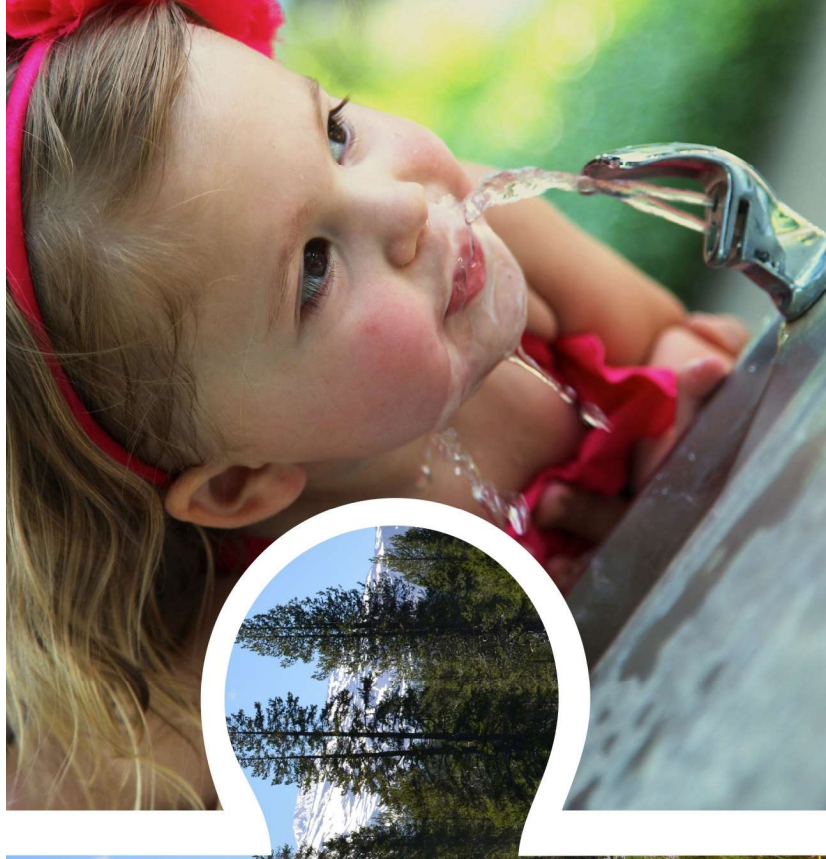
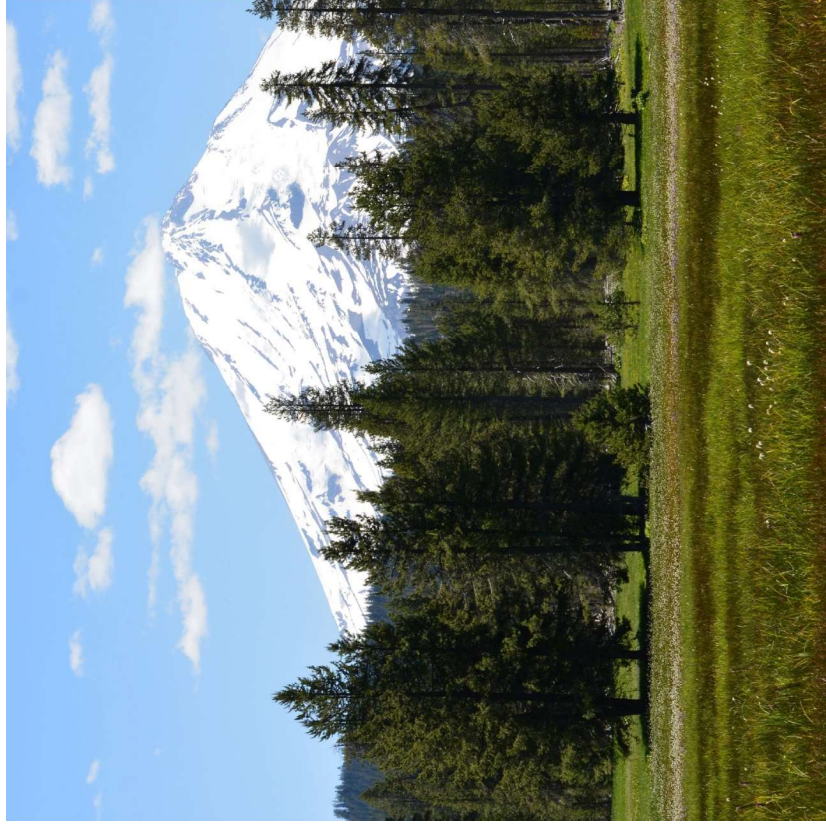
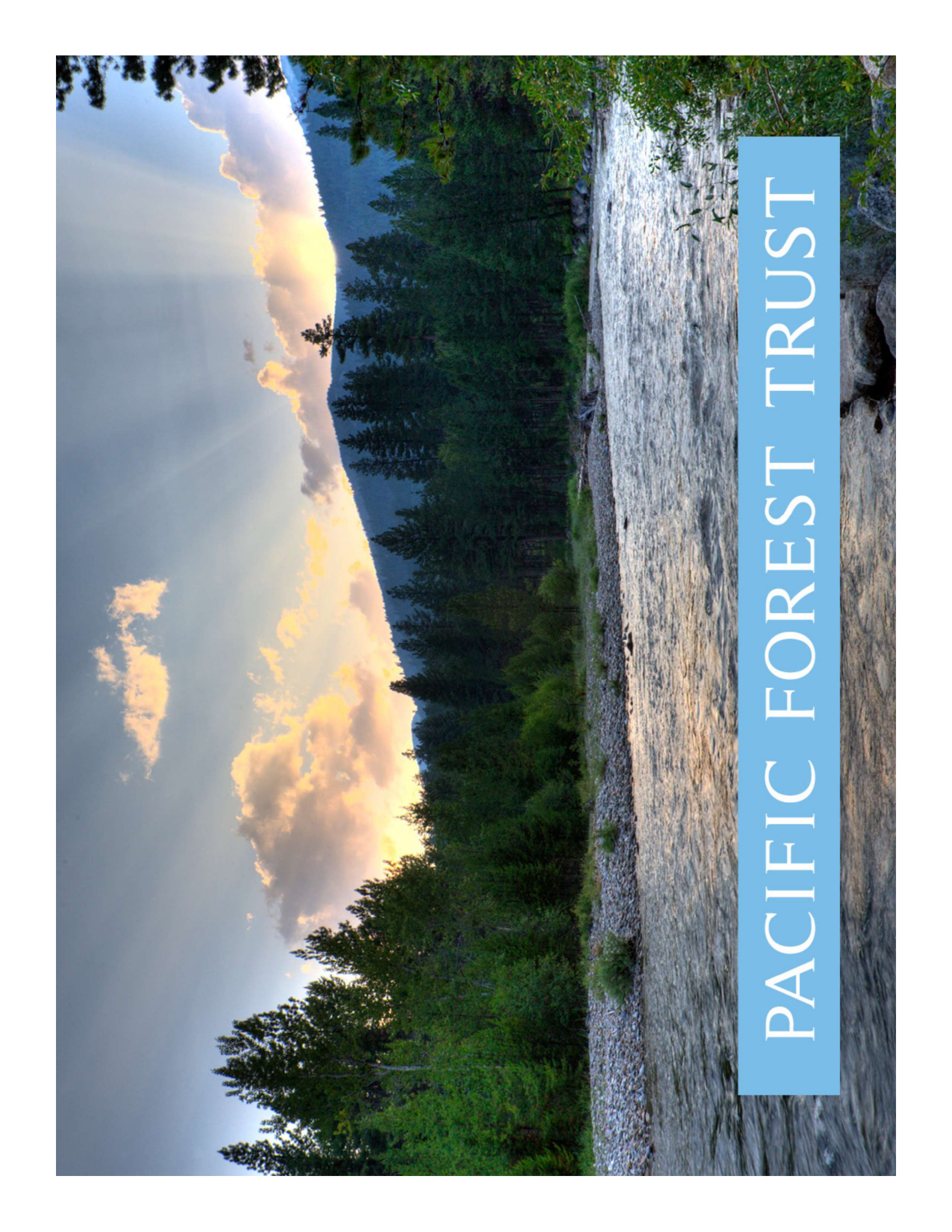


