

# RECLAMATION

*Managing Water in the West*

## **Yakima Project Current Operations**

**September 23, 2009  
YRBWEP Workgroup**

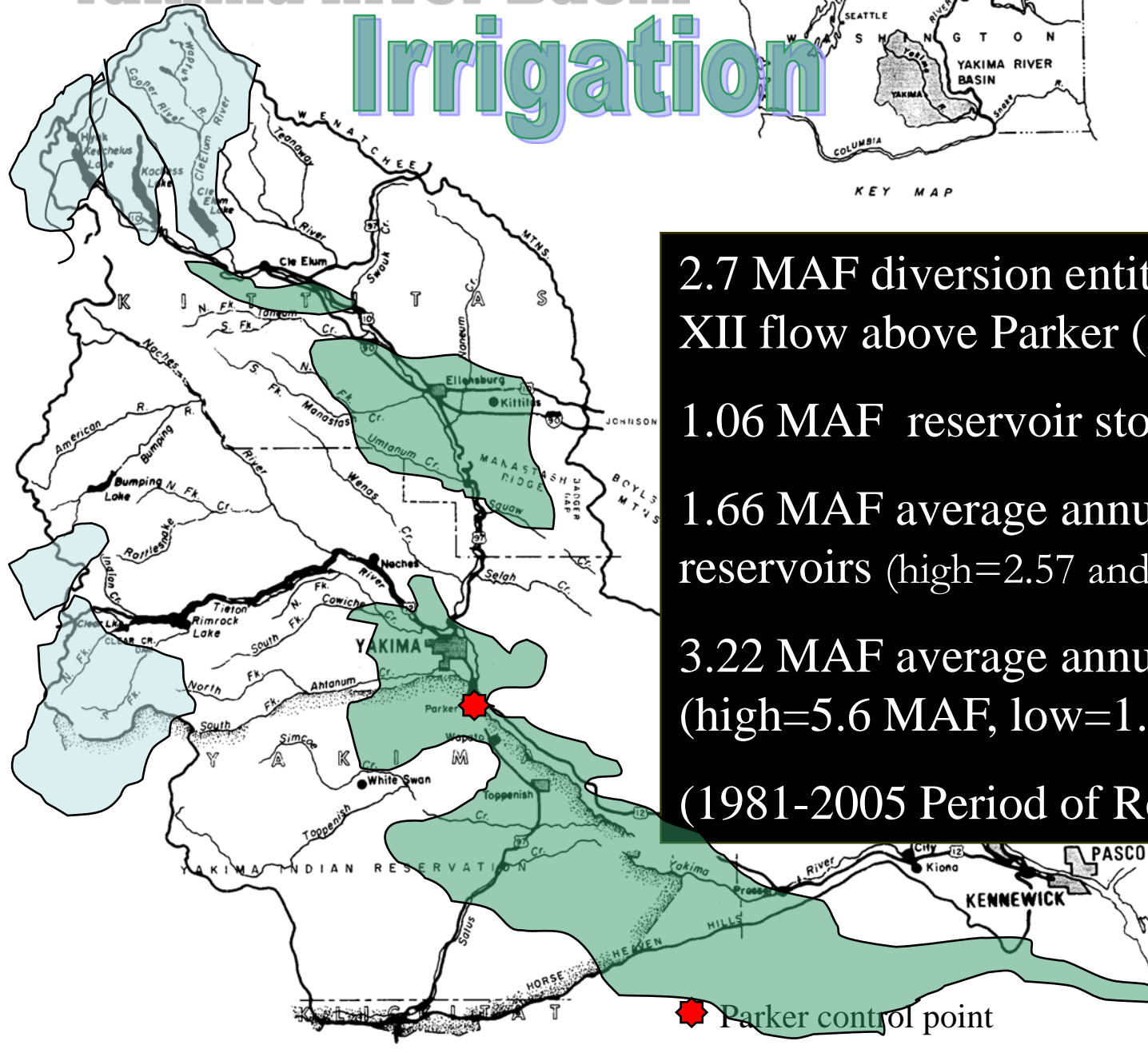


U.S. Department of the Interior  
Bureau of Reclamation

# Yakima Project Reservoirs

Reservoir	Year Built	Full Pool Storage 1000's of AF	Percent of System Storage	Mean Runoff to Full capacity Ratio	Basin Area Sq. Miles
Bumping	1910	34	3%	5.7	69
Kachess	1912	239	23%	0.9	64
Keechelus	1917	158	15%	1.5	55
Rimrock	1925	198	19%	1.7	187
Cle Elum	1933	437	41%	1.4	203
System Total		1066	100%	1.5	578

