

IMPLEMENTATION  
OF  
THE ARIZONA WATER SETTLEMENTS  
ACT  
IN  
NEW MEXICO

AN OVERVIEW  
OF  
LEGAL CONSIDERATIONS

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FOR  
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## EXECUTIVE SUMMARY<sup>i</sup>

The Arizona Water Settlements Act of 2004 (“AWSA”) promotes water development in southwestern New Mexico by providing (1) money to fund water project(s) and (2) the option to divert more water from the Gila River system as part of an exchange with the Central Arizona Project.

Funds made available through the AWSA may be used to meet *water supply demands* in the Southwest Planning Region of New Mexico (Catron, Luna, Hidalgo and Grant counties) either through the construction of a New Mexico Unit of the Central Arizona Project to increase diversion capacity, or through non-diversion water projects. New Mexico shall receive a guaranteed \$6.6 million a year for ten years, beginning in 2012 that can be used for any water project that meets a water supply demand.<sup>ii</sup> New Mexico may also receive an additional \$34 to \$62 million if it chooses to construct a New Mexico Unit of the Central Arizona Project.

Any cost associated with construction of new diversion, storage or delivery works that exceeds the \$100-128 million potentially available for the New Mexico Unit will be the responsibility of New Mexico. The State Engineer estimated in 2003 that construction of a New Mexico Unit will cost \$220 million and acknowledged a Bureau of Reclamation estimate of \$300 million. The recently completed Animas-La Plata diversion and reservoir cost \$500 million (48% above its original estimate). New Mexico will be responsible for all future operations, maintenance and betterment costs associated with the New Mexico Unit.

The AWSA authorizes the Secretary of the Interior to deliver up to an additional 14,000 acre-feet per year from the Gila system in New Mexico (either surface or groundwater) to meet water supply demands in Catron, Luna, Hidalgo and Grant counties. To receive additional water from the Gila system, New Mexico must replace any new water it takes from the Gila River system by paying the Central Arizona Project to assure delivery of an equal amount of exchange water to downstream users of the Gila River.

Access to CAP water needed for exchange is neither guaranteed nor cheap. The Central Arizona Project anticipates that Colorado River water shortages may begin as soon as 2016 and that high-priority customers like municipalities may experience shortages as soon as the mid 2020’s. The 2011 cost for Central Arizona Project water is \$122 per acre-foot. Costs are projected to increase 3.5% per year. By the time a new diversion could be built, the exchange cost may be well over \$2 million per year. In addition, a new diversion in New Mexico will be subordinate to all Arizona water uses with a priority date prior to September 30, 1968.

The Gila River system is considered the most biologically diverse area of New Mexico, rife with species of concern. It is the heart of our nation’s first protected Wilderness Area. Developing more water from the Gila system will place considerable fiscal and environmental responsibilities on New Mexico and give the federal government significantly more control over the Gila system. A new diversion from the Gila system

will transform the Gila from a locally operated and managed system into a subdivision of a huge federal water development project, the Central Arizona Project. This will undoubtedly require an ongoing Endangered Species Act compliance program, like the Middle Rio Grande Collaborative Program, which has required \$12.7 million in non-federal contributions since 2001.

A federal diversion project on the Gila in New Mexico is not a new idea; three attempts have been made in the past, all of which failed. Although a federal subsidy is available under the AWSA to partially offset the costs of constructing a New Mexico Unit, there remains a number of potential barriers to the likelihood of building a New Mexico Unit, such as impacts of shortage sharing on the Colorado River, climate change impacts on Gila flows, and New Mexico's ability to fully fund construction of a New Mexico Unit given the current economic crisis, among others.

The \$66 million that New Mexico is guaranteed under the AWSA may be used to pay costs associated with building a New Mexico Unit of the Central Arizona Project **or** it may be used for “**other water utilization alternatives to meet water supply demands in the Southwest Planning Region.**” Southwest New Mexico stakeholders have developed a wide array of high priority water utilization projects, including more than 50 proposals for non-diversion water utilization projects that are likely to be much more cost effective for meeting water supply demands in the region.

The AWSA provides New Mexico with options for meeting water supply needs in southwestern New Mexico either through funding for non-diversion water projects or through funding of a Gila River development project. The lack of any significant demand for new water supplies; the immense cost and complexity of joining the Central Arizona Project through development of a New Mexico Unit; the inability of any party to develop a feasible project design at this late date; the environmental constraints; and the potential water users' lack of repayment capability all indicate that utilizing the \$66 million to support local water projects throughout the region is a much more sensible option for New Mexico to pursue.

