

APPENDIX A

Developing Community-Based Watershed Strategies for the Lake Tahoe Basin – 2014/2015

EPA SPONSORED - SNPLMA FUNDING

Tahoe Resource Conservation District

Original Scope of Work

Task 1.0 - Project Management, Administration and Reporting

1.1 Project Oversight.

This task is complete. Project oversight occurred over the duration of this grant.

1.2 Project Reporting.

This task is complete. The ten required quarterly reports were submitted on time over the course of this grant. This report fulfills the Final Project Report requirement.

1.3 Invoicing.

This task will be completed by January 2016 with the submittal of the final invoice (#27).

1.4 Establish a Project Advisory Committee (PAC).

This task is complete. The PAC included representatives from the Lahontan Water Board, Natural Resource Conservation Service, Nevada Division of Environmental Protection, Tahoe Regional Planning Agency and EPA. Since the beginning of the grant term, the PAC has met a total of 5 times. These meeting dates are: 6/4/2013, 1/23/2014, 6/19/2014, 2/20/2015, and 5/27/2015. Tahoe RCD participated in all PAC meetings. This task also helps complete tasks 2.1c and 6.1a in the revised work plan.

Task 2.0 – Develop Community-Based Watershed Planning Efforts

2.1 Work with the PAC and other stormwater agencies to identify 2 target watersheds and key stakeholders within each watershed.

This task is complete. Selection criteria and watershed identification was submitted and approved in the second reporting period. The planning areas include Meyers and Tahoma, California. Please refer to the *CWP Map*, the *Watershed Ranking Criteria*, and the *CWP Priority Areas* documents included in Appendix C.

2.2 Develop stormwater management plans/strategies in selected sub-watersheds, engage stakeholders and assist with finding solutions for EIP and TMDL implementation.

2.2a Develop a Quality Assurance Project Plan for PLRM parameters/usage.

This task is complete. A PLRM QAPP was developed and submitted to EPA. Please refer to the *PLRM QAPP* included in Appendix C.

2.2b Assist jurisdictions in identifying SFR, MFR and commercial BMP pollutant load reduction benefits of implementing and maintaining private property BMPs, as calculated by the Pollutant Load Reduction Model (PLRM). The TRCD will provide Load Reduction Estimates on stormwater volume, TSS/FSP,

phosphorus, and nitrogen pollutant load; the TRPA spreadsheet methods may also be used to estimate reductions.

This task is complete. For a summary of activities, please refer to the following reports included in Appendix B: the *Tahoe Valley and Meyers, CA Final Watershed Strategy Report*; the *Tahoma, CA, Final Watershed Strategy Report*, and *TMDL Catchment Registration and Testing TMDL Tools: Catchment PLRM Modeling in the City of South Lake Tahoe's Urban Planning Catchment B14*.

2.2c Investigate options for community stormwater treatment in select watershed areas and provide recommendations to Basin Managers for single family residential (SFR), multifamily residential (MFR), and commercial load reduction improvements. Show expected benefits with Pollutant Load Reduction Model (PLRM) output.

This task is complete. For a summary of activities, please refer to the following reports included in Appendix B: the *Tahoe Valley and Meyers, CA Final Watershed Strategy Report*; the *Tahoma, CA, Final Watershed Strategy Report*, and *TMDL Catchment Registration and Testing TMDL Tools: Catchment PLRM Modeling in the City of South Lake Tahoe's Urban Planning Catchment B14*.

2.2c(1) Identify potential target areas where SFR, MFR and commercial BMP evaluations have not been completed, or have resulted in source control certifications rather than complete BMP certifications. Investigate whether homeowners might be willing to contribute to the maintenance of a regional treatment system versus attaining an individual parcel-level BMP certification. Targeted BMP evaluations will be administered to help facilitate this level of assessment.

This task is complete. For a summary of activities, please refer to the following reports included in Appendix B: the *Tahoe Valley and Meyers, CA Final Watershed Strategy Report* and the *Tahoma, CA, Final Watershed Strategy Report*.

Additional information regarding homeowner attitudes and possible acceptance of BMP alternatives, such as a regional treatment fee, is provided under Revised Work Plan, Task 6.

2.2d Identify possible efficiencies gained through joint treatment opportunities using GIS and PLRM tools; work with jurisdictions to identify estimated costs and or possible actions needed to successfully implement load reductions within the watershed.

This task is complete. For a summary of activities, please refer to the following reports included in Appendix B: the *Tahoe Valley and Meyers, CA Final Watershed Strategy Report*; the *Tahoma, CA, Final Watershed Strategy Report*, and *TMDL Catchment Registration and Testing TMDL Tools: Catchment PLRM Modeling in the City of South Lake Tahoe's Urban Planning Catchment B14*.

2.3 Coordinate outreach and education efforts to avoid duplication and conflicting messages with other Basin Managers, and make the best use of available partnerships and resources. (See task 4 for collaboration).

