Nevada Tahoe Conservation District

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Stormwater Feasibility Study Work Plan

Background

The Nevada Tahoe Conservation District (NTCD) serves the landowners of the Nevada Tahoe with erosion control, stream restoration, irrigation management and non-point source control programs. The Nevada Tahoe Partnership, and initiative of NTCD, communicates to the broad interest areas of stakeholders throughout Nevada Lake Tahoe. Through meetings and public comments, NTCD has identified a perceived need for multi-jurisdictional stormwater management. In response, NTCD engaged peer agencies and key stakeholders to help provide input on the formation of a feasibility study to analyze the efficiency and cost benefits of combining resources and erosion control programs both public and private properties. This work-plan addresses the scientific, political, equity and socio-economic issues associated with the development of a stormwater utility.

One question often asked is: can a stormwater utility district address maintenance of Best Management Practices (BMPs), both private and public and what kind of capitalization is necessary for upgrade and replacement of these systems? Stormwater projects are being implemented throughout the Lake Tahoe Basin via a combination of public and private funds, sometimes arbitrarily and in isolation from one another. This approach is in part due to the mechanics of the Lake Tahoe Basin's Environmental Improvement Program (EIP) process, time constraints of a short construction season and more specifically in Douglas County, where the multi-jurisdictional make-up complicates project implementation and capitalization. There are eleven separate General Improvement Districts (GIDs), multiple Homeowner Associations (HOAs), the Nevada Department of Transportation and various other agencies within Douglas County alone; each has some responsibility for the installation of BMPs and public works/right-of-way stormwater conveyance and treatment systems as a part of the EIP.

In addition to these projects, EIP 16 (a.k.a. The BMP Retrofit Program) requires residential and commercial source control BMPs, including the driveway capture, conveyance and on-site infiltration. The EIP mandates that all properties achieve compliance by October, 2008, yet less than 20% of residential properties Basin-wide has complied while the program has been in place since 1992. Subjectively speaking, the reason for the low compliance rate is confounded by a number of issues: 1. public perception: Tahoe Regional Planning Agency (TRPA) has yet to enforce any fines for non-compliance to date; 2. the turn-around time needed to install BMPs and acquire a Certificate of Completion; 3. the cost: the driveway portion alone is more than two thirds the entire cost, in total often as much as $5,000; and 4. some argue that the source-control only ordinance leaves property owners with few options.

Overall, the EIP process has earmarked expenditures of over $200 million on water quality projects in the Lake Tahoe Basin since 1997 (estimated from the US Forest Service's Erosion Control Grant Program tracking, July, 2004 and the 2006 NRCS tracking of the EIP 16 program). Due to the collaborative nature of the EIP, an exhaustive number of agencies active in the Basin, and the complexity of these interactions, BMPs from public works projects have yet to be adequately tracked. In response to this, NTCD collaborated with TRPA in 2005 to conduct a Water Quality and Erosion Control BMP Inventory; a written report and online database tracking these BMPs, which is also being updated this winter. This report summarizes public works-type BMPs installed through 2004.

A 2005 survey of GIDs regarding stormwater indicated that 80% of those surveyed (14 GID and county staff) thought water quality and erosion control maintenance was important. 30% tracked those projects implemented and only 50% believed they were maintaining systems to their fullest potential. And a 2006 assessment of GIDs revealed overwhelming interest in pursuing cost-sharing options for stormwater maintenance as long as it was cost-effective. Figure 1 shows a common capture and conveyance system; note the nutrient-laden stormwater in the second photo.


Figure 1: Downstream end of a stormwater conveyance system showing sediment traps as the last mechanical treatment before entering the Lake

Funding and Support

NTCD has applied for seed funding from NDEP and NDSL as well as from some of the local jurisdictions including HOAs, GIDs and Douglas County. Additionally, much in-kind support has been donated by US Army Corps of Engineers, TRPA and other peer agencies. See Attachment 1 for a summary of the grant that was submitted to NDEP to fund this project. See Attachment 2 for a copy of the Memorandum of Support used to solicit support from peer agencies, GIDs, HOAs and stakeholders.

Goals and Objectives

Phase I of this initiative will involve the creation an ad hoc advisory committee and technical implementation team. The technical team will generate data, conduct a gap analysis and present findings to the committee. The committee will review and make recommendations regarding the feasibility of establishing a stormwater utility for Nevada Lake Tahoe. The second phase, if determined feasible, will build the public support and leverage the capital necessary to begin the implementation of a stormwater utility district for Nevada Lake Tahoe. And the final phase if desired by the entities will comprise of the implementation of a stormwater utility. See Attachment 3 for the Task Matrix.

