

# This presentation premiered at WaterSmart Innovations

[watersmartinnovations.com](http://watersmartinnovations.com)



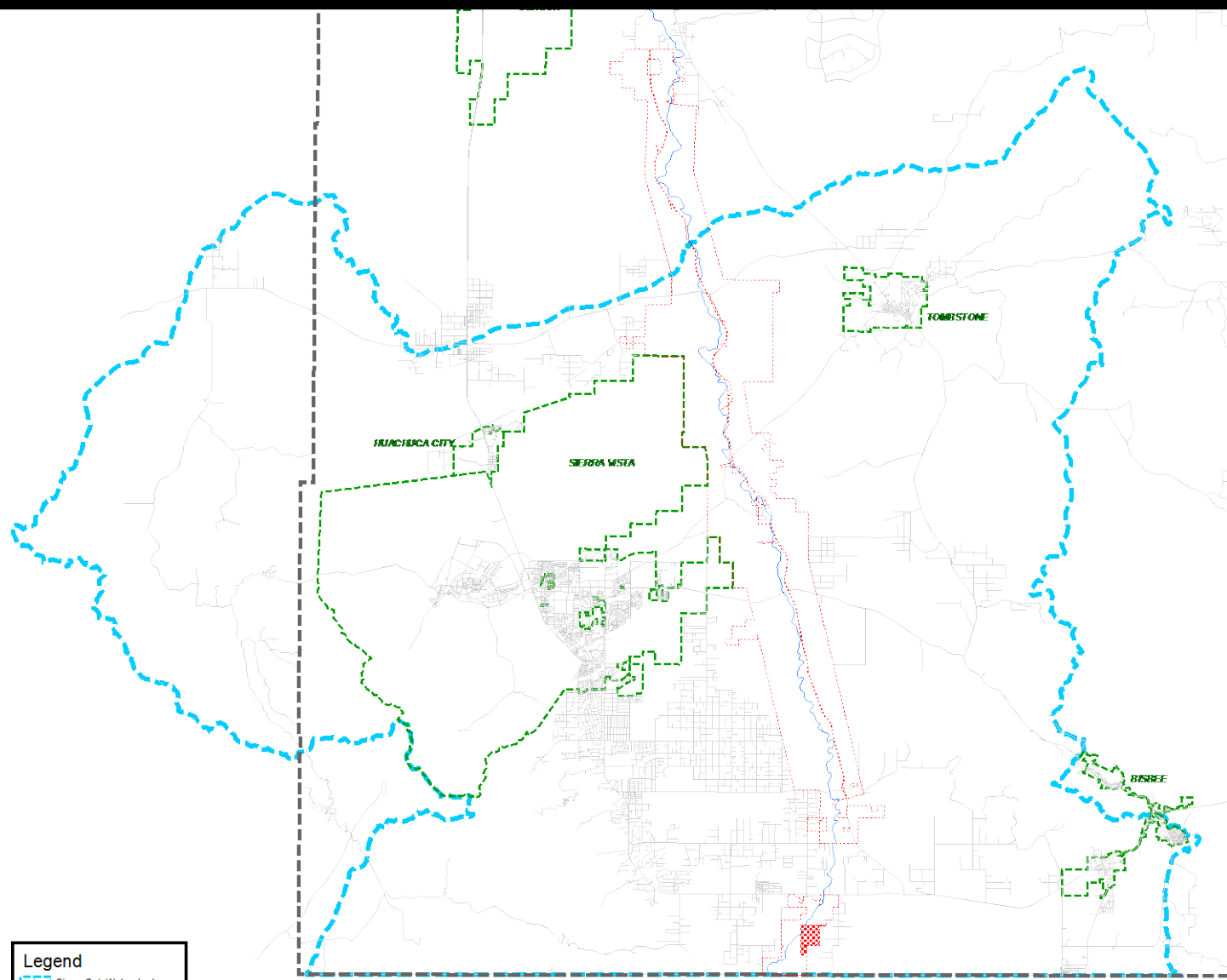


- **TCWP** - a new first!
  - Private/public partnership
- Focus is Sierra Vista, AZ sub watershed
  - San Pedro River National Conservation Area
  - Education & conservation grant initiatives
- Not for profit
- Apolitical



