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The Utton Transboundary Resources Center

4-2010

2010 Annual Operating Plan

U.S. Department of the Interior, Bureau of Reclamation

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2010 Annual Operating Plan

April 1 Runoff Forecast































Definitions

Native/Natural Rio Grande water: Water that comes directly from the Rio Grande Basin

San Juan-Chama water: Water that is imported into the Rio Grande Basin from the San Juan Basin through the San Juan-Chama Project

Rio Grande Compact: Agreement between the states of Colorado, New Mexico, and Texas that apportions Rio Grande water between the three states.

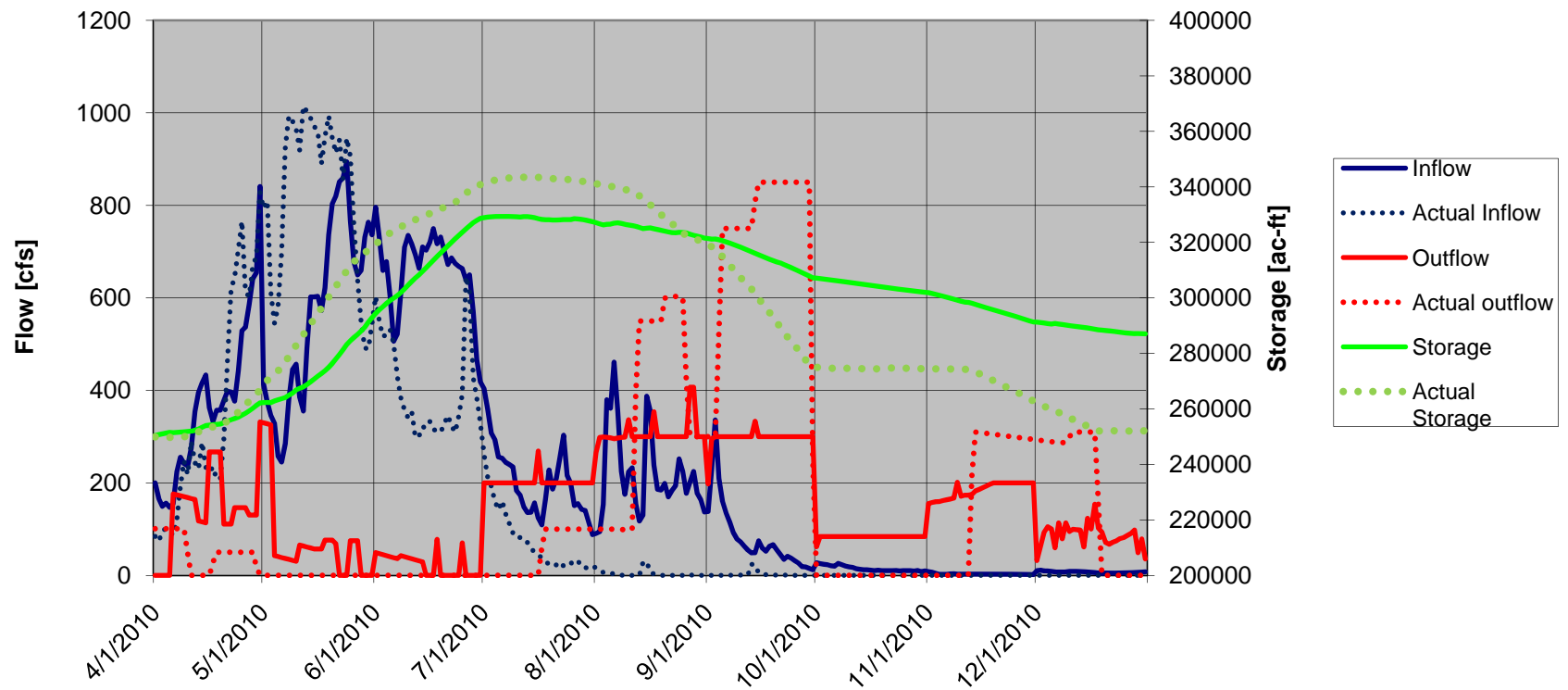
Article 7: Section of the Rio Grande Compact that dictates storage in reservoirs. If Rio Grande Project storage is less than 400,000 ac-ft at Elephant Butte and Caballo, no storage of Rio Grande water can take place at El Vado except to satisfy Native American needs.

<u>Operated By:</u> <u>Dams:</u>	Reclamation 	Corps 	Water Supply	Recreation	Flood Control	Sediment Control
HERON						
EL VADO						
ABIQUIU						
NAMBE FALLS						
GALISTEO						
COCHITI						
JEMEZ CANYON						
ELEPHANT BUTTE						

