

The California Grazing Water Quality Partnership

Dan Macon, UC Davis



UCRANGELANDS
Supporting Working Landscapes

**UC
CE**

University of California
Agriculture and Natural Resources

Overview

California's rangeland WQ partnership.

Where we've been and where we are now.



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WQ protection, planning and practices.

Outreach, research, and implementation.



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WQ protection, planning and practices.

Outreach, research, and implementation.

Future grazing and WQ activities.

Where do we go from here?



Early 1990's, concerns about...

- Microbial pollutants – *Cryptosporidium*, *E. coli*
- Nutrients – nitrogen and phosphorus
- Sediment – erosion, fish habitat



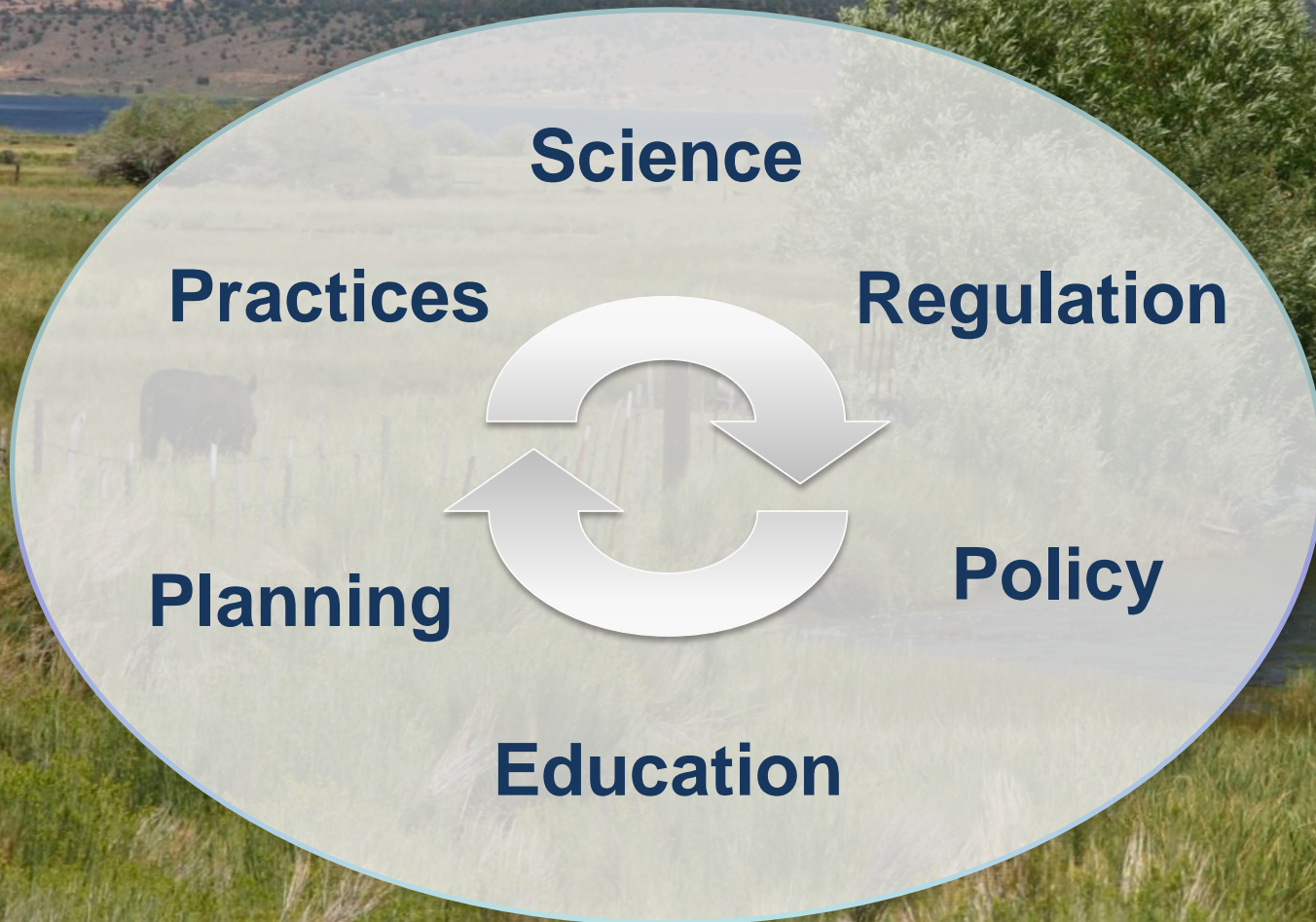
Early 1990's, concerns about...

