

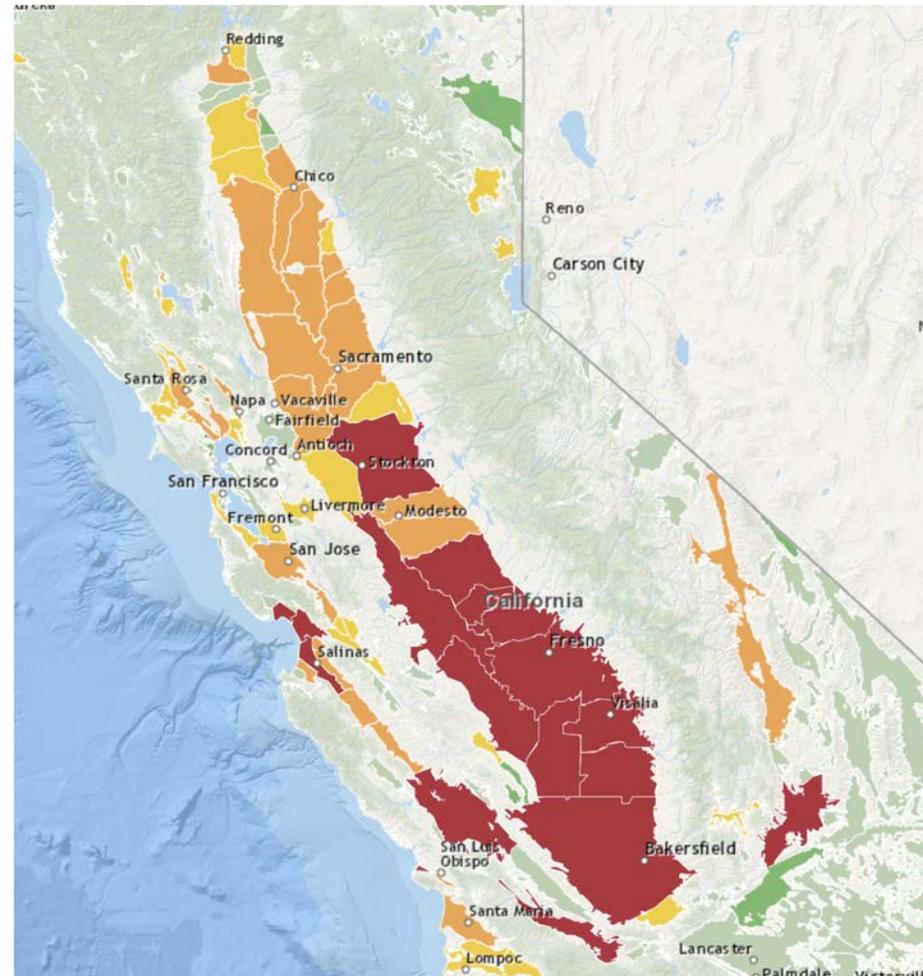
Let's build a 2 million acre foot
reservoir...underfoot



Sara Tiffany
Community Alliance
with Family Farmers

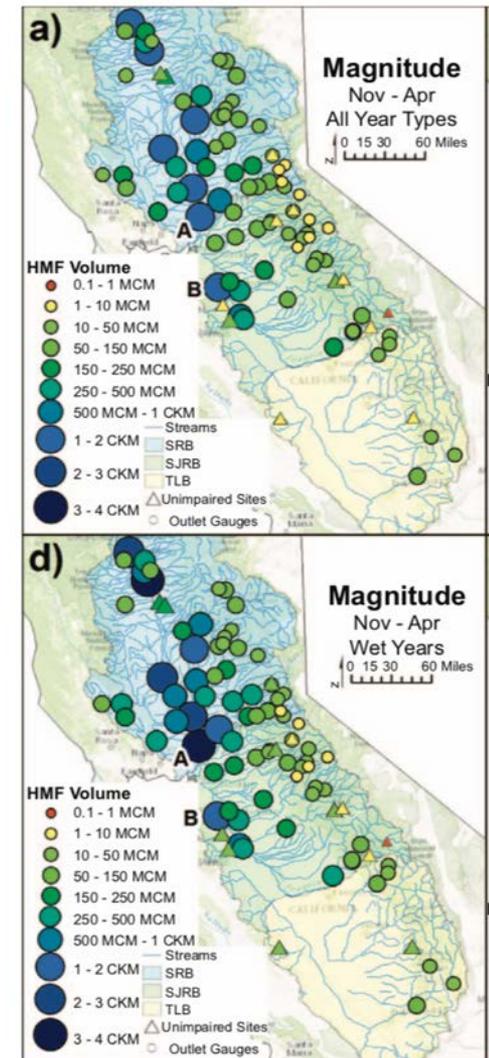
Where will the water come from?

