



*Virgin River near Mesquite, Nevada. Photo courtesy of the Virgin River Coalition and The Nature Conservancy*

# Nevada Division of Environmental Protection

## Nonpoint Source Management Program

SFY 2021 Annual Report



# NEVADA'S NONPOINT SOURCE MANAGEMENT PROGRAM

## SUMMARY OF ACCOMPLISHMENTS

This report is written to comply with Subsection 319(h)(11) of the Clean Water Act (CWA), which requires each state to report to the United States Environmental Protection Agency (EPA) on an annual basis regarding (A) its progress in meeting milestones listed in the Nevada Nonpoint Source State Management Plan; and (B) to the extent appropriate information is available, reductions in nonpoint source (NPS) pollution loading and improvements in water quality resulting from implementation of the management program.

The report documents the activities and accomplishments of the Nevada Division of Environmental Protection (NDEP), Nonpoint Source Pollution Management Program (NPS Program) and other state, federal, and local agencies in addressing NPS issues in Nevada. The reporting period for these activities, **July 1, 2020 through June 30, 2021**, coincides with the State Fiscal Year (SFY) 2021. During this time the NPS Program operated under the Federal Fiscal Year (FFY) 2021 work plan and funding (Grant C9-979081-20). Activities referenced, including the preparation of this report, were funded through Subsection 319(h) of the Clean Water Act (CWA) via the EPA. All tasks delineated in this quarterly report support the EPA's Strategic Goal 1.2A: Cleaner, Healthier Environment and Objective 1.2: Provide for Clean and Safe Water.

The annual reporting requirements delineated in the *Nonpoint Source Program and Grants Guidelines for States and Territories* (p. 45) are listed below with their corresponding location in this report:

REPORTING REQUIREMENT	LOCATION
Summary of progress with evidence/examples toward meeting approved milestones, short and long-term goals and objectives	Summary Appendix C: Project Updates Appendix D: Nevada Success Story
Matrix displaying milestones	Appendix A: Quarterly Report Matrices
Discussion of Federal Agencies supporting SMP milestones	Summary
Summary of NPS load reductions	Summary Appendix B: Load Reductions
Summary of environmental improvements	Appendix C: Project Updates Appendix D: Nevada Incremental Success Story

**Table 1:** EPA Annual Reporting Requirements and Location

## **Nonpoint Source Pollution in Nevada**

The Nevada Nonpoint Source State Management Plan (SMP) establishes how NDEP will work with partners to address NPS pollution from 2020 through 2024. The SMP formalized Nevada's approach for protecting and improving water quality and described the goals, short and long term objectives, milestones and timeframes to guide activities, and measures for tracking success. The SMP incorporates the "Key Components of an Effective State Nonpoint Source Management Program" as identified in the *Nonpoint Source Program and Grants Guidelines for States and Territories* issued by EPA on April 12, 2013. This report discusses activities performed under the Plan from July 1, 2020 through June 30, 2024.

### **State Management Plan Update**

The 2020-2024 Plan was updated and submitted to EPA for review and approval on September 22, 2020. On September 30, 2020, NDEP received EPA approval for the updated 2020-2025 Plan. NDEP immediately began implementation of the approved plan.

### **Reporting Environmental Progress**

NDEP is committed to reporting environmental improvements that result from nonpoint source projects. It is important for incremental progress to be described and reported adequately to tell the story of Nevada's nonpoint source program. A list of environmental indicators was created by NPS staff to adequately demonstrate improvements. These indicators include integrating pre- and post-site conditions through data gathering by establishing photo points, tracking feet of riverbank restored, monitoring increase in riparian vegetation, and evaluating trend in Proper Functioning Condition (PFC), among others. For education programs, success will be evaluated through implementation of a logic model, pre- and post-knowledge statistics, attendance and self-evaluation of likelihood of environmental behavior change, and other metrics as they are determined. All new projects have specific, appropriate indicators written into their project contracts and scopes of work to ensure that all 319(h) projects adequately report environmental improvements. All active projects during SFY 2021 were evaluated with environmental results reported using this template. Care was taken to ensure that relevant metrics were included; as well as information regarding progress, partners, and leveraging of funding. Project updates utilizing the "Telling the Story" framework are included in Appendix C and Nevada's annual Incremental Success Story, the accomplishments of the Southern Nevada Water Authority, is attached as Appendix D.

### **Fiscal Summary**

Contract funds were obligated through the 2020 Grant Funding Opportunity (GFO) process (in the summer/fall of 2020). Eleven projects were funded in the amount of \$1,005,821.00. The awardees were as follows:

Table 1: 2020 319(h) Awards

2020 319(h) Recommendations for Subgrant Funding		
<b>Implementation Projects</b>		
Proposal Name:	Entity	Award Amount
Lower Wood Creek Phase I Water Quality Improvement	Washoe County	\$153,000.00
Genoa Carson River Bank Stabilization Phase 2	Carson Valley Conservation District	\$150,000.00
Public Restroom Installation and Urban River Education	One Truckee River	\$119,920.00
Westwood Neighborhood and Douglas High School Outreach/LID	Douglas County	\$28,776.00
BMP Technical Assistance and Kingsbury Treatment	Tahoe Regional Planning Agency	\$100,000.00
Wata Semu: East Carson River Stabilization and Restoration	Washoe Tribe of California and Nevada	\$100,000.00
Initiatives to Reduce NPS Pollution in Southern Nevada	Southern Nevada Water Authority	\$67,500.00
Chalk Creek Stabilization and Erosion Control	City of Reno	\$125,000.00
Evaluation/Prioritization and Repairs to Carson River Projects	Dayton Valley Conservation District	\$50,000.00
	Subtotal	\$894,196.00
<b>Public Outreach Projects</b>		
Proposal Name:		Award Amount
Sierra Nevada Journey's Watershed Education Initiative	Sierra Nevada Journeys	\$70,000.00
Collaboration/Coordination to Improve Biothermal Thresholds in the Virgin River	The Nature Conservancy	\$41,625.00
	Subtotal	\$111,625.00
	TOTAL	\$1,005,821.00

## Nonpoint Source Program Accomplishments

### Priority 1: Support/Grow Existing Local Watershed Efforts

The NPS Program has established effective long-term relationships with agencies, organizations and the private sector. NDEP strengthened these partnerships for continued implementation of water quality improvement and environmental education projects including:

- ◆ Carson Water Subconservancy District for implementation of the Carson River Adaptive Stewardship Plan;
- ◆ Douglas County, Washoe County and Nevada Department of Transportation for implementation of the Lake Tahoe TMDL;
- ◆ Southern Nevada Water Authority and Las Vegas Wash Coordination Committee for implementation of the Las Vegas Wash Comprehensive Adaptive Management Plan;
- ◆ One Truckee River, Cities of Reno, Sparks, Washoe County and other stakeholders for the implementation of the One Truckee River Management Plan and the Source Water/Watershed Based Plan for the Truckee River;
- ◆ Virgin River Coalition for the implementation of the Virgin River Watershed Plan; and
- ◆ Conservation Districts including Carson Valley, Dayton Valley, Smith Valley and Mason Valley for implementation of bank stabilization, riparian habitat restoration and environmental education projects.

The NPS Program continued to build relationships as outlined in the 2020-2024 Plan. Specific information regarding activities is reported below under each watershed, and more detailed information is attached in the Appendix C: Project Updates.

## **Priority 2: Establish New Partnerships**

During SFY 2021, the NPS Program has met with a multitude of agencies to encourage increased leveraging of funding and to accelerate mitigation of NPS pollution throughout the state. Details follow.

