



2013 REPORT

by

THE NEW MEXICO INTERSTATE STREAM COMMISSION

to the

LEGISLATIVE FINANCE COMMITTEE

on

THE 2004 ARIZONA WATER SETTLEMENTS ACT

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EXECUTIVE SUMMARY

Mr. Chairman and Members of the Committee,

This report presents the current and anticipated planning efforts and associated work that will take place under the Arizona Water Settlements Act (AWSA) over the next year.

The AWSA

The AWSA was signed into federal law in December 2004. The AWSA allocates to New Mexico up to \$128 million in non-reimbursable federal funding and an annual average of 14,000 acre-feet of additional water from the Gila Basin, a 47% increase over New Mexico's current Gila apportionment. Sixty-six million dollars of the funding can be used for a New Mexico Unit to develop the new water. The \$66 million can also fund other water utilization alternatives to meet water supply demands in the Southwest Water Planning Region of New Mexico. The remaining \$62 million may only be disbursed for construction of a New Mexico Unit.

The AWSA requires that the new Gila Basin water be consumed in New Mexico. Leasing any of the 14,000 acre-feet of Gila water outside New Mexico is not permitted. New Mexico must inform the U. S. Secretary of the Interior by December 31, 2014 as to whether New Mexico will utilize any of the 14,000 acre-feet of additional water. If New Mexico does not choose to develop any of the additional water, it will continue to flow to Arizona and up to \$62 million of the federal funding will be forfeited.

The Planning Process

To date, there have been over 200 public meetings on the AWSA, conducted in various venues throughout the region. In September 2007, the Southwest New Mexico Stakeholders Group (SWNMSG) was formed to reach a consensus among stakeholders on projects for use of the 14,000 acre-feet of water and federal funding in the AWSA. After several years of work, the SWNMSG was not able to find consensus on a small number of projects.

Consequently, in the spring of 2011, the ISC began its own two-tiered evaluation process of forty-one project proposals submitted by stakeholders. The ISC established an Evaluation Panel that reviewed and ranked the 20 proposals that passed Tier-1. On February 29, 2012, the ISC approved sixteen projects for further assessment, integration, and/or refinement. See Figure 1 for locations of the selected projects. The Commission also approved \$100,000 for funding a pilot municipal conservation program and directed staff to conduct studies of wetlands restoration and agricultural conservation.

Ongoing Work and Next steps

New Mexico must inform the Secretary of the Interior by December 31, 2014 if New Mexico will utilize any of the additional AWSA water Congress allocated to New Mexico. To provide ample opportunity to gather final input from stakeholders, state and federal agencies, local governments, the legislature, and the general public, the ISC will make a preliminary selection of projects in August 2014, before a final selection in November 2014.

The City of Bayard has removed its effluent reuse proposal from consideration. The list of all proposals are presented in Table 1.

Each of the fifteen remaining proposals is undergoing comprehensive assessments of technical feasibility, legal feasibility, economic costs and benefits, and ecologic impacts. In response to stakeholder requests, some additional studies are underway or in the contracting process for surveys of cropping patterns and agricultural conservation, GIS modeling, wetlands studies, hydrologic and hydraulic modeling, ecologic impacts assessment and climate change projections. Because the Legislature has requested as much information as possible prior to the 2014 legislative session, ongoing evaluations of the 15 proposals have been accelerated, and most studies will be completed or produce preliminary results by January 2014. Please see Table 1 on page 9 and Appendix 1, FY14 AWSA Work Plan, beginning page 18, for details.

Budgeting from the New Mexico Unit Fund

The New Mexico Unit Fund has received \$9.04 million for each Fiscal Year 2012 and 2013. An identical amount will be deposited in the Fund in January 2014. For FY2014, ISC has budgeted \$265,700 of the \$18.08 million currently in the Fund into the ISC operating budget for 2.5 FTE's and supporting costs. For FY12, FY13, and now in FY14, the ISC budgeted \$4,713,900 to support contractual services for engineering, hydrologic, geologic, ecologic, and economic assessments of proposals. The work budgeted in the FY14 AWSA Work Plan totals \$2,845,000. Ecologic studies and assessments account for over \$1.3 million of that total. Details for FY14 work can be found in Appendix 1, FY14 AWSA Work Plan, beginning page 18. Additional funding may be budgeted if necessary. Table 1, page 9 presents the studies, engineering assessments, and other work underway or completed since FY12. As of July 1, 2013, the balance in the NM Unit Fund is \$17,179,404.

Public Involvement

The ISC has continued its comprehensive process of public involvement, including facilitated quarterly public meetings. The ISC has also created a website dedicated to the New Mexico portion of the AWSA (www.nmawsa.org). All scopes of work, reports, and ongoing efforts are posted there.

Finally, the ISC has convened a smaller group composed of fifteen members from local governments and stakeholder interests to provide representative, broad-based input on specific issues. The composition of this "Input Group" includes local governments, agricultural interests, municipalities, and environmental NGO's.

Drought Concerns

The ISC contracted with Dr. David Gutzler, climatologist at the University of New Mexico. His study, posted on the New Mexico AWSA website at <http://nmawsa.org/ongoing-work/draft-stream-flow-projections-for-the-upper-gila-river/view>, used both dynamic models and a statistical empirical model to estimate stream flow reductions in the Upper Gila River. The study concluded that the best estimate of the effect of projected climate change on average peak-- season flow in the upper Gila River is a

reduction of approximately 8% by 2021-- 2050, relative to a baseline period of 1951--2012. These estimates comport closely with other estimates in the Colorado Basin; e.g., the Bureau of Reclamation estimate is 9% flow reduction for the Colorado Basin. The study also concluded that spring runoff would occur earlier in the year and at lower volumes, and that natural variability will continue to swamp flow reduction. Flow reductions on this order appear to pose no problem for harvesting the additional water allocated to New Mexico in the AWSA.

