



Annual Lake Tahoe Stormwater Report for Water Year 2023

October 1, 2022– September 30, 2023

Washoe County

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Note: [Blue hyperlink text](#) in certain tables may be clicked to access the respective registration pages (LT Info login required).

List of Acronyms

BAT	Best Available Technology
BMP	Best Management Practices
BMP RAM	Best Management Practices Rapid Assessment Methodology
CICU	Commercial, Institutional, Communications, Utilities
EIP	Environmental Improvement Program
FSP	Fine Sediment Particles
GIS	Geographic Information System
ILA	Interlocal Agreement
IMP	Implementers Monitoring Program
LCCP	Lake Clarity Crediting Program
MFR	Multi-family residential
NDEP	Nevada Division of Environmental Protection
NTCD	Nevada Tahoe Conservation District
O&M	Operations and Maintenance
PLRM	Pollutant Load Reduction Model
RAM	Rapid Assessment Methodology
Road RAM	Road Rapid Assessment Methodology
RSWMP	Regional Stormwater Monitoring Program
SFR	Single-family residential
SLRP	Stormwater Load Reduction Plan
SWQIC	Storm Water Quality Improvement Committee
TMDL	Total Maximum Daily Load
TN	Total Nitrogen
TP	Total Phosphorus
TRPA	Tahoe Regional Planning Agency
WQIP	Water Quality Improvement Project
WY	Water Year (October 1 – September 30)

1 Background

The purpose of this report is to comply with the LCCP Handbook and Section IV.D of the *Interlocal Agreement to Implement the Lake Tahoe Total Maximum Daily Load (ILA)*, dated October 2021 between Washoe County and NDEP. The Lake Tahoe TMDL is a 65-year plan to return Lake Tahoe’s historic annual average deep-water clarity of 97.4 feet, and the ILA documents Washoe County’s commitment to reduce the FSP load in urban stormwater by establishing the second five-year TMDL credit milestone and intermediate annual credit targets. This report summarizes Washoe County’s load reduction activities undertaken during Water Year 2023 (October 1, 2022 through September 30, 2023) in an effort to meet the credit milestones and targets established in the ILA.

2 Accomplishment Summary

To meet the WY2023 intermediate credit target, Washoe County expanded its road registration, submitted one parcel BMP registration, and attained credits from twelve existing BMP registrations. RAMs were completed for all registrations, resulting in the declaration and award of 439 lake clarity credits shown in Table 1.

Several committees and working groups provide input into the program decisions affecting the implementation of the Lake Tahoe TMDL. In addition to crediting activities, Washoe County participated in the following committees that provided program guidance for the Lake Tahoe TMDL: Parcel BMP Working Group; and the Stormwater Quality Improvement Committee (SWQIC), including two subcommittees—Stormwater Operations & Maintenance (O&M) and the Implementers’ Monitoring Program (IMP).

Credit Declaration and Award

As identified in the ILA with NDEP, Washoe County’s intermediate annual credit target for WY2023 is 380 credits (26% reduction in FSP). Per the 2022 Annual Report, Washoe County projected to register 441 credits to meet the credit target based on road operations, completed water quality improvement projects and parcel BMP certifications. Due to non-performing private parcel BMPs (Central Incline Village Phase II BMP Registration), Washoe County declared and was awarded 439 credits, two credits less than the 441 estimated potential credits, but still exceeding the WY2023 target (see Table 1). These annual targets are guidelines to show incremental progress toward achieving the five-year milestones, the next being 2026, that are referenced for compliance.

Table 1. Jurisdiction-wide Credits Projected, Declared, and Awarded

Water Year	Annual Credit Target	2026 Five Year Milestone	Lake Clarity Credits Projected ^[a]	Lake Clarity Credits Declared	Lake Clarity Credits Awarded
2023 (October 2022 – Sep 2023)	380	496	441	439	439

[a] Projected credits are based on WY2022 Annual Report total credits anticipated to be registered and declared during WY2023.

Progress Toward 2023 Target

Washoe County worked diligently with NTCD (who performed the PLRM modeling and RAMs) and NDEP to declare 439 credits for WY2023 and surpassed the annual credit target of 380 credits. The County expanded or maintained twelve of its existing thirteen registrations for full credit. Due to non-performing parcel BMPs, the existing Central Incline Village Phase II BMP Registration was updated in the Stormwater Tools for a potential 12 credits instead of the originally registered potential 14 credits. Washoe County attained full potential credits on the other twelve Stormwater Tools BMP registrations and one Road Registration.