## THE ARIZONA WATER SETTLEMENTS ACT<sup>iii</sup>

In 1968 the Secretary of the Interior was authorized by the Colorado River Project Act to provide New Mexico with additional water from the Gila system, but only if the Secretary can assure that main-stem Gila River water users in Arizona suffer no economic injury or cost.<sup>iv</sup> The Arizona Water Settlement Act of 2004 (“AWSA”) created the formal mechanisms by which the Secretary may exercise the authority to deliver additional water to New Mexico. The parties to the settlement<sup>v</sup> agreed that New Mexico *may* take up to 14,000 acre-feet of water more than it currently can from the Gila and San Francisco Rivers, but only if New Mexico does not impair downstream water rights. New Mexico must do this by providing the downstream users of the Gila River with sufficient quantities of water through the Central Arizona Project to offset any additional water diverted in New Mexico as specified in an “Exchange Agreement.”

The complex and detailed constraints under which additional water can be diverted in New Mexico are specified in a technical agreement called the New Mexico Consumptive Use and Forbearance Agreement (“CUFA”). The CUFA sets forth rules under which the Secretary of the Interior may divert up to 14,000 acre-feet of either surface or groundwater from the Gila River system for beneficial use in New Mexico.<sup>vi</sup>

These new water operations will make the Gila River system in New Mexico part of the federal Central Arizona Project. Any additional diversions from the Gila will be made through a “New Mexico Unit” of the Central Arizona Project.

The AWSA also provides a federal subsidy of \$66 million (in 2004 dollars) to New Mexico to fund projects that meet water supply demands in the region. This funding will be transferred to the State in ten annual installments of \$6.6 million beginning in 2012.<sup>vii</sup> The Interstate Stream Commission (“ISC”) will determine how these funds are utilized with input from southwestern New Mexico.<sup>viii</sup> These funds can be expended on a New Mexico Unit or on any water utilization project that meets a water supply demand in southwestern New Mexico.

If New Mexico decides to take additional water from the Gila or San Francisco Rivers under this agreement, the AWSA authorizes an additional federal subsidy of \$34 to \$62 million to fund the capital costs of using that water.

As any new diversions from the Gila system will occur as part of a federal water project, the Secretary must comply with all applicable environmental laws and regulations, including the Endangered Species Act.<sup>ix</sup> The U.S. Bureau of Reclamation shall be the lead agency for environmental compliance and New Mexico may ask to be a joint lead agency.<sup>x</sup>

## OPERATIONAL REQUIREMENTS

The New Mexico Unit of the Central Arizona Project may only divert additional water in New Mexico within the following operational limitations:

- The new diversions will be subordinate to all water delivery contracts existing between the Secretary and Arizona as of 1968.<sup>xi</sup>
- The new diversions are subordinate to all existing New Mexico and Arizona water rights with priority dates earlier than September 30, 1968.<sup>xii</sup>
- The Secretary may not divert water for New Mexico unless 30,000 acre-feet is in storage in San Carlos Reservoir for use under the Globe Equity Decree.<sup>xiii</sup>
- New diversions from the Gila system may not be made available for irrigation of lands that do not have a recent history of irrigation, except for wildlife refuges and management areas, or as specially approved by the Secretary.<sup>xiv</sup>
- Any new diversions must have measures approved by the Secretary to control the expansion of irrigation from aquifers affected by irrigation in the service area.<sup>xv</sup>
- The distribution systems through which any new diversions run must be maintained with liners adequate to prevent excessive conveyance losses.<sup>xvi</sup>
- No more than 140,000 acre-feet may be consumed from the Gila and San Francisco Rivers in any ten year period. No more than 4,000 acre-feet may be consumed from the San Francisco River in any single year.<sup>xvii</sup>
- In no single year may New Mexico consume more than 64,000 acre-feet of additional water from the Gila and San Francisco Rivers.<sup>xviii</sup>
- Combined diversions from the Gila and San Francisco Rivers may not exceed 350 cubic feet per second at any time.<sup>xix</sup>
- Much greater detail regarding when and how the Secretary may deliver water to New Mexico is contained in the CUFA.

In addition to working within the operational limitations above, New Mexico must also protect downstream users on the Gila and San Francisco from impairment caused by additional New Mexico diversions. To protect Arizona water users, New Mexico and the Secretary must satisfy certain financial conditions before the Secretary may deliver any additional water.

