Shasta River Report

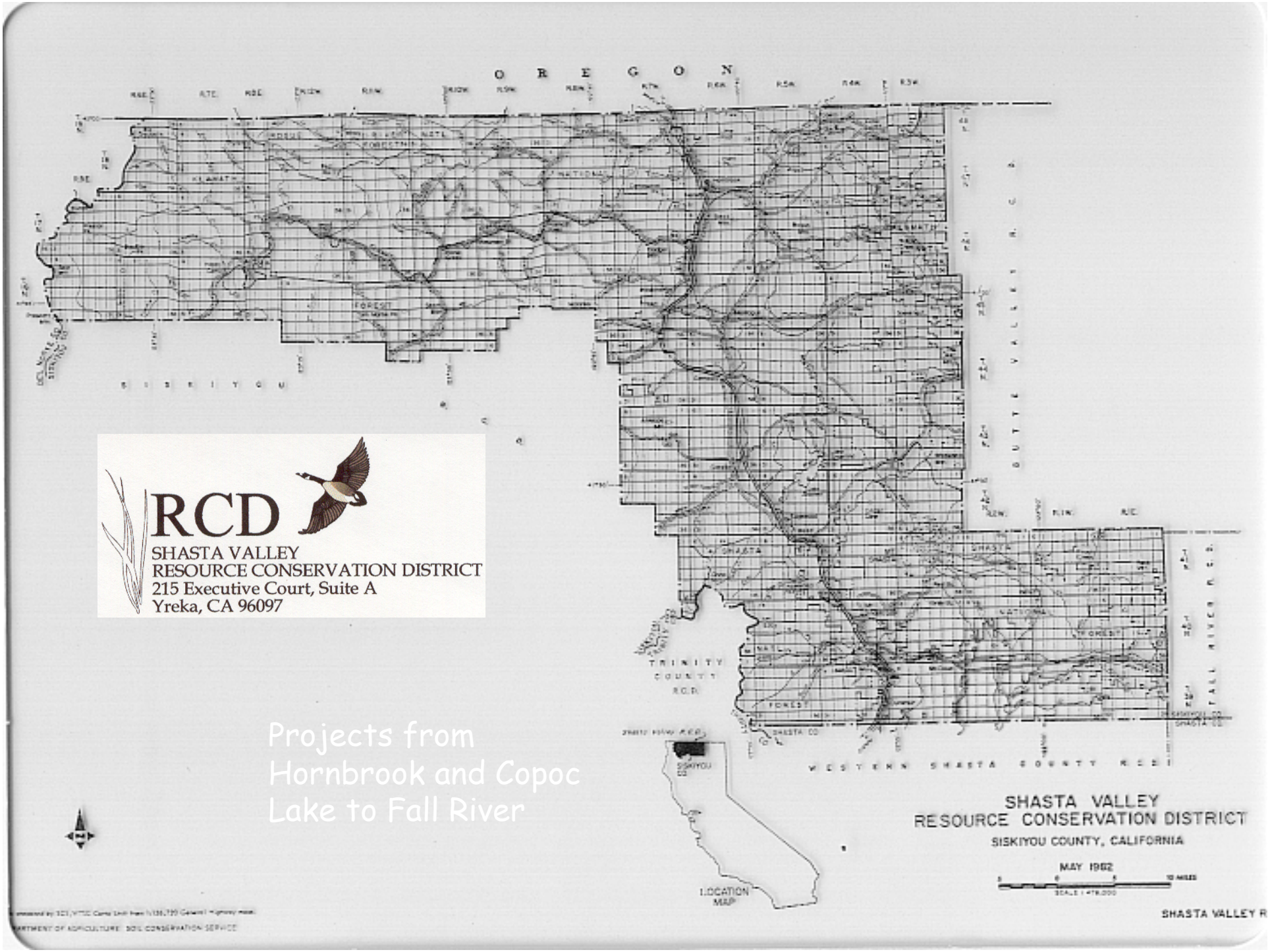
Regional Tribal Water Plenary Meeting #7