Road Operations Implementation Summary

Washoe County's Road Registration- Water Year 2022-2026 includes 103 potential credits per year with a five-year credit schedule through WY2026, representing a network of 59 impervious acres of Priority 1 (road class) roadway with an Expected Condition Score of 3.4 for all roads within this class.

Washoe County completed four Road RAM inspections for WY2023, in accordance with LCCP. The inspections were conducted on April 17, May 15, May 30, and June 28 of 2023. Washoe County's roads crews worked to maintain optimal road conditions throughout the year, and subsequently received inspection scores of 3.5, 4.1 and 5.0 (January-May), and 5.0 (June-September), with an average annual Road RAM score of 4.3. Thus, Washoe County achieved and surpassed its expected road condition score (3.4) and was awarded 103 credits by NDEP on December 22, 2022.

Table 2. Potential, Declared, and Awarded Credits from Road Operations

Road Registration Name	Primary Water Quality Improvement Actions	Declaration Date	Annual Credit Potential ^[a]	Credits Declared	Credits Awarded
Washoe County Road Registration- Water Year 2022-2026	Road Operations & Maintenance	10/10/2023	103	103	103
TOTAL			103	103	103

[a] Expected credits are based on the verified registration in LT Info Stormwater Tools.

BMP Implementation Summary

Washoe County has completed many WQIPs in the Lake Tahoe Basin since the 2004 start date for TMDL compliance; due to the high rate of parcel BMP implementation in Washoe County, both parcel and treatment BMPs are registered as pollutant controls. During WY2023, Washoe County maintained twelve existing BMP registrations and added one Sweetwater-WC60dWC31a parcel BMP Registration, as shown in Table 3.

One existing BMP Registration, Central Incline Village Phase II, was updated due to parcel BMP certificates dropping from 100% to 50% after exceeding 5-years of no maintenance. The registration potential credits decreased from 14 to 12.

During summer 2023, NTCD performed BMP RAM for registered Key and Essential treatment BMPs to meet the annual BMP RAM requirements for registered treatment BMPs and inform Washoe County of maintenance needs. Washoe County's roads crews performed the identified maintenance, including spot

cleaning of conveyance features and treatment features (basins and Jellyfish), maintenance of staff gauges, and stabilization of erosion caused by summer thunderstorms and winter snowmelt. The Washoe County Roads Department vector truck allowed the crews to clean all pertinent stormwater infrastructure in the Incline Village area in WY2023.

Table 3. Potential, Declared, and Awarded Credits from BMP Implementations

Registration	Primary Water Quality Improvement Actions	Declaration Date	Annual Credit Potential ^[a]	Credits Declared	Credits Awarded
Fairview/Fairway Ph III WQIP Upper Deer Creek	Stormwater Treatment BMPs, Parcel BMPs	10/11/2023	37	37	37
Fairview/Fairway Ph III WQIP Rosewood Creek	Stormwater Treatment BMPs, Parcel BMPs	10/11/2023	14	14	14
Central Incline Village Phase I WQIP	Stormwater Treatment BMPs, Parcel BMPs	10/11/2023	44	44	44
C07 Parcel BMP	Parcel BMPs	10/11/2023	12	12	12
E01 Parcel BMP	Parcel BMPs	10/11/2023	3	3	3
G01 Parcel BMP	Parcel BMPs	10/11/2023	2	2	2
Diamond Peak (WC68) Parcel BMP	Parcel BMPs	10/11/2023	25	25	25
Central Incline Village Phase II BMP	Stormwater Treatment BMPs, Parcel BMPs	10/11/2023	14	12	12
Central Incline Village Phase I & East Incline Village Phase I	Stormwater Treatment BMPs, Parcel BMPs	10/11/2023	69	69	69
East Incline Village Phase I Reg 1	Stormwater Treatment BMPs, Parcel BMPs	10/11/2023	56	56	56
East Incline Village Phase I Reg 2	Stormwater Treatment BMPs, Parcel BMPs	10/11/2023	22	22	22
East Incline Village Phase I Reg 3	Stormwater Treatment BMPs, Parcel BMPs	10/11/2023	21	21	21
Sweetwater-WC60dWC31a	Parcel BMPs	10/11/2023	19	19	19
TOTAL			338	336	336

[a] Credit potential is based on verified registrations in LT Info Stormwater Tools.