2009: The Year in Review

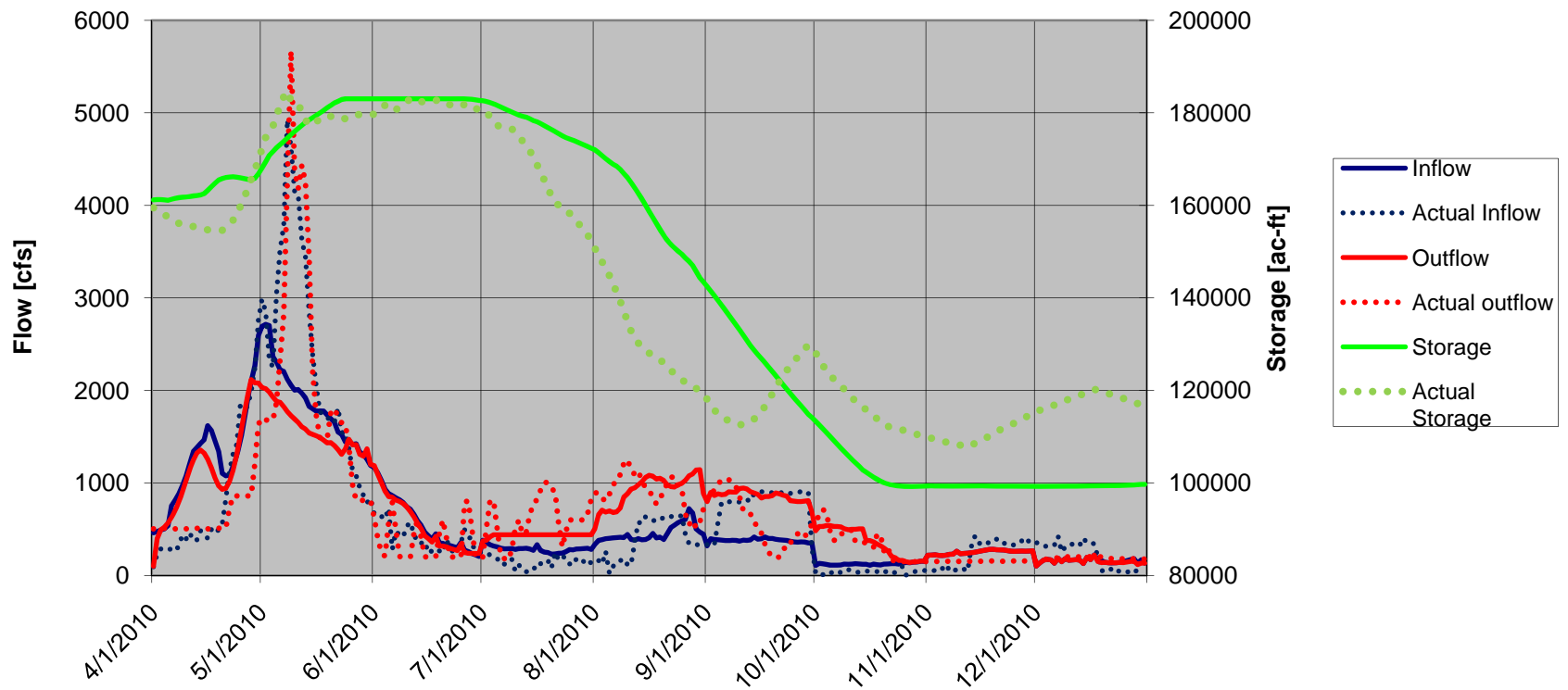
Heron Reservoir

2009 Heron Operations
modeled vs. actual



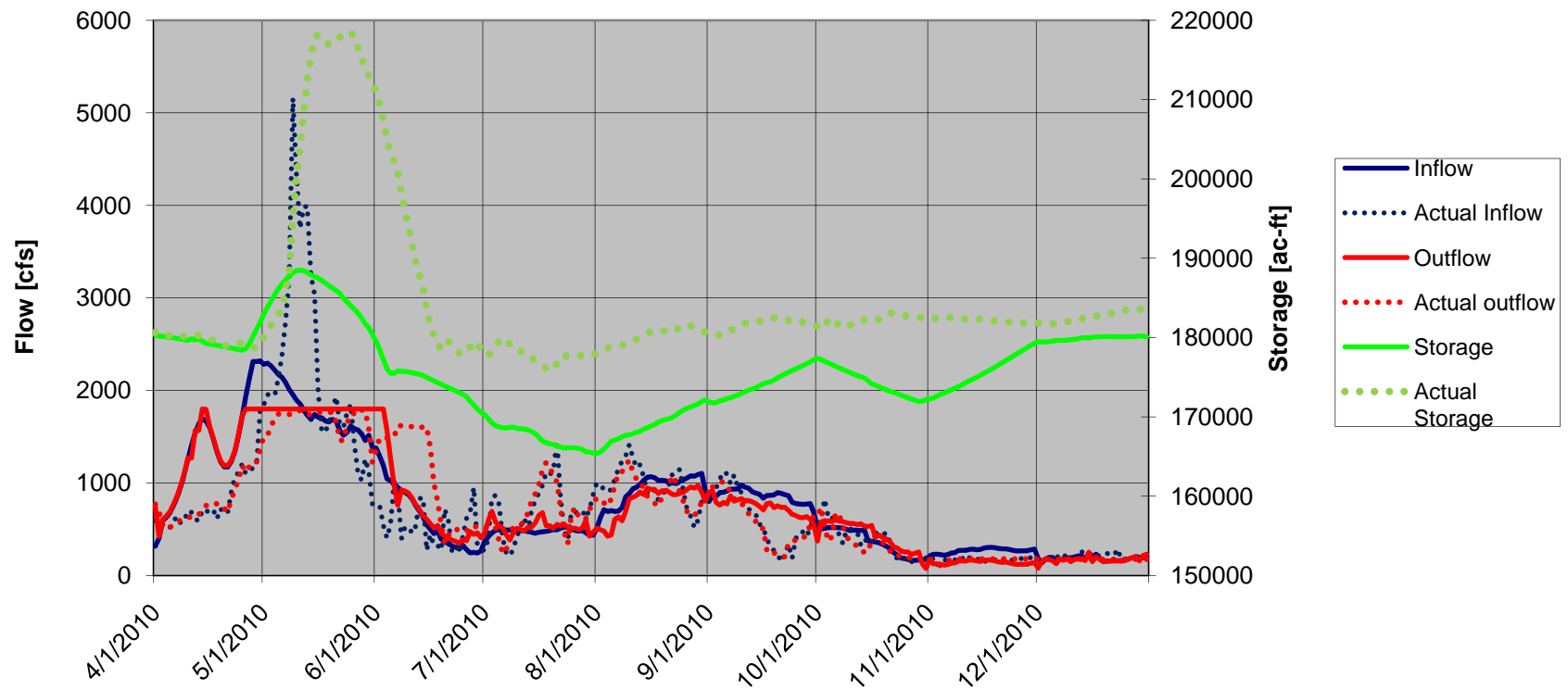
El Vado Reservoir

2009 El Vado Operations
modeled vs. actual



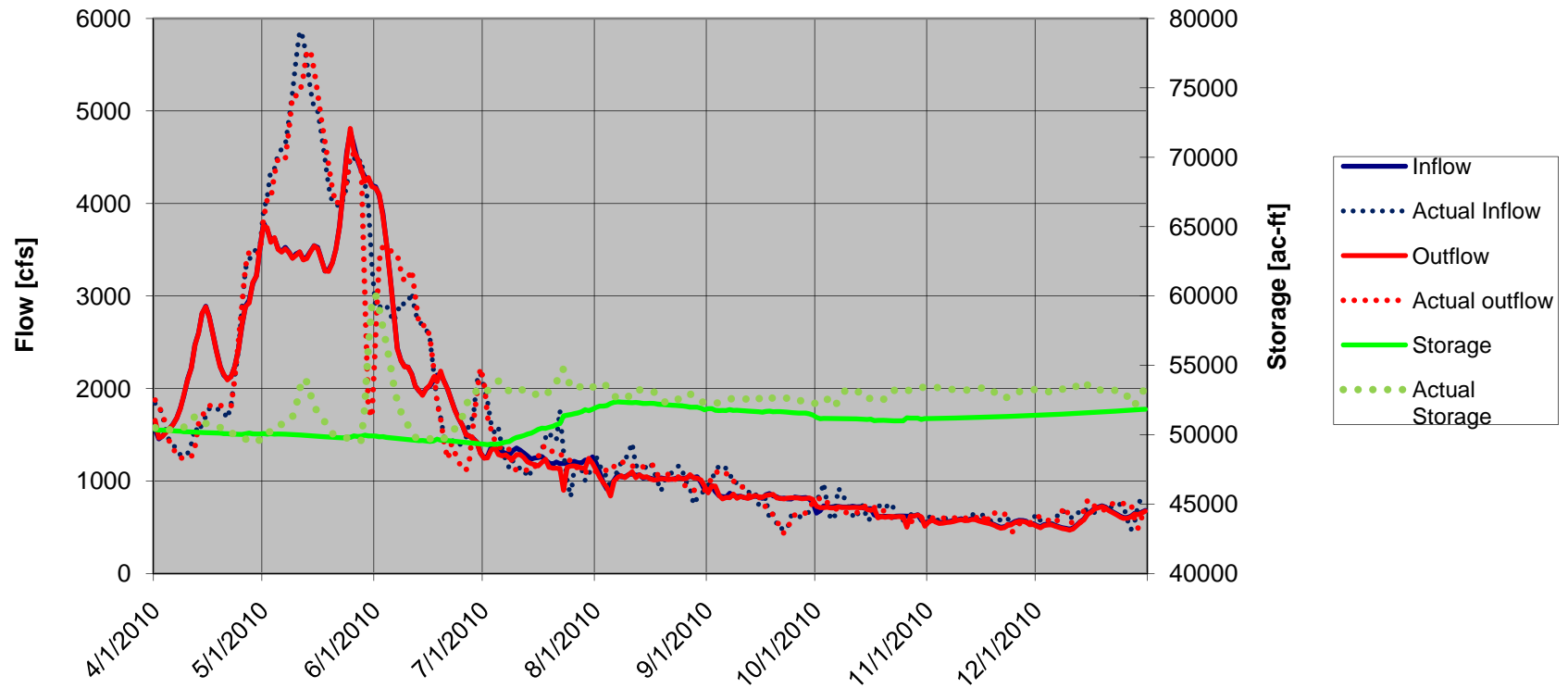
Abiquiu Reservoir

2009 Abiquiu Operations