## FINANCIAL REQUIREMENTS

### 1. PRE-BANKED OFFSET WATER

The Secretary may not divert water for New Mexico unless an equal amount of water has been “pre-banked” by New Mexico in the Central Arizona Project to assure that Arizona water users will not be injured by the additional depletions in New Mexico.<sup>xx</sup>

The supply for offset water is not guaranteed. The Central Arizona Project anticipates that Colorado River water shortages may begin as soon as 2016 and that

high-priority customers like municipalities may experience shortages as soon as the mid 2020's.<sup>xxi</sup> If no Central Arizona Project water is available for New Mexico to pre-bank, the Secretary cannot divert water from the Gila for the New Mexico Unit.

## 2. EXCHANGE COST

New Mexico must pay for Central Arizona Project water credits sufficient to offset every additional acre-foot diverted from the Gila system in New Mexico. New Mexico may not have more than 70,000 acre-feet of offset water pre-banked at any time.<sup>xxii</sup> Moreover, the Secretary may not deliver more than 18,000 acre-feet of offset water in any one year.<sup>xxiii</sup>

The cost New Mexico will have to pay to deliver an acre-foot of Central Arizona Project water will increase every year. Here are the prices for the last two years with the advisory prices for the next five years.<sup>xxiv</sup> The CAP advisory prices are projected to rise 3.5% on average between 2012 and 2016.

<u>COST PER ACRE FOOT FOR AWSA GILA WATER</u>						
2010	2011	2012	2013	2014	2015	2016
\$118	\$122	\$122	\$126	\$129	\$137	\$141

## 3. FEDERAL COST-BENEFIT ANALYSIS

The Secretary must demonstrate that the construction of a New Mexico project to deliver an annual safe yield of more than 10,000 acre-feet will not cost more per acre foot diverted than a project sized to produce an annual average safe yield of 10,000 acre-feet per year.<sup>xxv</sup>

Federal fiscal planning tools that the Bureau of Reclamation may use include:

- National Economic Development Benefit-Cost Analysis to determine national effects;
- Regional Economic Development Impact Analysis to determine impacts on the local economy (jobs and incomes);
- Cost effectiveness analysis to rank alternatives;
- Fiscal impact analysis to determine the impacts on the government sector; and
- Financial analysis of users' ability to pay project costs and the project's financial sustainability.

## ENVIRONMENTAL REQUIREMENTS

The Secretary must issue a Record of Decision approving the new diversions based on an environmental analysis done pursuant to federal laws no later than the end of 2019.<sup>xxvi</sup> This deadline may be extended by the Secretary, but no further than to the end of 2030.<sup>xxvii</sup>

The AWSA is explicit that the Secretary must comply with the Endangered Species Act, the National Environmental Policy Act and all other applicable environmental laws and regulations when implementing the CUFA.<sup>xxviii</sup>

The AWSA and CUFA make it clear that the Secretary is responsible for the delivery of water to the New Mexico Unit.<sup>xxix</sup> Therefore the delivery of additional Gila water will be subject to the Endangered Species Act, like federal water deliveries are on the San Juan, Middle Rio Grande and Pecos.

The Gila River supports some of the most biologically diverse ecosystems in New Mexico. In addition to the currently listed threatened and endangered species, many other species of concern rely on the Gila River for their habitat. Long-term compliance with the Endangered Species Act will very likely require the creation of an ongoing effort like the San Juan Endangered Fish Recovery Implementation Program or the Middle Rio Grande Collaborative Program. The non-federal contribution for the Middle Rio Grande Collaborative program has been \$12.7 million since 2001.<sup>xxx</sup> Non-federal cost-share for the San Juan Endangered Fish Recovery Program between 2000 and 2007 was \$2 million per year.<sup>xxxi</sup>

The AWSA is also clear that the Secretary holds the authority and responsibility to design, build, operate and maintain a New Mexico Unit.<sup>xxxii</sup> The Secretary may transfer the responsibility for any of these activities to New Mexico,<sup>xxxiii</sup> however, the Bureau of Reclamation shall remain the lead agency for environmental compliance.<sup>xxxiv</sup>

## NEW MEXICO UNIT PROJECT COSTS

There is a maximum of \$128 million available in federal subsidies to construct a New Mexico Unit of the Central Arizona Project. These funds will be adjusted to reflect changes since 2004 in the construction cost indices<sup>xxxv</sup> applicable to the types of construction involved in building a New Mexico Unit.<sup>xxxvi</sup> Any capital costs beyond these federal subsidies and all operation and maintenance costs will be borne by New Mexico.

Currently, there are no detailed project proposals or engineering designs for a New Mexico Unit of the Central Arizona Project. This makes it impossible to estimate a total project construction cost and likewise, makes it difficult to project long-term operations and maintenance costs.

