Why Clean WaterR3?
- Access to high quality water for irrigation is increasingly limited
- Growers reluctant to use recycled water because of contaminants (diseases, salts & pesticides) that could limit plant growth

Our transdisciplinary, SCRI-funded team of researchers and grower partners (from across the US) are working to encourage recycling and reuse of remediated irrigation runoff by:
- Developing online grower decision support tools
  - Integrate socioeconomic & biological data to enhance decision making resources
  - Case-studies with treatment technologies
- Research and select runoff treatment technologies to manage contaminants

Grower focused website for outputs: cleanwater3.org

Sociology interviews
- How to present data
- Motivating factors to change practice
- Barriers to change in practice

Economic studies
- Economic assessment
- Life cycle analysis (LCA)
- Loss evaluation (Why is plant dead?)

Trans-disciplinary research to increase water recycling:
- Outreach & data delivery the focus
- Grower interviews (25+) for sociological assessment
- Economic components ground cost of change (yes/no) in practice
- Biological components combine to reduce and remediate pollutants
- Model development integrates biological & socio-economic data into simple, interactive, online tools

Grower Input & Collaboration:
11 collaborating growers
- 9 advisory board members
- On-farm trials & evaluation of treatment technology efficacy
- Online tool evaluation
- Economic assessment validation
- Research planning

Online decision making tools will be hosted on this site

Reduce - Remediate - Recycle:
Biology & modeling to create predictive tools

Manage Irrigation:
Reduce nutrients, pesticides & diseases in runoff

Treatment Technologies:
Remediate diseases & agrochemicals in irrigation runoff water

Lab and on-farm evaluation of treatment technologies
Filter socks: sediment & phosphorus management

Recycled runoff: Clean water for irrigating container crops

Recycled runoff:
- Nutrients, phosphorus, other inputs
- Remediating technologies
- Discharge water, nutrients, pesticides, pathogens

Reducing nutrient, pesticide, and disease loads leaving production areas (A) can enhance efficacy of treatment technologies (B) and ultimately support use of recycle water (C) by growers. These information combine in model-based (D) “decision support tools” to aid in grower use of recycle water.

“Clean WaterR³ - Reduce, Remediate, Recycle - Enhancing Alternative Water Resources Availability and Use to Increase Profitability in Specialty Crops”

This material is based upon work that is supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, under award number 2014-51181-22372.