### **Integrated Source Water Protection Program (ISWPP)/One Truckee River Management Plan**

In response to EPA's direction to better coordinate Nonpoint Source Program activities with Source Water Protection, NPS staff met with NDEP's Integrated Source Water Protection Program (ISWPP) to identify areas where the two programs have overlapping goals and where coordination could increase. In SFY 2016, a coordinated action plan was developed and submitted with the Annual Report in September 2016. Through ancillary efforts in developing the water quality component of the One Truckee River (OTR) collaborative effort, NPS and ISWPP staff saw many convergent opportunities to create a joint watershed and source water protection plan in Washoe County and the Truckee River Watershed. In 2017, the 319(h) Technical Advisory Committee recommended an additional \$99,780 to partially support a One Truckee River Coordinator, who was hired in April, 2018. In 2018 and 2019, the TAC again funded the OTR Coordinator. In 2019, the TAC awarded monies to the Truckee Meadows Regional Planning Agency to develop a GIS on-line planning tool component for the Plan. The Western Regional Water Commission saw the value in providing local match monies to update the Tributary Plan overseen by the Truckee Meadows Stormwater Permit Coordinating Committee and set aside \$75,000 for a data gap analysis and an additional \$150,000 for the update of the plan itself. The Tributary Plan update is a main component of the Source Water/Watershed Plan and was approved by the Committee and NDEP. Multiple commissions and boards were presented the final Plan in 2020 and the Plan was approved by all of them unanimously. The plan was submitted to EPA for review in late calendar 2020 and the online tool was presented to EPA for understanding through several virtual demonstrations. Demos were provided to many other stakeholders as well. Comments on the draft plan were received from EPA on April 13, 2021 and NDEP's response to the comments were submitted back to EPA on June 21, 2021. Final approval of the plan by EPA is pending. The plan and GIS online tool can be viewed at [washoecountycleanwater.org](http://washoecountycleanwater.org). This coordination has been an exciting and groundbreaking collaboration between surface and groundwater programs in Nevada, in addition to local stakeholders, and we expect to continue this kind of coordination in the future for broader-based water planning, protection and restoration in Nevada.

### **Lake Tahoe Basin**

Implementation of the Total Maximum Daily Load Implementation Plan continued during SFY 21. Highlights of the extensive effort include:

- Development of a new user manual to guide users in the use of the LT Info Stormwater Tools, the Lake Clarity Crediting Program's registration platform.
- The Lake Clarity Crediting Program Handbook and Pollutant Load Reduction Model User Manual was updated with policy adjustments that have taken place over the past several years. Executives and

stakeholders agreed a full update to these documents would be delayed until after completion of the LT Info Stormwater Tools.

- Successful implementation of another annual cycle of the TMDL Management System: including the following deliverables: Urban Implementing Partners' Stormwater Program Annual Report and Regional Stormwater Monitoring Program Annual Report; TMDL Performance Report; Findings and Recommendation Memo; executive Program Review Meeting and accompanying Decision Record Memo.
- Nevada Urban Implementing Partners completed all requirements necessary to secure and even surpass the credits targets specified in Interlocal Agreements.
- Draft updates to the Interlocal Agreements for the 2022-2026 term were created and passed on to Urban Implementing Partners to advance up the review and approval chain. Agreements are anticipated to be executed in September or October 2021.
- Staff collaborated and coordinated with partner agencies and organizations on several committees and workgroups with the overall goal of watershed health protection including the Nearshore Agency Workgroup, Stormwater Quality Improvement Committee, Lake Tahoe License Plate Grant Funding Opportunity Review Committee, and the Tahoe Interagency Executives Committee.

## **NRCS**

NPS staff attended and presented at the NRCS State Technical Advisory Committee via teleconference on December 9, 2020. NPS Staff met virtually with NRCS to determine how to revise the selected NWQI HUC-12 watersheds in order to coordinate with the new Source Water Initiative released in the most recent farm bill. Source Water and NPS Program Managers met to determine an area that had producers and groundwater and nonpoint source issues. Four HUC-12 watersheds were selected in the Carson Valley and the NRCS State Conservationist agreed. They include the Town of Genoa-Carson River, Town of Gardnerville-East Fork Carson River, Lower West Fork Carson River, and the Brockliss Slough. Several informational meetings have been held with NRCS staff to determine how to move forward with the NWQI and the Source Water initiative.

## **Walker River/Nevada Division of State Parks**

Funds were awarded to Nevada Division of State Parks to assist them in the restoration of the recently-acquired state lands that were previously irrigated ranch lands. The goal is to remove the noxious weeds and restore native ecosystem to native, established plants before the irrigation is pulled of the land. NDEP sees NDSP as a potential champion in the development of an alternative plan for the Walker River.

New staff was hired at NDEP and that person has been assigned scoping development of an alternative plan for the Walker River watershed. The initial steps will include building a core stakeholder group that will include NDSP and the Walker River Conservancy.

## **Virgin River Coalition**

NDEP Staff have been actively involved in the Virgin River Coalition since its inception. The Coalition developed a Watershed Plan that meets many, but not all, of the nine-elements required in an EPA Watershed Based Plan. The Coalition hired a Watershed Coordinator partially paid for with a subgrant through the NPS Program. Staff continues to be actively involved in the effort, which is moving into implementation. The VRC Steering Committee has developed a Watershed Outreach Plan.

### **Priority 3: Plan and Implement NPS Pollution Control Measures**

The NPS Program supported implementation of NPS pollution control measures to achieve load reductions and incremental progress toward watershed improvement. NDEP coordinated with partners to identify the most appropriate action to address site-specific water quality impairments. Projects were prioritized based on local support, available resources and potential load reductions. Project updates describing this work is presented in Appendix C.

### **Priority 4: Implement Robust Environmental Education Program**

The NPS Program continues to implement an effective environmental education program to create an informed and motivated public that supports and participates in NPS pollution prevention activities. Environmental education is accomplished through 319(h) contracted projects implemented by a network of local, state, federal and private partners who deliver watershed-specific programs to a diverse audience of stakeholders. This network includes CWSD, several conservation districts, City of Reno, UNCE, Clark County, Southern Nevada Water Authority (SNWA), TNC, Sierra Nevada Journeys, Nevada Outdoor School and Great Basin Outdoor School. Unfortunately, due to the COVID-19 outbreak and subsequent halt of all in-person educational events and activities, the Program Coordinator at NDEP and our partners needed to determine alternative, distance learning or online options to implement programs. After strategizing, alternatives were created and are being implemented. Detailed information regarding contracted projects is included in Appendix C.

NDEP continued to work with established partners, and continued to expand the program throughout Nevada. The vacant Education and Outreach Coordinator position was filled in early February, 2021. The new coordinator has soil health and agricultural technical assistance experience and the NPS Program is working on strategies to branch out from historical efforts to create and disseminate education and outreach in these fields as well as maintaining other efforts.

Information regarding the education projects is outlined in the Appendix C with more information about NPS staff program implementation below.

### **Implementation: Watershed Activities**

Overviews of significant activities by watershed are delineated in the attached Quarterly Reports Matrices (Appendix A) and detailed information about progress and environmental results from active projects can be found in Appendix C (Project Updates) and Appendix D (Nevada Incremental Success Story).

### **Load Reductions**

Load reductions were reported and entered into EPA's Grants Reporting and Tracking System (GRTS) in February 2021. The load reductions numbers reported (for the 2020 calendar year, half of which falls into SFY21) were:

<b>Nitrogen, LBS/YR</b>	<b>158,064</b>
<b>Phosphorus, LBS/YR</b>	<b>46,030</b>
<b>Sedimentation-Siltation, TONS/YR</b>	<b>3,975</b>

A detailed report on reported load reductions is attached as Appendix C.