The State Engineer's estimate to build a New Mexico Unit is \$92 million more than the available federal subsidies to build a new Gila diversion. In 2003 John D'Antonio testified before a joint hearing of the Subcommittee on Water and Power of the Committee on Energy and Natural Resources and the Committee on Indian Affairs.<sup>xxxvii</sup> He provided an estimate of \$220 million for construction of a New Mexico Unit. He also acknowledged that the Bureau of Reclamation has estimated the cost to be as much as

\$300 million (adjusted for inflation), which would require New Mexico to finance at least \$172 million (approximately 60%) of the project with State funds.<sup>xxxviii</sup>

It is important to note that federal water projects are often subject to the same time and cost overruns associated with large construction efforts. For example, cost estimates for completion of the Animas-La Plata Project in southern Colorado went from \$337.9 million in 1999 to \$500 million in 2003,<sup>xxxix</sup> a 48% cost overrun.

## BARRIERS TO LIKELIHOOD OF CONSTRUCTING A NEW MEXICO UNIT

A federal diversion project on the Gila in New Mexico is not a new idea; three attempts have been made in the past.<sup>xi</sup> In 1964 the Bureau of Reclamation and the State of New Mexico considered building the Hooker Dam, which failed due to pressure from the burgeoning conservation movement and proposed flooding of a portion of the Gila Wilderness. Several years later the project was revived as the Conner Dam proposal in the Middle Box Canyon, endangered species concerns killed this proposal. Another diversion was later proposed on Mangas Creek. Although this proposal did not have endangered species concerns at that time, it failed because Silver City was unwilling to take on the repayment schedule of the project. It is important to note that federally listed fish have since been found in Mangus Creek.

Although a federal subsidy is available under the AWSA to partially offset the costs of construction of a New Mexico Unit, a critical obstacle to developing the Gila in previous attempts, there remain a number of potential barriers to the likelihood of building a New Mexico Unit:

- Given that the Colorado River is over appropriated and shortages may occur as early as 2016, it is unclear if and how frequently exchange water will be available for New Mexico to be able to divert water from the Gila River;
- The impacts of climate change on Gila River flows are unknown. Given that New Mexico must comply with the operational requirements of the CUFA, long-term drought could significantly impact New Mexico's ability to divert.
- The state and federal economic crises call into question the ability to fund the remaining 60% of the capital costs of a New Mexico Unit.
- Long-term projections of rising energy prices will increase the exchange costs and operations and maintenance costs of a New Mexico Unit.
- New National Objectives, Principles and Standards for Water and Related Resources Implementation Studies<sup>xli</sup> will change how federal agencies conduct water resource planning. The guidelines direct federal water planners to:
  - (1) Consider the environment and non-monetary benefits in addition to economics;
  - (2) Protect and restore natural ecosystems and the environment while encouraging sustainable economic development;
  - (3) Avoid adverse impacts to natural ecosystems wherever possible and fully mitigating any unavoidable impacts; and

(4) Avoid the unwise use of flood plains, flood-prone areas and other ecologically valuable areas.

## WATER UTILIZATION ALTERNATIVES

The \$66 million federal subsidy that New Mexico is guaranteed under the AWSA may be used to pay costs associated with building a New Mexico Unit of the Central Arizona Project or it may be used for “**other water utilization alternatives to meet water supply demands in the Southwest Planning Region.**”<sup>xlii</sup> The term “water supply demand” is not defined in the AWSA and therefore may be assumed to refer to any legal use of water in New Mexico.

New Mexico may choose to forgo tying the Gila River system to the Central Arizona Project and decline the additional federal subsidy to build a New Mexico Unit. New Mexico must then determine how it will use the guaranteed \$66 million federal subsidy to meet water supply demands in the Catron, Grant, Hidalgo and Luna Counties.

### WATER UTILIZATION PROJECT PROPOSALS<sup>xliii</sup>

Although some have voiced support for building a New Mexico Unit, a new diversion project that is feasible, cost-efficient and supported by the local community has not been identified or proposed by any party.

However, as many as 50 priority projects, such as developing a regional water system for Silver City and the “mining district,” have been proposed by local communities and stakeholders to meet water supply demands in the most cost effective way without requiring a new federal water project. Other preliminary water utilization alternative proposals include water conservation projects, infrastructure projects, and watershed restoration.

### CONCLUSION

The Arizona Water Settlements Act provides New Mexico with options for meeting water supply needs in southwestern New Mexico either through funding for non-diversion water projects or through funding of a Gila River water development project. The lack of any significant demand for new water supplies; the immense cost and complexity of joining the Central Arizona Project through development of a New Mexico Unit; the inability of any party to develop a feasible project design at this late date; the environmental constraints; and the potential water users’ lack of repayment capability all indicate that utilizing the \$66 million to support local water projects throughout the region is a much more sensible option for New Mexico to pursue.

