


**TIER-1 APPLICATION TO THE NEW MEXICO INTERSTATE STREAM COMMISSION  
FOR NEW MEXICO UNIT OR WATER UTILIZATION ALTERNATIVE  
UNDER THE ARIZONA WATER SETTLEMENTS ACT**

**APPLICANT INFORMATION (PRINT OR**

**DATE: 7/6/2011**

<p>1. Legal Name: Pleasanton East-side Ditch Company</p>	<p>2. Organization: Pleasanton East-side Ditch Company (PEDCo)</p>										
<p>3. Address (street, city, county, state, and zip code):  P.O. Box 112 Glenwood, Catron Co., NM 88039</p>	<p>4. Name, email, and phone number of contract person:  Rob Overacker <a href="mailto:robandjulie@wildblue.net">robandjulie@wildblue.net</a> 575-539-2006</p>										
<p>5. TYPE OF APPLICATION (check one): <input checked="" type="checkbox"/> Final   <input type="checkbox"/> Preliminary for review   <input type="checkbox"/> Revised</p>	<p>6. TYPE OF APPLICANT (CHECK BOX): <input type="checkbox"/> local governments or municipalities  <input checked="" type="checkbox"/> soil and water conservation districts, irrigation districts or commissions, acequias, or other political subdivision of the State of New Mexico  <input type="checkbox"/> institutions of higher education or a consortium of such institutions  <input type="checkbox"/> non-profit organizations or associations  <input type="checkbox"/> private individual/s  <input type="checkbox"/> federal agency (ies)  <input type="checkbox"/> Other (specify)</p>										
<p>7. BRIEF PROJECT DESCRIPTION:  Improve delivery of irrigation water to 24 users by decreasing conveyance water loss on 20,000 ft. Pleasanton East-side Ditch. Relining or inserting pipe into deteriorated concrete and dirt ditch.</p>											
<p>8. AREAS AFFECTED (describe by county, municipality, township, etc. as applicable): Catron County, Pleasanton, Pleasanton Valley (see maps appended)</p>											
<p>9. TOTAL FUNDING REQUESTED (in \$1,000): \$ 1,200</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">2012: \$ 600</td> <td style="width: 20%;">2013: \$ 400</td> <td style="width: 20%;">2014: \$ 200</td> <td style="width: 20%;">2015:</td> <td style="width: 20%;">2016:</td> </tr> <tr> <td>2017:</td> <td>2018:</td> <td>2019:</td> <td>2020:</td> <td>2021:</td> </tr> </table>		2012: \$ 600	2013: \$ 400	2014: \$ 200	2015:	2016:	2017:	2018:	2019:	2020:	2021:
2012: \$ 600	2013: \$ 400	2014: \$ 200	2015:	2016:							
2017:	2018:	2019:	2020:	2021:							
<p>10a. TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL DATA IN THIS APPLICATION ARE TRUE AND CORRECT, THE DOCUMENT HAS BEEN DULY AUTHORIZED BY THE GOVERNING BODY OF THE APPLICANT AND THE APPLICANT WILL COMPLY WITH THE ATTACHED REQUIREMENTS AND ASSURANCES IF THE PROPOSAL IS ACCEPTED.</p>											
<p>10b. TYPED OR PRINTED NAME OF AUTHORIZED REPRESENTATIVE: Rob Overacker</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;"> <p>11. TITLE: Vice-President, PEDCo</p> </td> <td style="width: 50%;"> <p>12. PHONE NUMBER: 575-539-2006</p> </td> </tr> </table>	<p>11. TITLE: Vice-President, PEDCo</p>	<p>12. PHONE NUMBER: 575-539-2006</p>								
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<p>13. SIGNATURE:</p> 	<p>DATE: 7/6/2011</p>										

**A. State whether the proposal is for the “New Mexico Unit,” a “water utilization alternative,” or both.**

This proposed project is a *water utilization alternative*. The project does not develop additional water from the Gila basin; however, the project would extend the water supply through conservation.