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- Sediment – erosion, fish habitat

**Rangeland Watershed Program
was formed to address these
concerns.**

Rangeland Watershed Program

A 25 yr proactive partnership to improve water, range, and ranch enterprises. (Agencies, Ranchers, UC, NGOs).



Rangeland Watershed Program

- Integrate science, policy, and management.



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- Develop ranch-specific WQ management plans and management actions.
- Provide supporting research base.



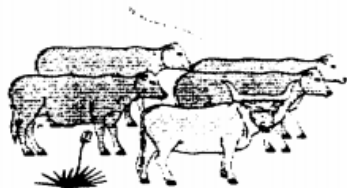
25 years of progress

CA Rangeland WQ Management Plan – complete 1995



CA Rangeland WQ Management Plan

STATE WATER RESOURCES CONTROL BOARD
DIVISION OF WATER QUALITY
NONPOINT SOURCE PROGRAM



California Rangeland Water Quality Management Plan

July 1995

1. Outlines science-based management strategies to prevent water quality impairments.
2. Provides for educational programs to develop on-ranch water quality protection strategies.

http://www.waterboards.ca.gov/publications_forms/publications/general/docs/ca_rangeland_wqmgmt_plan_july_1995.pdf

Crafted in partnership



California Rangeland Water Quality Management Plan

Technical & Policy Advisory Committee

Organization

CA. Cattlemen's Association
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 CA. Cattlemen's Association
 CA. Coastal Conservancy
 CA. Department of Conservation
 CA. Department of Fish & Game
 CA. Department of Fish & Game
 CA. Department of Fish & Game
 CA. Department of Fish & Game
 CA. Department of Forestry
 CA. Department of Forestry
 CA. Department of Forestry
 CA. Department of Forestry
 CA. Farm Bureau Federation
 CA. Farm Bureau Federation
 CA. Native Plant Society
 CA. Oak Foundation
 County Supervisors Association
 County Supervisors Association
 CA. Watershed Management Council
 CA. Woolgrowers Association
 CA. Woolgrowers Association
 CalTrout Inc.
 CA Resource Conservation Districts
 Marin Agricultural Land Trust

Name

Mike Bennett
 George Gough
 Marden Wilber Jr.
 Mark Moore
 Russell Rustici
 Laurel Marcus
 Chuck Tyson
 Mark Horshovsky
 Barry Garrison
 Jim Steele
 Jane Vorpagel
 Tom Randolph
 Clay Brandow
 John Munn
 Clancy Dutra
 Bruce Blodgett
 Emily Roberson
 Ginger Strong
 Mary K. Shell
 Tom Bamert
 Donna Lindquist
 Steve Hackett
 Jay Wilson
 Tom Hesseldenz
 Chuck Pritchard
 Lisa Bush

Title

Water Quality Chair
 Director, Gov. Affairs
 Rancher
 Rancher
 Rancher
 Project Manager
 Soil Resource Specialist
 Natural Heritage Program
 Wildlife Management
 Environmental Services
 Environmental Specialist
 Rangeland Programs
 Watershed Specialist
 Soil Scientist
 RMAC Representative
 Natural Resources
 Public Lands Planner
 Executive Committee
 Chair, Ag. & Nat.Resource
 V.Ch., Ag. & Nat.Resource
 PG&E
 Rancher
 Executive Vice President
 Executive Director
 RMAC
 Monitoring Specialist