The goal of this project is to determine if the creation if a district is economical and political viable and if so to determine where, who and how it will be implemented (In essence, Does it Make Sense or DIMS). The objectives are to:

1. Establish a Technical Implementation Team and ad hoc Advisory Committee which will establish the scope of work for this phase of the project.
    a. Determine scope, charter and communication strategies
    b. Define the roles, responsibilities and the composition of the committee and team
    c. Develop a work plan which will commence in November 2006 and be complete by June 2007
    d. Establish a public outreach strategy for the duration of the project
    e. Review initial data: representative cross-sample of the percent of impervious surface associated with private driveways which slope towards the public right-of-way

2. Analyze the existing and future conditions to evaluate the economics, engineering constraints, politics and equity issues associated with combining all or portions of the GIDs, HOAs and County public works systems into a cooperative stormwater utility district.
    a. Identify the regulatory framework under which this project is subject
    b. Characterize the political setting and identify barriers and opportunities to establishing a stormwater utility district
    c. Catalogue the physical setting; i.e. watershed make-up, boundaries and geographic setting
    d. Complete Water Quality and Erosion Control BMP Inventory
    e. Identify operations and maintenance recommendations for stormwater systems
    f. Conduct literature review of case studies relevant to this project
    g. Assess public sentiment and generate a public outreach strategy
    h. Compile summary report and presentation of findings and activities

3. Conduct a gap analysis to compare how current regulatory framework meshes with current EIP project implementation and operations and if some portion of the private BMPs can be incorporated into the public EIP systems.
    a. Compare existing structure with case studies
    b. Conduct cost-analysis for consideration of stormwater implementation strategies
    c. Quantify costs of BMP operations and maintenance needs
    d. Develop a list of options from cost-sharing to stormwater implementation
    e. Develop a report summarizing data and final recommendations

4. Make final recommendations to local jurisdictions, stakeholders and peer agencies as to whether or not a stormwater utility is a more cost-effective, politically, socio-economically, and scientifically appropriate solution to current stormwater management

If a SWU is deemed politically, economically, equitably and scientifically feasible then NTCD would assist stakeholders, peer agencies and local jurisdictions in the preparation of a stormwater master implementation plan for the both Nevada and all of the Lake Tahoe Basin.

Work Accomplished to Date

As a part of our mission to provide leadership, education and technical assistance, NTCD initiated the Nevada Tahoe Partnership (NTP) in 2004 to help improve communication among and between local and regional policy-makers. Lake Tahoe Basin comprises two states and multiple local government and non-government entities. TRPA operates under a unique bi-state compact with which states of Nevada and California cooperate both jointly and independently. This unique structure, and the compounding complexity of Douglas County with 11 GIDs all operating separately has had a great influence on water policy over the last decade.

NTCD's Partnership has outreached to over 300 stakeholders in the last year using direct outreach methods. Additionally, NTP has reached over 5,000 through indirect outreach efforts. The Partnership conducted community assessments in 2006 which have been useful in summarizing much conservation related needs and opportunities these entities face. Overwhelmingly, stormwater management, specifically the long-term capitalization and maintenance of these systems has been frequently identified as a top concern.

In response to this NTCD conducted interviews, EIP project tours, and one-on-one meetings with key stakeholders to determine the level of need for improved stormwater management. Included in these discussions were GID leaders, County officials, staff from Nevada Division of Environmental Protection, Nevada Division of State Lands and Nevada Department of Transportation. Additionally, NTCD reached out to TRPA, local HOAs, and peer agencies on the California-side. All of the GIDs were approached to ask how they would respond to a stormwater utility district forming in Nevada Lake Tahoe. Figure 2 summarizes their response.

Figure 2: Community Assessment Summary Matrix

GID/HOA	General interest?	Top Natural Resource/Conservation Issue
Incline Village GID	Yes	EIP project O & M
Kingsbury GID	Yes	EIP project O & M
Oliver Park GID	Yes	lowest elevation of all GIDS; captures the most run-off; taking MOS to board in Spring
Lake Village HOA	Yes	BMP enforcement
Round Hill GID	Yes	EIP project O & M
Skyland GID	Yes	New EC projects and O & M for existing; Board met in December; yet to hear back from them.
Pinewild HOA	Yes	Common area BMPs & water conservation
Lake Ridge GID	Yes	Urban Lots; O & M
Zephyr Heights GID	No	concerned w/ enforcement
Elk Point HOA	Yes	Financing & technical assistance; not interested unless homeowners are responsible
Cave Rock Estates GID	Yes	Still in board negotiations; have not responded
Zephyr Knolls GID	Yes	O&M of EIP projects; wants homeowners to pay fee, not GID
Castle Rock HOA	Yes	Financing/implementing an EIP project
Lincoln Park LLC	Yes	NDOT run-off

