FIRST LEVEL SCREENING - *WEEG 2015*

APPLICANT NAME: SNWA	**CONTROL NUMBER:** 98
APPLICANT LOCATION: Las Vegas, NV	**TASK AREA:** ABD
PROJECT NAME: Landscapes Rebate Program	**BOR $:** 300,000 **Cost Share $:** 3,000,000

	SCREENING FACTOR	COMPLETE	COMMENTS
1	Eligibility requirements		
	• Eligible applicant in a Reclamation state	✓YES __NO	
	• 50% or more non-Federal cost share	✓YES __NO	
	• Authorized funding amount ($1 Million total – no more than $500,000 a year)	✓YES __NO	
	• Funding Group I or II	✓I __II	
	• Length of project (9/30/17 – FG I or 9/30/18 – FG II)	✓YES __NO	6/30/16
2	Proper format and length (75 pages)	✓YES __NO	
3	Proposal content		
	• SF-424 (authorized signature)	✓YES __NO	g.gov
	• SF-424B or SF-424D (authorized signature)	✓YES __NO	g.gov
	• Title page	✓YES __NO	
	• Table of contents	✓YES __NO	
	TECHNICAL PROPOSAL/EVALUATION CRITERIA (No More Than 50 Pages)		
	• Executive summary	✓YES __NO	
	• Background data	✓YES __NO	
	• Technical Project description	✓YES __NO	
	• Evaluation Criteria	✓YES __NO	
	• Project Benefits/Performance Measures	✓YES __NO	
	• Potential Environmental Impact Desc.	✓YES __NO	
	• Required Permits/Approvals, if applicable	__YES ✓NO	N/A
	• Letters of Project Support	__YES ✓NO	
	• Official Resolution (Required 30 Days After)	✓YES __NO	
	PROJECT BUDGET		
	• Funding Plan	✓YES __NO	
	• Letters of Funding Commitment	__YES ✓NO	
	• Budget Proposal	✓YES __NO	
	• Budget Narrative	✓YES __NO	
	• SF-424A or SF-424C	✓YES __NO	

1st Level Screening Comments (Screening Committee Member):

Summary Comments (Grants Officer):

Applicant is eligible for consideration during the Second Level Evaluation phase X **Yes** ____ **No**

Grants Officer _____ **Date** 1/22/15

Southern Nevada Water Authority
Water Smart Landscapes Rebate Program
($300,000)

Applicant:
Southern Nevada Water Authority

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1. Technical Proposal: Executive Summary

Date: January 23, 2015
Applicant: Southern Nevada Water Authority
Location: 1001 South Valley View Boulevard
Las Vegas, NV 89153 (Clark County)

Project Overview:
As severe and sustained drought conditions in the Colorado River Basin continue to threaten water supplies and delivery systems, water conservation has become a critical tool in helping to ensure a safe and reliable drinking water supply for Southern Nevada. Since 1991, the Southern Nevada Water Authority (SNWA) and its member agencies have implemented one of the most comprehensive and aggressive water conservation programs in the United States. Conservation initiatives have helped to save billions of gallons of water annually, extending the availability of Nevada's 300,000 acre-feet per year (AFY) Colorado River water appropriation. Within the SNWA's member agencies' service areas, nearly all water used meets municipal demands.

This project proposal seeks $300,000 from the Bureau of Reclamation (Reclamation) WaterSMART Water and Energy Efficiency Grants to support Southern Nevada's continued water conservation efforts. Funding will support a portion of the SNWA's 2015/2016 Water Smart Landscapes Rebate Program (WSL Program). The SNWA will provide a minimum matching contribution of $3 million for a total project cost of $3.3 million. This project will result in an estimated recurring annual savings of 441 AFY by converting 2,578,125 square-feet of lawn to water-efficient landscaping. Over the life of the improvement (50 years), the cumulative recurring impact of this project is estimated to result in a savings of approximately 22,050 AF.

Task Area:
The proposed project fits within grant Task Area A, *Water Conservation – projects resulting in quantifiable and sustained water savings or improved water management.* The SNWA's WSL Program provides a financial incentive for property owners to replace lawn with water-efficient landscaping. The program has proven to be the region's most effective way to achieve significant and lasting conservation gains, providing water savings that directly extend the region's existing supplies.

In addition to meeting the objectives of Task Area A, the water conserved through this program supports the goals of Task Area B by providing quantifiable reductions in energy consumption and Task Area D through resultant contributions to existing water banks in California, Arizona and Southern Nevada.

Length of Time and Estimated Completion Date
The proposed project encompasses landscape conversion rebates that are distributed under the SNWA's WSL Program during fiscal year 2015/2016 (July 1, 2015–June 30, 2016). All project work will be completed by June 30, 2016. Program participation is dependent on customer demands, which has been fairly steady in prior years.

2. Technical Proposal: Background Data

The SNWA was formed in 1991 by a cooperative agreement among the following water and wastewater agencies in Southern Nevada:

- Big Bend Water District
- City of Boulder City
- City of Henderson
- City of Las Vegas
- City of North Las Vegas
- Clark County Water Reclamation District
- Las Vegas Valley Water District

Together, these seven agencies provide water and wastewater service to nearly 2 million residents in the cities of Boulder City, Henderson, Las Vegas and North Las Vegas, and areas of unincorporated Clark County (the service area is shown in the map included as Appendix A). As their wholesale water provider, the SNWA is responsible for water treatment and delivery, as well as acquiring and managing the region's short and long-term water resources. Since its inception, the SNWA has worked to seek new water resources, manage existing and future water resources, construct and manage regional water facilities, and promote conservation.