# Yakima River Basin Irrigation



2.7 MAF diversion entitlements plus Title XII flow above Parker (Apr-Oct)

1.06 MAF reservoir storage capacity

1.66 MAF average annual runoff through the reservoirs (high=2.57 and low=0.95 MAF).

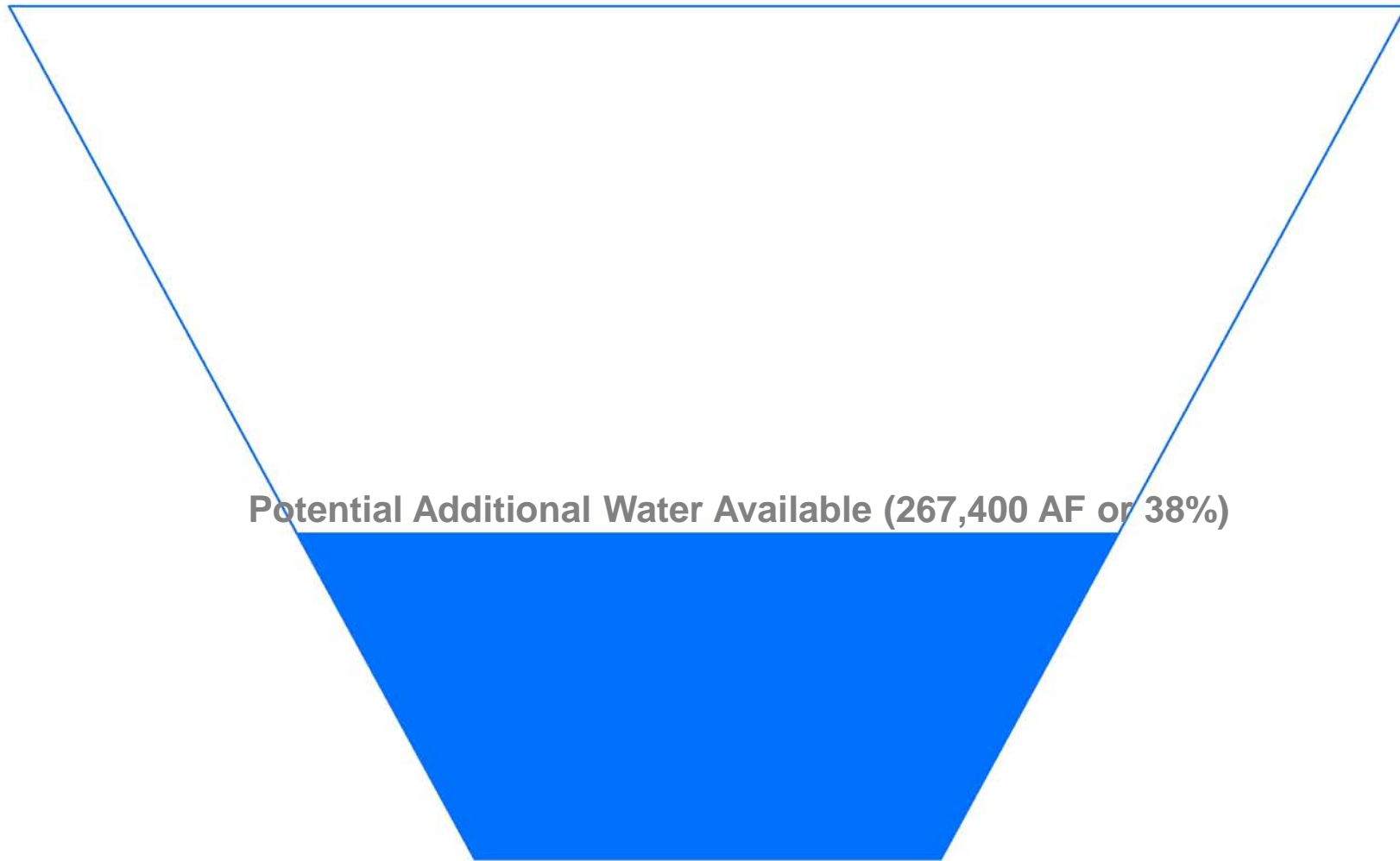
3.22 MAF average annual runoff past Parker (high=5.6 MAF, low=1.6 MAF).

