

Sierra Nevada Meadows: Why They Matter and What Is Being Done To Restore Them

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Headwaters to Groundwater Symposium

Tulare, CA

OCTOBER 12, 2017



Context: What is our relationship to ecosystems and what are our responsibilities

New Vision of Connectivity

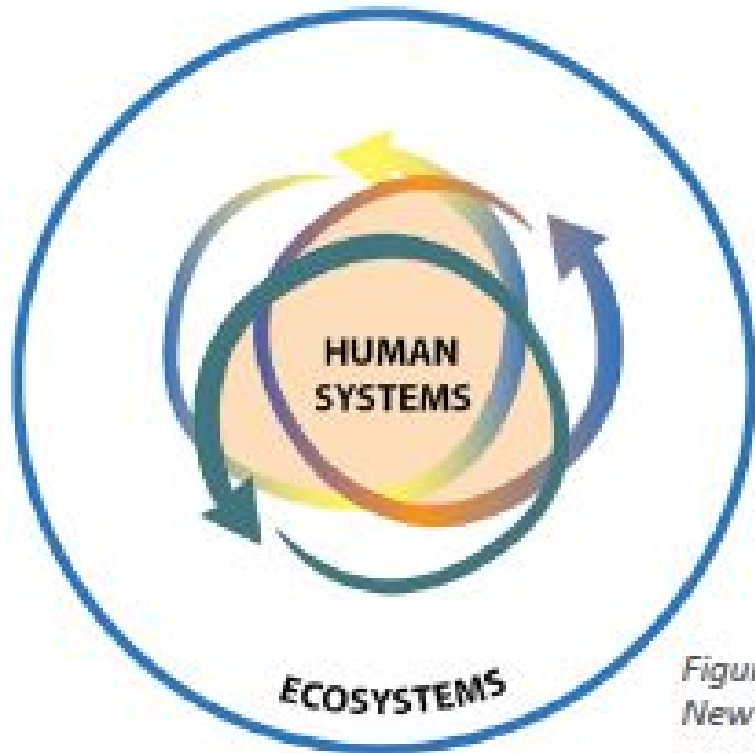


Figure 2.
New vision of
connectivity

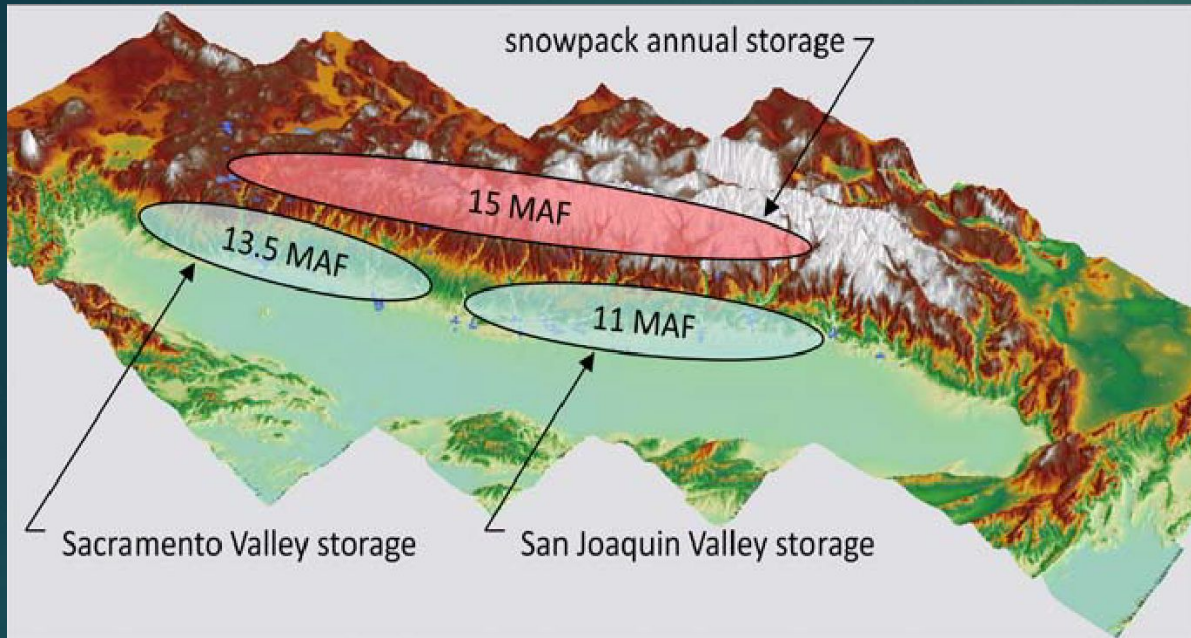
- Tendency is “humans first”
- Often have under-valued provision of ecosystem benefits
- Reality is human systems are dependent on the goods and services that natural ecosystems provides
- Suggest:
 - Expand concept of “constituency”
 - increased focus on use-neutrality and full-value accounting

