

**IRRIGATED
AGRICULTURE
IN ARIZONA:
A FRESH PERSPECTIVE**



**WRRC
CONFERENCE
2017**



COLLEGE OF AGRICULTURE & LIFE SCIENCES
COOPERATIVE EXTENSION
**WATER RESOURCES
RESEARCH CENTER**



**AGRIBUSINESS
& WATER
COUNCIL
OF ARIZONA**



**Dan Keppen
Executive Director**

March 28, 2017

ROUND 1 MARCH 16 - 17
 ROUND 2 MARCH 18 - 19
 SWEET 16 MARCH 23 - 24
 ELITE EIGHT MARCH 25 - 26
 FINAL FOUR APRIL 1
 ELITE EIGHT MARCH 25 - 26
 SWEET 16 MARCH 23 - 24
 ROUND 2 MARCH 18 - 19
 ROUND 1 MARCH 16 - 17




DON'T MISS A THING WITH DIRECTV FROM AT&T.



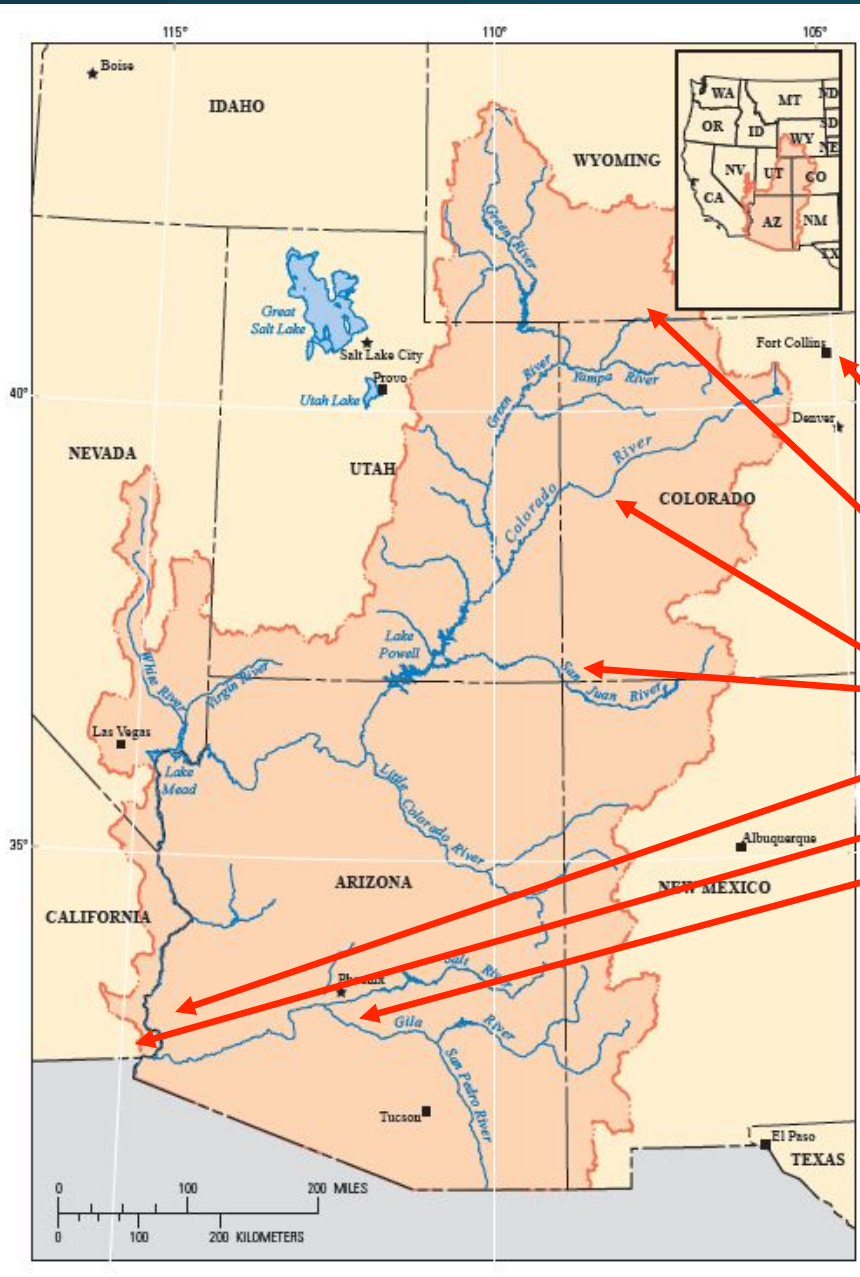

About the Alliance



2015 Colorado River White Paper

A Mixed Bag of Agricultural Interests

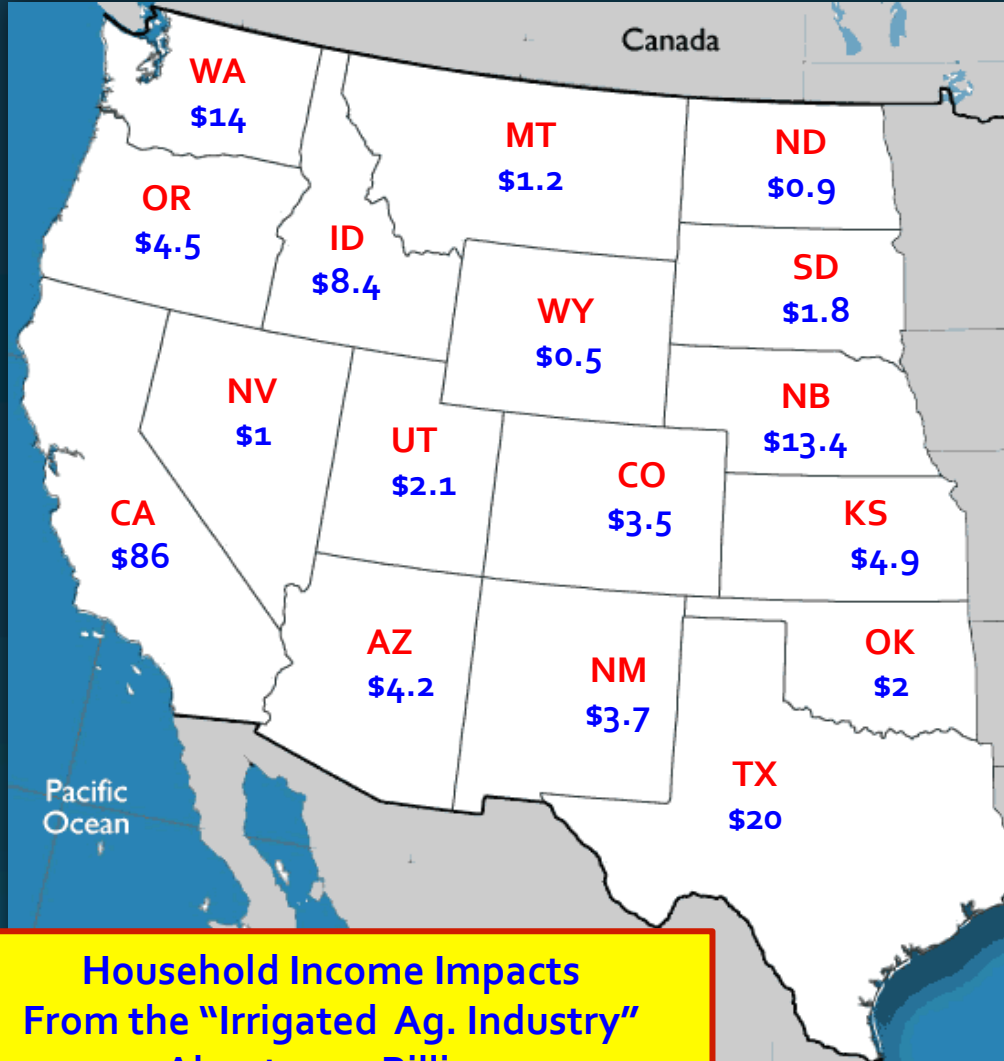
- Ag/urban water purveyors on the Front Range
- Wyoming Ranchers w/ individual water rights on Colorado River Tribs
- West Slope Colorado Water districts
- Yuma Water Users
- Imperial Irrigation District
- Salt River Project /
Central Arizona Project customers