Private Parcel BMPs

As stated in the Credit Declaration and Award section of this document, some private parcel BMPs were non-performing, causing a loss of two credits to Washoe County. Washoe County is in the process of developing a maintenance strategy to offer BMP maintenance activities for apartment complexes and shared spaces in order to ensure private parcel BMPs are maintained and adequate. While Washoe County alongside TRPA conditions new development with installation of BMPs, Washoe County is exploring abilities or methods to incentivize private property owners with maintaining their private parcel BMPs.

3 Stormwater Load Reduction Plan

Description and Timeline of Controls to be Implemented

In accordance with the ILA, Washoe County must attain 416 credits—or 28.5% load reduction—in order to meet the 2024 Pollutant Load Reduction Target for FSP. Table 4 lists the existing WY2023 registrations that will carry forward to help Washoe County attain the WY2024 target. Table 5, Table 6, and Figure 1 show the proposed registrations and timeline for WY2024, along with intermittent years through WY2026. To meet the 2026 Pollutant Load Reduction Milestone for FSP, Washoe County must register and maintain 496 credits or a 34% FSP load reduction according to the ILA. Pollutant controls proposed for registration include all three load reduction categories: road operations, parcel BMPs, and treatment BMPs.

Estimated Credit Potential of Pollutant Controls

Estimated credit potential for existing and proposed registrations are identified in Table 4 through Table 6. Table 4 presents the active registrations for WY2023 and indicates the annual credit potential for these registrations. For WY2024, Washoe County has 422 potential credits from these existing Table 4 registrations.

Table 4. Existing Registrations – Water Year 2023 Potential Credits

Registration	Pollutant Controls	Establishment Water Year	Expiration Water Year	Annual Credit Potential ^[a]
Existing Registrations				
Fairview/Fairway Ph III WQIP Upper Deer Creek Registration	Stormwater Treatment BMPs, Parcel BMPs	2016	2026	37
Fairview/Fairway Ph III WQIP Rosewood Creek Registration	Stormwater Treatment BMPs, Parcel BMPs	2016	2030	14
Central Incline Village Phase I WQIP Registration	Stormwater Treatment BMPs, Parcel BMPs	2017	2031	44
E01 Parcel BMP Registration	Parcel BMPs	2017	2031	3
G01 Parcel BMP Registration	Parcel BMPs	2017	2031	2
Central Incline Village Ph II WQIP Registration	Stormwater Treatment BMPs, Parcel BMPs	2018	2032	12
Diamond Peak (WC68) Parcel BMP Registration	Parcel BMPs	2018	2032	25
Central Incline Village Phase II and East Incline Village Phase I BMP Registration	Stormwater Treatment BMPs, Parcel BMPs	2019	2033	69
East Incline Village Phase I Reg 1 BMP Registration	Stormwater Treatment BMPs, Parcel BMPs	2020	2034	56
East Incline Village Phase I Reg 2 BMP Registration	Stormwater Treatment BMPs, Parcel BMPs	2020	2034	22
East Incline Village Phase I Reg 3 BMP Registration	Stormwater Treatment BMPs, Parcel BMPs	2020	2034	21
Sweetwater-WC60dWC31a BMP Registration	Parcel BMPs	2023	2037	19
Washoe County Road Registration- Water Year 2022-2026	Road Operations & Maintenance	2022	2026	103
Potential WY2024 Credits from Existing Registrations				427

[a] Potential credits are based on verified registrations in LT Info Stormwater Tools.

Table 5 presents the new registrations that will be submitted and approved for WY2024, and the potential credits available. Washoe County will add the Lower Wood Creek Phase I and II BMP Registration for a potential 44 credits, with only 28 potential credits available for WY2024 due to a March 2024 registration timeline. The current 427 registered potential credits plus 44 projected potential credits should give Washoe County 455 credits for WY2024, which exceeds the water year target of 416 (see Table 5).