(1981-2005 Period of Record)

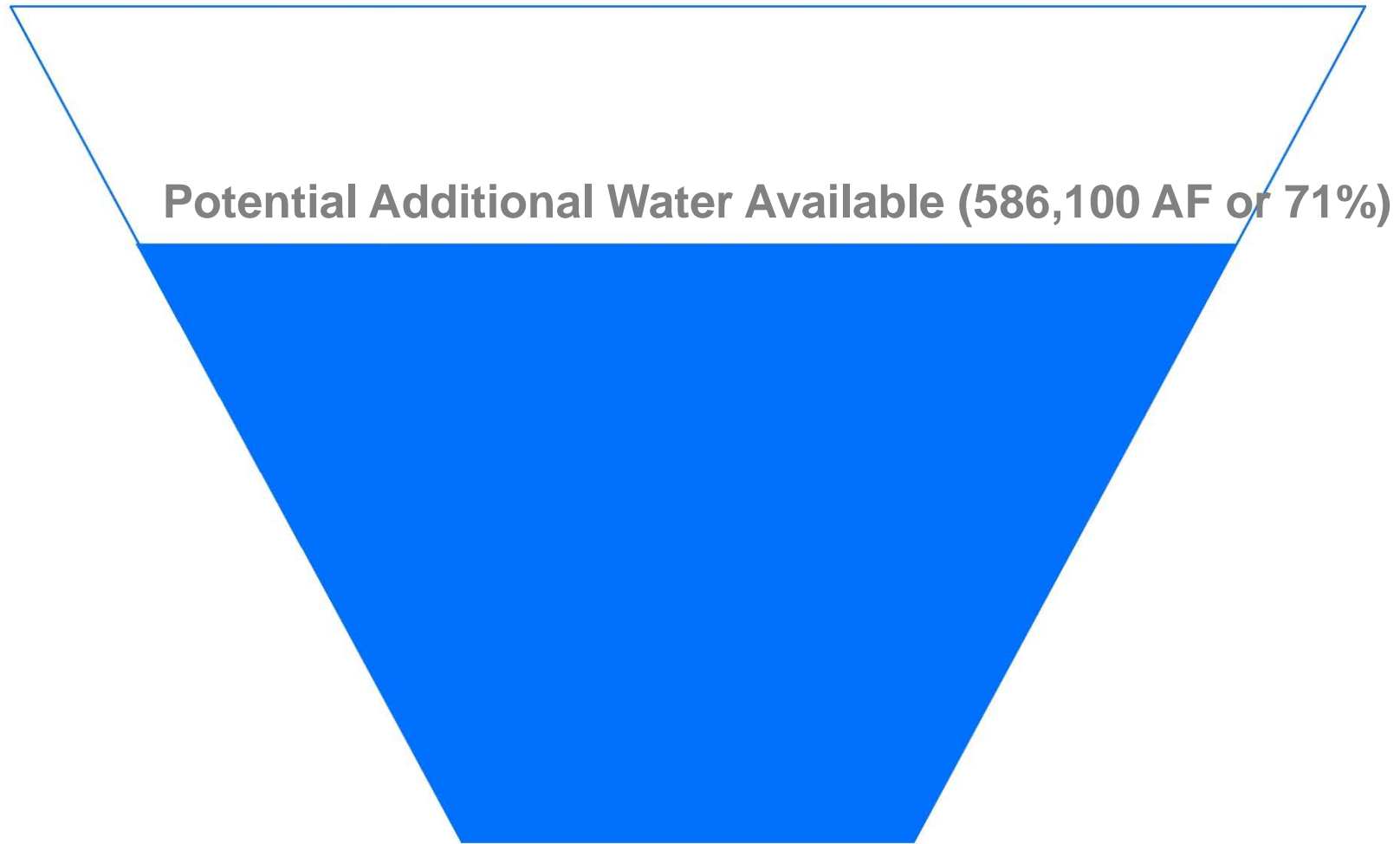
★ Parker control point

