

## **Agenda Item # 13**



*Alamosa River*

## **Proposed Water Acquisition**

### **Gabino Gallegos Ditch Alamosa River**

**CWCB Meeting  
January 26-27, 2010**

**Water Division 3**

# ACQUISITION PROPOSAL

- Culmination of a multiple year effort to restore the natural environment of Alamosa River from degradation due to Summitville open pit gold mine, an Superfund NPL site
- Offer for donation of water rights and storage space brought to CWCB by Alamosa Riverkeepers ("ARK") (part of international Riverkeeper alliance) and Terrace Irrigation Company
- A step in the larger Alamosa River Instream Flow Project ("ISF Project") to restore flows and replace degraded natural resources

# ACQUISITION PROPOSAL

- ARK will donate irrig. water right for ISF use from outlet of Terrace Res d/s to CR 10 (~16 mi).
- Terrace Irrigation Co. will donate up to 2000 af of storage space in Terrace Reservoir
- Storage donation is contingent on reconstruction of spillway to lift storage restriction, as required to pass Probable Maximum Flood design storm.
- Changed ISF water right will be stored in-priority during historical irrigation season.
- Water will be released and protected for ISF use when needed (late summer, fall and early winter)

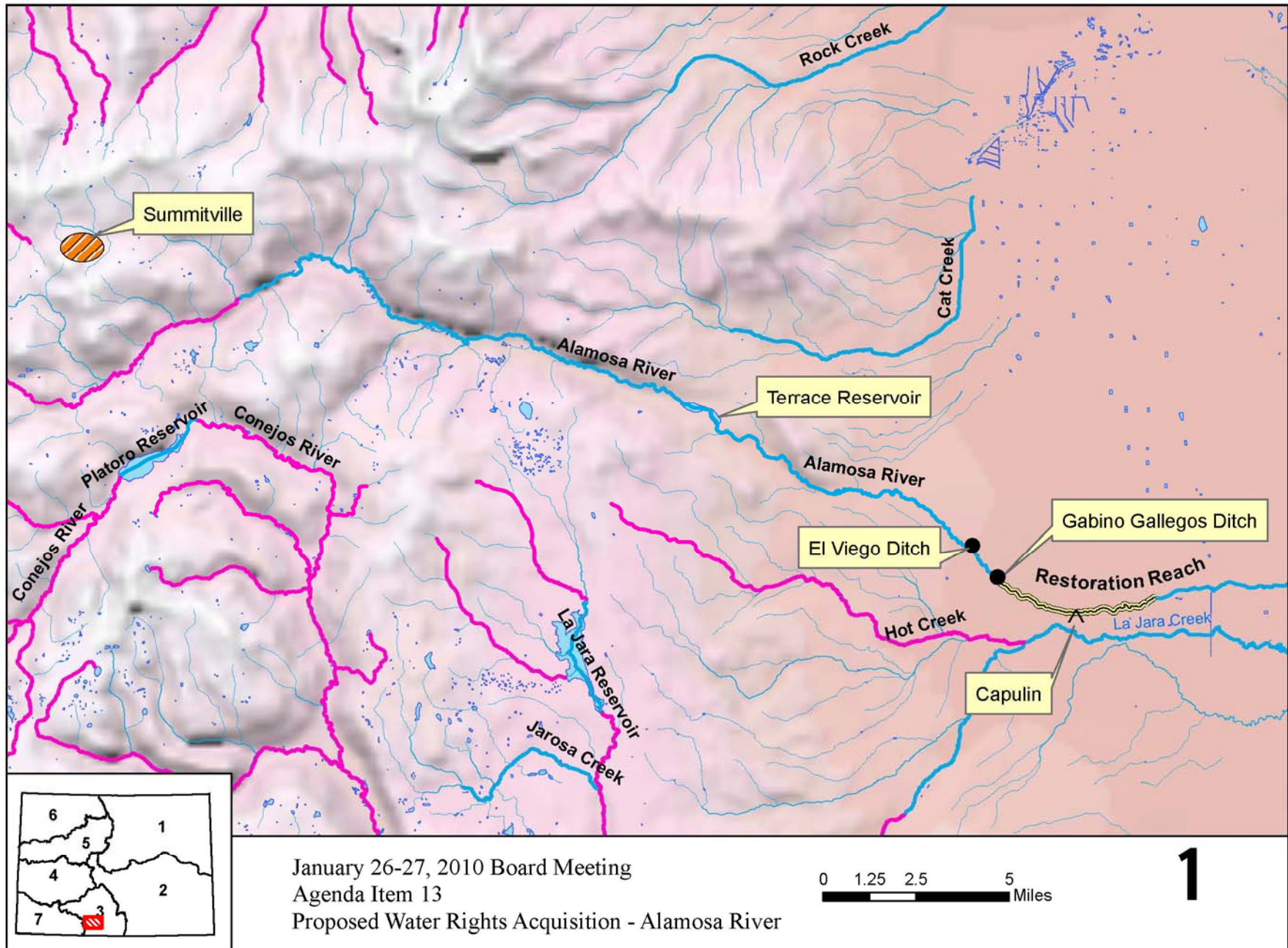
## **METHOD OF ACQUISITION**

- The Valle Del Sol Community Center/ARK, a Colo non-profit located in Capulin, Colo, entered into a Purchase Agreement with the Seller
- Seller executed a Dry-Up Covenant for historically irrigated land
- The Valle Del Sol / ARK intend to donate purchased water right to CWCB; CWCB's decision to accept will close escrow
- CWCB's use of Terrace Res is contingent on reconstruction of spillway; parties are considering temporary options such as a lease back for irrigation or using water from headgate d/s for ISF

