity for Private Capital



Advantages of Private Capital

Infusion of capital

Cost sharing

Larger projects

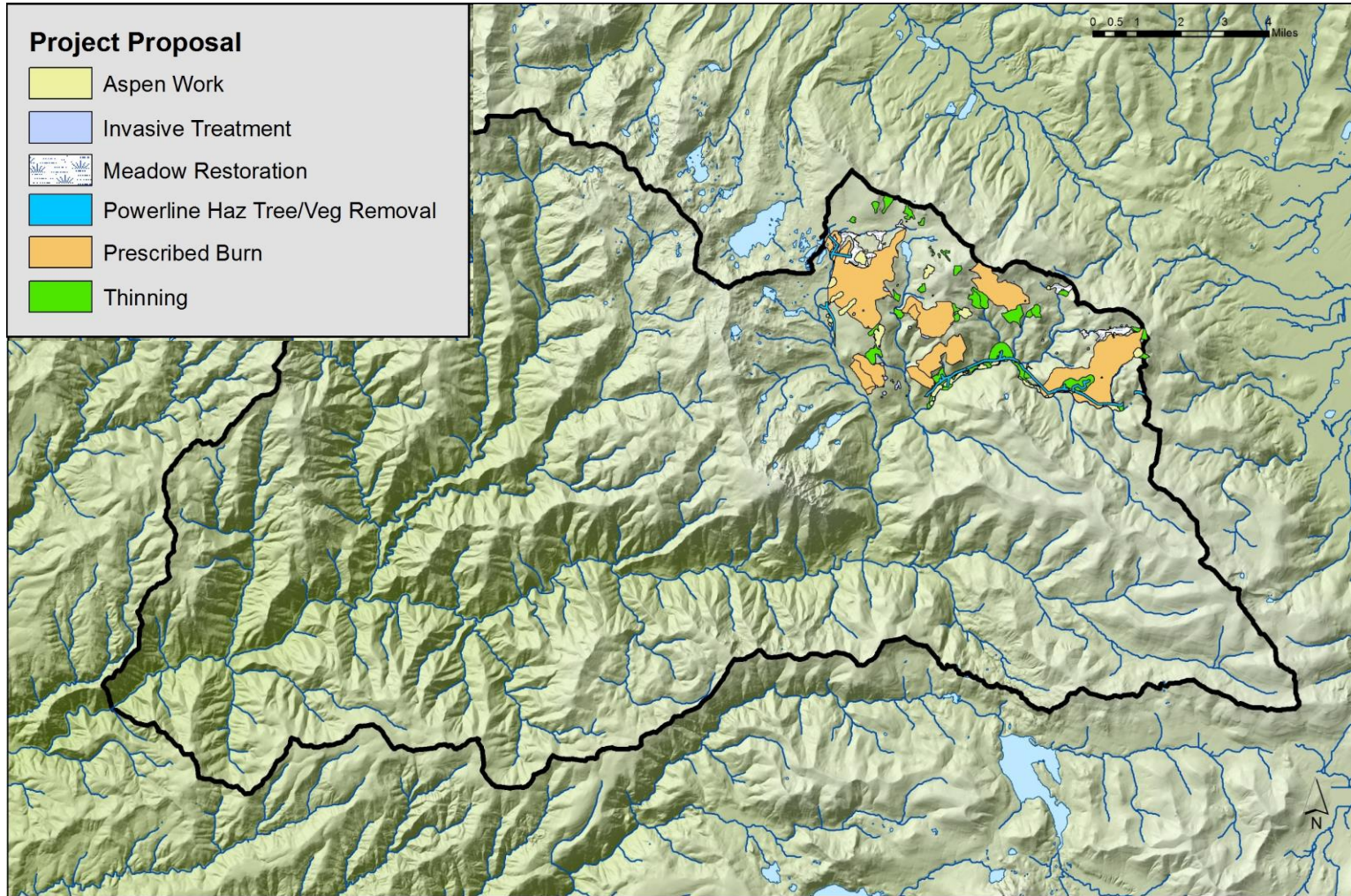
Project catalyst

Ex-post payments

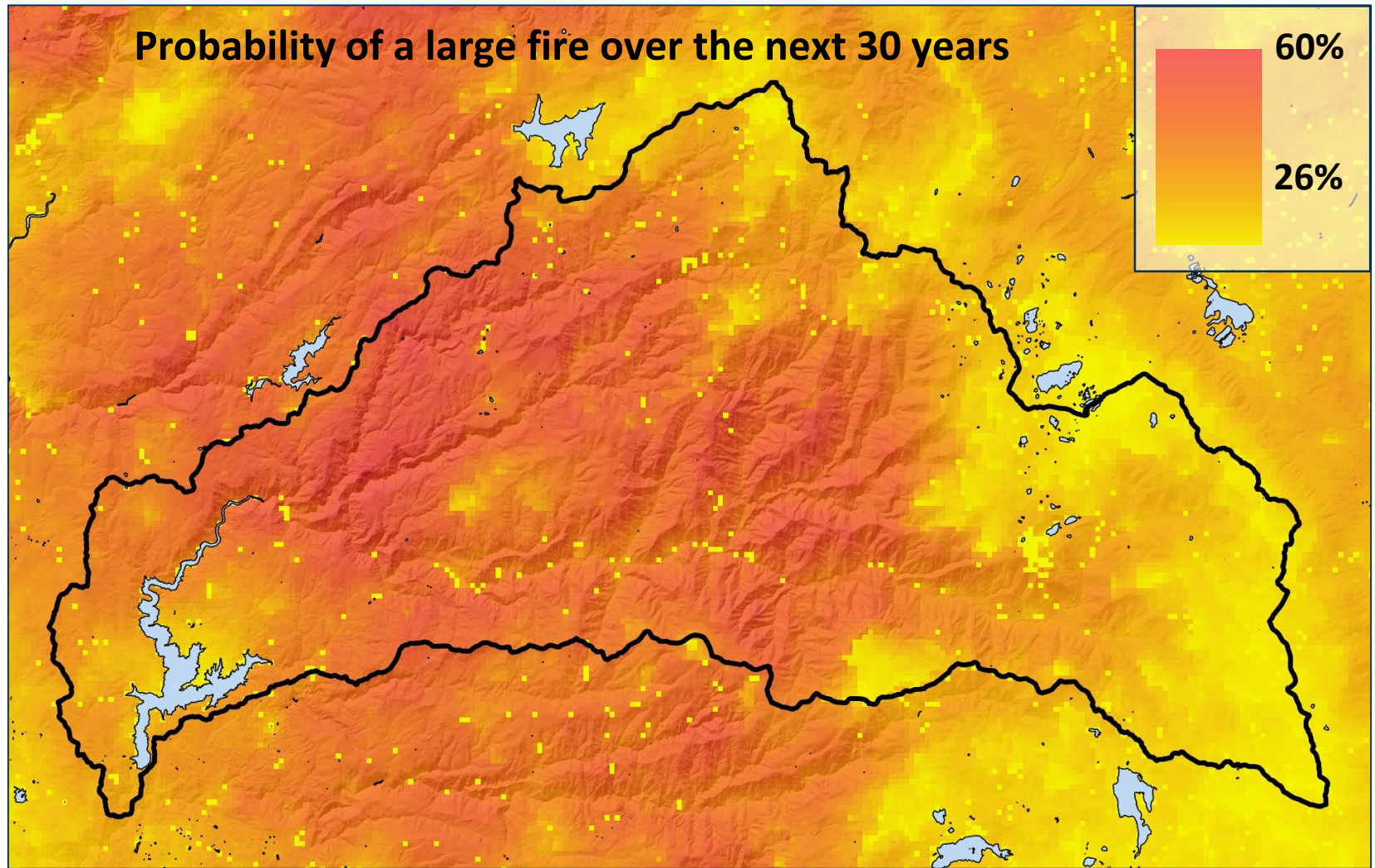
1. [USFS Fiscal Year 2017 Budget Overview](#) (\$40 million for CFLRP and \$384.1 million for hazardous fuel reduction)
2. [State of Private Investment in Conservation 2016](#) (\$3.1 billion of investor capital undeployed at end of 2015)
3. [USFS Fiscal Year 2017 Budget Overview](#) (58 million acres at “high or very high risk of severe fire” @ \$1,000/acre)