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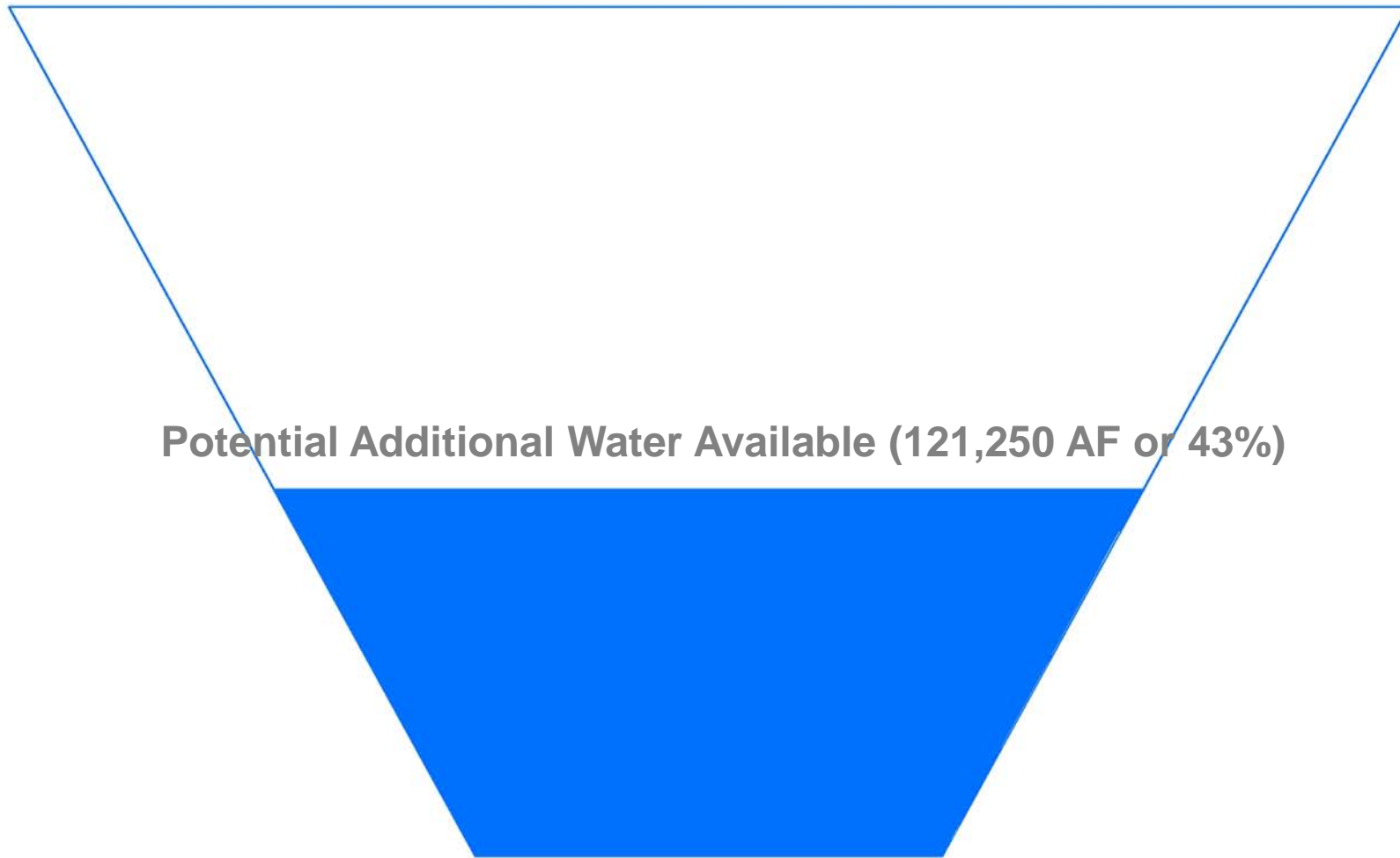
## Cle Elum Inaccessible Storage