Managing Forest Watersheds in an Era of Climate Change: A natural solution



PACIFIC FOREST TRUST



PACIFIC FOREST TRUST



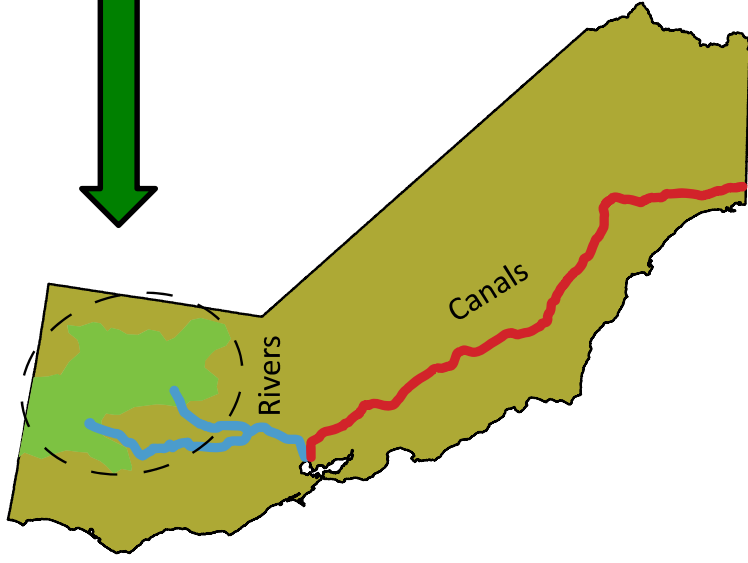
PACIFIC FOREST TRUST





PACIFIC FOREST TRUST

Where does California's water come from?