modeled vs. actual



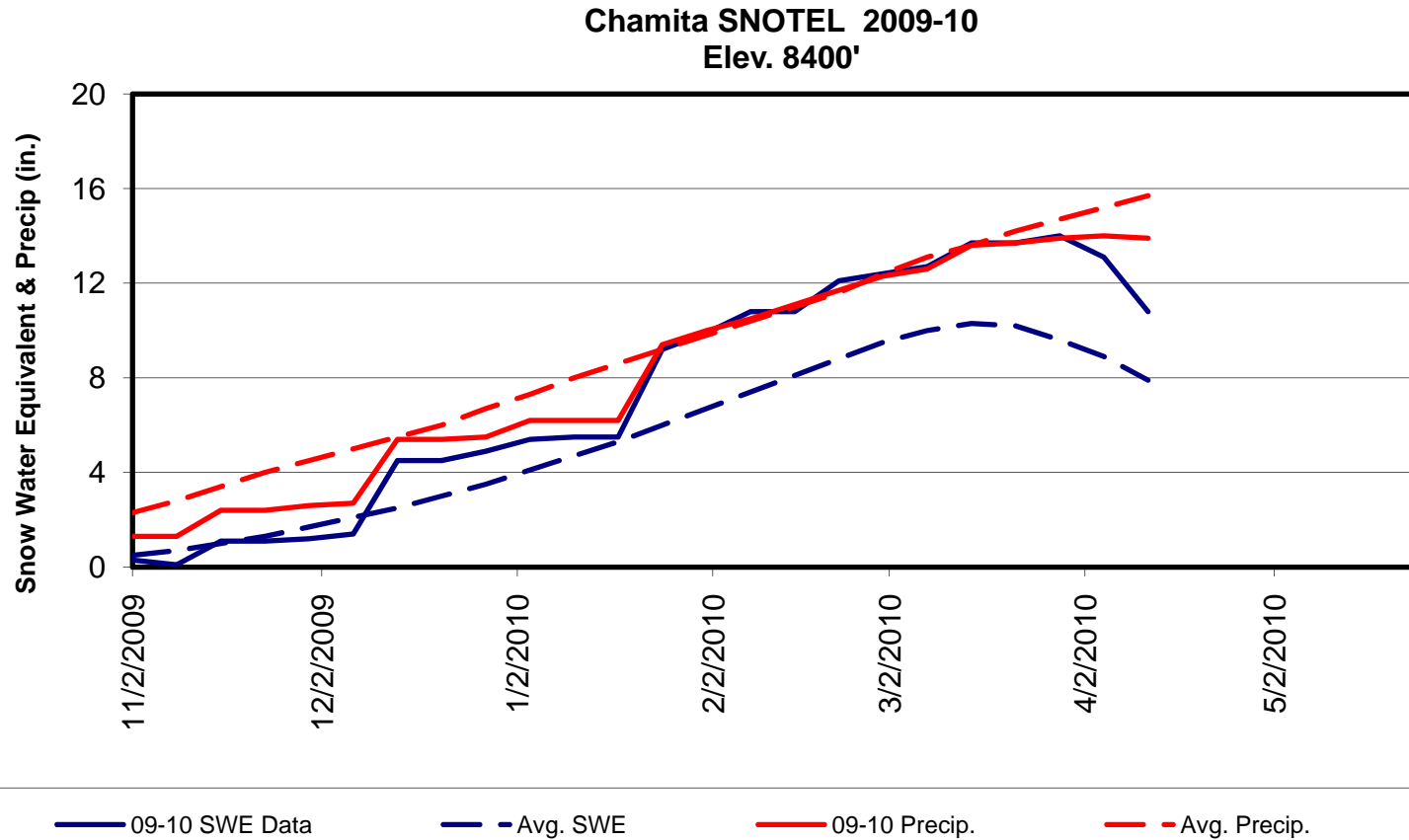
Cochiti Reservoir

2009 Cochiti Operations
modeled vs. actual



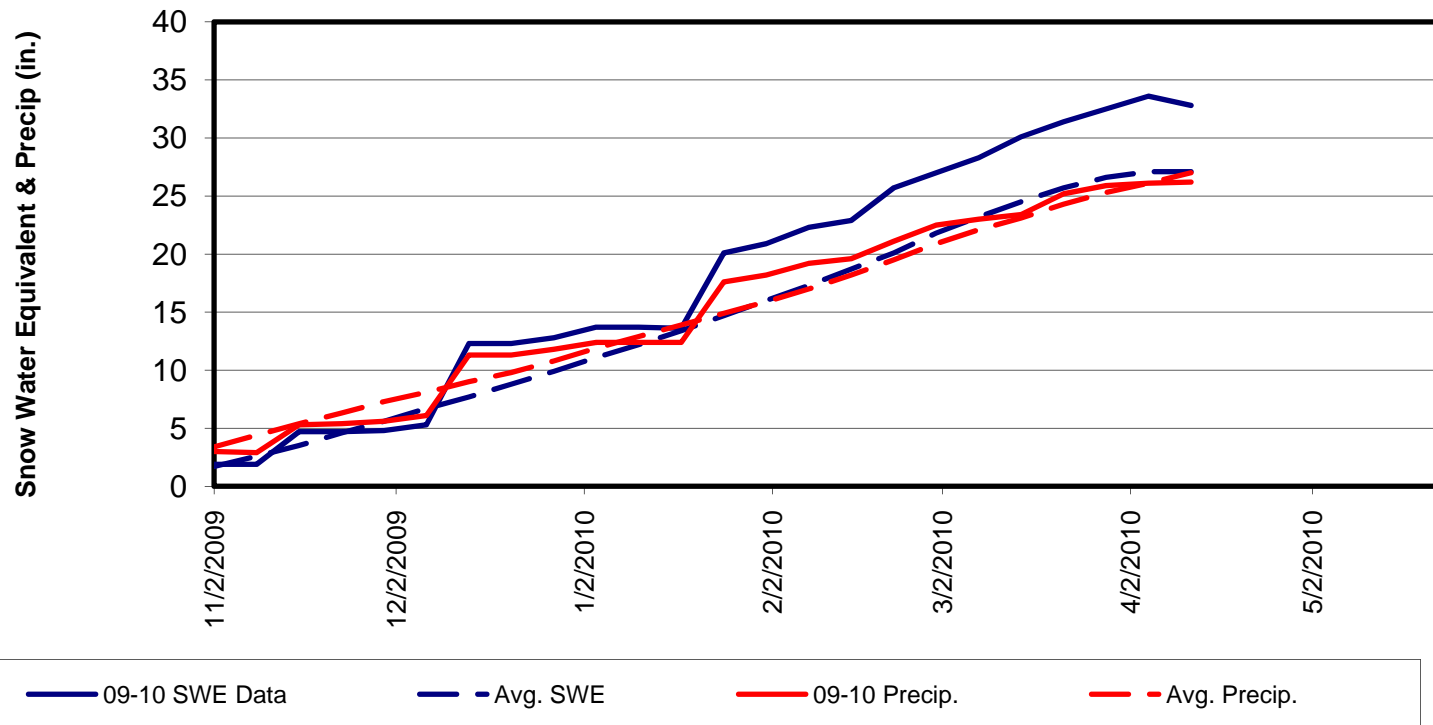
Current Snow Conditions

Rio Chama Snow Data



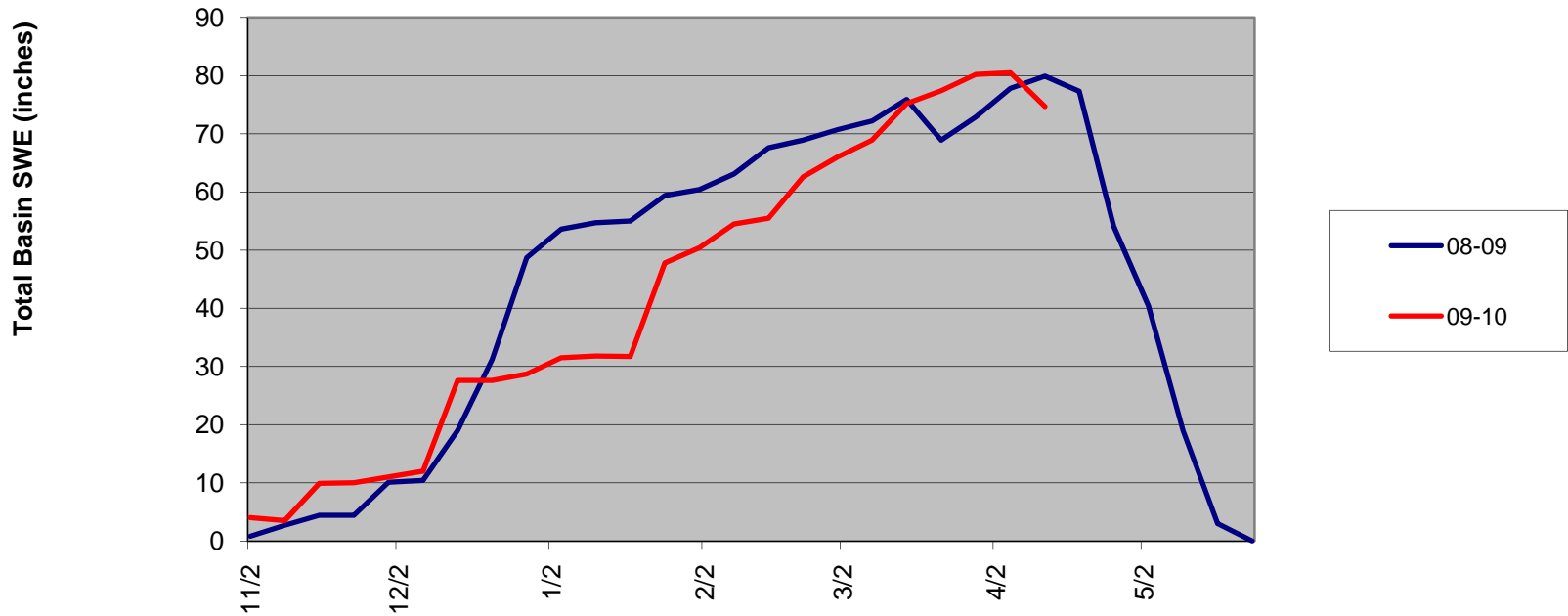
Rio Chama Snow Data

Cumbres SNOTEL Site 2009-10
Elev. 10,400'