The onset of severe drought conditions on the Colorado River underscores the critical role of conservation in helping to meet current and future demands. If drought conditions continue, Southern Nevada may be subject to declared Colorado River shortages as early as 2017—making Southern Nevada's conservation efforts even more important. In addition, further declines in Lake Mead's water level could result in additional shortages, which would further stress the ability of water supply facilities to meet water demands. Water conservation will help to mitigate these concerns.

The SNWA and its member agencies depend on the Colorado River for approximately 90 percent of the community's drinking water needs. The SNWA's primary resource is its share of Nevada's consumptive-use apportionment of 300,000 AFY of Colorado River water. In addition to this apportionment, the SNWA also has access to groundwater rights in the Las Vegas Valley, purchased/leased rights along the Muddy and Virgin rivers, and Coyote Spring Valley groundwater rights, which can be conveyed to the Colorado River for Intentionally Created Surplus (ICS) credit.

In Southern Nevada, the SNWA serves as a regional water wholesaler, which eliminates the need for direct marketing between municipalities. Instead, unused Colorado River resources are stored for the community's future use in water banks located in Southern Nevada, California and Arizona. The Southern Nevada water bank, established in 1987, has approximately 359,000 AF of credits, including water banked for the Las Vegas Valley Groundwater Management Program. The SNWA's California water bank has accumulated approximately 162,000 acre-feet of credits, while Arizona's bank has accumulated 601,000 acre-feet since the inception of Nevada Interstate Banking in 2002. SNWA's water conservation gains have helped further its banking efforts. Since 2002, water-efficiency programs have helped the SNWA to contribute approximately 269,000 AF of unused Nevada Colorado River water toward interstate banking efforts.

In the event that Colorado River shortages are implemented, the SNWA intends to utilize banked resources to help temporarily offset supply availability. Conservation improves the ability to respond to shortages both by directly reducing demand and freeing up resources that can be banked for times of emergency.

Program Description
Since its creation in 1991, the SNWA has implemented a number of conservation programs focused on reducing water use. While the SNWA actively promotes indoor conservation, in Southern Nevada the greatest opportunity for water conservation lies in curbing outdoor water use. According to consolidated data provided by SNWA member agencies, residents account for approximately 59 percent of water use. Approximately, 60 percent of Southern Nevada's total annual water supply is used consumptively, meaning it can be used just once—commercial and residential landscape irrigation is collectively the single largest consumptive use.

The SNWA has realized significant water savings as part of its lawn conversion program. As a measure of success, since 2002 Southern Nevada's consumptive water use has declined by approximately 33 billion gallons annually, despite the addition of 400,000 new residents and millions of annual visitors. In addition, total water use stated in gallons per capita per day (GPCD) has been reduced 30 percent (from 314 GPCD in 2002 to 219 GPCD in 2012) and significant recent progress has been made toward the community's new conservation goal of 199 GPCD by 2035. Achieving this goal is estimated to save nearly 276,000 AFY by 2035, with incremental gains in preceding years.

The SNWA has expended more than $195 million to the WSL program to date, resulting in the removal of more than 171 million square-feet of turf. This represents a cumulative savings of approximately 240,000 AF and annual recurring savings of more than 29,400 AFY. Due to a substantial decline in revenue streams resulting from current economic conditions, the SNWA cannot sustain historic program funding levels. Prior to the economic downturn, the SNWA was budgeting more than $35 million annually for conservation programs. Despite continued high program demand, the SNWA has been required to scale back the WSL Program's annual budget by 62 percent since the 2009/2010 fiscal year. Reclamation's WaterSMART Water and Energy Efficiency Grants will provide an important contribution to continuing the impact and capacity of this program.

System Overview
The SNWA manages the Southern Nevada Water System's (SNWS) regional pumping, treatment and delivery facilities. SNWS diverts and treats raw Colorado River water from Lake Mead and delivers potable water to Southern Nevada's municipal water purveyors (Las Vegas Valley Water District, City of Henderson, City of North Las Vegas and City of Boulder City).

Water is extracted via two 600 million gallons per day (MGD) raw water intakes submerged within Lake Mead (located at elevation 1,050 and 1,000 feet, respectively). Water collected at these diversion points is transported to and treated at one of the SNWA's two water treatment facilities. These facilities treat and deliver an average of approximately 400 MGD and have a maximum capacity of 900 MGD. Treated water is delivered to the municipal water purveyors through more than 160 miles of large diameter pipeline, which traverse the Las Vegas Valley and connect to purveyor systems. SNWA facilities support water distribution to more than 500,000 customer accounts and nearly 2 million residents in Southern Nevada.

Energy Efficiency
Water treatment and delivery is energy intensive. Each acre-foot of water saved will result in an estimated 2,118 kilo-Watt hours (kWh) energy reduction. As a result of the WSL Program, the SNWA saves an estimated 57,000 megawatt hours (MWH) annually.

The SNWA obtains energy from a number of sources. In 2013, these included 721,825 MWH from the Silverhawk Power Station (82 percent), 111,118 MWH hydropower generated at Hoover Dam and purchased from Reclamation (13 percent), 10,416 MWH market purchases (1 percent), and small quantities of power purchased from NV Energy (32,926 MWH) or generated by SNWA solar and

hydropower projects (8,829 MWH). The energy conserved as a result of the proposed project allows the SNWA to reduce its non-renewable market purchases.

