



ANNUAL REPORT

Fiscal Year 2018

**July 1st, 2017
to
June 30th, 2018**

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MISSION STATEMENT

“ TO PROMOTE THE CONSERVATION AND IMPROVEMENT OF THE LAKE TAHOE BASIN’S NATURAL RESOURCES BY PROVIDING LEADERSHIP, EDUCATION AND TECHNICAL ASSISTANCE TO ALL BASIN USERS.”

VISION STATEMENTS

Organization

“TO BE A HIGHLY RESPECTED AND EFFECTIVE CONSERVATION ORGANIZATION IN THE LAKE TAHOE BASIN WITH SUFFICIENT AND SUSTAINED FUNDING TO MEET OUR CONSERVATION EFFORTS.”

Natural Resource

“A NEVADA LAKE TAHOE BASIN WHERE NATURAL RESOURCES AND NATURAL BEAUTY ARE PROTECTED AND ENHANCED IN HARMONY WITH THE USE AND ENJOYMENT OF RESIDENTS AND VISITORS.”

DISTRICT SUPERVISORS

SUPERVISORS - EXECUTIVE COMMITTEE

Glen Smith, Chair
Doug Martin, Representing Carson City, Vice Chair
Cary Sarnoff, Secretary/Treasurer

SUPERVISORS

Maureen McCarthy, PhD
Bob Cook
Barbara Perlman-Whyman
Marsha Berkgigler, Representing Washoe County
Dave Nelson, Representing Douglas County

DISTRICT STAFF

Meghan Kelly–District Manager/Senior Project Engineer
Dana Olson – Assistant District Manager
Domi Fellers – Environmental Scientist
Monica Grammenos – Project Engineer
Christopher Waetcher – Staff Engineer

*NTCD Board of Supervisors and Staff as of June 30th, 2018

INTRODUCTION

The Nevada Tahoe Conservation District (NTCD) is one of approximately 3,000 Conservation Districts functioning in all 50 States and U.S. Territories. Conservation Districts are subdivisions of State government and are unique locally led conservation agencies. Districts provide resource management and technical assistance to land occupiers (owners, renters, and producers) as well as work cooperatively with Federal, State, and Local governments in the delivery of conservation programs.

The Nevada Tahoe Conservation District is one of 28 Conservation Districts functioning under the auspices of Nevada Revised Statute, Chapter 548. The District is a Governmental Subdivision of the State of Nevada and a public body corporate created in 1976. Prior to July 1st, 1976 the land area that now makes up the NTCD was part of a larger Conservation District known as the Tahoe Verdi Conservation District. Local leaders realized the unique natural resource issues of the Lake Tahoe Basin and realigned District boundaries to create the NTCD. They believed the realignment would allow for more effective conservation management of Lake Tahoe's natural resources. Now the District encompasses all of the land in the Lake Tahoe Basin residing in the State of Nevada including portions of Douglas and Washoe Counties and the Carson City Rural Area.

The Nevada Tahoe Conservation District is Nevada Lake Tahoe's local conservation agency and source for technical assistance in the areas of erosion and conservation management. The District is a non-regulatory and grant funded agency that works closely with its Federal, State, and Local partners to deliver conservation programs to the Nevada Lake Tahoe Community. The District is guided by a Board of Supervisors made up of elected and appointed community leaders. The Board of Supervisors provides direction to the District's full time staff in carrying out the District's mission statement, vision statements, and guiding principles. As described in our mission statement, the District seeks to provide its constituents with superior technical assistance, educational resources, and conservation leadership with the goal of protecting Lake Tahoe's natural resources.

DISTRICT ADMINISTRATION AND OPERATIONS

Included in our accomplishments during the past year was the completion of the FY 2017 audit. The audit showed a financial outlook for the District which continues to reflect a financial position of accountability. Internal controls are in place to ensure the solvency of the District's funds.

The District submitted its Indirect Cost Rate with the Department of the Interior for the year 2019. The rate was approved in March 2018.