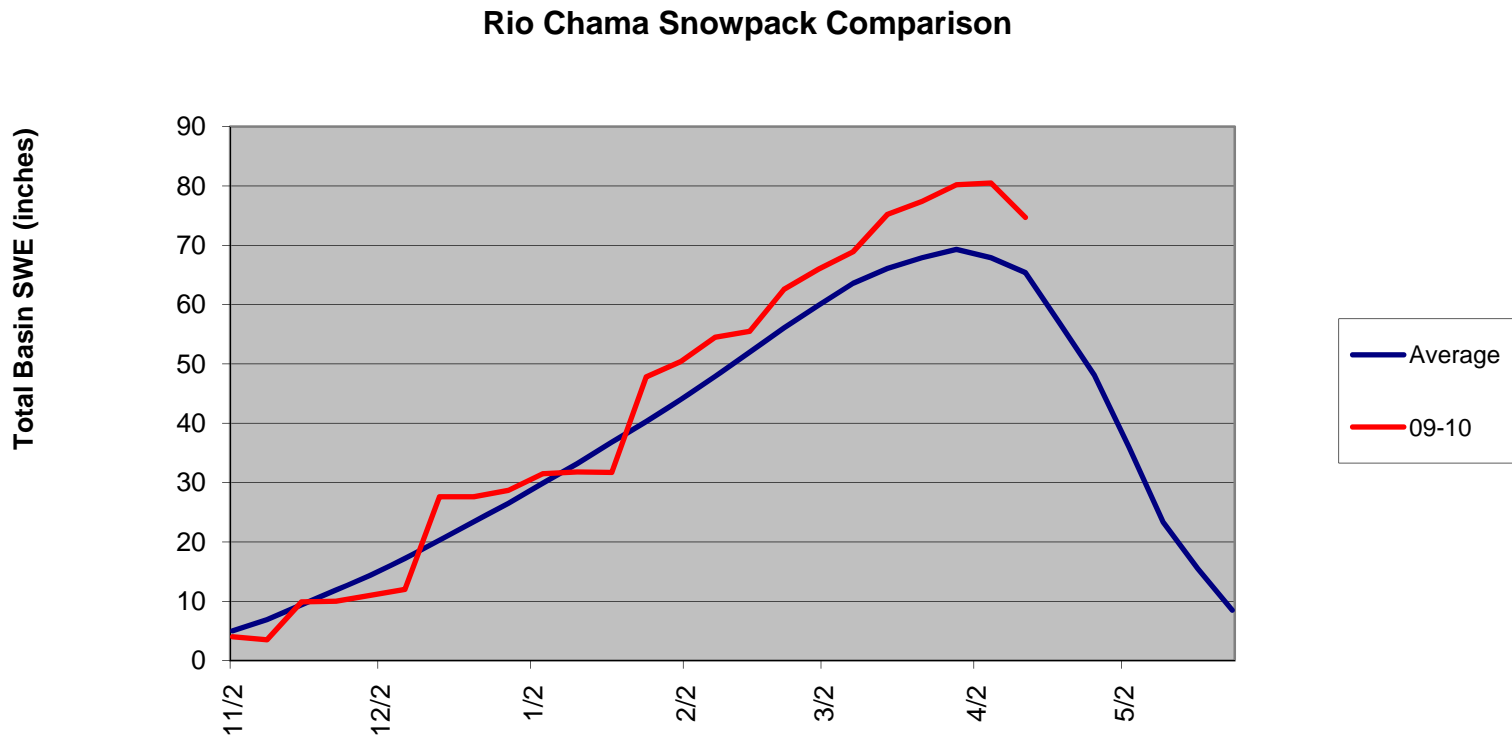


Rio Chama Snow Comparison

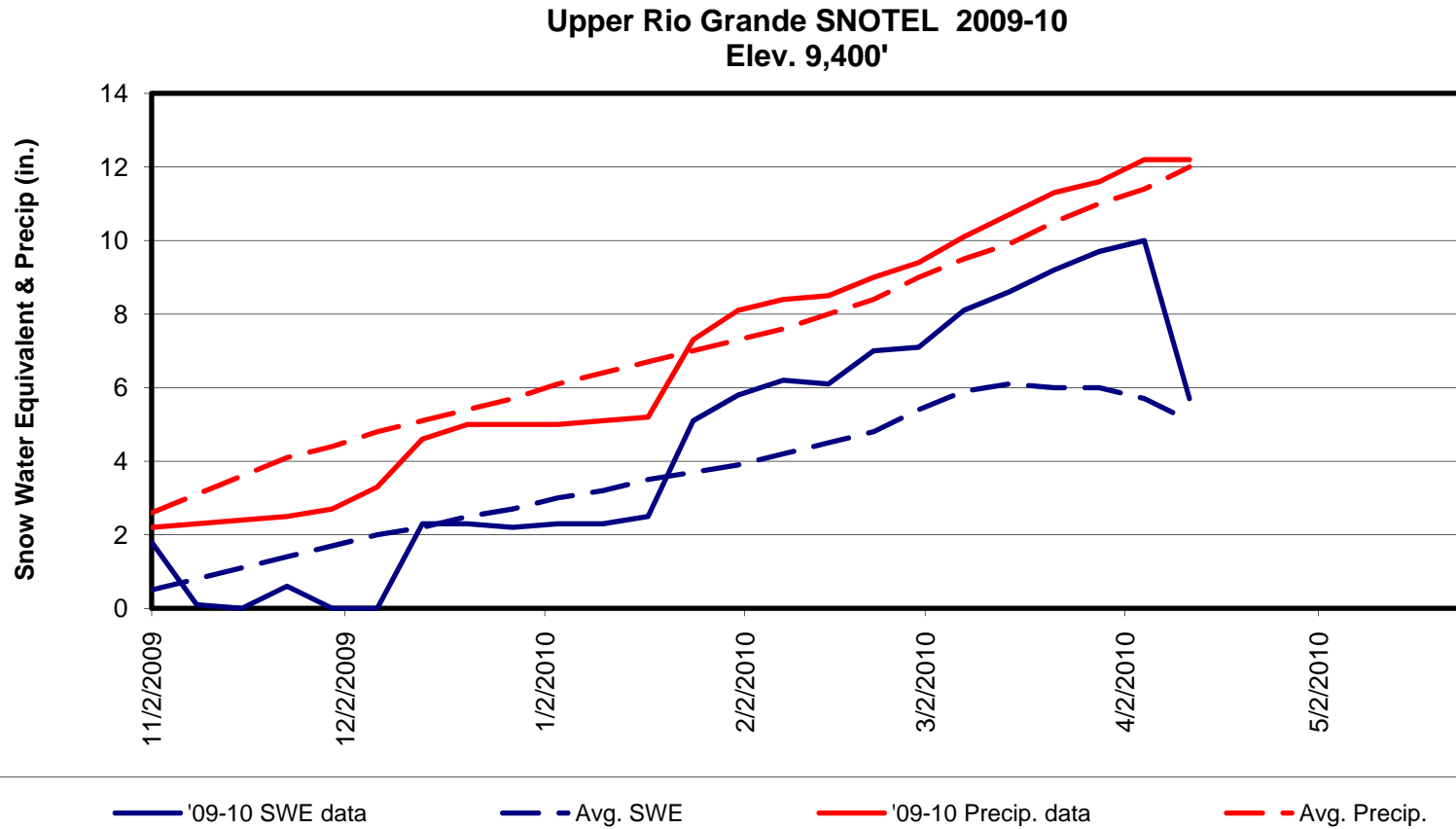
Rio Chama Snowpack Comparison



Rio Chama Snow Comparison

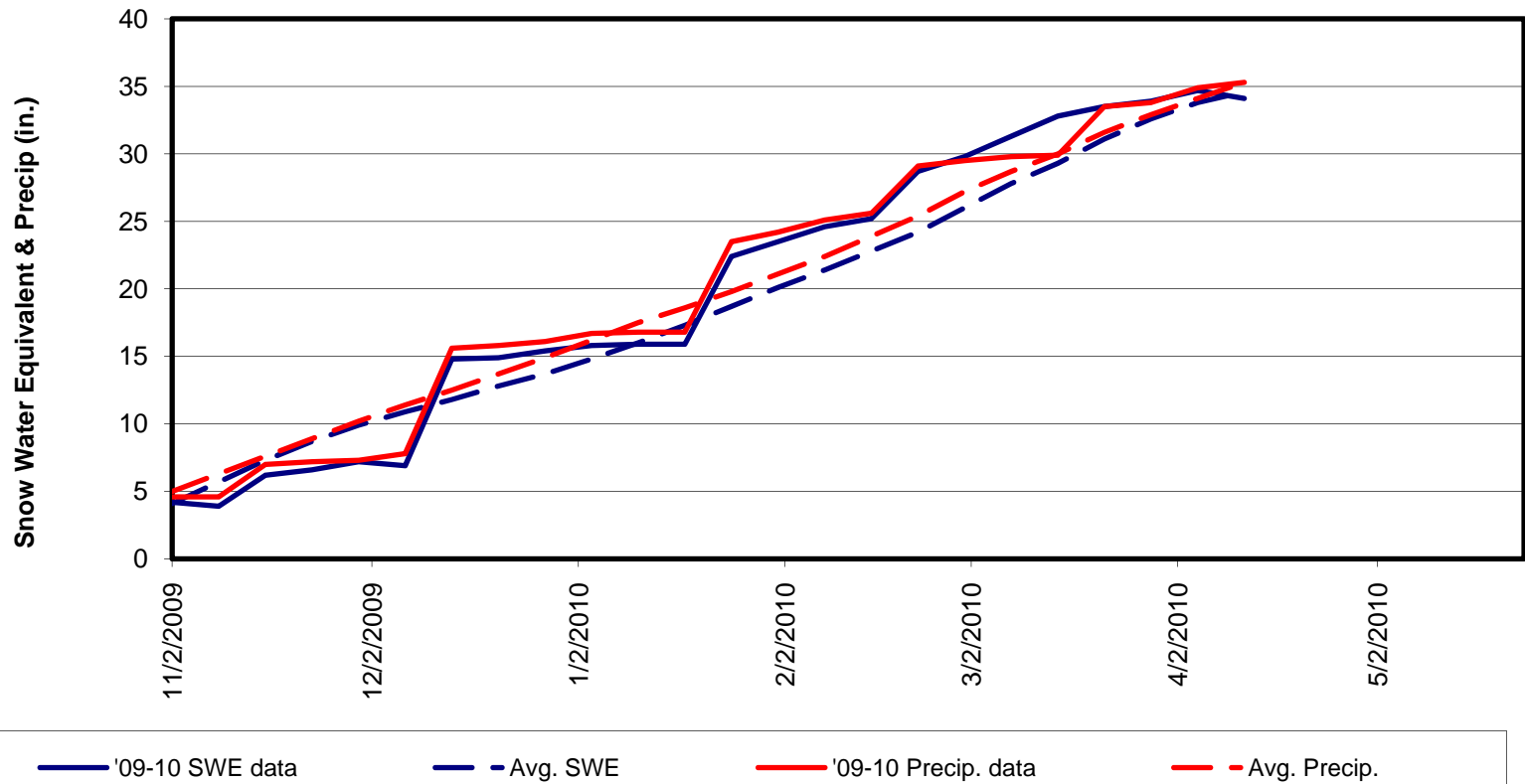


Rio Grande Snow Data



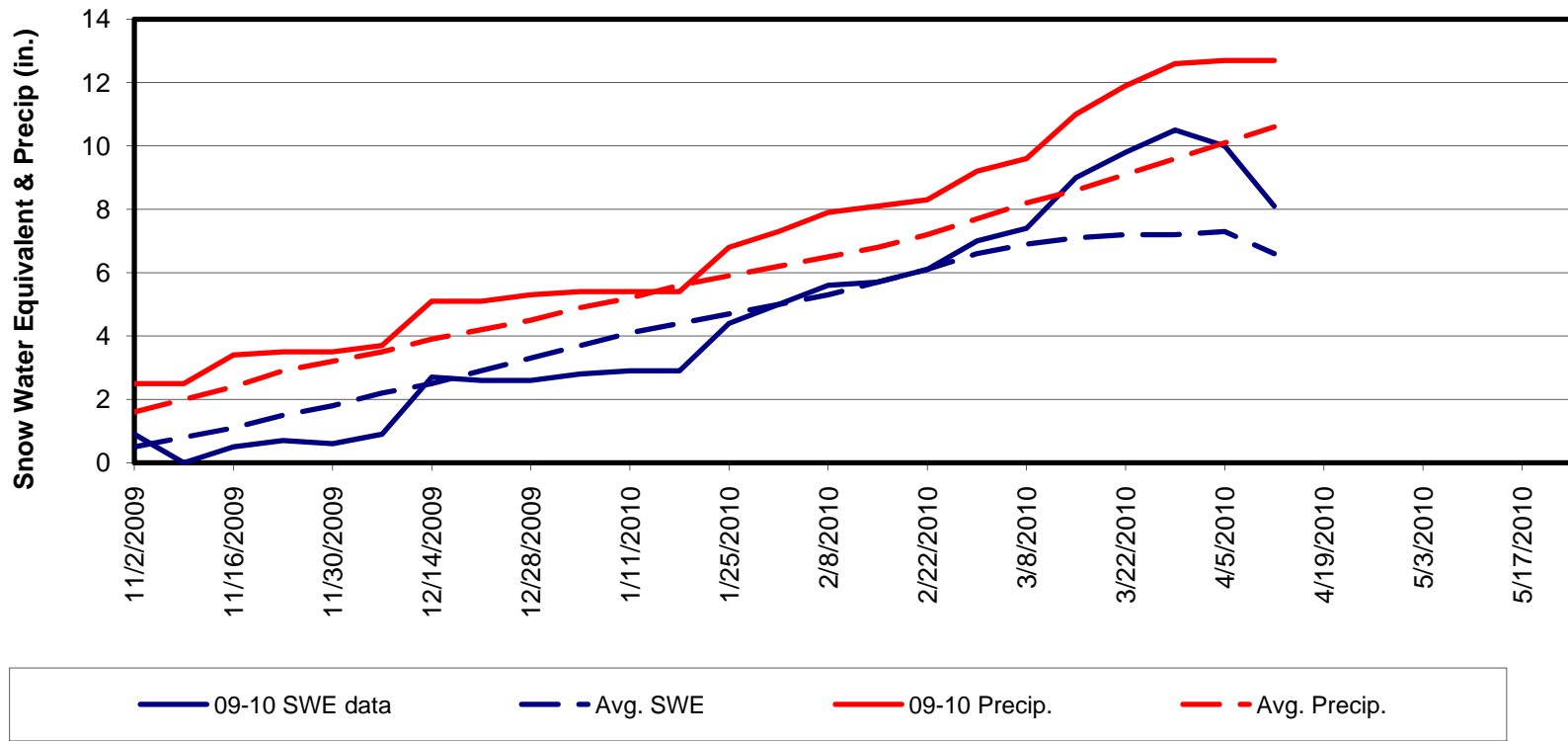
Rio Grande Snow Data

Wolf Creek Summit SNOTEL 2009-10
Elev. 11,000'