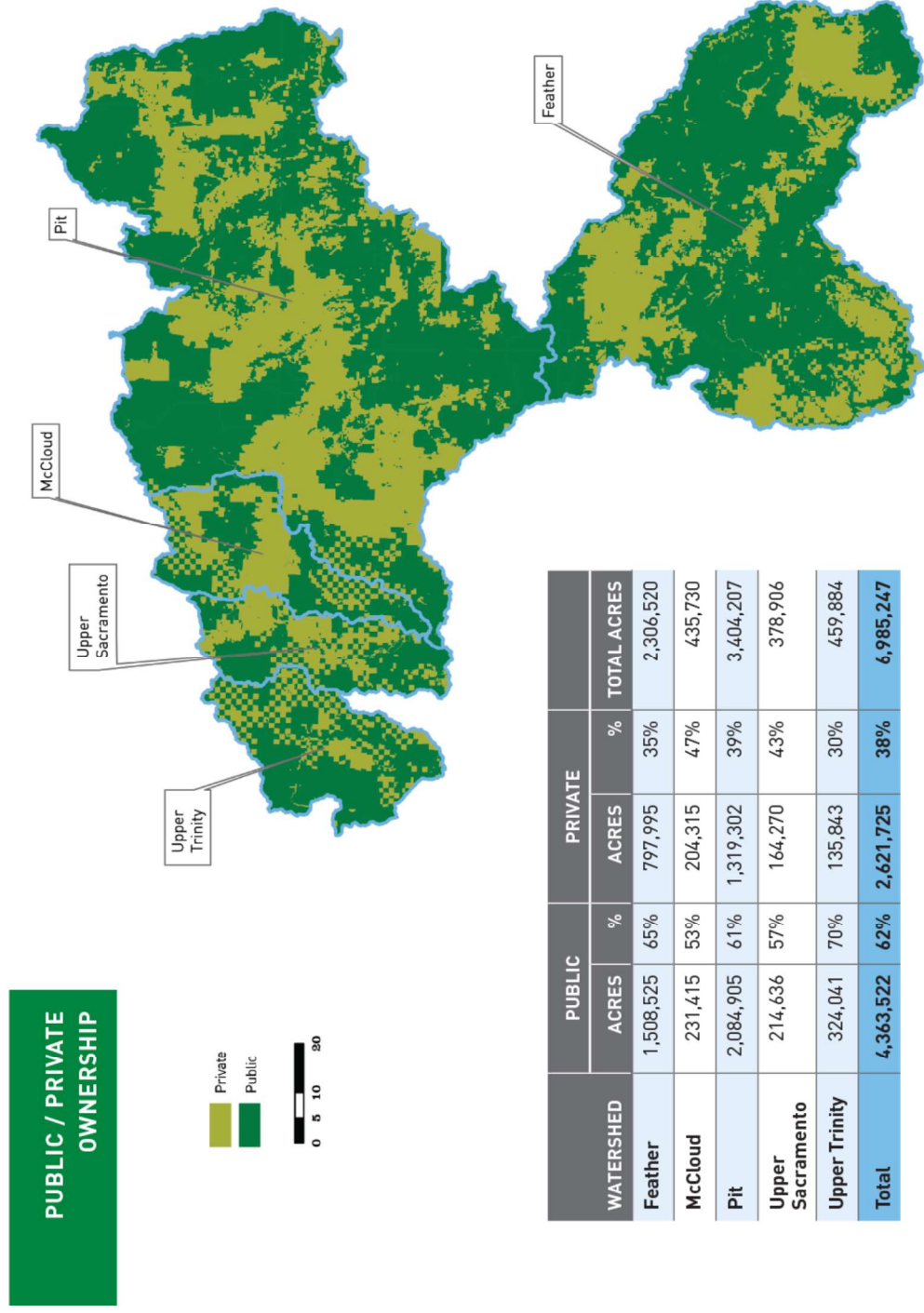


- The Klamath-Cascade region provides:
- 60% of irrigated agriculture water
 - 80% of freshwater into SF Bay
 - 45% of LA and 20% San Diego's drinking water
 - Drinking water for 28 million people



PACIFIC FOREST TRUST

Five Key Watersheds



California's Natural Water Infrastructure

Problem:

- Sub-optimal watershed health threatens water supply
- Water policy and financing focuses on built infrastructure
- Funding for watershed conservation and restoration is insufficient and inconsistent

Solution:

- Cost-effective, comprehensive watershed restoration and conservation & new financing model
- AB 2480 (2016), AB 2551 (2018), WIIN: tools towards solution

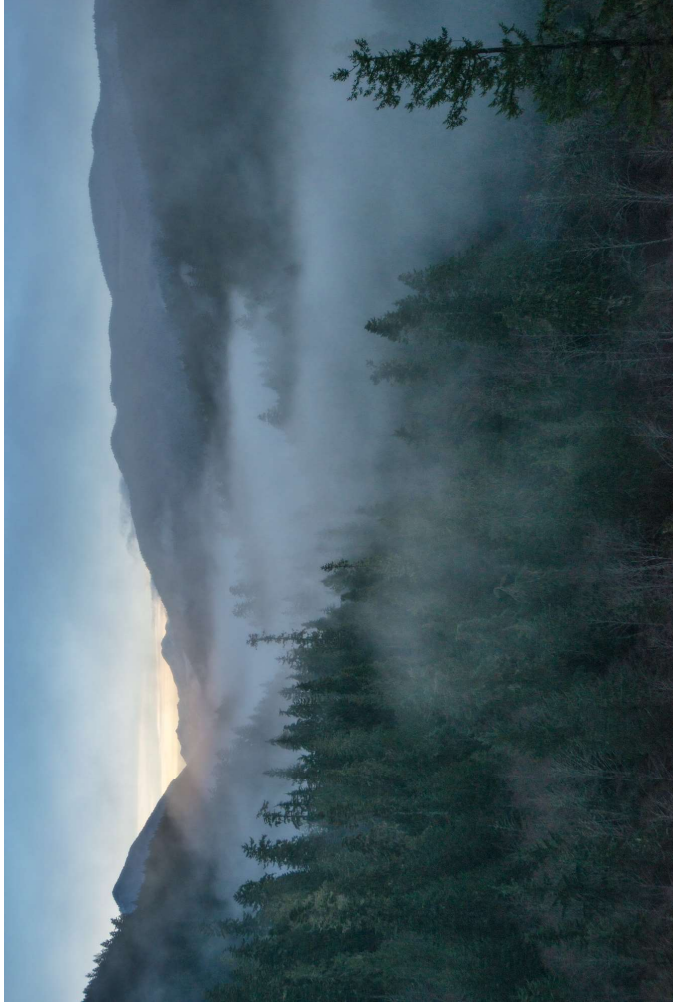
Result:

- *Enhanced water security and quantity for California in an era of climate change*



PACIFIC FOREST TRUST

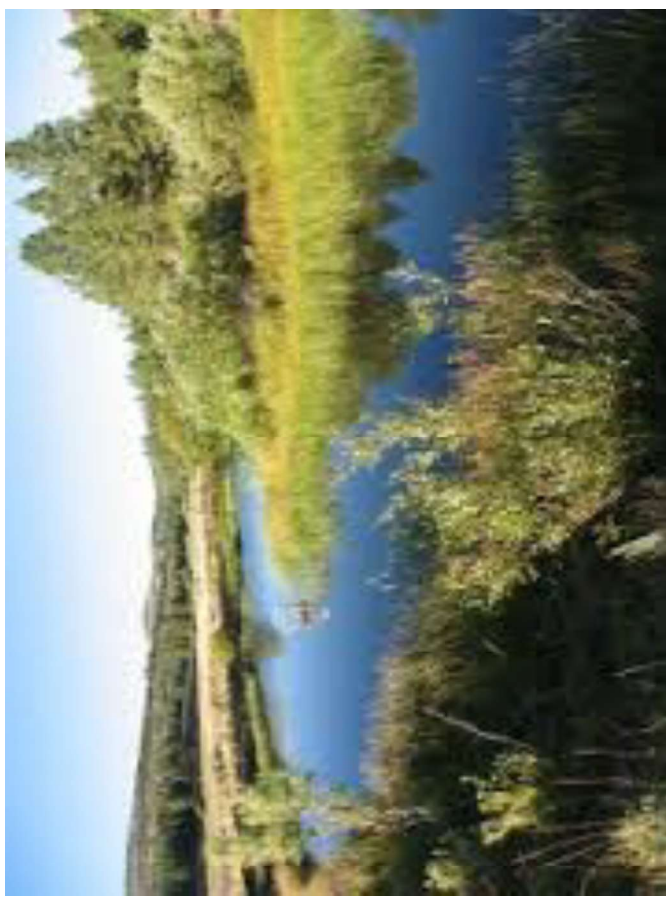
Solution: Restore more water- and carbon-rich forests



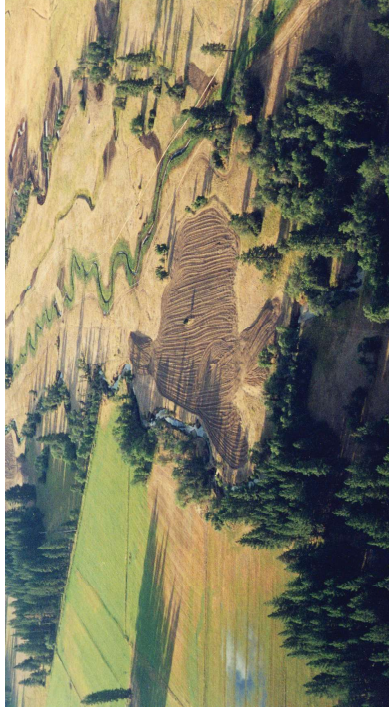
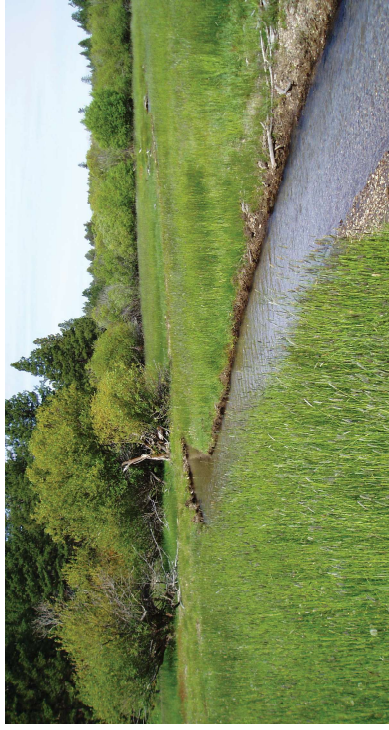
PACIFIC FOREST TRUST

Private Forests. Public Treasures.

