

Challenges in the Allocation of
Fryingpan-Arkansas
Project Water
and
Project Water Return Flows

Allocation Committee
January 7, 2014

Project Water Allocation

Project Water Allocation With NPANIW - 2014	
Area/Entity	Percent
Fountain Valley Pipeline	25.451%
Pueblo	10.000%
West of Pueblo	4.271%
East of Pueblo	12.730%
Pueblo West Metro District	0.341%
Manitou Springs	0.350%
CS-U Payback	1.449%
Total Municipal Allocation.	54.592%
Total Ag Allocation	45.408%
Total Allocation	100.000%

Ag Project Water Allocations

- Ag Project water is allocated based on Eligible Reclamation Reform Act (RRA) acreages.
- Total Ag Project water available is divided by the total eligible acres to determine the allocation in Acre-Feet per eligible acres.
- The eligible acres of each ditch is then multiplied by this factor.

Project Water Allocation (Continued)

- If the Ditch's request is less than the calculated allocation that ditch is allocated its request. The excess water from all ditches whose requests are met is then redistributed to the remaining ditches.
- The calculated allocations are then presented to the Allocation Committee and then the Enterprise Board for allocations

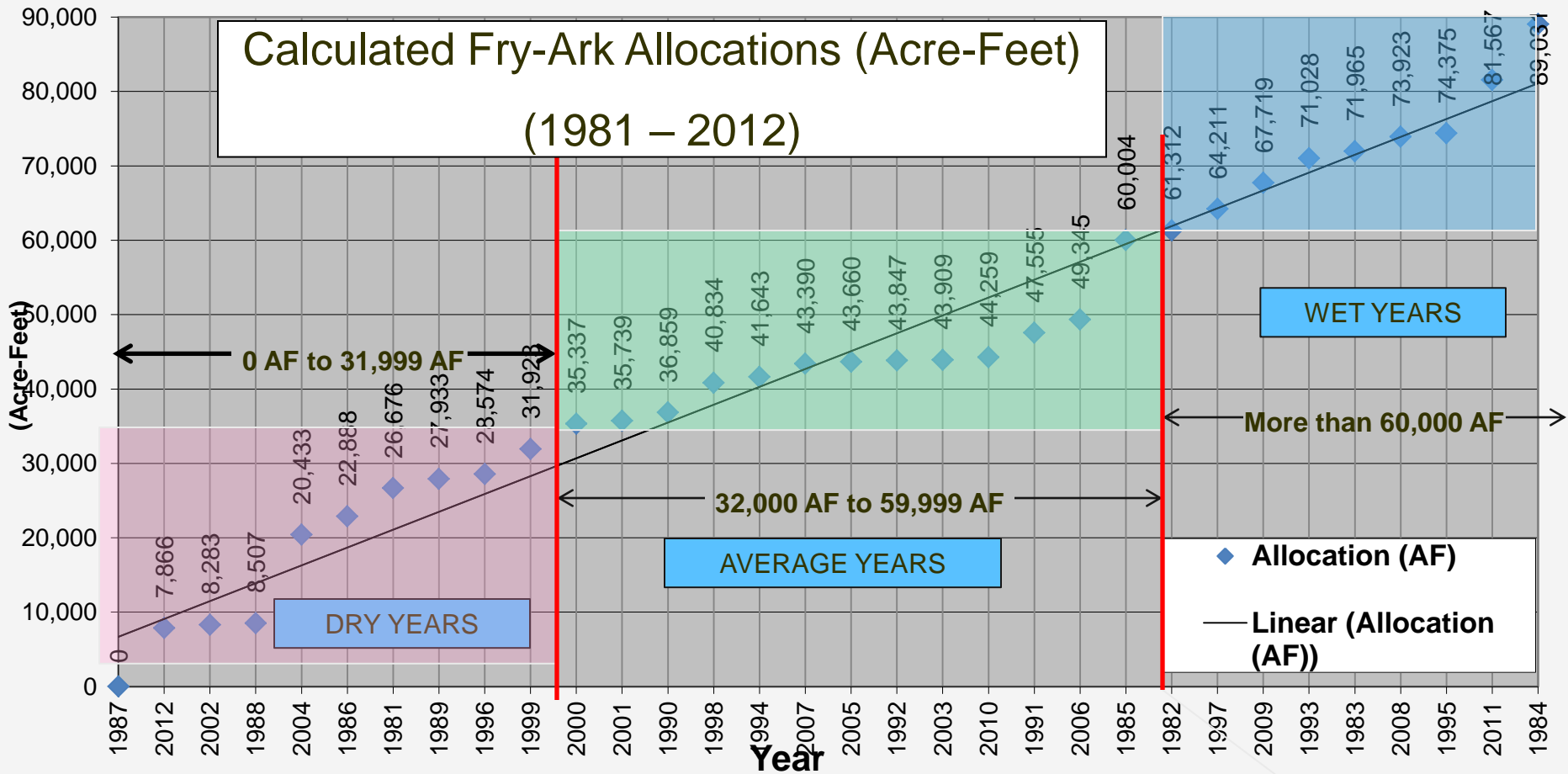
Time Forward Allocation of Return Flows

Bill Tyner

Ag Project Water Return Flow Allocations

In the past, the amount Ag Project water return flows available for allocation have been based upon 40 percent of the headgate Diversions without any consideration of river conditions.

The chart of the following page shows the distribution of total allocation by calculated water available for 1981 - 2012.



