



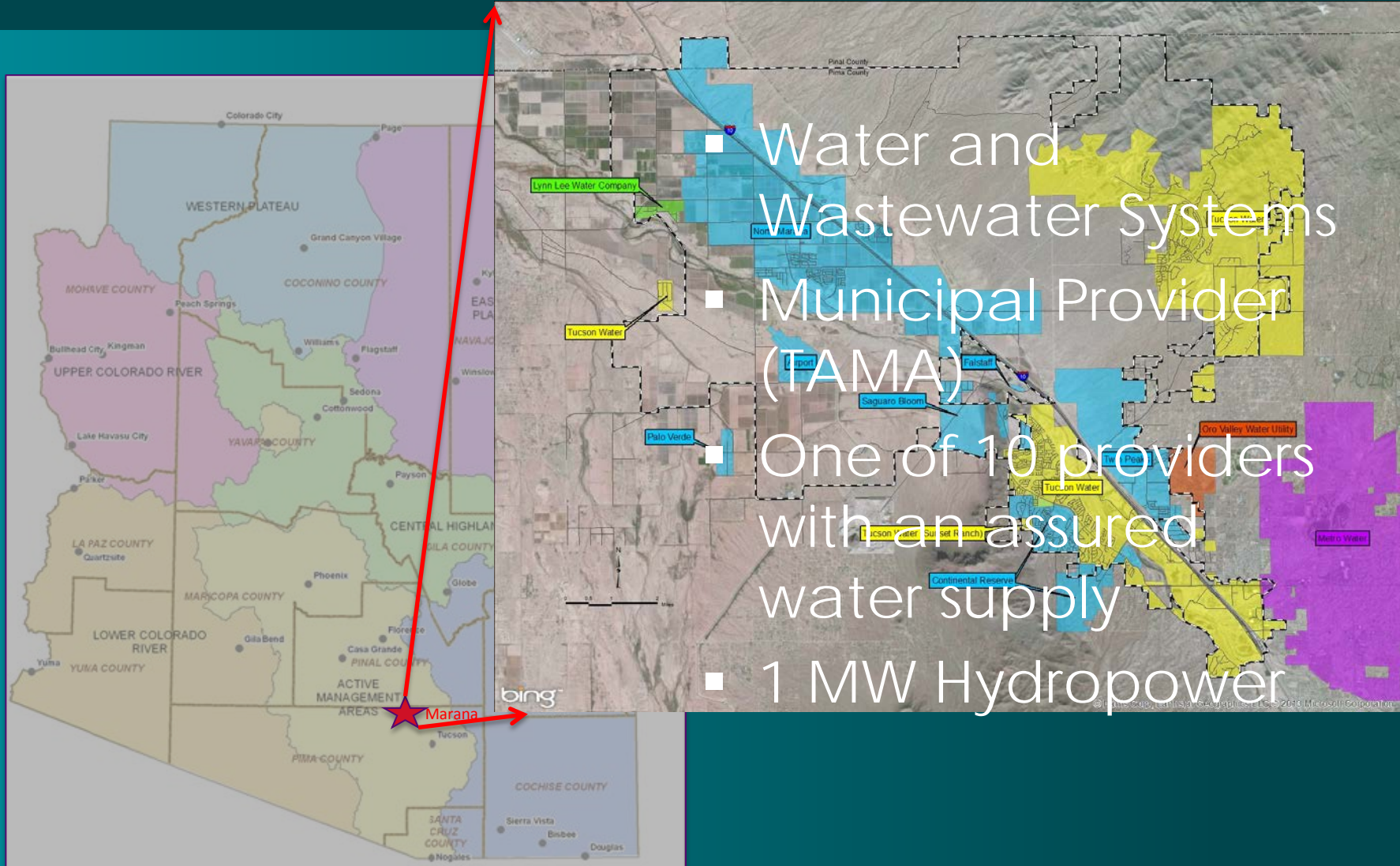
Panel Discussion:  
*A Public Utility Perspective from  
Southern Arizona*