June 13, 2009

Yreka, CA

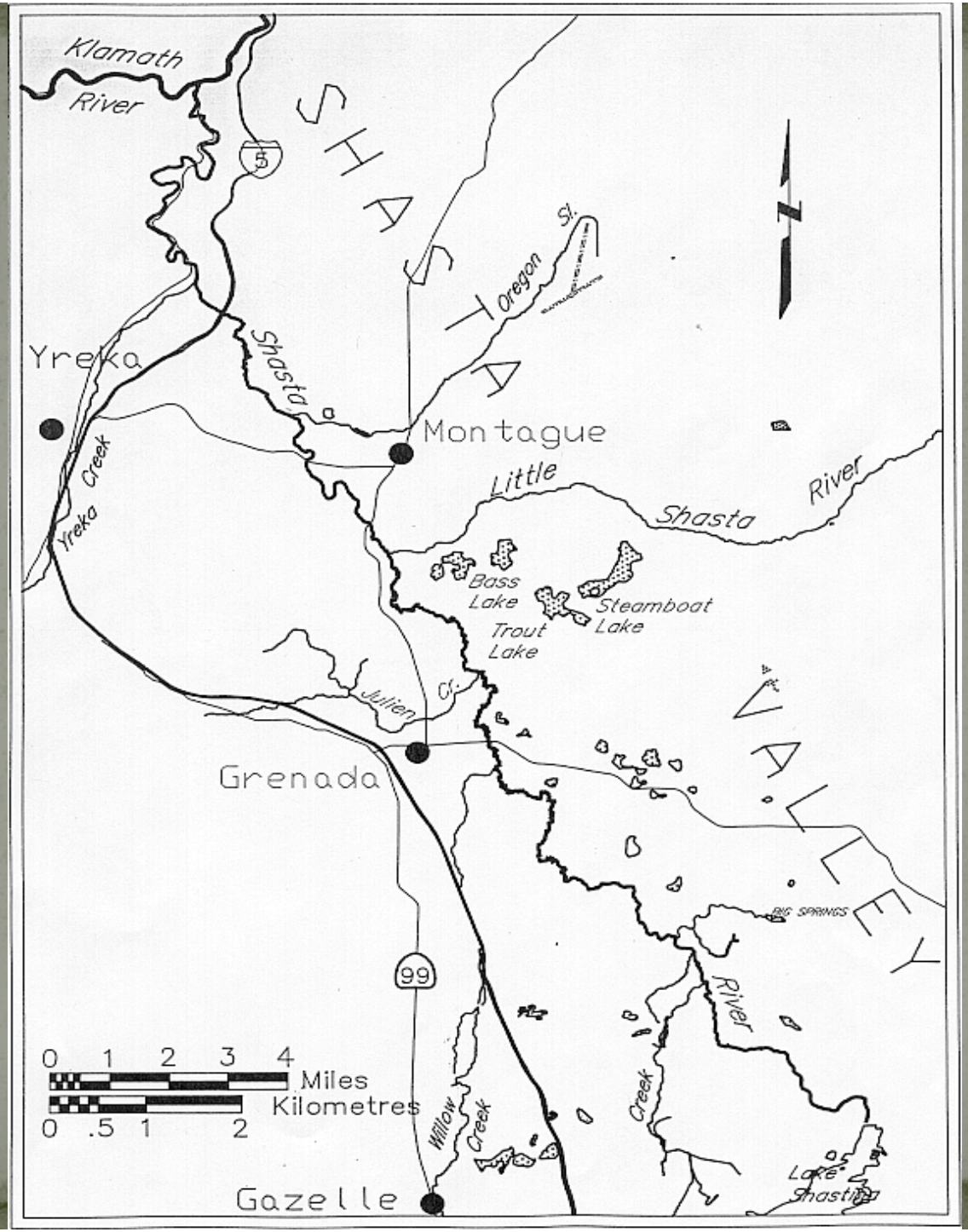
Today's presentation.

