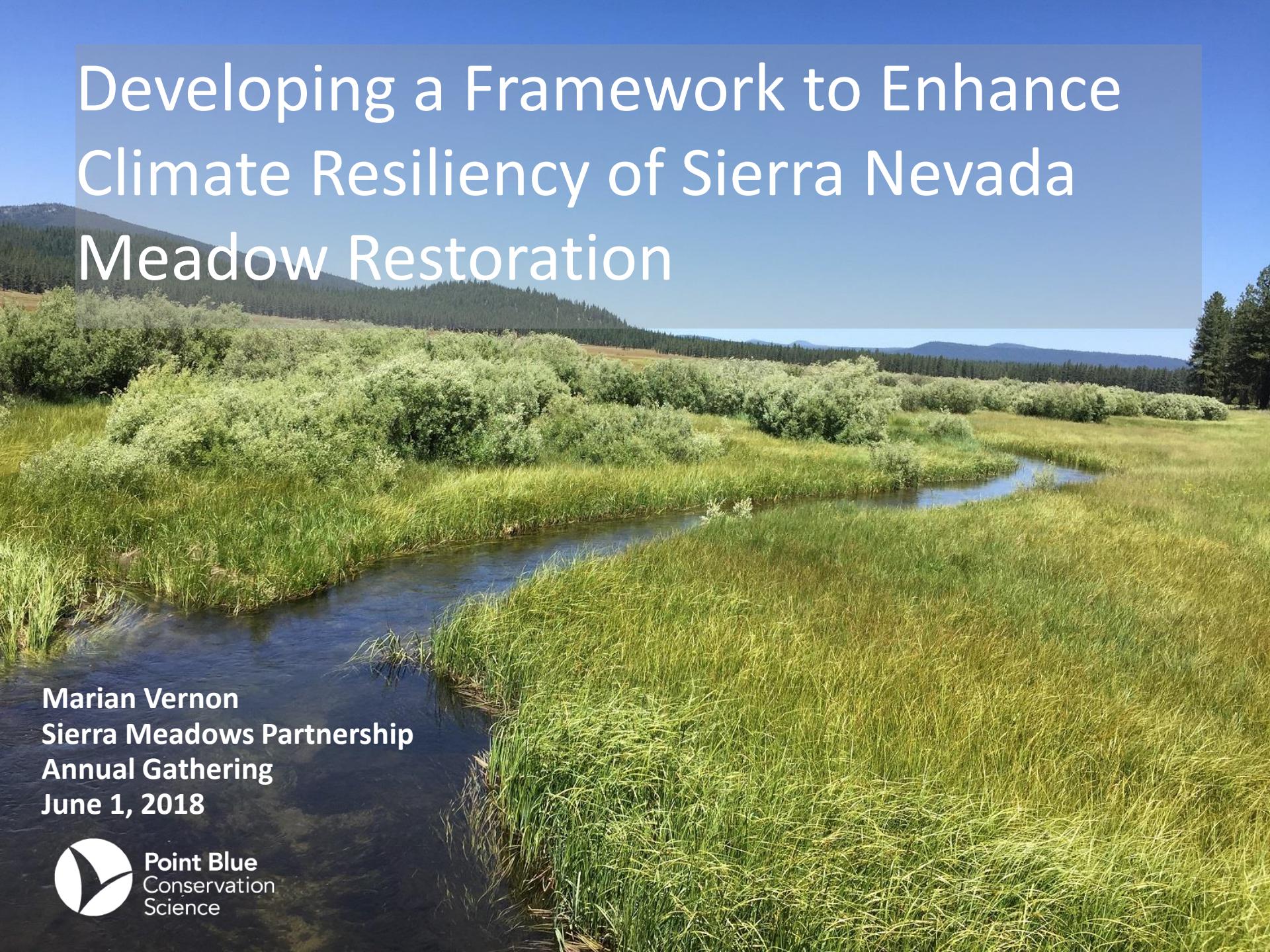


Developing a Framework to Enhance Climate Resiliency of Sierra Nevada Meadow Restoration



**Marian Vernon
Sierra Meadows Partnership
Annual Gathering
June 1, 2018**



**Point Blue
Conservation
Science**

A scenic landscape featuring a river flowing through a grassy valley, with a forested hillside in the background.

