

Tahoe Sierra IRWM

Project Template

Please provide information in the tables below:

I. Project Proponent Information

Agency/ Organization	Truckee Donner Public Utility District
Name of Primary Contact	Steven Poncelet
Name of Secondary Contact	Brian Wright
Mailing Address	11570 Donner Pass Road
E-mail	stevenponcelet@tdpud.org
Phone (###)###-####	(530)550-8951
Other Cooperating Agencies/Organizations/Stakeholders	Truckee River Watershed Council, Town of Truckee, Nevada County, Placer County, Placer County Water Agency, Northstar Community Services District
Is your agency/organization committed to the project through completion? If not, please explain	Yes but this project is not currently budgeted and the timeline for funding depends on outside funding.

II. General Project Information

Project Title	Martis Valley Groundwater Basin Planning & Restoration Study
Project Category	<input type="checkbox"/> Water Supply/Wastewater <input checked="" type="checkbox"/> Restoration <input checked="" type="checkbox"/> Storm Water/Flood Control
Project Description (Briefly describe the project, in 300 words or less)	<p>The Martis Valley aquifer is the main water supply for the greater Truckee region. The US Bureau of Reclamation recently completed the Truckee River Basin study which included a state-of-the-art groundwater model for the Martis Valley groundwater basing and watershed. This study has identified key recharge areas for the basin which will help plan for and protect key recharge areas that have or may be damaged by human activity.</p> <p>This project will provide the opportunity to: protect and improve water quality; project the community water supply; manage groundwater for sustainable yield; contribute to ecosystem restoration; provide a model for applying science to solve water problems.</p> <p>The opportunity exists to conduct a study using existing LIDAR and other GIS data (slope, soil errodability, vegetation, and backcountry road density) to identify opportunities to mitigate the negative impacts to water supply, water quality, and erosion in key impacted recharge areas. Known impacted areas include the large, football field sized landing pads from historic logging activities along with the myriad of logging, fire, and OHV dirt roads.</p>

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	<p>The ability to identify key aquifer recharge areas that have been damaged by human activity would enable Truckee Donner PUD, along with the other groundwater users in the Martis Valley, to better understand and plan for adequate water supply and quality. The benefits would be directly to the Martis Valley aquifer, Martis Creek, Martis Dam, and the Truckee River.</p> <p>One outcome would be a list of potential restoration or mitigation projects. The benefits would include increased water supply, improved water quality, reduced erosion, and reduced storm water. This would also allow for improved communication and collaboration with the land-owners, responsible agencies, developers, and the restoration/environmental community.</p> <p>The project scope would be to conduct the study and produce a final report documenting the findings and creating a prioritized list of potential projects. This study and list of projects would then be used to try and secure funding for the most important and beneficial projects.</p>				
Project Prioritization:	<table border="1" style="width: 100%;"> <tr> <td data-bbox="690 892 1144 961">Total number of projects submitted by your Agency:</td> <td data-bbox="1144 892 1446 961" style="text-align: center;">4</td> </tr> <tr> <td data-bbox="690 961 1144 1039">Agency Prioritization of this project (e.g., 3 of 5)</td> <td data-bbox="1144 961 1446 1039" style="text-align: center;">2 of 4</td> </tr> </table>	Total number of projects submitted by your Agency:	4	Agency Prioritization of this project (e.g., 3 of 5)	2 of 4
Total number of projects submitted by your Agency:	4				
Agency Prioritization of this project (e.g., 3 of 5)	2 of 4				
Does this project contribute to a larger Project (e.g., TMDL, EIP, Phase 2 of 3) ? If so provide description.	<p>This project would enable improved water supply and water quality and would also enable reduced erosion and corresponding benefit to storm water. Any future projects could be mitigations against new development.</p>				
Political Support – List related MOUs, agreements or TACs currently in place.	<p>Stewardship of the Martis Valley aquifer is currently jointly shared between Truckee Donner PUD, Northstar CSD, and Placer County Water Agency and the three water purveyors collaboratively adopted the Martis Valley Ground Water Management Plan (GMP) and associated MOU's. The State of California passed the Sustainable Groundwater Management Act of 2014 (SGMA) requires that the three water agencies also work with the Town of Truckee, Placer County, and Nevada County of a new regulatory framework to management of the Martis Valley Groundwater Basin.</p>				
Project Location:					
Latitude:	Various				
Longitude:	Various				
Project Location Description (e.g., along the south bank of stream/river between river miles or miles from Towns/intersection and/or address):	<p>The project area is the key recharge areas in the watershed above the Maris Valley groundwater basin. The new recharge maps indicate that the key recharge areas around typically in the ~500 foot elevation range and are centered mostly east and west of Highway 267 between Northstar and Brockway Summit.</p>				