- History and past projects
- Minor impoundment removals
- Water use efficiency projects
- Tailwater analysis and reduction projects
- Water diversions and flows
- Groundwater Data Needs Assessment
- Riparian Plantings
- Monitoring activities
- TMDL Landowner Assistance.
- Opportunities for Tribal assistance



RCD
SHASTA VALLEY
RESOURCE CONSERVATION DISTRICT
215 Executive Court, Suite A
Yreka, CA 96097

Projects from
Hornbrook and Copoc
Lake to Fall River


Klamath
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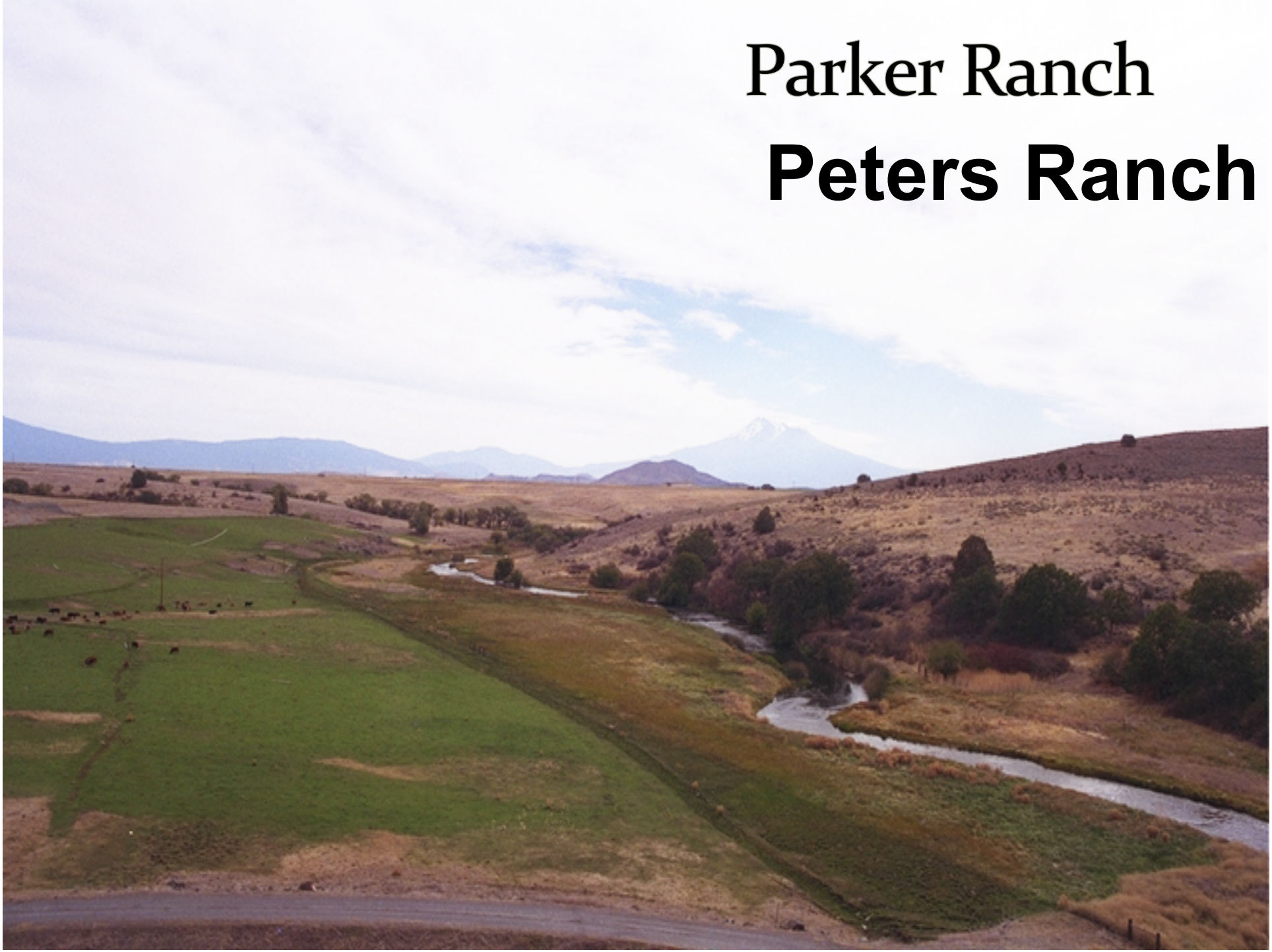
Yreka
Shasta
Montague
Yreka Creek
Little
Shasta
River
Bass
Lake
Steamboat
Lake
Trout
Lake
Julien
Cr.
Grenada
VALLEY
BIG SPRINGS
99
River
Creek
Willow
Creek
0 1 2 3 4
Miles
0 .5 1 2
Kilometres
Gazelle
Lake
Shasta