**Restore 30,000 acres by 2030 that
enhance water, carbon, and
biodiversity benefits**

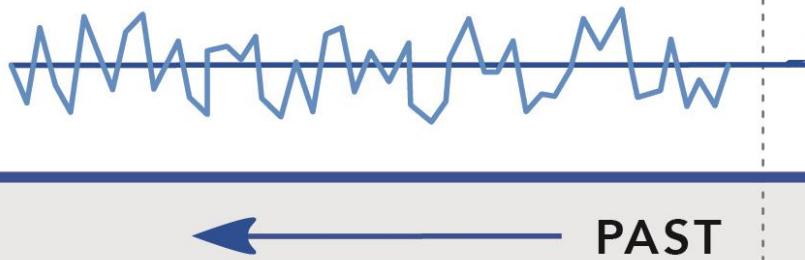
Climate-smart ecological restoration is the process of enhancing ecological function of degraded or destroyed areas in a manner that prepares them for the consequences of climate change.

Gardali et al., In review

Climate-smart principles

1. Show your work
2. Look forward but don't ignore the past
3. Consider the broader context
4. Build ecological insurance
5. Build evolutionary resilience
6. Include the human community
7. Monitor and Experiment

ECOSYSTEM STATE



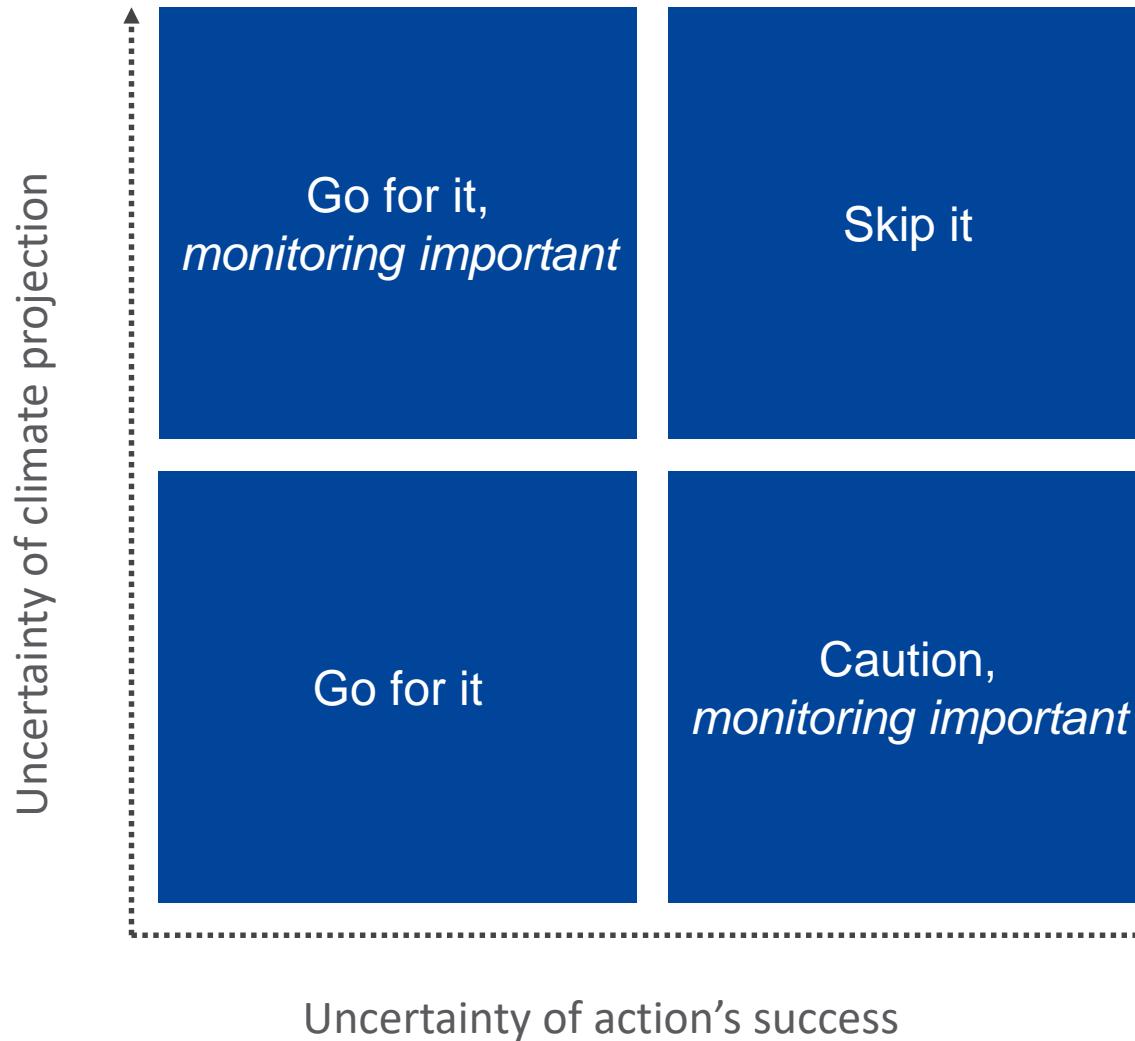
Projects:



Point Blue
Conservation
Science

Projects should be designed to succeed under multiple scenarios.

Risk



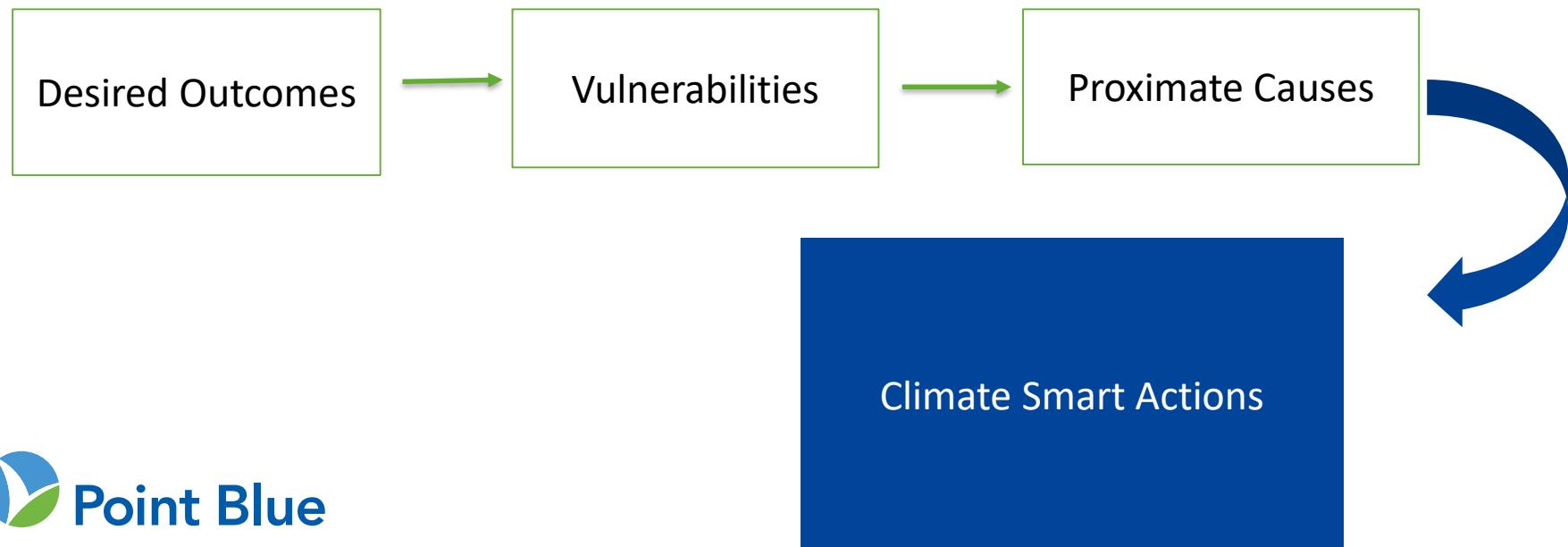
Developing a Climate Smart Framework



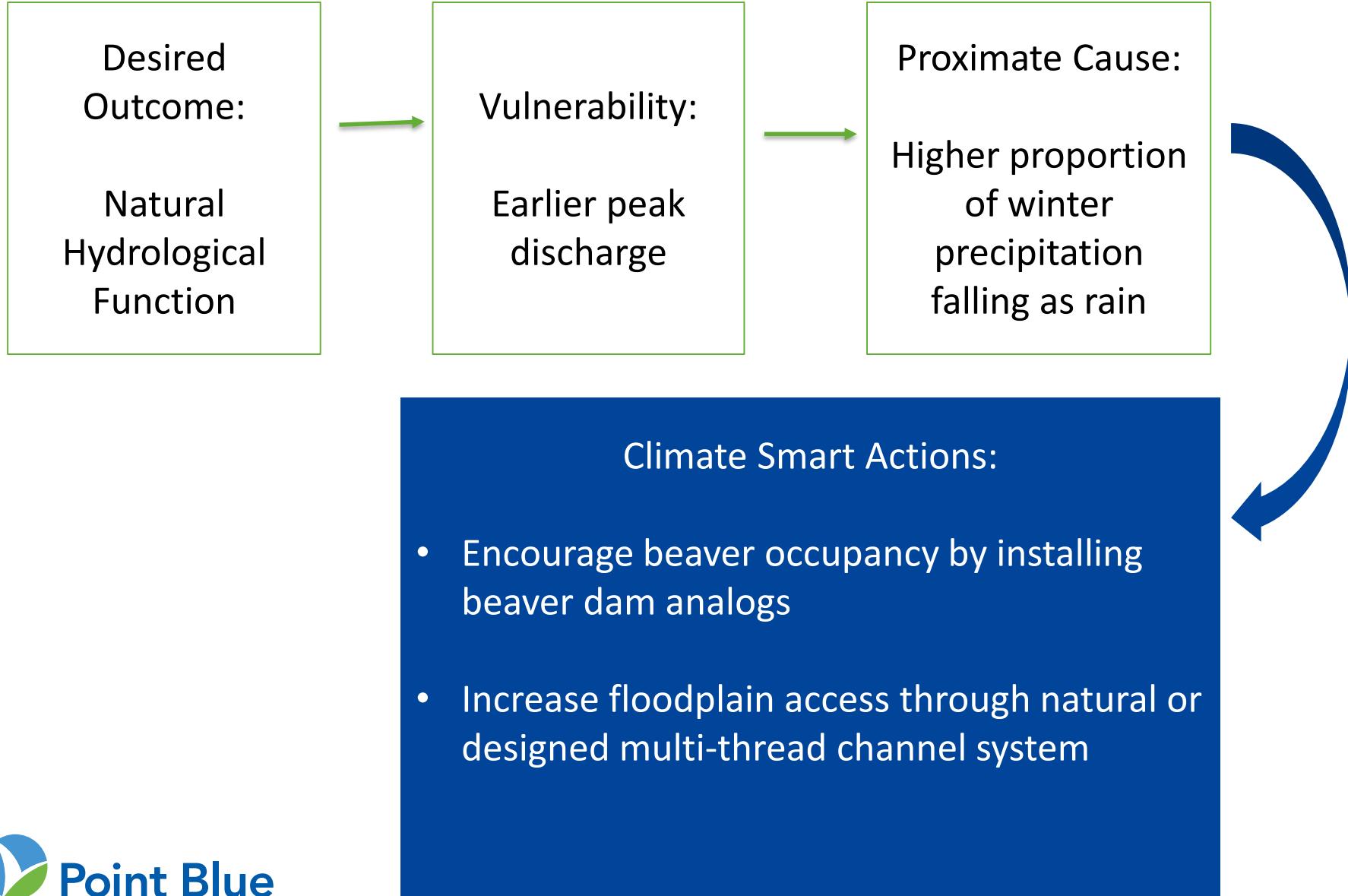
- **Goal:** Ensure all meadow restoration in the Sierra Nevada is Climate Smart
- **Approach:**
 - Workshops to pilot and refine approach
 - Develop framework and handbook to guide meadow restoration

Workshop Approach

- Identify desired outcomes for meadow
- Synthesize range of climate projections & identify vulnerabilities to desired outcomes
- Develop climate-smart actions to address vulnerabilities



Example: Swain Meadow



Climate-Smart Meadow Restoration Handbook

- Introduce an approach for assessing and addressing climate vulnerabilities to Sierra meadows
- Illustrate the range of projected climatic changes and associated vulnerabilities to meadows
- Provide recommendations of best management practices to ensure projects are resilient to the consequences of climate change

Thanks and Acknowledgments

Bella Vista Foundation

Volgenau Foundation

U.S. Forest Service

Truckee River Watershed Council

South Yuba River Citizens League

Balance Hydrologics

Gateway Mountain Center

UC Davis Center for Watershed Sciences

Plumas Corporation

Collins Pine

And our other restoration partners