Logan Creek GID	**Yes**	**O & M funding**
Roundridge HOA	**Yes**	**Financing/implementing an EIP project**
Zephyr Cove GID	**No**	**not applicable to them**
Marla Bay GID	**?**	**No current POC**
Glenbrook HOA	**Yes**	**whole parcel conservation/restoration**

What is a Stormwater Utility?
A stormwater utility can be seen as an umbrella under which individual jurisdictions address their own specific needs in a manner consistent with regional problems, priorities and practices. With the expected needs for increased stormwater management suggested by existing O&M programs and potential NPDES compliance through the TMDL, the stability, flexibility, and adequacy of a utility provides a great advantage over other financing methods.

What is a Stormwater Utility?
A FUNDING METHOD
A method or mix of methods for providing adequate, stable, and equitable funding for the comprehensive stormwater program.
A PROGRAM CONCEPT
A comprehensive stormwater quantity and quality program with an effective balance of: capital, operational, regulatory, engineering, planning, environmental and administrative activities.
AN ORGANIZATIONAL ENTITY
A legal entity with the authority to regulate stormwater management, to operate stormwater management systems, and to assess fees and charges.

Stormwater utilities are comparable in many ways to more traditional municipal water supply and wastewater treatment utilities. Nearly all involve management of a complex system of natural and man-made physical structures, and demand continuing operational and regulatory programs as well as capital investment in the systems. Because of previous and recent federal and state mandates, most provide a comprehensive program that addresses water quality as well as quantity (flood) control. The programmatic needs eventually dictate the utility structure and function.

A stormwater utility can provide a vehicle for:

1. consolidating or coordinating activities and responsibilities that were previously dispersed among several jurisdictions;
2. generating funding that is adequate, stable and equitable, and dedicated solely to stormwater management ; and
3. developing programs that are comprehensive, cohesive, and consistent year-to-year.

A stormwater utility provides an organizational focus for a comprehensive program such as that being studies for Douglas County, as well as the entire basin. The utility approach also offers a means to properly fund such a program through service fees. However, a utility service fee is not necessarily the only funding solution available to jurisdictions. Many cities in the US implementing stormwater utilities in recent years have discovered that it is desirable and/or necessary to use more than one funding source to generate sufficient revenue in a way that is equitable and publicly acceptable. Thus, the source or sources of funding to be used is a core issue to be resolved in assessing feasibility and formulating a strategy.

A stormwater utility user fee methodology needs to be equitable because the cost is borne by the user on the basis of the user's demand placed on the drainage system. A stormwater utility is stable because it is not as dependent on the changes of the annual budgetary process as taxes. A stormwater utility is adequate because a typical stormwater program can be financed with payments below what the normal customer is willing to pay. Most communities find that their particular problems and needs demand a stormwater rate methodology that is tailored specifically to the local situation. No standard definition is adequate and no “cookbook” approach to funding stormwater utilities exists.

Case Studies
The District has conducted an in depth literature review of different stormwater master planning and implementation projects from around the country. The Town of Chapel Hill, North Carolina, for example has the entire process online for easy access and download. Moreover, El Dorado County has released its draft Stormwater Master Plan. Much of this literature is helping in developing scoping drafts and in the writing of our own stormwater master plan which will be a compilation of all of the work conducted to date.

Many of these examples assert that this process is about three to five years long and can cost $300,000 to $500,000 to complete. By 2010, Nevada Lake Tahoe should have a clearer idea of what their stormwater management program will look like, how it will be funded, who will manage it and to what extent it coincides pending water management policies.

Case study information is being compiled into a matrix to be used as a reference tool which will allow committee members to reference a particular precedence for a given direction or recommendation we may take during the coming months.

Public Outreach Strategy
For the first phase, public outreach strategies will target key stakeholders, associated peer agencies and partners, the staff of associated participating agencies and the general public. A variety of outreach methods will be employed, including, but not limited to: media press releases, email notifications, public meetings, newsletter articles, fact sheets and presentations. The public outreach at this stage is intended to:

1. build rapport among participating partners;
2. assert ideas and concepts generated in the implementation of the work plan;
3. diffuse negative public sentiment; and
4. negotiate solutions to these long-standing questions regarding stormwater management.

A list of Frequently Asked Questions (FAQs) will be developed and distributed for those participating in phase I when interacting with the public and media. It will be critical for the advisory committee and implementation team to recognize the need for consistent messaging to the public. It is important is this beginning stage to establish a collective understanding of the stormwater system as a utility, meaning that this will provide a community-based solution to a community-wide problem. All aspects from financing, long-term capitalization, operation and education are a functions of the utility to come.