Other administration and operations accomplishments for fiscal year 2018:

- Successfully held eight regular board meetings.
- Participation in national and state conservation programs.
- The FY 2017 audit was completed with no findings.
- Successfully met all deliverable requirements of the Conservation Commission.
- District Staff and Supervisors continued to provide support for the NvACD.

PROJECT UPDATES

WATER QUALITY AND EROSION CONTROL PROJECTS

Scientists, researchers, and water quality specialists in the Lake Tahoe Basin have identified untreated storm water runoff, eroding soils, and impaired or disturbed stream environment zones (SEZ) as key threats to the water quality of Lake Tahoe. The District's Water Quality and Erosion Control (WQEC) Program is focused on identifying and correcting areas where point and non-point source pollution from stormwater runoff, eroding soils, and impaired SEZs are negatively impacting the quality of Nevada Lake Tahoe surface and ground waters.

In partnership with the Nevada Division of State Lands (NDSL), Nevada Division of Environmental Protection (NDEP), Tahoe Regional Planning Agency (TRPA), the US Forest Service Lake Tahoe Basin Management Unit (USFS), jurisdictions such as the Nevada Department of Transportation (NDOT) and Douglas and Washoe County, as well as other basin agencies, the District identifies and prioritizes critical areas and projects. Once projects have been identified, the District works diligently to assist project proponents in obtaining funding from Federal, State, and Local sources to design and construct the projects. During project design, the District, its grantors, and a project-specific Technical Advisory Committee provide technical oversight to ensure the project meets the natural resource, water quality, and community objectives of the WQEC Program.

NTCD continues working on several Water Quality and Restoration Projects with NDSL and under the State of Nevada Tahoe bond act, NDEP under the Nonpoint Source Program, NDOT under the gas tax funding, TRPA Mitigation funding from each Douglas and Washoe County, and federal funding sources such as the US Forest Service and Bureau of Reclamation. The cooperative effort between these agencies has led to several design and implementation projects including the Rosewood Creek Restoration Project, the Zephyr Cove Water Quality Improvement Project, and the Burke Creek Highway 50 Crossing and Realignment Project.

Rosewood Creek Restoration Project - Continuation

The purpose of the Rosewood Creek Restoration Project - Continuation is to continue to stabilize portions of the Third Creek watershed to reduce sediment loads to Lake Tahoe. Nearly a half mile of creek was restored as part of a project completed in October 2015. A new project was authorized by the Bureau of Reclamation to address a 400 foot section of creek just downstream from this restored reach. Design started on this reach in May 2017 and construction is planned for 2019. Monitoring is ongoing through FY 2021 to determine the project's contribution to water quality improvements.



New channel, culvert, and floodplain at Rosewood Creek Area A SEZ Restoration continues to undergo monitoring

Pittman Terrace Water Quality Improvement Project

This project is a partnership with NTCD, NDOT, Douglas County and the Pittman Terrace neighborhood to implement water quality and erosion control improvements in the Pittman Terrace community to address NDOT runoff generated from HWY 50. Funding is through NDEP, NDSL and NDOT. Funding was secured from all partners in April 2017. Final design was completed in May 2018 and the project was publically bid and a qualified best value bidder was selected and approved by the NTCD board and project funders. The project is will be constructed in Fall 2018.

Burke Creek HWY 50 Crossing and Realignment Project, Phase I & II and Headcut Repair

This project is a partnership with NTCD, USFS, NDOT and Douglas County to implement the Burke Creek HWY 50 Crossing and Realignment Project as well as a headcut repair on USFS land downstream. Phase I of the Project installed a new culvert under HWY 50, improved conveyance and drainage along HWY 50, removed a portion of the Douglas County parking lot and restored the area to stream channel and floodplain, and addressed channel entrenchment and head cuts upstream. NTCD engineers and consultants completed the design of the project in May 2016 and this phase was constructed August – October 2016. Phase II created a new branching channel downstream of HWY 50 on USFS land and construction stormwater treatment for NDOT runoff. USFS crews led Phase II construction, NTCD assisted with plan review and permitting. Phase 2 construction was completed October 2017. A final phase to repair downstream headcuts proceeded in spring 2018 and NTCD assisted with permitting while USFS did the design and implementation. The final headcut phase will be completed in October 2018. The Project is funded through USFS, NDOT, Douglas County and NDSL.