## **Conclusion**

Nevada's NPS Program has implemented the first year of the 2020-2024 SMP and met the milestones set forward. The NPS Program will focus efforts on the priorities of supporting and growing existing local watershed efforts, establishing new partnerships, planning and implementing NPS pollution control measures and implementing a robust environmental education program.



## Appendix A: Quarterly Report Matrices

**State Fiscal Year 2021 1st Quarterly Report**  
**July 1 - September 30, 2020**  
**319(h) Grant #C9-97908120**

**EPA Strategic Plan**

All tasks delineated in this quarterly report support the Environmental Protection Agency's Strategic Goal 1.2A: Cleaner, Healthier Environment and Objective 1.2: Provide for Clean and Safe Water.

**COMPONENTS OF NEVADA'S FFY 2019/SFY 2021 NPS MANAGEMENT PLAN**

**Goal #1: Prevent and reduce nonpoint source pollution in impaired waters and improve watershed health.**

**GENERAL**

**Objective A. Implement NPS Projects in Priority Watersheds and Document Successes.**

**Strategy I. Build and maintain strong partnerships to implement a successful NPS Program statewide.**

Milestones:		Staff coordinated with stakeholders in the Truckee River watershed to bring a multi-year joint source water and watershed based plan to fruition. Staff coordinated with stakeholders in the Carson River watershed to evaluate and phase restoration projects on a reach that NDEP recently prioritized
	1. Coordinate with stakeholders in priority watersheds to develop watershed based plans, alternative restoration plans, and to prioritize and/or identify projects to implement.	
	2. Manage and oversee subgrants in priority watersheds.	Staff oversaw subgrants to ensure that they were on schedule and on budget. Staff reviewed subgrant quarterly reports and processed invoices and attended coordination meetings.

**Strategy II. Document and report progressive achievement or success toward environment improvement.**

**Milestones:**

1. Incorporate measurable metrics into scope of works for subgrants.

When SOWs were developed, appropriate metrics were included in subgrant reporting requirements. Due to COVID, metrics in education and outreach subgrants are being re-evaluated based on distance learning.

2. Report metrics annually in reports to EPA.

Metrics were reported to EPA in the Annual Report, which was submitted on November 1, 2020. Each subgrant was summarized with metrics reported. Metrics for SFY 21 will be submitted November, 2021.

3. Develop and publicize at least one success story per year.

A progressive success story was submitted with the Annual Report for SFY 20 describing the efforts and results at South Fork State Recreation Area. Another progressive success story will be developed and submitted with the SFY 21 Annual Report in November 2021.

4. Evaluate progress of implementation of watershed based plans and/or alternative restoration plans.

The Carson River Adaptive Stewardship plan is being implemented on schedule. The Las Vegas Wash Comprehensive Adaptive Management Plan is being implemented on schedule. The Lake Tahoe TMDL is being implemented on schedule. The joint Source Water/Watershed Plan for the Truckee River was completed and is expected to begin implementation by the 3rd quarter of SFY 21.

### Strategy III. Provide efficient and effective administration of NPS Program.

#### Milestones:

1. Invest in water quality improvement and environmental education projects that are likely to provide long-term load reductions and changes in behavior to achieve watershed wide improvement in water quality.
  - a. Release annual Grant Funding Opportunity that clearly specifies program priorities and requirements; review applications; select projects for funding based on established prioritization criteria. Annual GFO was released August 10 and will close October 2, 2020.
  - b. Ensure selected proponents have sufficient resources, technical skills and commitments to implement and maintain the project for the design life of the project. Scope of work and budgets will be prepared for the subgrants of awarded proposals in the 2nd and 3rd quarters of SFY 21. Subgrantees will be actively managed to ensure they have the resources to implement their projects successfully.
2. Enter and maintain grant and project information in EPA Grants Reporting and Tracking System within required timeline. GRTS data for load reductions during calendar year 2019 were entered in February, 2020. As subgrants are entered resulting from the SFY 21 GFO, data will be entered into GRTS.
3. Report to EPA quarterly to document incremental progress toward achieving annual grant milestones. This report satisfies this requirement for reporting for 1st Quarter SFY 21.
4. Report to EPA annually to document progress in achieving SMP and grant milestones including information submitted by outside agencies. Annual Report for SFY 20 was submitted November 1, 2020. Annual Report for SFY 21 will be submitted in November, 2021.
5. Submit to EPA all required financial reports within required timeline. All financial reports will be submitted.

### Strategy IV. Provide Best Management Practice Resources.

#### Milestones:

1. Maintain BMP Toolbox with statewide BMP resources available online. The BMP toolbox was updated in SFY 20. The links provided in the toolbox will be reviewed and updated, with new resources added if necessary, during 2nd Quarter SFY 21.
2. Provide technical BMP assistance to contractors, local agencies, or property owners as requested. Technical assistance provided as requested.

### Strategy V. Continue Collaboration with Integrated Source Water Protection Program.

#### Milestones:

This quarter, the SW/WS Plan was completed, with the online technical planning tool developed through subgrant

1. Complete Source Water/Watershed Management (SW/WS) Planning process for the Truckee River Watershed in Washoe County.

Online technical planning tool developed through subgrant with the Truckee Meadows Regional Planning Agency. Staff is presenting the plan to local planning entities, commissions and boards for acceptance and approval. Plan will be shared with EPA in 2nd Quarter SFY 21 for comment and review. Edits will be made as appropriate, and the final plan will be approved by the State in 2nd or 3rd quarter SFY 21.

2. Assist stakeholders in Washoe County to implement components of the SW/WS Management Plan.

Stakeholders were assisted in the development of Project Profiles, aka projects under the auspices of the plan and encouraged to apply to the competitive GFO process. Once the plan is formally approved, stakeholders will have ability to compete for the larger pot of project money granted annually from EPA.

3. Identify potential other watersheds/counties to coordinate SW/WS Planning Processes.

Meetings with NPS and Source Water staff along with the retained consultant have determined that Douglas County will be the next focus area to coordinate programs. Douglas County has a WSBP, however, there are many opportunities to focus efforts and many engaged stakeholders. Additionally, three reaches of the Carson River in Douglas County have been identified as priorities for BWQP for a Vision Plan.

4. Attend SW or NPS conferences, working group meetings, webinars, etc. to discuss coordinating SW and NPS Programs.

While in-person conferences have been halted due to COVID complications, many online webinars and other virtual meeting platform opportunities were attended by NPS staff. Many of these where to complete the SW/SW Planning effort with our consultants and stakeholders. Additionally, several virtual meetings with held with Kellie Nevills, the new Water Planning Specialist with Nevada Rural Water to determine opportunities with both SW and NPS programs for coordination.

5. Attend Ground Water Protection Task Force meetings and Western States Source Water conferences to further coordinate SW/NPS Programs.

The Western States Source Water Conference planned to be held in Reno, hosted by NDEP, and highlighting the SW/WS coordination effort and successes has been postponed until 2021. No GWPTF meetings were held this quarter.

#### Strategy VI. 401 Certification Program.

##### Milestones:

1. Issue 401 certifications for all federally permitted projects to ensure water quality standards are met and NPS issues are addressed.

Eight 401 certifications were issued this quarter. Many online meetings and webinars were attended by staff to understand, evaluate and comment on both the new National Water Protection Rule and new 401 Certification Rule. Staff adjusted Nevada's 401 application to meet the requirements of the new 401 Certification Rule. Additional, staff reviewed and commented on the draft proposed Nationwide Permits and determined how the state would respond to each one: waive, require notification, or deny without prejudice.