Targets

- reduced water temperatures
- increased levels of dissolved oxygen
- reduced fine sediment finding it's way into the stream
- improved fish passage and screening

4 Use vegetation to remove nutrients, then cool it through sub-surfaced return to the river


Parker Ranch
Peters Ranch

Adding Stock Water Access

Meamber Ranch
Crossing Lane

Riparian Zone Livestock Control Fencing

- Most important first step for people raising livestock next to streams
- Demonstrates a commitment to responsible stewardship
- Reimbursement available for loss of grazing through Conservation Reserve Program

Ekstrom Ranch

Pulsed Flows

- Developed as a temporary approach to improving survival of Fall Chinook salmon
- Generally done for 2 days in May and 2 days in June
- Will no longer be necessary once water quality and fish passage are sufficiently improved

Biotechnical Bank Protection

Araujo Dam Removal- Oct. 2007

- 5 individual ranches
- 5 state and federal agencies
- 1 listed species (coho)
- 6 years (planning to construction)
- ~$2.5 million dollars
- Addresses 3 Action Items in TMDL Action Plan

Goals: reduce ponding in river

- increased water velocities
- increase dissolved oxygen
- reduce thermal temperature gains

Goals: Install protections for beneficial users - fish and ranchers

- screened 1-unscreened diversion
- 3 additional diversions brought into compliance

Goal- improve water use efficency

- gravity to pumps –commitment made by landowners
- new efficient pumps but includes an electrical bill.
- efficient water delivery with little to no loss of water.

Goal: water use efficiency cont.

- piping over 80% of main irrigation ditches
- installed 6.7 miles of pipe
- eliminated poor water quality conditions in ditches

Goal: tailwater reduction

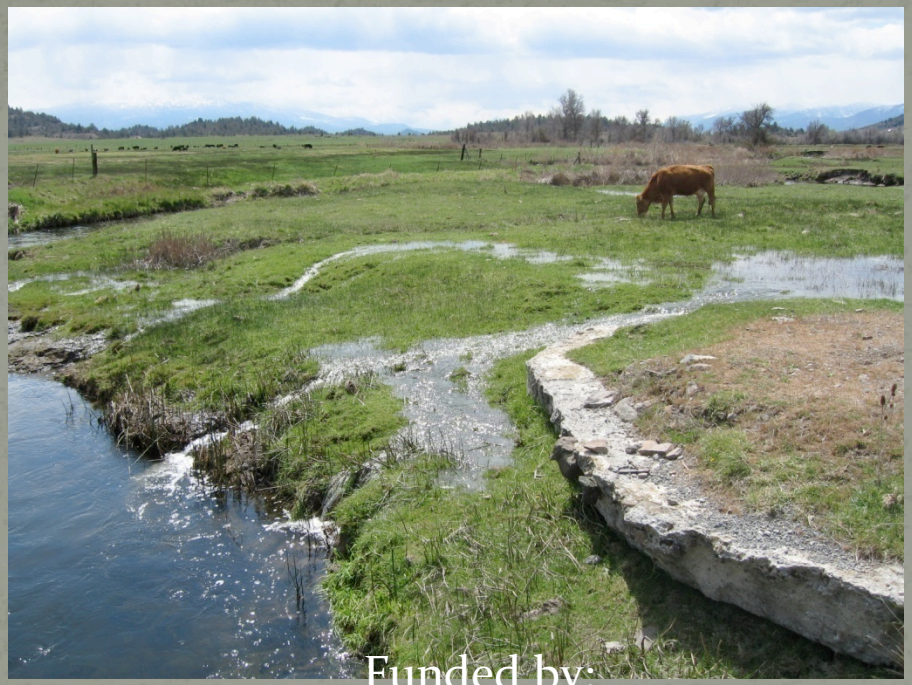
- Tailwater captured and funneled into pipelines.