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2013 REPORT BY THE NEW MEXICO INTERSTATE STREAM COMMISSION TO THE NEW MEXICO LEGISLATIVE FINANCE COMMITTEE ON THE 2004 ARIZONA WATER SETTLEMENTS ACT

This report presents a summary of the extensive process the New Mexico Interstate Stream Commission (ISC) has undertaken to secure New Mexico's benefits under the 2004 Arizona Water Settlements Act, or "AWSA." Also discussed are the current and anticipated studies, engineering, technical evaluations, and associated planning efforts that will take place over the next two years.

The AWSA

The AWSA was signed into federal law in December 2004. The AWSA allocates to New Mexico up to an annual average of 14,000 acre-feet of additional water from the Gila Basin and up to \$128 million in non-reimbursable federal funding. The additional 14,000 acre-feet of water represents a 47% increase over New Mexico's current allotment of water from the Gila Basin. Sixty-six million dollars of the funding can be used "for the purpose of paying costs of the New Mexico Unit or other water utilization alternatives to meet water supply demands in the Southwest Water Planning Region of New Mexico, as determined by the New Mexico Interstate Stream Commission in consultation with the Southwest New Mexico Water Study Group or its successor, including costs associated with planning and environmental compliance activities and environmental mitigation and restoration."¹ The remainder of the federal funding, up to \$62 million, would be disbursed on a construction cost-schedule basis only for construction of a New Mexico Unit.

The AWSA requires that the 14,000 acre-feet of new Gila Basin water be consumed in New Mexico (see AWSA Section 212(d) attached). Neither the AWSA nor the Consumptive Use and Forbearance Agreement (CUFA)² permit leasing any of the new 14,000 acre-feet of Gila water outside New Mexico. New Mexico must inform the U. S. Secretary of the Interior by December 31, 2014 as to whether New Mexico will utilize any of the 14,000 acre-feet of additional water. Additionally, if New Mexico does not choose to develop any of the additional water, up to \$62 million of the federal funding is forfeited, and the additional water will continue to flow to and be depleted in Arizona.

History of the Planning Process

The ISC began a planning process many years ago. The first public meeting regarding the AWSA was held in Silver City in the late spring of 2001, almost four years before the AWSA was signed into law in December 2004. To date, there have been over 200 public meetings on the AWSA, conducted in various venues throughout the region.

In 2005, the Gila San Francisco Coordinating Committee (GSFCC) was formed. The GSFCC was composed of representatives of the Office of the Governor, the Bureau of Reclamation, the Gila San Francisco

¹ The successor to the Southwest New Mexico Water Study Group is the Gila San Francisco Water Commission. A "New Mexico Unit" is any facility that develops any of the additional water. The "Southwest Planning Region" is composed of Luna, Grant, Hidalgo, and Catron counties.

² The CUFA is an agreement signed by Arizona, New Mexico, the U.S. Secretary of the Interior, and Arizona water users and others that protects and firms New Mexico's ability to develop the 14,000 acre-feet.

Water Commission, the US Fish and Wildlife Service, the Interstate Stream Commission (ISC), and later the New Mexico Department of Game and Fish. The purpose of the GSFCC was to develop baseline information, especially as to any impacts on endangered species that might occur from development of the additional AWSA water. The GSFCC held a number of meetings and science forums open to the public, and began creating a decision support model to aid building consensus. In late 2005 the Technical Subcommittee of the GSFCC, composed of state and federal agencies and stakeholders, crafted a plan of integrated basic scientific studies. In 2006, the legislature appropriated full funding for those studies, but the appropriation was vetoed.

In September 2007, the Southwest New Mexico Stakeholders Group (SWNMSG) was formed. The SWNMSG's purpose was to reach a consensus on a small set of projects for use of the 14,000 acre-feet of water and federal funding allocated to New Mexico in the AWSA. In November 2010, the SWNMSG suggested fifty-five projects to the ISC. The ISC asked it to reduce the number of projects to a workable size. The SWNMSG was not able to find consensus on a smaller set of projects.

The ISC consequently began its own two-tiered evaluation process in the spring of 2011. Any stakeholder, tribe, federal or state agency, or local government was encouraged to submit proposals. The ISC crafted the process and criteria for the evaluation process with input from stakeholders and local governments in the region. Forty-one project proposals were accepted during the period May 2011 to June 2011. To evaluate and rank the 41 proposals submitted, the ISC established an Evaluation Panel with one representative each from the New Mexico Environment Department; the Energy, Minerals and Natural Resources Department; the Office of the State Engineer; ISC; and the Department of Game and Fish. Twenty proposals met the Tier-1 criteria and passed to the Tier-2 ranking process.

The ISC staff, considering the ranking and comments of the evaluation panel, the independent rankings of the Gila San Francisco Water Commission, the results of the New Mexico First Gila Town Hall, and hundreds of hours of public comment before the Commission and in public meetings, recommended sixteen proposals for further assessment, refinement, or combination. On February 29, 2012, the ISC approved the staff recommendations. The sixteen projects are grouped in five categories: municipal conservation (1 project), diversion and storage (3 projects), effluent re-use and municipal infrastructure (4 projects), watershed restoration (5 projects), and agricultural infrastructure improvements for conservation (3 projects). Figure 1 presents the categories and general locations of the selected projects. The Commission also approved additional study of wetlands restoration and agricultural conservation. In 2013, the City of Bayard removed its effluent reuse proposal from consideration.