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III. Plan Objectives Addressed

For each of the objectives addressed by the project, provide a one to two sentence description of how the project contributes to attaining the objective and how the project will be quantified. If the project does not address any of the draft IRWM plan objectives, provide a one to two sentence description of how the project relates to a challenge or opportunity of the Region (see the bottom of page 4).

Objectives:	Will the project address the objective?	Brief explanation of project linkage to selected Objective	Quantification (e.g. acres of streams/wetlands restored or enhanced)
WQ1 - Meet approved TMDL standards in accordance with the attainment date, and participate in the development of future TMDLs.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Identifying impacted recharge areas and future restoration projects would improve recharge and reduce erosion.	
WQ2 – Reduce pollutant loads by implementing measures such as storm water LID retrofits, erosion control/restoration to meet Water Quality Objectives (WQOs) for receiving water bodies established in the Basin Plan within the planning horizon.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Again, identifying highly impacted/compacted areas will reduce erosion and improve water quality	Potential existing to restore 100’s or 1000’s of acres of impacted recharge areas.
WQ3 - Implement water quality monitoring programs through planning horizon, and coordinate annually throughout the Region.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A		
WQ4 - Ensure that drinking water supplied by public water systems continues to meet Federal and State standards.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Again, identifying highly impacted/compacted areas will reduce erosion and improve water quality.	Potential existing to restore 100’s or 1000’s of acres of impacted recharge areas.
WQ5 - Restore degraded streams, wetlands, riparian and upland areas to re-establish natural water filtering processes.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	This study would focus mostly in upland areas where the majority of the recharge for the Maris Valley aquifer occurs. Again, identifying highly impacted/compacted areas will reduce erosion and improve water quality	Potential existing to restore 100’s or 1000’s of acres of impacted recharge areas.

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Objectives:	Will the project address the objective?	Brief explanation of project linkage to selected Objective	Quantification (e.g. acres of streams/wetlands restored or enhanced)
WQ6 -Operate and maintain, build, or replace infrastructure for reliable collection, treatment and disposal of wastewater.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A		
WS1 - Provide water supply to meet projected demands for a 20-year planning horizon.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Projects identified in this study would improve recharge for the aquifer resulting in increased water supply	The Martis Valley aquifer provides almost 100% of the region's water.
WS2 - Operate and maintain, build, or replace infrastructure to reliably supply water.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Projects identified in this study would improve recharge for the aquifer resulting in increased water supply	Restoring and/or protecting key recharge areas could off-set future water infrastructure capital expenditures.
WS3 - Implement and promote water conservation measures and practices to meet state goals.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Improving water supply and educating the public about the need to conserve water are key State goals that would be accomplished by this study	The completed study and subsequent restoration projects would help educate the community about our watershed.
GWM1 - Maintain and monitor groundwater supply to assure future reliability.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	This study will help protect key recharge areas in the future and restore areas impacted by human activity.	Potential existing to restore 100's or 1000's of acres of impacted recharge areas.