## Kachess Inaccessible Storage



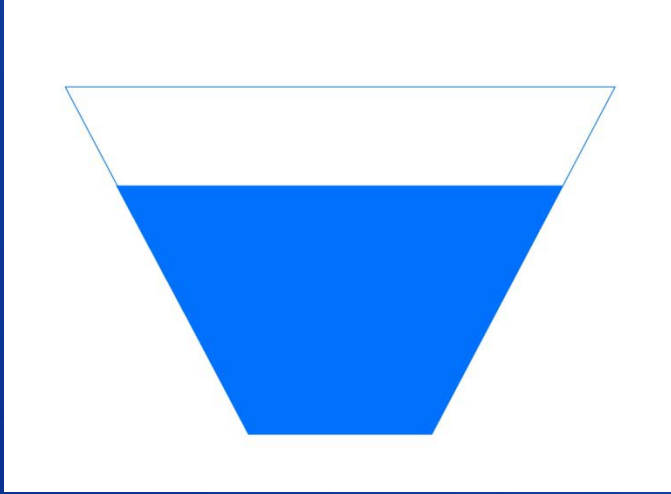
Keechelus Inaccessible Storage



Potential Additional Water Available (121,250 AF or 43%)

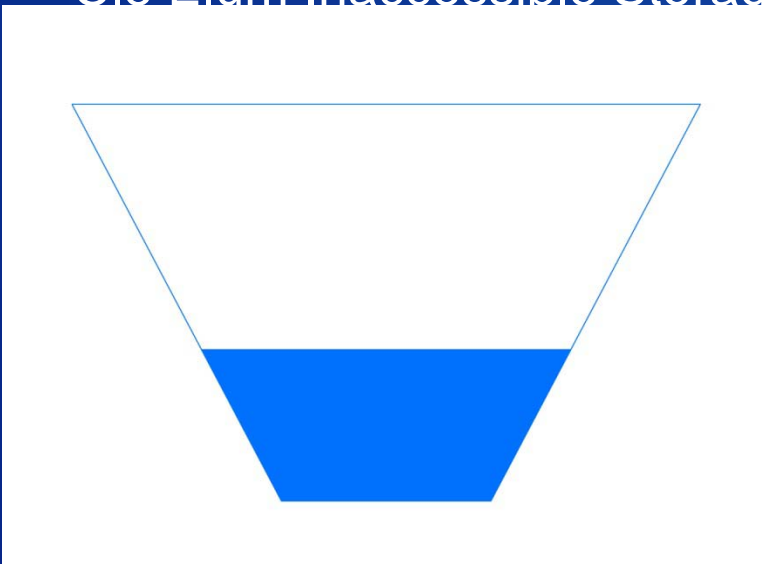
## Comparison of Reservoirs by Potential Total Water Accessibility

### Kachess Inaccessible Storage



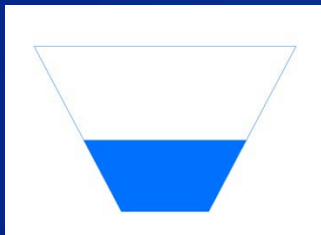
Potential Additional Water Available (586,100 AF or 71%)

### Cle Elum Inaccessible Storage



Potential Additional Water Available (267,400 AF or 38%)

