Verde River Flow Restoration Initiative
Arizona, Colorado River Basin

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The Nature Conservancy
Protecting nature. Preserving life.
THE NATURE CONSERVANCY

COLORADO RIVER PROGRAM

The Nature Conservancy is the largest, most innovative science-driven multi-channel conservation organization in the world. This positions the Conservancy to have a meaningfully impact on the future of the Colorado River Basin. The Colorado Basin Program was developed in 2008

• A river facing multiple threats and demands across state and national lines requires a big-picture approach
• The needs of people can and must be met without sacrificing the health of the Colorado River system, upon which the region depends
• Fifteen phase one priority river reaches and sub-basins were selected as demonstrations and to focus on-the-ground projects
• Focus our efforts for the next three years on flow alteration, which we believe to be the most pervasive and harmful threat
• Partnerships are key to our long-term success
Colorado River Program

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Verde River Watershed

- One of 26 of the state’s 38 groundwater basins forecasted to have more demand than supply within 2 decades
- Surface flows are highly impacted by groundwater and surface water diversions
- Supplies surface water to one of the five largest metro areas in the country
- Drinking water supply for one of the fastest growing counties in rural Arizona
Verde River Walk-a-boat

WHAT IF I WAS A FISH....
Verde Valley Flows

Prioritize & target reaches with a long range vision

• 30 cfs in Camp Verde, 20 cfs in Cottonwood
• Connect West Clear Creek
• Maintain flow at the gages
Irrigation Systems

The lowest cost system is not the most efficient
Tools for Flow Restoration

COOPERATIVE SOLUTIONS FOR COMPLEX PROBLEMS

1. Transaction based
   - Full and partial season fallowing
   - Diversion reduction agreements
   - Sever and transfer of rights
   - Leases/Short term transfers

2. Non-transaction based
   - Water measurement
   - Grants to support infrastructure
Diamond S Ditch Flow Restoration Project

A PROJECT MAP BRINGS MULTIPLE PARTIES TO THE SAME PAGE

Monitoring & Infrastructure
• Install measurement
• Install automation equipment

Diversion Reduction Agreements
• 1 pilot agreement
• 3 agreement with progressively stricter targets

Long lasting Changes
• Redesign diversion structure
• Incorporate community needs
Fallow Agreements

MAKING DO WITH THE LAWS WE HAVE

1. Full season fallowing
   • takes land out of production for full year
2. Summer fallowing
   • Water in the river in summer when most needed
   • Farmer still gets a crop
   • Native grass cropping
On-Farm Efficiency

RE D U C I N G W A T E R U S E AT THE FARM

- Infrastructure
  - ✓ Drip irrigation
  - ✓ Sprinklers
  - ✓ Gated pipe
  - ✓ Demand management

- Challenges
  - ✓ Expensive
  - ✓ New technology

- Advantages
  - ✓ Match system to farm/farmer
  - ✓ USDA-NRCS funding
  - ✓ Long lasting impact
Valuing Water

Focus is on keeping the price as low as possible but enough money to get people interested.

Identify the infrastructure needed and tie it to the incentive payment.

Evaluate financial loss farmer will incur and add a little money to that.
Funding

GOOD PROJECTS MATCHED TO THE RIGHT FUNDER

The Walton Family Foundation

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Successes

A R E  W E  G E T T I N G  T H E R E ?

Over the past four years:
• Improved flows in 20 miles of river
• Up to 10 cfs of restored flows
• Formed partnerships with 8 irrigation companies.
• Invested more than $175,000 in improvements to irrigation systems
• Developed a collaborative vision to keep us moving ahead
Success across the Basin

PART OF SYSTEM

- Delta Pulse Flow
- San Pedro Recharge Network
- Colorado Water Bank /System

Conservation Program: Introducing Flexibility for Water Managers

Photos by Pete McBride