

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

**APPLICANT INFORMATION (PRINT OR**

**DATE: July 14, 2011**

<p>1. Legal Name: Allyson Siwik</p>	<p>2. Organization: Gila Conservation Coalition</p>										
<p>3. Address (street, city, county, state, and zip code): 305A North Cooper St. Silver City, NM 88061</p>	<p>4. Name, email, and phone number of contract person: Allyson Siwik 575.538.8078 info@gilaconservation.org</p>										
<p>5. TYPE OF APPLICATION (check one): <input checked="" type="checkbox"/> Final <input type="checkbox"/> Preliminary for review <input type="checkbox"/> Revised</p>	<p>6. TYPE OF APPLICANT (CHECK BOX): <input type="checkbox"/> local governments or municipalities  <input type="checkbox"/> soil and water conservation districts, irrigation districts or commissions, acequias, or other political subdivision of the State of New Mexico  <input type="checkbox"/> institutions of higher education or a consortium of such institutions  <input checked="" type="checkbox"/> non-profit organizations or associations  <input type="checkbox"/> private individual/s  <input type="checkbox"/> federal agency (ies)  <input type="checkbox"/> Other (specify)</p>										
<p>7. BRIEF PROJECT DESCRIPTION:  Municipal Conservation to Reduce Net Depletions to Groundwater Funding to be provided through WTB to SWNM municipalities for implementation of municipal water conservation activities (see proposal)</p>	<p>8. AREAS AFFECTED (describe by county, municipality, township, etc. as applicable):  Deming, Lordsburg, Silver City, Reserve and publicly supplied water systems throughout Grant, Hidalgo, Luna and Catron counties.</p>										
<p>9. TOTAL FUNDING REQUESTED (in \$1,000):</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20%;">2012: \$100,000</td> <td style="width: 20%;">2013: \$418,000</td> <td style="width: 20%;">2014: \$418,000</td> <td style="width: 20%;">2015: \$418,000</td> <td style="width: 20%;">2016: \$418,000</td> </tr> <tr> <td>2017: \$418,000</td> <td>2018: \$418,000</td> <td>2019: \$418,000</td> <td>2020: \$418,000</td> <td>2021: \$418,000</td> </tr> </table>		2012: \$100,000	2013: \$418,000	2014: \$418,000	2015: \$418,000	2016: \$418,000	2017: \$418,000	2018: \$418,000	2019: \$418,000	2020: \$418,000	2021: \$418,000
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2017: \$418,000	2018: \$418,000	2019: \$418,000	2020: \$418,000	2021: \$418,000							
<p>10a. TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL DATA IN THIS APPLICATION ARE TRUE AND CORRECT, THE DOCUMENT HAS BEEN DULY AUTHORIZED BY THE GOVERNING BODY OF THE APPLICANT AND THE APPLICANT WILL COMPLY WITH THE ATTACHED REQUIREMENTS AND ASSURANCES IF THE PROPOSAL IS ACCEPTED.</p>											
<p>10b. TYPED OR PRINTED NAME OF AUTHORIZED REPRESENTATIVE: Allyson Siwik</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;"> <p>11. TITLE: Executive Director</p> </td> <td style="width: 50%; padding: 5px;"> <p>12. PHONE NUMBER: 575.538.8078</p> </td> </tr> </table>	<p>11. TITLE: Executive Director</p>	<p>12. PHONE NUMBER: 575.538.8078</p>								
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<p>13. SIGNATURE: </p>	<p>DATE: 7/13/11</p>										

14. Evaluation criteria. Comprehensive responses to criteria A through D should be supported where possible by the best available science and scientific data, studies, models, and, where applicable, cite state, regional, or other water plans. Where such data and information is not available, applications should include best estimates and describe how such information would be obtained. Applications that do not include the requested information will not satisfy Tier-1 standards and, therefore, will not be eligible for Tier-2 consideration. Use Form 14a if needed.

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

This project is for a **WATER UTILIZATION ALTERNATIVE** that proposes to implement water conservation measures for municipal and other publicly supplied water systems in southwestern New Mexico to reduce municipal and industrial water use and extend the life of groundwater supplies.

Water conservation measures reduce the demand for water and therefore reduce the need to develop new water supplies. Many of these measures also save energy costs, reduce wastewater treatment costs, and reduce the overall environmental impacts associated with water use. In fact, per capita water use in the US has dropped by 30 percent since 1975 largely due to more efficient water use according to a recently released US Geological Survey study. According to the NM Office of the State Engineer, “Because the costs of water development and treatment continue to rise, many communities are faced with expensive water and wastewater treatment facility expansions to meet growing water demands. Fortunately, water conservation can delay, and in some cases actually eliminate, the need for these costly infrastructure expansions. The simple fact is this: *conservation is almost always the least costly water supply alternative.*”<sup>1</sup>

The NMOSE states that “In New Mexico, many water utilities have proven that reducing water requirements by decreasing demand and increasing operating efficiencies is a cost-effective way to delay capital facilities, reduce operation and maintenance costs, reduce the need for development of costly new water sources, and demonstrate responsible water-use efficiency to regulatory agencies.”<sup>2</sup>

Conservation measures fall into two broad categories: those implemented on the consumer side of the water meter such as installing water efficient devices, and those implemented on the utility side, such as rate structures aimed at encouraging conservation.