## Strategy VII. Update NPS State Management Plan

### Milestones:

1. Evaluate SMP for update needs based on Integrated Report and discussions with watershed stakeholders.
2. Submit draft revised plan to EPA for review and discussion.
3. Submit final plan to EPA for approval.

No tasks this SFY year

## CARSON RIVER BASIN

### Strategy I. Implement Carson River Adaptive Stewardship Plan

### Milestones:

1. Restore 1,250 feet of Carson River channel (250 feet per year) to reduce sediment by 50 tons/year and phosphorus by 50 lbs/year.
2. Conduct environmental education programs to increase awareness of water quality issues and promote actions to reduce NPS pollution.
3. Implement the CRASP and increase efforts on NDEP's prioritized river segments. Perform geomorphology study on prioritized segments to prioritize restoration projects. Develop a more cohesive strategy for implementation of river restoration projects in coordination with CWSD, DVCD, CVCD, AWG and TNC and develop phased approach.
4. Utilize new technology (drones, etc.) to more effectively plan and monitor results of restoration on the Carson River.

CVCD and The Nature Conservancy are both designing and implementing restoration projects on the prioritized reaches of the Carson River.

Environmental education was performed in the Carson River watershed by CWSD through the "I am Carson Watershed" campaign, by River Wranglers, and Sierra Nevada Journeys. CVCD worked with RO Anderson and Wildscape to create a geomorphological study of the reach of the Carson River below Genoa Lane. Bioengineering plans were drawn up and reviewed, and restoration projects were prioritized based on the study.

CWSD staff has a 106 subgrant to utilize drones on the Carson River to map, monitor and determine how to calculate movement of sediment in the system. Several fly overs were conducted this quarter, and data should be available soon.

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|--|---|
| 5. Coordinate with AWG on their development and implementation of Vision plan for the West Fork of the Carson River segments in CA, and encourage development of a plan for the East Fork of the Carson River. | CWSD met with USFS, American Rivers and AWG regarding Faith Valley Project, in Hope Valley off of Blue Lakes Road on July 21, 2020. |
| 6. Work with stakeholders to identify and implement additional projects for 319 or other agency funds.   | Potential projects were discussed with CVCD, CWSD, DVCD and others.   |

## Strategy II. Implement Carson River Floodplain Management Plan

### Milestones:

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|---|--|
| 1. Assist in implementation of outreach and education plan to support the CRFMP and increase understanding of the importance of floodplains in maintaining water quality. | CWSD created a presentation given at the Floodplain Management Association conference on September 22, 2020.   |
| 2. Support the Living River approach with stakeholders through implementation of projects that release the Carson River to the floodplain.                                | All currently subgranted projects support the Living River approach, with banks laid back, bioengineering stabilization techniques engaged, and minimal hardscaping of banks to minimize impacts downstream. |

## LAS VEGAS WASH

### Strategy I. Implement Las Vegas Wash Comprehensive Adaptive Management Plan

### Milestones:

- |   |  |
|---|--|
| 1. Fund priority projects consistent with CAMP to reduce sediment and other nonpoint source pollutants to the Las Vegas Wash and Lake Mead. | SNWA and CCWRD have open subgrant agreements with BWQP, and have submitted new proposals under the 2020 319(h) GFO.            |
| 2. Conduct environmental education programs to increase awareness of water quality issues and promote actions to reduce NPS pollution.      | SNWA and CCWRD continue to conduct education programs utilizing new platforms compatible with Covid 19 restrictions.           |
| 3. Conduct site visits to funded projects and to further coordinate efforts with identified stakeholders.                                   | Covid 19 travel policies have prevented project site visits that require extensive travel from being completed during the qtr. |

## LAKE TAHOE BASIN

### Strategy I. Manage the Lake Tahoe Total Maximum Daily Load Program to meet the Clarity Challenge of 24 meters by 2026.

### Milestones:

- |   |  |
|---|--|
| 1. Work with Urban Implementing Partners to identify projects and actions to meet load reduction targets and milestones contained in Interlocal Agreements. | Staff reviewed and commented on two new Washoe County registrations, and drafts of a Road Operations Plan and registration memo for a new expanded NDOT road registration. |
| 2. Provide funding and staff support for water quality improvement project implementation and program operations improvement.                               | Staff participated in a Lower Wood Creek water quality improvement project technical advisory committee meeting.   |

3. Collaborate with Lahontan Water Board to execute the annual TMDL Management System cycle; including updating, maintaining and reporting implementation progress for urban and non-urban sources through the Lake Clarity Tracker.

Staff finalized and released the 2020 TMDL Performance Report and an associated press release. Staff prepared and finalized a draft Lake Tahoe Info Stormwater Tools reference manual and updated the Lake Clarity Creditng Program Handbook to reflect changes to the registration platform, as well as several policy changes that have taken place over the past several years.

4. Renew Interlocal Agreements including updated commitments and schedule of load reduction and associated credit targets.

No tasks this SFY year

5. Participate in Tahoe Science Advisory Council meetings to provide TMDL Management Agencies' perspective on key questions, information needs, and workplan development and prioritization.

Staff participated in a regular committee meeting and an executive meeting. Staff reviewed and coordinated comments with the Lahontan Water Board and TRPA regarding a draft report for the Seasonal Clarity Assessment project, intended to investigate the disparity in seasonal clarity trends. NDEP, funders of the project, invested an additional \$25K to complete the final report and respond to agency and peer review comments. The final report should be available by end of October.

#### **Strategy II. Coordinate with partner organizations to protect water quality, watershed health, and ensure the effective use of public funding.**

1. Participate on the Stormwater Quality Improvement Committee to coordinate stormwater planning and design activities and to fulfill LTRA project prioritization and reporting requirements.

No activity.

2. Coordinate with the Tahoe Regional Planning Agency to advance Regional Plan goals and Threshold attainment.

Staff notified TRPA of availability of 604(b)3 funding.

3. Participate on grant committees and technical advisory committees as needed.

Staff participated in a Lower Wood Creek water quality improvement project technical advisory committee meeting.

#### **Strategy III. Coordinate with agency partners to address nearshore water quality.**

##### **Milestones:**

1. Coordinate with Nearshore Agency Workgroup agencies to implement the Nearshore Resource Allocation Program.

No activity.

2. Coordinate TMDL and nearshore program activities and look for opportunities to prioritize implementation actions where multi-benefit objectives may be achieved.

No activity.

#### **TRUCKEE RIVER BASIN**

##### **Strategy I. Develop Source Water/Watershed Management Plan and get local and EPA Approval.**

##### **Milestones:**

The Tributary Plan was finalized and accepted by NDEP and

1. Work with local jurisdictions and stakeholders to integrate and complete the SW/WS plan, including the Tributary Plan developed by the TMSWPCC.

the TMSWPCC this quarter. The online tool was updated and the overarching Source Water/Watershed Based Plan was completed.

2. Present final plan to local boards and commissions for approval. Submit to EPA as a 9-element plan and a Source Water Protection Plan.

SW and NPS staff, along with their contractor RCI, presented the completed plan to the Truckee Meadows Water Authority on September 16th and it was accepted. The team also presented the plan to the TMSWPCC and it was accepted.

### Strategy II. Implement Approved Plan.

#### Milestones:

1. Implement projects and steps delineated in the plan. Fund competitive projects through annual GFO consistent with the plan.

Three projects identified in the plan have been submitted for consideration to the GFO Technical Advisory Committee.