John Kmiec, Marana Utilities Director

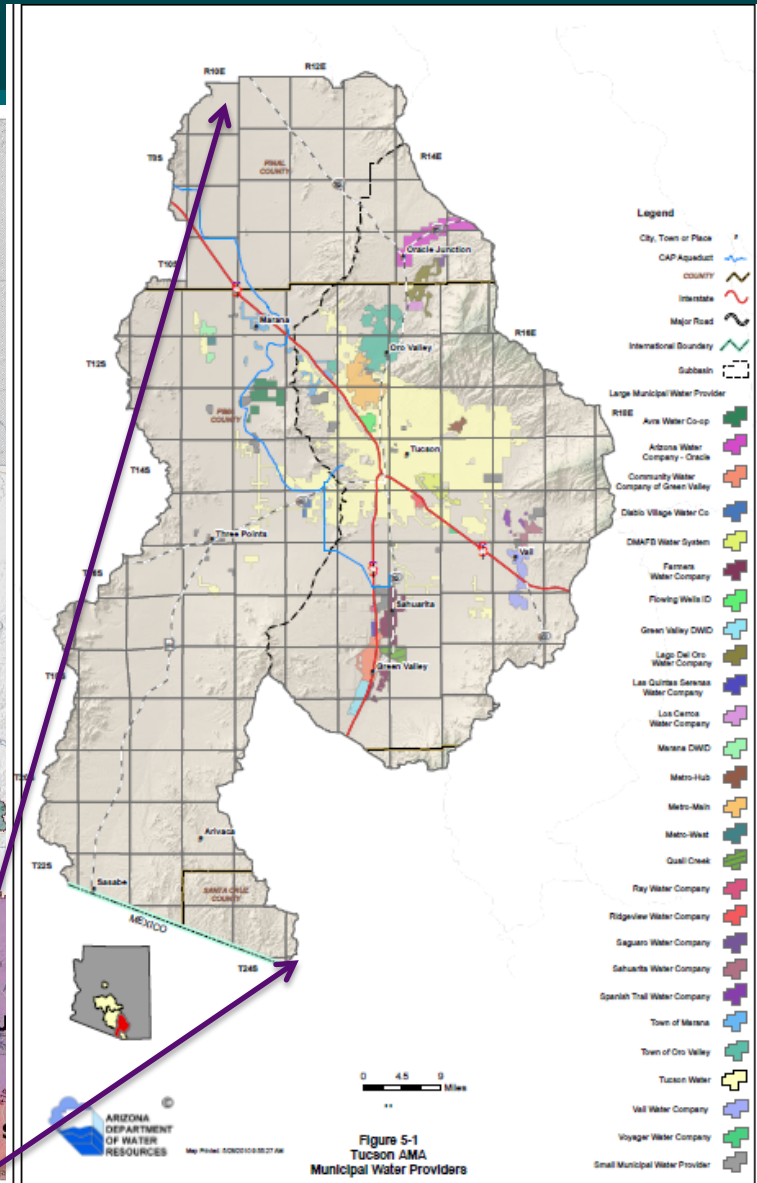
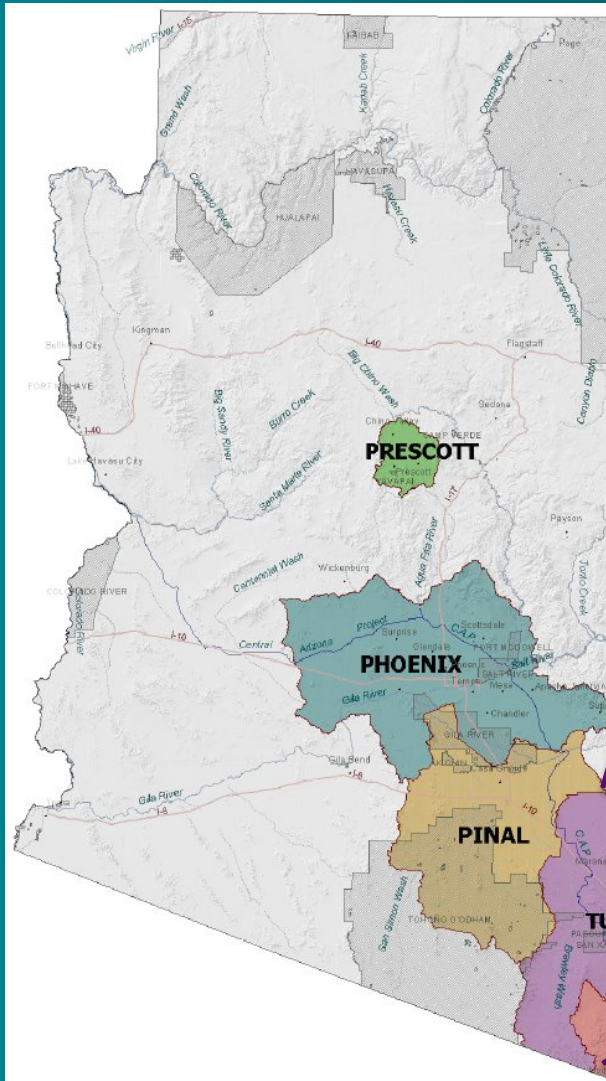
WRRC Conference 2014: Closing the Gap  
Between Water Supply and Demand