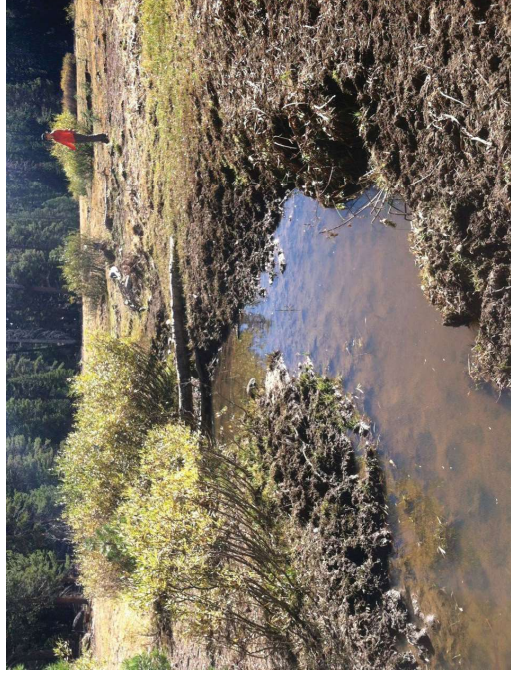
Solution: Restore degraded streams



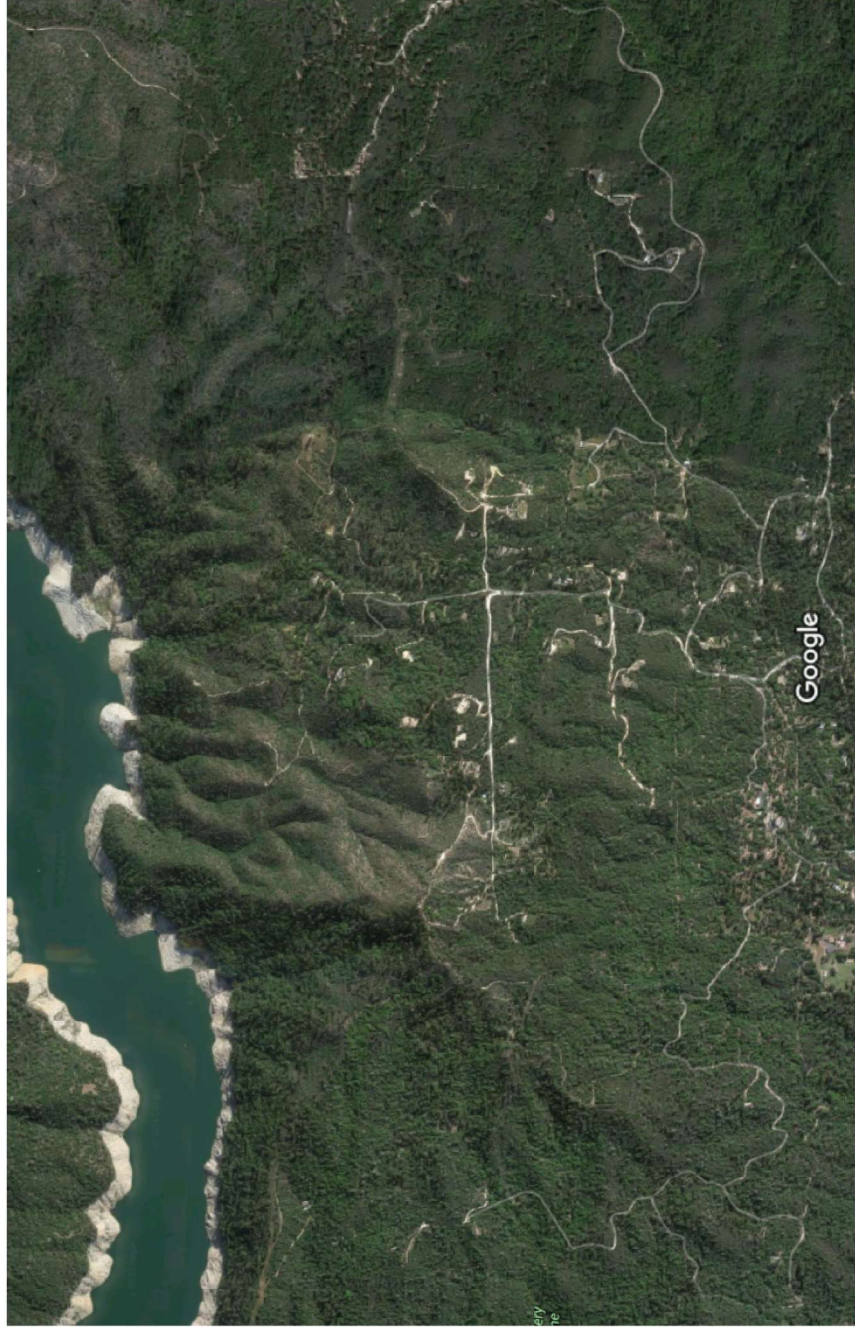
Solution: Restore Wet Meadows



Solution: Reduce Sediment Delivery