Table 5. Proposed Registrations - Water Year 2023 Potential Credits

Registration ^[a]	Pollutant Controls	Year Implemented	Planned Registration Timeline	Projected Credits
Proposed WY2024 Registrations				
Lower Wood Creek Phase I and II BMP Registration	Stormwater Treatment BMPs, Parcel BMPs	2024	2037	28 ^[b]
Projected New WY2024 Credits				28
Potential Existing WY2023 Credits				427
Total Projected WY2024 Credits				455

[a] Potential credits are based on verified registrations in LT Info Stormwater Tools.

[b] Due to a March 2024 registration date, only 64% of the potential credits are eligible for WY2024 ($44 * 65\% = 28$)

Progress Toward 2026 Milestone

Assessment and Planning

Washoe County plans to continue registering pollutant controls to meet credit targets and milestones for coming years. Table 6 presents the WQIPs/Urban Catchments that Washoe County anticipates registering to achieve the 2026 credit milestone, as well as the annual intermittent targets. Washoe County anticipates registering an additional 84 credits by 2026, for a total of 513 credits to satisfy Washoe County's 2026 milestone credit target for the five-year planning horizon.

The Lower Wood Creek (LWC) Phase I and II Water Quality Improvement Projects (WQIPs) will be registered in WY2024 for 44 potential credits. The WQIPs installed new conveyance to treatment BMPs including basins and underground perforated pipes designed for infiltration.

The County conducted a 10-year stormwater plan (LCCP Projects and Credits Plan), June 2021, that included an assessment of existing conditions and a long-term TMDL Compliance Plan, to assist the County in compliance with the ILA and to protect Lake Tahoe water clarity. The stormwater planning memo sought to utilize time and budgets wisely by expanding the road registration again in 2026 to include the roads within the Upper Third and Rosewood Creeks WQIP as a new road class with an expected condition score of 2.8. Within the same timeline (WY2026), the Upper Third and Rosewood Creeks WQIP will be registered for both parcel and treatment BMPs. This project received planning, permitting and potential design funding from the US Forest Service Lake Tahoe Restoration Act (LTRA) and it is listed in the Lake Tahoe Info EIP Project Tracker. The project remains on the LTRA list for implementation funding.

Washoe County continues to plan for the future by having added the Preston Field, Burnt Cedar and Second Creek WQIPs to the LTRA and EIP Project Tracker lists. The potential credits from these projects should not be needed until beyond the 2026 milestone, thus, the projects were not included on Table 6. By maintaining the registrations listed in Table 4 and registering the projects listed in Table 5 and Table 6,

Washoe County will meet the 2026 milestone. Registrations include road operations, stormwater treatment BMPs and parcel BMPs. All proposed stormwater treatment BMP registrations reflect infrastructure installed after 2004. Washoe County continues working to identify a sustainable funding source for TMDL implementation (see Section 4.1).

In 2017, NTCD conducted a study for Washoe County to determine the potential number of Clarity Credits that could be attained by Washoe County if there was 100% compliance by private parcels with TRPA's Parcel BMP Program. The study indicated that over 50% of the 1,043 credits estimated to be required of the County for the 65-year milestone could be achieved through parcel BMPs (NTCD, 2018). However, parcel BMP credits lose optimal value if not maintained, which reduces Washoe County's credit potential and jeopardizes intermittent targets and milestone compliance. Without resources to encourage parcel owners to maintain their parcel BMPs and agency support to assist parcel owners with parcel BMP compliance, Washoe County will resort to obtaining parcel BMP credits at a minimum to avoid losing potential credits during declarations.

Projected Lake Clarity Credits for proposed credit registrations identified in Table 6 have been compiled from the best available sources, including preliminary draft registration work using PLRM v2.1. The actual load reduction and credit potential are expected to change as each catchment is registered. The updated baseline calculations will be used as the starting point for future registrations and input parameters will be refined to reflect catchment conditions more accurately.

Update to Intermediate Credit Target Schedule

The credit target schedule in Table 6 presents the load reduction targets and milestones established in the updated 2022-2026 ILA. Washoe County is on track to meet each of these targets and milestones and does not propose any changes to the credit schedule at this time.