Tuesday, April 8, 2014

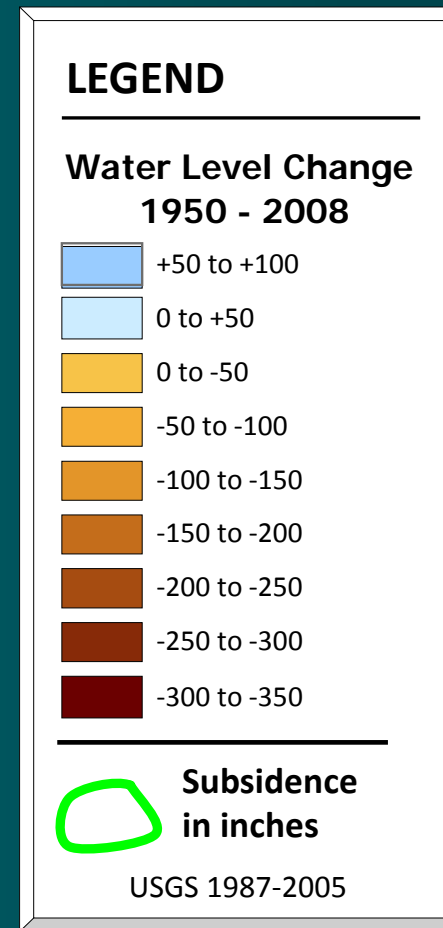
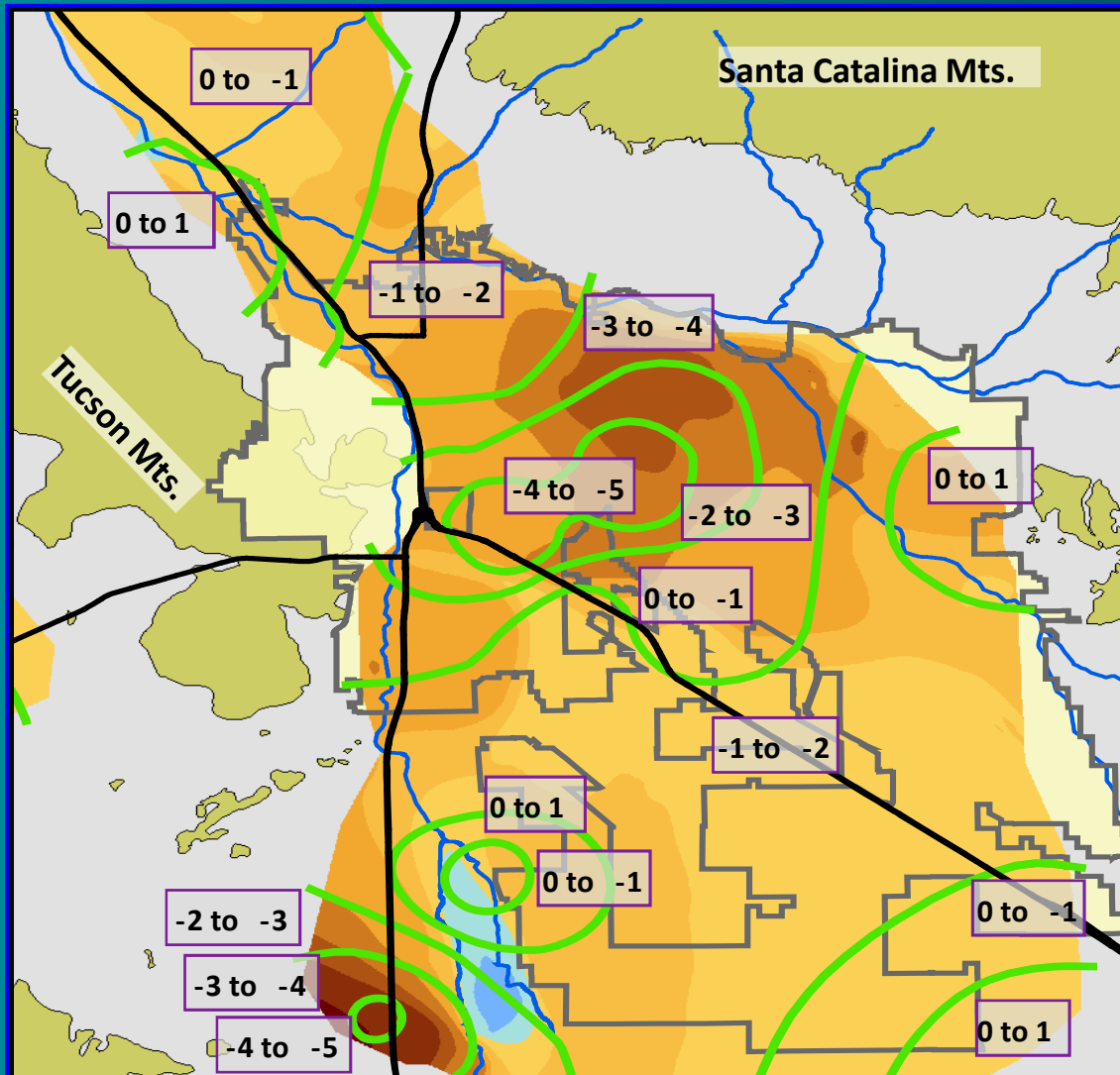
# Marana Utilities: Profile



# Need for Change



# Need for Change



Source: TUCSON WATER



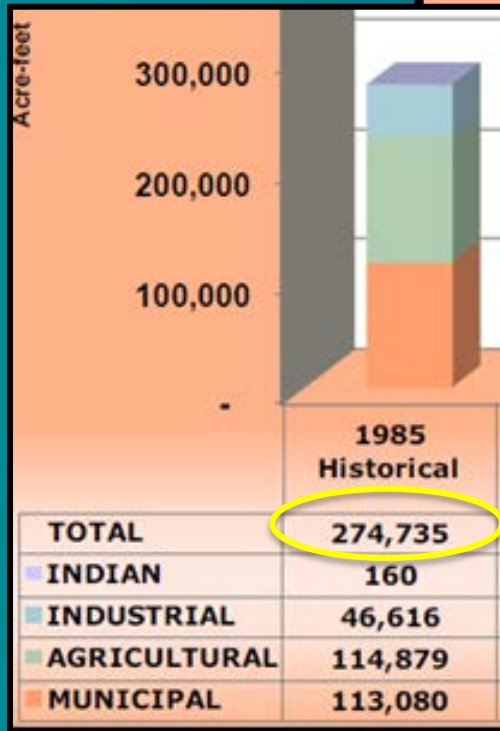


# Need for Change

Components of Natural Recharge in the TAMA (Mason and Boda, 2006)

Element of Net Natural Recharge	Acre Feet/Year
Mountain Front Recharge	34,445
Streambed Infiltration	39,270
Groundwater Inflow	24,710
Groundwater Outflow	-16,461
<b>Total Net Natural Recharge</b>	<b>81,964</b>