Attachment 4 is a list of DRAFT Frequently Asked Questions which, once finalized, will be distributed to all committee members and stakeholders and made available online.

Project Management & Evaluation

Throughout the project, NTCD will monitor the effectiveness of the tools being used to analyze data, facilitate committee decision-making and outreach to the public. Several items will be tracked and used as indicators for success:

1. number of committee members and meeting attendance
2. number of in-kind hours devoted to the project's completion
3. number work plan tasks and their date of completion
4. number of public outreach materials distributed and public response
5. number of stakeholders who vote in favor of stormwater utility district
6. number of assumptions before project compared to validated results after project

Attachment 1

319 h Grant Amendment Request

A. Project Title: **Stormwater Utility District Assessment Project**

B. Project Location: **This project will be implemented within the Nevada Lake Tahoe Basin (Attachment 2: Site Map)**
(Lake Tahoe Hydrologic Unit Code 16050101)

C. Entity Requesting Grant Funds: **Nevada Tahoe Conservation District**

D. **Total Estimated Project Cost: $ 47,500**
Grant Amount Requested: $ 20,000
Matching Contribution: $ 20,000 (from BMP Retrofit Invoices)

E. Contact Information:
Doug Martin
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dmartin@ntcd.org
Ph: 775-586-1610 (ext. 22)
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F. Person's Name and Title Authorized to Represent the Project and Agency.

Doug Martin, District Manager, Nevada Tahoe Conservation District

(Please Print clearly or Type)

Signature Date

Project Description

Purpose – The Nevada Tahoe Conservation District (NTCD) serves the landowners of the Nevada Tahoe Basin with conservation related programs such as erosion control, stream restoration, irrigation management and other renewable resource programs. Working through the Nevada Tahoe Partnership, NTCD has identified the creation of a multi-jurisdictional stormwater utility for erosion control management should be investigated as a possible solution to the many costly and complex issues relating to stormwater management. The purpose of the project is to analyze the efficiency and cost benefits of combining and pooling of systems, resources and programs within the multiple existing and planned erosion control projects, both public and private. This Scope of Work addresses the issues and benefits and of a Stormwater Utility District (Phases I) and if appropriate later there will be a task to develop a plan for a stormwater utility (Phase II).

Background – Stormwater utilities in the form of public works projects are being implemented piecemeal within portions of the Nevada side of the Lake Tahoe Basin through a combination of public and private funds. This piecemeal approach is in part due to the mechanics of the Lake Tahoe Basin's Environmental Improvement Program (EIP) process as well as the multi-jurisdictional makeup of Douglas County, Nevada within the Basin. There are twelve separate General Improvement Districts (GID), multiple Homeowner Associations (HOA) and highway transportation agencies within Douglas County; each has some responsibility for stormwater conveyance and treatment through development of Best Management Practices (BMP). The immediate issue a utility district would likely address is the implementation of the maintenance portion of the BMP system, while the longer term issue is capitalization for upgrading and replacement.

In addition to the public works stormwater projects, EIP 16 (BMP Retrofit) requires residential and commercial source control Best Management Practices (BMP), including the driveway component of the properties. This EIP mandates compliance by October, 2008, yet less than 10% of residential properties basin wide have complied while the program has been in place since 1992. Part of the subjective reason for the low compliance rate is the cost as well as the public system being attached to the lots, thus a feeling that these systems are managing that runoff.

Overall, the EIP process has earmarked expenditures of over $250 million on water quality projects in the Lake Tahoe Basin since 1997 (estimated from the US Forest Service's Erosion Control Grant Program tracking, July, 2004 and the 2006 NRCS tracking of the EIP 16 program). Due to the collaborative nature of the EIP, multiple agencies active in the Basin, and the complexity of agency interactions, BMPs from public works projects have not been tracked as a whole. The expenditure and effectiveness information however, can be found among funding agencies, project implementers, the Tahoe Regional Planning Agency (TRPA), and engineering consultants.

Scope – This project is being coordinated between funding sources, grantors and contributor. The following table indicates the tasks and contributions of those parties. NTCD personnel will perform the scope of work in-house with support staff and contractor support from the US Army Corps of Engineers (USACE) and technical guidance from a yet to be selected stormwater advisory group. Before any work begins, a one page letter will be sent out by the District to all recipients of public funds in Douglas County for EIP stormwater projects and to all GIDs and HOAs within Douglas County, summarizing the work plan, intent of data collection, and any recommendations the implementer can make that would add more utility to the final product.