Next steps

To provide the Commission with the information needed to make an informed and considered decision, a large amount of work must take place between now and mid-2014. Each of the remaining fifteen proposals will require assessments of technical feasibility (engineering, hydrology, geomorphology, geology, etc.), legal feasibility (compliance with the AWSA, with other federal statutes, with New Mexico statutes, etc.), economic costs and benefits, and ecologic impacts (protection of the environment, endangered species impacts, watershed health, etc.). Should the Commission select for implementation

and funding proposals to develop the additional water or some portion thereof (i.e., a “New Mexico Unit”), the AWSA requires compliance with all federal environmental mandates upon signing of the New Mexico Unit Agreement by the Secretary of the Interior.

The work to assess the technical, ecologic, economic, and legal feasibility of proposed projects has begun, been completed, or is in the planning/contracting stages. Table 1 below lists the work efforts, their current status, and if ongoing, the anticipated completion dates. Additional information and detail may be found in Appendix 1, FY14 AWSA Workplan for details, beginning page 18.

Table 1.

WORK EFFORT	COMPLETION	WORK EFFORT	COMPLETION
Low water use crop study	Completed		
Groundwater/SW model, Phase I	Completed	Macroinvertebrate studies	Prelim January 2014 Final June 30, 2014
Groundwater/SW model, Phase II	Prelim January 2014 Final June 30, 2014	Riparian/flow correlations	Prelim January 2014 Final June 30, 2014
IHA comparison, Phase I	Completed	Municipal conservation	June 30, 2014
IHA comparison, Phase II	January 2014	Ditch improvement projects	December 2013
Ecologic data compilation	Completed	Reuse projects evaluation	November 2013
Biologic resource surveys	January 2014	Watershed projects	Prelim January 2014 Final June 30, 2014
Cultural surveys	January 2014		
Climate change study	Completed	Diversions/Storage Proposal Technical Assessment	Prelim January 2014 Final June 30, 2014
Wetlands study	June 30, 2014	Geomorphologic study	Completed
Economic Studies	June 30, 2014		
Drip irrigation study	Completed	Meetings/Facilitation	Through 2014
PHABSIM, PVA for birds, fish,	Prelim January 2014 Final June 30, 2014		

The ISC’s current planning schedule calls for final project selection by November 2014. To provide ample opportunity to gather final input from stakeholders, state and federal agencies, local governments, the legislature, and the general public, the schedule calls for preliminary selection in August 2014, and ISC final selection in November 2014. Final project selection in November will still allow for timely transmittal of New Mexico’s intentions to the Secretary of the Interior by the December 2014 deadline.

Budgeting and Fiscal Report

During its 2011 session, the New Mexico Legislature passed H.B. 301, creating the New Mexico Unit Fund (the Fund) in the State Treasury. The 2011 New Mexico Unit Fund Act requires the Interstate Stream Commission (“ISC”) to report by November 15th every year to the Interim Committee on Water and Natural Resources and to the Legislative Finance Committee on the following three points:

- (1) The status of the New Mexico Unit Fund;
- (2) The distribution of money from the New Mexico Unit Fund to implement the purpose of the Fund pursuant to the Act; and
- (3) Proposed uses and levels of funding projected for the following fiscal year.

2011 N.M. Laws, Ch. 99, NMSA 1978, § 72-14-45 (2011). Included here is the ISC report to the Interim Committee on Water and Natural Resources for 2013.

1. Status of the New Mexico Unit Fund

In January 2012 and 2013, pursuant to the AWSA, the Bureau of Reclamation disbursed \$9.04 million in the Fund. Identical sums of monies will be deposited in the Fund in January 2014.

2. Distribution of money from the Fund to implement the purpose of the Fund pursuant to the Act

The New Mexico Unit Fund has received \$9.04 million for each Fiscal Year 2012 and 2013. An identical amount will be deposited in the Fund in January 2014. For FY2014, ISC has budgeted \$265,700 of the \$18.08 million currently in the Fund into the ISC operating budget for 2.5 FTE’s and supporting costs. For FY12, FY13, and now in FY14, the ISC budgeted \$4,713,900 to support contractual services for engineering, hydrologic, geologic, ecologic, and economic assessments of proposals. The work budgeted in the FY14 AWSA Work Plan totals \$2,845,000. Ecologic studies and assessments account for over \$1.3 million of that total. Details for FY14 work can be found in Appendix 1, FY14 AWSA Work Plan, beginning page 18. Additional funding may be budgeted if necessary. Table 1 presents the studies, engineering assessments, and other work underway or completed since FY12. As of July 1, 2013, the balance in the NM Unit Fund is \$17,179,404.

3. Uses and levels of funding projected for the following fiscal year

In FY15, the ISC appropriation request for the operating budget will include \$403,800 from the Fund for 3.5 FTE and supporting costs. Any unexpended balances from either the operating budget or the contractual services budget will revert to the Fund. As evaluation results become available, additional funding may be budgeted if required.

In FY14, engineering, hydrologic, geomorphic, ecologic, wetlands, watershed, economic, and agricultural conservation assessments and work must be completed. In addition, if a New Mexico Unit is chosen, a study will be conducted to confirm that those who would contract for the water are willing and able to pay local cost shares.

Public Involvement

The ISC will continue its comprehensive process of public involvement throughout the completion of this planning and decision process. To ensure all stakeholders and the public are afforded opportunity for input and comment, ISC will hold facilitated quarterly public meetings throughout the planning process. The ISC has also created a website dedicated to the New Mexico portion of the AWSA (www.nmawsa.org). All scopes of work, reports, and ongoing efforts are posted there as well.