### Strategy III. Coordinate with One Truckee River and OTR Stakeholders to continue implementation of OTR Plan.

#### Milestones:

1. Participate on OTR Board.  
2. Participate in OTR Partnership meetings and events.  
3. Support water quality components of the OTR Plan.

NPS Branch Manager attended monthly board meetings as a member.

No meetings or events of the Partnership COuncil occurred this quarter.

Action plan item under Goal 1 was completed in the SW/WS Based Plan conclusion. Subgrant with OTR funding a restroom attendant and outreach position was overseen.

### Strategy IV: Continue and/or build new partnerships to implement NPS related projects.

#### Milestones:

1. Work with current and new partners to identify additional implementation or education projects.  
2. Conduct environmental education programs to increase awareness of water quality issues and promote actions to reduce NPS pollution.

Project Profiles were developed in the creation of the SW/WS Plan, identifying implementation and education projects and partners.

Environmental education was delivered throughout the watershed by Sierra Nevada Journeys.

## VIRGIN RIVER BASIN

### Strategy I. Collaborate with existing and emerging natural resource related local working groups and support efforts that may maintain or improve water quality.

#### Milestones:

1. Attend local working group meetings when deemed appropriate, including with the Virgin River Coalition.  
2. Provide technical assistance and grant funding to support local working groups.  
3. Identify other resources to facilitate implementation of water quality projects.  
4. Encourage local efforts to adapt watershed plan to cover the 9 required EPA elements.

Staff participated in a 6 hr video conference with the Coalition on September 17 that included subgroup members that reported on various ongoing efforts in the watershed.

No Activity

No Activity

No Activity



## WALKER RIVER BASIN

### Strategy I. Work with local, state, federal and private resources to address nonpoint source pollution in the Walker River Basin.

#### Milestones:

1. Restore 500 feet of Walker River channel (100 feet per year) to reduce sediment by 20 tons/year and phosphorus by 20 lbs/year.
2. Conduct environmental education programs to increase awareness of water quality issues and promote actions to reduce NPS pollution.

Native vegetation was planted and cottonwoods were propagated by Walker River State Park staff.

Walker River State Park staff held virtual learning sessions regarding the Walker River.

### Strategy II. Coordinate with Walker River State Park to improve water quality in Walker River watershed.

#### Milestones:

1. Work with Nevada Division of State Parks and the Walker River Conservancy to implement ecological restoration projects at a park-scale (14,000 acres) at Walker River State Park.
2. NDEP will approach State Parks regarding being a main stakeholder in the development of an alternative restoration plan or watershed based plan. Other stakeholders (Federal, State, Local, Nonprofit, Private and Tribal) will be invited if they are.

Native vegetation was planted and cottonwoods were propagated by Walker River State Park staff.

NDEP discussed potential next projects with Deputy Director of State Parks.

## Goal #2. Educate and inform the public about nonpoint source pollution, watershed stewardship and water quality protection to increase awareness, promote behavior change and empower effective water quality protection actions.

### Objective A. Implement high quality, effective NPS Environmental Education Program.

#### Strategy I. Implement Environmental Education Strategic Plan.

#### Milestones:

1. Develop next five year Environmental Education Strategic Plan.
2. Conduct Project WET Workshops for teachers and other community educators.
3. Conduct and/or assist with environmental education events including Earth Day, river snapshot monitoring, green-ups, school environmental science classes, etc.
4. Publish Watershed Ed newsletter.
5. Maintain and regularly update Environmental Education web site.
6. Provide education and training opportunities on water quality topics of concern to watershed partners, stakeholder organizations, and education institutions upon request.

On hold until position refilled next quarter.

Get Outdoors Nevada converted their Project WET workshops to virtual online trainings and conducted five trainings.

On hold until position refilled next quarter.

On hold until position refilled next quarter.

On hold until position refilled next quarter.

On hold until position refilled next quarter.

7. Provide high quality EE materials to school and community educators and the public including Project WET curriculum guides, activity booklets, fact sheets, maps and other resources.

On hold until position refilled next quarter.

## **Strategy II. Support local or regional environmental education projects.**

### **Milestones:**

1. Invest in environmental education projects that encourage behavior change and citizen involvement in water quality improvement efforts.

Subgrants with Sierra Nevada Journeys, Great Basin Outdoor School, River Wranglers, Get Outdoors Nevada and CWSD supported environmental education efforts throughout the state. These subgrants were overseen by staff and many adjusted their Scope of Works and budgets due to transitions to distance learning techniques due to COVID.

2. Continue education and training on environmental program effectiveness measurements and standards.

On hold until position refilled next quarter.

3. Require appropriate program measurement metrics to determine efficacy of funded education projects.

Appropriate metrics were put into the one new education subgrant this quarter with GBOS.

4. Participate with watershed partner programs to support and evaluate.

Evaluations occur at the end of the year and the end of the subgrant.

## **Goal #3 Coordinate with State, Federal, local agencies and Tribes to prevent and reduce nonpoint source pollution impacts to surface and groundwater.**

### **Objective A. Maintain and improve existing partnerships and build new partnerships with other agencies, nonprofit organizations, local watershed groups and private landowners.**

#### **Strategy I. Provide opportunities for local, State and Federal agencies, Tribes, environmental organizations, etc. to coordinate and collaborate on NPS related issues.**

### **Milestones:**

1. Identify and contact appropriate agencies and stakeholders including BLM, USFS, NRCS, Tribes, NDOW, Nevada Association of Conservation Districts, The Nature Conservancy and others regarding collaboration opportunities.

Staff continues to collaborate and meet with all the partners listed to the left.

2. Provide technical assistance, education and training to stakeholders on water quality related topics and how to develop project proposals.

Staff assisted Virgin River Coalition members with preparation of a project proposal to be submitted under the 2020 319(h) GFO.

3. Maintain and update contact information to notify agencies of the release of Grand Funding Opportunity for 319 funds.

The NPS GFO Contact List was updated and utilized to notify parties of the 2020 319(h) GFO.

4. Provide opportunity for agencies to participate in triennial review of State water quality standards.

No triennial review this quarter.

#### **Strategy II. Coordinate with NRCS to implement National Water Quality Initiative and other Farm Bill Programs.**

### **Milestones:**

Staff participated and presented in the annual STC meeting

1. Participate in Nevada NRCS State Technical Committee meetings to encourage the use of Farm Bill funding towards water quality improvement.	last quarter.
2. Meet with NRCS to discuss Farm Bill programs, develop shared watershed priorities and water quality restoration goals and identify project or education opportunities.	Staff met with NRCS several times strategizing water quality goals in the newly selected NWQI watersheds in the Carson Valley.
3. Partner with NRCS to transfer lessons learned from the NWQI to inform future water quality restoration via Farm Bill/EQIP funding.	No work this quarter.
4. Engage NRCS in dialogue about state water quality priorities and watersheds; share maps and other information.	staff met with NRCS several times strategizing water quality goals in the newly selected NWQI watersheds in the Carson Valley.

**Objective B. Ensure consistency among local, state, federal programs and NDEP Nonpoint Source Pollution Management Plan.**

**Strategy I. Ensure consistency between federal and state programs.**

**Milestones:**

1. Review and comment as determined appropriate on EAs, EISs, Resource Area Management Plans and grazing allotment plans to ensure water quality concerns are addressed.	Staff receives all State Clearinghouse memos via email and reviews the announcement to see if there is comment needed regarding water quality and nonpoint source impacts.
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**State Fiscal Year 2021 2nd Quarterly Report**  
**October 1 - December 31, 2020**  
**319(h) Grant #C9-97908120**

**EPA Strategic Plan**

All tasks delineated in this quarterly report support the Environmental Protection Agency's Strategic Strategic Goal 1.2A: Cleaner, Healthier Environment and Objective 1.2: Provide for Clean and Safe Water.