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Objectives:	Will the project address the objective?	Brief explanation of project linkage to selected Objective	Quantification (e.g. acres of streams/wetlands restored or enhanced)
GWM2 - Promote groundwater protection activities for high quality groundwater, and advocate for improvements to impacted groundwater quality through public education.	<input type="checkbox"/> Yes x <input type="checkbox"/> N/A	YES. The ability to overlay past and planned development/human activities over key recharge areas will enable proper plan and protection for groundwater supply. The study and subsequent projects would be shared with stakeholders and the community to further public education.	Project scope would include at least one public meeting and multiple stakeholder meetings.
GWM3 - Manage groundwater for multiple uses (e.g. municipal/industrial/agricultural supply and environmental use).	<input type="checkbox"/> Yes x <input type="checkbox"/> N/A	YES. The goal of the study is to identify key recharge areas for protection and to restore impacted areas. The primary goal would be improved water supply but there are significant benefits to	Potential existing to restore 100's or 1000's of acres of impacted recharge areas.
ER1 - Enhance and restore water bodies, wetlands, riparian areas and associated uplands to support healthy watersheds, viable native fish, wildlife and plant habitats.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Addressing highly compacted logging landing pads and a substantial network of dirt roads would improve recharge, reduce erosion, improve water quality, and help storm water.	Potential existing to restore 100's or 1000's of acres of impacted recharge areas.
ER2 - Develop and implement programs to prevent the spread of existing invasive species and colonization of potential future invasive species.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A		

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Objectives:	Will the project address the objective?	Brief explanation of project linkage to selected Objective	Quantification (e.g. acres of streams/wetlands restored or enhanced)
ER3 - Implement, in coordination with public and private landowners, activities to manage forest health and wildfire risks.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	The key recharge areas for the Martis Valley are either owned by private interested, the Federal government, or the local Land Trust. Public-Private-NGO partnerships will be necessary to implement restoration projects. A side benefit or restoration activities would be improved forest health and reduced wildfire risk.	Potential existing to restore 100's or 1000's of acres of impacted recharge areas.
ER4 - Minimize ecosystem impacts caused by existing and new development.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Overlaying key recharge areas with planned developments will allow entitlement agencies to plan for and project key recharge areas.	
IWM1 - Conduct local and regional water-related planning activities within the planning horizon as supported by current and future watershed science.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	This study would combine a state-of-the-art groundwater model with world-class LIDAR/GIS technology	This planning tool could be used by multiple water agencies, entitlement agencies, and other interests.
IWM2 - Ensure collaboration among multiple jurisdictions within the Region for information exchange.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	The study/planning area is covered by two counties, one Town, three public water agencies, State & Federal agencies, private land owners, and environmental interests. The watershed is also one of the major sources of water supply for the State of Nevada.	Numerous interagency collaboration and public-private partnerships exist in the region and this study would help foster more.

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Objectives:	Will the project address the objective?	Brief explanation of project linkage to selected Objective	Quantification (e.g. acres of streams/wetlands restored or enhanced)
IWM3 - Increase public education and awareness of watershed functions, protection and restoration needs to encourage stewardship by the public.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	There will be a strong community and educational outreach component to this project and the primary focus is ‘How does the watershed work and what impacts do human activity have?’ Understanding this may change people’s behavior and would encourage stewardship by the public.	Project scope would include at least one public meeting and multiple stakeholder meetings.
IWM4 - Promote activities that reduce flood risk.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Improved recharge reduces storm water runoff and erosion both of which reduce flood risk.	
IWM5 - Address climate change (e.g. water quality, water supply, groundwater recharge, flood management) in local and regional planning efforts and support efforts to continue improving the science.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	The Truckee River Basin Study projects climate impacts to the Martis Valley Groundwater basin through the end of the century. Part of this study would address how climate change might impact/change recharge areas.	
IWM6 - Monitor water storage, release and exchange activities in order to improve coordination with regional planning.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	All of the water in the Martis Valley Groundwater Basin (and in the Tahoe-Truckee region) is governed by the Truckee River Operating Agreement (TROA) which is an agreement between two states and multiple stakeholders. Improving the understanding of aquifer recharge and human impacts will help overall coordination and regional planning since this is a shared resource.	