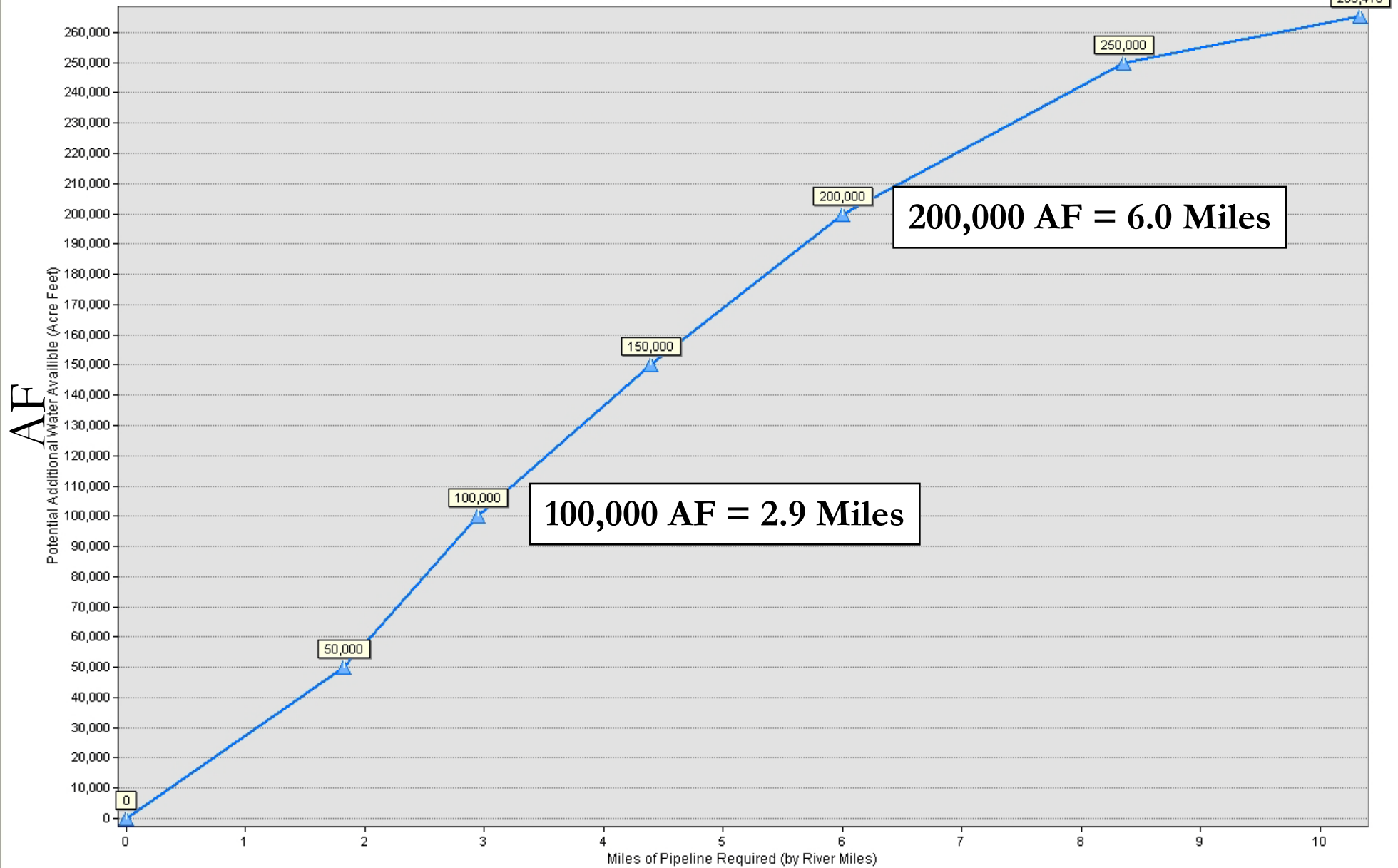
### Keechelus Inaccessible Storage



Potential Additional Water Available (121,250 AF or 43%)

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Potential Water Availability by Amount of Pipeline Required for Access (Cle Elum)

