

RIVERS for LIFE

The Sierra Nevada Forests of California

Did you know....

the Sierra Nevada has **24 major watersheds**

Sierran rivers provide **60% of the state's water supply**

a source of **hydroelectric power** for 4 million households

but,

OUR FORESTS ARE OVERCROWDED

Why?



So?

Overcrowded forests reduce the water otherwise available to streams, rivers, and reservoirs



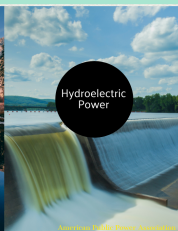
...making water quantity and quality less dependable.



Why do we need rivers?



Recreation + Wildlife



Hydroelectric Power



Irrigated Agriculture + Domestic Use

- river recreation, brings state income
- river habitat

- cheaper and cleaner than fossil fuels
- meets 10% of CA's energy need
- spent \$2 billion more on utilities in the last drought

- filters out pollutants
- flood protection
- reduces reliance on groundwater

Drought Preparation

By having more water in our rivers and reservoirs, more is available for future use!

Why do we need forest management?

- water repellent soil causes surface runoff
- runoff carries sediment to surface water bodies
- with fire, erosion continues at a higher rate

- excess sediment destroys river habitat
- erosion degrades water quality
- accelerated erosion causes rapid sedimentation in reservoirs, shortening their lifespan

CATASTROPHIC WILDFIRE

- accelerates erosion, destroys habitat, and fills reservoirs with sediment

MANAGEMENT

- Increases reservoir lifespan, makes more water available to rivers and reservoirs, reduces risk of fire

2014 King Fire

330,000 tons of topsoil eroded into reservoirs

Reuters/Noah Berger



severe fires burn protective forest leaf litter layer

USDA Forest Service

- overcrowded forests have high water demand
- overcrowded forests are less tolerant to drought
- more dependable water supply
- less large, severe fires

Insufficient/No Management



Sufficient Management

Mac Taylor/Adela Contreras

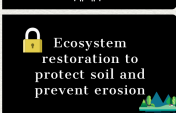
What's needed to protect our rivers:



Policies that fund forest management.



Policies can be incentivized using modeling tools being developed by the Center for Ecosystem Climate Solutions, which will predict the amount of water saved after each kind of forest treatment.



Ecosystem restoration to protect soil and prevent erosion



Sharing information about forest management



Center for Ecosystem Climate Solutions

Visit california-ecosystem-climate.solutions for more information.



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