This task is complete. Tahoe RCD staff have partnered with several collaborative Basin-wide groups including the Parcel Level BMP Working Group, BMP Compliance Working Group, the Basin's Fertilizer Management Group, the Tahoe Fire and Fuels Public Information Team, and the Weed Coordinating Group. All of these groups meet to improve consistent messaging and outreach to the

community. Additionally, Tahoe RCD coordinated with the TRPA on the following programmatic matters:

- Do-it-yourself BMP website
- Tahoe RCD websites updates
- Adoption of the revised BMP sizing calculation spreadsheet
- BMP final inspection reporting protocols
- Future fee for services operations
- The Annual BMP Contractors Workshop
- Homeowner Privacy
- Partnership development through grant collaboration
- Improved communication methods
- Area-wide stormwater treatment

2.3a Develop/maintain or contribute to a web page that provides TMDL/EIP project information related to the targeted watersheds. Coordinate with TRPA and NTCDC to ensure collaboration with planning area maps including SRF, MFR, commercial, and public works projects. This effort will prevent duplication and help establish an online, one-stop resource for Basin Managers and residents alike.

This task is complete. Staff actively maintained the Tahoe RCD website over the course of this project. TMDL/EIP project information and CWP reports can be found at:

<http://tahoercd.org/stormwater-watershed-monitoring-reports/>

2.4 Gain feedback from stakeholders.

This task is complete. District staff has received feedback through community surveys. Surveys were provided through newsletter links, 50 mailers to the Tahoma CWP, and in person at select community events. The *2014 Tahoe Community Survey and Results* are included in Appendix C. Through this effort, community members were introduced to the role of pollutants in water quality decline, the Tahoe RCD's role in conservation, education, and technical assistance, and were asked questions to help the Tahoe RCD better understand community awareness and willingness to participate in basin-wide conservation efforts including supporting area-wide stormwater BMPs. Approximately 75% of survey respondents were familiar with the term Urban Runoff and how it affects water quality and 67% would be in support of finding alternative ways to traditional parcel level BMPs to assist in stormwater collection and treatment.

In addition, Tahoe RCD's consultant RO Anderson worked in Meyers to discuss incentive opportunities with business owners as part of understanding if an assessment district would be a viable option in the Meyers community. RO Anderson spoke with the bulk of business owners on the north side of Highway 50; where the business core stormwater treatment concepts were developed. For a summary of activities, please refer to the *Tahoe Valley and Meyers, CA Final Watershed Strategy Report*, included in Appendix B.

Task 3.0 - Support Watershed Planning Efforts and Improve Tahoe RCD Capacity

3.1 Work in coordination with local jurisdictions to supplement monitoring efforts for regulatory compliance in a registered TMDL catchment to increase data resolution for improving annual load and PLRM estimates, and to assist with the Basin's efforts to move toward a Regional Stormwater Monitoring Program (RSWMP).

This task is complete. Supplementary compliance monitoring at an urban stormwater monitoring site located in the west shore neighborhood of Tahoma in El Dorado County was completed on September 30, 2014 with the end of the water year. The Tahoma site is a catchment outfall site that was originally selected for monitoring through the Implementers' Monitoring Program (IMP) to comply with the National Pollutant Discharge Elimination System (NPDES) permit held by the California jurisdictions to implement the TMDL. Though discharge and turbidity are monitored continuously, IMP decided to conduct water quality sampling on only four precipitation events per year, one for each season. The Tahoe RCD supplemented these four events with seven events, for a total of eleven events sampled to date. Sampling many events increases seasonal and annual data resolution, thereby increasing confidence in empirical pollutant load estimates. Final monitoring and PLRM results were included in the *Tahoma, CA, Final Watershed Strategy Report* in Appendix B.

The Tahoma site has also been selected as a long-term status and trend monitoring site under the developing RSWMP. Thus, the funding provided by the EPA for this project has ultimately supported the RSWMP program by affording the Tahoe RCD and the local jurisdictions with a year of higher resolution monitoring at the Tahoma catchment outfall prior to actual RSWMP implementation. Other completed deliverables related to this task include:

- Approval of the Water Quality Monitoring QAPP. Please refer to the *Water Quality Monitoring QAPP* included in Appendix C.
- Approval of the PLRM QAPP. Please refer to the *PLRM QAPP* included in Appendix C.

3.2 Improve Tahoe RCD capacity to assist TMDL implementation.

This task is complete. District Staff have also been trained in the TMDL Tools PLRM, Road RAM, BMP RAM, and CAP. Please refer to Task 3.1 in the revised work plan for more information. As a result of this training, Tahoe RCD was able to provide TMDL Tools beta testing and assistance to the jurisdictions over the course of this grant and is continuing to provide TMDL assistance to local stormwater jurisdictions using alternative funding.

Micro Basin Technology: Recent analysis of LiDAR data and other remotely sensed data in Incline Village, and South Lake Tahoe has identified a potential to develop stormwater detention and infiltration areas based on small-scale patterns of land topography (Schladow 2013). This information makes it possible to identify the volume of Micro Stormwater Infiltration Systems (MSIS) achievable by small and simple modifications to existing depressions in the landscape. MSIS have the potential to infiltrate urban stormwater and reduce inputs of nutrients and sediments to Lake Tahoe, a key goal of the Lake Tahoe TMDL.