Finally, the ISC has convened a smaller group composed of fifteen members from local governments and stakeholder interests to provide facilitated input on specific issues as needed. This “Input Group” provides representative, broad-based input to the ISC, but is not focused on reaching consensus. The composition of the Input Group is as follows: 1 representative each from Luna, Grant, Hidalgo, and Catron Counties, 1 representative from the Town of Silver City, 1 representative from the City of Deming, 2 representatives from the environmental interests, 1 representative from the mining industry, 2 representatives from farming interests, 2 representatives from ranching interests, and 2 representatives from the business community. Each entity or interest chose its own representative(s). To date, the Input Group has met quarterly and provided the ISC with over 150 questions related to the selected projects that the group felt should be asked and answered over the next two years. Participation at the quarterly public meetings has been excellent with 80 to 100 attendees.

Drought Concerns

The ISC contracted with Dr. David Gutzler, climatologist at the University of New Mexico. His study, posted on the New Mexico AWSA website at <http://nmawsa.org/ongoing-work/draft-stream-flow-projections-for-the-upper-gila-river/view>, used both dynamic models and a statistical empirical model to estimate stream flow reductions in the Upper Gila River. The study concluded that the best estimate of the effect of projected climate change on average peak-- season flow in the upper Gila River is a reduction of approximately 8% by 2021-- 2050, relative to a baseline period of 1951--2012. These estimates comport closely with other estimates in the Colorado Basin; e.g., the Bureau of Reclamation estimate is 9% reduction. The study also concluded that spring runoff would occur earlier in the year and at lower volumes, and that natural variability will continue to swamp flow reduction. Flow reductions on this order appear to pose no problem for harvesting the additional water allocated to New Mexico in the AWSA.

Priority Concerns

New Mexico was first allocated the additional water from the Gila Basin in the 1968 Colorado River Basin Project Act (CRBPA). However, the priority of this additional water in the 1968 CRBPA was set at September 30, 1968, a date junior to many downstream Arizona water rights. The junior 1968 priority date made use of New Mexico’s additional water very difficult. The primary focus in negotiating New Mexico’s portion of the 2004 AWSA was to ensure the additional Gila water in the 1968 CRBPA became “wet water” that New Mexico could develop with certainty.

In the 2004 AWSA, New Mexico, Arizona, the U.S. Secretary of the Interior, and senior downstream water users agreed to the terms of the Consumptive Use and Forbearance Agreement (CUFA). In the AWSA Congress ratified the CUFA. The CUFA gives New Mexico a contractual right to divert and consume the additional 14,000 acre-feet of new Gila water without objection by senior downstream water users.

The terms of the CUFA include strict constraints on diversion and consumption of any new Gila water. Table 1, Bypass Flows, presents the minimum flows, by month, that must be bypassed before New Mexico may divert any of the AWSA water. New Mexico negotiated those minimum bypass flows with senior downstream water users. In the CUFA, the holders of those senior rights have agreed that bypassing those minimum flows (and meeting other constraints in the CUFA) protects their senior rights. As long as New Mexico complies with the terms of the CUFA, the holders of senior downstream water rights – and the Secretary of Interior – have agreed that New Mexico may divert and consume the 14,000 acre-feet of additional water without objection. In addition, the Arizona signatories agreed to use their own water to make whole any non-signatories who could bring a valid claim of impairment against New Mexico. In effect, New Mexico may divert the additional 14,000 acre-feet without threats of a priority call.

Figure 2 is a schematic of the relative locations of the signatories to the CUFA, showing the downstream senior users (Gila River Indian Community, San Carlos Irrigation and Drainage District, and Upper Valley Diverters, etc.). Because the CUFA provides that New Mexico may divert the additional AWSA water only when there are river flows in excess of amounts required to meet existing senior downstream rights, it is unlikely that priorities will ever play a role in this matter. During negotiations, the ISC modeled the effects of those terms of diversion and found that, in any historical running ten-year period, New Mexico could realize the annual average of 14,000 acre-feet of additional water allocated in the 2004 AWSA while fully complying with both the AWSA and the CUFA.

The AWSA requires the Secretary of the Interior to implement an exchange, through the Central Arizona Project, of an amount of mainstem Colorado River water equal to the additional Gila Basin water depleted in New Mexico. Concerns have been raised that drought shortages could prevent that exchange. One provision in the 1968 CRBPA (Section 304 (e)) sets the priority of that exchange water. The provision states that in case of a shortage or reduction on the Colorado River, users who have yielded water from other sources in exchange for mainstem Colorado River water shall have the first priority on the Central Arizona Project. The seniority of the exchange water is not modified by the 2004 AWSA. If shortages on the Colorado River do occur, as well they might, the 14,000 acre-feet of mainstem water necessary to effect New Mexico's exchange will have the first priority. By way of scale, the annual average of 14,000 acre-feet of exchange water represents less than 1% of the water currently delivered every year through the Central Arizona Project.

Both the ability of New Mexico to divert and consume the annual average of 14,000 acre-feet of additional water from the Gila Basin and the availability of the exchange water to effect those diversions of new Gila water appear secure.