The Economic Importance of Western Irrigated Agriculture

Family Farm Alliance Review, 2015

Household Income Impacts: About \$172 Billion



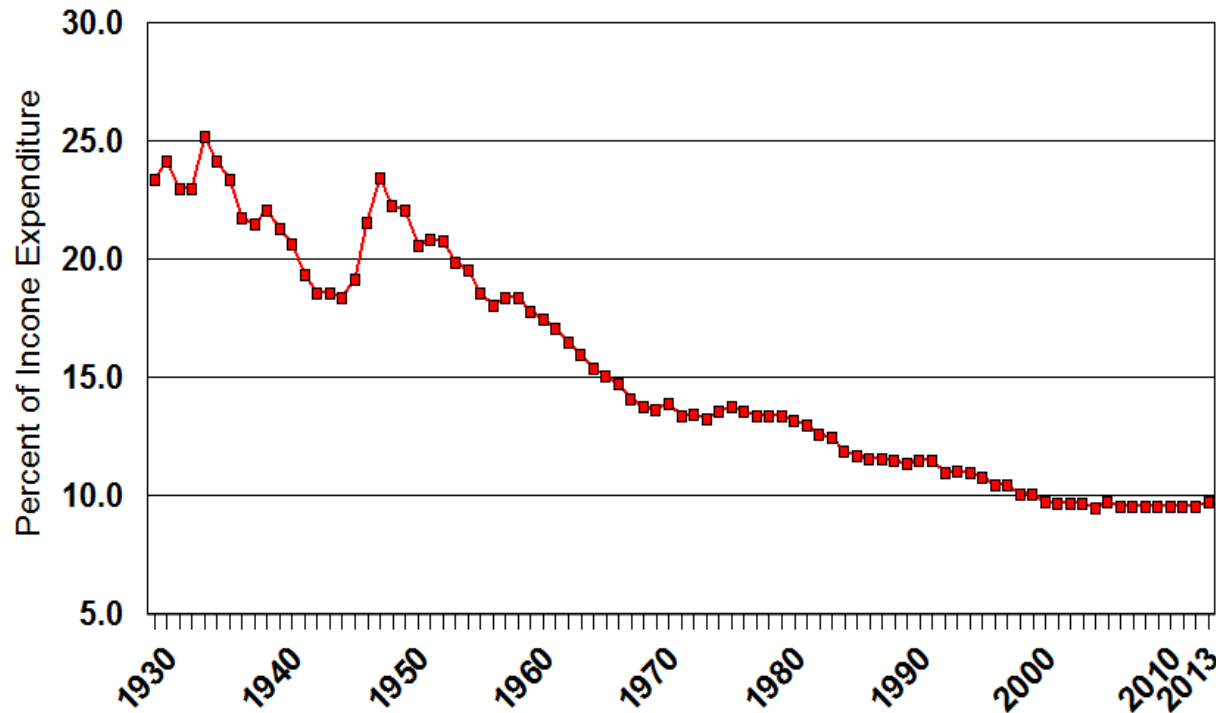
**Household Income Impacts
From the "Irrigated Ag. Industry"
About \$172 Billion**