Using maps produced by UC Davis that delineate small scale depressions in the landscape in the Tahoma neighborhood, the Tahoe RCD refined the maps and conducted field verifications to identify which depressions could potentially be used for MSIS. However, no viable opportunities were

identified in this neighborhood due to low slopes and high groundwater. A summary of findings was included in the *Tahoma, CA, Final Watershed Strategy Report* in Appendix B.

To further improve Tahoe RCD capacity, staff attended several multi-day trainings, including a community event called the Tahoe Basin Watershed Education Summit (TBWES) on September 26th and 27th 2013 to learn watershed monitoring techniques including stream channel measurements, vegetation analysis, and water quality parameters. Staff also attended a Facilitator Training class on March 18th put on by UC Davis Cooperative Extension to gain hands on experience and resources to more effectively facilitate collaborative projects. Staff participated in Landscape Conservation Training Seminars as part of the San Francisco Garden Show to learn about earth friendly landscaping practices including water conservation, water harvesting and native gardening. See the *Event Photos* included in Appendix C for photos from the 2013 TBWES.

Task 4.0 - Provide Technical Assistance and Education

4.1 Assist property owners and collaborate with local agencies on issues related to erosion control, irrigation and fertilizer management, native and invasive species, and fire-wise landscaping. The Tahoe RCD will provide direct outreach to a minimum of 50 homeowners/residents and will offer technical assistance related to backyard conservation needs.

This task is complete. Direct outreach was provided to greater than 50 residents/homeowners over the life of the project. This task was accomplished through direct homeowner technical assistance, engagement through providing technical documents, administering community surveys, and the stormwater symposium.

A total of **90** technical assistances on **84** individual private properties were provided over the life of this grant, see *Technical Assistance Provided* in Appendix D. Of these **90** technical assistances, **14** were Landscape Consultations, **62** were BMP Evaluations, **3** were BMP finals that passed inspections, and **11** were BMP Assistance to a Homeowner or Contractor. Of the required minimum 50 technical assistances, **96%** were in the CWP area; Tahoe RCD provided an additional 40 technical assistances above and beyond the required 50 minimum. An outreach mailer was sent to 50 homeowners in the Tahoma community which included the 2014 Community Survey, a description of Tahoe RCD Landscape Conservation services and the invasive weed brochure. The 2014 Community Survey was developed and posted to the District website to inform the District on matters of: public understanding of stormwater treatment and BMPs, participation willingness in area-wide BMP programs and fee for services. The survey outreach letter and results are included in *2014 Tahoe Community Survey and Results* in Appendix C. The Tahoe RCD authored the article "Don't let invasive weeds take root in your backyard" to be posted in various media outlets. The article highlights weed identification and removal services, explains the importance of prevention and control, and how to you can learn more. The article is included as *Invasive Weed Article* in Appendix C.

The First Annual Stormwater Symposium was held on December 10, 2014. See *Stormwater Symposium* included in Appendix C for the flyer, sign-in sheet, and Tahoe Daily Tribune Article for the event. Over 45 people attended the event including the general public, stormwater volunteers, and local, state and federal agencies. Presentations on the development of RSWMP and its connections to the Lake Tahoe TMDL were the primary focus of the evening. The highlight of the event was a six person panel including Tahoe RCD, Water Board, TRPA, City of South Lake Tahoe,

and League to Save Lake Tahoe (League). The event provided an excellent opportunity to discuss stormwater runoff issues, the TMDL Management System, and how Tahoe RCD efforts support Basin priorities.

4.2 Coordinate with NTCD, TRPA, and the California jurisdictions on helping homeowners initiate BMP evaluations and annual BMP maintenance programs through TRPA's new online Do-it-yourself BMP program.

No further work is required for this task. Unless further funding is identified by TRPA to improve the DIY tool, the tool is not developed enough for ease of community use. Feedback on the tool was provided to TRPA staff.

4.3 Special Projects: Assist UNCE, UCCE, Special Purpose Districts, School Districts and community partners with developing preferred messaging for use at community workshops and public speaking opportunities. Coordinate with Master Gardener Program volunteers to develop outreach materials and assist with leading public work days and special exhibits at public demonstration gardens.

This task is complete. Tahoe RCD staff coordinated with Tahoe Basin partners to provide technical assistance and conservation education. Activities included participation and/or direct sponsorship of the following:

- UCCE Master Gardener Meetings,
- The annual BMP Contractors Workshops on April 17-18, 2014,
- Water Wise Landscaping Workshop on June 11, 2014,
- Community service learning demonstration volunteer days on May 31 and June 21, 2014,
- The Wildfire Safety Expo on June 2, 2014,
- Community service learning demonstration volunteer day with the California Conservation Corps on August 16, 2104,
- The Conservation Landscape Tour on August 21, 2014 (See *Event Photos* included in Appendix C)
- Fire Fest on September 27, 2014 (See *Event Photos* included in Appendix C)
- Three Landscape Workshops offered by Tahoe RCD on July 16, August 20, and August 27, 2013 (See *Landscape Workshop* included in Appendix C for sign in event agenda, event flier, sign-in sheets, and workshop survey).
- Tahoe Fire and Fuels Public Information Team Meetings.