Section 212 (d) of the Arizona Water Settlements Act

(d) Amendment to Section 304- Section 304(f) of the Colorado River Basin Project Act (43 U.S.C. 1524(f)) is amended--

(1) by striking paragraph (1) and inserting the following: `(1) In the operation of the Central Arizona Project, the Secretary shall offer to contract with water users in the State of New Mexico, with the approval of its Interstate Stream Commission, or with the State of New Mexico, through its Interstate Stream Commission, for water from the Gila River, its tributaries and underground water sources in amounts that **will permit consumptive use of water in New Mexico [emphasis added]** of not to exceed an annual average in any period of 10 consecutive years of 14,000 acre-feet, including reservoir evaporation, over and above the consumptive uses provided for by article IV of the decree of the Supreme Court of the United States in *Arizona v. California* (376 U.S. 340). Such increased consumptive uses shall continue only so long as delivery of Colorado River water to downstream Gila River users in Arizona is being accomplished in accordance with this Act, in quantities sufficient to replace any diminution of their supply resulting from such diversion from the Gila River, its tributaries and underground water sources. In determining the amount required for this purpose, full consideration shall be given to any differences in the quality of the water involved.';

(2) by striking paragraph (2); and

(3) by redesignating paragraph (3) as paragraph (2).

FIGURE 1. Categories and locations of projects selected for assessment, integration, and/or refinement

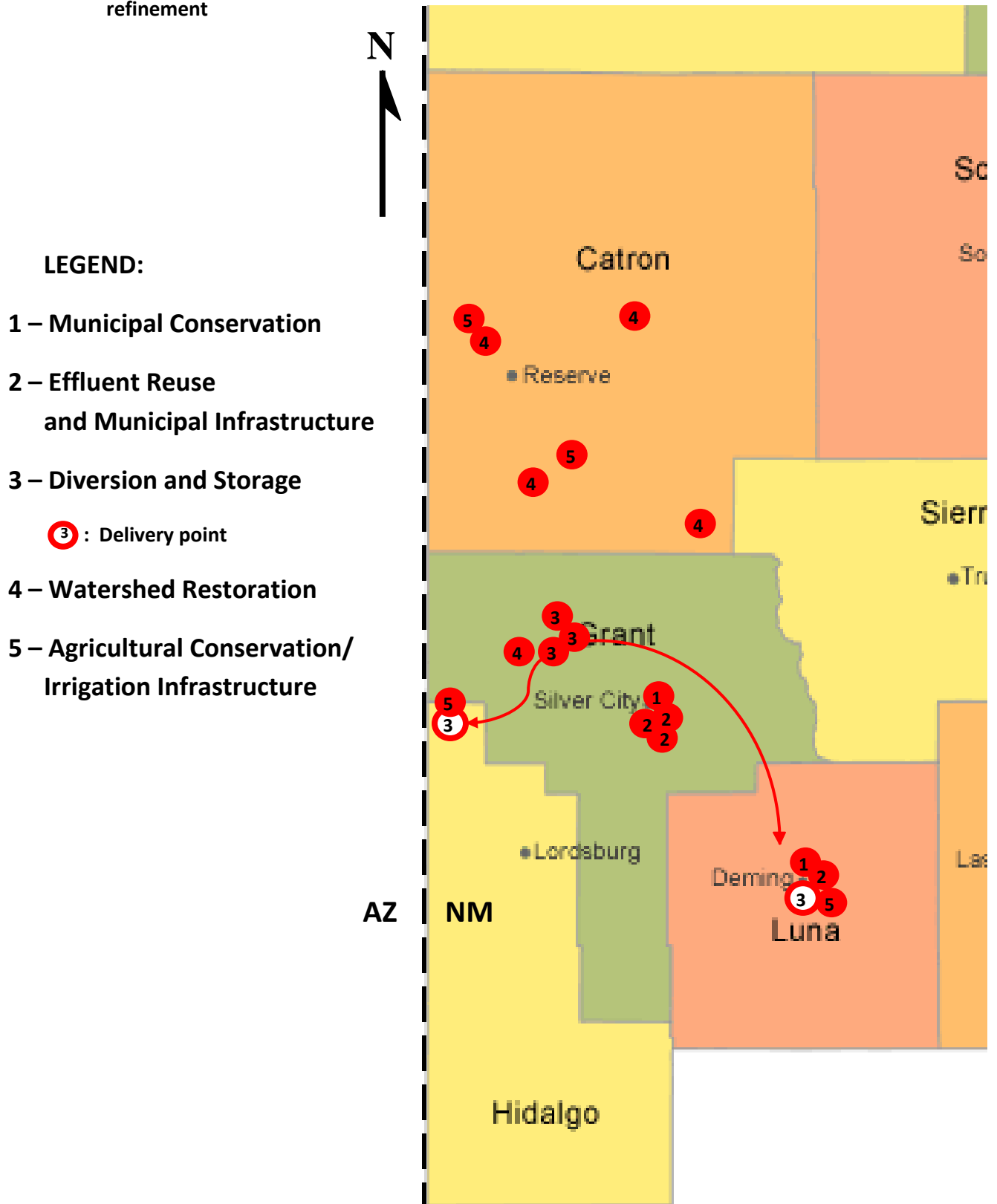
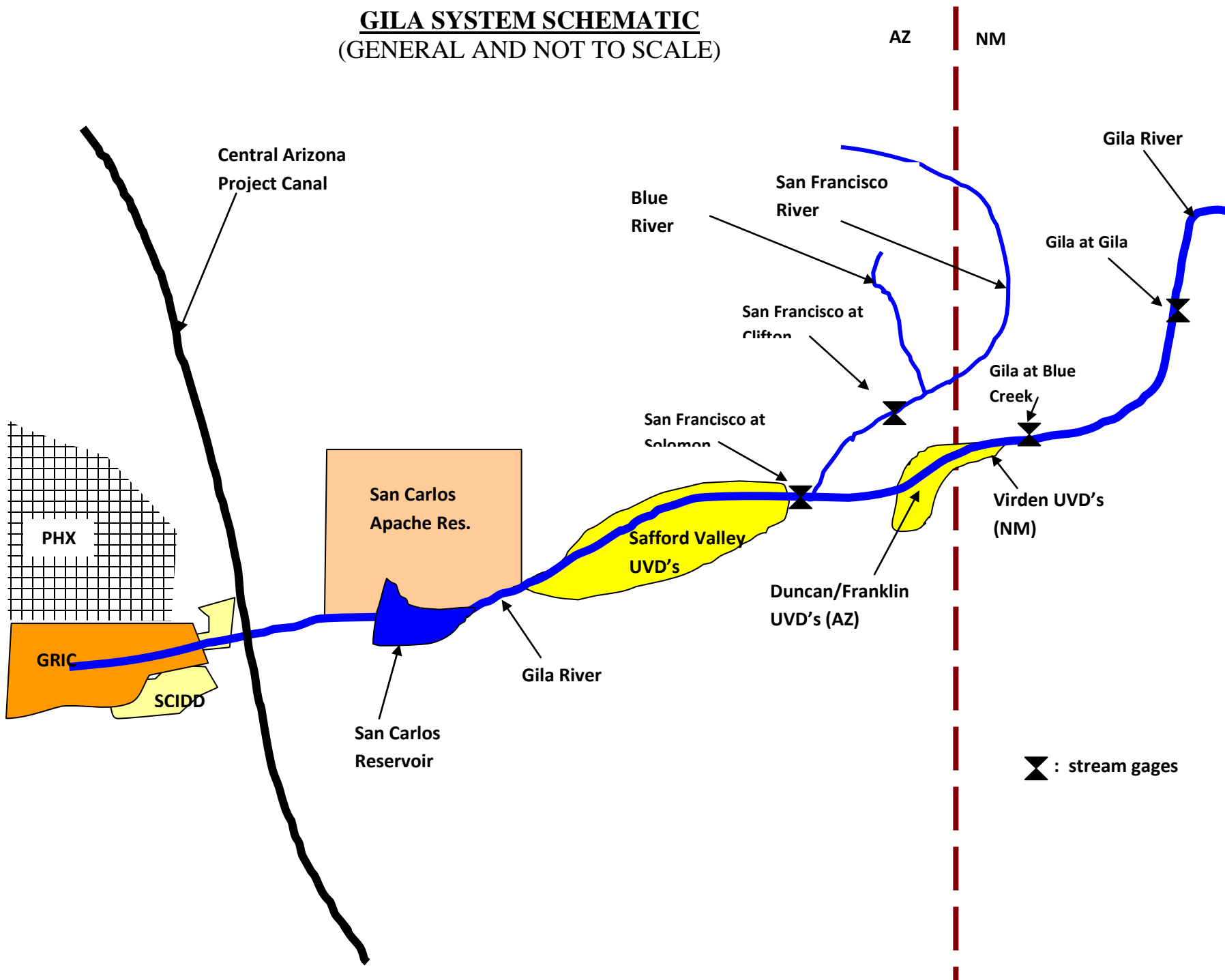