Table 6. Proposed Future Credit Registration Schedule

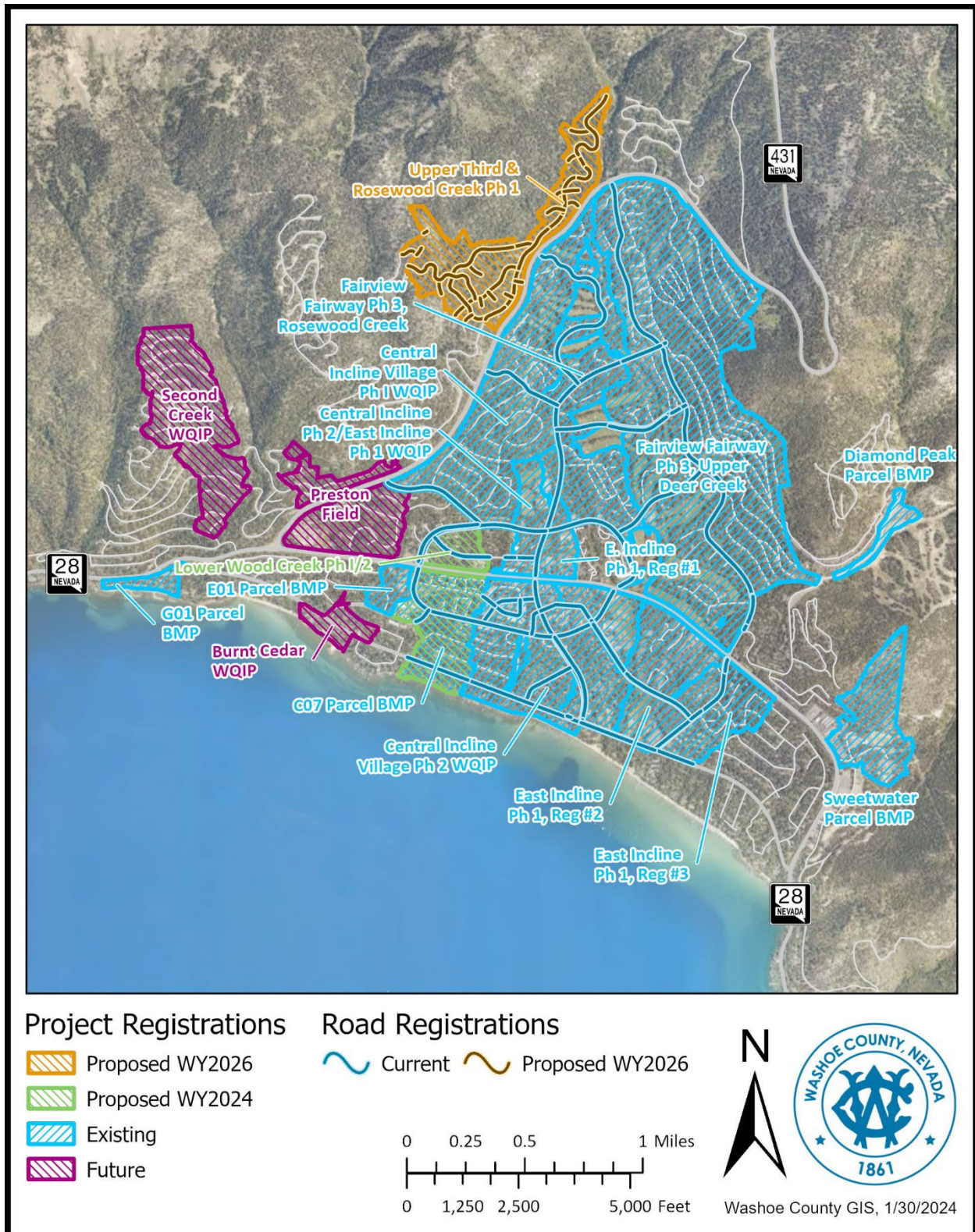
Registration ^[a]	Estimated Credit Potential by WY ^[b]				Comments
	2024	2025	2026	2027	
Fairview/Fairway Ph III WQIP - Upper Deer Creek	37	37	37	37	
Fairview/Fairway Ph III WQIP - Rosewood Creek	14	14	14	14	
Central Incline Village Ph I WQIP	44	44	44	44	
E01 Parcel BMP	3	3	3	3	
G01 Parcel BMP	2	2	2	2	
Central Incline Village Ph II WQIP	14	14	14	14	
Diamond Peak (WC68) Parcel BMP	25	25	25	25	
Central Incline Ph II/ East Incline Ph I WQIP	69	69	69	69	
East Incline Village Ph I WQIP Registration #1	56	56	56	56	
East Incline Village Ph I WQIP Registration #2	22	22	22	22	

East Incline Village Ph I WQIP Registration #3	21	21	21	21	
Road Registration - WY2022	103	103			Expanded Priority 1 Class @ 3.4
Sweetwater WC60d Parcel BMP	19	19	19	19	
Lower Wood Creek Ph I & II WQIP	44	44	44	44	
Road Registration – WY2026			128	128	New Priority 2 Class @ 2.8
Upper Third & Rosewood Creeks Ph I WQIP			15	15	
Total	473	473	513	513	
ILA Credit Target/Milestone ^[c]	416	452	496	497	2026 is next compliance Milestone

[a] See Figure 1 for map of proposed registration areas.