- Incentives for landowners to turn pumps off

- Individual on-farm improvements to continue to integrate tailwater into the system.

- Neighbors working together.

Tailwater Reduction Project



Funded by:
Prop40/50 Agriculture Water Quality Program

Water Boards

STATE OF CALIFORNIA
NORTH COAST REGION
REGIONAL WATER QUALITY CONTROL BOARD

Project Scope of Work

- Tailwater Advisory Committee
- Shasta Valley Tailwater Assessment and Project Prioritization
- Shasta River Water Association Tailwater Reduction Study
- Projects Implementation

Tailwater project aims to improve water quality

By JAMIE GENTNER
Daily News Staff Writer

YREKA – For as long as people can remember, some type of irrigation has been used for one purpose or another.

In ancient Egypt and early Europe, flood irrigation was used.

and nutrients. More nutrients feed plants that grow more, take oxygen from the water and cause the dissolved oxygen level to change, which starts killing fish."

When that happens on farmers' and ranchers' land, it affects the tailwater runoff that ends up back in

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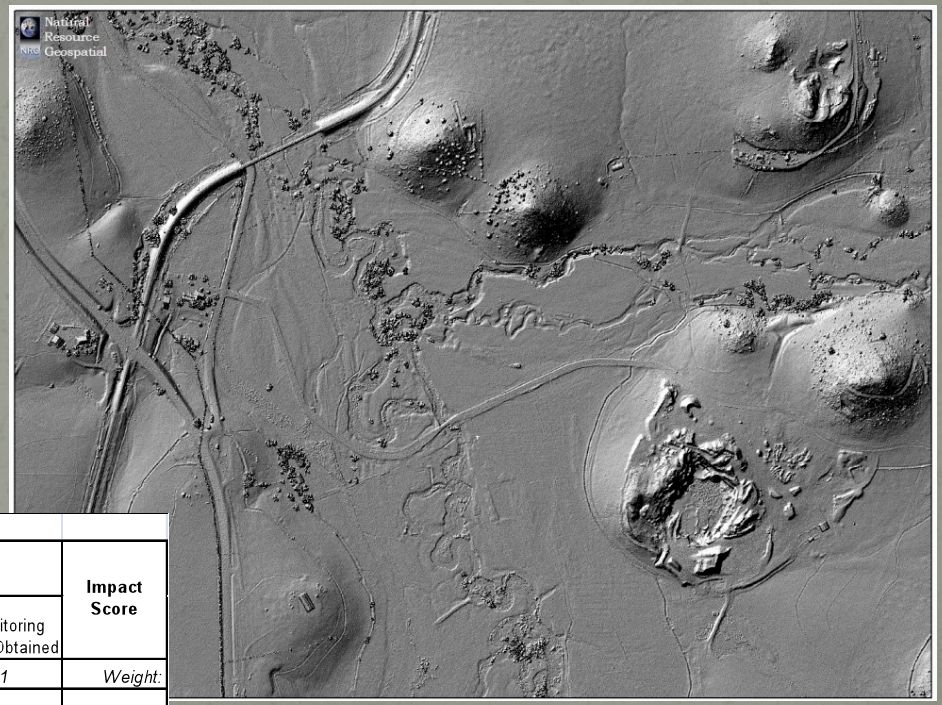
DAILY NEWS PHOTO/JAMIE GENTNER