TABLE 1. MINIMUM BYPASS FLOWS BY MONTH

<u>Month</u>	<u>Bypass</u>
January	82.5 (cfs)
February 1-13	137.5
February 14-28/29	215
March	292.5
April	432.5
May	437.5
June	442.5
July	442.5
August	442.5
September	442.5
October	267.5
November	152.5
December	75.5

GILA SYSTEM SCHEMATIC
(GENERAL AND NOT TO SCALE)



Appendix 1. FY 14 AWSA Workplan

2004 Arizona Water Settlements Act Work Plan

FY2014

Executive Summary

In the 2004 Arizona Water Settlements Act (AWSA) Congress allocated New Mexico an additional annual average of up to 14,000 acre-feet of water from the Gila Basin and/or up to \$128 million in non-reimbursable federal funding. By December 2014, the Interstate Stream Commission (Commission) must inform the Secretary of the Interior how New Mexico intends to utilize those benefits. The current planning schedule calls for a preliminary Commission decision at the end of August 2014 with a final decision by November 2014. The Commission approved FY expenditures of almost \$2.8 million in FY13 to begin assessing sixteen stakeholder proposals for utilization of the water and/or funding. Because of scoping, cost negotiations, and start up delays, only approximately \$650,000 will be expended in FY13.

The New Mexico Legislature has indicated it would prefer the Commission have a substantial plan in place before the 2014 legislative session. As a consequence, the FY13 proposal schedule has been accelerated to complete many initial assessment activities, especially engineering and ecologic work efforts, by January 2014. Staff is also requesting funding for NEPA and ESA legal support and assistance with planning strategies that were not included in the FY13 request. This accelerated schedule will provide important information that can assist in identifying likely projects for funding, but does not supplant the current schedule for preliminary and final decisions by the Commission.

The total funding requested in FY14 is \$2,845,000, supporting the nine elements described below. Scoping, scheduling, and contracting for those efforts will be largely complete in the first quarter of FY14. As in FY13, staff request permission for the Director to shift funding between elements as needed after informing the Gila Committee of the Commission.

Background

By December 2014, the New Mexico Interstate Stream Commission must inform the secretary of the Interior how New Mexico will utilize the additional annual average of up to 14,000 acre-feet of water from the Gila Basin and/or the up to \$128 million in non-reimbursable federal funding afforded New Mexico in the 2004 Arizona Water Settlements Act. The current schedule adopted by the Commission calls for a preliminary decision by August 31, 2014 and a final Commission decision by November 2014.