The objective of this project will be to evaluate the economics, engineering constraints, politics and equity issues associated with combining all or portions of the GIDs and County public works systems into a cooperative stormwater utility district. The frame is targeted as November 2006 through February 2007.

Deliverables – NTCD will provide the following deliverables upon completion of this project:

1. A stormwater advisory committee for Nevada Lake Tahoe which will collaborate with other stormwater planning entities throughout the Basin
2. An evaluation of existing and recommended O & M needs for GID and HOA managers to use in the short-term
3. A report which will include data from the proposed analysis, including but not limited to: an inventory of the BMPs, regulatory climate (present & future), gap analysis, O & M specs, volumetric calculations, system capacities and cost-benefit analysis of economy of scale options.
4. A public meeting at which a PowerPoint presentation will provide a summary of the findings.
5. A printed report of the project results and recommendations.

The above deliverables will be met through the following process that will be conducted by NTCD's staff, contracted engineering services, and support from in-houses staffs of partnering agencies working on usable information that will assist with this assessment work. Some of partners include: Nevada Division of Environmental Protection, Nevada Division of State Lands (Tahoe Basin Team) and the US Army Corps of Engineers.

Directly related to this project is work being conducted by NDSL staff in collecting information from EIP stormwater management projects regarding O & M of those systems. NTCD will request this information from NDSL and compare the information to manufacturer and engineering standards.

Specific tasks of the personnel assigned to this project include:

- District Manager
  - Project Coordination
  - Participation on Stormwater Advisory Group
  - Public outreach
  - Personnel supervision
  - Grant management
- Public Outreach Specialist
  - Develop surveys
  - Coordinate and facilitate public meetings
  - Coordinate with Nevada Tahoe Partnership
  - Record process
- Associate Program Manager & Engineering Technician
  - Coordinate and conduct site visits
  - Develop and implement authorization process to collect data
  - Compile all relevant information
  - Evaluate relevant information
  - Research addition information required to process data
  - Analyze data in relation to required activities and future activities
  - Identify gaps
  - Prepare reports
- Engineering Consultation
  - Oversee data collection and data interpretation
  - Coordinate with outside engineering demands such as US Army Corps of Engineers, local governmental and utility districts, and NDEP.
  - Identify and combine overlap elements required to develop a stormwater management plan

Project Timeline

The funding requested for this project is estimated for a two to three month time period. The District plans to utilize the requested funding from time of receipt until January 2007. The funding requested will support 25% of the Engineer Tech position, approximately 100 hrs of an engineering consultant with the remaining applied to the District Manager and Public Outreach Specialist to assist with project coordination and communication. For detail by task, please see Attachment 3.

Partners

The **Nevada Tahoe Conservation District (NTCD)** plans to work collaboratively with the agencies listed below to make this project as successful as possible. This project has broad inter-agency support.

The **Tahoe Regional Planning Agency (TRPA)** is the lead planning and regulatory agency for the BMP Retrofit Program. NTCD plans to work with TRPA to coordinate efforts on education, outreach, and training regarding the any significant findings with O & M needs pertaining to stormwater management in Nevada Lake Tahoe.

The District works with the **Lake Tahoe Environmental Education Coalition (LTEEC), the University of Nevada Cooperative Extension (UNCE), the University of California at Davis Cooperative Extension (UCDCE)** and **the Parasol Community Collaborative** to develop and disseminate educational materials and messages to landowners in Nevada Lake Tahoe. These agencies will assist with publicity and bringing together community partners.

The **Nevada Division of State Lands (NDSL)** provides resources to the District to assist in the scoping of O & M analysis and development of a regional approach to stormwater management.

The District will utilize its contacts for the local General Improvement Districts, Homeowners Associations, and community groups in Nevada Lake Tahoe to implement this project. The Nevada Tahoe Conservation District will work with the **Nevada Tahoe Partnership** to carry out this task and create a "stormwater advisory committee". So far, Logan Creek GID, Roundhill GID, IVGID, KGID and Glenbrook HOA have committed funds to this project.

Moreover, this project will be shared by staff members who sit on various committees throughout the Basin, including, but not limited to: **Pathway 2007 Forum, Strategic Planning Group, Lake Tahoe Federal Advisory Committee, EIP # 16 Working Group and the Storm Water Quality Improvement Committee among others**.

Acknowledgements

When issuing statements, press releases, printed materials, or other items describing any aspect of activities funded in whole or in part with funds provided under this contract, NTCD will ensure that the Nevada Division of State Lands is acknowledged.