**COMPONENTS OF NEVADA'S FFY 2019/SFY 2021 NPS MANAGEMENT PLAN**

**Goal #1: Prevent and reduce nonpoint source pollution in impaired waters and improve watershed health.**

**GENERAL**

**Objective A. Implement NPS Projects in Priority Watersheds and Document Successes.**

**Strategy I. Build and maintain strong partnerships to implement a successful NPS Program statewide.**

Milestones:		
	1. Coordinate with stakeholders in priority watersheds to develop watershed based plans, alternative restoration plans, and to prioritize and/or identify projects to implement.	Staff coordinated with stakeholders in the Truckee River watershed to bring a multi-year joint source water and watershed based plan to fruition. Staff presented the plan to multiple Boards and Commissions and received unanimous support to approve and implement the plan. Detailed information under Truckee River Basin Strategy 1, below. Staff coordinated with BWQP Standards Branch to strategize prioritization of reaches on the Carson River for a Vision Plan. The Technical Advisory Committee awarded money to the Virgin River Coalition to hire a Watershed Coordinator to coordinate and implement their plan.

2. Manage and oversee subgrants in priority watersheds.

Staff oversaw subgrants to ensure that they were on schedule and on budget. Staff reviewed subgrant quarterly reports and processed invoices and attended coordination meetings.

**Strategy II. Document and report progressive achievement or success toward environment improvement.**

**Milestones:**

1. Incorporate measurable metrics into scope of works for subgrants.

When SOWs were developed, appropriate metrics were included in subgrant reporting requirements. Due to COVID, metrics in education and outreach subgrants were re-evaluated and Scope of Works were amended based on distance learning and COVID-compliant events.

2. Report metrics annually in reports to EPA.

Metrics were reported to EPA in the Annual Report, which was submitted on October 1, 2020. Each subgrant was summarized with metrics reported.

3. Develop and publicize at least one success story per year.

A progressive success story was submitted with the Annual Report for SFY 20 describing the efforts and results at South Fork State Recreation Area. Another progressive success story will be developed and submitted with the SFY 21 Annual Report in November 2021.

4. Evaluate progress of implementation of watershed based plans and/or alternative restoration plans.

The Carson River Adaptive Stewardship plan is being implemented on schedule. The Las Vegas Wash Comprehensive Adaptive Management Plan is being implemented on schedule. The Lake Tahoe TMDL is being implemented on schedule. The joint Source Water/Watershed Plan for the Truckee River was completed and taken to multiple Boards and Commissions for approval. All bodies unanimously approved and accepted the plan.

### **Strategy III. Provide efficient and effective administration of NPS Program.**

#### **Milestones:**

1. Invest in water quality improvement and environmental education projects that are likely to provide long-term load reductions and changes in behavior to achieve watershed wide improvement in water quality.

a. Release annual Grant Funding Opportunity that clearly specifies program priorities and requirements; review applications; select projects for funding based on established prioritization criteria.

Annual GFO was released August 10 and closed October 2, 2020. Fourteen applications were received. The Technical Advisory Committee reviewed, ranked and interviewed all applicants. Eleven subgrants were awarded funding in the amount of \$1,005,821. Nine projects are implementation and two are education and outreach focused.

b. Ensure selected proponents have sufficient resources, technical skills and commitments to implement and maintain the project for the design life of the project.

Scope of work and budgets will be prepared for the subgrants of awarded proposals in 3rd quarter of SFY 21. Subgrantees will be actively managed to ensure they have the resources to implement their projects successfully.

2. Enter and maintain grant and project information in EPA Grants Reporting and Tracking System within required timeline.

GRTS data for load reductions during calendar year 2019 were entered in February, 2020. As subgrants are executed resulting from the SFY 21 GFO, data will be entered into GRTS.

3. Report to EPA quarterly to document incremental progress toward achieving annual grant milestones.

This report satisfies this requirement for reporting for 2nd Quarter SFY 21.

4. Report to EPA annually to document progress in achieving SMP and grant milestones including information submitted by outside agencies.

Annual Report for SFY 20 was submitted October 1, 2020. Annual Report for SFY 21 will be submitted in November, 2021.

5. Submit to EPA all required financial reports within required timeline.

All financial reports will be submitted.

### **Strategy IV. Provide Best Management Practice Resources.**

#### **Milestones:**

1. Maintain BMP Toolbox with statewide BMP resources available online.

The BMP toolbox was updated in SFY 20. The links provided in the toolbox will be reviewed and updated, with new resources added if necessary, during 2nd Quarter SFY 21.

2. Provide technical BMP assistance to contractors, local agencies, or property owners as requested.
- Technical assistance provided as requested.

#### **Strategy V. Continue Collaboration with Integrated Source Water Protection Program.**

##### **Milestones:**

1. Complete Source Water/Watershed Management (SW/WS) Planning process for the Truckee River Watershed in Washoe County.

This quarter, staff presented the plan to local planning entities, commissions and boards for acceptance and approval. Plan will be shared with EPA in 2nd and 3rd quarter SFY 21 for comment and review. Edits will be made as appropriate, and the final plan will be approved by the State 3rd quarter SFY 21.

2. Assist stakeholders in Washoe County to implement components of the SW/WS Management Plan.

Two projects identified under the plan were submitted under the Grant Funding Opportunity and were awarded funds. They are the City of Reno Chalk Creek Stabilization and Erosion Control project and the One Truckee River Public Restroom Installation and Urban River Education. Once the plan is formally approved, stakeholders will have ability to compete for the larger pot of project money granted annually from EPA.

3. Identify potential other watersheds/counties to coordinate SW/WS Planning Processes.

Four HUC-12s in the Carson Valley have been identified for collaboration between the SW and WS planning processes. Stakeholder building for the Carson River will begin in January 2021.

4. Attend SW or NPS conferences, working group meetings, webinars, etc. to discuss coordinating SW and NPS Programs.

While in-person conferences have been halted due to COVID complications, many online webinars and other virtual meeting platform opportunities were attended by NPS staff. Many of these were to complete the SW/WS Planning effort with our consultants and stakeholders.

5. Attend Ground Water Protection Task Force meetings and Western States Source Water conferences to further coordinate SW/NPS Programs.

The Western States Source Water Conference planned to be held in Reno, hosted by NDEP, and highlighting the SW/WS coordination effort and successes has been postponed until 2021. A GWPTF meeting was held December 2nd and attended by staff.

#### **Strategy VI. 401 Certification Program.**

##### **Milestones:**

1. Issue 401 certifications for all federally permitted projects to ensure water quality standards are met and NPS issues are addressed.

67 401 certifications were issued this quarter. Many online meetings and webinars were attended by staff to understand, evaluate and comment on both the new National Water Protection Rule and new 401 Certification Rule. Additionally, staff reviewed and Certified the draft proposed Nationwide Permits and determined how the state would respond to each one: waive, require notification, or deny without prejudice. 57 of the Certifications were for the Army Corps Nationwide Permits. Two other Certifications were waived and eight were issued with conditions.

## Strategy VII. Update NPS State Management Plan

### Milestones:

1. Evaluate SMP for update needs based on Integrated Report and discussions with watershed stakeholders.
2. Submit draft revised plan to EPA for review and discussion.
3. Submit final plan to EPA for approval.

No tasks this SFY year. SFY 21 is year one of the 2020-2024 Nevada NPS State Management Plan, which was approved in September, 2020.