Relationship with Bureau of Reclamation
The SNWA has established long-standing relationships with Reclamation, and has coordinated on a number of initiatives including the Brock Reservoir System Efficiency Project and the Yuma Desalting Plant Pilot Project; development and implementation of interstate water banking agreements with Arizona and California; Colorado River accounting and procedures for return-flow credits; a Xeriscape Conversion Study; and environmental restoration and stabilization initiatives in the Las Vegas Wash. The SNWA also has received two grants in support of the WSL program in FY 2014—$300,000 was awarded by the WaterSMART: Water and Energy Efficiency Grants Program with an additional $100,000 being awarded through the Water Conservation Field Services Program.

3. Technical Proposal: Technical Project Description

Water Smart Landscapes Program Overview:
In Southern Nevada, nearly all water used indoors is recovered, treated and returned to the Colorado River system for return-flow credits. The recycling of Colorado River water used in Southern Nevada is accrued according to the 1984 U.S. Bureau of Reclamation "Procedure for Determining Return-Flow Credits to Nevada from Las Vegas Wash" and subsequent administrative updates authorized by Reclamation. This process extends Nevada's Colorado River water supply by nearly 70 percent. As a result, the SNWA's conservation efforts emphasize reducing outdoor water use, which cannot be recovered through return-flow credits.

The WSL Program is a key component in the SNWA's efforts to meet its conservation goals. The WSL Program encourages property owners to convert lawn by providing a financial incentive to offset a portion of the cost associated with the conversion. The program rebates $1.50 per square-foot for the first 5,000 square-feet converted per property, and $1.00 per square-foot for each additional square-foot converted. The maximum award for any property in a fiscal year is $300,000. Based upon a joint Reclamation/SNWA research project conducted from 1995 to 2000, every square-foot of grass replaced with desert landscaping saves an average of 55.8 gallons of water per year (see Subcriteria No.1(a) for scientific basis of estimate).

Since 1999, the WSL Program has supported the removal of more than 171 million square-feet of lawn–resulting in cumulative conservation savings of more than 240,000 AF of total water, and an annual recurring savings of more than 29,400 AFY.

The SNWA will contribute $3 million in matching contributions to the proposed project, which will be derived from SNWA budgeted 2015/2016 WSL Program funding. At current budget levels, this project will result in the conversion of 2.6 million square-feet of turf and will save an additional 441 AFY.

Water Smart Landscapes Program Process:
The following details the general process that applicants to the WSL program follow to qualify for and receive landscape conversion rebates:

1. **Application** - Single-family property owners must submit an application to the WSL Program via mail or internet. Commercial and institutional properties contact a Programs Coordinator directly.

2. **Pre-conversion site inspection** – All properties must meet eligibility requirements. At the pre-conversion site inspection, SNWA staff document the existing landscape, determine eligibility to participate in the program and explain the program requirements to the property owner or agent.

   (Step 1-2 Duration: 14 days)

3. **Six month performance period** – After SNWA deems the property eligible for participation, the property owner is given up to six months to complete a landscape conversion. Subject to SNWA approval, participants may be granted up to six additional months.

   (Step 3 Duration: Customer dependent up to 6 months)

4. **Post-conversion site inspection** – Upon notice from the applicant that a conversion is complete, SNWA will inspect the landscape to ensure it meets minimum requirements and to determine the square footage eligible for rebate. If program requirements are not met, the applicant is given an additional 60 days or the remainder of the six-month time period to take corrective action.

5. **Rebate issuance** – Following a successful post-conversion site inspection, the customer is notified of the rebate amount. The customer acknowledges the amount by signing a form and returning it. A rebate check is then processed and mailed.

   (Step 4-5 Duration: 21 days)

   On average, this entire process takes approximately 3 to 4 months from initial customer request.

4. Technical Proposal: Evaluation Criteria

Criteria A - Water Conservation

Subcriteria No. 1(a) — Quantifiable Water Savings:

The total project cost for this funding request is $3,300,000. Based upon past participation, SNWA estimates that the average rebate during the project period will be $1.28 per square-foot. Based on this cost, the SNWA estimates that 2,578,125 square-feet of turf grass will be removed through this program in the coming fiscal year (during the grant performance period).

$$\textbf{Total Square Feet Converted} \quad \frac{\$3{,}300{,}000}{\$1.28/\text{square-foot}} = 2{,}578{,}125 \text{ square-feet}$$

In 1995, a multi-year Xeriscape Conversion Study was implemented as a result of a cooperative agreement between SNWA and Reclamation. Funded in part by Reclamation, the draft final report finished in 2005. This research involved hundreds of participants that were divided into three treatment groups: Xeric Study, Turf Study, and control groups. Data on both household water consumption and water consumption through irrigation submeters was collected. Submeters were installed to determine per-unit area water application for both xeric- and turf grass-dominated landscapes. The per-unit area savings of xeric- versus turf dominated landscapes as revealed by the submeter data was found to be 55.8 gallons per square-foot per year. This results in a significant savings of 76.4 percent when considered in the context of all available residential water conservation measures.

Based on the data gathered from the Xeriscape Conversion Study, SNWA is able to determine the water savings realized from landscape conversion projects completed through the WSL Program. The number of square feet of lawn converted to Xeriscape under the requirements of the WSL program will determine the number of gallons of water saved.