Household Income Direct
& Secondary Impacts

State	Billions \$
Arizona	\$4.2
California	\$86
Colorado	\$3.5
Idaho	\$8.4
Kansas	\$4.9
Montana	\$1.2
Nebraska	\$13.4
Nevada	\$1
New Mexico	\$3.7
N. Dakota	\$0.9
Oklahoma	\$2
Oregon	\$4.5
S. Dakota	\$1.8
Texas	\$20
Utah	\$2.1
Washington	\$14
Wyoming	\$0.5

Economic Importance of Agriculture

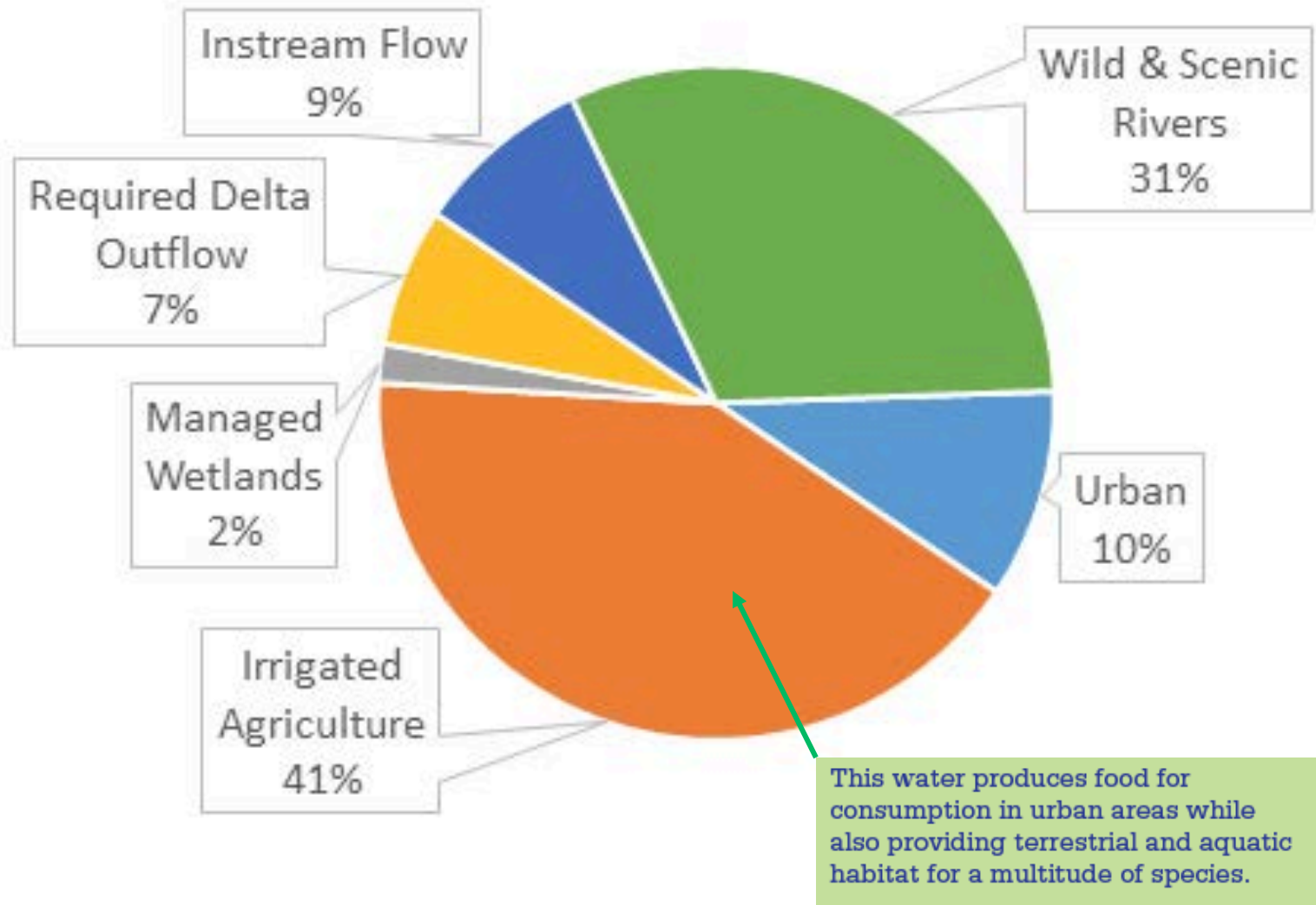
U.S. Total Food Expenditures, 1929-2013
% of Disposable Private Income