[b] Projected credits are estimates only. Due to PLRM refinements that occur during registration, the Modeled FSP Load Reductions and Projected Lake Clarity Credits are expected to change upon registration.

[c] WY2026 is a compliance milestone year (496 credits required). Intervening annual targets are guidelines used for the purpose of demonstrating incremental progress and do not determine compliance.



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Figure 1. Catchments Planned for Registration to Meet 2026 Milestone and Beyond

4 Fiscal Analysis

Budget

Expenses related to the implementation of the Lake Tahoe TMDL include program management, infrastructure maintenance, stormwater monitoring and capital improvements. Washoe County continues to analyze program cost estimates with ongoing utilization and refinement of a robust asset management system. After several unanticipated delays, the County will diligently work to establish the Lake Tahoe Stormwater Program Support Services Project to identify program costs and evaluate feasible long-term funding sources related to the Lake Tahoe TMDL. It is the current goal of Washoe County to develop a plan and scope of work for this project in calendar year 2024, with a planned start date in October 2024. This project could take up to one calendar year to complete, depending on Washoe County staff and other resources. Project goals include identifying Washoe County's stormwater costs in the Tahoe Basin and identifying options to develop a sustainable funding source for both new infrastructure as well as the increasing maintenance and replacement of existing infrastructure along with the required staff levels to manage the program. The first project tasks include:

- Defining the Program – This includes developing the understanding of all of Washoe County's Stormwater Program requirements, components and services.
- Refining a Financial Analysis for the Program – This includes developing annual past and future program expenditures for major program elements; identifying any gaps between previous and future costs; and past revenue sources and their future availability.

These tasks will prove to be a significant undertaking, requiring compilation of a substantial amount of cost data related to all aspects of TMDL implementation. Continued data analysis will aid in determining operational and maintenance funding levels necessary for the sustainable implementation of the Program. In the meantime, the County will continue to advance the program through the following tasks:

- Continue and Refine Initial Program Branding – This includes developing Program branding and messaging, which includes defining a compelling title, tag line, and answering key questions about the Program.
- Outreach to Key Stakeholders and Potential Partners – This includes facilitating initial outreach, in the early planning and design phases, to key stakeholders and potential partners, including the facilitation and documentation of meetings with the identified stakeholders. Based on a compilation of all information, the County will determine if there is strong justification and support to move forward with a funding initiative.

In addition to continuing the cost and funding study, Washoe County will continue the use of Asset Essentials, implemented in the summer of 2018; this software utilizes GIS mapping and tracking along with operations management reporting to cross reference operations with location. Through Asset Essentials, the County can more easily track the location of areas that need increased or specific operation, as well as areas that receive redundant operation and management practices. This provides a more detailed tracking of maintenance performed related to the implementation of the Lake Tahoe TMDL.

During WY23, the County utilized GIS data, which provides Washoe County a more accurate quantification of operation performance and yields practices that better maintain assets and plan capital projects.

Finance Plan

Washoe County relies on grant funds for project planning, design, and implementation. Washoe County's active grant funded projects (as of October 1, 2023) that support implementation of the Lake Tahoe TMDL are listed in Table 7 and include stormwater quality improvement projects, streets and roads operations & maintenance (O&M), stormwater treatment facilities O&M, participation in TMDL stormwater monitoring, and credit registration. Washoe County uses TRPA Water Quality Mitigation funds as match for limited infrastructure maintenance, LCCP implementation, and water quality improvement projects. However, the County recognizes these funds are not generated rapidly enough to be considered a sustainable long-term funding source and do not address the increasing operational costs nor the future repair and replacement costs. Grant administration is ongoing and includes the submittal of quarterly reports related to each project. In addition to administering the current grants, Washoe County continues to pursue available funding and explore partnerships to meet the requirements of the ILA. Washoe County will continue to target grant funding opportunities, such as the Lake Tahoe Restoration Act, Nevada Division of State Lands funding, and NDEP's 319(h) program.