Based on the results of the joint SNWA and Reclamation research, this project will result in a 441 AFY savings per year.

$$\textbf{Total AFY Saved} \quad \frac{55.8 \text{ gal} \times 2{,}578{,}125 \text{ square-feet}}{325{,}851 \text{ gal/AF}} = 441 \text{ AFY}$$

The SNWA estimates the expected life of the improvements to be 50 years. Over the life of the improvement, the cumulative recurring impact of this portion of the 2014/2015 WSL Program is estimated to result in the savings of approximately 22,050 AF.

$$\textbf{Cumulative Recurring Impact} \quad 441 \text{ AFY} \times 50 \text{ years} = 22{,}050 \text{ AF}$$

The SNWA and its member agencies depend on the Colorado River for approximately 90 percent of the community's water resource needs. The SNWA's primary resource is its share of Nevada's consumptive-use apportionment of 300,000 AFY of Colorado River water. SNWA's member agencies also have groundwater rights in Las Vegas Valley totaling 46,830 AFY. In addition, the SNWA has a right to purchased/leased rights along the Muddy and Virgin rivers and Coyote Spring Valley groundwater rights, which can be conveyed to the Colorado River for Intentionally Created Surplus (ICS) credit. These resources have a total consumptive use of approximately 34,000 AF expected to be available during 2015. Total water use in 2013 was approximately 480,000 AF, including groundwater, Colorado River water diversions and direct reuse.

In Southern Nevada, the SNWA serves as a regional water wholesaler, which eliminates the need for direct marketing between municipalities. Instead, unused Colorado River resources are stored for future use in water banks located in Southern Nevada, California and Arizona. The Southern Nevada water bank, established in 1987, has approximately 359,000 AF of credits, including water banked for the Las Vegas Valley Groundwater Management Program. The SNWA's California water bank has accumulated approximately 162,000 acre-feet of credits, while Arizona's bank has accumulated 601,000 acre-feet since the inception of Nevada Interstate Banking in 2002. SNWA's water conservation gains have helped further its banking efforts. Since 2002, water-efficiency programs have helped the SNWA to contribute approximately 269,000 AF of unused Nevada Colorado River water toward interstate banking efforts.

In the event that Colorado River shortages are implemented, the SNWA intends to utilize banked resources to help offset supply availability. Conservation improves the ability to respond to shortages both by directly reducing demand, and by freeing up resources that can be banked for times of emergency. The proposed project will yield a recurring annual water savings of 441 AFY, resulting in a cumulative 22,050 AF available for banking over the life of the project.

Subcriteria No. 2 — Percentage of Total Supply:
According to the SNWA's 2013 Water Budget, member agency customer water use was approximately 480,000 AF, including groundwater, Colorado River water diversions (allocation and return-flow credits) and direct reuse. The SNWA meters its Colorado River diversions at individual diversion points in Southern Nevada, including SNWS Intakes 1 and 2. Return-flow credits are based on measured flows at gauges in the Las Vegas Wash. The SNWA reports Colorado River diversions to Reclamation, and the Colorado River Commission of Nevada reports return-flow credits to Reclamation. Nevada Colorado River water diversions, return-flow credits, and consumptive use are reported by Reclamation annually in its Colorado River Accounting and Water Use Report.

Water savings resulting from the proposed project represent only a small fraction of the total water supply (0.16 percent). However, the WSL Program is a long-term conservation strategy and cannot be viewed as a single year. Although the incremental gains of each year are small, the cumulative impact of the program has been significant—when considering all projects completed since inception, the WSL Program has achieved an annual recurring savings of more than 29,400 AFY. With the WSL Program budget cut by 62 percent since the 2009/2010 fiscal year, additional funding is critical to continue the program's momentum, adding year by year incremental gains to the more than 5 percent overall savings that the program has achieved to date.

Subcriteria No. 3 — Reasonableness of Costs:
Calculating a 50-year improvement life, the cost of investment is $149.66 per acre-foot.

$$\textbf{Cost of Investment} \quad \frac{\$3{,}300{,}000}{441 \text{ AFY} \times 50 \text{ years}} = \$149.66 \text{ per acre-foot}$$

Criteria B- Energy-Water Nexus
Subcriteria No.2 — Increasing Energy Efficiency in Water Management
Under the proposed project, each acre-foot of water saved will yield an estimated 2,118 kilo-Watt hours (kWh) of energy conserved. These savings are estimated by calculating the power required to treat and deliver one acre-foot of water to the average customer (includes wholesale and purveyor power uses).

Through this portion of the 2015/2016 WSL Program, the region will save an estimated 934,038 kWh each year, with a total savings of more than 47 million kWh through the life of the project.

$$\textbf{Energy Savings} \quad 441 \text{ AFY} \times 2{,}118 \text{ kWh} = 934{,}038 \text{ kWh}$$

The SNWA is committed to conserving energy and utilizing renewable resources when possible. The SNWA voluntarily committed to meet 25 percent of its energy needs through renewable resources by 2025, which parallels Nevada's Renewable Energy Portfolio Standards. At present, more than 14 percent of energy used by the SNWA is generated through renewable resources. The savings generated by the proposed project will allow the SNWA to reduce its non-renewable market purchases, increasing the emphasis on renewable energy.

Criteria C- Benefits to Endangered Species
The Colorado River watershed contains a number of sensitive and protected species, including four endangered fish, four endangered birds and one endangered invertebrate. In 1994, the U.S. Fish and Wildlife Service designated 1,980 miles of river as "critical habitat" for the four listed fish within the Colorado River Basin. The presence of these listed species makes Endangered Species Act (ESA) compliance a major component of resource planning along the Colorado River and its tributaries.

Management of the river's resources is key to protecting these species and their habitats. Although the conversion of urban turf landscaping provides no direct benefits to threatened or endangered species, water conservation achievements can indirectly increase Reclamation's flexibility in managing Lake Mead and Colorado River water resources.

Construction activities associated with the conversion of lawn will not harm or negatively impact any of Southern Nevada's threatened or endangered species. All landscape conversions will be completed by private parties and implemented on private land within previously developed residential and commercial areas in Southern Nevada.