In March 2011, the Commission began a two-tiered evaluation of proposals submitted by stakeholders that utilize the additional water and/or funding. In February 2012 the Commission staff presented the results of the evaluation panel rankings. Staff also considered and presented the proposal rankings of the Gila San Francisco Water Commission and the results of a New Mexico First Town Hall focused on the 2004 AWSA. The New Mexico Interstate Stream Commission approved staff's recommendation that the Commission accept sixteen stakeholder proposals for further assessment, integration, and/or refinement. The proposals can be grouped in five categories:

- Municipal Effluent Treatment and Reuse Proposals by the City of Deming, City of Bayard, Grant County Water Commission, Village of Santa Clara, and Grant County
- Proposals for diversion, storage, and use of part or all of the AWSA water by the Gila Basin Irrigation Commission, Hidalgo County, and the City of Deming.
- Improvements in agricultural water conservation by irrigators of Luna Ditch, Pleasanton Ditch, and the Sunset/New Model Ditch.
- A proposal for Municipal Conservation by the Gila Conservation Coalition. The Commission approved \$100,000 for a pilot municipal conservation proposal.
- Watershed restoration proposals by the US Forest Industries Association, New Mexico State University, Catron County, and the Grant Soil and Water Conservancy District.

The Commission also directed staff to undertake investigations of agricultural conservation through improved irrigation efficiency and wetlands studies. In June 2012, the Commission approved a FY13 Work Plan to further assess, integrate, or refine the accepted proposals. The FY13 Work Plan included elements for assessments of the effluent treatment and reuse proposals, the AWSA water diversion and storage proposals, agricultural conservation, wetlands studies, and baseline ecologic studies. The total estimated cost of the FY13 Work Plan was \$2,796,000. Because of delays, scoping, and contracting issues, only approximately \$650,000 will be expended in FY13.

In February 2013, the Commission afforded all proposers the opportunity to amend their proposals utilizing features or elements already in the sixteen proposals accepted by the Commission for further assessment, integration, or refinement. Five proposals were amended:

- Catron County, because of the huge wildfires in the Gila during 2012, amended their proposal to eliminate tree thinning, add reseeding and monitoring, and installation of ash and sediment protective diversion and conveyance facilities.
- The City of Deming improved engineering and cost-estimation details in their effluent treatment and reuse proposal.
- The City of Deming also amended their diversion and storage proposal to include a regional water supply system and include additional storage near the top of the Cliff-Gila Valley.
- The Gila Conservation Coalition amended their municipal conservation proposal to ask for an additional \$400,000.
- Hidalgo County amended their diversion and storage proposal to add a second, smaller off-stream storage near the state line.

The Commission accepted the amended proposals for further evaluation with the exception of the amended Gila Conservation Coalition proposal. The Gila Conservation Coalition proposal and the eleven un-amended proposals will be evaluated in their original form. No proposer withdrew its proposal because of amendments to other proposals. The Village of Bayard secured alternate funding for its effluent and treatment proposal and has been withdrawn.

Description

The FY AWSA Work Plan is separated into nine elements. A description of the work for each element is below:

1. **Assess and Evaluate Effluent Reuse Proposals.** Assessments of the effluent treatment and reuse proposals by the City of Deming, the City of Silver City, the City of Bayard, and Grant County began in FY13. Consultants from William J. Miller Engineering, Bohannon Huston Inc., Portage/Souder-Miller Engineering, and ISC staff began assessments of these proposals in FY13. Proposers have been consulted during in the assessments. The City of Bayard has obtained alternate funding for its proposal, is beginning final design and construction and has withdrawn its proposal from consideration. The work performed in FY14 under this element will complete the assessments of the effluent treatment and reuse proposals. The expected date for completion is by the end of January 2014.
2. **Assess and Evaluate Diversion and Storage Proposals.** Assessments of the diversion and storage proposals by the City of Deming, the Gila Basin Irrigation Commission, and Hidalgo County began in FY13. The Bureau of Reclamation offered to assess these proposals using their in-house funding. In and ISC staff toured potential diversion and storage sites in November 2012 and again in March 2013. Reclamation is performing initial engineering and scoping work. To ensure completion of preliminary engineering assessments before the end of 2013, ISC has entered into a work order with Bohannon Huston Inc. (BHI) to become familiar with the AWSA diversion and storage proposals. Should funding or other resource issues prevent Reclamation from completing engineering assessments by the end of 2013, BHI and/or additional engineering firms will be tasked to provide additional needed engineering support. The funding estimated for this element (see "Work Plan Budget, Funding Source & Time Frame" below) accommodates this possibility.
3. **Assess Agricultural Conservation.** First preliminary surveys were conducted for assessments of the ditch improvement proposals in FY14. In addition, improvements to diversions, conveyance, and storage for ten ditches as proposed in Catron County's amended watershed restoration plan will be completed in FY14 assessments. Staff will contract with engineering firms to complete the assessments in FY14. The Commission directed staff to assess water savings from implementation of drip irrigation. That task was completed by INTERA, Inc. in FY13. Results in a comprehensive comparison of flood irrigation versus drip irrigation in the near-Deming area indicated an increase of water use of at least 16% when flood irrigated lands were converted to drip irrigation for the same crop type. Dependent on soil types, discrete farmlands may realize a water savings from conversion to drip irrigation, but overall aquifer levels in the Deming area have continued to decline at the same rate after conversion of much acreage to drip irrigation.
4. **Assess Municipal Conservation.** Staff negotiated contracts for pilot municipal water conservation projects with the Cities of Deming and Silver City. Both municipalities have executed and returned contracts. The contracts with each municipality are for \$50,000. The municipal conservation measures include improved irrigation efficiency of sports fields, replacement of swamp coolers with more water efficient heat pumps, and replacement of shower heads and toilets with models that require less water. The OSE water Use and Conservation Bureau will assess the water savings from the projects.
5. **Assess Watershed Restoration Projects.** Assessment of the Catron County, NMSU, US Forest Industries, and Grant Soil and Water Conservancy District watershed restoration proposals will begin and be completed in FY14. Staff will contract with watershed restoration experts to perform the assessments.