**B. Describe how the proposal will meet a “water supply demand” in the Southwest New Mexico Water Planning Region, comprised of Catron, Grant, Hidalgo and Luna Counties.**

The 20,000 ft. Pleasanton Eastside Ditch (Figures 1 & 2) delivers surface flow diversions from the San Francisco River to 24 private water rights holders in the Pleasanton Valley of southern Catron County, New Mexico. Approximately 925 acre feet of adjudicated water are delivered to members each year. However, the 50 year-old concrete lining of the Pleasanton Eastside Ditch has degraded (Figures 3 & 4) to the point that delivery to the southern-most (end-of-ditch) users is often compromised due to conveyance loss.

Irrigation conveyance loss, the loss of water from the point of diversion to the point of use, occurs through seepage, leakage, and evaporation. Conveyance loss from an open ditch may be on the order of 50% depending on the nature of the ditch lining and its integrity, and the nature of the ditch substrate.<sup>1-3</sup>

We propose to increase the efficiency of water delivery to our members by either relining the degraded, open ditch, or by inserting a closed pipeline into the present ditch course (potentially both methods will be used). By reducing conveyance loss, we increase our capacity to *meet the present and future water demands* of our members. Additionally, conserving water extends the capacity of the basin to support natural ecosystems and/or other human water needs. A rough estimate of the amount of water potentially conserved by this proposed project is on the order of 750-1250 acre feet. To put that in another perspective, 1250 a.f. equals a constant flow of 2.1 cfs over a 10 month diversion period.

**C. Describe how the proposal considers the Gila environment and describe how any negative impacts might be mitigated.**

3 We indicated above how a reduction of conveyance loss translates to a beneficial increase in the capacity of the basin to support natural riparian ecosystems. Southwestern riparian ecosystems support some of the highest diversities of plants and animals in North America.<sup>4</sup> The presence of surface water in an otherwise xeric landscape is the root cause of this diversity, but natural and man-made stresses on these habitats have greatly reduced some species populations over the past century. Our preliminary scoping of special status species (Table 1 appended) produced a list of special status species that includes 8 fish, 3 amphibians, 1 reptile, and 11 birds. Currently it is not clear if any of these species would be directly impacted by the proposed re-lining of the ditch or by the insertion of pipe into the ditch. We intend to consult with USFWS, NMDGF, and USFS biologists to determine what special status species may be impacted and to determine potential mitigations. Some loss of open water habitat and ditch-bank vegetation would be expected from relining and refitting operations, and additional bank-side vegetation habitats could be impacted as substrates become drier with decreased seepage/leakage from the improved ditch/pipe (Figure 5). We could possibly mitigate some of these impacts by selective use of open ditch vs. closed pipe.

**D. Describe how the proposal considers the historic uses of and future demands for water in the Southwest New Mexico Water Planning Region and the traditions, cultures and customs affecting those uses.**

Pleasanton Eastside Ditch delivers surface flow diversions from the San Francisco River to 24 private water rights holders in the Pleasanton Valley of southern Catron County, New Mexico. Water diversions from the San Francisco River into agricultural fields of the Pleasanton Valley date to at least 1880. The Pleasanton Eastside Ditch Company (PEDCo) is the governing entity that represents water users along the ditch. PEDCo was formally incorporated in 1962 at the time the old dirt-banked Pleasanton Eastside Ditch was concrete lined. PEDCo assesses and collects user fees, sets user schedules, and maintains the ditch and diversion structures and adjacent easements. Some 280 acres of adjudicated water rights are linked to the Pleasanton Eastside Ditch. Individually held water rights of PEDCo members vary from 0.75 ac. to 100 ac. with priority dates in the 1885-1895 range. PEDCo members generally hold senior water rights relative to the priority dates of other water rights in the San Francisco Basin of New Mexico (Figure 6). Water from the Pleasanton Eastside Ditch is used to produce alfalfa hay and small truck-farm crops; to irrigate permanent pastures, private orchards, gardens and native plant nurseries; and to supply livestock water. This project will help to insure continued use of senior water rights for agriculture in Catron County. Further, by decreasing conveyance loss we increase our capacity to *meet the present and future water demands* of our members and conserving water extends the capacity of the basin to support natural ecosystems and/or other human water needs.