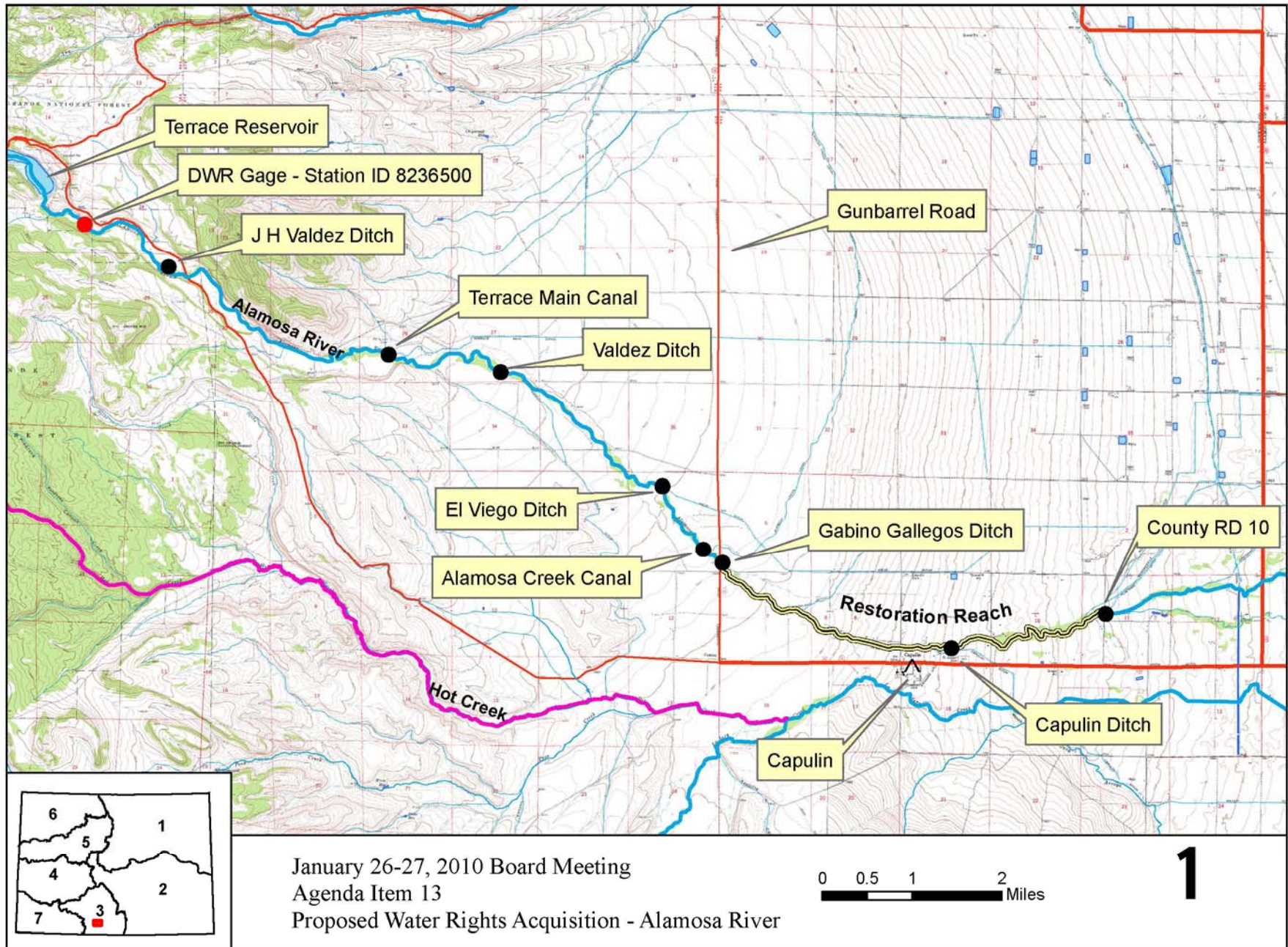
# HISTORY

- In 1984 Summitville Consolidated Mining Corporation began a new operation of the open pit gold mine near Alamosa R headwaters using cyanide heap leaching
- Accidental releases caused massive fish kills affecting 53 miles of the Alamosa R; owner abandoned site & filed for bankruptcy in 1992
- EPA & Colo recovered \$5M to remediate site between 1992 & 2001; US stimulus money provided another \$25M for on-site treatment plant
- 2005 Restoration Master Plan & Environmental Assessment Preferred Restoration Alternative recommended this ISF Project









# **MASTER PLAN & EA RECOMMENDATIONS**

- Increase Terrace Reservoir spillway capacity to remove storage restriction
- Acquire senior irrigation water rights on Alamosa River from willing sellers
- Transfer irrigation water rights to CWCB for storage in Terrace Reservoir for later ISF use