- SGMA
- Unimpaired flows
- Climate change
- Aging infrastructure
- Water rights



There is some good news

High magnitude flows mean more water.



How do we capture HMF?

- On-farm groundwater recharge
- New infrastructure



Credit: Sustainable Conservation

How do HMF happen?



Ground zero is on the ground

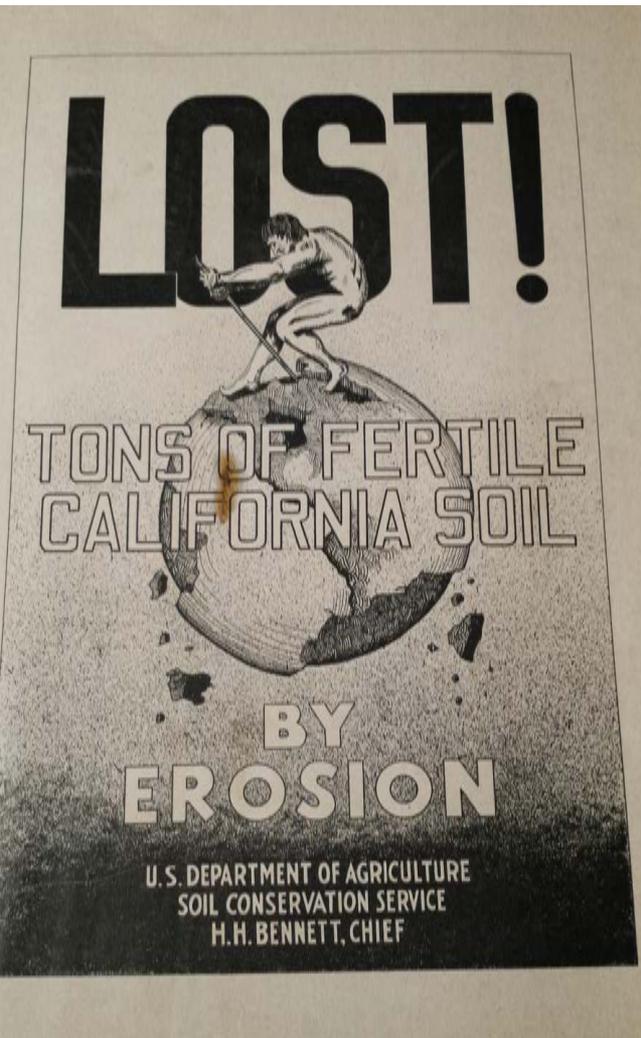
- HMF in agricultural areas start at the surface of the soil
- What happens when a raindrop hits the soil?







Not a new problem...



“KEEP THE RAINDROP WHERE IT FALLS”

- Hugh Hammond Bennett

“Soil conservation and water conservation are synonymous. Spending millions, even billions to construct large reservoirs, only to starve the permanent work of soil conservation and the replenishment of quality water certainly is weak logic.”

- Joseph Cocannouer

Another tool in the tool box

How we manage the soil in our fields during the winter can go a long way.