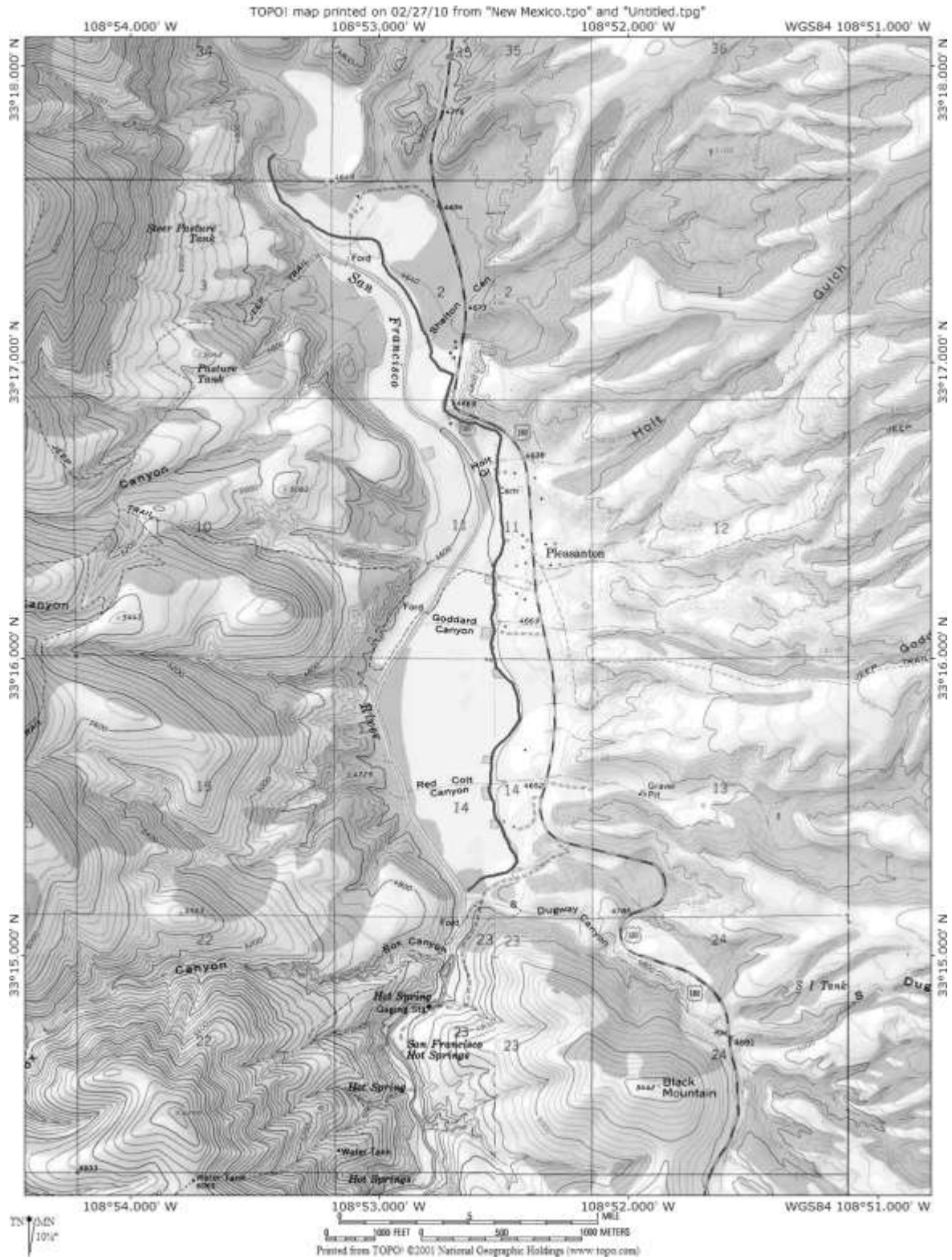
