
**Water Acquisition and Management Subcommittee
Position Paper: Program Water Acquisition**

Introduction

Achievement of the goals of the Middle Rio Grande (MRG) ESA Collaborative Program (Program) and advancement of the conservation and recovery of endangered species along the MRG valley likely requires that both short- and long-term water supply be acquired through the Program. This water supply acquired to meet the needs of the Program will need to include:

1. A flow component that would provide water to support river flows and river habitat under the applicable BO requirements and related Program activities.
2. A consumptive component that would include evaporation and transpiration losses associated with Program activities within the MRG valley.

To date, the needs of the Program have been met through the short-term acquisition of water, primarily from leasing of San Juan-Chama water, and agreements with the State of New Mexico. The development of a longer-term water supply to meet the needs of the Program is a major goal of the WAM. Long-term or permanent acquisition of water to support both the flow and the consumptive requirements of the Program could include fee-simple acquisition of native Rio Grande water rights, acquisition of lands with appurtenant water rights, and/or long-term sublease of San-Juan Chama or other contracted water available from willing lessors. A long-term water supply could also be established through the implementation of a long-term, programmatic irrigation forbearance program with an annual target (in which, for instance, a number of irrigators agree to accept compensation in lieu of irrigating say once every five years, and this forbearance is rotated annually), if ongoing studies determine that such an approach is feasible. This position paper describes the short-term water acquisition strategy and activities that have been used thus far (through the 2003 season) to meet the goals of the Program, and also provides information and WAM conclusions related to the need for long-term acquisition of water to support the needs of the Program.

History of Short-Term Water Acquisition to Meet Program Needs

As noted above, since 1996, the needs of the Program have been met through the short-term acquisition of water, primarily from leasing of San Juan Chama water, and agreements with the State of New Mexico. A summary accounting of the supplemental water program since 1996 is presented in Attachment A. Table A1 presents the quantities of San Juan-Chama water that have been leased from willing sellers by the US Bureau of Reclamation (Bureau), using Bureau or Program funds. Table A2 summarizes the amount of water that has been *released* to meet the needs of the Program during that year, based on the Bureau's annual accounting reports of supplemental water to the Engineer Advisors (these reports began formally in 2001, previous years had less formal reporting). The majority of water released since 2000 for the Program purposes consists of Conservation Water Agreement water and Emergency Drought Water Management Agreement water made available by the State.

The Need for a Longer-Term Water Supply

As reported in the WAM Position Paper "New Mexico Rio Grande Compact Delivery Water," in an administrative sense, specified endangered species flow requirements impose a "new" use on the MRG water system. The storage of water during the winter and snowmelt runoff period (when natural evapotranspiration demand is fully satisfied) for later release during low-flow periods (when natural evapotranspiration demand is not met), results in additional evapotranspiration depletions on the system. Also, as discussed in more detail below, additional depletions will likely occur as a result of planned habitat improvements, such as increased evaporation from wider, shallower reaches of river channel, low-velocity side-channels, and overbank areas. These depletions are "new" because they are not previously accounted for in New Mexico's fully allocated water system. Therefore, these new depletions must be

offset through retirement of other existing uses. In New Mexico's water rights system, existing uses of are retired through purchase and subsequent non-exercise of their associated water rights or contracts.

The Program's Draft Habitat Restoration Plan indicates that most habitat restoration actions that are likely to produce significant direct benefits to the MRG listed species will be accompanied by some increases in total evaporation and/or transpiration, i.e., basin depletions, unless offset by additional water salvage or other conservation efforts. For example, potential restoration projects often include altering habitat conditions for the listed species by actions that increase water surface areas and/or slow overall downstream conveyance rates. Without additional actions to offset these water losses, increased basin depletions would result. The magnitude of these depletions would depend on the extent of hydrologic alteration produced by the Project.

The Program includes the objective that net MRG basin depletions associated with Program actions produce no net increase in depletions in the basin. Therefore, an objective of the Subcommittee is to encourage and support, to the extent possible, projects intending to offset depletions caused by habitat restoration efforts and actions to supplement river flows intending to benefit the Basin's listed species.