Yuba Pilot Restoration Project



North Yuba Wildfire Risk






Estimated Economic Benefits of Fire



Measuring Water Benefits

 **Water Quantity & Quality**

 **Hydropower Generation**

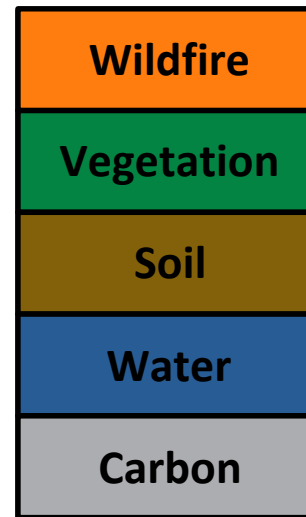
 

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**Direct
Observation**



**Ecosystem
Modeling**

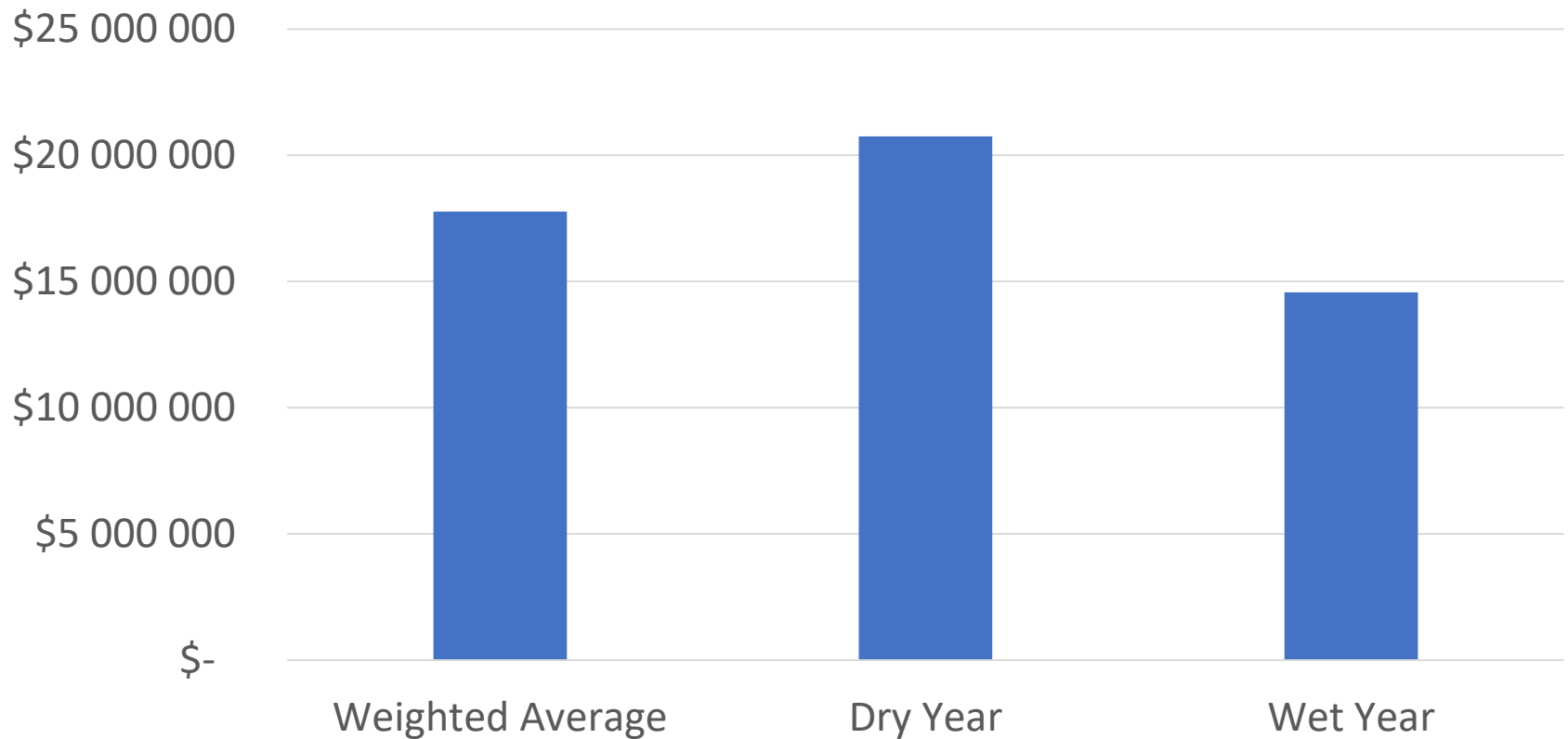


**Remote
Sensing**

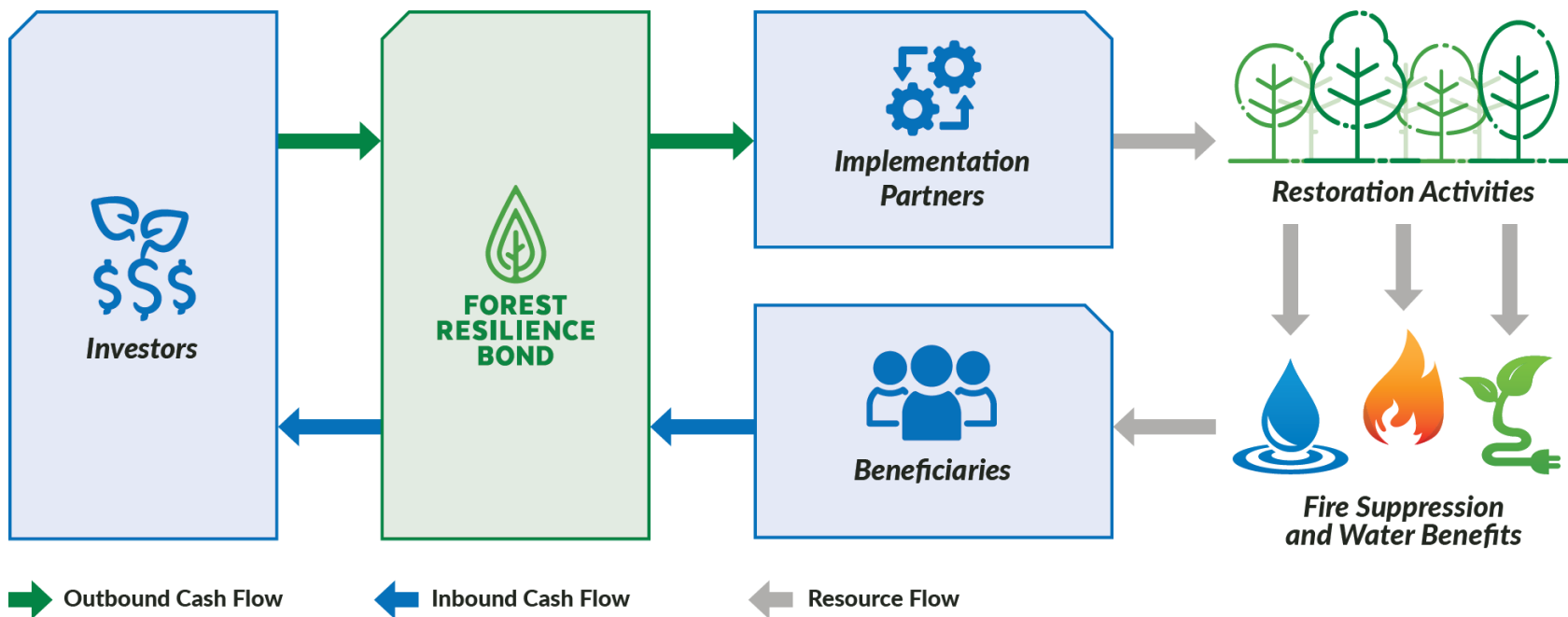


Estimated Economic Benefits of Water

Cumulative Expected Water Supply Benefits



Financial Structuring



Investor Interest in the Yuba Pilot - **\$4.6M**

Foundation

THE
ROCKEFELLER
FOUNDATION

GORDON AND BETTY
MOORE
FOUNDATION

Commercial

- Insurance companies