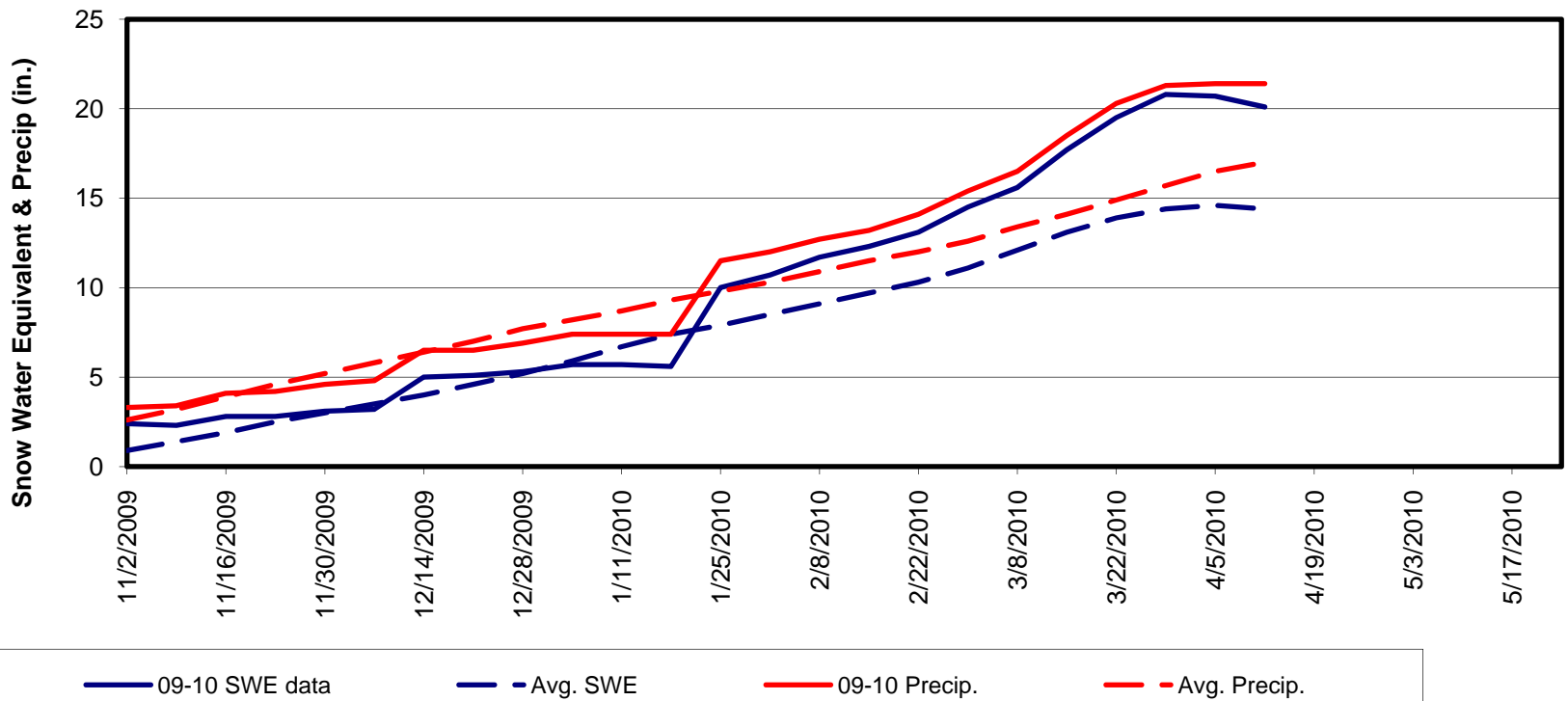
Sangre de Cristo Snow Data

Red River Pass SNOTEL 2009-10
Elev. 9,850'



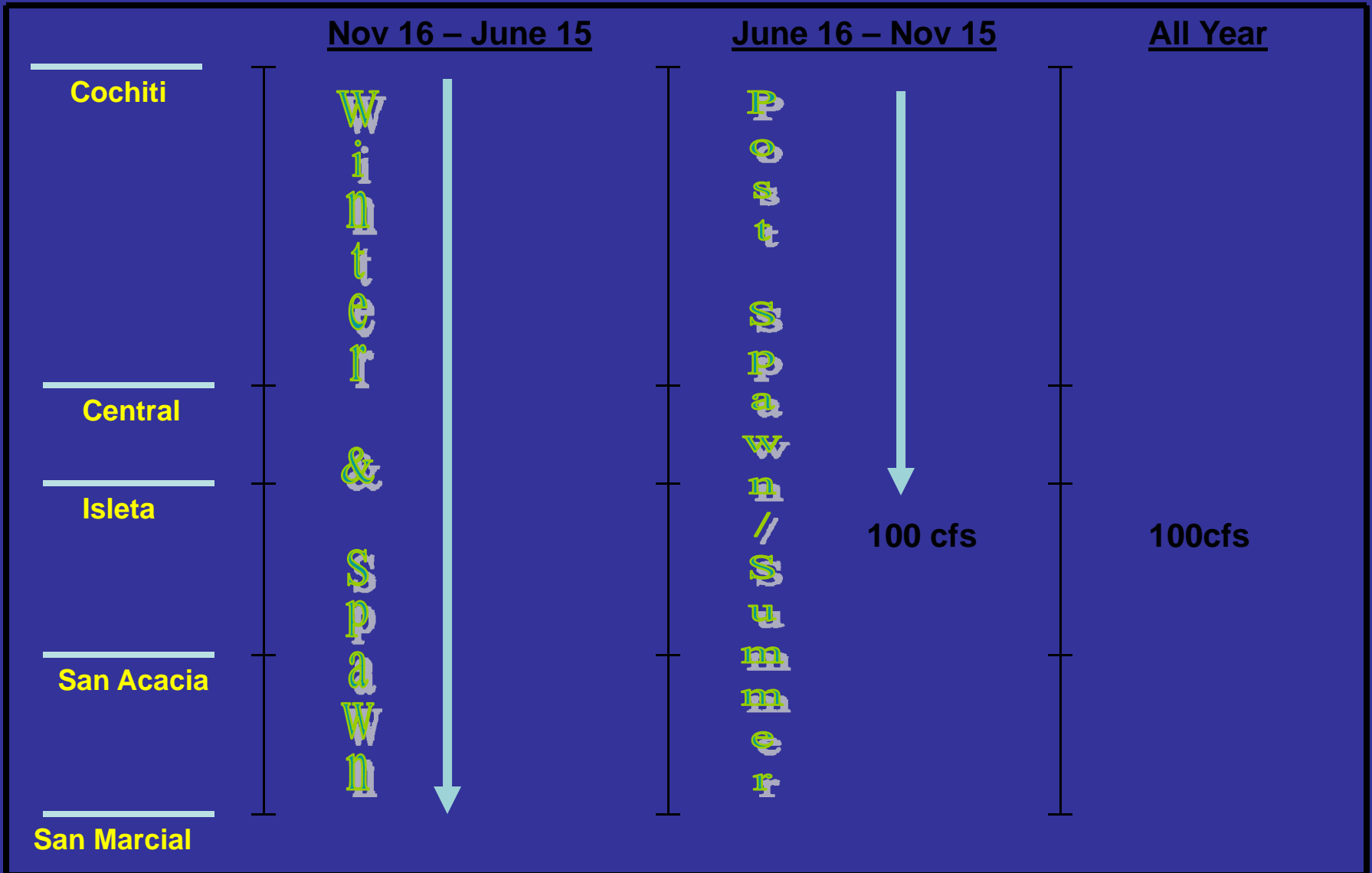
Sangre de Cristo Snow Data

Santa Fe SNOTEL 2009-10
Elev. 11,445'



2010 Water Operations Modeling

March 2003 BiOp Flow Requirements – Dry Year



April Forecast Data

	Most Probable Percent of Average		April 1 Most Probable Volume (acre-feet)
	2009	2010	2010
Rio Grande nr Del Norte	91%	94%	500,000
El Vado Reservoir Inflow	101%	97%	230,000
Rio Grande at Otowi	86%	99%	750,000
Santa Fe River nr Santa Fe	76%	133%	6,200
Jemez blw Jemez Dam	24%	102%	46,000
Heron Reservoir Inflow	92%	97%	94,000

Major Results

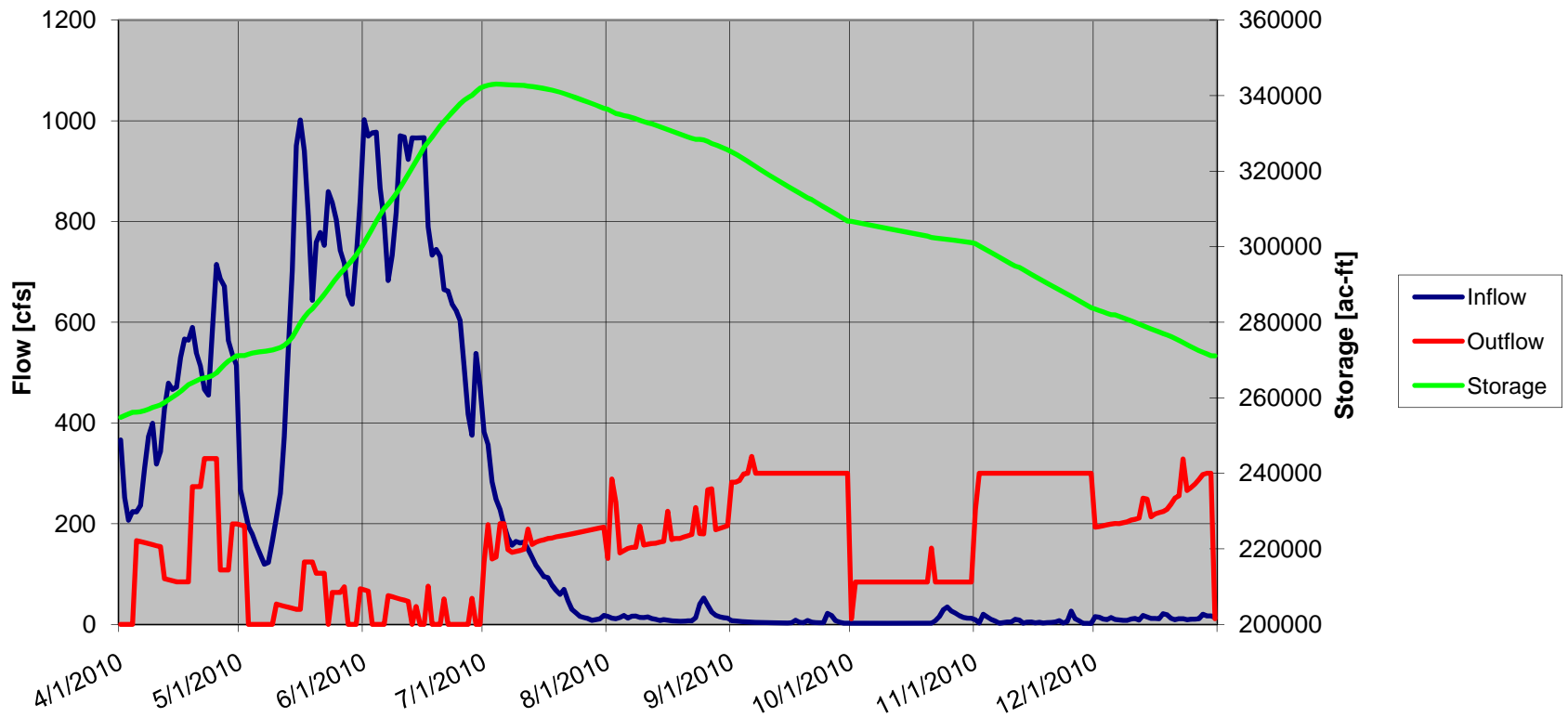
- Snowmelt Runoff normal
- BiOp flow requirements met through out the irrigation season
- Supplemental Water Releases begin early-July
- Recreational Flows provided for the Rio Chama through all of the Summer