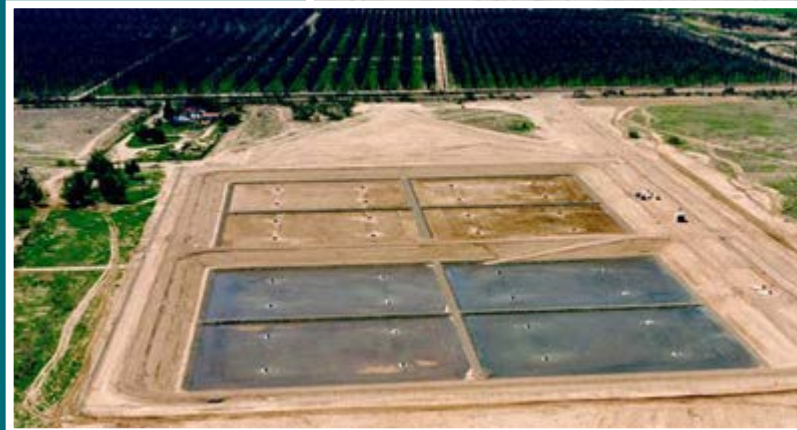
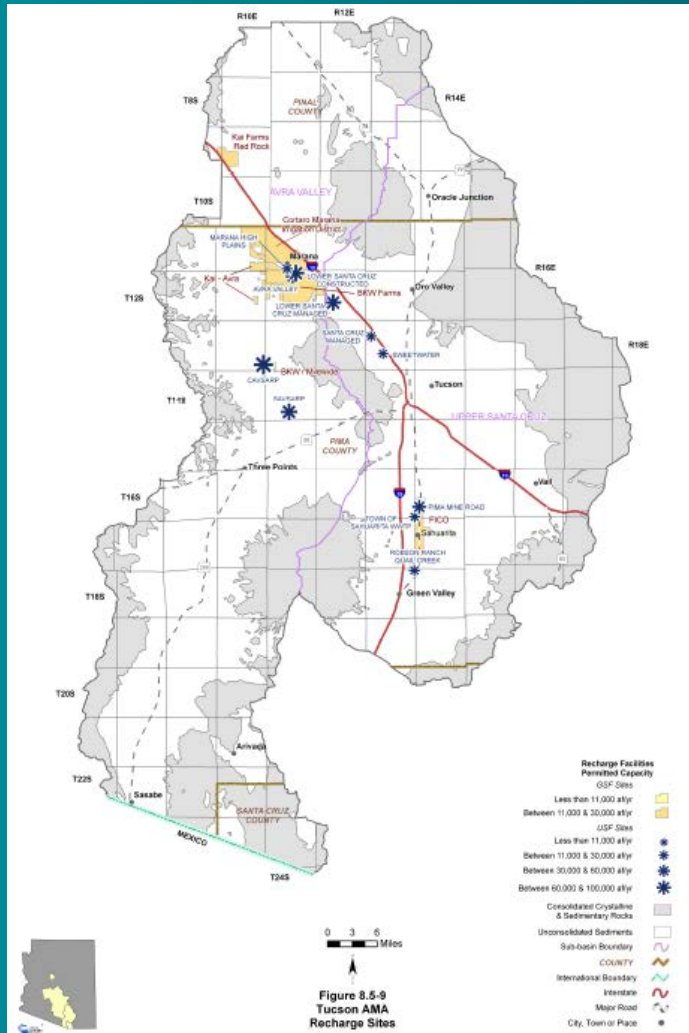
\*does not include incidental recharge from M,I,A activities



**-192,771 AF/Y  
(1985)**

Historical Demands in the TAMA (ADWR - TAMA Assessment, 2010)