**Replacing less efficient plumbing fixtures and appliances** with the latest in water efficient devices has great potential to reduce indoor water use. By communicating the true cost of water, **increasing block water rate structures** can also be used to promote efficiency. This rate structure charges more per unit of

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<sup>1</sup> NM OSE “A Water Conservation Guide for Public Utilities” <http://www.ose.state.nm.us/water-info/conservation/pdf-manuals/nm-water-manual.pdf> p. 2.

<sup>2</sup> Ibid. p. 6.

water (e.g., \$/1,000 gallons) as consumption increases, protecting lower-volume users and penalizing high volume users. **Outdoor watering requirements** can be implemented to achieve water conservation, such as time of day and day per week limits on turf and landscape irrigation, non-essential water use restrictions related to washing of houses and mobile equipment, and prohibitions on wasting water by letting irrigation, pool or wash water to run off or drain into a street or public right of way. **Leak detection and repair programs** can also reduce or eliminate unaccounted for losses from the water distribution system.

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

An analysis was conducted to estimate the magnitude of potential water savings and costs for implementation of municipal water conservation measures in southwest New Mexico. Across the four-county area, municipal demand management can save 3,670 acre-feet/year of water at a cost of \$4.2 million (amortized over 20 years).<sup>3</sup> The SWNM Regional Water Demand Study conducted by AMEC for the Stakeholders Group estimates that municipal demand can be reduced by 4,260 acre-feet/year through implementation of water conservation measures throughout the four-county area in 2050.<sup>4</sup>

Water efficient technologies can be used to reduce municipal demand for water through conversion to low-flow shower heads and toilets. Increasing block rate structures can be used to give water consumers the appropriate price signals to encourage conservation. An outdoor watering ordinance can also reduce municipal outdoor use. Because some communities in southwest New Mexico have already implemented water conservation measures, the analysis results presented below reflect measures that are not duplicative and could provide incremental reductions in municipal demand.

- Shower head replacement implemented for the four-county area would cost \$261/acre-foot of water saved, total cost of \$680,000 (amortized over 20 years) and save 212 acre-feet/year of water.
- Low-flow toilet rebate program implemented for the four-county area would cost \$360/acre-foot, total cost of \$2.8 million (amortized over 20 years) and save 640 acre-feet/year of water.
- Implementation of an increasing block rate structure for Lordsburg and Deming would cost \$17/acre-foot (Deming) to \$68/acre-foot (Lordsburg), total cost of \$600,000 (amortized over 20 years) and save 2,079 acre-feet/year of water.
- Implementation of an outdoor watering ordinance for Silver City would cost \$11/acre-foot, total cost of \$100,000 (amortized over 20 years) and save 739 acre-feet/year of water.

Municipal demand management can reduce withdrawals from groundwater in the four-county area by 3,670 – 4,260 acre-feet per year thus extending the life of groundwater supplies and reducing the need to develop additional new infrastructure for SWNM communities.

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<sup>3</sup> Rice, Jennie. “Cost-Effective Utilization of Arizona Water Settlement Act Subsidies for Southwestern New Mexico,” in press.

<sup>4</sup> AMEC, “Regional Water Demand Study for Southwest New Mexico Catron, Grant, Hidalgo and Luna Counties” October 2010. p. 3-50. [http://www.awsaplanning.com/Studies\\_files/FINAL%20report%20SW%20Demand.pdf](http://www.awsaplanning.com/Studies_files/FINAL%20report%20SW%20Demand.pdf)

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

This project promotes conservation of our groundwater supplies so that communities can utilize these supplies in a more sustainable way for an overall benefit to the environment.

According to the Southwest New Mexico Regional Water Plan, “water conservation tools can significantly reduce local demand on local water supply and treatment facilities. For significant populations to be supported in the Southwest Region without eventually depleting local groundwater resources and quality of life, municipal conservation must continue to be emphasized, thereby contributing to the long-term sustainability of water resources. If a municipality were to dedicate the amount of water conserved to the preservation of a particular species or sensitive habitat, then a conservation program could directly benefit the environment.”<sup>5</sup>

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

Implementation of water conserving technologies for municipal and industrial use throughout southwestern New Mexico is a means to make this historical use of water more efficient in order to decrease the amount of groundwater mining occurring in the region and ensure reliable supply for future generations.

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<sup>5</sup> DBSA. 2005 “Southwest New Mexico Regional Water Plan” p. 8-36.