Heron Reservoir



Proposed 2010 Heron Operations

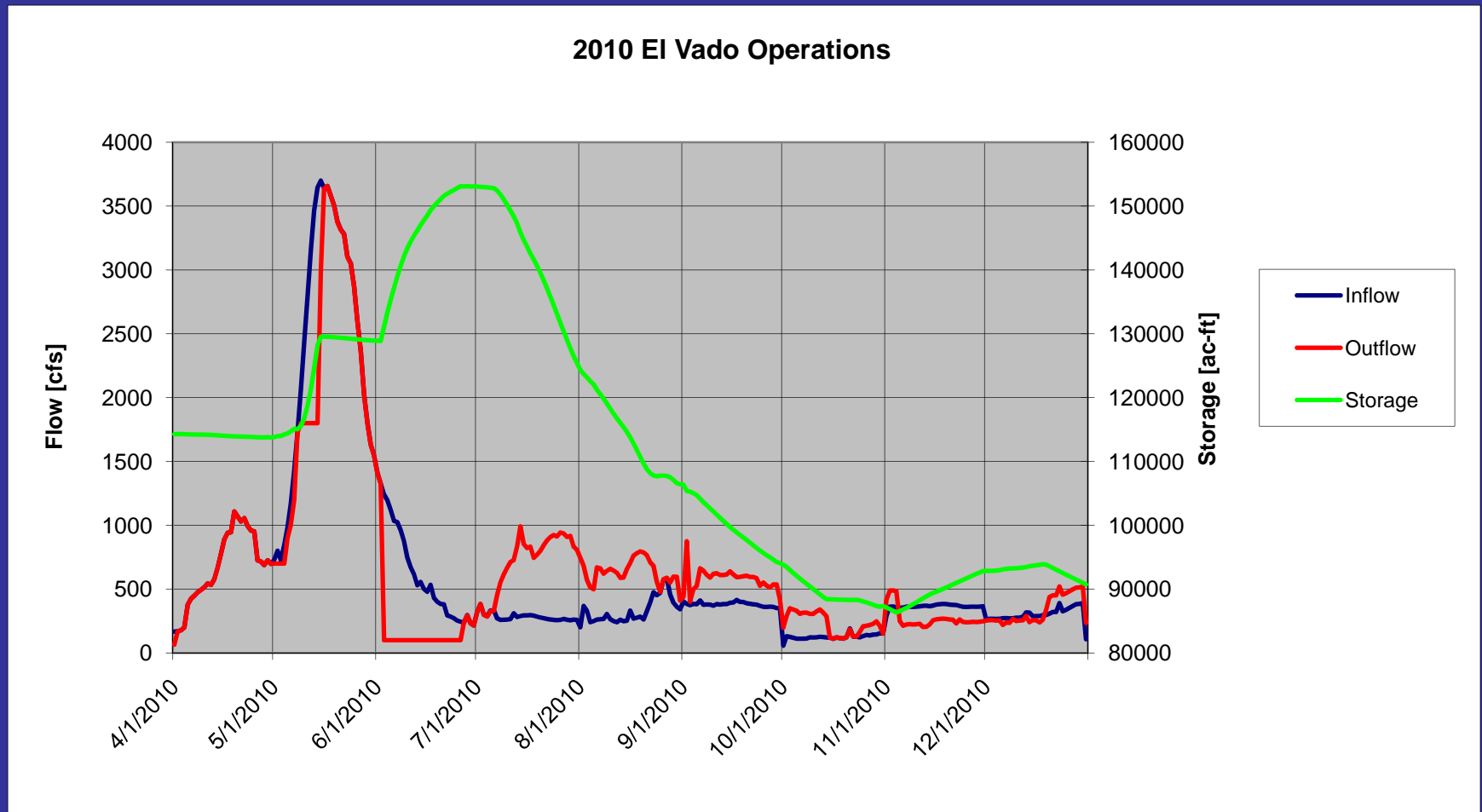
2010 Heron Operations



El Vado Reservoir



Proposed 2010 El Vado Operations



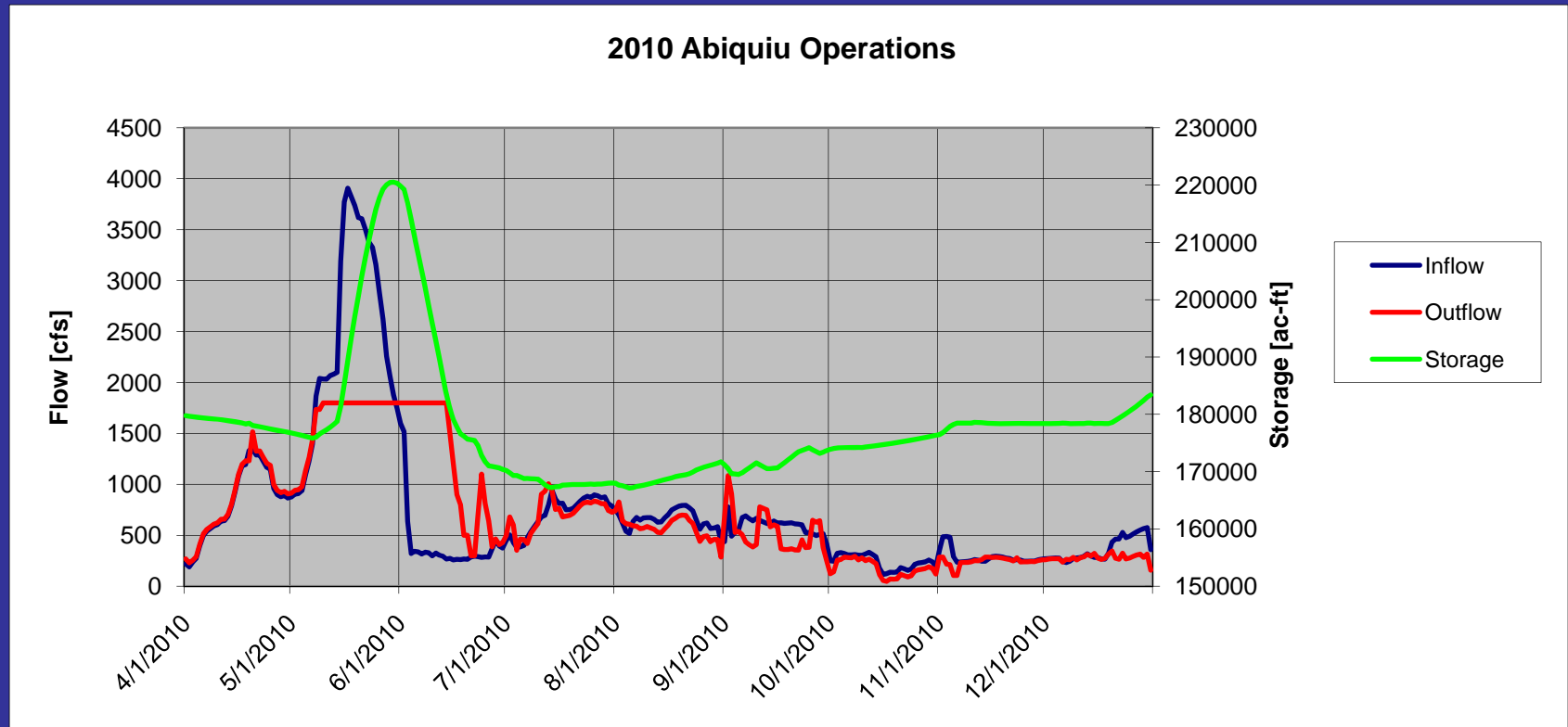
El Vado Reservoir:

Lake Level: Dropping from a peak at Elev. 6890' to 6864' by EOY
Probably will not fill due to Article VII restrictions.

ABIQUIU LAKE



Proposed 2010 Abiquiu Operations



Abiquiu Reservoir:

Flood Operations: Downstream channel capacity reached and 40,000 ac-ft temporarily stored