# Sierra Vista sub Watershed





**Legend**

- Sierra Sub Watershed
- Incorporated Limits
- Road Network
- County Boundary
- San Pedro Riparian NCA
- San Pedro River

This map is a product of the Cochise County GIS



# About TCWP

**“Below average is smart!”**

- Goal: reduce overdraft by 1300 AF in 4 years
  - conservation initiatives
- 2011: funding by Walton Family Foundation
- 2012
  - BOD formed – actively engaged in recharge/reuse advocacy
  - 501(c)3 status obtained
  - Technical advisory committee created
  - Pilot projects were focus for 2013 effective initiatives
- 2013
  - Grant initiatives begin in earnest



# 2013 Project Water Savings

(annualized)

**10.9M gallons**

**or**

**33.5 AF\***

\*AF = acre-foot  $\approx$  326,000 gallons

# **Outcome Performance Measures**

**(Water Conservation Action Plan; as of July 1, 2013)**

- Groundwater reduction projects
- Capacity building
- Business support
- Public support
- Cooperation and coordination

# Groundwater reduction projects: recharge

- Three regional storm water capture projects:
  - Total of 4,086 acres
  - Recharge potential (AF\*) being studied

\* AF = acre-foot  $\approx$  326,000 gallons



# Residential reduction projects

(Projects through July 1, 2013; annualized gallons saved)

<u>Initiative</u>	<u>Gals/year</u>	<u>TCWP \$/gal</u>	<u>Units</u>
All	3.18M	\$0.034	302
HET*	1.66M	0.026	159
DCP**	670K	0.035	67
HET + DCP	595K	0.036	29
RWH^	255K	0.081	47

\*High efficiency toilet; \*\*Demand controlled pump; ^Rain water harvesting

# Residential reduction projects

(Years of useful life (UL) of all initiatives)