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If no objectives are addressed; describe how the project relates to a challenge or opportunity of the Region:

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Project Impacts and Benefits

Please provide a summary of the expected project benefits and impacts in the table below or check N/A if not applicable; **do not leave a blank cell.**

If applicable describe benefits or impacts of the project with respect to:		
a. Native American Tribal Community considerations.	<input type="checkbox"/> N/A	One beneficiary of improved recharge in the Martis Valley is the Pyramid/Piute Tribe of Nevada which relies on Truckee River water for the environmental health of Pyramid Lake.
b. Disadvantaged Community considerations¹.	<input type="checkbox"/> N/A <input checked="" type="checkbox"/>	
c. Environmental Justice ² considerations.	<input type="checkbox"/> N/A <input checked="" type="checkbox"/>	
d. Assist the Region in adapting to effects of climate change³.	<input type="checkbox"/> N/A	See above. Improve recharge and reduced environmental degradation will help the region adapt to climate change.
e. Generation or reduction of greenhouse gas emissions (e.g. green technology).	<input type="checkbox"/> N/A	Restoration projects tend to reduce greenhouse gas emissions or improve carbon sequestration.
f. Other expected impacts or benefits that are not already mentioned elsewhere.	<input type="checkbox"/> N/A	This could be a model for other groundwater basins/watersheds.

1. A Disadvantaged Community is defined as a community with an annual median household (MHI) income that is less than 80 percent of the Statewide annual MHI. A map has been provided with the Project Template Instruction for reference.

2. Environmental Justice is defined as the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation and enforcement of environmental laws, regulations and policies. An example of environmental justice benefit would be to improve conditions (e.g. water supply, flooding, sanitation) in an area of racial minorities

3. Climate change effects are likely to include increased flooding, extended drought, and associated secondary effects such as increased wildfire risk, erosion, and sedimentation.

IV. Resource Management Strategies (RMS)

For each resource management strategy employed by the project, provide a one to two sentence description in the table below of how the project incorporates the strategy. A description of the Resource Management Strategies can be found in Volume 2 of the 2009 California Water Plan here: <http://www.waterplan.water.ca.gov/cwpu2009/index.cfm>

Resource Management Strategy	Will the Project incorporate RMS?	Description, of how RMS to be employed if applicable
Reduce Water Demand		
Agricultural Water Use Efficiency	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	No
Urban Water Use Efficiency	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	No
Improve Operational Efficiency and Transfers		
Conveyance - Regional / local	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Yes, Improves overall watershed performance

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Resource Management Strategy	Will the Project incorporate RMS?	Description, of how RMS to be employed if applicable
System Reoperation	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Potential to restore damaged recharge areas and improve overall watershed performance and System Reoperation.
Water Transfers	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Increase Water Supply		
Conjunctive Management & Groundwater	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Improves recharge by reducing storm water and erosion.
Desalination	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Precipitation Enhancement		
Recycled Municipal Water	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Surface Storage -- Regional / Local	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Improve Water Quality		
Drinking Water Treatment and Distribution	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Groundwater and Aquifer Remediation	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Study would identify restoration opportunities in key recharge area improving water supply, water quality, and reducing storm water/erosion.
Matching Water Quality to Use	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Pollution Prevention	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Reduced erosion would improve water quality in Martis Creek, Martis Dam, and the Truckee River.
Salt and Salinity Management	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Urban Runoff Management	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Improved recharge and reduced erosion helps with Urban Runoff Management
Practice Resources Stewardship		
Agricultural Lands Stewardship	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Economic Incentives (Loans, Grants, and Water Pricing)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Ecosystem Restoration	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Study would identify Ecosystem Restoration opportunities in key recharge area improving water supply, water quality, and reducing storm water/erosion.
Forest Management	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Almost all of the key recharge areas for the Martis Valley are forested and the study would help with Forest Management
Land Use Planning and Management	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	This study would identify key recharge areas that have either been impacted by past human activity or which are planned to be developed or used in the future. Understanding this is

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Resource Management Strategy	Will the Project incorporate RMS?	Description, of how RMS to be employed if applicable
		critical for Land Use Planning and Management
Recharge Areas Protection	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The central theme of this study is Recharge Area Projection
Water-dependent Recreation	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Watershed Management	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	This study would identify key recharge areas that have either been impacted by past human activity or which are planned to be developed or used in the future. Understanding this is critical for Watershed Management.
Improve Flood Management		
Flood Risk Management	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Improved recharge and reduced storm water/erosion helps with Flood Risk Management.