2013 Home Food \$:	
U.S:	6.6%
U.K:	9.3%
Germany:	12.0%
Japan:	13.6%
Brazil:	15.7%
Greece:	16.6%
Iran:	25.0%
China:	26.1%
India:	29.6%
Russia:	30.5%
Egypt:	37.4%
Pakistan:	48.1%

Agricultural water conservation can help stretch water supplies but has its limits.

California Water Use



Public sentiment supports water remaining with irrigated agriculture and developing more water storage opportunities as insurance against shortages.

Public Perceptions, Preferences,
and Values for Water in the West

A Survey of Western and Colorado Residents

James Pritchett
Alan Bright
Andrea Shortsleeve
Jennifer Thorvaldson
Troy Bauder
Reagan Waskom

February 2009

Special Report No. 17

Colorado Water Institute

Colorado
State
University

- The general public has indicated its defense of farmers and agricultural water use.
- A 2009 CSU survey showed strong support for irrigated agriculture, especially in times of drought.
- The results of the survey demonstrated broad support in the Western U.S. for ensuring water was available for agriculture, particularly during droughts.

**Recommendation:
Planning for water shortage in the Basin
must look to the long-term**



We need to understand how those actions are linked to other related actions and plans occurring in different parts of each watershed and in adjacent watersheds.

A successful water shortage strategy must include a “portfolio” of water supply enhancements and improvements



INCLUDING:

- Water reuse
- Recycling
- Conservation
- Desalination
- Water system improvements.
- Upper watershed storage.
- Produced water.

New infrastructure and technologies can help stretch water for all uses.

Technologies for water reuse and recycling can be effective in creating drought-proof supplies for urban, environmental and other uses.



CAVEATS:

- The ability to reuse/recycle our way out of a growing demand (and likely a shrinking supply) can have limitations under some regulatory/statutory frameworks.
- In many areas, most return flows and waste water inflows constitute a good portion of a downstream water right.
- "It depends!"

Planning for water shortage in the Basin must look to the long-term

- Agricultural water contractors and water users need to be involved in the earliest stages of water planning efforts to respond to growth and continued dry hydrology.
- Solutions to the problems facing the Colorado River will not and should not fall on the backs of any single user, state or sector of the economy.



Temporary, short-term following proposals should be approached in a thoughtful, thorough manner

- Only after other water users show a commitment to better manage their share of the finite supply
- Only for temporary shortfalls caused by droughts or emergency situations.
 - M&I users need to tie land use decisions to available water supplies
 - Environmental water managers need to prioritize how best to use their finite share of a limited water supply.
 - Water associated with energy development and use must be factored into water management and planning policies.

True costs of transferring water away from irrigated farms through land fallowing must be accurately accounted for and compensated or mitigated



- Unintended consequences
- Environmental impacts
- Other third-party impacts.