Also, the Subcommittee has established additional objectives to encourage and support, to the extent possible, projects intending to increase the understanding of factors affecting basin depletions (including irrigation efficiencies and riparian evapotranspiration rates) and those intending to decrease total depletions along the MRG basin (including actions that may be characterized as "water salvage projects"). Example projects would include those implemented to decrease total riparian evapotranspiration (e.g., replacing dense saltcedar growths with native grassland or mixed forest communities). Whenever increases in net depletions produced by habitat restoration or flow enhancement projects cannot be offset through these Program activities, the Subcommittee will work with the Program to secure the acquisition of water rights by the Program, through lease or purchase, to offset these increased depletions.

Long-Term Water Acquisition of Native Rio Grande Water Rights - Background

- Since 1846, when it was claimed as a territory of the United States, water has been considered a public resource in New Mexico. The NM Water Code of 1907 confirmed earlier laws, including the Constitution of the State of New Mexico in stating, "all natural waters flowing in streams and watercourses, whether such be perennial or torrential, within the limits of the state of New Mexico, belong to the public and are subject to appropriation for beneficial uses."
- The State Engineer is responsible for the general supervision of the state's water resources, including their measurement, appropriation, and distribution.
- New Mexico, like most western states, follows the doctrine of prior appropriation ("first in time, first in right") rather than riparian rights. That is, those who first use water beneficially have a higher priority to continue that use. These rights were codified by the New Mexico legislature in the 1907 for surface waters and in 1931 for groundwater basins.
- The MRG is not adjudicated. Therefore, the water rights in the valley have never been proven, quantified, or given priority dates. For this reason, the effective implementation of the prior appropriation system is not possible. In the absence of adjudication, the MRG Valley is not administered according to the doctrine of prior appropriation, but rather through shortage sharing – holders of senior and junior water rights all get less water during water-short years (except Pueblo Prior and Paramount rights).
- A March 27, 1998 Opinion from the New Mexico Attorney General (Belin 1998) concluded "that there is nothing in the New Mexico Constitution, statutes, or case law that would preclude the State Engineer from approving an application to change the purpose of use of an existing water

right to an instream purpose and conditioning that approval upon the installation of gauging devices to measure the instream flow beneficially used. However, since water distribution during water-short years follows the practice of shortage-sharing, river flows – even if they are supported by senior water rights – would have to share the shortage with irrigators using Junior water rights.

Note: A summary of concepts and definitions related to water rights in New Mexico is provided in Attachment B.

Administration of Water Rights in the Middle Rio Grande

According to personal communication with Jess Ward and Andrew Lieuwen of the Office of the State Engineer, Feb. 21, 2003, the only privately-held surface-water rights in the Middle Rio Grande Valley are pre-1907 rights. Many of these rights have not been proven at the Office of the State Engineer (OSE), since the OSE is only obligated to review applications to prove water rights in the event of a proposed sale or transfer of these rights. The OSE Water Rights Division is not obligated to validate water rights without an application for transfer of that water right. However, they can perform this validation with an application for a “temporary transfer” – which could be a lease. The OSE generally bases its decisions concerning the validity of a pre-1907 water right on the 1917 Irrigation and Drainage Survey. If the lands are irrigated in this survey, and there is no evidence of abandonment after that date, then the right is considered proven. If the lands were not irrigated in the 1917 survey, then proving of the water rights would require submission of other evidence of prior irrigation, such as a 1914 survey done in Bernalillo County, or records of irrigation on that particular piece of land. The 1917 survey showed irrigation of 48,800 acres. Water rights associated with lands shown as alkali in that survey would be denied validation, unless the candidate shows other evidence of previous irrigation.