Burke Creek Post Construction June 2018

Kahle Water Quality Implementation Project

This project had been on Douglas County's priority list for a number of years and was specifically identified in the 2014 Burke Creek Rabe Meadow Master Plan by NTCD. Leftover USFS SNPLMA funding from the Burke Creek Crossing and Realignment Project was moved to this project and match was secured from Douglas County TRPA Mitigation Funds, NDOT, and NDSL to design and install this \$1.4 million dollar project which includes 1400' of storm drain pipe and large wet basin. Both treatments are appropriately sized for the design storm in the area and will result in considerable improvements to water quality. NTCD designed, permitted and bid the project with their own staff and the project is currently under construction to be completed in October 2018.

Incline Village Green Infrastructure Project

The goal of this project was to install 6 to 8 green infrastructure sites in the Washoe County Right-of-Way in Incline Village to treat stormwater runoff in high pollutant loading catchments. NTCD used part of the hydrologic and pollutant loading knowledge gained during the Asset Inventory Project and Stormwater Load Reduction Plan Projects coupled with the LID BMP effectiveness knowledge gained from the Hybrid BMP Project to construct rain gardens and bio-swales to maximize runoff treatment. NTCD staff in FY 2018 worked on permitting, planning and design components. However, due to a downscaling of the project by Washoe County, the project was deemed infeasible by funders and the project was closed prior to completion. The project work including the modeling and 50% engineering design and hydrology will be useful in future projects.

Zephyr Cove GID Water Quality Improvement Project

This project resulted in the construction of new conveyance pipe and a stormwater treatment basin on USFS land to treat runoff from the NDOT right-of-way and outfall treatments to treat overflow and some runoff from the Zephyr Cove GID neighborhood. Funding was provided by USFS SNPLMA Round 12, NDSL Bond Act, NDEP, and NDOT. NTCD acted as the overall project manager and design engineer. The project was constructed in phases that occurred in September and October 2016 and May and June of 2017 and completed July 7, 2017. The project is considered complete and was nominated for a TRPA best in basin award in 2018.



Zephyr Cove GID Water Quality Improvement Project: Left, installation of storm drain, Right, Newly constructed basin collecting runoff.

MONITORING AND MODELING PROJECTS

NTCD's environmental monitoring program is designed to provide answers to the scientific and natural resource questions of Lake Tahoe's resource managers. The program delivers these answers by the following means:

- Evaluation of environmental restoration projects
- Inventory of Basin-wide project accomplishments
- Inventory of Nevada's stormwater assets
- NDEP compliance monitoring
- Stream health and water quality
- Advanced stormwater treatment analysis
- Pollutant Load Reduction Modeling
- Sediment Load Reduction Planning

Lake Clarity Crediting Program Implementation & Registration

The 2014 Stormwater Load Reduction Plans and subsequent Annual Stormwater Reports for each of the Nevada jurisdictions of Washoe County (WC), Douglas County (DC) and the NDOT in the Lake Tahoe Basin demonstrate their capability of meeting the 5, 10 and 15 year Lake Tahoe Total Maximum Daily Load (TMDL) load reduction goals. The plans and reports were essential for laying out how each jurisdiction will meet their TMDL load reduction obligations under an Interlocal Agreement (ILA) with NDEP. The Lake Clarity Crediting Program (LCCP) Implementation & Registration project prioritized registration activities toward TMDL compliance for WC and NDOT only; Douglas County performed the registration and implementation in-house. After a steep learning curve on the steps involved in a registration for all parties (NTCD, WC, NDOT and NDEP) and a complete transfer and code re-write of the LCCP Tools (BMP RAM, Road RAM and CAP), both WC and NDOT have completed successful registrations and credit declaration. NTCD completed both the Road RAM and BMP RAM requirements for water year 2017. New agreements that continue this program into 2020 were signed with Washoe County, NDEP and NDOT in Spring 2018.