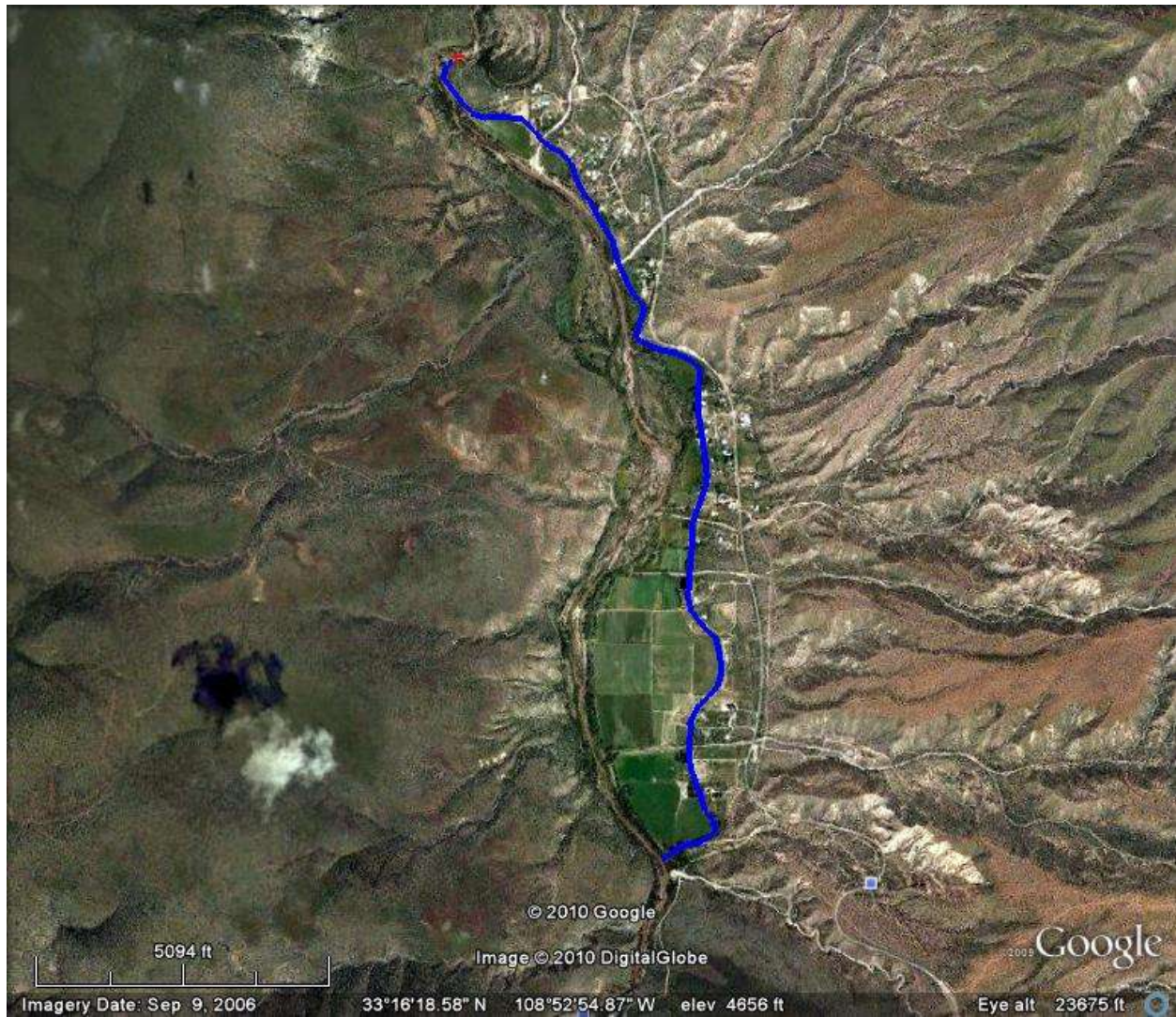