The Tahoe RCD also coordinated with the South Tahoe PUD to provide technical assistance to Turf Buy Back Program participants. Tahoe RCD also trained STPUD conservation specialists on water wise landscaping and revegetation techniques.

4.4 Collaborate with and provide leadership to non-profit organizations and volunteers who engage in stormwater monitoring and/or source control efforts that support data collection and community engagement efforts.

This task is complete. Staff collaborated with the League to Save Lake Tahoe and provided technical expertise to the Pipe Keepers program as well as Eyes on the Lake and Snapshot Day monitoring efforts. Additionally, the 1st Annual Stormwater Symposium, held on December 10, 2014 provided an excellent opportunity for the Tahoe RCD to form a collaborative relationship with the League to

Save Lake Tahoe, a local non-profit in the watershed. This process was synchronized by the parallel interests in stormwater monitoring, including the Tahoe RCD's development of RSWMP, and the League's citizen monitoring effort known as Pipe Keepers. The event provided an opportunity to highlight the work the Tahoe RCD is doing in partnership with non-profit organization to meet common TMDL goals. See *Stormwater Symposium* included in Appendix C for the flyer, sign-in sheet, and Tahoe Daily Tribune Article for the event. Also, at Tahoe Farm Day, Tahoe RCD staff demonstrated source control and BMP techniques to over 500 4th and 5th graders at Camp Richardson held on September 16th, 2014. The event was organized by Tahoe RCD in coordination with the El Dorado County Department of Agriculture, Lake Tahoe Unified School District, UCCE and many volunteers. See *Event Photos* included in Appendix C for photos of Farm Day.

The Tahoe Basin Watershed Education Summit (TBWES) creates teams of high school students, teachers, and resource specialists for an extensive watershed assessment in Blackwood Canyon on Tahoe's West Shore. The 2nd annual TBWES took place from September 25th through the 27th 2013 and provided data critical to the US Forest Service and continued understanding of restoration efforts in Blackwood Creek. Approximately 30 high school students from South and North Lake Tahoe and Truckee were involved in this hands-on experience integrating environmental stewardship, community service, academic achievement, and career exploration. District staff attended this event in order to outreach the benefits of stormwater control and its connection to SEZ restoration. The South Tahoe Environmental Education Coalition (STEEC) helps coordinate the event, which is comprised of over 20 Lake Tahoe organizations and agencies that collaborate to bring environmental education and resources to the Lake Tahoe Basin. Tahoe RCD staff organized and planned the science and data collection needs for STEEC and the USDA Forest Service for TBWES. (For photos of the TBWES see *Event Photos* in Appendix C.

Task 5.0 - Develop a Targeted Watershed Planning Report (Final)

This task is complete. Please refer to the following reports included in Appendix B: the *Tahoe Valley and Meyers, CA Final Watershed Strategy Report*; and the *Tahoma, CA, Final Watershed Strategy Report*.

Revised Work Plan

Task 2. Partnership Development

2.1 Collaborate with Stakeholders on BMP Program Vision.

2.1a Tracking progress of BMP Compliance Group recommendations.

This task is complete. The Tahoe RCD collaborated with TRPA in meeting with key stakeholder groups to better plan for BMP needs in the future. The BMP Compliance Group finished discussions during the fall of 2014. Discussion outcomes and recommendations are presented in TRPA's BMP Action Plan at http://www.trpa.org/wp-content/uploads/FINAL-BMP-Action-Plan_08.13.2014.pdf.

2.1b Quarterly meetings with the BMP Parcel Level Group

This task is complete. Tahoe RCD staff attended quarterly BMP Parcel Level Group meetings throughout the duration of this project.

2.1c Quarterly meetings with the Project Advisory Committee

This task is complete. Refer to Section 1 Task 1.4 for a list of previous PAC meetings.

2.2 Collaborate with Stormwater Jurisdictions on TMDL Catchment Registration.

2.2a Identify threshold and benchmark conditions for key and essential BMPs in select catchments.

This task is complete. Threshold and benchmark conditions have been identified for all major BMPs in select catchments. The City of South Lake Tahoe has decided against registering the 12th Street ECP (B14) catchment, therefore none of the BMPs in this catchment are key or essential. Key and essential BMPs in El Dorado County's Montgomery Estates (UPC 04) have been identified through PLRM modeling. See the *PLRM Results - Letter to El Dorado County* in Appendix B for El Dorado County key and essential BMPs.

2.2b Coordinate schedule and perform BMP and Road RAM monitoring.

This task is complete. BMP RAM measurements have been completed in the El Dorado County's Montgomery Estates (UPC 04) and the City of South Lake Tahoe's B14 Catchment for fall 2014, winter 2015, and spring 2015. Road RAM has been performed in coordination with NTCD and the City of South Lake Tahoe.

2.2c Coordinate and perform PLRM modeling and data entry needs for the Jurisdictions.