Table 7. Active Washoe County Projects (as of October 1, 2023)

Project Description	Funders	Total Funding Amount ^[a]	Funding Period	Water Quality Action
LCCP Registration and Implementation Ph IV	NDEP 319(h) TRPA Mitigation Funds	\$14,080 \$13,500	2024	Continue catchment registrations and RAMs
LCCP Registration and Implementation Ph V	NDEP 319(h) TRPA Mitigation Funds	\$40,080 \$45,080	2024-2026	Continue catchment registrations and RAMs
Lower Wood Creek Phase II Bid Alternates 1, 2 and 3	NDSL Tahoe Bonds USFS SNPLMA NDEP 319(h) TRPA Mitigation Funds Washoe County GF	\$2,500,000 \$450,000 \$153,000 \$592,903 \$80,850	2024	Water quality improvement project and parcel BMPs
Upper Third and Rosewood Creeks	USFS LTRA	\$850,000	2023-	Water Quality Improvement Project and Parcel BMPs
TRCD Stormwater Compliance Monitoring ^[b]	Partner Jurisdictions (7) Washoe County GF	\$284,690 \$40,670	FY 2024	TMDL required stormwater monitoring
Streets and Roads Operations & Maintenance	Washoe County Road Enterprise	\$150,000 annually	2009-2045	Operations & Maintenance
Stormwater Treatment Facilities Operations & Maintenance	Washoe County Road Enterprise	\$200,000 annually	2009-2040	Operations & Maintenance

[a] Funding amounts as of October 1, 2023

[b] Project management done by the TahoeRCD.

Table 8 identifies water quality projects that Washoe County intends to implement to meet credit targets and credit milestones beyond 2024. Like many of the Lake Tahoe basin jurisdictions, Washoe County does not have a reliable and sustainable funding source for the additional infrastructure maintenance and stormwater monitoring necessary under the LCCP, and while federal funds are more competitive to acquire for capital project design and construction, Washoe County continues to rely on state funding. As described in Section 4.1, the County is working to develop comprehensive program costs and ultimately identify a feasible long-term approach to fund these and other projects to meet the County's commitments under the TMDL.

Table 8. Proposed Washoe County Projects (as of Oct 1, 2023)

Project Description	Targeted Funding Sources	Estimated Total Cost	Implementation Year	Water Quality Action
Upper Third & Rosewood Creeks Phase I	NDSL Tahoe Bond Act	\$3,500,000	2025	Water quality improvement project and parcel BMPs
Expand Road Registration	Washoe County	N/A	2025	Road Operations
Preston Field	Unknown	\$1,500,000	2026	Water quality improvement project and parcel BMPs
Burnt Cedar/Lakeshore Blvd	Unknown	\$500,000	2028	Water quality improvement project and parcel BMPs
Incline1 Catchment	Unknown	\$975,000	2028	Water quality improvement project and parcel BMPs
Second Creek (B02)	Unknown	\$2,500,000	2030	Water quality improvement project and parcel BMPs

5 Barriers

Six major barriers continue to affect Washoe County's successful implementation of the Lake Clarity Crediting Program; these include funding, decrease in prioritization of stormwater quality in the Tahoe Basin, adaptive management, Road RAM, maintaining private parcel BMP certification, and time needed to administer the LCCP.

1. Lack of a dedicated and sustainable funding source is anticipated to be Washoe County's largest barrier to meeting the Lake Tahoe TMDL. Funding continues to be secured for capital projects, stormwater monitoring, and program management, but grant funds continue to be competitive with all jurisdictions seeking funding annually. Additionally, the County's operations and maintenance costs continue to increase with added stormwater infrastructure and expanding road operations. As discussed above, Washoe County is actively working to address this barrier, starting with documenting total program expenses and explore future funding options. Until a

sustainable funding source is established, Washoe County will continue to rely on limited grant opportunities, diminished TRPA Mitigation funds, and partnering opportunities that result in cost savings.