- Operate Terrace Reservoir to store and release acquired water for CWCB's ISF use between Terrace Reservoir and County Road 10.
- With a target of 10 cfs, the ISF Project is expected to increase the magnitude and duration of surface flows, thereby improving and ultimately preserving the natural environment



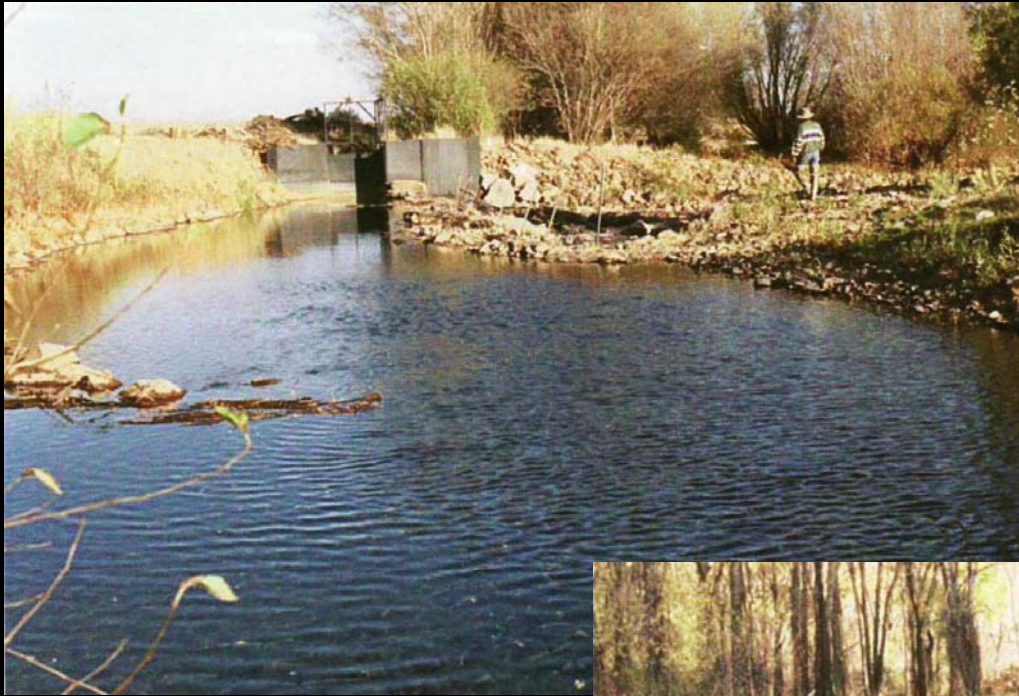
# Gabino Gallegos Ditch Water Right

- Diverts from Alamosa River 8 miles d/s of Terrace Res, near the town of Capulin, Conejos County.
- Decreed for 16 cfs in 1888 with a 1870 appropriation date (Water District 21, July 11, 1888 decree, pg 23)
- Donation is 2.5 cfs of priority 11, which historically irrigated 180 acres
- Senior d/s calling right is Capulin Ditch decreed for 31.37 cfs
- Diversions are fully consumptive to Alamosa River because return flows all accrue to groundwater