No further work is required for this task. The City of South Lake Tahoe has decided against registering the 12th Street ECP (B14) catchment due to the relatively small credit potential for improving existing infrastructure (which was the City's initial plan for obtaining credit in this catchment). Therefore there will be no data entry into the BMP RAM database or CAP for the City of South Lake Tahoe. Modeling and BMP RAM for the Montgomery Estates (UPC 04) Catchment was completed. Data entry for Montgomery Estates (UPC 04) was performed for BMP RAM and CAP,

however bugs in CAP were encountered, so the catchment was not fully registered. El Dorado County has all the information needed for full catchment registration for UPC 04. Once the CAP bugs are addressed, Tahoe RCD is available to assist with catchment registration using supplemental funding. Model results are included in Appendix B for El Dorado County and the City of South Lake Tahoe as *PLRM Results - Letter to El Dorado County* and *TMDL Catchment Registration and Testing TMDL Tools: PLRM Modeling in the City of South Lake Tahoe's Urban Planning Catchment B14*, respectively.

2.3 Community Ad Campaign

This task is complete. This task helped fulfill task 6.2b. Supplemental funding was used to assist in completing this task. Education and outreach activities for the stormwater campaign included the run of print advertisements in local media venues, attending outreach events, hosting a Stormwater Symposium, issuing press releases, writing Facebook posts, disseminating posters and brochures, publishing newsletters, airing radio advertisements, and updating the Tahoe RCD website. Advertising costs were supplemented with alternative grant funding through the Department of Water Resources and the State Water Resources Control Board. For examples of outreach activities, see the *Stormwater Outreach*, *Stormwater Symposium*, and *TRCD Newsletters*, included in Appendix C.

2.3a Quarterly Press Release/Public Service Announcements on Stormwater issues in the Basin

This task is complete. Quarterly Press Release/Public Service Announcements (PSA) on Stormwater issues in the Basin were disseminated over the duration of this project. PSAs were placed in local media venues including Tahoe Mountain News, Tahoe Daily Tribune, and Tahoe Quarterly; also airing on the local KRLT and KWOL radio stations. Press releases were developed for the 2015 Stormwater Symposium, the 2015 Snapshot Day and the Stormwater public awareness campaign. Supplemental funding was used to assist in completing this task. See *Stormwater Outreach* included in Appendix C for advertisements, press releases, and radio scripts.

2.3b Bi-annual Newsletter articles

This task is complete. Bi-annual Newsletter articles were disseminated in fall 2014 and spring 2015. Supplemental funding was used to assist in completing this task. See *TRCD Newsletters* included in Appendix C.

2.3c Outreach campaign using a multiple media/venue approach

This is complete. Through the utilization of EPA funding Tahoe RCD staff was able to raise greater awareness within the community through education and thoughtful discussions about the negative impacts of stormwater pollution on Lake Tahoe's clarity. Tahoe RCD staff used local media resources, including radio and print public service announcements to raise awareness of stormwater pollution as a pertinent environmental issue within the Basin. Large decals were added to our monitoring equipment boxes at each monitoring site to raise awareness and familiarity within the community about the location of our sites and adding to the public's knowledge of the Tahoe RCD's efforts to monitor stormwater.

Community events gave staff the ability to have meaningful connections with community members that assisted them in understanding the issue of stormwater pollution as a whole while enhancing

knowledge community members previously had in regards to this environmental concern. The South Lake Tahoe Earth Day celebration on April 25th, 2015 provided outreach to approximately 100 community members about the issue of stormwater pollution and what they can do to help prevent polluted runoff. The Lake Tahoe News Line coverage of the Earth Day event is available via the Tahoe RCD website at <http://TahoeRCD.org/tahoe-stormwater-monitoring/public-awareness/>. See attached Earth Day Ad included in *Stormwater Outreach* in Appendix C. Staff also attended the Business Expo in 2015 to raise awareness about the Tahoe RCD, our programs, and our mission.

The Tahoe RCD stormwater program brochure was developed and circulated throughout the community. See the stormwater brochure included in *Stormwater Outreach* in Appendix C. Community posters were distributed in local venues to continue raising awareness about stormwater pollution and action steps the community can take to prevent runoff.

Tahoe RCD used the internet to disseminate stormwater information through the Tahoe RCD's website (<http://tahoercd.org/tahoe-stormwater-monitoring/public-awareness/>) and the social media networking site Facebook (<https://www.facebook.com/tahoercd/>). Tahoe RCD staff posted information on Facebook to increase public awareness about stormwater. Additionally, ads were placed on Facebook which increased public interaction with the page.

By leveraging these grants funds with funds from the State of California, Tahoe RCD successfully implemented a stormwater outreach campaign using a multiple media/venue approach to raise public awareness of Tahoe RCD's stormwater monitoring program as well as stormwater issues and solutions in our community.

Task 3. Capacity Building

3.1 Catchment Registration Training.

3.1a BMP and Road Ram Data Collection

This task is complete. Tahoe RCD staff is trained in these methods and completed a final report comparing BMP RAM methods including the CHP, Ring Infiltrometer, and CASQA 48-hour draw down time, which is included in Appendix B as *A comparison of infiltration observations for dry basins in Lake Tahoe*. Tahoe RCD staff has coordinated with NTCD, 2N, and the City of South Lake Tahoe on both training and assisting with data collection.

