# The Sacramento-San Joaquin Delta and its Sierra Nevada Tributaries

#### "The Stressors and the Fix" October 27, 2017

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#### CALIFORNIA'S PRIMARY WATERSHED THE SIERRA NEVADA REGION

Provides more than 60% of CA's developed water supply, which nourishes:

- > communities
- > agriculture
- > industry



Sources: The Nature Conservancy, Environmental Protection Agency, Esri, Sierra Nevada Conservancy

## The Stressors:

Climate Change and the Sierra Nevada

- Climate change projections suggest that the future will hold more precipitation in the form of rain and less as snow for the Sierra.
- Sierra Nevada snowpack will diminish by 48 percent by 2100 compared to 1981-2000 levels. (UCLA Center for Climate Science)
- Increasing temperatures will result in longer and more severe fire seasons.
- Rim Fire, Lake Oroville, Napa/Sonoma the new norm?

# **The Stressors**

Today, Many Forested Watersheds Aren't Healthy.

- Many Sierra forests are overgrown and unhealthy.
- Sierra meadows and streams are in need of restoration.
- Many of our communities continue to face economic and social challenges.
- We lack the resources and infrastructure needed.



#### THE STATE OF THE SIERRA NEVADA'S FORESTS

e to the 2014 report, this version was released by the Sierra Nevada Conservancy on March 1, 2017.

FROM BAD TO WORSE

## **The Stressors**

Unhealthy Forests are More Susceptible to:

> Large, high severity wildfires

Massive tree mortality





Photos: U.S. Forest Service





Madera County tree mortality. Photos by Margarita Gordus, CA DFW.

#### **The Stressors:** *More Large, High-Severity Fires*

- Current decade has set the new record for acres burned in recorded history of western slope of the Sierra Nevada.
- Percentage of high severity fire steadily increasing.



## The Stressors:

10 large, damaging fires account for ~70% of the total acres burned





#### High Severity Wildfires and Tree Mortality Have Major Adverse Impacts



High-Severity Wildfire & California's Water

Impacts to:

- Water quality & timing
- Snowpack
- Hydropower
  infrastructure
- Reservoir storage capacity



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# So what does all of this mean for the Sacramento-San Joaquin Delta?



Comes from the Sierra Nevada Region

Restore the Top to Sustain the Tap



# We Know How We Got Here

Unhealthy Forests are the Result of a Number of Factors

- Decades of Aggressive Fire Suppression
- Inadequate Restoration Activity
  - Thinning
  - Prescribed and Managed Fire
- Conflict Over Management and Regulatory Complexity/Cost
- Legacy Management Practices that Removed Largest Trees



And We Know What To Do: Restore Resilience and Health Failing to act carries far greater risk than taking the right actions now!

The science is clear in terms of the benefits of healthy, resilient forests. This can be achieved by:

- Ecologically sound thinning and timber harvest
- Prescribed and managed fire
- Appropriate reforestation



### **The Fix:** The Sierra Nevada Watershed Improvement Program



A partnership of the SNC, USFS, other state and federal agencies, and a wide range of partners from local government, the environmental community, the wood products industry, and others.

# The Fix:

The Sierra Nevada Watershed Improvement Program







PHOTO: Place Agency

#### **Desired Outcomes**

- Restore the health and resilience of forests, streams, meadows, and communities.
  - Reduce the risk and consequences of severe wildfire
  - Reduce spread of tree mortality
  - Sustain healthy flows into the Delta

# The Fix:

The Sierra Nevada Watershed Improvement Program Without support to achieve the following objectives, our watersheds will continue to decline and the Sacramento-San Joaquin Delta will be the unfortunate recipient.

Increase
 investment in
 restoration
 efforts

Address key
 policy issues
 affecting
 restoration

Increase
 infrastructure
 to support
 restoration

#### Right Here, Right Now The Tahoe Central Sierra Initiative



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### **Tahoe-Central Sierra Initiative**



For more information on the **Sierra Nevada Watershed Improvement Program** and the **Tahoe-Central Sierra Initiative**, visit: www.RESTORETHESIERRA.org