Criteria D- Water Marketing

Water conservation efforts in Southern Nevada directly correlate with regional water banking initiatives. Water conserved through the WSL Program has allowed SNWA to bank substantial quantities of Nevada's unused Colorado River apportionment in the Southern Nevada Water Bank, California Water Bank and Arizona Water Bank. The act of storing conserved water provides greater surety of supply to meet demands particularly during times of drought and possible water shortage.

In 2004, the SNWA and Colorado River Commission of Nevada (CRC) entered into initial agreements with the Metropolitan Water District of Southern California (MWD) and Reclamation to bank unused Nevada Colorado River water in Southern California until it is needed. The agreement with MWD was amended in 2009 to provide additional terms and conditions for storage and recovery. The agreement provides California with improved versatility to manage water quality and supply while diversifying Southern Nevada's resource portfolio. Under the agreements, Nevada can recover up to 30,000 AF per year from the storage account during normal water supply conditions, beginning in the year 2022 or earlier in the event of declared Colorado River shortages. To date, the SNWA has banked 162,000 AF in California. California water banking is a regionally significant initiative, providing resource managers in both states with flexibility.

Beginning in 2001, the SNWA, the Arizona Water Banking Authority (AWBA), the Arizona Department of Water Resources, Central Arizona Water Conservation District and the CRC entered into agreements for the SNWA to establish a bank of storage credits in Arizona for future use. The SNWA acquires storage credits by paying the AWBA to bank unused Arizona or Nevada Colorado River water in Arizona's underground aquifer. Subsequent amendments, including a 2009 amendment, provide the SNWA with a guarantee that the AWBA will store 1.25 million acre-feet of water for SNWA in the Arizona Water Bank. As part of the agreement, SNWA can recover 40,000 AFY of consumptive use during a normal Colorado River water supply year with advanced notice, as well as the opportunity to recover additional water from Arizona to make up for reductions in Nevada's basic apportionment during Colorado River shortages. In addition, the SNWA has directed approximately 61,000 AF of unused Nevada Colorado River water to AWBA for banking on SNWA's behalf. The SNWA's conservation efforts directly contributed toward making this water available for banking in the Arizona Water Bank.

The SNWA manages the Southern Nevada Water Bank within the Las Vegas Valley Groundwater Basin. Since the program's inception in 1987, unused Colorado River water has been artificially recharged into the Las Vegas Valley aquifer. This resource is a critical tool in managing summer peak-use demands and is an important component in the SNWA water resource portfolio. To date, Southern Nevada has stored 359,000 AF of water in the local groundwater basin for future use, with an additional 17,378 AF banked in the Las Vegas Valley available for the benefit of the Las Vegas Valley Groundwater Management Program (LVVGMP). As opportunities arise and circumstances warrant, this water bank will continue to be utilized for water-banking initiatives. The water banked on behalf of the LVVGMP will remain in storage, and it is not intended to be used by SNWA in the future use.

Agreements and related permits are in place in support of the described actions. No known legal constraints limit the described water marketing/banking initiatives. Reclamation regulations permit all of the above-mentioned activities.

Criteria E- Other Contributions to Water Supply Sustainability

The intent of the WSL Program is to make more water available to respond to the challenges of meeting demands, climate change and drought. The program is a direct effort to establish a more efficient and sustainable water supply for Southern Nevada. The water that will be conserved through this initiative is currently being used consumptively for landscape irrigation. Water conserved by the establishment of more efficient landscaping approaches will, in the short-term, reduce system demands and allow for Nevada's unused Colorado River apportionment to be used for other purposes, including banking initiatives in California, Arizona and Southern Nevada, which provide for greater security during times of drought and shortages. Long-term, Southern Nevada's population is projected to be 2.65 million by 2035 and 3.10 million by 2050. Conservation efforts extend Southern Nevada's water resources and secure future banked resources to meet the increased water demands and offset potential supply shortages.

Criteria F- Implementation and Results

Subcriteria No. 1 — Project Planning:

The SNWA has developed a number of planning documents that guide the management, acquisition and conservation of its water resources. To help plan for the future, the SNWA has developed and maintains a comprehensive Water Resource Plan (available at http://www.snwa.com/ws/resource_plan.html). This document includes a 50-year planning horizon where future water resources are assessed against projected demands. The plan is reviewed annually and updated as needed. Since 1996, the plan has been revised eight times to reflect rapidly changing conditions driven by drought and growth. The plan considers both water conservation initiatives and banking arrangements as important goals and resources. The WSL Program is specifically highlighted as an important conservation tool, which extends the region's water resources.

In addition, and in accordance with Reclamation requirements for Section 210(b) of the Reclamation Reform Act of 1982, the SNWA maintains a regional water conservation plan that identifies water conservation strategies and goals to protect and extend Southern Nevada's available water resources (available at http://www.snwa.com/assets/pdf/about_reports_conservation_plan.pdf). The SNWA works closely with its member agencies to refine conservation strategies and programs that are appropriate for the community. The 2014-2018 SNWA Conservation Plan is currently on file with Reclamation. This plan sets a new target goal of 199 GPCD by 2035. The Conservation Plan identifies the WSL Program as a critical tool in achieving this conservation goal.

Subcriteria No. 2 — Readiness to Proceed:

Estimated Project Schedule:

As a customer rebate program, the WSL Program is dependent upon customer demand. Historically, rebate issuance has remained relatively steady through the fiscal year. If approved, SNWA will be able to proceed as soon as an agreement is entered. By quarter, expenditures for this portion of the FY 2015/2016 WSL Program are anticipated to track the following estimated forecast:

Fiscal Year 2015-2016	Percent	Landscape Converted	Rebate Issuance
Q1 - July 1 – September 30	25	644,531.25 square-feet	$825,000
Q2 - October 1 – December 31	25	644,531.25 square-feet	$825,000
Q3 – January 1 – March 31	25	644,531.25 square-feet	$825,000
Q4 - April 1 – June 30	25	644,531.25 square-feet	$825,000
Total	100	2,578,125 square feet	$3,300,000

As a non-construction program, the implementation of this project does not require issuance of any permits.