Irrigators attending Tuesday night's Shasta River CRMP meeting work together to map out tailwater neighborhoods being studied for the Tailwater Reduction Project. Pictured are, top photo from left, Bill Hirt, Don Meamber, Steve Orloff, Ayn Perry, Stan Seers, Lisa Unkefer of AquaTerra; bottom photo from left, Rick Lemos and Albert Sandhal.

LiDAR Imagery

- Identify areas of tailwater production and tailwater neighborhoods
- Create criteria for prioritization of tailwater areas and identify projects.



Property Owner/Neighborhood	*Impact Prioritization*					Impact Score
	Location (relation to waterways)	Location (relation to habitat areas)	Quantity	Distance or Temp/Quality	Monitoring Data Obtained	
Weight:	*10*	*10*	*10*	*8*	*1*	*Weight:*
Hansen Ranch	10	10	10	3	10	334
						0

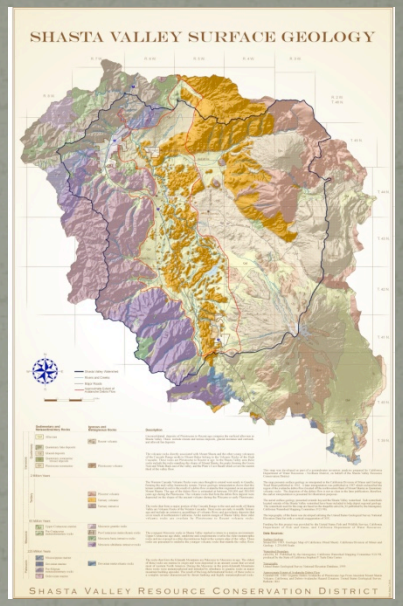
Tailwater Project Status

- January 2008- LiDAR completed
- 2008- 2011- Tailwater monitoring
  - flows, water chemistry, temperature, and DO.
- Summer 2008- Complete Shasta Valley Implementation Plan and Prioritization Criteria.
- Fall/Winter 2008- Complete Shasta River Water Association Tailwater Reduction Study
- 2008- 2009- identify and rank potential projects
- Implementation of projects 2009-2010.

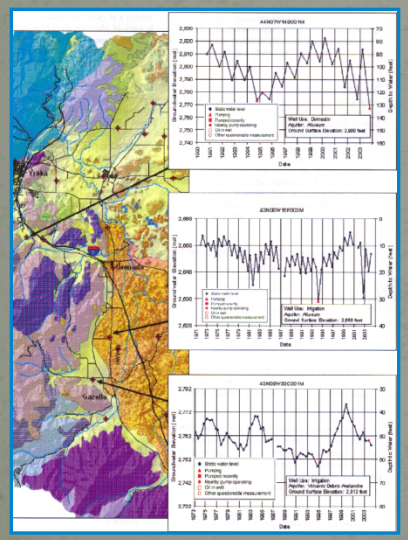
Shasta River Water trust

- Program development (mission and vision)
- Identification of short term and long terms goals.
- Prioritize key locations in the watershed.
- Continue outreach and input from the community
- Seek funding to support the Water trust program and potential water transactions.
- $30,000 privately donated to begin the effort.

Shasta River Groundwater Data Needs Assessment



- Draft under review by the Groundwater Advisory Committee.
- A basis to move forward.
- An assessment of current data.
- Identifies data gaps



NEXT STEPS….

- Advisory Committee will begin discussing how to move forward.
- May include coming to consensus on data needs, prioritization of needs as well as refinement of research objectives.