***Gabino Gallegos Ditch Headgate – April 2009***





*Alamosa River u/s  
from irrigation ditch*



*Alamosa River d/s  
from irrigation ditch*

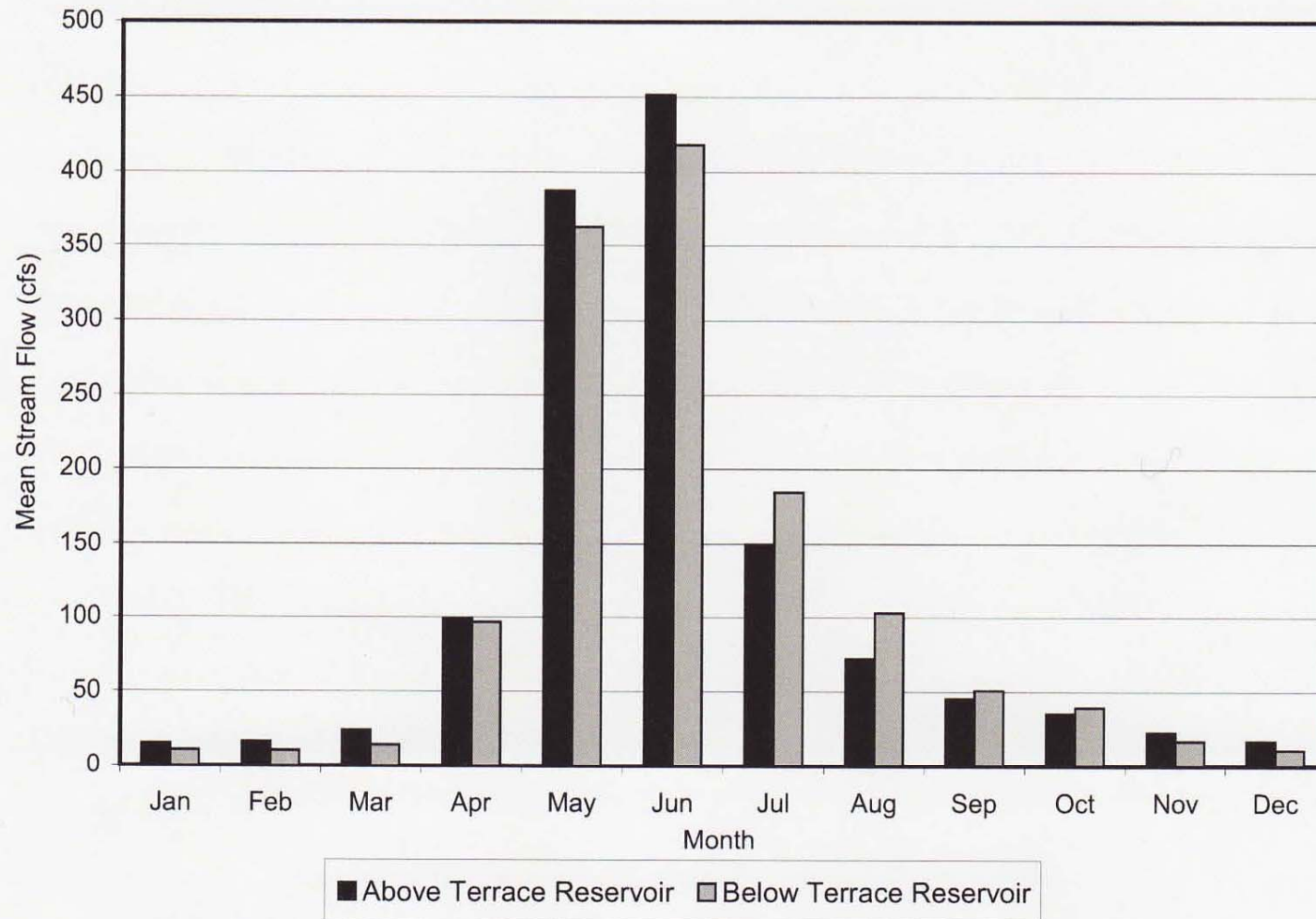


# Hydrology

- Flashy hydrograph – peak flows in June quickly dropping off in July and August (see hydrograph)
- Little to no water during several months of the year in lower portion of Alamosa River
- Stream flow percolates into groundwater in its entirety before reaching Rio Grande River
- Alamosa River is not hydrologically connected to Rio Grande; not part of Rio Grande Compact