Natural Resources Defense Council
 Nature Conservancy
 Range Management Advisory Comm.
 Rangeland Consultant
 RWQCB - Central Coast
 RWQCB - Central Valley
 RWQCB - Central Valley
 RWQCB - Lahontan
 RWQCB - North Coast
 RWQCB - North Coast
 RWQCB - San Diego
 Sierra Club
 Society for Range Management
 Soil & Water Conservation Society
 State Water Resources Control Board
 State Water Resources Control Board
 U.C. Cooperative Extension
 U.C. Cooperative Extension
 U.C. Cooperative Extension
 U.C.D. Agricultural Issues Center
 US Army Corps of Engineers
 US Environmental Protection Agency
 US Environmental Protection Agency
 US Environmental Protection Agency
 US Fish & Wildlife Service
 USDA Consolidated Farm Services
 USDA Forest Service
 USDA Forest Service
 USDA Natural Resource Service
 USDA Natural Resource Service
 USDA Natural Resource Service
 USDA Natural Resource Service
 USDA Natural Resource Service
 USDA Natural Resource Service
 USDI Bureau of Land Management
 USDI Bureau of Land Management
 USDI National Park Service

Dr. Tom Dudley
 Rich Reiner
 Barbara Allen-Diaz
 Jim Clawson
 Howard Kolb
 Dennis Heiman
 Larry Glandon
 Fred Blatt
 Mark Neely
 Greig Peters
 Dave Fullerton
 Cathy Bleir
 Bea McCamy
 Jack Hodges
 Gaylon Lee
 Mel George
 Neil McDougald
 Stephanie Larson
 Dr. Eric Bradford
 c/o Calvin Fong
 Jovita Pajarillo
 Sam Ziegler
 Tim Hatton
 Tom Mauer
 Larry Plumb
 Ralph Giffen
 John Rector
 Richard King
 Dennis Nay
 Gary Bullard
 Joe Thompson
 Leonard Jolley
 Jim Morrison
 John Willoughby
 Karl Striby

Pacific Institute
 Range Scientist
 U. C. Berkeley
 Technical Writing
 Water Resources Engineer
 Environmental Specialist
 Soil Scientist
 Environmental Specialist
 Engineering Geologist
 Environmental Specialist
 Water Chair
 President
 President
 NPS Chief
 NPS Forest Programs
 Range Specialist
 Watershed Specialist
 Livestock Advisor
 Animal Science
 Chief, Regulatory Branch
 NPS Coordinator
 NPS Projects, California
 SCS/EPA Liasion
 Contaminants Division
 State Cons. Specialist
 State Range Cons.
 Watershed Planning
 District Conservationist
 Range Conservationist
 Water Quality Coordinator
 District Conservationist
 State Range Cons.
 State Range Cons.
 Ecosystem Specialist
 Range Conservationist

25 years of progress

CA Rangeland WQ Management Plan – complete 1995

Ranch WQ Planning Short Courses – 1994 to present

1990

2015

Ranch Water Quality Planning Short Course

- SWRCB funded curriculum development.



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- 1994-2015, >80 courses taught, 35 counties, 1000+ ranches, 2+ million acres.



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- Ranch Water Quality Plan – tailored to ranch, watershed, and regional regulatory approach.



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- Ranch Water Quality Plan – tailored to ranch, watershed, and regional regulatory approach.
- Flexibility at ranch level or at watershed level.