Attachment 2

Nevada Tahoe Conservation District

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Agreement to Provide Financial and Cooperative Support

Name: _____ ____ Organization/Entity: _____

Phone: _____ Fax: _____

Email:_____ Mailing Address: _____

City: _____ State & Zip: _____

The above entity agrees to support Nevada Tahoe Conservation District (NTCD) in the completion of Phase I of a stormwater utility district initiative. The ultimate goal is to create and implement a fee-based stormwater utility district for Nevada Lake Tahoe where practical and cost-effective.

To this end, the above named entity agrees to a financial contribution payable within 30 days in the amount of $ _____ to further support this work. We understand that this contribution of funds will be used in Phase I of this project.

Explanation of the Agreement

Phase I: The preliminary stormwater implementation plan, will evaluate the economics, engineering constraints, politics and equity issues associated with combining all or portions of the General Improvement Districts (GIDs) and County public works systems into a cooperative stormwater utility district. Phase I time frame is targeted as September 18, 2006 to December 29, 2006. Issues to be address include:

- Inventory of public works BMPs (types, length, service area, etc.);
- Examination of ordinances and statutes pertaining to stormwater to determine complexity of proceeding;
- Assessment of public opinion;
- Examination of manufacturers' recommended O & M schedules and estimated costs;
- Evaluation of existing O & M practices, effectiveness and costs;
- Inventory of O & M equipment and resources;
- Volumetric calculations assessing total impervious surface contributions of private driveways;

- Evaluation of various socio-economic factors which influence single family driveway BMP installation compliance and a comparison of source management of sediment vs. public works management including the collective benefits, liabilities, equity and costs;
- Completion of a report of findings and cost benefit analyses of the above items;
- Development of a comprehensive work plan for Phase II; and
- Presentation of findings at a public forum TBD.

Upon completion of Phase I, the above entity will be asked to review the findings and to participate in the development and execution of Phase II and Phase III if appropriate.

Phase II – Draft Stormwater utility development and financing plan, time frame is January 2, 2006 to April 30, 2006.

- Draft utility framework and infrastructure
- Political boundaries
- Regulatory plan for creation of district (County/TRPA ordinance drafting)
- Financing plan
- TRPA coordination
- Public outreach
- Cooperative Agreement Consensus Building
- Draft plan to TRPA defining district and area of coverage, which may include portions of private BMP being treated within the public system.

Phase III – Stormwater utility implementation

- TBD

_____ _____

NTCD District Manager Date

_____ _____

Cooperating Entity Authorized Representative Date

Attachment 3

TASK	TITLE	DESCRIPTION
1.0	**Establish Project Scope and composition of participants**	
1.1	Identify Partners and build rapport among stakeholders	Identify a core representation of Nevada entities and broader Basin stakeholders and peer agencies
1.2	Define purpose of implementation Team	The purpose of the Implementation Team is to complete the tasks in the work plan, generate unbiased & scientifically valid data and work collaboratively w/ all associated stakehoders and peer agencies
1.3	Define function of the Team and Committee	The committee's role is to review data presented by the Team and advise, guide and support the Team's completion of the tasks in the work plan. Moreover, the committee will in the end make a final recommendation or set of recommendations to Nevada entities regarding whether or not a stormwater utility district would is worth pursuing
1.4	Determine charter of the Committee	Complete a draft charter for review at the first meeting, 12/27/06
1.5	Develop work plan for the Team	Create a Gantt Chart.
1.6	Conduct preliminary field data collection characterizing typical percentages fo impervious surface coverage	Field data helps inform future tasks in which O & M standards, capcity, and existing regulatory framework analysis are considered
1.7	Generate preliminary talking points for responding to questions from the public	Working w/ TRPA, NTCD will draft a list of most frequently asked questions to help ensure committee members are well informed and able to reach out effectively to their respective audiences
1.8	Conduct a presentation of Phase 1, Task 1 to the Committee	Completion of this item will mark the end of this task set
2.0	**Analyze the Existing and Future Conditions**	
2.1	Define the regulatory framework at the local, state, and regional levels	To include analysis of the regulations in relation to creation, implementation and operation of a district, pay paticular attention to Washoe County regs as they have created a district. Also, look at compliance regulations (TRPA & NDEP). What will it take to create a district and what barriers exist?
2.2	Develop a public outreach strategy	The public outreach strategy will have elements which operate concurrently and independently of this project. All of the public outreach associated w/ this project which identifies any of the committee members will be approved prior to publication.
2.3	Characterize the current political setting, the opportunities and barriers to establishing a SWU	NTCD will meet with Basin leadership and catalogue current political perception of various stormwater management options and identify opportunities and barriers to SWU development in Nevada Lake Tahoe
2.4	Conduct a literature review of SWUs implemented in the nation. Emphasize SWU established in the local region. The goal is to create a library of SWU plans with an associated summary.	Assemble the following information in a matrix: - why are SWUs created - what O&M procedures or plans were implemented? - what funding structures were used pay attention to Washington State, California, and Washoe County, Nevada
2.5	Define the physical setting; i.e., watersheds, topography, political boundaries, business parcels, and residential parcels	Create a base map with multiple GIS data layers
2.6	a) Inventory the existing public stormwater systems in the basin; i.e., what exists where and how much b) summarize the level of compliance with the private BMP retrofit program c) summarize of how businesses, apartments, and condos are complying with the BMP mandates	There are several concurrent and completed projects which will be used to inform these sub-tasks: the Water Quality BMP Project Inventory (NTCD, USFS); the BMP Tool Kit and TIIMS (TRPA); a survey of GID and other implementer O & M practices (NDSL) and survey and analysis of socio-economic and political drivers influencing BMP installation (UC Davis, CTC)
2.7	Local maintenance conditions: Identify O&M practices currently used by organizations responsible for BMP maintenance in the Tahoe basin; understand the annual maintenance costs expended by each organization; inventory hardware and personnel allocated to BMP maintenance	
2.8	Assess public sentiment to BMPs and an SWU; opinions, perceived problems, preferred level of service, socio-economic motivators, equity, and general understanding	