3.1b PLRM Training

This task is complete. Tahoe RCD staff is done with initial training for PLRM. An occasional phone call to NHC is needed to work out some bugs with the new system, but otherwise staff is comfortable with the general operation of PLRM V2.

3.1c Data Entry into RAM Database Credit Accounting Platform (CAP) Training

This task is complete. Tahoe RCD staff has been trained in data entry methods for the Road RAM database, BMP RAM database, and CAP.

3.2 Evaluation of Funding Mechanisms and Community Support on Stormwater Program Development.

3.2a Evaluation of Stormwater Program Funding Mechanisms and Decision Maker Feedback on Support for Stormwater Program Development

Collaborate with jurisdictions, regulators, and other identified professionals to develop and implement a detailed RFP to guide and select a consultant to assess and evaluate available funding mechanisms and decision maker support for stormwater program development and sustained implementation. Partners will include at a minimum, the City of South Lake Tahoe, El Dorado County, Placer County, the Lahontan Water Board, EPA, NDEP, NTCD and others as appropriate. The local California jurisdictions are currently in the process of preparing a letter of commitment for the Tahoe RCD; through TRPA funds an additional \$5,000 will be contributed to assist in the execution of this task.

This task is complete. Please refer to the *Stormwater RFP* included in Appendix C.

3.2b Execute a collaborative scope.

This task is complete. A collaborative scope was developed for the subcontractor NCE to implement. Please refer to the *NCE Scope* included in Appendix C.

3.2c Financial Outlook, and Unified Action Plan (Summary of Findings Report)

This task is complete. The project to create a Stormwater Financial Outlook and Unified Action Plan was kicked off on July 10, 2015. Project partners include the City of South Lake Tahoe, El Dorado County, Placer County, Tahoe Regional Planning Agency, Lahontan Regional Water Quality Control Board, and the EPA. Facilitated partner meetings were held on September 16th, September 30th, November 5th, and December 3rd, 2015 to evaluate the financial, legal, political, governance, partnership, and outreach aspects of alternative long-term funding mechanisms. In support of this evaluation, the subcontractor NCE produced a Financial Outlook document. Please refer to the *SW Funding Partnership – Financial Outlook* included in Appendix C.

Partnership representatives and the Tahoe RCD met individually with community leaders, elected officials, and local government executives to obtain feedback on the draft Financial Outlook, preferred funding mechanisms, and outreach strategies. Feedback further refined the approach to securing a long term funding source for stormwater programs. The results of these sessions will inform next steps in securing a dedicated source of stormwater program funding, which are articulated in the summary report of the initiative. Please refer to the *SW Funding Partnership – Summary Report and Summary Report Attachments* included in Appendix C.

Task 4. Beta Testing PLRM Tools for a minimum of Two Urban Catchments

4.1 Coordinate with NTCD, El Dorado Co, City of SLT, Placer County and the TMDL Stormwater Tools Improvement Working Group on information gathering in the field, and PLRM modeling approach.

This task is complete. The TMDL Stormwater Tools Improvement Working Group met monthly during 2014/2015 to discuss issues, changes and improvements for Road RAM, BMP RAM, CAP, and PLRMv2. The meetings were run by NHC and were regularly attended by representatives from El Dorado County, the City of South Lake Tahoe, Douglas County, the Lahontan Regional Water Quality Control Board, Nevada Division of Environmental Protection, Nevada Department of Transportation, 2nd Nature, NTCD and the Tahoe RCD.

Tahoe RCD staff member Cara Moore began attending the meetings in April 2014, and attended nine of the PAC meetings on the following dates: 4/2/2014, 5/7/2014, 7/2/2014, 8/6/2014, 10/1/2014, 11/5/2014, 12/17/2014, 1/7/2015, 5/6/2015. Tahoe RCD staff member Andrea Buxton attended the PAC meeting on 2/3/15. March and April PAC meetings were canceled.

Throughout involvement with the TMDL Stormwater Tools Improvement Working Group, Tahoe RCD has provided invaluable beta testing and debugging of PLRMv2, Road RAM, BMP RAM, and CAP. The finalized TMDL tools were formally released as of August 26th, 2015.

4.2 Work with El Dorado County to test TMDL Tool Improvements and perform Catchment Registration process for one urban catchment.

No further work is required for this task. The County of El Dorado requested registration assistance for the Montgomery Estates (Urban Planning Catchment (UPC) 04). Tahoe RCD staff completed all work required for catchment registration (PLRM modeling, BMP RAM) and assisted El Dorado County with data entry into BMP RAM and CAP. However, bugs were encountered in CAP which prevented final catchment registration. El Dorado County has all of the information needed for full catchment registration once CAP bugs are worked out. For a summary of activities, please refer to *PLRM Results - Letter to El Dorado County* in Appendix B.

4.2a Threshold and Benchmark Identification (data collection for condition assessment)

This task is complete. Threshold and Benchmark values have been entered into BMP RAM.

4.2b BMP RAM data collection and input for identified key and essential BMPs

This task is complete. BMP RAM was performed for all BMPs in Montgomery Estates (UPC 04) in the fall, winter, and spring. Input into BMP RAM has been completed.