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Ranch WQ Planning Short Courses – 1994 to present

On-ranch WQ Management Practice Implementation

1990

2015

NRCS – Practice Cost Share (2009-2014)

- \$302 M in rangeland WQ practice implementation
- 7,385 contracts with landowners
- 5.7 M acres contracted

cross fencing

riparian planting

off-stream drinking water



25 years of progress

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Ranch WQ Planning Short Courses – 1994 to present

On-ranch WQ Management Practice Implementation

Rangeland WQ Research – 1994 to present

1990

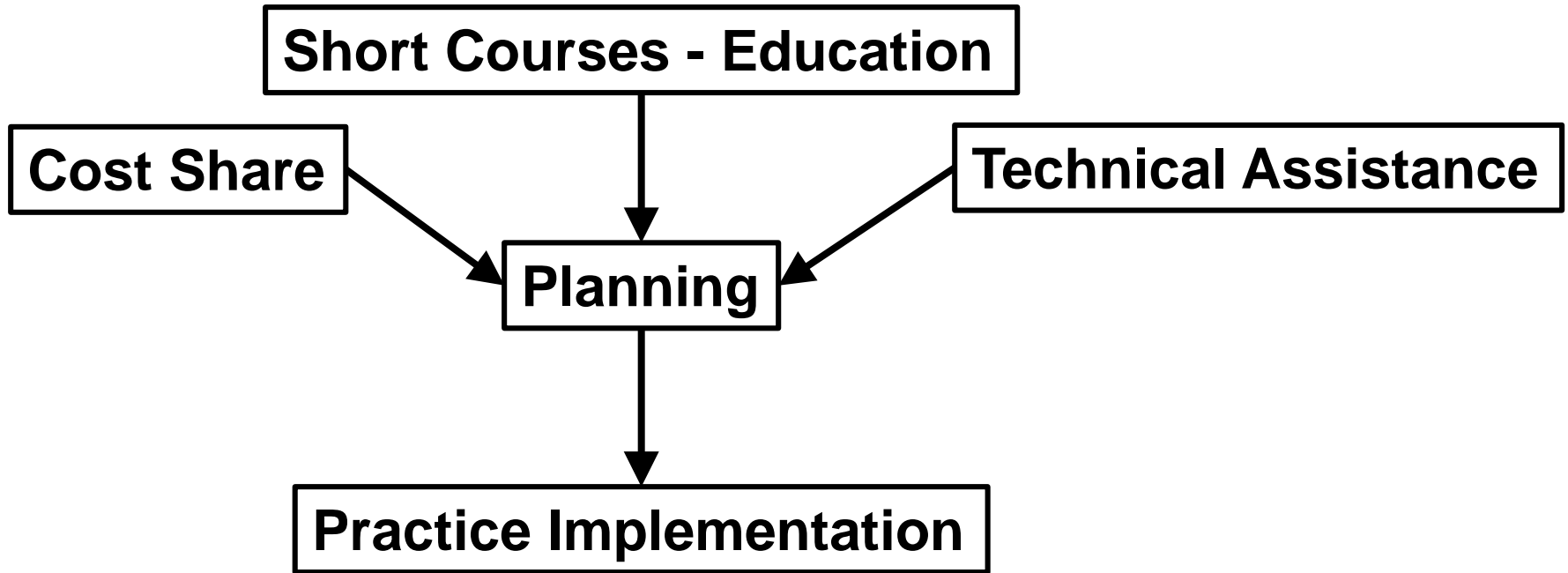
2015

Over 100 research papers

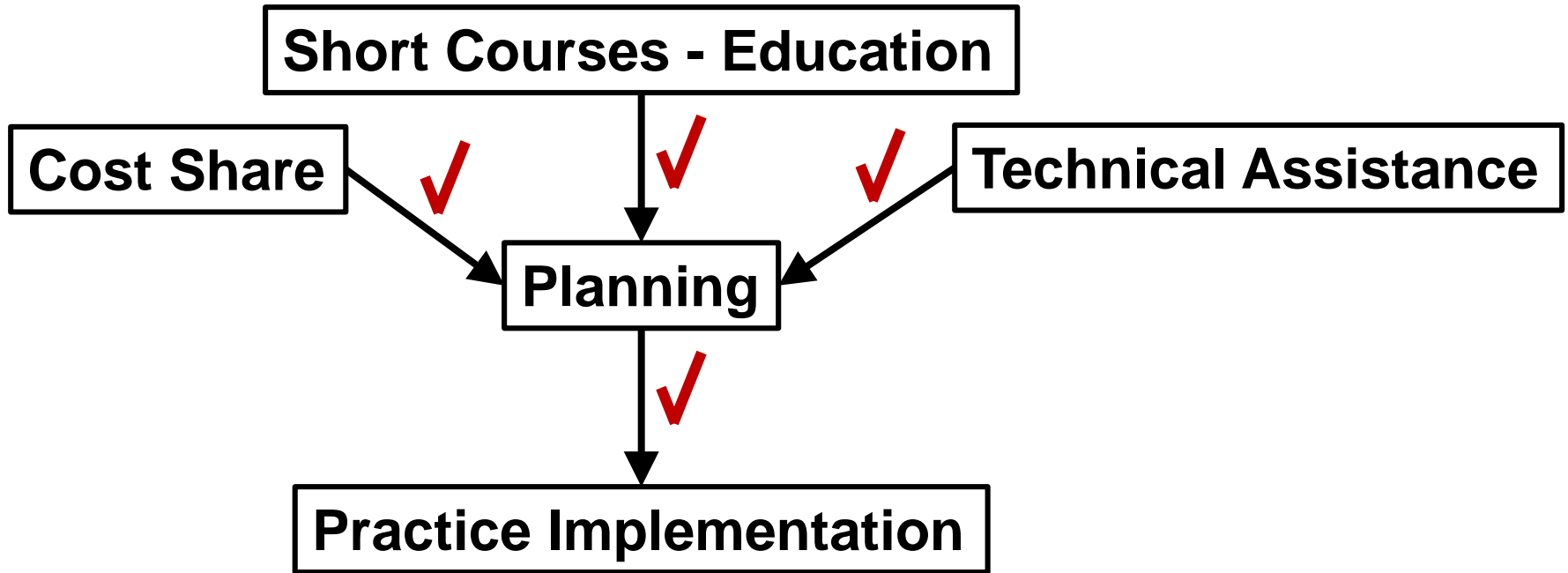
- Pollutant sources on grazing lands
- Transport, fate, mitigation of these pollutants
- WQ conditions on rangelands