Subcriteria No. 3 — Performance Measures:

Performance measures for this program will be calculated in *rebates issued, turf converted* and *water saved.* Total program performance measures include the issuance of $3,300,000 in rebates, 2,578,125 square-feet of turf converted and the recurring annual conservation of 441 AFY. As described in the table below, Reclamation's $300,000 contribution to this program will result in the conversion of approximately 234,375 square-feet of lawn and the recurring annual conservation of 40 AFY. The number of rebates issued will be available upon project completion.

Agency	Contribution	Turf Converted (square feet)	Water Conserved (AFY)
SNWA	$3,000,000	2,343,750	401
Reclamation	$300,000	234,375	40
Total	$3,300,000	2,578,125	441

Conservation progress is measured by annually comparing the community's actual water use to the expected water use without conservation measures in effect. To measure conservation, the SNWA uses an explanatory regression model to determine the variables that influenced Southern Nevada's water use during the preceding year. Although the model has identified a substantial number of relevant variables, the most significant are related to population, weather and economic indicators. This data is obtained from other agencies on an annual basis.

To track and monitor the effectiveness of the WSL Program, the SNWA developed the Water Efficiency Incentive and Rebate Database (WEIRD). Designed in-house and launched in September 2004, the WEIRD database tracks all participants, processes and results related to the WSL Program. Important features include individual participant tracking, Clark County Assessor property record information, rebate application information, site assessment information, converted square footage, and rebate amounts. Other functions include the ability to run various reports on program participation, to track quality assurance performed on staff work, and to run queries on numerous tracking and enrollment options. All of these functions allow the database to serve as the primary method for tracking performance measures. Information regarding results of the program can be made available to Reclamation as needed, or quarterly through progress reporting processes. At project completion, Reclamation will be provided with a report summarizing the number of square feet converted, rebates issued, acre-feet per year saved and other relevant program information.

Criteria G- Connection to Reclamation Project Activities

Reclamation is a critical partner in SNWA's water management and conservation efforts. The SNWA diverts 90 percent of its water supply from the Reclamation managed Colorado River system. The SNWA receives delivery of Colorado River water from Reclamation under several contracts held by the SNWA or its member agencies, as listed below:

SNWA Contracts:

- Contract Number 2-07-30-W0266, Amendment Number 1, Amended and Restated Contract with the Southern Nevada Water Authority, for the Delivery of Colorado River Water
- Contract Number 7-07-30-W0004, Amendatory and Supplemental Contract between the United States and the State of Nevada for the Delivery of Water and Construction of Project Works

SNWA Member Agency Contracts:

- Contract Number 14-06-300-978, "Boulder Canyon Project Arizona-California-Nevada Contract for the Delivery of Water," City of Boulder City
- Contract Number 0-07-30-W0246, Contract for Delivery of Water to City of Henderson
- Contract Number 14-06-300-2130, "Boulder Canyon Project Contract for Delivery of Water to Las Vegas Valley Water District"
- Contract Number 2-07-30-W0269, "Boulder Canyon Project Contract with the Big Bend Water District, Nevada, for the Delivery of Colorado River Water"

The water delivered by SNWA under these contracts is diverted at Reclamation approved diversion points in the Colorado River at Lake Mead and below Hoover Dam. This includes delivery of water through the Robert B. Griffith Water Project (formerly the Southern Nevada Water Project) constructed by Reclamation, as authorized by an Act of the United States Congress.

In addition, the SNWA has established long-standing relationships with Reclamation, and has coordinated on a number of initiatives including funding for the Brock Reservoir System Efficiency Project and the Yuma Desalting Plant Pilot Project; development and implementation of interstate water banking agreements with Arizona and California; Colorado River accounting and procedures for return-flow credits; a Xeriscape Conversion Study; and environmental restoration and stabilization initiatives in the Las Vegas Wash.

The SNWA also has received two grants in support of the WSL program in FY 2014—$300,000 was awarded through the WaterSMART: Water & Energy Efficiency Grant Program with an additional $100,000 being awarded through the Water Conservation Field Services Program.

Section F. Performance Measure for Quantifying Post-Project Benefit

As further described in Criteria F, Subcriteria No. 3 performance measures for this program will be calculated in *rebates issued, turf converted* and *water saved.*

Section G. Environmental Compliance

(1) Will the project impact the surrounding environment?

The elements of this proposal are not anticipated to have any environmental impacts that would require consideration under NEPA or NHPA. Work will be implemented on private land, within urbanized Southern Nevada communities, all of which have been previously disturbed.

(2) Impact on listed or candidate species?

The Colorado River watershed contains a number of sensitive and protected species. Management of the river's resources is key to protecting these species and their habitats. Although conversion of turf landscaping provides no direct benefits to threatened or endangered species, water conservation achievements can indirectly increase Reclamation's flexibility in managing Lake Mead and Colorado River water resources.

Construction activities associated with the conversion of lawn will not harm or negatively impact any of Southern Nevada's threatened or endangered species. All landscape conversions will be completed by private parties and implemented on private land within previously developed residential and commercial areas in Southern Nevada.

(3) Wetlands or other surface waters inside the project boundaries?
Not applicable.

(4) When was the water delivery system constructed.
The majority of the SNWA and its member agencies water system has been constructed over the past 40 years. This project is not anticipated to impact any infrastructure that might be classified as historic.