Figure 1. A topographic map of Pleasanton Valley with Pleasanton East-side Ditch indicated by the heavy black line in the center of map.





**Figure 2. Satellite picture of Pleasanton Valley with the course of Pleasanton East-side Ditch indicated. The diversion dam at the north end of the valley is indicated by a red mark.**



Figure 3. Typical reach of East-side Pleasanton Ditch showing 50 year-old degraded concrete lining which contributes to conveyance loss through leakage and seepage.





Figure 4. Bank lining of this section of East-side Pleasanton Ditch is completely degraded and contributes to conveyance loss through leakage and seepage.



Figure 5. Before and after photos of a degraded section of Pleasanton East-side Ditch that PEDCo recently repaired by inserting closed pipe. For reference, note the same tree appears upper left in both photos.



Table 1. A preliminary scoping of special status animal species extant, or historically present, in the Pleasanton Valley of the San Francisco River, New Mexico.\*

Species	Scientific Name	Status**			Notes
		Fed	NM	USFS	
<b>Fish</b>					
Gila Chub	<i>Gila intermedia</i>	E	E	S	Historically present, but current status in San Francisco River basin uncertain, possibly extirpated.
Roundtail Chub	<i>Gila robusta</i>		E		Historically present in the San Francisco River, but no records of occurrence since 1958.
Longfin Dace	<i>Agosia chrysogaster</i>			S	Populations apparently stable and present.
Loach Minnow	<i>Tiaroga cobitis</i>	T	E	S	Range reductions within the Gila River Basin, but it persists locally
Spikedace	<i>Meda fulgida</i>	T	E	S	Historically present, but extirpated from San Francisco River.
Gila Topminnow	<i>Poeciliops occidentalis occidentalis</i>	E	T		Historically present at the southern end of the Pleasanton Valley, extirpated in the 1950's.

Sonora Sucker	<i>Catostomus insignis</i>	SC	S	S	Present and apparently locally common.
Desert Sucker	<i>Catostomus clarki</i>	SC	S	S	Present and apparently locally common.
<b>Amphibians</b>					
Arizona Toad	<i>Bufo microscaphus microscaphus</i>		S	S	Present in riparian cottonwood/sycamore habitats.
Lowland Leopard Frog	<i>Rana yavapaiensis</i>	SC	E	S	Historical records from riparian habitats at the southern end of Pleasanton Valley. Current status??
Chiricahua Leopard Frog	<i>Rana chiricahuensis</i>	T	S	S	Populations greatly reduced over the past several decades. Status in Pleasanton Valley uncertain.
<b>Reptiles</b>					
Narrowhead Garter Snake	<i>Thamnophis rufipunctatus rufipunctatus</i>	SC	T	S	Resident in riparian habitats of San Francisco River Valley, especially the north and south ends of the valley where the walls close in and the stream substrate and banks become rockier.
<b>Birds</b>					
Bald Eagle	<i>Haliaeetus leucocephalus</i>	DM	T	S	Winter resident in riparian and adjacent uplands.

Common Black-Hawk	<i>Buteogallus anthracinus anthracinus</i>	SC	T	S	Summer resident (breeder) in riparian habitats of Pleasanton Valley.
Swainson's Hawk	<i>Buteo swainsoni</i>	C3		S	Summer presence in Pleasanton Valley, breeding status unknown
Peregrine Falcon	<i>Falco peregrinus anatum</i>	D	T	S	Forages in valley year round.
Green Heron	<i>Butorides virescens</i>			S	Records from a few km north at Glenwood State Fish Hatchery.
Belted Kingfisher	<i>Megaceryle alcyon</i>			S	Resident in Pleasanton Valley.
Elf Owl	<i>Micrathene whitneyi whitneyi</i>			S	Probable summer resident.
Mexican Spotted Owl	<i>Strix occidentalis lucida</i>	T	S	S	Resident in canyon habitats at southern boundary of the Pleasanton Valley.
Yellow-Billed Cuckoo	<i>Coccyzus americanus</i>	C	S	S	Summer resident in cottonwood/willow riparian woodlands.
SW Willow Flycatcher	<i>Empidonax traillii extimus</i>	E	E	S	There are historical records for the Willow Flycatcher in the Pleasanton Valley, but its current status here is unknown.
Bell's Vireo	<i>Vireo bellii</i>	SC	T	S	Occasional along lower San Francisco River in dense willow/seepwillow/mesquite.