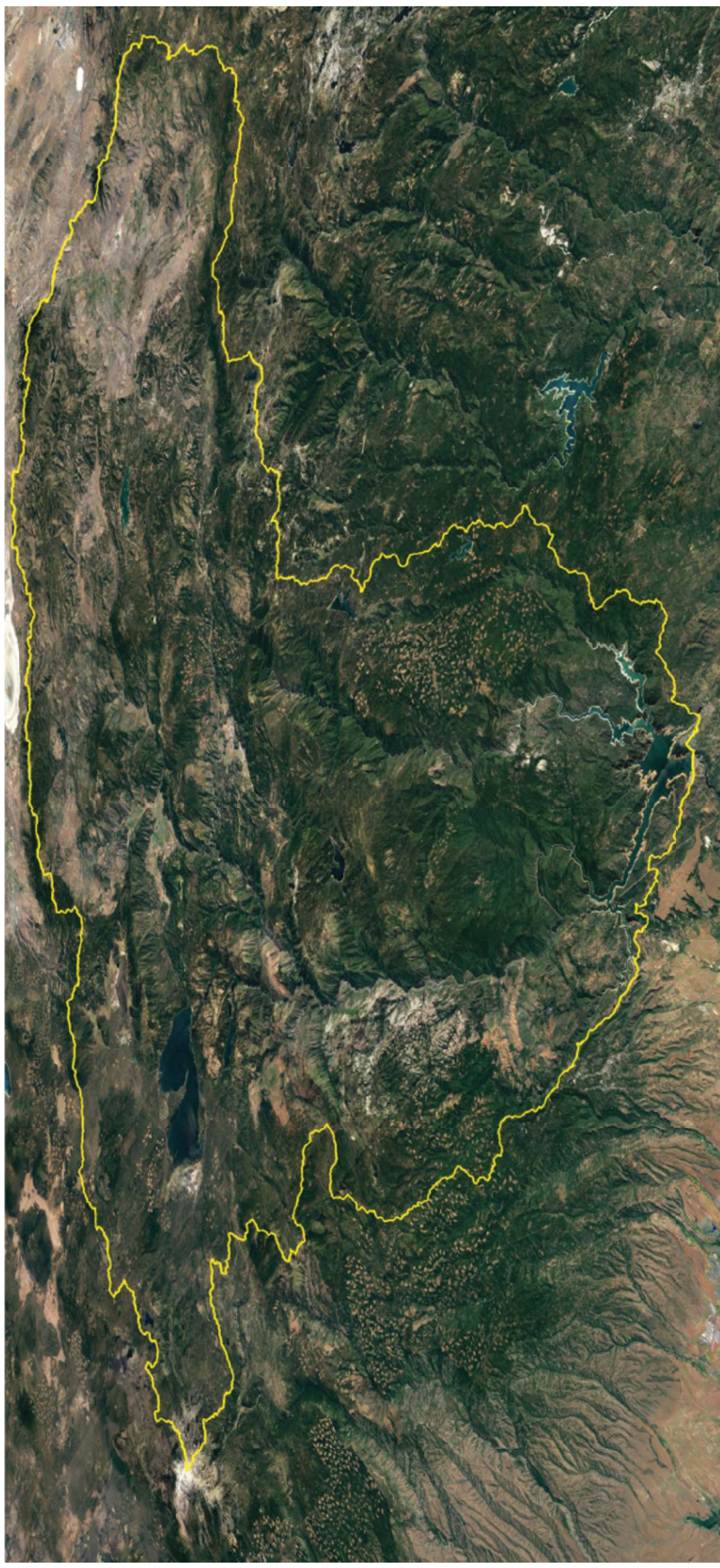
Keep watersheds whole



PACIFIC FOREST TRUST

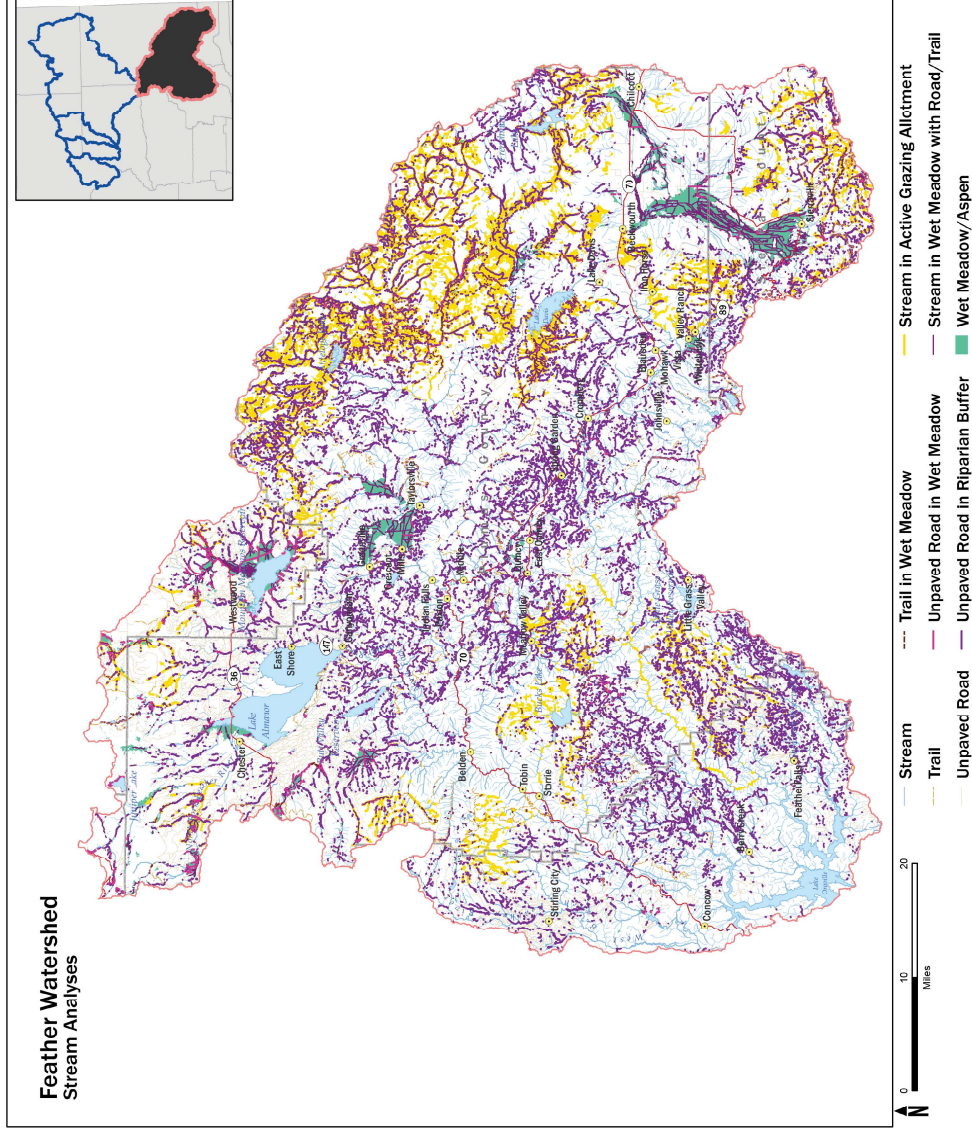
Private Forests. Public Treasures.