Attachment 3 Continued

2.0	**Analyze the Existing and Future Conditions**	
2.9	Identify O&M or level of recommended treatment for public BMPs in the basin	Resources: 2005 Water Quality BMP Project Inventory (NTCD); contact manufacturers; TRPA data & implementer anecdotal information (NDSL)
2.10	Define NPDES II and its application to our existing settings at the county, state, and regional levels. Include any new watershed management policies on the horizon	Use the NDEP and Lahontan TMDL agreement. Also, look at the defined regulatory structure of EPA and schedule for implementation.
2.12	Generate a report and presentation for the Committee summarizing the work in task 2	Report will be a chapter in the final report
2.13	Public forum to present tasks 1 and 2	Announced with a press release. Continue to share progress with local GIDs via Douglas County GID Forum
3.0	**Gap analysis**	
3.1	Compare how our existing conditions meet current regulatory framework and what will change in the future	The gap between current and future conditions will inform the decision-makers in their quest to recommend the most politically, socio-economically, equitable options
3.2	Conduct a cost analysis; do the current expenditures by basin organizations satisfy current regulatory requirements? Do they satisfy manufacturer requirements?	Cost will ultimately determine a lot of things: installation rate, compliance, political will, public acceptance, O & M. Therefore, analyzing current costs to anticipated costs will further strengthen and validate recommendations made.
3.3	Anaylze cost sharing options for local jurisdictions	Pooling of existing resources, facilities, man-power, economies of scale and cost-sharing agreements would be identified and summarized for committee consideration
3.4	Develop an options/recommendations package that will close the gap between regulatory framework and existing conditions with alternatives	Anticipated alternatives are a) do nothing, b) establish and promulgate O&M standards for public BMPs for all basin organizations, c) SWUD Nevada only, SWUD with Basin-wide connections.
3.5	Develop area options for an SWU program.	Possible options could include, but are not limited to, a) KGID, b) Douglas County, or c) Washoe County, d) new district.
3.6	Generate a report and presentation for the Committee summarizing the work in Task 3	Report will be a chapter in the final report
3.7	Conduct GID strategy session	Ray Ledgerwood is already on contract w/ NTCD for February; he could facilitate a GID strategy session in which the GIDs provide feedback on the project's current progress and have a chance to freely air concerns, request more information and debate cost-sharing options.
3.8	Public forum to present Tasks 1, 2, and 3	Will be announced with a press release. Present findings to GID Forum (Douglas County)
4.0	**Recommendations**	
4.1	Generate recommendation or set of recommendations	
4.2	Share results w/ peer agencies for possible replication and collaboration	Through existing venues (meetings, email, phone calls, etc…) share information and results w/ peer agencies
4.3	Generate a report and presentation for the Committee to recommend the next phase of the SWU effort	Report will be a chapter in the final report
4.4	"Bridge the Gap" - funding and cooperative agreement options	Begin researching financing options; show opportunities for implementation w/in current and future political condition
4.5	Public forums to present the results of SWU Phase I	Will be announced with a press release. Present findings to GID Forum (Douglas County)
4.6	Satisfy any unique requirements from the funding organizations	

Attachment 4

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CORE FREQUENTLY ASKED QUESTIONS
Stormwater Utility Project