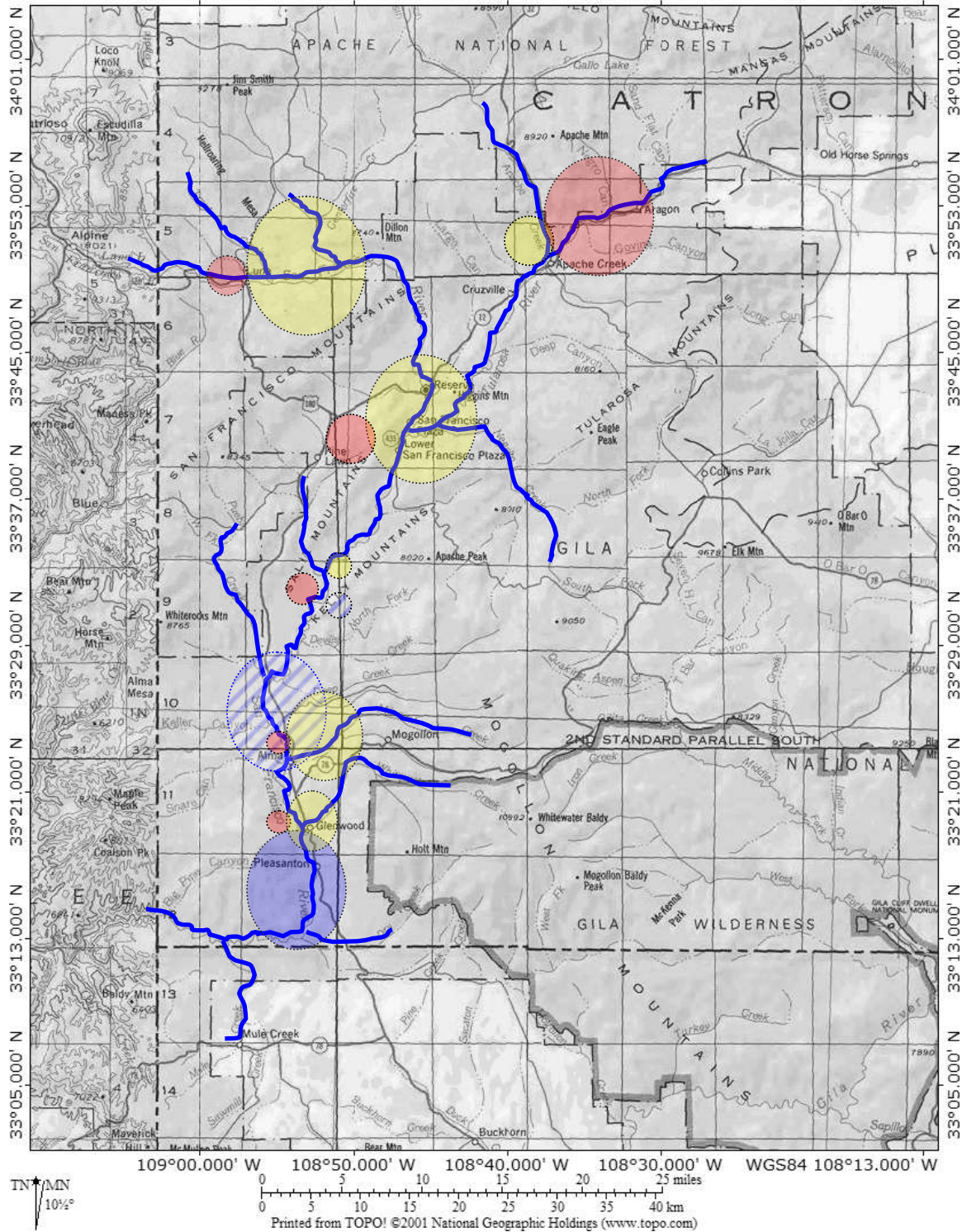


Mammals					
Allen's Big-eared Bat	<i>Idionycteris phyllotis</i>	SC	S	S	Records for most of these bat species come from nocturnal netting surveys at the pond of Glenwood State Fish Hatchery a few km north of Pleasanton.
Big Free-tailed Bat	<i>Nyctinomops macrotis</i>		S		
Little Brown Myotis	<i>Myotis lucifugus occultus</i>		S	S	
Cave Myotis	<i>M. velifer brevis</i>		S	S	
Fringed Myotis	<i>M. thysanodes</i>		S		
Long-eared Myotis	<i>M. evotis evotis</i>		S		
Long-legged Myotis	<i>M. volans interior</i>		S		
Small-footed Myotis	<i>M. ciliolabrum melanorhinus</i>		S		
Yuma Myotis	<i>M. yumanensis yumanensis</i>		S		
Townsend's Big-Eared Bat	<i>Corynorhinus townsendii pallescens</i>	SC	S	S	
Western Red Bat	<i>Lasiurus blossevillii</i>	SC	S	S	
Spotted Bat	<i>Euderma maculatum</i>		T	S	
Big-Eared Bat	<i>Idionycteris phyllotis</i>	SC	S	S	
Desert Shrew	<i>Notiosorex crawfordi</i>			S	Sycamore, cottonwood, & rabbitbrush riparian habitats.
Arizona Gray Squirrel	<i>Sciurus arizonensis arizonensis</i>			S	Resident in riparian cottonwood/willow/walnut/sycamore forest.

Botta's Pocket Gopher	<i>Thomomys bottae</i>			S	Adapted to a wide range of habitats, but especially found in sandy soils of valley riparian and agricultural habitats.
Western Spotted Skunk	<i>Spilogale gracilis</i>		S		Rocky/brushy riparian habitats.
Ringtail	<i>Bassariscus astutus arizonensis</i>		S	S	Resident in rocky slopes/cliffs bordering the river.
Rocky Mtn. Bighorn Sheep	<i>Ovis canadensis canadensis</i>			S	Found on rocky slopes and cliffs at the southern end of Pleasanton Valley.
Mexican Gray Wolf	<i>Canis lupus baileyi</i>	E	E	S	Extirpated by the mid-1900's. Reintroduced in 1998 as Nonessential Experimental Population.