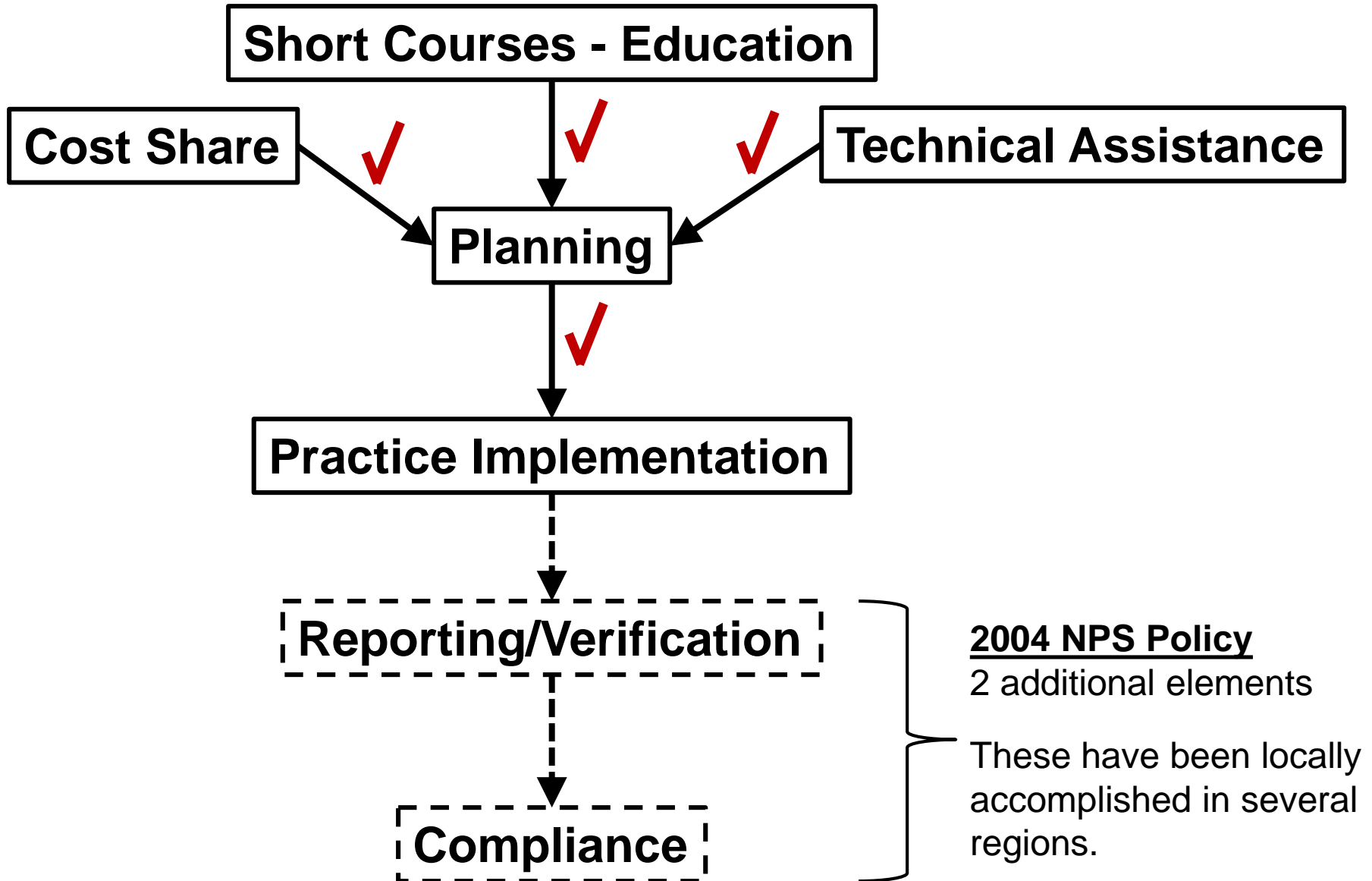
What is Regulatory Compliance?



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The next 25 years ??

CA Rangeland WQ Management Plan

Ranch WQ Planning Short Courses

Ranch WQ Management Practices

Rangeland WQ Research

*Continue to build
upon our successes!*



1990

2015

2040



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California Grazing Water Quality
Partnership

1990

2015

2040

CA Grazing WQ Partnership

Partnership Goal

Develop a contemporary, collaborative strategy for proactive grazing land water quality protection and regulatory compliance across the state for the next 20 years.

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Develop a contemporary, collaborative strategy for proactive grazing land water quality protection and regulatory compliance across the state for the next 20 years.



1. Policy

Collaborate to develop policies to address the new elements in the 2004 NPS-PIEP.

2. Plan Update

Update the 1995 Plan with contemporary water quality science, planning, education, management implementation, and policies.

3. Research

Address outstanding questions related to grazing lands water quality policy, planning, and protection.

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CA Rangeland WQ Management Plan

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Implementation

Integrated outreach, education, planning, practice implementation, monitoring, and research to improve and protect water quality.

Current Local Partnership Efforts

Emerging Partnerships

Bridgeport Valley

Stanislaus National Forest



Joining the Partnership...

Contact:

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UC Rangelands

dmacon@ucdavis.edu

(530) 889-7324

Stay tuned for our website launch this spring!

<http://rangelands.ucdavis.edu>

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