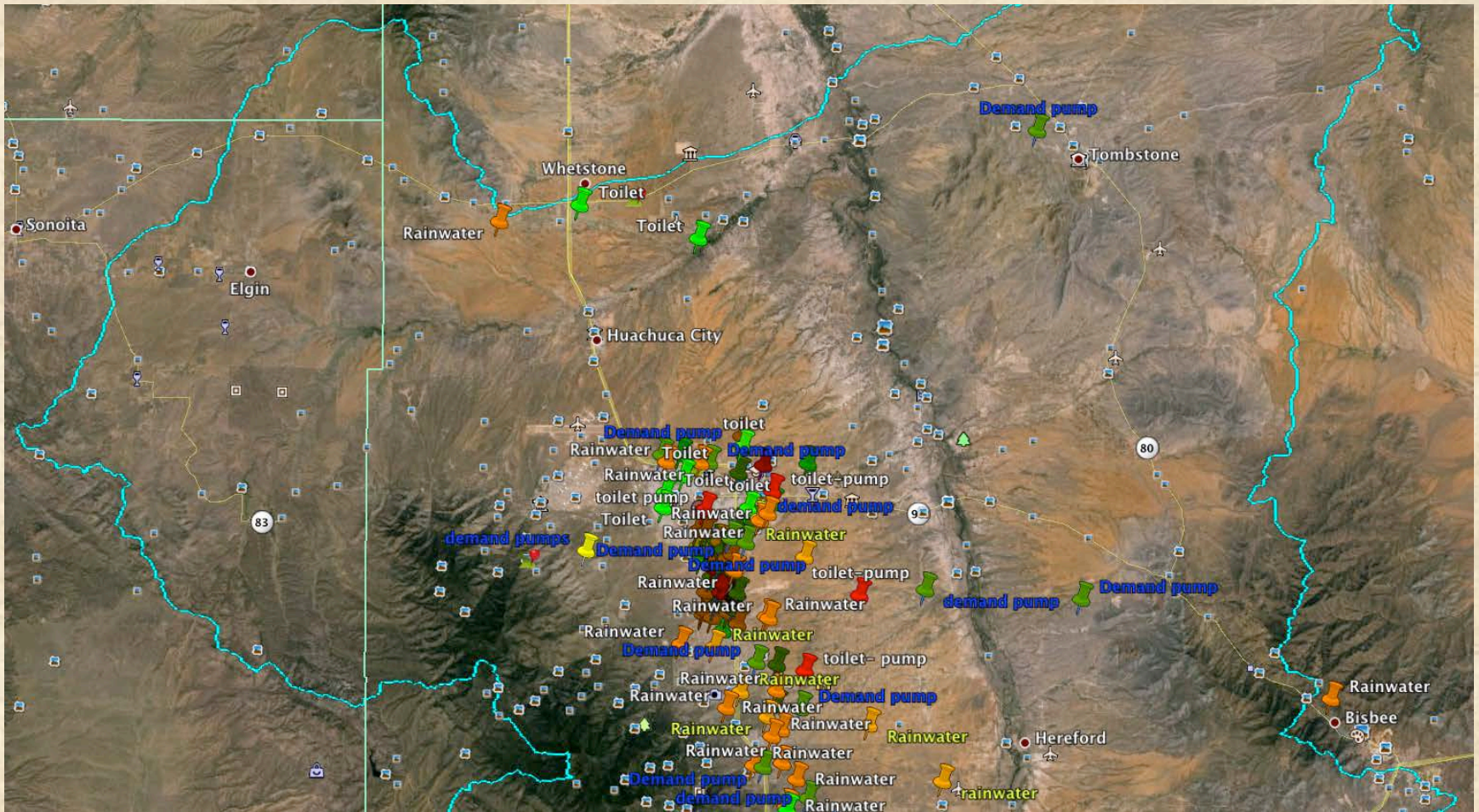
<u>Initiative</u>	<u>UL, range</u>	<u>AF saved*</u>	<u>Units</u>
All	(15 – 20)	161	302

- Average \$/AF over useful lives = **\$677**
- Overall funding ratio:
  - TCWP = **47%**
  - homeowners = **53%**



# Residential locations

(subset of grant initiatives completed)



# Capacity building

- University of Arizona cooperative extension service
  - Emphasis on rain water harvesting
- Sulphur Springs Valley Electric Cooperative
  - *Watts in the Water* brochure to 52,000 customers
- Free use of business training facilities for classes
  - Ace Hardware
  - Lowe's Home Improvement
- Fully funded Green Plumber training; constantly promote!
  - Any initiative rebate requires a Green Plumber





# Business support

- Funded *Sierra Vista Area Water Survey Results*
- At no cost installed HET\*, metered faucets, waterless urinals, WaterSense showerheads, and RWH systems in high traffic enterprises.
- Repaid in kind: motel nights, movie tickets; access to facilities
- EPA/WaterSense: rebate inspection expense for new WaterSense certified homes
- **Water saved: 1.2M gallons/year**