<p>*Table reference: NM Dept. Game &amp; Fish BISON-M database: <a href="http://www.bison-m.org/">http://www.bison-m.org/</a></p> <p>** Status Key:</p> <p>Federal (E – endangered, T – threatened, C – candidate, SC- FWS species of concern, D- downlisted)</p> <p>NM (E-endangered, T- threatened, S-sensitive taxa (informal)</p> <p>USFS (S- sensitive species)</p>					







**Figure 6. Distribution and relative priority of surface water rights in the upper San Francisco River basin of New Mexico above the PEDCo diversion.<sup>5</sup> PEDCo members hold approximately 280 acres of surface water rights (solid blue circle) and 96% are priority 1885 or earlier. There are some 1,945 acres of surface rights above the PEDCo diversion. Of these, 24% are senior (red circles), 16% are equivalent (striped blue circles), and 60% are junior (yellow circle) rights relative to an 1885 priority.**

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## References

1. Fipps, Guy., 2000. Characterization of Conveyance Losses In Irrigation Distribution Networks In The Lower Rio Grande Valley of Texas. Final report to USDI Bureau of Reclamation Grant Agreement No. 98-FG-60-10\_0 , 22 p.
2. Contor, Bryce A. , 2004, Irrigation Conveyance Loss, Idaho Water Resources Research Institute Technical Report 04-008. 12 p.
3. Marsden Jacobs Associates, 2003, improving water-use efficiency in irrigation conveyance systems: a study of investment strategies. Pub: Land and Water Australia, 45 p.
4. Brown, David E. (Ed.), 1982. Biotic Communities of the American Southwest- United States and Mexico. Desert Plants Vol. 4, No. 1-4.
5. NM State Engineer, 1965. Hydrographic Survey Gila River System, San Francisco Basin Maps.