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<sup>i</sup> Citations for information provided in the Executive Summary may be found at the end of this report.

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- <sup>ii</sup> The \$6.6 million is in 2004 dollars, to be adjusted according to a construction cost index. The Bureau of Reclamation has budgeted \$9.04 million for transfer to New Mexico in 2012. *See* [www.usbr.gov/budget/2012budget.pdf](http://www.usbr.gov/budget/2012budget.pdf).
- <sup>iii</sup> <http://www.gpo.gov/fdsys/pkg/PLAW-108publ451/pdf/PLAW-108publ451.pdf>
- <sup>iv</sup> Colorado Basin Project Act of 1968, §§304(d) & (f).
- <sup>v</sup> For a complete list of parties to the AWSA NEW MEXICO CONSUMPTIVE USE AND FORBEARANCE EXCHANGE AGREEMENT *see* <http://www.ose.state.nm.us/PDF/ISC/BasinsPrograms/GilaSanFrancisco/Final-CUFA-Oct27-2005.pdf>.
- <sup>vi</sup> AWSA at §212(c)(4).
- <sup>vii</sup> The New Mexico Unit Fund was established by the New Mexico State Legislature through HB301 “Creation of the New Mexico Unit Fund” and signed into law by Governor Susana Martinez on
- <sup>viii</sup> Section 212(i) of AWSA states:
- <sup>ix</sup> AWSA §212(h).
- <sup>x</sup> *Id.*
- <sup>xi</sup> *Id* at §304(c)(3).
- <sup>xii</sup> *Id* at §304(f)(3).
- <sup>xiii</sup> CUFA §4.5
- <sup>xiv</sup> Colorado River Basin Project Act of 1968, P.L. 90-537, §304(a).
- <sup>xv</sup> *Id* at §304(c)(1).
- <sup>xvi</sup> *Id* at §304(c)(2).
- <sup>xvii</sup> CUFA §4.4
- <sup>xviii</sup> CUFA §4.6
- <sup>xix</sup> CUFA §4.11
- <sup>xx</sup> CUFA §4.6.2.
- <sup>xxi</sup> Central Arizona Project, Press Release June 22, 2010; Central Arizona Project, Press Release April 5, 2011.
- <sup>xxii</sup> CUFA §6.3.
- <sup>xxiii</sup> CUFA §5.2.
- <sup>xxiv</sup> Central Arizona Project Final 2011/2012 Price Schedule, Delivery Rates for Federal Water, <http://www.cap-az.com/Portals/1/Skins/cap/files/Final-2011-2012-Rate-Schedule-6-3-2010.pdf>
- <sup>xxv</sup> AWSA §212(j)(2)
- <sup>xxvi</sup> *Id.*
- <sup>xxvii</sup> *Id.*
- <sup>xxviii</sup> AWSA §212(h).
- <sup>xxix</sup> AWSA §212(c)(3).
- <sup>xxx</sup> <http://www.middlerigrande.com/>
- <sup>xxxi</sup> P.L. 106-392, §3(c), §3(d)(2).
- <sup>xxxii</sup> AWSA §212(c)(3).
- <sup>xxxiii</sup> *Id.*
- <sup>xxxiv</sup> AWSA §212(h).
- <sup>xxxv</sup> *See* Bureau of Reclamation Technical Service Center Estimating, Specifications, and Value Program Group Construction Cost Trends at [http://www.usbr.gov/pmts/estimate/cost\\_trend.html](http://www.usbr.gov/pmts/estimate/cost_trend.html).
- <sup>xxxvi</sup> 43 USC §1543(f)(2)(D).
- <sup>xxxvii</sup> Joint Hearing: Subcommittee on Water and Power of the Committee on Energy & Natural Resources and the Committee on Indian Affairs, para. 5 (September 30, 2003).
- <sup>xxxviii</sup> *Id.*
- <sup>xxxix</sup> Animas-La Plate Construction Cost Estimates: Report to the Secretary, November 2003.
- <sup>xl</sup> *See* Gila Libre: New Mexico’s Last Wild River, M.H. Salmon, UNM Press 2008 (p.123).
- <sup>xli</sup> Proposed National Objectives, Principles and Standards for Water and Related Resources Implementation Studies, Dec. 3, 2009.
- <sup>xlii</sup> AWSA §212(i).
- <sup>xliii</sup> *See* AWSA Planning Process, Draft Project Matrix, April 27, 2010 at [www.awsaplanning.com](http://www.awsaplanning.com).