# Change in Action





# Change in Action

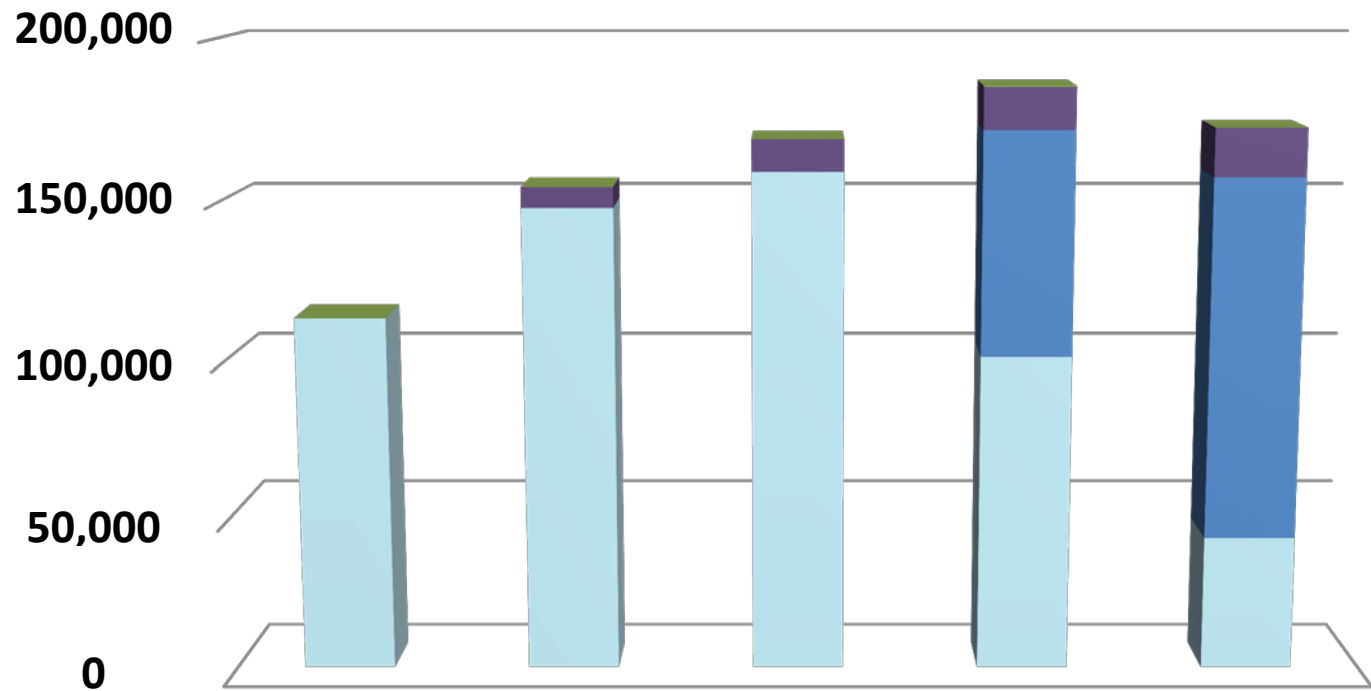


# Change in Action



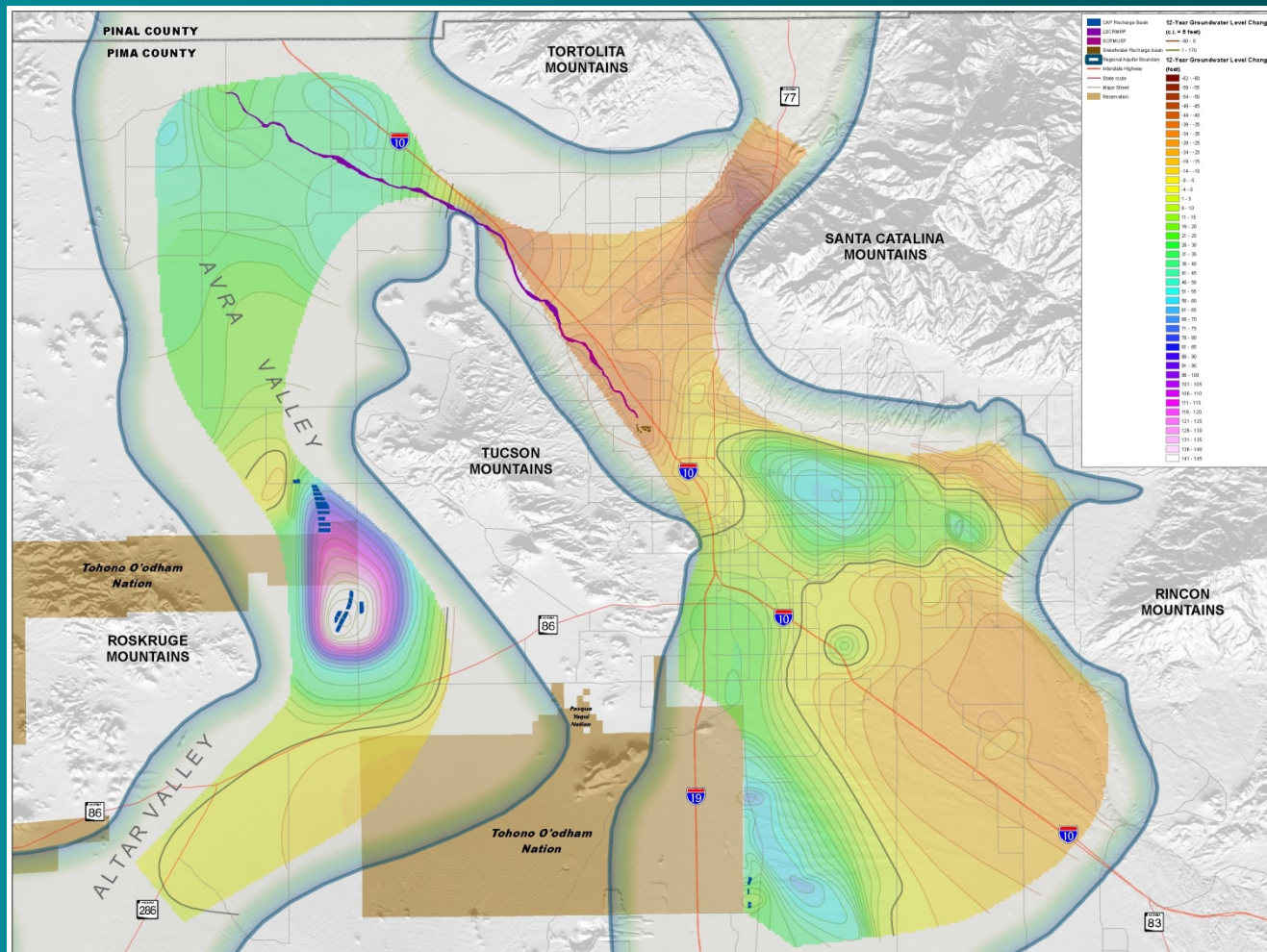


# The Transition: Challenges & Solutions



	1985	1995	2000	2005	2010
Total	113,080	154,288	169,211	185,550	172,748
Groundwater	113,080	147,763	158,953	100,777	42,504
CAP (direct, recovery, repl'mt)	0	0	69	71,132	114,811
Reclaimed Water	0	6,525	10,189	13,453	15,421
Surface water	0	0	0	188	12