## CARSON RIVER BASIN

### Strategy I. Implement Carson River Adaptive Stewardship Plan

#### Milestones:

1. Restore 1,250 feet of Carson River channel (250 feet per year) to reduce sediment by 50 tons/year and phosphorus by 50 lbs/year.
2. Conduct environmental education programs to increase awareness of water quality issues and promote actions to reduce NPS pollution.
3. Implement the CRASP and increase efforts on NDEP's prioritized river segments. Perform geomorphology study on prioritized segments to prioritize restoration projects. Develop a more cohesive strategy for implementation of river restoration projects in coordination with CWSD, DVCD, CVCD, AWG and TNC and develop phased approach.
4. Utilize new technology (drones, etc.) to more effectively plan and monitor results of restoration on the Carson River.
5. Coordinate with AWG on their development and implementation of Vision plan for the West Fork of the Carson River segments in CA, and encourage development of a plan for the East Fork of the Carson River.
6. Work with stakeholders to identify and implement additional projects for 319 or other agency funds.

CVCD and The Nature Conservancy are both designing and implementing restoration projects on the prioritized reaches of the Carson River. The TAC awarded funds to CVCD and the Washoe Tribe of California and Nevada for more restoration on the Carson River.

Environmental education was performed in the Carson River watershed by CWSD through the "I am Carson Watershed" campaign, by River Wranglers, and Sierra Nevada Journeys.

CVCD worked with RO Anderson and Wildscape to create a geomorphological study of the reach of the Carson River below Genoa Lane. Bioengineering plans were drawn up and reviewed, and restoration projects were prioritized based on the study. The first prioritized project was designed by RO Anderson and implementation will start in in the 3rd Quarter of SFY21.

CWSD staff had a 106 subgrant and performed drone data flyovers of the Carson River. That information was shared with stakeholders and used to help design the prioritized restoration project with Carson Valley Conservation District. The 106 grant was concluded. CWSD filmed drone footage, created a video and established post restoration monitoring data set for AWG's 4th Crossing Project.

Carson Water Subconservancy District coordinated with USFS, American Rivers and AWG on the Faith Valley Project design. CWSD filmed drone footage of AWG's 4th Crossing Project and created a video for outreach. CWSD also created an aerial image post restoration monitoring data set.

Potential projects were discussed with CVCD, CWSD, DVCD and others.

### Strategy II. Implement Carson River Floodplain Management Plan

**Milestones:**

1. Assist in implementation of outreach and education plan to support the CRFMP and increase understanding of the importance of floodplains in maintaining water quality.

2. Support the Living River approach with stakeholders through implementation of projects that release the Carson River to the floodplain.

CWSD planned, coordinated and held CRC Floodplain Management Working Group Meeting on November 10th.

All currently subgranted projects support the Living River approach, with banks laid back, bioengineering stabilization techniques engaged, and minimal hardscaping of banks to minimize impacts downstream.

**LAS VEGAS WASH****Strategy I. Implement Las Vegas Wash Comprehensive Adaptive Management Plan****Milestones:**

1. Fund priority projects consistent with CAMP to reduce sediment and other nonpoint source pollutants to the Las Vegas Wash and Lake Mead.

2. Conduct environmental education programs to increase awareness of water quality issues and promote actions to reduce NPS pollution.

3. Conduct site visits to funded projects and to further coordinate efforts with identified stakeholders.

SNWA and CCWRD have open subgrant agreements with BWQP. SNWA was awarded a subgrant in the 2020 Grant Funding Opportunity.

SNWA and CCWRD continue to conduct education programs utilizing new platforms compatible with Covid 19 restrictions. Both SNWA and CCWRD are producing outreach videos to supplement outreach efforts that require gatherings, including workshops and fieldtrips. CCWRD has created interactive video programs loaded onto touchscreen kiosks located in learning centers. The useful life of these products will outlive Covid and continue to bolster NPS outreach efforts into the future.

Covid 19 travel policies have prevented project site visits that require extensive travel from being completed.

**LAKE TAHOE BASIN****Strategy I. Manage the Lake Tahoe Total Maximum Daily Load Program to meet the Clarity Challenge of 24 meters by 2026.****Milestones:**

1. Work with Urban Implementing Partners to identify projects and actions to meet load reduction targets and milestones contained in Interlocal Agreements.

2. Provide funding and staff support for water quality improvement project implementation and program operations improvement.

Staff reviewed and approved seven registrations submitted by Nevada urban implementers, including one updated and two new Washoe County registrations, three Douglas County re-registrations (expired), and an NDOT expanded road operations registration. All credit declarations were reviewed and approved.

Staff participated in a Lower Wood Creek water quality improvement project technical advisory committee meeting. Washoe County was awarded \$153K through the 2020 NV NPS Grant round.



3. Collaborate with Lahontan Water Board to execute the annual TMDL Management System cycle; including updating, maintaining and reporting implementation progress for urban and non-urban sources through the Lake Clarity Tracker.

Staff held a TMDL Program Review meeting with executives. Staff prepared and finalized a draft Lake Tahoe Info Stormwater Tools reference manual and updated the Lake Clarity Creditng Program Handbook to reflect changes to the registration platform, as well as several policy changes that have taken place over the past several years. Staff developed and circulated internal drafts of the 202 Findings and Recommendations Memo and 2021 TMDL Annual Strategy.

4. Renew Interlocal Agreements including updated commitments and schedule of load reduction and associated credit targets.

No tasks this SFY year

5. Participate in Tahoe Science Advisory Council meetings to provide TMDL Management Agencies' perspective on key questions, information needs, and workplan development and prioritization.

Staff participated in committee and project-specific meetings. Staff reviewed a draft Clarity Model Assessment project report, assisted in the preparation of coordinated agency (NDEP, Lahontan Water Board, TRPA and EPA) comments, and participated in a meeting to discuss and address agency comments.

#### **Strategy II. Coordinate with partner organizations to protect water quality, watershed health, and ensure the effective use of public funding.**

1. Participate on the Stormwater Quality Improvement Committee to coordinate stormwater planning and design activities and to fulfill LTRA project prioritization and reporting requirements.

Staff participated in two SWQIC meetings.

2. Coordinate with the Tahoe Regional Planning Agency to advance Regional Plan goals and Threshold attainment.

TRPA was awarded \$100K through the 2020 NV NS Grant round. Staff worked with TRPA to flesh out a workplan for the the 319 grant and 604(b)3 funding.

3. Participate on grant committees and technical advisory committees as needed.

Staff participated in the 2020 319 NPS Grant Funding Opportunity.

#### **Strategy III. Coordinate with agency partners to address nearshore water quality.**

##### **Milestones:**

1. Coordinate with Nearshore Agency Workgroup agencies to implement the Nearshore Resource Allocation Program.

No activity.

2. Coordinate TMDL and nearshore program activities and look for opportunities to prioritize implementation actions where multi-benefit objectives may be achieved.

No activity.

#### **TRUCKEE RIVER BASIN**

##### **Strategy I. Develop Source Water/Watershed Management Plan and get local and EPA Approval.**

##### **Milestones:**

The SW/WS Plan and the Tributary Plan are both complete.

1. Work with local jurisdictions and stakeholders to integrate and complete the SW/WS plan, including the Tributary Plan developed by the TMSWPCC.

2. Present final plan to local boards and commissions for approval. Submit to EPA as a 9-element plan and a Source Water Protection Plan.