Ag Project Water Allocations

Type of Year		DRY 2012	AVERAGE 2005	WET 2011	2013
AG Project water Entity	Eligible Acres	Calculated Total Allocation 7,866	Calculated Total Allocation 43,660	Calculated Total Allocation 81,824	Total Allocation 37,647
		Ag Acre/feet 3,572	Ag Acre/feet 19,956	Ag Acre/feet 37,156	Ag Acre/feet 18,517
		Fort Lyon Canal Co.	57,812	1,237	6,908
Beaver Park Water	3,530	76	422	785	0
Bessemer Irrigating Ditch Co.	19,000	406	2,270	4,227	2,321
Catlin Canal Co.	18,660	399	2,230	4,152	1,765
Colorado Canal Co.	4,092	88	489	910	414
DeWeese-Dye Ditch & Res. Co.	1,060	23	127	236	134
Excelsior Irrigation	1,299	28	155	289	202
Highline Canal Co.	21,433	458	2,561	4,769	2,673
Holbrook Mututal Irrigation Co.	16,244	347	1,941	3,614	1,906
Las Animas Consolidated	7,365	158	880	1,639	86
Otero Ditch Co.	4,973	106	594	1,106	409
Oxford Farmers Ditch Co.	6,000	128	717	1,335	661
Others(17 less that 1,000) acres	5,658	121	676	1,259	686
Total Eligible Acres or Acre-Feet	167,125	3,575	19,970	37,184	18,519
USE 167,000 Acres	167,000	3,575	19,970	37,184	18,519

Variations in Yield and Allocation

- As you could see in the previous slide. There is great variation in the amount of Project water available in the last three years.
- From one wet extreme in 2011 to a dry extreme in 2012 with an average year in 2013.

Variations in Yield and Allocation

- These Dry, Average, and Wet year variations will be discussed in much more depth at an upcoming Committee meeting.
- Fry-Ark Project water and return flows are “Supplemental” and flexibility for conditions must be included in the allocation process.

Ag Return Flow Allocation (Continued)

- As experienced in 2013, with the higher transit losses in the Arkansas river following a dry year, the headgate deliveries of Project water decreased and so did the return flows.
- Addressing these variables is a challenge facing Southeastern.

Rule 14 Plans

- Prior to 2013, Fry-Ark return flows were allocated for Well pumping Rule 14 Plans.
- Rule 14 Plans are detailed plans to divert out of priority tributary groundwater in the Arkansas basin and how the entity proposes to replace the resulting depletions, documented sources and quantities.
- The Rule 14 plans are submitted annually to the State Engineer's office for approval.

Rule 14 Plans (Continued)

- The Plans are complex, CWPDA's 2013 Rule 14 plan is ½ inch thick and weigh almost 1 lb.
- There are two types of Wells
 - Supplemental wells – decreed wells which also have a surface water right
 - Sole sources wells – decreed wells which have no other source of water.

Rule 14 Plans (Continued)

- There are three types of irrigation methods for the wells, each of which has a separate depletion factor:
 - Flood irrigation – least efficient – more return flow
 - Sprinkler irrigation – more efficient – less return flow
 - Drip irrigation – very efficient – no return flow

Rule 14 Plans (Continued)

- The Rule 14 plans use all of this information plus the acreage irrigated by each well to calculate the needs of the irrigators.
- The amount of water from all sources is evaluated and the irrigator's allowed pumping is then calculated.

Rule 14 Plans (Continued)

- Irrigators report their pumping monthly,
 - through totalizing flow meter reading on the well or
 - through electrical power readings.
- If an irrigator exceeds his allowed pumping he is placed on the over-pumper list and is monitored by the State and shut down if necessary.

Other Changes in Return Flow Allocations

- Substitute Water Supply Plans (SWSP) are similar to Rule 14 Plans, and allows for temporary approval of change of water rights within substitute supply plans (HB 03-1001).
- Typically, an SWSP can be renewed yearly for up to three years, until the Water Court adjudication process for the augmentation plan is completed

Other Changes in Return Flow Allocations

- In 2013, the Fort Lyon Canal Co. exercised its First Right of Refusal for a portion of the return flows it generated for Compact Efficiency Compliance Rule 10.
- This brings up two new challenges
 - First Right of Refusal by ditch companies
 - Rule 10 Compact Efficiency Compliance

Other Changes in Return Flow Allocations

- First Right of Refusal by Ditch Companies
 - In 2004 the “Return Flows Sale Policy” was amended to allow ditches that generate Fry-Ark return flows the First Right of Refusal for the re-purchase of Fry-Ark return flows they generate.
 - Paragraph 2 and 7 of the “Return Flows Sale Policy” describe the limitation of these re-purchases. These Limitations will be discuss in more depth at as future meeting.

Other Changes in Return Flow Allocations

- Some ditch companies have been requesting a portion of their Project water be used for Well Augmentation.
- To maximize the use of Project water, Southeastern has been trying to meet these request with return flows thus making the most efficient use of Project water

Other Changes in Return Flow Allocations

- Rule 10 use of Fry-Ark return flows for replacing additional stream depletions created by the installation of high efficiency improvements which reduce return flows:
 - sprinkler and drip irrigation systems;
 - ditch lining and underground pipelines; and
 - other efficiency measures.

Other Changes in Return Flow Allocations

- Rule 10 use of Fry-Ark return flows is limited to replacing depletions only within Southeastern boundaries because Fry-Ark Project water and Return flows is not allowed outside of Southeastern's boundaries.

Discussion on Return Flow Allocations

- Southeastern must make the most beneficial use of Project water and return flows.

Discussion on Return Flow Allocations

- Southeastern is requesting input from its constituents before making changes necessary to address these changing conditions.

Discussion