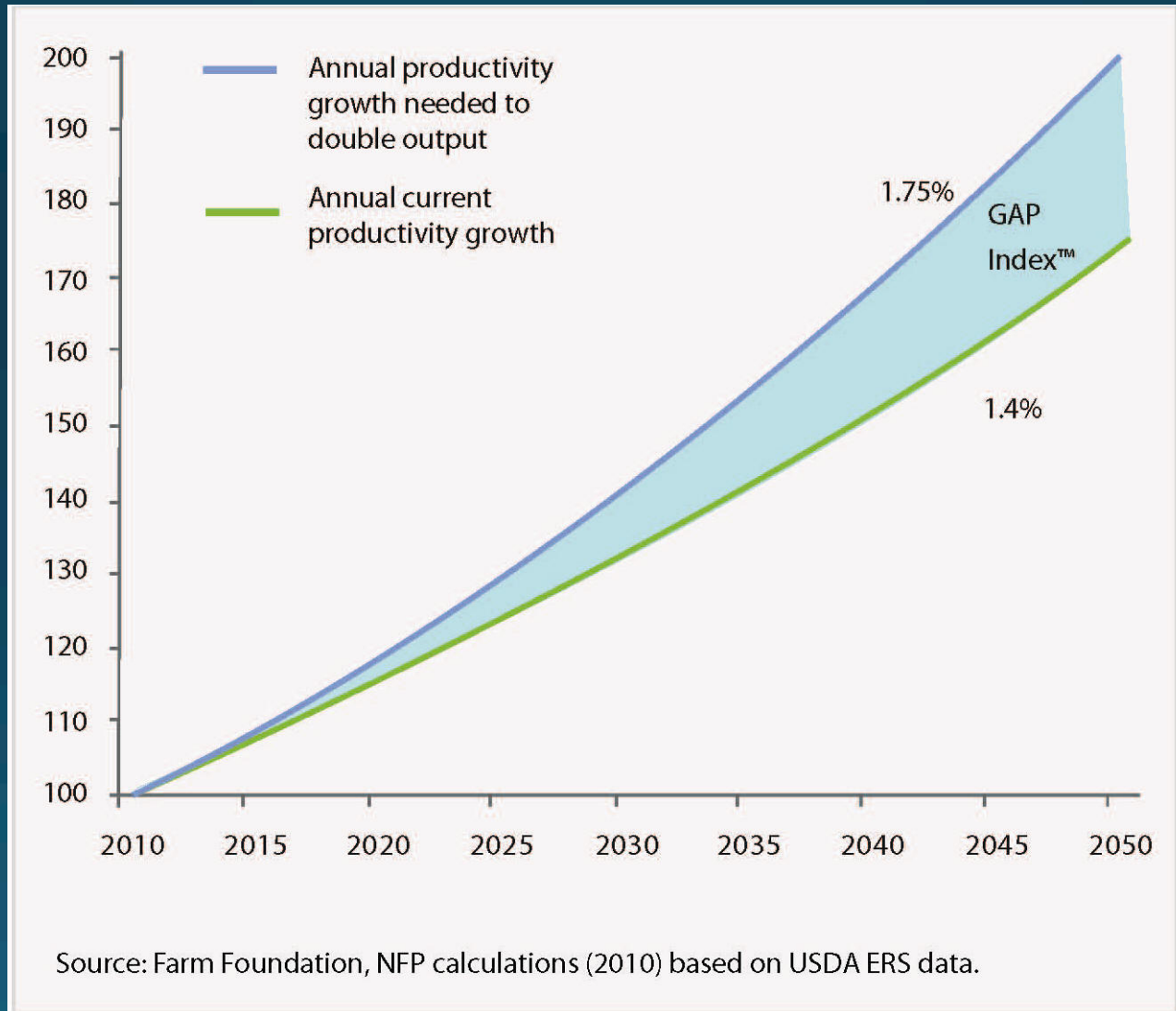
Understanding these costs will assist in determining the fair value of any land fallowing proposal.

Unintended consequences associated with reducing productive agricultural land



- Should be accounted for and avoided, if possible.
- If unavoidable, should be minimized and fully mitigated.
- Reversibility as a litmus test for an acceptable following program.

The World Food Supply "GAP"



Conclusions

- Policy makers and elected officials must clearly understand the importance of Western irrigated agriculture and the implications associated with drying up land currently producing food in the West.
- We'll do our best to advocate towards that end.



Questions?

Catch me later at the conference
Or e-mail me at dankeppen@charter.net