6. **Ecologic Assessments of Proposals and Baseline Ecologic Studies.** Should the Commission choose to approve projects that develop any of the additional water allocated to New Mexico in the 2004 AWSA, that decision will trigger the NEPA process. The NEPA process will consider any environmental impact. To ensure the NEPA analyses utilize the best available science, the ISC must engage in a number of studies and work efforts. For a number of years, staff has contracted with SS Pappopoulos to build essential hydrologic models in the Gila Basin. Data acquisition and reduction, such as LiDAR survey data, GIS data, and GIS modeling were begun in FY13 by Tetra Tech. Staff contracted with UNM to perform climate change projections and the wetland studies directed by the Commission. The wetland studies are progressing but the climate change investigator has not produced the intended deliverables. Staff may need to contract with other expert consultants to complete the drought projections tasks.

Reclamation has begun, as part of its appraisal level study of diversion and storage proposals, an environmental assessment of those projects. The Nature Conservancy (TNC) received a small grant from Reclamation to perform a similar analysis of the environmental impacts of AWSA diversions. Staff supported the TNC grant proposal and TNC has requested ISC provide TNC all pertinent models, data, and information ISC has obtained or developed. At the same time TNC has denied ISC's request to participate in their study. Though such duplication of effort should not be necessary, staff has contracted with SWCA Environmental Consultants for a much more detailed and in-depth environmental consideration. SWCA is currently convening a panel of independent experts to assess impacts from AWSA diversions on endangered species, riparian habitat, and other potentially-impacted environmental factors and to guide further ecologic studies and strategies. Although preliminary conclusions are due by January 2014, this expensive but critical effort will need to continue throughout any NEPA process.

7. **Legal Services.** Staff will contract with expert and experienced legal counsel to provide assistance in moving correctly and expeditiously through NEPA and ESA consultations.
8. **Economic Analysis.** Reclamation will perform an appraisal level economic analysis of all proposals. To provide more thorough economic analyses, staff will contract with private firms. Preliminary findings will be due by January 2014.
9. **Planning Consultation and Facilitation.** Staff will contract with a planning/public involvement firm and professional facilitators to assist on public meetings, dissemination of materials, and formulation of public involvement strategy. This work may continue throughout the AWSA process, including NEPA.

Work Plan Budget, Funding Source & Time Frame

All funding will be drawn from the AWSA settlement monies deposited in the New Mexico Unit Fund. Below are budget details for each element in the Work Plan.

Work Element	Estimated FY 14 Cost (\$1,000)
1. Assess Effluent Reuse	
Deming	\$ 62
Bayard ¹	\$ -
Grant County	\$ 55
Silver City	\$ 70
TOTAL:	\$ 187

2. Assess Diversion/Storage	
Hidalgo	\$ 150
Deming	\$ 300
GBIC	\$ 150
GBIC Diversions	\$ 50
Diversion/Conveyance	\$ 50
Grade control/diversion	\$ 20
Total:	\$ 720

3. Assess Ag Conservation	
Luna Ditch	\$ 5
Pleasanton Ditch	\$ 5
Sunset Ditch	\$ 5
Catron Ditches	\$ 10
Effects of Drip Irrigation	\$ -
Total:	\$ 25

4. Municipal Conservation Pilot	
Deming	\$ 50
Silver	\$ 50
Total:	\$ 100

5. Assess Watershed Restoration	
Catron	\$ 5
NMSU	\$ 5
NM FIA	\$ 5

Grant SWCD	\$	5
USFS	\$	5
Total:	\$	25

6. Ecologic Assessments⁷		
Hydrologic Modeling	\$	500
LiDAR	\$	100
Assess Diversion Impacts	\$	405
GIS Modeling	\$	200
Assess Wetlands	\$	100
Drought Flow Prediction	\$	60
Total:	\$	1,365

7. Legal Services		
NEPA/ESA/other ^{5,7}	\$	100
Total:	\$	100

8. Economic Analysis		
All proposals	\$	-
All proposals	\$	250
Total:	\$	250

9. Planning Consultation⁷		
SW NM	\$	75
Total:	\$	75

TOTAL ALL ELEMENTS: \$ 2,847

- 1 — This proposal has been withdrawn.
- 2 — May not happen through UNM, may have to sub or contract through SWCA or SSPA.
- 3 — Completed FY13. Existing data sufficient.
- 4 — Time frame may be extended if additional issues are identified in initial assessments.
- 5 — Legal services will focus on properly responding to and developing legal strategies regarding ESA and NEPA issues.
- 6 — Contractors may change and additional contractors added depending on cost and scope negotiations and project progress.
- 7 — This effort will likely continue throughout any AWSA/NEPA process.

Work Plan Risk(s) and Impact(s)

A not uncommon occurrence in initial assessment activities is the discovery of unanticipated complications or additional issues. Such encounters could delay substantive assessments and have a

concomitant impact on the ability of the Commission to make a considered and informed decision by December 2014.