Washoe County Support Services

Provide GIS, Inventory, and modeling support (time and materials) to Washoe County to help complete a series of products for the TMDL including defining and characterizing an Urban Planning Catchment, mapping all stormwater assets, and running several Pollutant Load Reduction Model (PLRM) configurations.

Rosewood Creek Water Quality Monitoring

NTCD received additional funding to continue monitoring on Rosewood Creek with the goal of quantifying the restoration's impact on meeting the Tahoe TMDL. The sampling systems above Northwood Blvd. and below SR28 continue to be operational and are monitoring Rosewood Creek flow above and below the Area A restoration. With the new funding, an additional monitoring station above SR28 was installed to separate the impact of SR28 road runoff. These efforts continued through FY 2017 with the current grant and through FY 2020 with a new grant recently awarded.

Lower Wood Creek Water Quality Monitoring

NTCD is the lead Pollutant Load Reduction Model (PLRM) modeler for the Lower Wood Creek (LWC) Phase I Water Quality Improvement Project. NTCD provided preliminary PLRM data to Washoe County and the consultant, NCE. After reviewing the data, all parties participated in a field visit to discuss discrepancies and refine the GIS shapefile PLRM inputs files. NDEP approved the GIS shapefiles adjustments which should save time when the project is ready for LT Info Registration. NTCD refined PLRM using the updated GIS shapefile data and provided Washoe County and NCE the final results and files. NTCD is currently working to on the Final Technical Memo documenting all PLRM and GIS shapefile refinements. NCE is working on designing treatment BMP alternatives for priority stormwater areas. NTCD and Washoe County will then have the opportunity to review and offer insight prior to showing the treatment BMP alternatives to the TAC members in December 2018. The LWC Water Quality Improvement Project is on a fast track for construction in 2021 with BMP Registration by 2022.

Urban Agriculture Project

The National Association of Conservation Districts funded a project to promote urban agriculture in the schools surrounding South Lake Tahoe. This project supported technical assistance for the budding school garden program. A greenhouse was built at Bijou Elementary School and one is being constructed at the Lake Tahoe Environmental Magnet School to increase experiential learning and incorporate STEAM curriculum at the schools. Along with infrastructure, a school garden committee was formed under the South Tahoe Environmental Education Coalition to unify and guide the different garden programs at the schools. There is also work being done to bring the Tahoe Food Hub to South Lake Tahoe there by increasing access to locally grown produce.

Invasive Weeds

The District, in partnership with the Lake Tahoe Basin Weed Coordinating Group (LTBWCG), secured a grant with the Tahoe Fund to reprint the Lake Tahoe Invasive Weed Booklet. This booklet is an update of the 2004 booklet. This reprint adds new species of concern, and improves the relevancy of information included. The District also continues to be involved with the LTBWCG by attending to quarterly meetings.

Tahoe Yellow Cress

The NTCD attended quarterly Tahoe yellow cress meetings. This fiscal year, the District had limited funding for outreach and education efforts to inform lake front homeowners about Tahoe Yellow Cress. It did continue to work with partners on a Safe Harbor Agreement application in hopes to develop a program to improved conservation of Tahoe yellow cress on private properties.



Tahoe Yellow Cress

Community Watershed Planning

NTCD made progress on this project originally funded by the United States Environmental Protection Agency (US EPA - SNPLMA) with funding through January 2018 from the NRCS. The project's goals are to assist private property owners, commercial businesses, and local jurisdictions with TMDL implementation through a community-based watershed approach. The intent is to focus the community on implementation and maintenance of individual and merged BMPs for protection and restoration of water quality. Through an integrated strategy for community outreach, education and information sharing, the NTCD will increase the communities' knowledge of restoration objectives, opportunities for improving environmental stewardship, and continuation of the BMP retrofit program. This project aims to connect the private and public works EIP projects while being adapted to local community priorities. The NTCD continues to provide BMP assistance, BMP area planning assistance, maintenance verification protocols development and conservation planning assistance to two focus communities. Kahle Drive and the Oliver Park GID are the communities that NTCD has most recently focused efforts.