Cover crops can capture rainfall

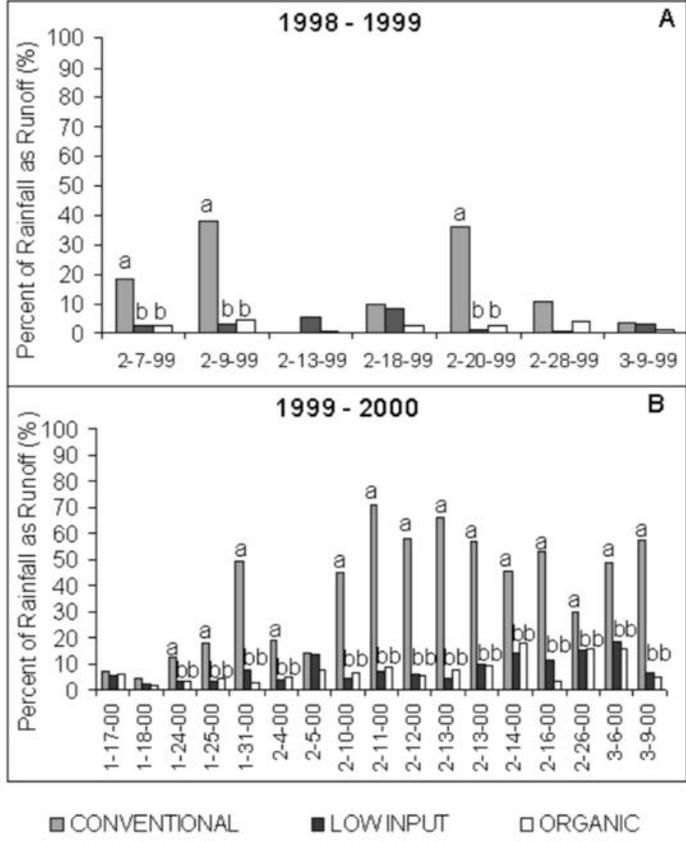


Figure 4. Percent of precipitation lost as runoff from 10.67 m² infiltration test areas. Letters indicate statistical significance (P < 0.05).

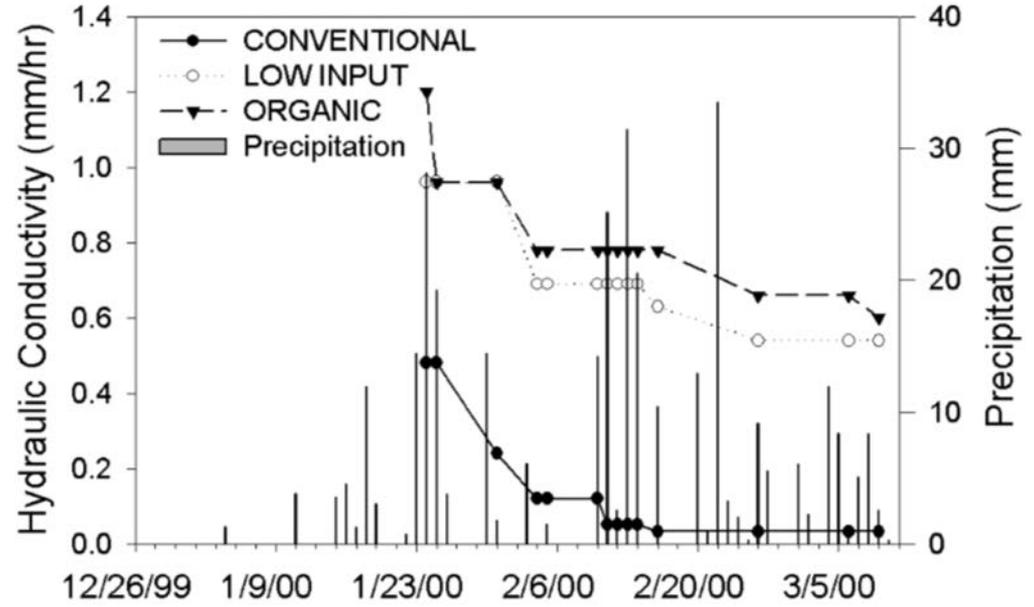


Figure 5. Changes in hydraulic conductivity with successive rainfall events.

Are they worth the water?



It DEPENDS...

- Cover crop species planted
- Local climate/ water availability
- Planting and termination

→ MANAGEMENT!

Grower motivations

Why do growers plant cover crops in the first place?

- Build soil organic matter
- Reduce compaction
- Pollination
- Nitrogen (in the case of legumes)
- Integrated Pest Management
- Erosion control
- Improved soil/ water dynamics



Notes from the field...

“We have used cover crops to address water infiltration problems in certain spots. Even after one season there is a noticeable improvement.”



Notes from the field...

“We seeded a ditch with mustard in order to stabilize it over the course of the winter rains. Then it blooms when the bees are in our orchard, which helps the health of our pollinators and fosters a great relationship with our bee supplier.”



Notes from the field...

“Adding organic matter to our soil, through the use of cover crops has many known and, I believe, unknown benefits to our operation. The co-benefits are numerous and you can manage the cover crop however it fits best with your system and the conditions present at any given season. Working as close to nature as we do in our profession, it is a constant evaluation of unknown and uncontrollable variables, but cover crops help make us more resilient and adaptive.”



So let's build a reservoir underfoot



3.2 cubic kilometers = 2,594,282.22 acre feet



Thank You!



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