# The Transition: Challenges & Solutions



2000 - 2012

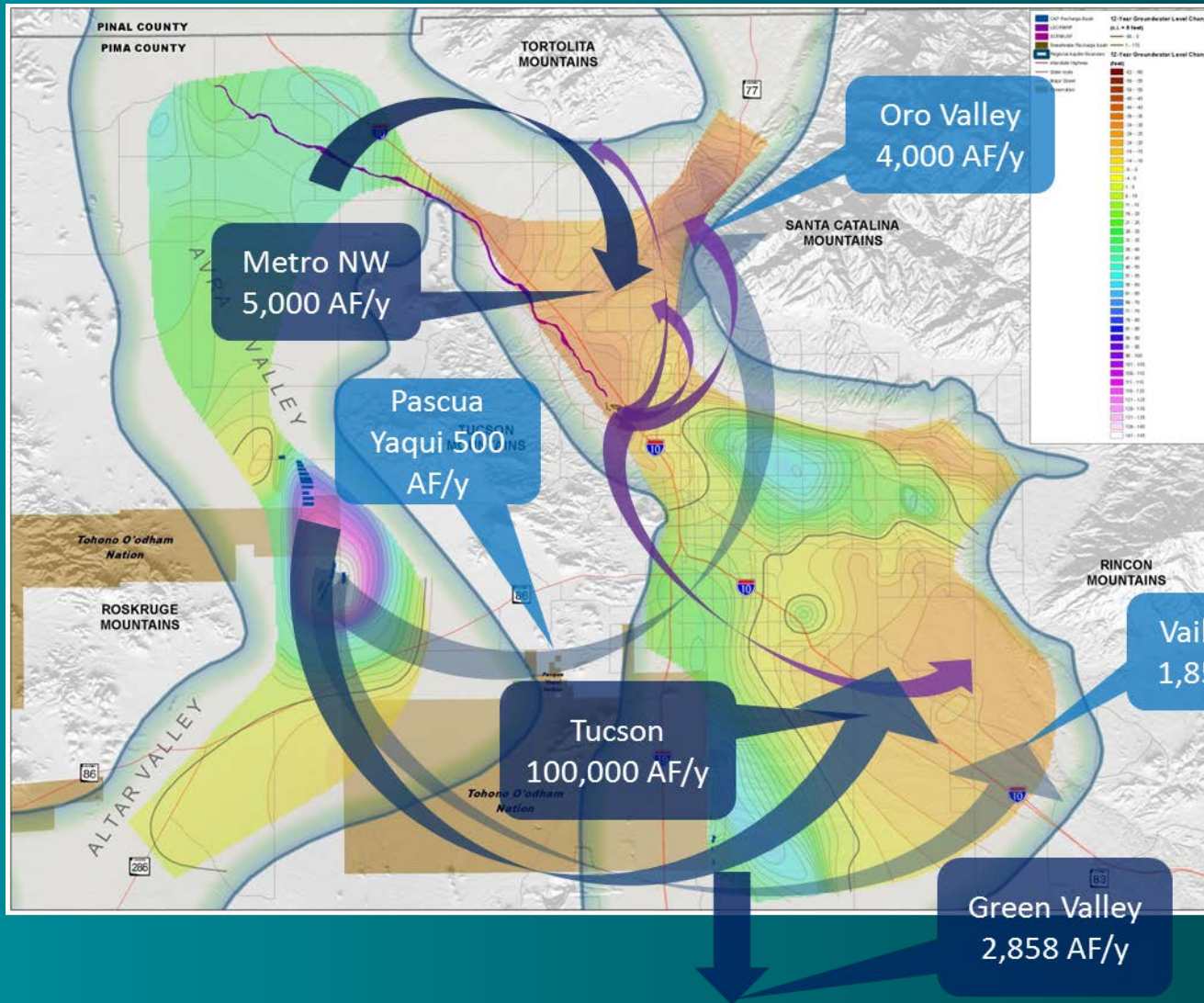
*Water level recovery in many areas*

*Some areas still in decline*

Source:

TUCSON WATER

# The Transition: Challenges & Solutions



*Addressing areas  
where declines  
continue through  
Regional  
Cooperation and  
Wheeling*