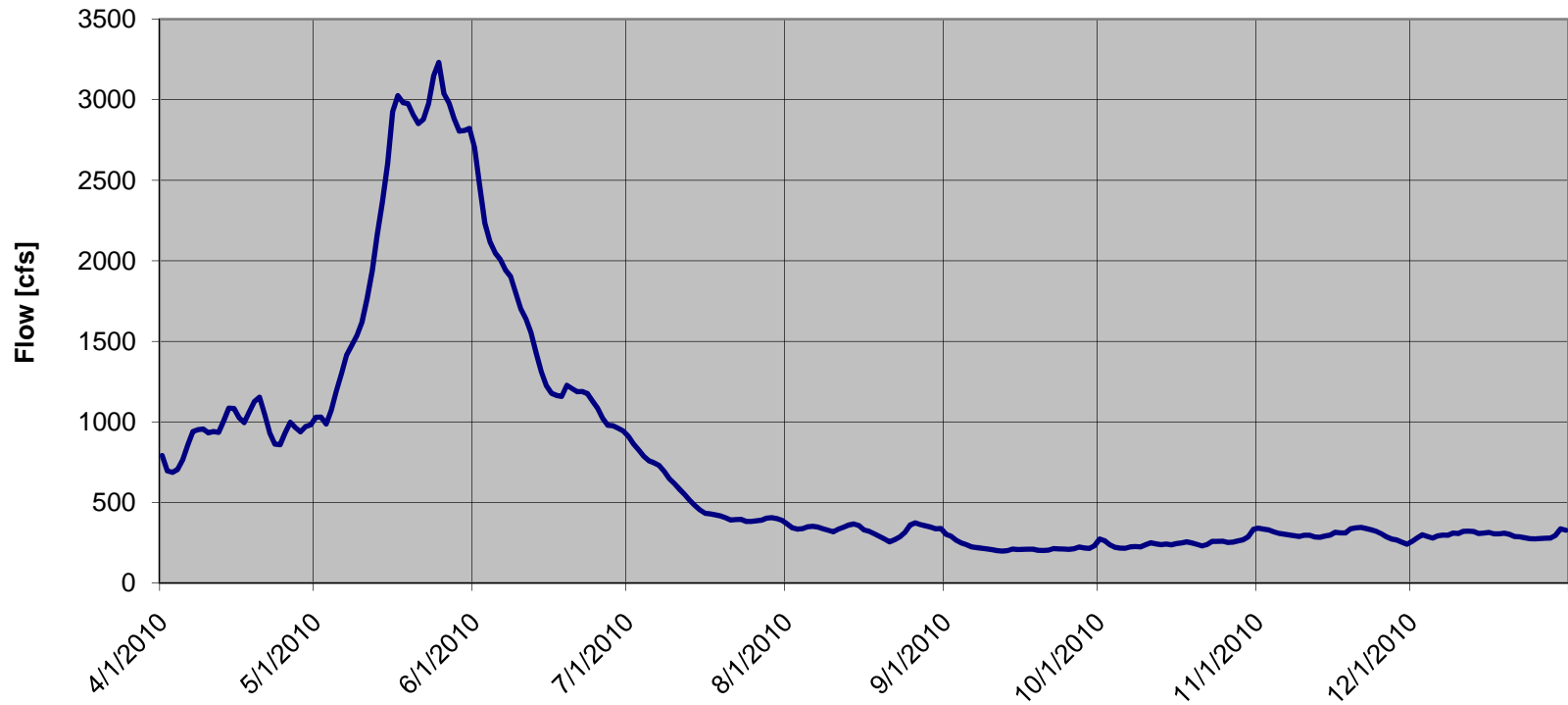
Lake Level: Staying between Elev. 6215' and 6220' for most of the year except for flood control ops.

Water Supply: Storing and releasing ABCWUA's and others' SJ-C.