4.2c Run PLRM scenarios

This task is complete. PLRM modeling of Montgomery Estates (UPC04) is complete. Please refer to *PLRM Results - Letter to El Dorado County* in Appendix B for PLRM results.

4.2d Data entry into CAP

No further work is required for this task. Data entry into CAP was performed. However, bugs were encountered in CAP which prevented final catchment registration. El Dorado County has all of the information needed for full catchment registration once CAP bugs are worked out.

4.3 Work with the City of South Lake Tahoe to test TMDL Tool Improvements and perform Catchment Registration process for one urban catchment.

No further work is required for this task. The City of South Lake Tahoe originally requested catchment registration assistance in 12th Street ECP (B14). The initial intent was that improvement to existing baseline infrastructure would result in a large credit benefit; however modeling results indicated a relatively small credit potential for this management action. Therefore, the City of South

Lake Tahoe has decided not to register this catchment under this permit term. As requested by the City of South Lake Tahoe, the Tahoe RCD has provided credit potential comparisons in the 12th Street ECP (B14) under different water quality improvement scenarios to assist in planning efforts for catchment registration under future permit terms. For a summary of activities, Please refer to *TMDL Catchment Registration and Testing TMDL Tools: PLRM Modeling in the City of South Lake Tahoe's Urban Planning Catchment B14* included in Appendix B. Although this modeling effort did not result in catchment registration, the City of South Lake Tahoe found the information included in the report very useful. In response to the report, the City of South Lake Tahoe's Stormwater Program Coordinator, Jason Burke, stated "The Credit Potential breakdown by management action is hugely helpful. I think this report is very useful in guiding how we look at different possibilities for load reductions, and where the costs far exceed the benefits (SFR BMP retrofits) or other actions with 'diminishing returns' compared with disconnecting roads."

4.3a Develop BMP inventory and build model conditions for catchment.

This task is complete. For a summary of activities, Please refer to *TMDL Catchment Registration and Testing TMDL Tools: PLRM Modeling in the City of South Lake Tahoe's Urban Planning Catchment B14* included in Appendix B.

4.3b Threshold and Benchmark Identification (data collection for condition assessment)

This task is complete, however the City has decided against registering this catchment, so data will not be entered into the BMP RAM database.

4.3c RAM data collection and input for identified key and essential BMPs

This task is complete. BMP RAM data was collected for BMPs in the 12th Street ECP (B14) Catchment. The City of South Lake Tahoe has decided against registering the 12th Street ECP (B14) Catchment this permit term, so there are no key and essential BMPs in this catchment. Therefore, there will be no data input for key and essential BMPs.

4.3d Run PLRM scenarios

This task is complete. For a summary of activities, Please refer to *TMDL Catchment Registration and Testing TMDL Tools: PLRM Modeling in the City of South Lake Tahoe's Urban Planning Catchment B14* included in Appendix B.

4.3e Data entry into CAP

No further work is required for this task. The City has decided against registering the 12th Street ECP (B14) Catchment, so data will not be entered into CAP.

Task 5. Catchment Registration Assistance

5.1 Provide Cost Estimate for Catchment Registration Process

This task is complete. A cost estimate for catchment registration process is included in the main body of this report.

Task 6.0 – Community-Based Watershed Strategy for Tahoe Valley

6.1 Engage stakeholders and assist with finding solutions for EIP and TMDL implementation.

6.1a Develop Project Advisory Committee (PAC) for the Tahoe Valley Community Watershed Strategy; attend quarterly meetings.

This task is complete. Refer to Task 1.4.

6.1c Investigate complimentary options for community stormwater treatment strategies described in Tahoe Valley Area Plan. Provide recommendations to the City of South Lake Tahoe if additional load reduction opportunities and actionable strategies are identified.

This task is complete. For a summary of activities, please refer to the *Tahoe Valley and Meyers, CA Final Watershed Strategy Report* included in Appendix B.

6.1c(1) Prepare two “high level” community stormwater treatment concepts (one active, one passive). Provide to the City of SLT and key partners for review and comment. Concepts will demonstrate the multi-benefits of area-wide storm water management when it is successfully integrated with other public/private benefits (scenic, recreation, transportation/circulation, economic development)

This task is complete. For a summary of activities, please refer to the *Tahoe Valley Concept – Passive*; and the *Tahoe Valley Concept – Active*; included in Appendix C; and the *Tahoe Valley and Meyers, CA Final Watershed Strategy Report*, included in Appendix B.

6.1d Assist City of SLT in identifying private property BMP pollutant load reduction benefits as calculated by the Pollutant Load Reduction Model (PLRM). For identified Tahoe Valley catchment/s, the TRCD will provide Load Reduction Estimates on stormwater volume, TSS, phosphorus, and nitrogen pollutant load reductions at multiple scales of implementation.

This task is complete. For a summary of activities, please refer to the *Tahoe Valley and Meyers, CA Final Watershed Strategy Report* included in Appendix B.

6.1e Identify potential target areas where private property BMP evaluations have not been completed, or have resulted in source control certifications rather than complete BMP certifications. Investigate whether property owners might be willing to contribute to the maintenance of a regional treatment system versus attaining an individual parcel-level BMP certification.