*- Recovered CAP*

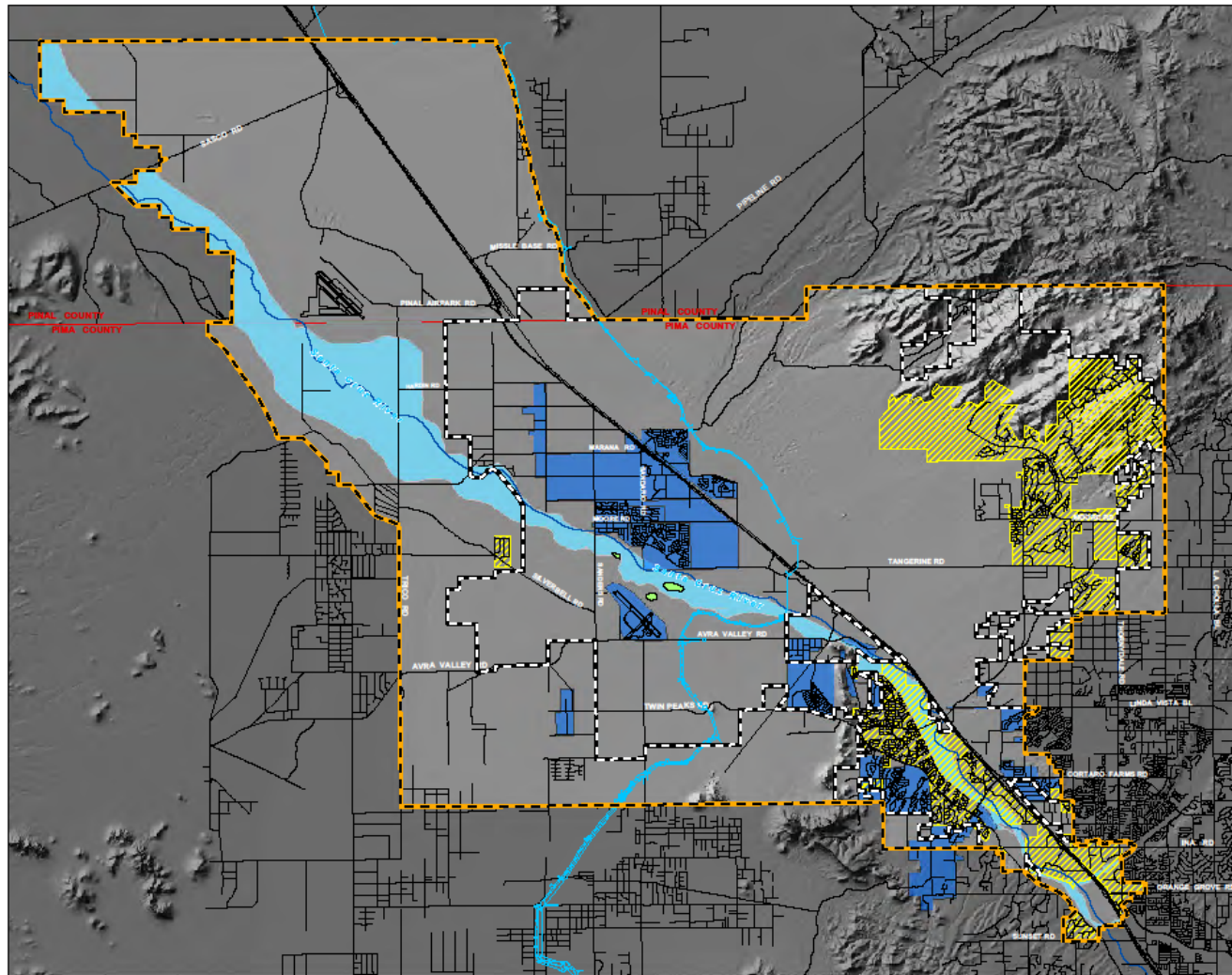
*- Effluent*

*Source:*

*TUCSON WATER*











# Marana Moving Forward



## MARANA 2010 General Plan

### 8.3.A Water Resources

-  Marana Water Service Area
-  Tucson Water Service Area
-  Santa Cruz River Floodway
-  CAP Canal
-  Recharge Basins
-  Planning Area
-  Marana Town Limits
-  Pima/Pinal County Boundary



Data Disclaimer: The Town of Marana provides this map information "As Is" at the request of the user with the understanding that it is not guaranteed to be accurate, correct or complete and conclusions drawn from such information are the responsibility of the user. In no event shall The Town of Marana become liable to users of these data, or any other party, for any loss or direct, indirect, special, incidental, or consequential damages, including but not limited to time, money, or goodwill, arising from the use or modification of the data.

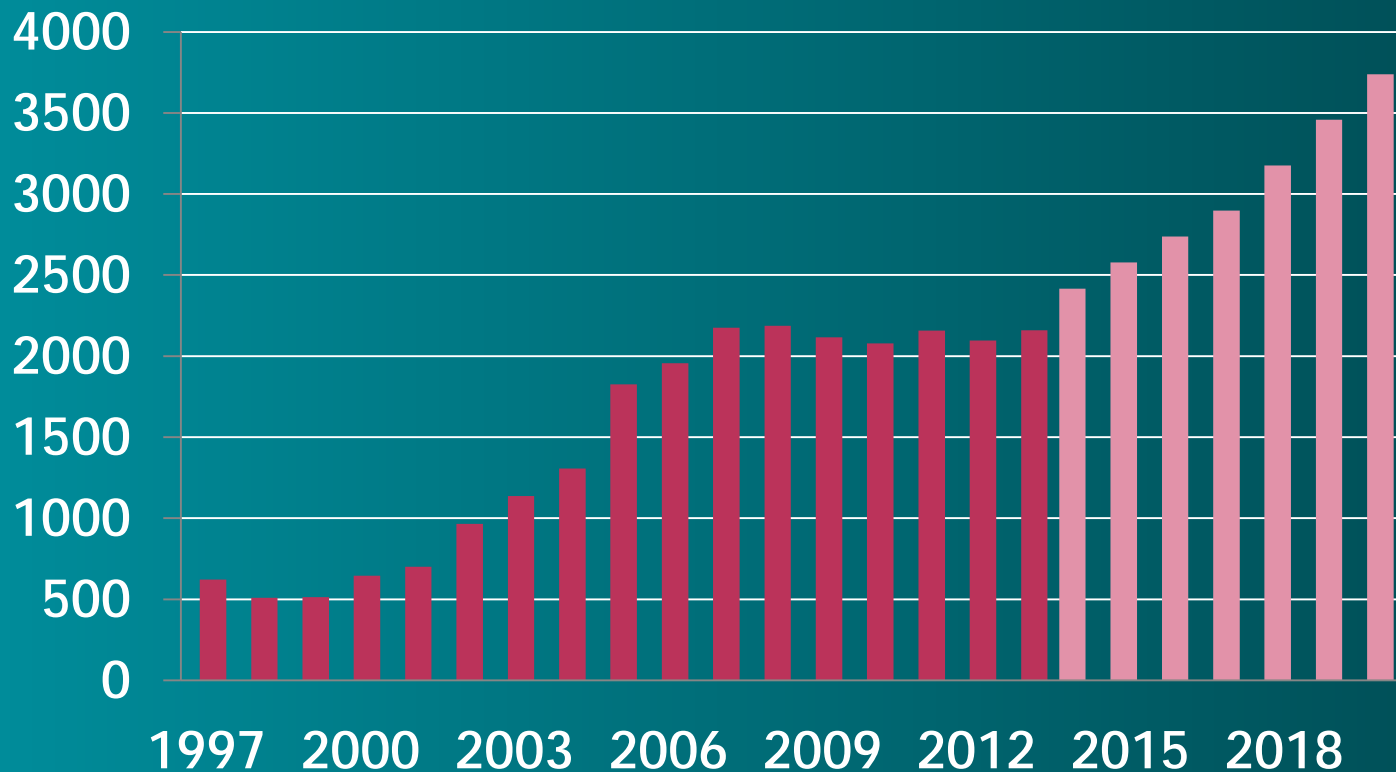
U:\General\_Plan\2010\Final\Water Resources.mxd  
© Town of Marana 12/2010