Silvery Minnow: Releasing SJ-C water for Silvery Minnow this year

Estimated Hydrograph at Embudo

2010 Flow at Embudo

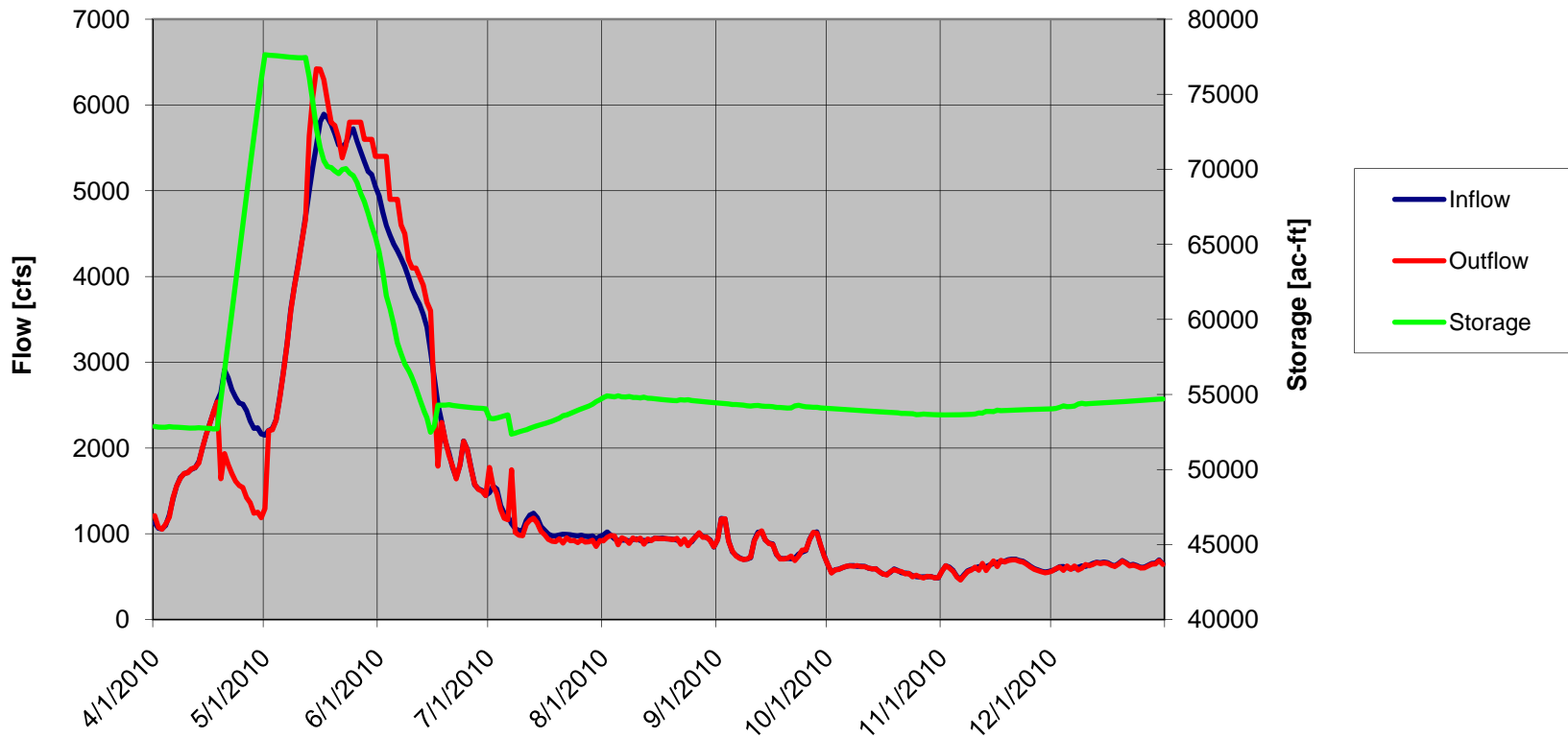


COCHITI LAKE



Proposed 2010 Cochiti Operations

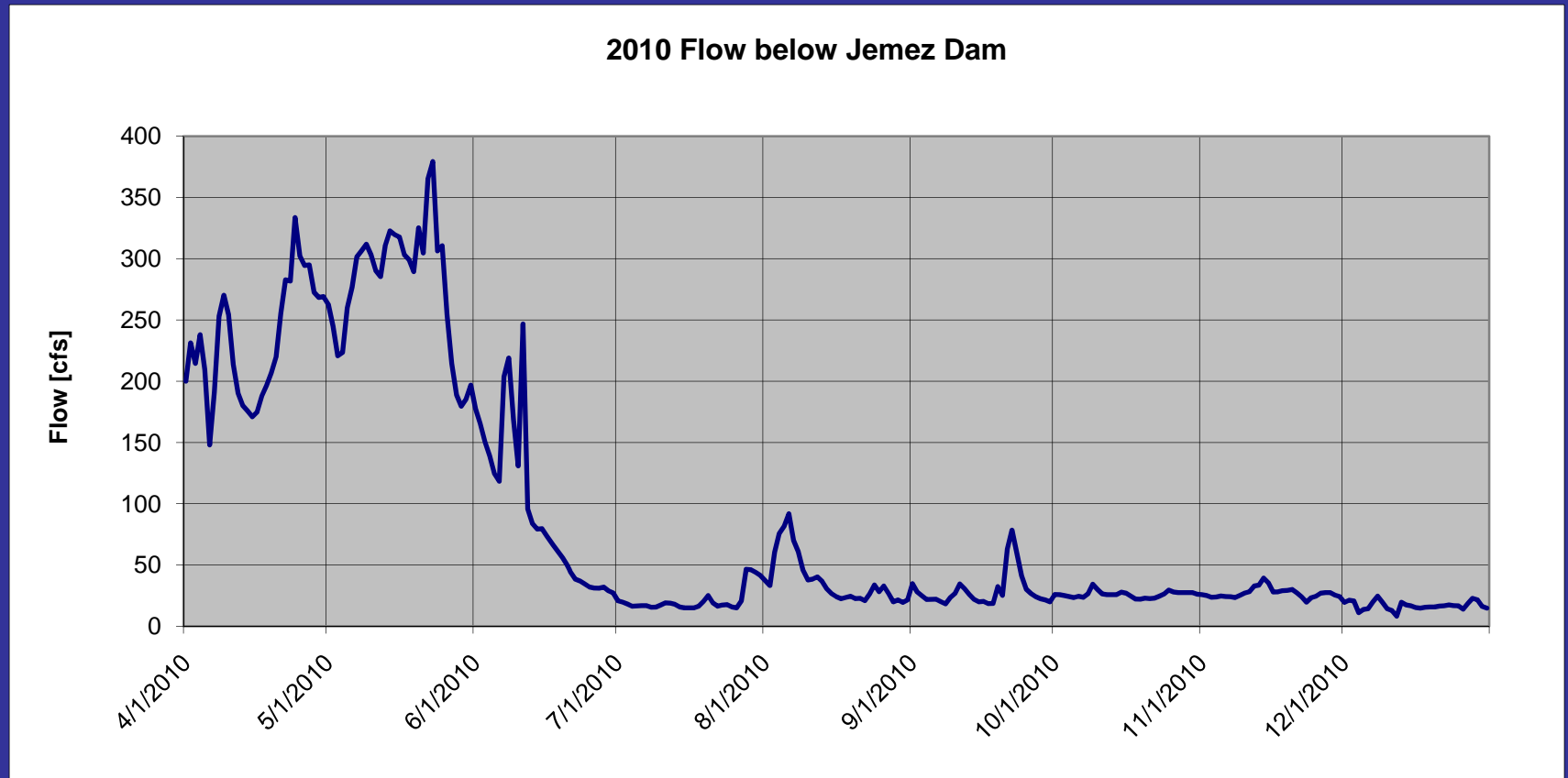
2010 Cochiti Operations



JEMEZ CANYON DAM

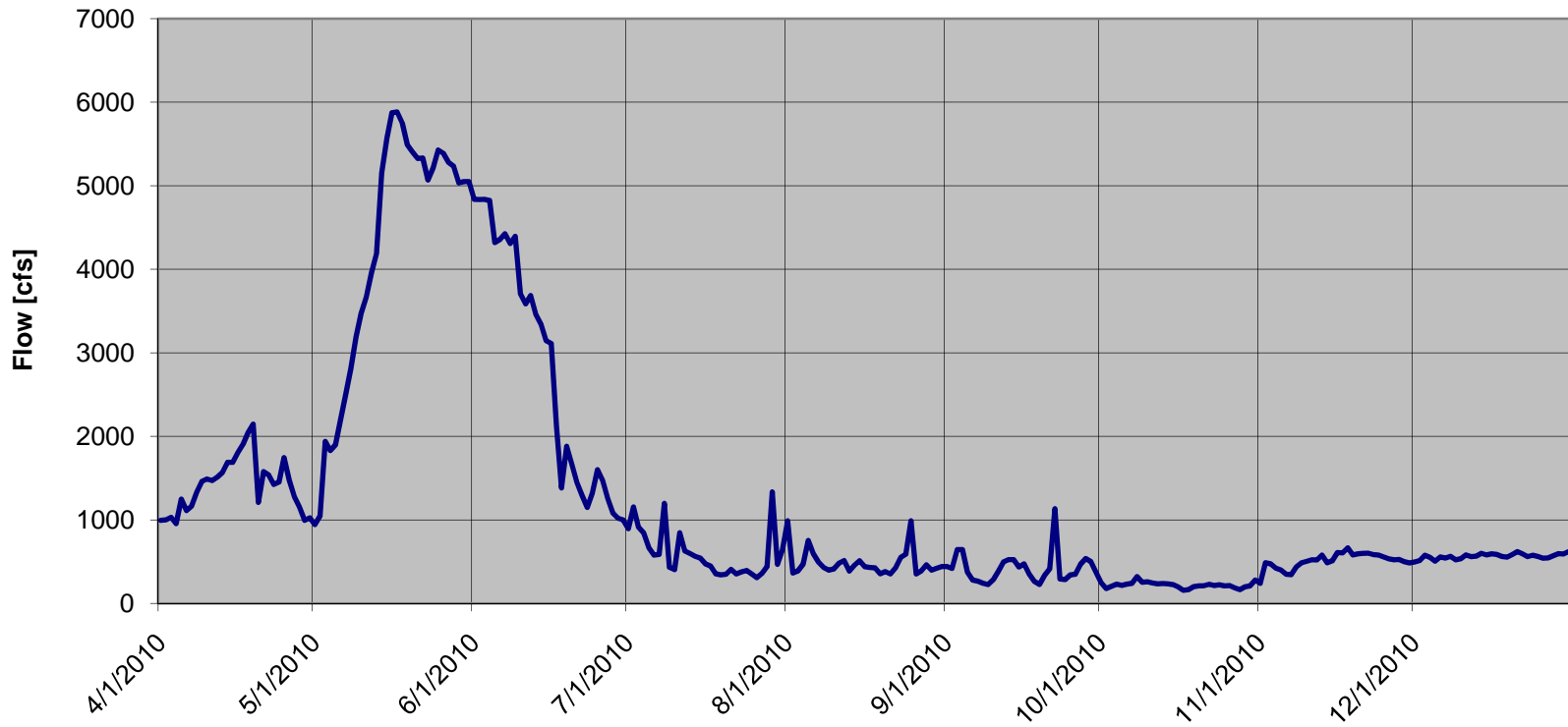


Estimated Hydrograph below Jemez Reservoir



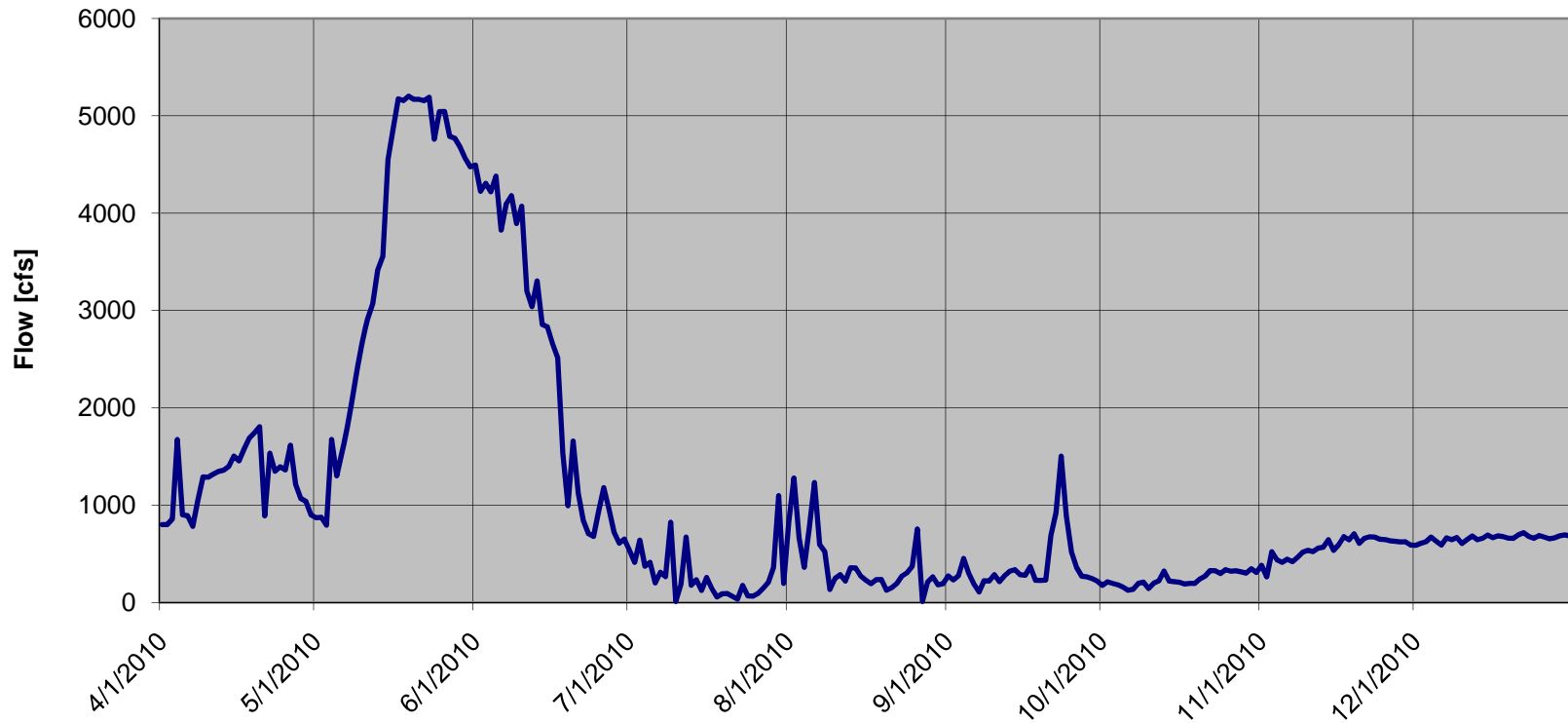
Estimated Hydrograph at Central Ave.

2010 Flow at Central Ave Gage



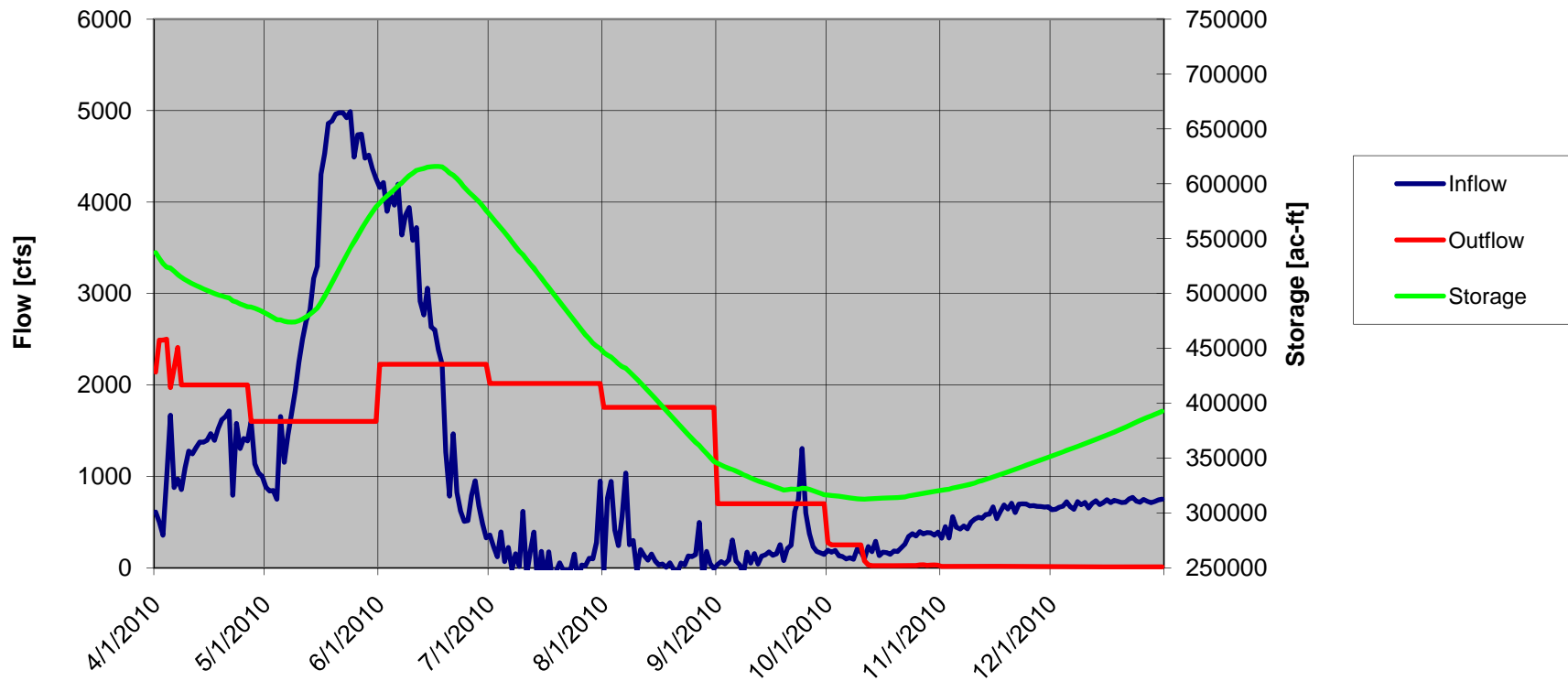
Estimated Flow at San Acacia

2010 Flow at San Acacia Gage



Proposed Elephant Butte Operations

2010 Elephant Butte Operations



Maximum Elevation = 4349'. Minimum Elevation= 4324'