Shasta River Riparian Working Group

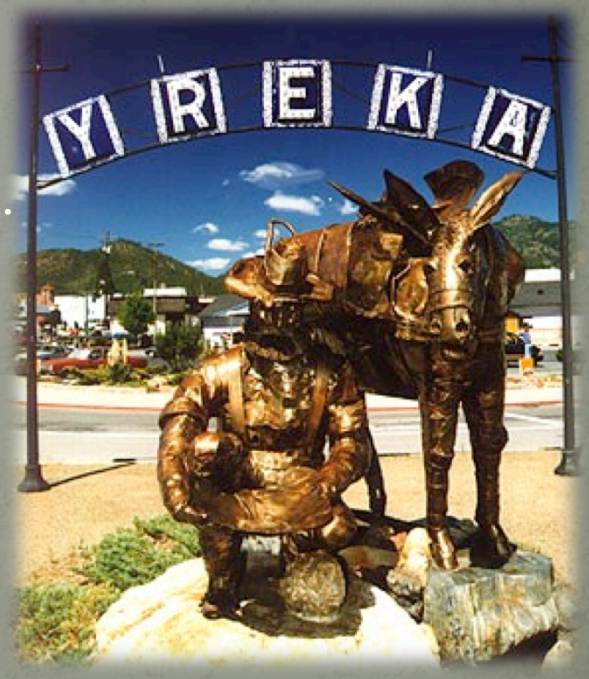
- A multi-agency/organizational technical work group.
- Created over concern about the poor success rates of riparian planting projects and overall quality of riparian habitat in the Shasta River.
- Purpose to develop a comprehensive strategy to restore and manage riparian habitat.
- Provides a forum for discussion, critical thinking and analysis.

Riparian Work Group Projects

- Assessment of previous planting projects.
- Evaluation of existing projects to refine methods.
- Experimental planting plots.
- Development of a standardized way to collect information from future riparian projects.
- Eventual development of planting and management prescriptions.

Yreka Creek Greenway Project

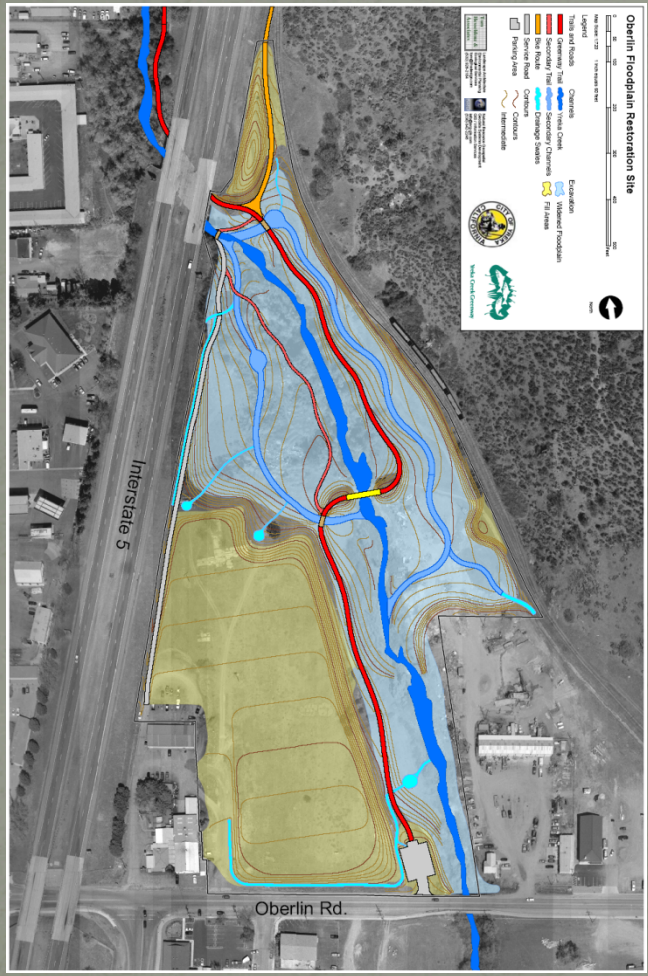
- Multi-agency/organizational/individual community project
- Extends along 4 ½ miles of Yreka Creek.
- Master Plan created in 1991, updated in 2005 and adopted into the City of Yreka's Master Plan.
- Non-motorized trails
- Extends from South to North through downtown.
- 10+ trailheads and restrooms
- Interpretive centers
- Access to local businesses, schools, hospitals, libraries, and housing.