California's Sierra Nevada

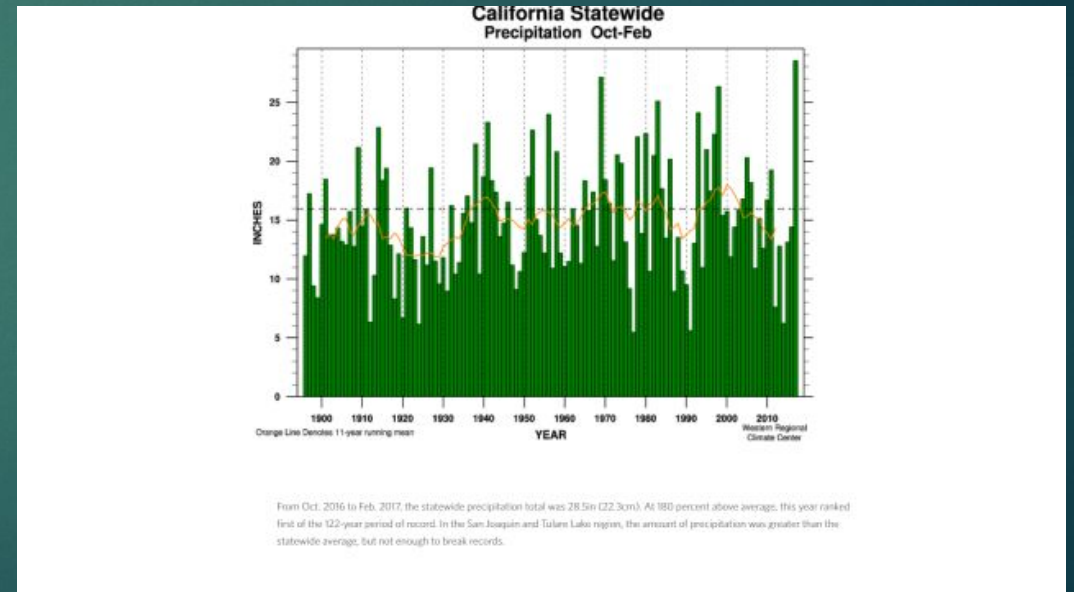
- ▶ Sierra Nevada are a fundamental and integral component of California's water infrastructure.
 - ▶ Snowpack driven system
 - ▶ ~60% of California's domestic water
 - ▶ Critical source of retention waters
 - ▶ ~15% of California's energy via hydropower
 - ▶ Fundamental to local livelihoods and CA economy-est ~\$4 billion/yr
- ▶ Sierra Nevada watersheds are home to an abundance of plants and animals
- ▶ Composition of forests, oak woodlands, meadows etc
- ▶ Meadows are a critical component of Sierra Nevada watersheds, including headwater areas.



