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For the
Shasta Valley Resource Conservation District

What is Tailwater?

- Surface water is diverted out of the Shasta River or it's tributaries
- Sometimes travels miles in irrigation ditches or pipes to the "point of use"
- Turned out onto fields to run across the land being used by plants, evaporating, percolating or running off as TAILWATER

Tailwater Neighborhood

- Tailwater runs off either back to the river or onto another property
- Due to TMDL's we needed to ask...

Who's water is it?
and

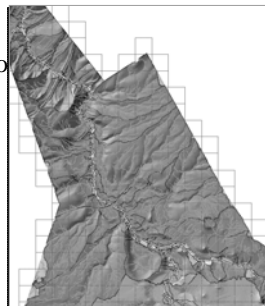
Who is responsible for it?

Grant Funding

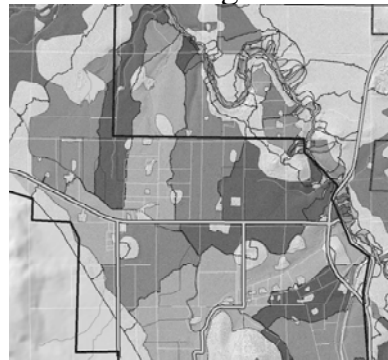
- Under Prop 40/50 Agricultural Water Quality money and 319h Clean Water Act funds the SVRCD received funding from State Water Resources Control Board
- Project Goal: Keep warm water out of river and cold water in the river
 - Identify neighborhoods valley-wide
 - Prioritize the neighborhoods for impacts to WQ
 - Implement high priority tailwater reduction projects
 - Monitor pre and post for project success

Neighborhood Identification

- LiDAR Flight
- Utilizing GIS software to perform flow accumulation model
 - Obtain Drainage lines
 - Pour points
 - Drainage areas



Tailwater Neighborhoods



So you think you have a project?



Project Prioritization Process

- Neighborhood Impact Score
- Project Screening
- Project Prioritization

Neighborhood Impact Score

- Where the tailwater return is in relation to known salmon rearing?
- How much tailwater is returning?
- What effect does the return have on river temperature?
- Is there monitoring data available on the return?

Neighborhood Prioritization



Management

- Education and Outreach to Neighborhoods
 - Workshops, neighborhood meetings, etc
- Irrigation Management (NRCS 449)
 - Shorter sets, night irrigation, less water applied, fee schedule adjustment
- Irrigation monitoring
 - Field sensors, river monitoring, etc

Project Screening Criteria

- Is tailwater re-entering a waterway?
- What's the impact score from the neighborhood that the project is within?
- Landowner willingness?
- Will project keep cold water in the river or return cold water to the river?
- How easy is the project to implement?
- Is the project's intent to assist landowners in increasing water management? Or has increased management already been implemented?
- Would project compromise Water Quality?
- Would project increase consumptive use?
- Would project impact a 3rd party?
- Does the project only benefit 1 landowner?
- Could water savings be dedicated to instream flow?

Project Scoring Criteria

- How much landowner management is required to realize benefit?
- Potential operating costs required by landowner to realize benefit?
- Landowner cost share to implement?
- Has landowner implemented tailwater reduction in past successfully?
- Percent of neighborhoods tailwater would reduced by project?
- Estimated water quality benefit expected
- Cost effectiveness?
- Would project impact groundwater due to recharge loss?

Watershed Tailwater Planning

Recommended Strategies:

- Increase irrigation monitoring/management
- Grazing management
- Increase irrigation efficiency (pipes, turn-outs)
- Water treatment
- Transfer tailwater to another user

Project Contributors:

State Water Resources Control Board
California Department of Fish and Game
The Nature Conservancy

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