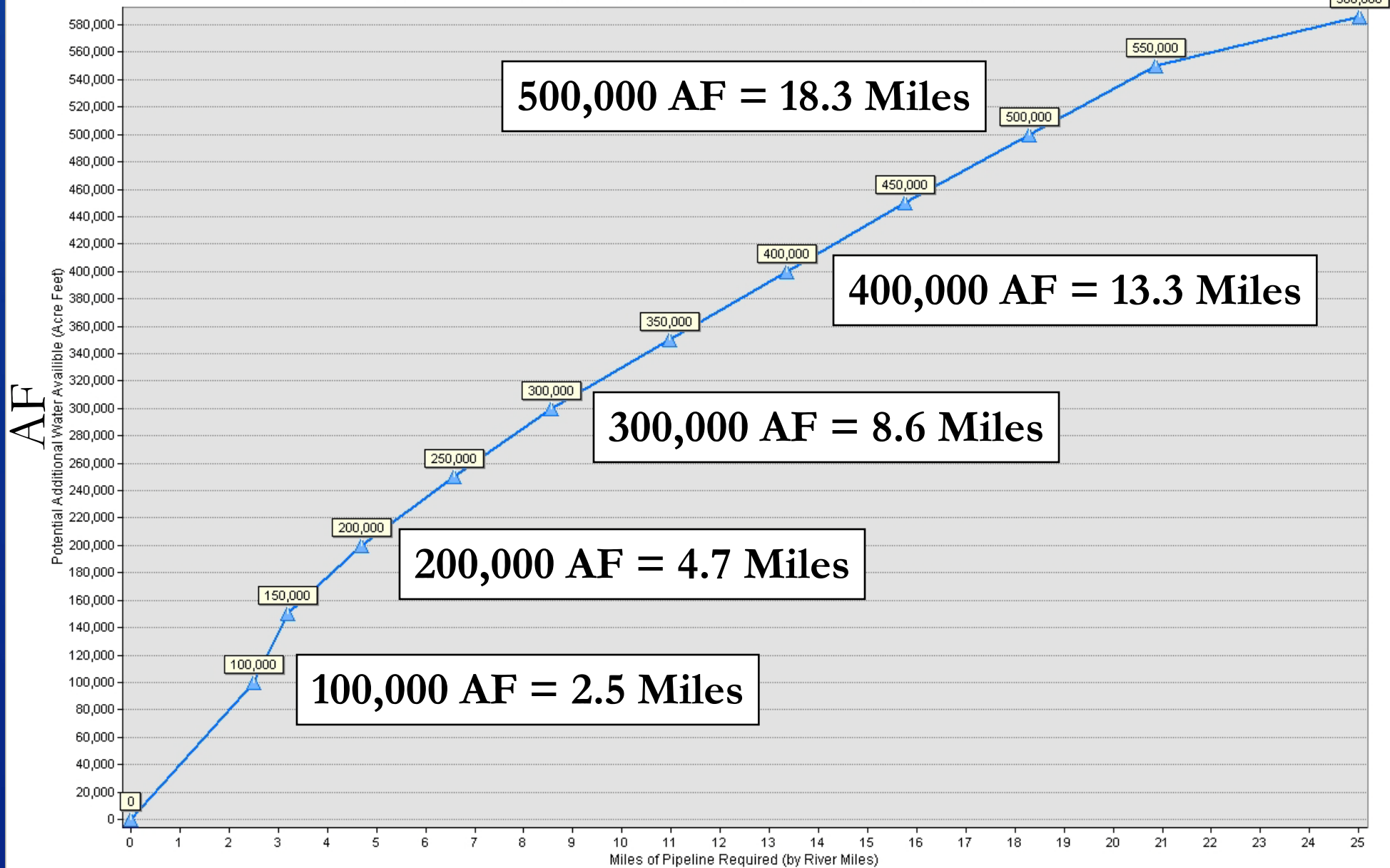


(not including pipeline within reservoir boundaries)