(5) Modification to individual features of an irrigation system?
System modifications are made to individual property owner's residential and commercial irrigation systems. The exact date of construction can vary widely but typically does not exceed 30 years.

(6) Are there any buildings, structures or features listed or eligible for listing on the National Register of Historic Areas?
The potential project area includes private residences and commercial residences throughout a large section of Southern Nevada, all of which have been previously impacted. There are a number of historic properties or candidate sites throughout the area. However, it is not anticipated that any of these sites will be candidate projects for the issuance of rebates.

(7) Are there any known archaeological sites in the proposed project area?
The potential project area includes private residences and commercial residences throughout a large section of Southern Nevada, all of which have been previously impacted. There are a number of archaeological areas throughout the area. However, it is not anticipated that any of these sites will be candidate projects for the issuance of rebates.

(8) Will the project have a disproportionally high and adverse effect on low income or minority populations?
No.

(9) Will the project limit access to and ceremonial use of Indian sacred sites or result in other impacts on tribal lands?
No.

(10) Will the project contribute to the introduction, continued existence or spread of noxious weeds or non-native invasive species known to occur in the area?
Not applicable.

Section H. Required Permits or Approvals
As a non-construction program, it is not anticipated that the implementation of this project will require the issuance of any permits. Property owners of exceptionally large projects may be required to seek permits applicable to the size and scope of work being performed. However, acquisition of such a permit would be the responsibility of the property owner. Such an occurrence is an exception and is not reflective of the standard landscape conversation project.

Section I. Funding Plan and Letters of Commitment

The SNWA has four key funding sources, which include quarter-cent sales tax, connection fees, commodity fees and reliability charges. These revenue sources provide the organization with a mix of funding sources, which help to ensure the financial stability and capacity of the organization. Matching

contributions for the 2015/2016 WSL Program will be derived from bond proceeds currently held in the SNWA Enterprise Fund.

The SNWA's Fiscal Year 2015/2016 tentative budget contains adequate funding to support project activities and matching requirements. Prior to the economic downturn, the SNWA was budgeting nearly $35 million annually for conservation programs and is capable of managing program capacity. Due to diminished revenue streams driven by current economic conditions, the SNWA has been required to scale back the WSL Program's annual budget by 62 percent since the 2009/2010 fiscal year. Reclamation funding will provide an important contribution to continuing the impact and capacity of this program. The proposed work will not result in operations and maintenance obligations in future calendar years.

No in-kind contributions are incorporated into this proposal. In addition, no funding will be provided by a source other than the applicant.

In addition to this request, a complementary request for $1,000,000 ($333,333 per year for three years) has been submitted under the same program. Necessary match funding is available for both program grants.

Section J. Official Resolution

An official resolution authorizing the submission of this proposal and confirming the subject matching requirements was approved by the SNWA Board of Directors on January 15, 2015 and is attached to this proposal.

Section K. Budget Proposal

The following details the planned expenditures related to the implementation of the FY 2015/2016 WSL Program.

Budget Form

BUDGET ITEM DESCRIPTION	COMPUTATION		RECIPIENT FUNDING	RECLAMATION FUNDING	TOTAL COST
	$/Unit and Unit	Quantity			
SALARIES AND WAGES	N/A	N/A			
FRINGE BENEFITS	N/A	N/A			
TRAVEL	N/A	N/A			
EQUIPMENT	N/A	N/A			
SUPPLIES AND MATERIALS	N/A	N/A			
OTHER (REBATES)					
Customer Rebates	$1.28 square feet	2,578,125	$3,000,000	$300,000	$3,300,000
CONTRACTUAL	N/A	N/A			
Regulatory and Environmental Compliance	N/A	N/A			
TOTAL DIRECT COSTS			$3,000,000	$300,000	$3,300,000
INDIRECT COSTS – 0%			$0.00	$0.00	$0.00
TOTAL PROJECT COSTS			**$3,000,000**	**$300,000**	**$3,300,000**

Budget Narrative
All costs included in this proposal are directly related to rebate and contract costs. Program costs for salaries/wages, fringe benefits, travel, equipment and other supplies and materials are not being requested for consideration as either match or reimbursable expenditures. All costs are direct and necessary for project implementation. The non-federal contribution is 90 percent; federal contribution is 10 percent.

Salaries and Wages
Reclamation funding will not be expended for program administration. In addition to the SNWA's matching contribution, the SNWA will assume all overhead costs necessary to operate the program, including staffing, administration, marketing and other duties associated with assuring a successful program.

Fringe Benefits
Not applicable to this project.

Travel
Not applicable to this project.

Supplies and Materials
Not applicable to this project.

Other (rebates)
Expenditures totaling $3,300,000 in customer rebates will result in the estimated conversion of approximately 2,578,125 square-feet of turf. The average rebate issuance is $1.28; it is anticipated that variance will be within a plus/minus 5 percent.

Contractual
Not applicable to this project.

Regulatory and Environmental Compliance
Not applicable to this project.