Work with the Whole

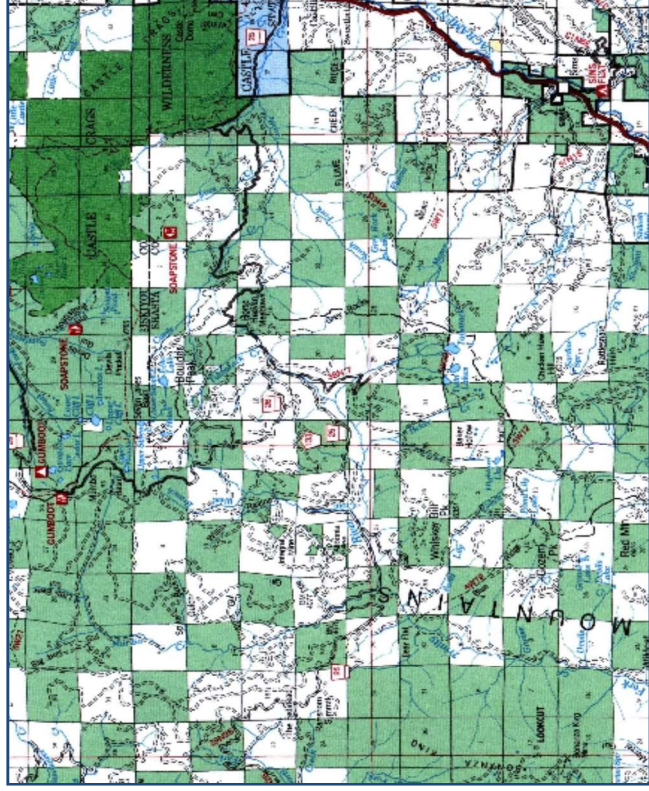


PACIFIC FOREST TRUST

Feather River Stream Analysis

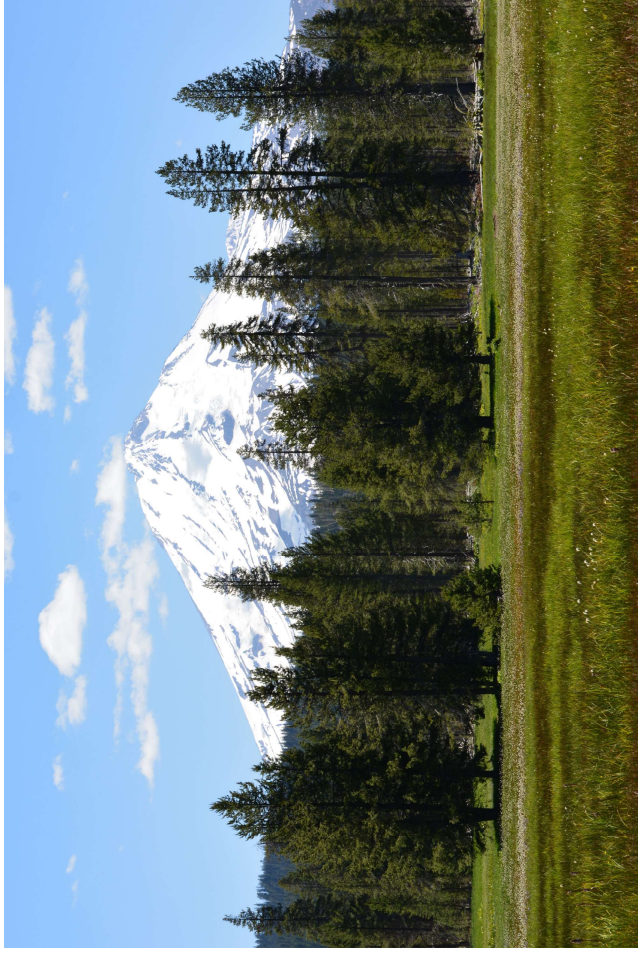


Solution: Manage across Boundaries



PACIFIC FOREST TRUST

Natural or Built solutions: a Shasta WIN?



Natural Watershed

Inflow increase: 450,000 acre ft/year
Flood protection: 12-40% reduced peak
Fire benefits: \$120M+/year savings
Jobs: 33,717 job years
Fish: 50% + in red band trout
Extends cold summer water: 2-3 weeks
Increased storage: 124,000 acre feet/year

Dam raise

Inflow increase: 0
Flood protection: none specified
Jobs: 7,500 job years
Fish: negative (USFWS)
Climate change mitigation: negative
Summer release cold water: rare-0
Increased storage: possible < 30% of time