2. While stormwater quality impacts remain a high priority for the Lake Tahoe basin, the identification of additional high priority issues, such as forest health, invasive species, biological diversity, climate fluctuation, and TRPA's environmental threshold carrying capacities, have diluted federal funding allocations. These factors, combined with public observation of the amount of funding previously spent on water quality in the Tahoe Basin, lead to challenges in securing funding for stormwater-related projects and programs. Yet, significant funding is still needed to fully implement the County's Program through the term of the Lake Tahoe TMDL. Dedicated funding is necessary at the programmatic level to ensure incremental progress will be made and to provide better certainty of the return on capital investment through a dedicated maintenance/replacement funding stream.
3. The Lake Tahoe TMDL Program uses adaptive management to incorporate best available science and technical information; a stakeholder review process results in annual findings and possible recommended changes to the TMDL program. As a result, the Stormwater Tools and the LCCP continue to evolve since program inception. While the County has adjusted to the changes and the program and tools are more streamlined, last change was 2020, the persistent potential for change creates a challenge for the County in developing a long-term strategy to meet credit milestones to comply with the TMDL; it also makes it difficult to plan for staff time and resources to manage and administer the LCCP. Nearly all changes result in additional work on the part of the County and/or NTCD to update registrations or to otherwise comply with the adaptations.
4. Challenges associated with Road RAM inspections is a potential barrier to Washoe County meeting credit targets and milestones. Due to winter road conditions balancing weather, roadway safety, road surface conditions, scheduling, and Road RAM scores will always be a challenge, but observations of salt-clouds impacting Road RAM scores during winter months is becoming an increasing concern. While salt-cloud observations have yet to prevent Washoe County from attaining our expected road condition score, Road RAM was not designed to differentiate between dirt and salt. It may prove harmful to rely on road operations as a method to meet milestones if scheduling, weather impacts, and/or road conditions prevent Washoe County from declaring credits in any given water year.
5. Washoe County has been able to attain Lake Clarity credits from parcel BMP certification, which is substantial in Washoe County and amounts to considerable credits. However, to attain maximum credit potential, the BMPs must be maintained and recertified by TRPA, preferably annually, but at least every five years. While Washoe County and NTCD will coordinate with TRPA to maintain parcel BMP compliance, the likelihood of TRPA being able to keep pace with recertification is low due to a lack of a dedicated staff member, meaning time must be spent updating registrations for less potential credits. The County anticipates parcel BMP compliance

being an issue for existing registrations, meaning Washoe County could not be quite as on-track to attain the annual intermittent credit targets and 2026 Milestone as previously thought.

6. The entire LCCP process has become more user friendly and streamlined, and every year the registrations, assessments and declarations become more routine; however, the total amount of staff time required to administer the LCCP continues to be a challenge for Washoe County. The County has been able to meet deadlines and maintain compliance, but with additional registrations come additional registration reviews, RAMs, tracking, planning, reporting and funding requirements. Staff time is a limited resource at Washoe County, so continued efficiencies and simplifications that can be implemented to the LCCP would be beneficial.

6 Baseline Discrepancies

The baseline load estimate developed in the 2016 Jurisdictional Baseline Report is refined with each credit registration. During the registration process, refinements will be made to the PLRM baseline inputs to better reflect baseline conditions. These changes are documented in each registration memo. NTCD maintains a comprehensive baseline load tally as continual refinements are made at the jurisdictional scale. It is important to note that NDOT loads associated with certain Washoe County registrations have been removed from Washoe County's baseline load for WY2023. According to NTCD records, reflecting all registrations through WY2023 and the WY2024 Lower Wood Creek Phase I and II BMP Registration, Washoe County's total baseline load has increased by 550 lb-FSP/yr, or approximately 3 credits, which is equivalent to a relative percent difference of 0.2% (see Table 10).

Table 7. Baseline Discrepancies

Pollutant of Concern	2016 Jurisdictional Baseline Report Estimated	Registration Baseline Refined	Baseline Difference	Baseline Difference (Credits)	Baseline Relative Percent Difference
FSP (lb/yr)	290,412	290,962	+550	+3	0.2%
Total Phosphorus (lb/yr)	1,228	1,216	-12		-1%
Total Nitrogen (lb/yr)	4,722	4,641	-81		-1.7%

References

- 2NDNATURE LLC et. al., 2009. *BMP RAM Technical Document, Lake Tahoe Basin*. Prepared for the U.S. Army Corps of Engineers, Sacramento District. September 2009.
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