- Impact Investors

NOT

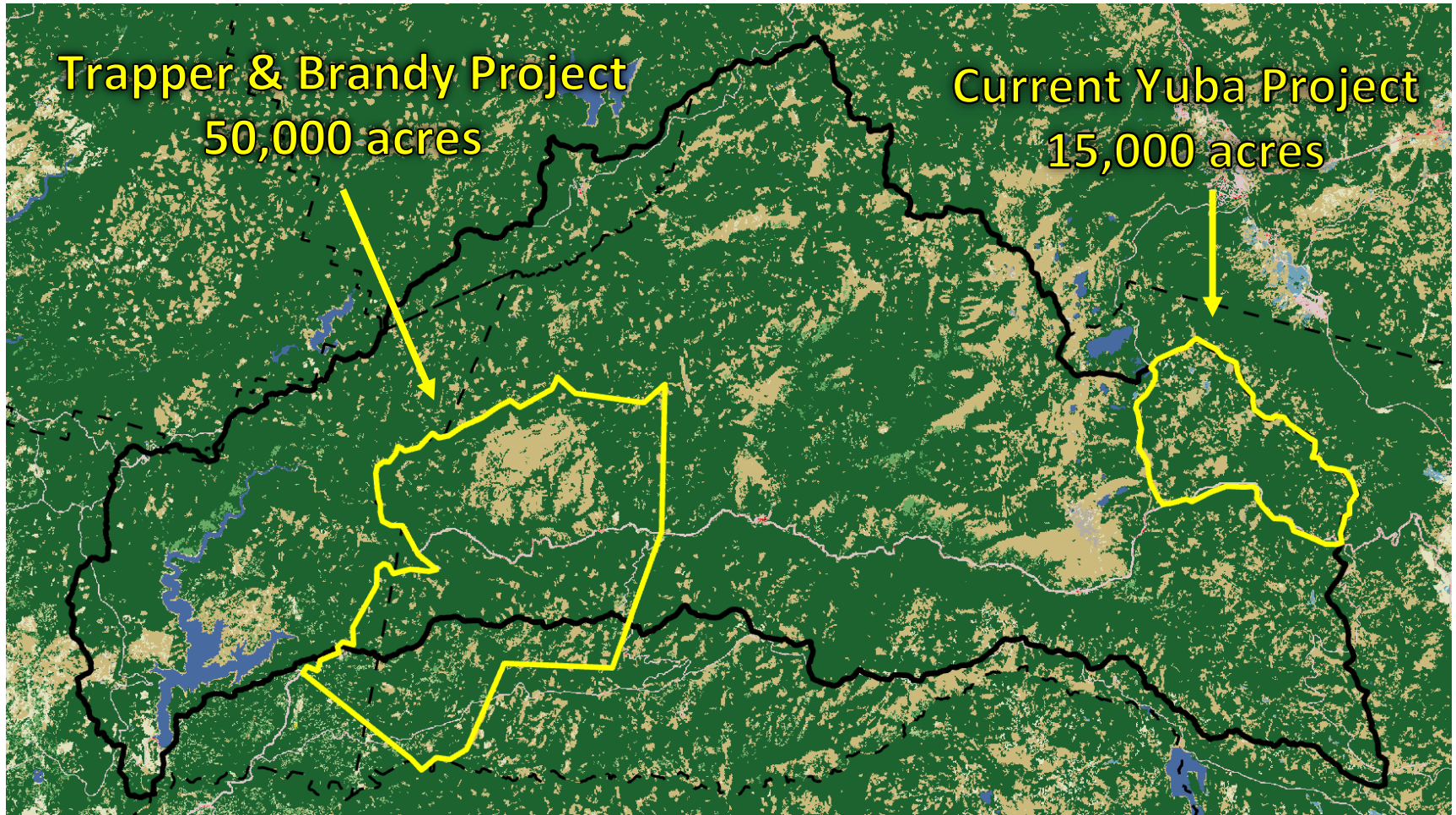
- Venture capital
- Private equity



Beneficiary Contributions/Investor Payback



Replication and Scaling





**FOREST
RESILIENCE
BOND**

**BLUE FOREST
CONSERVATION**
Financial Innovation for Sustainable Solutions



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