Note: The following RMS have been omitted from the list: Conveyance-Delta and Surface Storage – CALFED.

Other RMS addressed and explanation:

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V. Project Cost and Financing - Please provide any estimates of project cost, sources of funding, and operation and maintenance costs, as well as, the source of the project cost in the table below.

a. Project Costs	Requested Grant Amount	Cost Share: Non-State Fund Source (Local/Federal Funding Match)	Cost Share: Other State Fund Source	Total Cost
1. Capital (2013 Dollars)	\$100,000	\$25,000 OR <input type="checkbox"/> DAC		\$125,000
2. Annual Operations and Maintenance (O&M)				
b. Can the Project be phased?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
1. If so provide cost breakdown by phase(s)	Project Cost	O&M Cost	Description of Phase	
Phase 1				
Phase 2				
Phase 3				
Phase 4				
c. List secured source(s) of funding for Project cost	Source(s)		Amount	
d. List proposed source(s) of unsecured funding and certainty of the sources for Project cost.	Martis Valley GMP Partners (TDPUD, NSCSD, PCWA) Rates		\$25,000 total	
e. Explain how operation and maintenance costs will be financed for the 25-year planning period for project implementation (not grant funded).	This is a Study. Future projects and funding would address this issue			
f. Basis for project cost¹ (e.g. conceptual, planning, bid, etc.)	Conceptual			
g. Has a Cost/Benefit analysis been completed?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
h. Please describe what impact there may be if the project is not funded. (300 words or less)	Key recharge areas are currently not formally considered when evaluating watershed management, human activities, and future development. We know that some key recharge areas are already impacted by decades of logging and human activities and we are concerned that current and future planned growth/activities may further degrade the watershed performance as measured by recharge/water supply, water quality, erosion, and storm water. The United States Bureau of Reclamation, with support from the Martis Valley GMP partners, has spent over			

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	<p>\$1,000,000 and counting to build the Martis Valley groundwater model and associated studies, including projections on the impacts of climate change. In addition, the Truckee Donner PUD, has state-of-the-art LIDAR/GIS systems that can identify things like slope %, vegetation, forest density, and road density. This study would combine/overlay this existing data, along with future growth/activities, on known key recharge areas to identify opportunities for restoration and to protect these areas in the future.</p>
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1. For the grant application a detailed project cost estimate will need to be provided with the following cost categories; per the IRWM PSP for Round 2, Implementation Grants: Direct Project Administration, Land Purchase/Easement, Planning/Design/Engineering/Environmental Documentation, Construction/Implementation, Environmental Compliance/Mitigation/Enhancement, Construction Administration, Other Costs, and Construction/Implementation Contingency.

VI. Project Status and Schedule -Please provide a status of the project, level of completion as well as a description of the activities planned for each project stage. If unknown enter **TBD**.

Project Stage	Check the Current Project Stage	Completed?	Description of Activities in Each Project Stage	Planned/Actual Start Date (mm/yr)	Planned/Actual Completion Date (mm/yr)
a. Assessment and Evaluation	<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> <input type="checkbox"/> N/A	Significant science has been completed to date and this study would combine this body of data/understanding to identify key aquifer recharge areas that could be restored or should be protected.	TBD	TBD
b. Final Design	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> <input type="checkbox"/> N/A	Final output of this project would be a detailed report that would identify key recharge areas and produce a list of potential restoration projects along with an understand how future activities may impact aquifer recharge		

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			and watershed performance.		
c. Environmental Documentation (CEQA/NEPA)	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <u>X</u>	Would be done on a project by project basis that may result from this study.		
d. Permitting	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <u>X</u>	Would be done on a project by project basis that may result from this study.		
e. Construction Contracting	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <u>X</u>	Would be done on a project by project basis that may result from this study.		
f. Construction Implementation	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <u>X</u>	Would be done on a project by project basis that may result from this study.		