\*High efficiency toilet



# Public support

- Middle school

- RWH installation



- Funded water curriculum development

- Designed and built Water Wagon

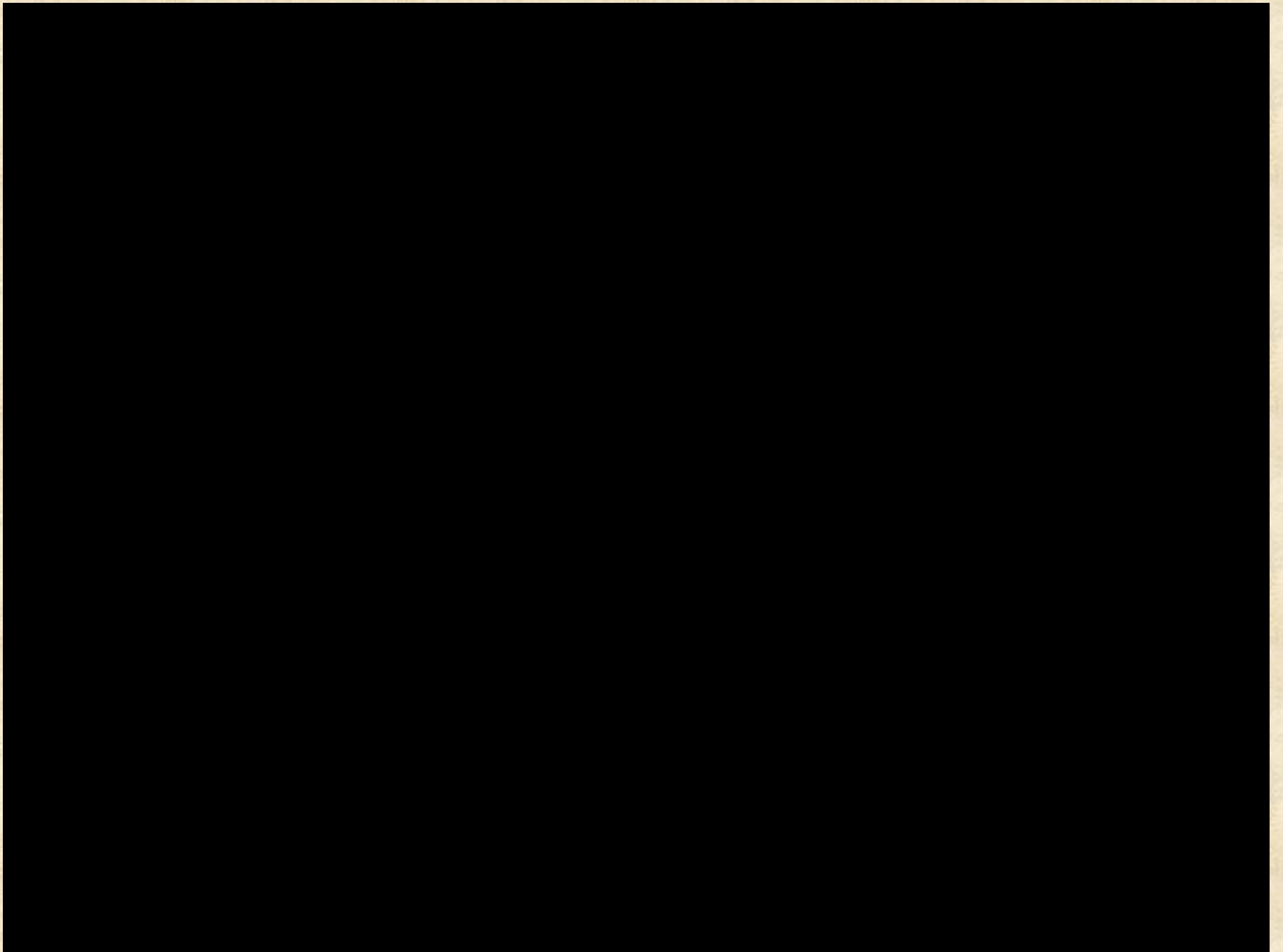
- Educate and demonstrate



- Movies in the Park

- Water themed event

- Refurbished 1.6 gpf toilets to Sonora, Mexico



# Public support: refurbished toilets to Mexico



# Cooperation and coordination

- Manage city of Sierra Vista and Cochise County toilet rebate programs



- Traded 20AF water avoidance by converting section of golf course to desert environment in exchange for 30K RWH system.



- Water companies sharing consumption data



# TCWP Lessons Learned

- Leadership through partnership - easier than anticipated!
- Offer rebates - “they will come”
  - Incentivize installations - remove all barriers
  - Green Plumbers - key; respected yet varied
- Consumers need “skin in the game”
  - Some will try to “game the system”
- Residential area outdoor water use: about half of assumed
  - RWH systems: inherently misunderstood
- More focus on specific areas
- Push the message: **Below average is smart!**





**Thanks for coming**  
**Thanks for listening**  
**May we help you?**