In these focus areas, project accomplishments include:

- Identified watershed stakeholders and engaged them in the community scale restoration scoping, targeting EIP and TMDL implementation. Provided coordinated outreach and education efforts within communities to avoid duplication and conflicting messages, and make the best use of available resources.
- Coordination and application of scientific information specific to the watershed areas.
- Assistance with TMDL catchment registration and tools training for such activities.

Direct project benefits will include source control, assisting jurisdictions in meeting environmental standards, and enhancement of natural/pre-development hydrologic cycle.

Secondary effects/benefits include increased understanding and awareness of local environmental issues amongst community members, ability to transfer technology across sub-watersheds, and promoting regional stormwater management approaches where these are superior to individual parcel-based BMP retrofits. No funding was received from EPA during this fiscal year, but the NRCS did contribute to private parcel technical assistance as well as community watershed planning in the Burke Creek Watershed through a cooperative agreement that ended in January 2018.

COMMUNITY PARTNERSHIPS

During Fiscal Year 2018, funding was provided by Douglas Counties. This funding has been essential to NTCD operations.

Douglas County Board Of Commissioners

NTCD received \$50,000 from the Board of Douglas County Commissioners for general assistance funding. Douglas County also provides NTCD with legal support through its District Attorney's office.

Carson City Board Of Supervisors

Although there are very few developed areas within the Carson City Rural Area, the Board of Supervisors has recognized the benefits of protecting Lake Tahoe Basin natural resources, for the thousands of residents and visitors who vacation and recreate in the basin.

Washoe County Board Of Commissioners

Washoe County continues to partner with NTCD on various projects in the Lake Tahoe Basin including the new Incline Village Green Infrastructure Project and Catchment Registration Projects.

The general fund funding provided by Douglas County enables NTCD to leverage a small amount of funding into larger projects such as the Burke Creek Highway 50 Crossing and Realignment Project and the upcoming Kahle Water Quality Basin Implementation Project. NTCD would like Washoe County to reinstate annual general fund assistance and presented to the Washoe County Board of County Commissioners in February 2017 on the matter. Washoe County did pledge \$25,000 of one time general fund assistance in June 2018. General fund assistance is critical for activities like grant writing and project planning and a consistent long term commitment is desired.

Other Partners

NTCD is involved in several other partnerships in addition to our Community Partnerships. During FY 2018, NTCD has Memorandums of Understanding or contracts with the USDA Natural Resources Conservation Service, the Nevada Division of Environmental Protection, the Nevada Division of State Lands, Tahoe Resource Conservation District, Nevada Department of Transportation, and the Tahoe Regional Planning Agency. We are fortunate to have such a

diverse and engaged group of partners who are dedicated to natural resource issues at Lake Tahoe.

Working groups are also an important partnership NTCDD is actively involved with. Our current participation includes:

- Lake Tahoe Interagency Monitoring Program
- South Tahoe Environmental Education Coalition
- Lake Tahoe Basin Weed Coordinating Group
- Stormwater Quality Improvement Committee
- Nevada Tahoe Water Suppliers Association
- TRPA Pathway Technical Working Groups
- TRPA Pathway Forum
- Lake Tahoe Federal Advisory Committee
- Nevada Stormwater Association
- Tahoe Interagency Executive Committee
- Washoe Tribe of Nevada
- University of Nevada Cooperative Extension
- Parasol Foundation
- Tahoe Yellow Cross Adaptive Management Working Group and Executive Committee.

FUNDING

Nevada Tahoe Conservation District funding during FY 2018 was provided by Local, State and Federal partners including:

LOCAL

Washoe County
Douglas County
Tahoe Resource Conservation District
Tahoe Regional Planning Agency

STATE

NV Division of Conservation Districts
NV Division of Environmental Protection
NV Division of State Lands
NV Department of Transportation
California Department of Transportation

FEDERAL

USDA Bureau of Reclamation
USDA Natural Resource Conservation Service
USDA Forest Service

PRIVATE

Tahoe Fund
National Association of Conservation Districts
Zephyr Cove GID
Skyland GID
Wildscape Engineering, Inc.
South Shore Transportation Management Ass.

A comprehensive overview of the District's finances is available in our FY 2018 annual audit. A copy of which is available at the district.