Provide explanation if more than one project stage is checked as current status	
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VIII. Project Technical Feasibility

Please provide any related documents (date, title, author, and page numbers) that describe and confirm the technical feasibility of the project.

<p>a. List the adopted planning documents the proposed project is consistent with or supported by (e.g. General Plans, UWMPs, GWMPs, Water Master Plans, Habitat Conservation Plans, TMDLs, Basin Plans, etc.)</p>	<p>Town of Truckee, Placer County, and Nevada County General Plans, Martis Valley Ground Water Management Plan, Truckee Donner PUD UWMP and Water System Master Plan, California Sustainable Groundwater Management Act of 2014</p>
<p>b. List technical reports and studies supporting the feasibility of this project</p>	<p><u><i>Integrated Surface and Groundwater Modeling of Martis Valley, California, for Assessment of Potential Climate Change Impacts on Basin-Scale Water Resources;</i></u> Desert Research Institute and U.S. Geological Survey; April, 2015</p> <p><u><i>California GAMA Special Study:: Climate Change Impacts to Recharge in a High-Elevation Groundwater Basin;</i></u> Lawrence Livermore National Laboratory, California State University – East Bay, University of California Santa Barbara; February, 2014</p> <p>Note: There are half a dozen previous studies conducted on the Martis Valley groundwater basin and aquifer.</p> <p>Note: Truckee Donner PUD manages the GIS infrastructure for numerous agencies in the greater Truckee area including Town of Truckee, Truckee Tahoe Airport District, Truckee Sanitary District, Tahoe Truckee Sanitation Agency, and Northstar Community Services District. This includes LIDAR data with 2” inch resolution and sophisticated GIS that includes above and below grade</p>

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	<p>infrastructure, property lines, zoning, etc... This shared resource enables the overlaying of the key recharge areas with past and planned activities.</p>
<p>c. Concisely describe the scientific basis (e.g. how much research has been conducted) of the proposed project in 300 words or less.</p>	<p>We know that some key recharge areas for the Martis Valley groundwater basin are already impacted by decades of logging and human activities and we are concerned that current and future planned growth/activities may further degrade the watershed performance as measured by recharge/water supply, water quality, erosion, and storm water.</p> <p>The United States Bureau of Reclamation, with support from the Martis Valley GMP partners, has spent over \$1,000,000 and counting to build the Martis Valley groundwater model and associated studies, including projections on the impacts of climate change. In addition, the Truckee Donner PUD, has state-of-the-art LIDAR/GIS systems that can identify things like slope %, vegetation, soil errodability, forest density, and road density. This study would combine/overlay this existing data, along with future growth/activities, on known key recharge areas to identify opportunities for restoration and to protect these areas in the future.</p> <p>All of the tools needed to complete this important work in the Martis Valley, due to the significant scientific studies over the last 5-years, exist today. This approach could also be a model for other watersheds/groundwater basins.</p>

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d. Does the project implement green technology (e.g. alternate forms of energy, recycled materials, LID techniques, etc.)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
1. If so please describe	The use of state-of-the art
e. If you are an Urban Water Supplier¹:	
1. Have you completed an Urban Water Management Plan and submitted to DWR?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
2. Are you in compliance with AB1420?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
3. Do you comply with the water meter requirements (CWC §525)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
4. If the answer to any of the questions above is “no”, do you intend to comply prior to receiving project funding	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Provide Explanation if necessary:
f. If you are an Agricultural Water Supplier²:	
1. Have you completed and submitted an AWMP (due 12/31/12)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
2. If not, will you complete and submit an AWMP prior to receiving project funding?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Provide Explanation if necessary:
g. If the project is related to groundwater:	
1. Has a GWMP been completed and submitted for the subject basin?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
2. If not will a GWMP be completed within 1 year of the grant submittal date?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A

1. Urban Water Supplier is defined as a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually.

2. Agricultural Water Supplier is defined as a water supplier, either publicly or privately owned, providing water to 10,000 or more irrigated acres, excluding the acreage that receives recycled water.