

FACT SHEET: STORMWATER TOOLS *IMPROVEMENT* PROJECT

This project will carry out priority technical improvements to existing Crediting Program tools as well as seeks to develop a web-based map viewer that assists stormwater managers with their duties and responsibilities.

PROJECT NEED

The Lake Clarity Crediting Program (LCCP) is an innovative program in which Tahoe urban stormwater jurisdictions will participate during implementation of the Lake Tahoe Total Maximum Daily Load (TMDL). The LCCP incentivizes jurisdictions to prioritize pollutant controls and increases the transparency and accountability for the expenditures of public funds through the use of standardized reporting protocols and stormwater tools. The LCCP involves the use of a suite of stormwater tools including the Pollutant Load Reduction Model (PLRM), Best Management Practice Rapid Assessment Methodology (BMP RAM), Road Rapid Assessment Methodology (Road RAM), and the Accounting and Tracking Tool (ATT). The limited testing and training that has occurred has generated a number of desirable and necessary improvements for the initial versions of these tools. Moreover, research projects funded specifically to collect and analyze datasets to compare and assess tool performance are just now coming to completion; recommendations for tool improvements are forth-coming from this research. Finally, by necessity the stormwater tools were developed independently and within different timeframes. Inasmuch as possible the tools were developed with consideration for one another, however the nature of the tool development process has meant that they are not completely aligned.

PROJECT PURPOSE & DELIVERABLES

The purpose of the project is to:

- Refine and improve the current suite of stormwater tools by addressing known, priority operational improvement needs that have been identified by researchers and tool users and developers;
- Expand functionality of management and reporting tools and enable stormwater managers to focus attention on targeted actions in priority areas;
- Enhance the user experience and increase acceptance of the Crediting Program and supporting tools;
- Increase transparency and improve the ability to demonstrate accountability for the use of public funds for water quality improvements;
- Demonstrate the TMDL regulatory agencies' commitment to adaptively manage the Lake Clarity Crediting Program and improve it when necessary and desirable.

The primary deliverables of this project are: (1) prioritization process and technical memorandum laying out the priority improvements to be accomplished; and (2) updated/refined stormwater tools (ex: PLRM, RAMs, and/or Tahoe Integrated Stormwater Tool) and corresponding documentation (user manuals, applications guides, technical documents, administrator and maintenance guidance). Specific to the stormwater tools improvements, this project will leverage the >\$2 million investment to develop the tools and subsequent research needed to take these beta-version tools to fully functional initial versions.

STAKEHOLDER ENGAGEMENT

As with the entire Lake Tahoe TMDL and Crediting Program development process, stakeholder involvement is a key component of this project. Tahoe urban stormwater jurisdictions, funders and regulators are all necessary participants to ensure the project has a successful outcome and meets user's needs. Stakeholders will be engaged and invited to provide input at several points in the course of product development: (1) brainstorming desirable and enhanced or expanded functionalities of existing tools; (2) recommending priorities for tool and documentation improvements; (3) beta-testing of improved tools and recommendations for further improvements. While the stakeholder input process is yet to be determined, it may be feasible that stakeholder engagement is coordinated through the Stormwater Quality Improvement Committee (SWQIC) or a subcommittee thereof.

TIMELINE

The milestone schedule below is tentative and subject to revision.

MILESTONE	TIMELINE
Stakeholder Meeting #1	December 2012
Tech Memo: priority improvements to be accomplished	March 2013
Draft updated tools and documentation	July 2014
User Testing and Feedback	August – September 2014
Final version 1 tools	November 2014
Final Tech Memo: Project Summary	December 2014

RELATED PROJECTS

The Integrated Stormwater Tool is one of multiple funded efforts related to the Lake Tahoe TMDL and Crediting Program tools. These efforts however have distinct scopes of work that should not be confused by stakeholders.

Stormwater Tools *Integration* Project

This project will rectify the current problem of independent operation of and lack of integration associated with the existing suite of LCCP stormwater tools. The main product of this project is the Tahoe Integrated Stormwater Tool (Integrated Tool) which integrates the functions and databases of the existing stormwater tools together and with LCCP forms into an intuitive and easy-to-use online interface. The reduced cost and complexity and increased efficacy will facilitate stormwater managers to focus their attention on targeting their actions. For more information on this project see *Fact Sheet: Tahoe Stormwater Tools Improvement Project*.

TMDL Management System Project

The TMDL Management System Project is focused on defining the process by which TMDL implementation may be adaptively managed and improved. The project will establish the protocols by which new information and data may be used to inform management decisions and programmatic and policy adjustments. Load reduction tracking protocols for the non-urban source categories will be developed. A public progress and reporting platform will assemble and report information. The tool will facilitate progress evaluation at a variety of scales (jurisdictional, basin-wide, and TMDL source category). For more information on this project see *Fact Sheet: Lake Tahoe TMDL Management System*.

Focused Stormwater Monitoring to Inform Assumptions and Evaluate Predictive Capabilities of Existing Tools

This recently completed research funded through SNPLMA built off the US Army Corps of Engineers (US ACE) [Focused Stormwater Monitoring to Validate Water Quality Source Control and Treatment Assumptions](#) project to: develop a monitoring strategy to obtain a representative and reliable stormwater dataset to compare to applicable predictions from the PLRM; and provide road specific data to inform the development of Road RAM. Key findings related to road, private parcel and stormwater treatment best management practices research along with recommendations for stormwater tool improvements based on this information are presented. The [final report](#) includes methods, results and recommendations from the US ACE and SNPLMA funding.

Pilot Catchment Validation Study: Lake Tahoe Basin

This study was funded by the US ACE to develop, test and refine stormwater sampling protocols, PLRM modeling techniques, and data analysis approaches to facilitate a catchment scale comparison of pollutant load observations with PLRM predictions. The [final report](#) presents key findings and recommendations for improvements to the PLRM and future data collection and analysis efforts.

Other Related Projects

Several other projects are ongoing or have been completed that may be used to inform stormwater tools improvements. In order to keep this Fact Sheet brief, the reader is referred to the [Tahoe Science Update Report \(2011\)](#) which provides an overview of completed, current, and new research projects in the Lake Tahoe Basin, the results or recommendations of which may be considered in updating the stormwater tools. In particular, refer to the Stormwater section of the Watersheds, Habitat and Water Quality research theme.

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