Yreka Creek Greenway Project

- Improve water quality and enhance steelhead, coho and Chinook salmon habitat.
- Reduce damage from floods by expanding Yreka Creek's floodplain.
- Teach stewardship.
- Improve quality of life
- Enhance local economy.

Yreka Creek Greenway 2007- Floodplain restoration efforts



- ~12.7 acres purchased by the City.
- 35,000 cubic yards of fill removed away from creek channel
- ~1/2 mile of Yreka Creek's floodplain restored
- Funded by:

2008 RCD Water Quality Monitoring

- 10 dissolved oxygen monitoring locations ('08-'09)
- ~20 temperature probes deployed (in both the main stem and in tailwater return areas)
- Tailwater water chemistry (on a rotating basis).
- Tailwater return flow (on a rotating basis).
- Stream cross sections –flashboard dam removal locations.

Other agencies/organizations conducting monitoring

- The Nature Conservancy
- UC Davis
- CA Department of Fish and Game
- Karuk Tribe
- Quartz Valley Tribe
- Department of Water Resources

Shasta Valley RCD remains committed to:

- educate landowners about the TMDL
- conduct evaluations and make recommendations to landowners on how to meet TMDL requirements.
- Outreach to landowners for future projects.
- Grant writing
- Long-term monitoring
- Program development

Shasta Valley RCD Challenges

- Majority of our funding -project specific.
- Over $9.5 million of open contracts and projects.
- Only $30,000 currently available for management and coordination.
- NO available TMDL Program Funding for the RCD.
  - How can we continue outreaching to the community?
  - How can we begin project planning?
  - How can we begin grant writing?
  - Long-term monitoring- how do we know we're making progress?

- All Ranchers making a living from their land
- Most of the landowners on the Shasta and Little Shasta
- All multi-generational ranchers

Thank you!
Shasta Valley RCD

Board of Directors

- Richard Kuck- chair
- Kerry Mauro- vice chair
- Don Meamber
- Bill Hirt
- Rick Lemos

RCD
SHASTA VALLEY
RESOURCE CONSERVATION DISTRICT
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Yreka, CA 96097
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www.svrcd.org

Staff

- Adriane Garayalde- District Administrator
- Amy Hansen-CRMP Coordinator
- Tim Beck-Project Coordinator
- Steve Hill- Project Coordinator
- Karen Mallory- Monitoring Specialist
- Rob Jochim- Project Coordinator
- Rotary Screw Trap Staff (12 strong)
- Dave Webb- Life-time CRMP Coordinator

(530) 859-3814
shastaworks@gmail.com

Barriers and Opportunities

- Need to increase active partnerships between landowners and the Shasta CRMP
- Need to have funding available in a timely fashion to defray project costs
- Need to have the awareness, understanding, support and cooperation of the residents of Siskiyou County who are not in the agricultural community
- Need the cooperation of the resource agencies to overcome permitting and other legal hurdles
- Need to have engineering and design assistance in developing fish screens and fish passage

Personal observations

- A great well spring of people wanting to “do the right thing”
- Willing to take advise
- Willing to “do the right thing” (even at personal cost)

- Need to know “what to do”
- Need technical and physical assistance
- Oft times need financial assistance

Question:

- Are there opportunities for partnership with Tribes?

Tribal cooperation and projects.