Under the New Mexico Conservancy Act of 1923, conservancy districts such as the Middle Rio Grande Conservancy District (MRGCD) are also authorized to hold water rights. The MRGCD presently operates under two OSE permits, 0620 and 1690, which include up to 42,482 acres of “newly reclaimed lands”, which were designated to be made irrigable based on drainage and land improvements associated with the creation of the District. The MRGCD rather than private landholders would hold any rights perfected under these permits for these lands. Presently, irrigation may be performed under the permitted rights associated with these acreages through leasing of water from the MRGCD through the District’s Water Bank. However, it should be noted that the MRGCD’s water bank, although authorized by the Conservancy Act, has not yet been sanctioned by the OSE, and the reclamation and beneficial use of these 42,482 acres have yet to be perfected through the submission of a Proof of Beneficial Use by the MRGCD to the OSE.

Purchase and Administration of Senior Water Rights for In-Stream Flow

Based on discussions with Jess Ward and Andrew Lieuwen (personal communication, Feb. 21, 2003):

- The Program would only need to acquire water rights for its consumptive uses – not for the entire amount of water that it would like to be flowing down the river.
- If the Program acquires senior water rights, it should, according to OSE practice, receive for river flow for each acre of water rights purchased the 3.0 acre-feet per acre designated as the farm delivery requirement, with a right to consume 2.1 acre-feet per acre of that. The farm-delivery requirement of 3.0 acre-feet per acre is the amount of water transferred to a groundwater user who purchases a surface-water right. To date, it has not been the practice of the OSE to give diversion rights equal to the full amount that the MRGCD diverts for an acre to be irrigated, but they generally only transfer surface-water rights to groundwater rights, and in those cases the river diversion amount isn’t relevant. They also said that the OSE “allows the MRGCD to divert significantly higher than 3.0 acre-feet per acre, but it does not say that the MRGCD has a RIGHT

to this water. The percentage of diversion that can be offset by return flow varies from purpose to purpose. The allowed CIR of 2.1 acre-feet per acre is viewed as allowed river depletion.

- Under the present methods of administration, the management of water rights acquired by the Program to provide increased irrigation-season river flows would most easily be accomplished in the short run through the development of a cooperative agreement with the MRGCD for management of this water. This conserved water could potentially be stored in El Vado Reservoir in a designated pool, for release as the Program sees most beneficial for endangered species. The OSE would help administer such an agreement.

Other Water-Rights Acquisition Issues

- Without adjudication or other proof of water right, the Program needs to be very cautious in its potential use or purchase of water to ensure that the seller actually holds the rights to this water. Transfer of a water right to address short-term or long-term Program goals would require proof of cessation of the former beneficial uses for the water transferred to the program.
- In the past couple of years, all new permits (for transfer of water) require the use of the “best conservation technology”. It is not clear how this would apply to the Program.
- Lisa Robert (personal communication, Feb. 5, 2003) noted that any environmental water rights purchase program will have to be competitive with other consumptive use demands. Right now, there are only two options for water right owners: keep irrigating or sell to developers, and once a water right is transferred to development, it will never again be available for purchase or lease. Individuals might agree to temporarily lease all or a portion of their water rights for environmental uses if they were assured by the OSE that doing so would not jeopardize the rights.
- The current price of native Rio Grande water rights along the MRG is approximately \$5,000 per acre-foot.

San Juan Chama Project Information and Water Availability

Another possible method for long-term water acquisition for the program is the long-term sublease of San Juan Chama water. Since 1996, the Bureau of Reclamation or the Program has subleased San-Juan Chama water from contract-holders on an annual basis in order to supplement Rio Grande flows to support endangered species. The Program could also consider longer-term leasing arrangements (such as 10 or 20 years) with contractors.

The following description of the San Juan-Chama project is excerpted from the Middle Rio Grande Water Supply Study, prepared by S. S. Papadopoulos & Assoc. for the U.S. Army Corps of Engineers and the New Mexico Interstate Stream Commission, 2000:

Trans-mountain diversions of the San-Juan Chama Project were initiated in June 1971, to provide supplemental water supply to New Mexico entities contracting for this water. The US Bureau of Reclamation project, authorized by Public Law 87-483, diverts water from three tributaries of the San Juan River in Southwestern Colorado (the Navajo, Little Navajo, and Blanco rivers), and delivers it through a series of tunnels across the continental divide into northern New Mexico. Project deliveries are measured at the mouth of Azotea Tunnel, which discharges to Willow Creek, a tributary of the Rio Chama. Project water is stored in Heron Reservoir on Willow Creek, just above its confluence with the Chama. The total San Juan-Chama allocation, measured as released from Heron Reservoir, is 96,200 acre-feet per year, ...[all of which is presently contracted except for 2,990 acre-feet which has been reserved for the settlement of Indian water rights in the Taos area]. Included in this amount is 70,400 acre-feet per year contracted to entities within the Middle Rio Grande region, 5,605 acre-feet per year

contracted to the city [and County] of Santa Fe and 5,000 acre-feet per year to maintain the recreation pool at Cochiti Lake, for a total contracted quantity for use between Otowi gage and Elephant Butte of 81,005 acre-feet per year. San Juan -Chama water delivered for use in the Middle Rio Grande regions is assessed a 2% conveyance loss between Heron Reservoir and Otowi gage, as approved by the Rio Grande Compact Commission in 1979.

The existing contracts for San Juan-Chama water, including the amount of water contracted and the expiration date of the contract, if applicable, are summarized in Attachment C to this document.

As long as the operation and maintenance of the San Juan-Chama Project complies with the Upper Colorado Basin Compact, the Rio Grande Compact, and there is water to transfer from the Upper Colorado Basin to the Rio Grande Basin, the USBR is under contract to deliver that water to contractors. However, some discretion on the delivery of that water has been clarified by recent court decisions (Judge Parker, September 2002, 10th Circuit Court of Appeals, April 2003). These decisions are currently on appeal.

Conclusion and Recommendations

1. Since 1996, the Bureau of Reclamation or the Program has subleased San-Juan Chama water from contract-holders on an annual basis in order to supplement Rio Grande flows to support endangered species. This program of short-term leasing will need to be continued until longer-term strategies are implemented. The Bureau has also acquired short-term water from the state of New Mexico, and the present agreement with the state will provide supplemental water through 2005. However, there is no indication that water will be available in the future through such agreements.
2. The Program will likely need to acquire a long-term water supply to offset the depletions associated with habitat improvements (such as increased evaporation from wider, shallower reaches of river channel, low-velocity side-channels, and overbank areas) and with increased in-stream flows during the warmer summer months, to the extent that these increases in depletions cannot be offset through Program water salvage projects. These depletions are considered “new” uses on the MRG water system, and so must be offset through the retirement of existing uses through the purchase of water rights or water contracts.
3. The Program should initiate long-term or permanent acquisition of water to support the goals of the Program, through some combination of acquisition of native Rio Grande water rights or lands with appurtenant water rights, long-term sublease of San-Juan Chama water or other water available by contract with willing lessors, or implementation of a long-term, programmatic irrigation forbearance program with an annual target (in which, for instance, a number of irrigators agree to accept compensation in lieu of irrigating say once every five years, and this forbearance is rotated annually), if ongoing studies determine that such an approach is feasible.
4. The amount of water that the program will be required to purchase to assure in-stream flows and near-stream habitats for the long-term conservation and recovery of the Rio Grande silvery minnow and the southwestern willow flycatcher will ultimately depend upon the success of the habitat restoration efforts, water salvage projects, voluntary irrigation forbearance programs, and water management efficiency improvements supported by the Program. The Program Management Subcommittee has determined that a comprehensive evaluation of the additional depletions associated with Program activities will need to be performed. The Depletions Subcommittee of the program is preparing a white paper on the state-of-knowledge related to the determination of depletions associated with activities or conditions on the river.

5. When the Program leases, buys, or otherwise acquires water for use to benefit Program goals, assurance must be obtained that the willing seller actually owns the water right being transferred and that the seller actually ends consumptive use of this water when he sells its associated right.
6. Administration of the dedication of water rights purchased by the program to in-stream flows and near-stream habitats will likely require, at least in the short-term, a cooperative agreement with the MRGCD.
7. In order to effectively manage the acquired water, it will be necessary for the Program, or one of its signatories, to secure the right to store and manage the acquired water in one or more upstream reservoirs.