# Marana Moving Forward



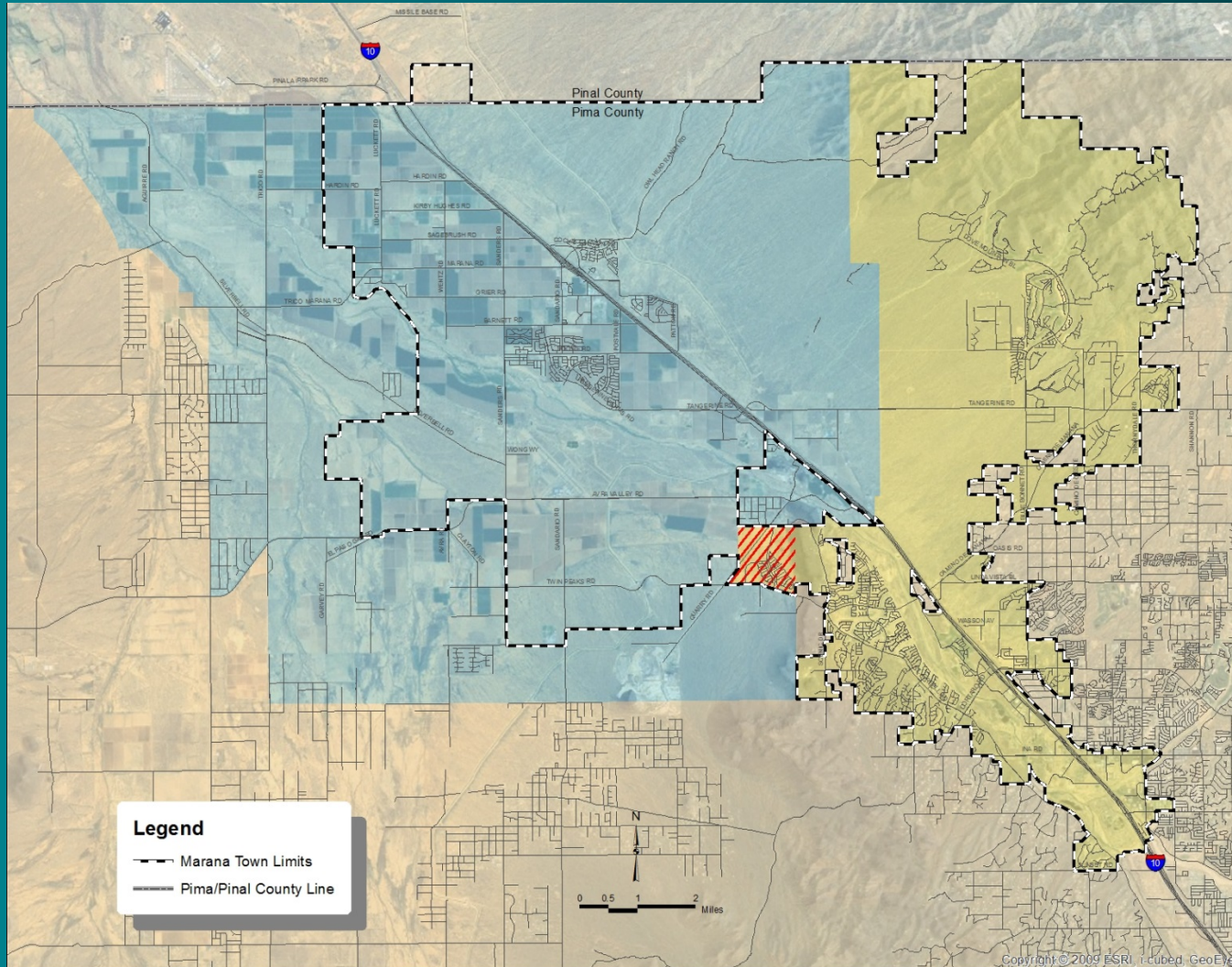
## Marana Water Department Demand (AF / yr)

Current  
Designation:  
7580 AF



- CAP
- LTSC
- CAGR
- Effluent
- Incidental Recharge

# Marana Moving Forward





# Marana Moving Forward



# Marana Moving Forward

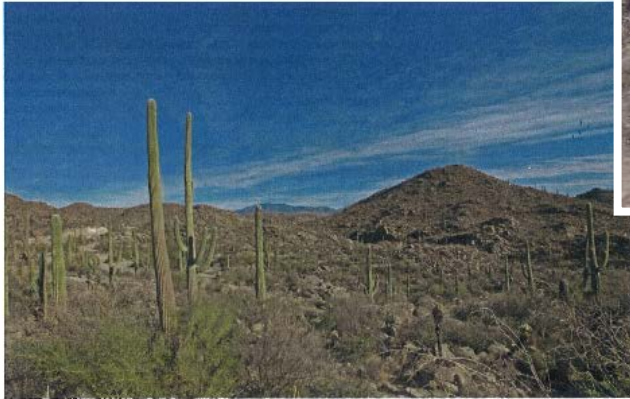




# Marana Moving Forward



Town of Marana  
Application for Non-Indian  
Agricultural Allocation



COMMERCE



COMMUNITY



PROGRESS &  
INNOVATION



HERITAGE



RECREATION



# Thank you!



John Kmiec  
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Town of Marana  
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