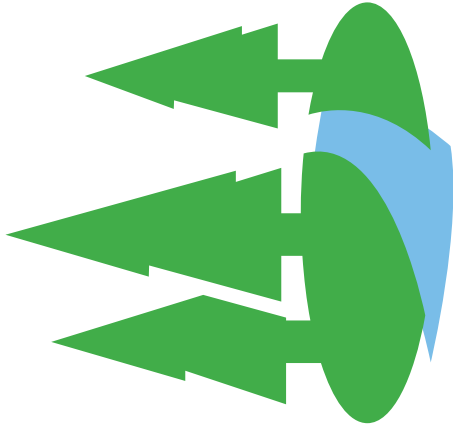


PACIFIC FOREST TRUST

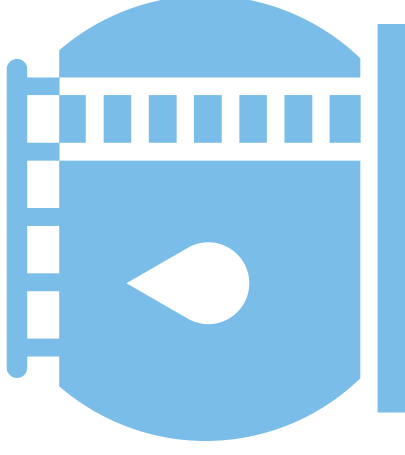


Cost of Natural Infrastructure vs. Built Infrastructure

Example: New York City



=



\$1.5 billion investment in natural infrastructure – conserving and restoring primary watershed in

Catskills Mountains

\$8 billion in new water filtration and storage facilities



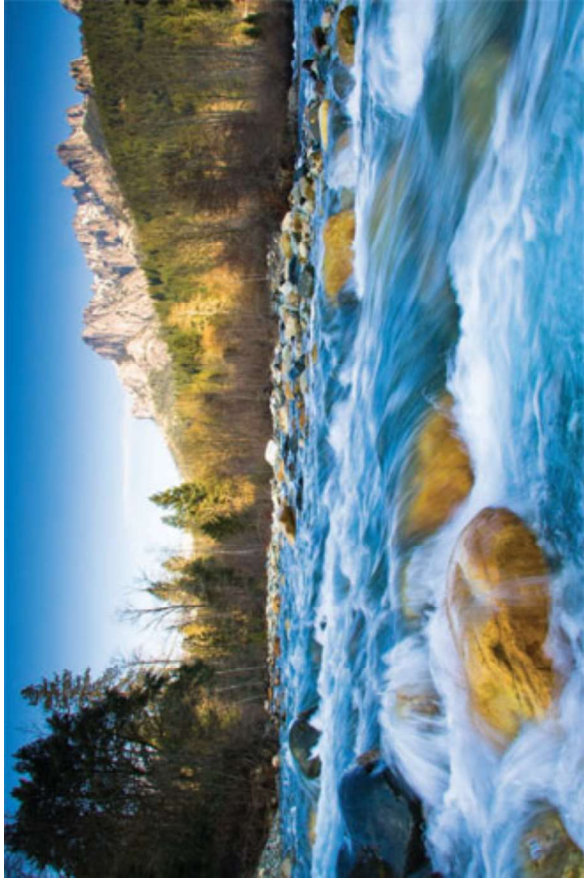
PACIFIC FOREST TRUST

Who is Paying: 2017

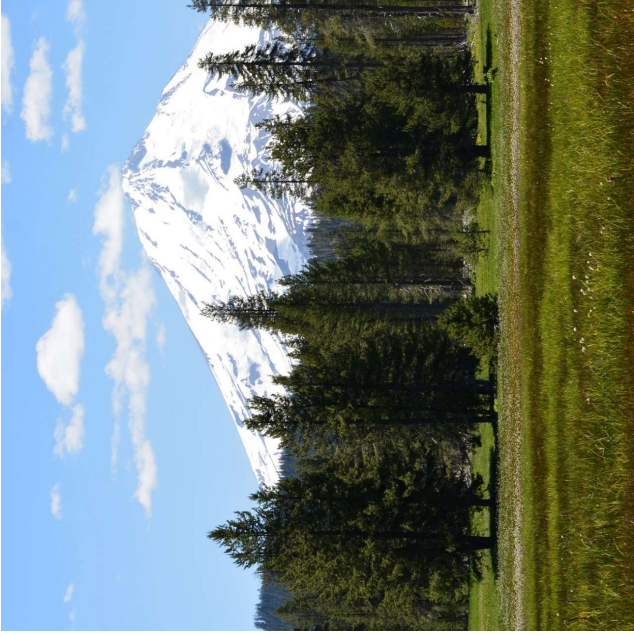
Table 1- Current Annual Costs of Holding and Maintaining Key Source Watersheds (\$millions)						
Cost Category	Example Activities	Private Land Owners	Taxpayers			Total
			CA	USFS	Other Federal	
Natural Resources	veg. + wildlife management, fire restoration, fire preparedness	20.7	22.2	38.5	7.1	\$88.6m
Access & Public Safety	access roads, fire suppression, law enforcement	18.8	26.4	55.7	0.1	\$108.8m
General Holding	administration, property taxes/PILT, fire damages	43.3	1		3.9	\$48.2m
Total		\$82.9m	\$49.6m	\$94.2m	\$11.1m	\$246m

Who Benefits?

Win – Win – Win – Win – Win Solution



Outcomes



- 75%-85% of key watersheds are secured & restored
- Water security for a growing California
- Climate resilient water supplies

Thank You!



This work is made possible in part by the generous support of the following foundations and agencies: US EPA Healthy Watersheds Consortium; US Endowment for Forestry and Communities; the Kresge, Libra, Caldera, and Thornton Foundations, Mary A. Crocker Trust, the Endurance Fund.

For further info: Laurie Wayburn: lwayburn@pacificforest.org



PACIFIC FOREST TRUST

Private Forests. Public Treasures.