**Figure 2-22. Mean Monthly Flow for Alamosa River near Terrace Reservoir**



Source: USGS Gage Data and CDWR Data (Above Terrace 1914–2002, Below Terrace 1923–2002)

**Hydrograph from Master Plan, page 2-26**

## Existing Natural Environment

- Large River (60-90 feet wide), which could support a self-sustaining fishery if water quality and winter quantity continue to improve
- Fishery was severely impacted by heavy metal contamination and extremely low wintertime flows
- Residents report that prior to 1990, Alamosa River was a popular place for picnics and recreational fishing near Capulin
- No existing ISF on the Alamosa River d/s of Terrace Reservoir

# Proposed Stream Reach and Use of Water Right

**Reach:** Alamosa River from outlet of Terrace Reservoir through restoration reach to County Road 10, a distance of approximately 16 miles.

**Use:** Diversion amount of 2.5 cfs (approximately 427 af) of the Gabino Gallegos Ditch water right will be released from Terrace Reservoir and protected for ISF use to improve and preserve the natural environment during late summer, fall and winter



***Terrace Reservoir***





***Terrace Reservoir Outlet***



***Alamosa River – Dry Channel & Eroded Bank  
Before Restoration – November***





***Alamosa River – After Restoration  
October***

# Historical Use and Return Flows

- Preliminary report on historical use by Ken Knox of URS
- Diversion records available for period 1950—2007
- Diversions generally from April – August, occasionally into November, when water available
- Average diversions estimated at 427 af/yr, with an HCU of 130 af/yr
- No surface water return flows
- Return flows accrued to unconfined groundwater, therefore diversions are 100% consumptive to Alamosa River



## Other Vested Water Rights / No Injury

- No injury to existing rights - Several water rights exist both senior and junior u/s and d/s of GG Ditch
- Storage Agreement term specifies – diversion into storage is limited to physical and legal availability of water at GG Ditch
- Change to ISF use will provide same amount of return flows to groundwater in same vicinity as former irrigation practice; timing of return flows will change from mid summer to late summer, fall and winter, however, this should not cause injury to wells or the Rio Grande due to groundwater buffering effect
- Terms and conditions may be introduced during the water court change case proceeding, as needed to protect other water rights

## Compact Issues

- Water rights in Division 3 are subject to the 1938 Rio Grande Compact
- In *Alamosa-La Jara* (Colo. 1983) the Supreme Court found that the Alamosa River is not subject to the requirements of the Rio Grande Compact
- This acquisition will return consumptive use water to the system
- Staff believes this will not impair the State's ability to meet its compact delivery obligations

## Maximum Utilization

- 2.5 cfs was historically beneficially used for irrigation of alfalfa and small grains
- Change will put water to beneficial use as an ISF to preserve and improve the NE to RD
- This acquisition is an integral component of the Alamosa River ISF Project to provide flow in the river; it will also raise water levels in the aquifer, and contribute to maintaining a more sustainable aquifer condition.



## **Benefits Provided by Acquisition**

- Increase stream flow during late summer, fall and winter during Terrace Reservoir releases for ISF use
- Segments of Alamosa River will remain a live stream longer in the season
- Adds historical consumptive use to the aquifer system, thus raising groundwater levels, which ultimately may provide base flow to the river
- Contributes to a more sustainable aquifer system
- Additional public benefits in Terrace Reservoir and Alamosa River recreational and fishing opportunities

# Acquisition Procedures

- Board has 120 days to evaluate this donation
- Unless a hearing requested on this proposal, Board could take final action at its March 2010 meeting
- Board must evaluate appropriateness of acquisition and determine how best to use acquired water right
- Staff has requested recommendations from DOW, State Parks, USFS and BLM on this proposal
- Staff has provided notice to Division 3 ISF Subscription Mailing List, and to State Engineer's Substitute Water Supply Plan Notification List

# Staff Recommendation

- No formal action is required at this time
- This presentation provides opportunity to the Board and public to identify questions or concerns for Staff and donors to address at this or a subsequent meeting





*Questions?*