Sierra storage is significant but uncertain



US Forest Service, 2015



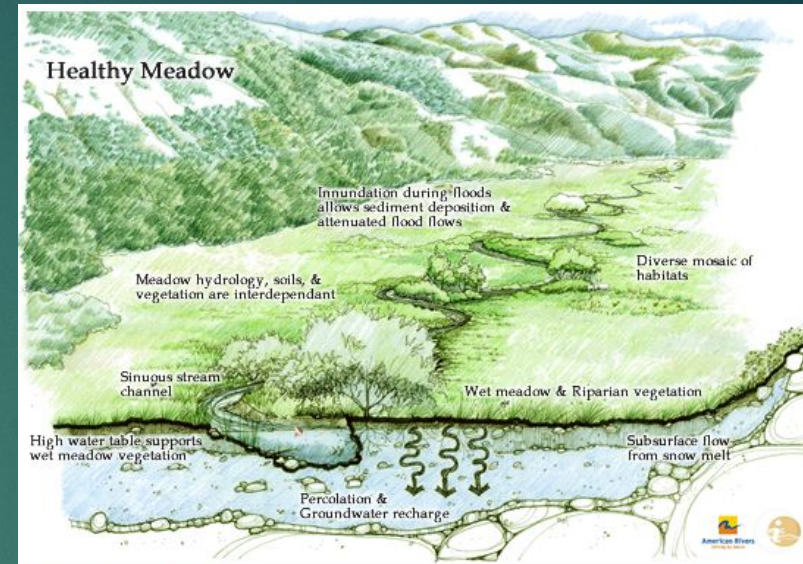
US Forest Service, 2015

Why meadows matter

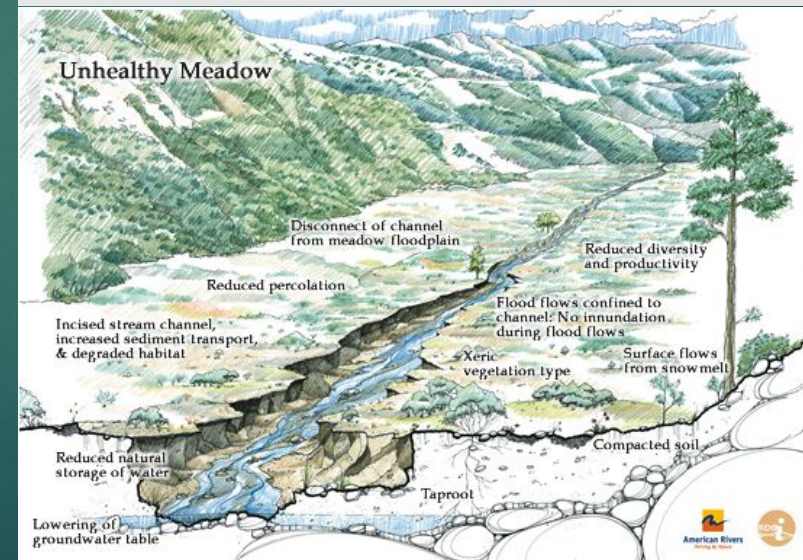
- ~18,700 meadows
- ~200,000 acres
- Provide important, valuable ecological services for people, flora and fauna
 - Water retention
 - Water quality
 - Aquatic habitats
 - Flood attenuation
 - GHG sequestration
 - Feeders to streams and rivers
 - Recreational & spiritual connections
- ~ 40-60% degraded

Historical and contemporary threats include:

- Fire management
- Land use practices
- A changing climate



The benefits of a healthy meadow



The problems created by an unhealthy meadow

What's being done: Evolution of a meadows movement



~ 2010 A **plan**,
with **funding**
support, is
developed



~2012-2014 **Political momentum** begins
supporting
headwaters and
meadows

Feb, 2014 Calistoga I: *The building of a collective stakeholder vision*



Outcome: Need for a comprehensive strategy

Feb, 2016
Calistoga II: *Strategy and Partnership development*



Outcome:

- Framework and scope for Sierra Meadows Strategy
- Formation of Sierra Meadows Partnership

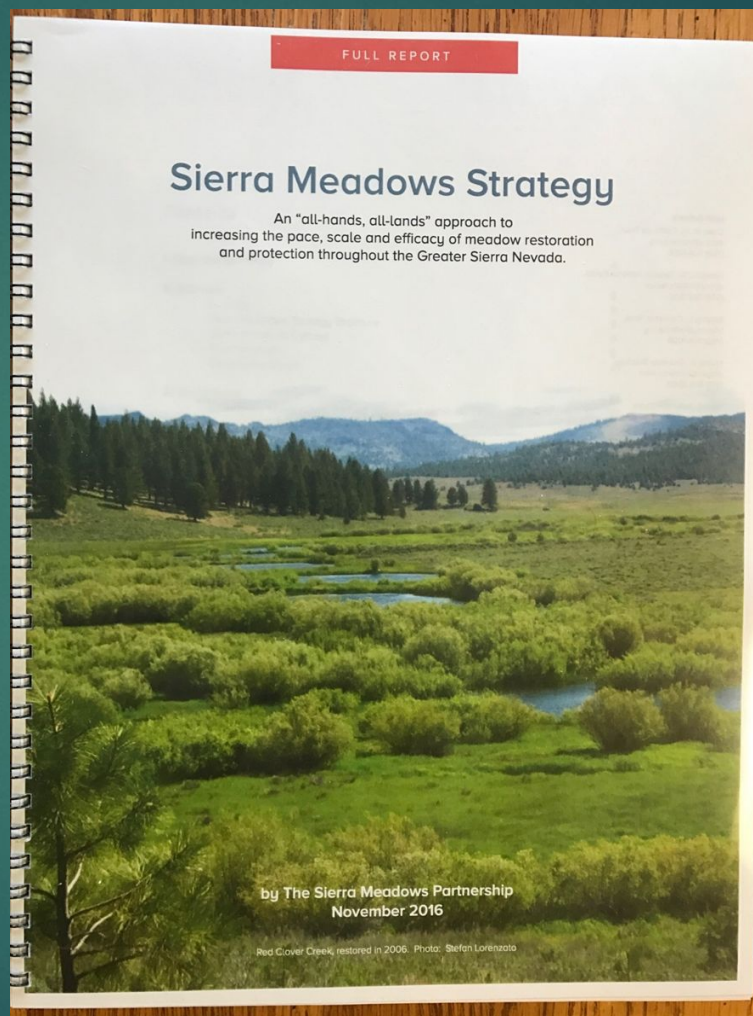
Feb. 2017, Calistoga III: *Sierra Meadows Strategy is completed, MOU signed*



- The shared vision of the *Sierra Meadows Partnership* is a greater Sierra Nevada Region with healthy and resilient meadows that provide sustained goods and services to benefit flora, fauna and people .
- Overarching goal: Restore and protect 30,000 acres across the Sierra Nevada in 15 years!
 - Improved science and restoration efficacy
 - Streamlining and improving efficiencies associated with planning and permitting
 - Enhance and expand partnership capacity and funding

What we accomplished

Collective action that created a living document providing a clear, concise set of goals, objectives, approaches, actions and metrics, as well as a prioritization framework, to guide Sierra meadow protection, management, restoration, research and potential investment through 2030.



Next steps, outcomes and lessons learned

- *Implement Strategy and track progress*
- *Expand focus to include surrounding watersheds*
- A Partnership and unified vision
- A pathway forward grounded in science
- Leveraged political, financial and capacity support
- *Creating space and time for thoughtful dialogue is beneficial*
- *Material change requires understanding, patience and commitment*
- *Leadership matters*
- *Nothing is perfect and the work is dynamic*

Thank you!

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