1. How is stormwater regulated in the Basin? *Currently the TRPA ordinance states that all private and commercial properties must install BMPs to capture and treat precipitation from a 20 year 1 hour storm event. Public projects are designed by engineers and installed by qualified contractors to meet this requirement for streets and rights of way. Private homeowners have the option to install the BMPs themselves or hire a contractor to do it for them. The TMDL and the Lake Tahoe Clarity Model will inform policy decisions for the eventual implementation of National Pollutant Discharge Elimination System (NPDES) permitting, which is a Federal water quality regulation implemented by the State.*

2. *What is a Tahoe stormwater management system? Simply it is a system consisting of capture, conveyance and treatment of stormwater to help restore the lake's clarity. Over the recent years it has been resolved that lake clarity is linked to runoff, nutrient and sediment loading and atmospheric deposition into the lake. As open space is/was developed man altered the natural process of slowing and retaining stormwater runoff into the lake. The Environmental Improvement Program (EIP) was developed after the commitments made at the US Presidential Summit in 1997 to address improving lake clarity. The water quality improvement component of the EIP resulted in numerous projects focusing on stormwater management and federal sharing of costs to construct these systems.*

3. Why didn't the EIP pay for the O & M of these projects? *The EIP was initiated to construct the infrastructure to capture and convey stormwater and prevent it from directly or indirectly entering Lake Tahoe. The federal and State dollars conveyed as grants required a local/private match which is the O & M component. As a community we are fortunate to have the option of grants, many communities are left to fund the entire process at the local level. As this project evolves and is completed, we will determine if we are to pool our resources to address the maintenance of these systems to protect our investments and ensure their functionality over the long-term.*

4. What is a TMDL? *Total Maximum Daily Load refers to the amount of sediment, nutrients and/or contaminates a certain water-body can "handle". The load calculations for each sub-watershed will inform policy makers as to how best implement the National Pollutant Discharge Elimination System or NPDES permits which regulate stormwater.*

5. What is NPDES? *The National Pollutant Discharge Elimination System is an EPA program which addresses managing contamination in surface waters. Part of that program focuses on stormwater management. CA and NV both have begun to move toward a combined watershed management approach that focuses on reducing the load that causes reduction of lake clarity. It is still a few years before each sub-watershed will have a calculated TMDL which will guide policy decisions for water quality managers. A stormwater utility can be a buffer and collective protection management system to the rate payers as well as a point of contact for the regulators.*

6. What is a Stormwater Utility? *A stormwater utility can be seen as an umbrella under which individual jurisdictions address their own specific needs in a manner consistent with regional problems, priorities and practices. With the expected needs for increased stormwater management suggested by existing O&M programs and potential NPDES compliance through the TMDL, the stability, flexibility, and adequacy of a utility provides a great advantage over other*

financing methods. SW Utilities are seen as funding mechanisms, offering a mix of methods to fund, to operate and maintain the investments in stormwater management facilities. They are also a program concept which offers an effective balance of: capital, operational, regulatory, engineering, planning and administrative activities. And finally, SW Utilities are the legal authority to regulate stormwater management, to operate stormwater management systems, and to assess fees and charges.

7. What is this project and how is the work being completed? *The project has three phases; first is to establish an ad hoc advisory committee and technical implementation team. These will be charged with compiling and analyzing data generated throughout the work plan to determine if pooling resources in the form of a stormwater utility makes sense for Nevada Lake Tahoe jurisdictions. The second and third phases are dependent upon the final recommendations made by this committee and entail the development and implementation of a stormwater utility structure. The majority of the work is being completed by the technical implementation team, with the advisory committee and stakeholders providing oversight, advice, and input.*

8. Who is on the Implementation Team? *NTCD established a Technical Implementation Team comprised of US Army Corps of Engineers, our staff, TRPA staff and other agency technical staff.*

9. What is the Ad-Hoc Stormwater Advisory Committee (SWAC) and who is represented? *The SWAC is made up of leadership from GIDs, HOAs, TRPA, Nevada Division of State Lands, Nevada Division of Environmental Protection, Nevada Department of Transportation, and experts in the field of stormwater master planning. Participation from California is encouraged so that we can apply what we learn Basin-wide. Each meeting will have a public comment period for anyone wishing to provide input. This is an ad hoc committee, which means it is only advisory; they have no authority or regulatory role.*

10. What is the Stormwater Advisory Committee's role? *The committee's role is primarily advisory; they are non-regulatory and have no authority to make policy changes. They will review data and information generated from the Technical Implementation Team and provide input, guidance and recommendations as to whether a district should be formed. Furthermore, they will be instrumental in working with NTCD and TRPA to outreach to their respective constituents and help build public support.*