This task is complete. For a summary of activities, please refer to the *Tahoe Valley and Meyers, CA Final Watershed Strategy Report* included in Appendix B.

6.1e(1) Prepare and provide postcard template to the City of SLT to distribute to property owners.

This task is complete. Postcards were distributed to property owners to encourage attendance at the July 16, 2015 Property Owner Advisory Group session. Please refer to the *Tahoe Valley Postcard* included in Appendix C. However, postcards were determined not to be an effective method for securing a large turnout at Property Owner Advisory Workshops. Instead, RO Anderson went door to door to personally invite property owners and provide them with a workshop flier. This approach resulted in a larger turnout for the final Property Owner Advisory Workshop in August 2015.

6.1e(2) Prepare for and facilitate a series of Property Owners Advisory Group Workshops to review and develop preferred concept ideas.

This task is complete. Tahoe RCD's subconsultant RO Anderson prepared for and facilitated three Property Owner Advisory Workshops in 2014 and 2015. Property owners provided their views on the strengths, weaknesses, opportunities and constraints of the Tahoe Valley Greenbelt area, their suggestions for revitalizing the area with neighborhood amenities in addition to stormwater treatment facilities, and offered ideas for enhancing preferred concept ideas. Please refer to the *Session 1 Minutes - Tahoe Valley Property Owner Advisory Group*, *Session 2 Minutes - Tahoe Valley Property Owner Advisory Group* and *Session 3 Minutes - Tahoe Valley Property Owner Advisory Group* included in Appendix C.

6.1e(3) Prepare Draft Concept based on property owners' input.

This task is complete. Please refer the *Tahoe Valley Concept - Preferred Draft Final* included in Appendix C.

6.2 Gain feedback from stakeholders in the Tahoe Valley community.

This task is complete. Tahoe RCD's subconsultant RO Anderson prepared for and facilitated three Property Owner Advisory Workshops in 2014 and 2015. Property owners provided their views on the strengths, weaknesses, opportunities and constraints of the Tahoe Valley Greenbelt area, their suggestions for revitalizing the area with neighborhood amenities in addition to stormwater treatment facilities, and offered ideas for enhancing preferred concept ideas. Please refer to the *Session 1 Minutes - Tahoe Valley Property Owner Advisory Group*, *Session 2 Minutes - Tahoe Valley Property Owner Advisory Group* and *Session 3 Minutes - Tahoe Valley Property Owner Advisory Group* included in Appendix C.

6.2a Hold collaborative work-sessions with the City of South Lake Tahoe.

This task is complete. Collaborative work sessions were held with the City of South Lake Tahoe to plan for and facilitate the three Property Owner Advisory Group workshops. As a result of these sessions, the City of South Lake Tahoe is pursuing funding to use the final concept for the Tahoe Valley Greenbelt to prepare planning and engineering documents. This will enable the City to take the next step towards implementation of the concept. Tahoe RCD provided a letter of support the City's grant application.

6.2b Utilize local media and events to illustrate the benefits of stormwater treatment in the watershed.

This is complete. Refer to task 2.3 in the revised work plan. See *Stormwater Outreach* and *TRCD Newsletters* included in Appendix C for advertisements, press releases, radio scripts, and newsletters.

6.2c Attend and facilitate collaborative meetings with key partners and stakeholders, and identify options for possible structure of an Assessment District.

This task is complete. Tahoe RCD's subconsultant RO Anderson prepared for and facilitated three Property Owner Advisory Workshops in 2014 and 2015. Property owners were asked their level of interest in participating in an Assessment District. Property owners were open to the idea, but stated they would need specific financial information before they could make a final decision. In

addition, during these sessions, property owners provided their views on the strengths, weaknesses, opportunities and constraints of the Tahoe Valley Greenbelt area, their suggestions for revitalizing the area with neighborhood amenities in addition to stormwater treatment facilities, and offered ideas for enhancing preferred concept ideas. Please refer to the *Tahoe Valley and Meyers, CA Final Watershed Strategy Report* included in Appendix B, *Session 1 Minutes - Tahoe Valley Property Owner Advisory Group*, *Session 2 Minutes - Tahoe Valley Property Owner Advisory Group* and *Session 3 Minutes - Tahoe Valley Property Owner Advisory Group* included in Appendix C.

6.2c(1) Prepare and deliver a City Council Presentation as well as a Public Workshop on the Green Belt Concept

No further work is required for this task. The Property Owner Advisory Group workshop process was very favorably received by community property owners who demonstrated support and interest in the implementation of the preferred concept. For this reason, the City determined that it would be redundant to host a separate Public Workshop and elected not to have RO Anderson provide a presentation to the City Council, preferring to provide the communication itself. The success of the project is evident, as the City has decided to move forward with submitting funding requests to develop the next phase of the project, including engineering and construction plans.

6.3 Prepare and submit the Final Tahoe Valley Watershed Strategy Report by December 30, 2015.

This task is complete. Please refer to the *Tahoe Valley and Meyers, CA Final Watershed Strategy Report* included in Appendix B.