Bibliography:

- Belin, A. 1998. Does New Mexico law (constitutional, statutory, or case law) permit the State Engineer to afford legal protection to instream flows for recreational, fish or wildlife, or ecological purposes? Opinion No. 98-01, NM Attorney General Office, Santa Fe, NM.
- Harris, L.G., L. Blair, and C.T. Ortega Klett. 2002. New Mexico Water Rights. WRRRI Miscellaneous Report No. 15, New Mexico Water Resources Research Institute, Las Cruces, NM.
- NM Office of the State Engineer. 1999. Water Rights Adjudication. Water Information, Office of the State Engineer, Santa Fe, NM. www.seo.state.nm.us/water-info/legal/adjud-process.html
- Lisa Robert, Editor of WaterMark, by the Ratepayers Assn. (within the MRGCD), Personal Communication, Feb. 5, 2003).
- Jess Ward and Andrew Lieuwen, New Mexico Office of the State Engineer, Water Rights Allocation Program (WRAP), District 1 (Albuquerque), Non-Contested Applications Unit, Personal Communication, February 21, 2003.

Attachment A: Summary of Short-Term Water Acquisition

Table A1: Summary of Rio Grande Supplemental Water Leasing Program: Leased San-Juan Chama Contract Water (acre-feet)

CONTRACTOR	1996	1997	1998	1999	2000	2001	2002	2003	<i>Notes*</i>	Total
Albuquerque	30,000	30,000	30,000	30,000	64,500		40,000			224,500
Belen				500		400	460	300		1,660
Bernalillo						400	300			700
Espanola			2,000	2,000	2,000		1,687	731	P	8,418
Jicarilla Apache				6,500	6,500	6,500	6,500	6,500		32,500
Los Alamos			3,650	3,600	5,000	1,200	1,529	1,200		16,179
Los Lunas			500	500	300	200	500	100		2,100
MRGCD					20,900			3,132	D	24,032
San Juan Pueblo							2,000	2,000		4,000
Santa Fe			10,000	10,000	10,000			2,500		32,500
Red River				60	60	60	60	60		300
Taos				400	400	400	937	419		2,556
Taos Ski Valley (Twining)				45	50		50			145
Uncontracted				4,990	4,990	4,990	2,990	2,990		20,950
TOTAL AF	30,000	30,000	46,150	58,595	114,700	14,150	57,013	19,932		370,540

ANNUAL AVERAGE	46,318
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*Notes: P -Pending D – Donated

Attachment A: Summary of Short-Term Water Acquisition

Table A2: Summary of Rio Grande Supplemental Water Released since 1996 (acre-feet)

Year	1996	1997	1998	1999	2000	2001	2002	Total	Annual Average
Leased San Juan-Chama Water	47,547	14,418	47,033	19,485	159,922	-	48,338	336,743	48,106
MRG ESA Conservation Pool						25,624	25,851	51,475	7,354
Miscellaneous					46,347	7,200		53,547	7,650
Annual Total	47,547	14,418	47,033	19,485	206,269	32,824	74,189	441,765	63,109