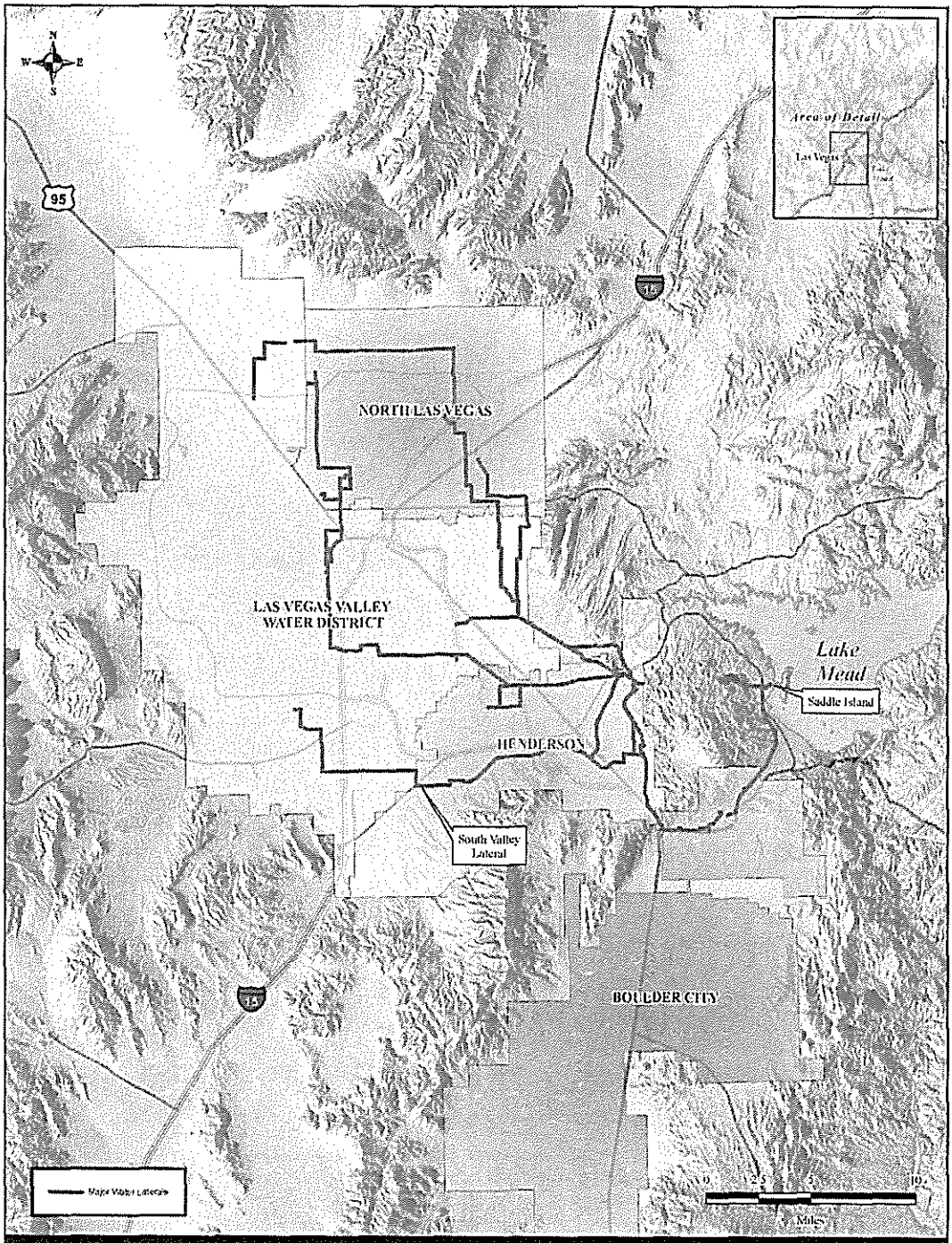
Total Direct Costs
Reclamation is being requested to contribute $300,000 toward direct WSL program. The SNWA will provide a cash match of $3 million.

Indirect Costs
Not applicable to this project.

SF-424A Budget Form

SUBMITTED VIA GRANTS.GOV

Appendix A – SNWA System



Southern Nevada Purveyor Service Areas & Major Water Laterals

RESOLUTION IN SUPPORT OF FUNDING REQUEST FOR
WATERSMART: WATER AND ENERGY EFFICIENCY GRANT PROPOSAL TO
THE UNITED STATES BUREAU OF RECLAMATION

WHEREAS, the U.S. Bureau of Reclamation WaterSMART: Water and Energy Efficiency Grants Program is soliciting proposals for and may provide financial assistance to irrigation districts, water districts and other organizations to implement projects that save water, improve energy efficiency, address endangered species and other environmental issues, and facilitate transfers to new uses; and

WHEREAS, the WaterSMART: Water and Energy Efficiency Grant Program specifically allows for project proposals involving an individual sale, lease or exchange of conserved water to another water use for agricultural, municipal or instream uses; and

WHEREAS, the Southern Nevada Water Authority has adopted a Water Resource Plan and a Conservation Plan, which outline specific water conservation strategies; and

WHEREAS, the Southern Nevada Water Authority will benefit significantly from financial assistance under the WaterSMART: Water and Energy Efficiency Grant Program to support water conservation efforts in Southern Nevada.

NOW, THEREFORE, BE IT RESOLVED that the Southern Nevada Water Authority Board of Directors agrees and authorizes:

1. The submission of an application to the U.S. Bureau of Reclamation WaterSMART: Water and Energy Efficiency Grant Program requesting $300,000 to support the Authority's Water Smart Landscape Rebate Program.

2. The submission of a proposal, including a funding plan that outlines the applicant's ability to provide up to $3,000,000 in matching funds, as specified by the WaterSMART: Water and Energy Efficiency Grant Program.

3. The Southern Nevada Water Authority's General Manager, or her designee, to execute and file an application and proposal with the U.S. Bureau of Reclamation for funding under the WaterSMART: Water and Energy Efficiency Grant Program, as outlined above.

Introduced and passed this 16th day of January, 2014.

Attest:

Patricia Mulroy, Secretary

Southern Nevada Water Authority

Mary Beth Scow, Chair

Approved as to form:

Gregory J. Walch, General Counsel