Miles



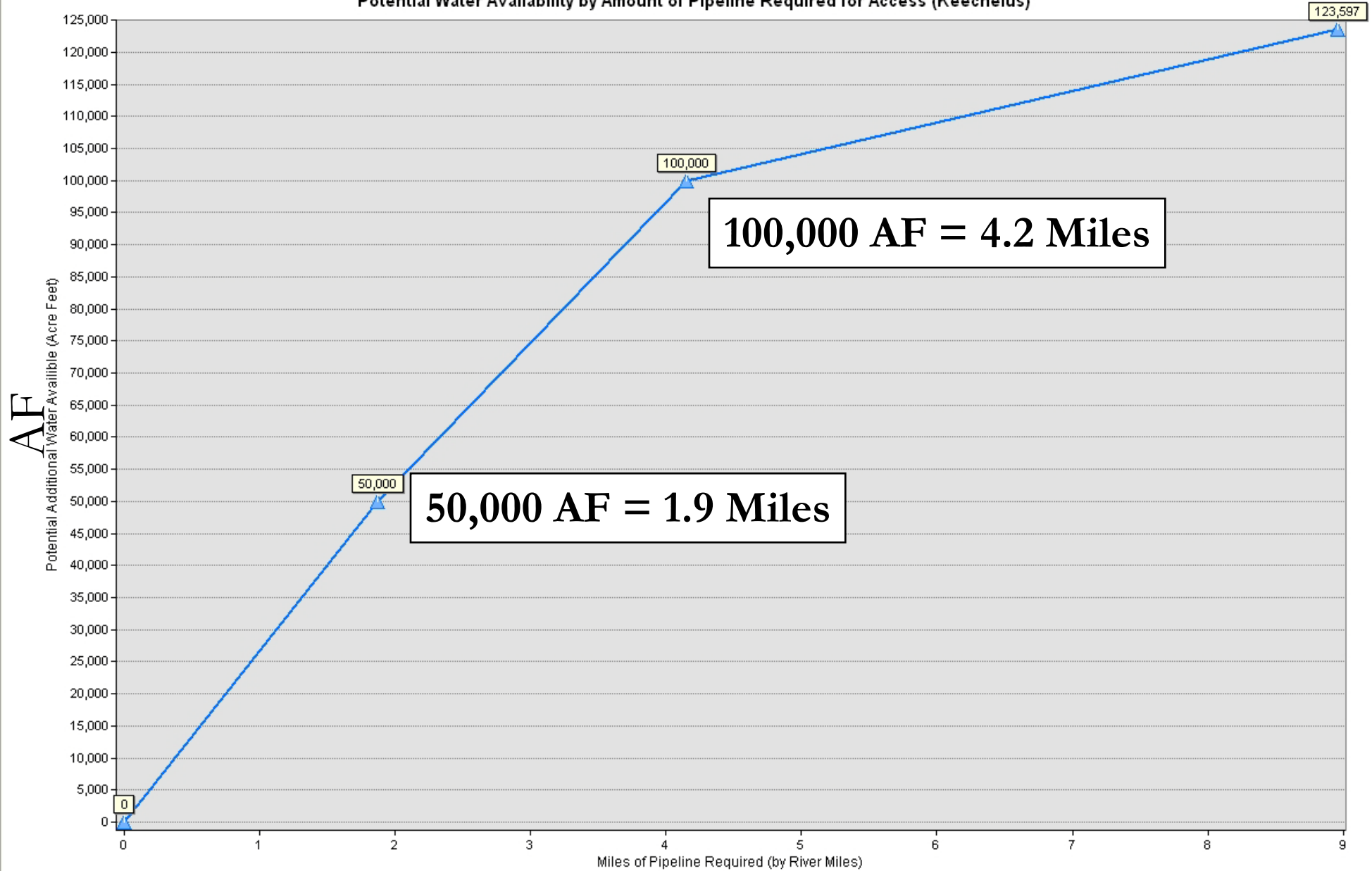
Potential Water Availability by Amount of Pipeline Required for Access (Kachess)



(not including pipeline within reservoir boundaries)

Miles

Potential Water Availability by Amount of Pipeline Required for Access (Keechelus)



(not including pipeline within reservoir boundaries)

Miles

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# Yakima River Basin Shortages



• August Prorationing	Max Sys, KAF
– 1973	80% 822
– 1977	70% 230
– 1979	46% 954
– 1987	68% 898
– 1988	90% 875
– 1992	58% 975
– 1993	67% 826
– 1994	39% 656
– 1995	1002
– 2001	37% 684
– 2002	1049
– 2003	86% 985
– 2004	90% 944
– 2005	42% 870
– 2006	992

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# Additional Storage in Developed Basins

- Diminishing returns
  - Basin runoff is limited
  - Some spill is already beneficially used to meet targets and demands
  - Some stored water will have to come from other stored water
- Impact to TWSA in subsequent years