Attachment B
Water Rights Concepts and Definitions

- **Water Right:** a legal right to use, generally as proven through a diversion from a main water body and subsequent beneficial use for the diverted water. The right relates a specific quantity of water for a specified beneficial use or uses.
- **Beneficial Use:** This concept is not specifically defined in New Mexico water law. Generally, all uses including agricultural, commercial, industrial, and recreational are considered beneficial, excluding the willful waste of water. A March 27, 1998 Opinion from the New Mexico Attorney General (Belin 1998) concluded that in-stream flow can be considered a beneficial use (see Other Water Acquisition Issues).
- **Appropriation:** water set aside and put to beneficial use, associated with the date on which water was put to the beneficial use.
- **Waste:** any water diverted by man that is not put to beneficial use; NM law classifies the “willful waste of surface or groundwater to the detriment of another or the public” as a misdemeanor.
- **Prior Appropriation:** doctrine that enables the first person who diverts water and puts it to beneficial to become the highest-priority water-rights holder. Rights are determined by the date of initiation of the right: first users take precedence over users who come later – “first in time, first in right.”
- **Prior and Paramount Water Right:** The most Senior Water Rights in New Mexico, held by Native American Pueblos. A Prior and Paramount water right is defined as the right (a pueblo water right) that any pueblo “municipality,” with its origins tracing to a Spanish or Mexican pueblo grant, has to all water of non-navigable streams flowing through or by the pueblo to the extent necessary to serve its future growth (until the Pueblo Lands Act of 1924). Prior and Paramount water rights have also been granted to Middle Rio Grande Pueblos of Middle Rio Grande native water, even though the MRG is considered a navigable waterway.
- **Senior Water Right:** A (non-Pueblo) water right that has a higher priority than a Junior water right. In New Mexico, Senior Surface Water Rights are those initiated prior to 1907, the date of promulgation of the New Mexico Surface Water Code. These rights are considered Senior, and Vested (see below).
- **Vested Water Right:** Rights established before the 1907 Surface Water Code, or a groundwater right established prior to the state engineer’s declaration of an underground water basin. Vested water rights are transferable without restrictions.
- **Conditioned Water Right:** a water right granted under a condition that would prevent the right from adversely affecting flow of a stream or another water right.
- **Apportionment:** the diversion and distribution of water according to a plan.
- **Fully Appropriated:** the condition in which all available water has been reserved for existing water rights.
- **Adjudication:** a formal court proceeding that results in the determination of the validity and extent of water rights associated with an area. This involves two processes: (1) a hydrographic survey to identify, map, and report the ownership of water right within a particular stream system or groundwater basin; and (2) a legal proceeding through which the court orders how much water each user has right to divert and use for a specific beneficial purpose.
- **Consumptive irrigation requirement (CIR):** the amount of water that plants need over the entire growing season for transpiration and for building plant tissue, plus evaporation from the soil surface.
- **Depletion:** the amount of water consumptively used and therefore not returned to a surface or groundwater system.
- **Return flow:** water diverted for a use that finds its way back to its source of supply.

Attachment C
San Juan Chama Contract Holders

The USBR is under contract as part of the San Juan Chama Project to deliver project water to the following contractors:

Municipal, domestic, and industrial purposes

(date of contract initiation and expiration appear parenthetically):

City of Albuquerque (1963 – no expiration): 48,200 acre-feet
Jicarilla Apache (1992 – no expiration): 16,500 acre-feet
City of Santa Fe and Santa Fe County (1976 – Dec. 31, 2016): 5,605 acre-feet
County of Los Alamos (1977 – Jan. 10, 2017): 1,200 acre-feet
City of Española (1978 – Dec. 31, 2018): 1,000 acre-feet
Town of Belen (1990 – no expiration): 500 acre-feet
Village of Los Lunas (1977 – Dec. 31, 2017): 400 acre-feet
Town of Taos (1981 – Dec. 31, 2021): 400 acre-feet
Town of Bernalillo (1988 – no expiration): 400 acre-feet
Town of Red River (1990 – no expiration): 60 acre-feet
Village of Taos Ski Valley (1978 – Dec. 31, 2017): 15 acre-feet
San Juan Pueblo (2001 – no expiration): 2,000 acre-feet

Irrigation:

Middle Rio Grande Cons. District (1963 – no expiration): 20,900 acre-feet
Pojoaque Valley Irrigation District (1972 – no expiration): 1,030 acre-feet

Recreation:

Corps - Cochiti Rec. Pool (1964 – no expiration): Up to 5,000 acre-feet

Allocated, but uncontracted

(water currently identified for future Indian water rights settlements and or use):
Taos Area 2,990 acre-feet

Total Allocation: 96,200 acre-feet

Source: Programmatic Biological Assessment of Bureau of Reclamation's Water and River Maintenance Operations, Army Corps of Engineers' Flood Control Operation, and Non-Federal Actions on the Middle Rio Grande, New Mexico; March 1, 2003 – February 28, 2013, Partially incorporating the 2001 Biological Assessment Submitted to the U. S. Fish and Wildlife Service Rio Grande Silvery Minnow, Southwestern Willow Flycatcher, Bald Eagle, Interior Least Tern; February 19, 2003