The SW/WS Plan was presented to No. NV Water Planning Commission on October 7th, the Western Regional Water Commission on October 21st, Truckee Meadows Regional Planning Agency Planning Commission on December 7th and the TMRPA Governing Board on December 10th. All Boards and Commissions accepted the plan unanimously. The online tool portion of the plan was submitted to EPA via [washoecountycleanwater.org](http://washoecountycleanwater.org). Demonstration modules will be presented to EPA to help guide them through the plan components for understanding and to help them in their review.

#### **Strategy II. Implement Approved Plan.**

**Milestones:**

1. Implement projects and steps delineated in the plan. Fund competitive projects through annual GFO consistent with the plan.

Three projects identified in the plan have been submitted for consideration to the GFO Technical Advisory Committee and two were funded.

#### **Strategy III. Coordinate with One Truckee River and OTR Stakeholders to continue implementation of OTR Plan.**

**Milestones:**

1. Participate on OTR Board.  
2. Participate in OTR Partnership meetings and events.

NPS Branch Manager attended monthly board meetings as a member.

No meetings or events of the Partnership Council occurred this quarter.

3. Support water quality components of the OTR Plan.

Action plan item under Goal 1 was completed in the SW/WS Based Plan conclusion. Subgrant with OTR funding a restroom attendant and outreach position was overseen.

#### **Strategy IV: Continue and/or build new partnerships to implement NPS related projects.**

**Milestones:**

1. Work with current and new partners to identify additional implementation or education projects.

Project Profiles were developed in the creation of the SW/WS Plan, identifying implementation and education projects and partners. New projects continue to be identified and developed in coordination with partners.

2. Conduct environmental education programs to increase awareness of water quality issues and promote actions to reduce NPS pollution.

Environmental education was delivered throughout the watershed by Sierra Nevada Journeys.

#### **VIRGIN RIVER BASIN**

##### **Strategy I. Collaborate with existing and emerging natural resource related local working groups and support efforts that may maintain or improve water quality.**

**Milestones:**

1. Attend local working group meetings when deemed appropriate, including with the Virgin River Coalition.

No working group or VRC meetings were attended during the quarter.

2. Provide technical assistance and grant funding to support local working groups.	Staff has submitted a draft Scope of Work and Budget to the VRC via The Nature Conservancy relative to the VRC's grant proposal to hire a Watershed Coordinator. Execution of a Subgrant Agreement is eminent.
3. Identify other resources to facilitate implementation of water quality projects.	The VRC Steering Committee was able to obtain a commitment from the City of Mesquite to provide a substantial 319(h) grant cash match (\$50K) to insure adequate funding to support the hiring of a VRC Watershed Coordinator.
4. Encourage local efforts to adapt watershed plan to cover the 9 required EPA elements.	No Activity this quarter, however, upon execution of the VRC Subgrant Agreement, staff will attend VRC Steering Group meetings (Virtually, and/or in person when possible) to identify avenues to update the watershed plan, and to include additional EPA required elements when and where possible.

## WALKER RIVER BASIN

### Strategy I. Work with local, state, federal and private resources to address nonpoint source pollution in the Walker River Basin.

#### Milestones:

1. Restore 500 feet of Walker River channel (100 feet per year) to reduce sediment by 20 tons/year and phosphorus by 20 lbs/year.
2. Conduct environmental education programs to increase awareness of water quality issues and promote actions to reduce NPS pollution.

Native vegetation was planted and cottonwoods were propagated by Walker River State Park staff.

Walker River State Park staff held virtual learning sessions regarding the Walker River.

### Strategy II. Coordinate with Walker River State Park to improve water quality in Walker River watershed.

#### Milestones:

1. Work with Nevada Division of State Parks and the Walker River Conservancy to implement ecological restoration projects at a park-scale (14,000 acres) at Walker River State Park.
2. NDEP will approach State Parks regarding being a main stakeholder in the development of an alternative restoration plan or watershed based plan. Other stakeholders (Federal, State, Local, Nonprofit, Private and Tribal) will be invited if they are.

Native vegetation was planted and cottonwoods were propagated by Walker River State Park staff.

NDEP discussed potential next projects with Deputy Director of State Parks.

## Goal #2. Educate and inform the public about nonpoint source pollution, watershed stewardship and water quality protection to increase awareness, promote behavior change and empower effective water quality protection actions.

### Objective A. Implement high quality, effective NPS Environmental Education Program.

#### Strategy I. Implement Environmental Education Strategic Plan.

#### Milestones:

1. Develop next five year Environmental Education Strategic Plan.

Interviews were held and the successful candidate was hired and will start work the 3rd Quarter of SFY21.

2. Conduct Project WET Workshops for teachers and other community educators.	Get Outdoors Nevada held several online Project WET workshops.
3. Conduct and/or assist with environmental education events including Earth Day, river snapshot monitoring, green-ups, school environmental science classes, etc.	On hold until position refilled next quarter.
4. Publish Watershed Ed newsletter.	On hold until position refilled next quarter.
5. Maintain and regularly update Environmental Education web site.	On hold until position refilled next quarter.
6. Provide education and training opportunities on water quality topics of concern to watershed partners, stakeholder organizations, and education institutions upon request.	On hold until position refilled next quarter.
7. Provide high quality EE materials to school and community educators and the public including Project WET curriculum guides, activity booklets, fact sheets, maps and other resources.	On hold until position refilled next quarter.

#### **Strategy II. Support local or regional environmental education projects.**

##### **Milestones:**

1. Invest in environmental education projects that encourage behavior change and citizen involvement in water quality improvement efforts.	Subgrants with Sierra Nevada Journeys, Great Basin Outdoor School, River Wranglers, Get Outdoors Nevada and CWSD supported environmental education efforts throughout the state. These subgrants were overseen by staff and many adjusted their Scope of Works and budgets due to transitions to distance learning techniques due to COVID.
2. Continue education and training on environmental program effectiveness measurements and standards.	On hold until position refilled next quarter.
3. Require appropriate program measurement metrics to determine efficacy of funded education projects.	No activity this quarter.
4. Participate with watershed partner programs to support and evaluate.	Evaluations occur at the end of the year and the end of the subgrant.

#### **Goal #3 Coordinate with State, Federal, local agencies and Tribes to prevent and reduce nonpoint source pollution impacts to surface and groundwater.**

##### **Objective A. Maintain and improve existing partnerships and build new partnerships with other agencies, nonprofit organizations, local watershed groups and private landowners.**

##### **Strategy I. Provide opportunities for local, State and Federal agencies, Tribes, environmental organizations, etc. to coordinate and collaborate on NPS related issues.**

##### **Milestones:**

1. Identify and contact appropriate agencies and stakeholders including BLM, USFS, NRCS, Tribes, NDOW, Nevada Association of Conservation Districts, The Nature Conservancy and others regarding collaboration opportunities.	Staff continues to collaborate and meet with all the partners listed to the left. On October 21 staff virtually attended a kick-off meeting held by the Nevada Land Trust for the Friends of the South Fork of the Humboldt River. Watershed issues and needs were discussed for future consideration the South Fork.
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|---|---|
| 2. Provide technical assistance, education and training to stakeholders on water quality related topics and how to develop project proposals. | Technical assistance was given to several partners.   |
| 3. Maintain and update contact information to notify agencies of the release of Grand Funding Opportunity for 319 funds.                      | The NPS GFO Contact List was updated and utilized to notify parties of the 2020 319(h) GFO. |
| 4. Provide opportunity for agencies to participate in triennial review of State water quality standards.                                      | No triennial review this quarter.   |

## **Strategy II. Coordinate with NRCS to implement National Water Quality Initiative and other Farm Bill Programs.**

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| <b>Milestones:</b>  | Staff participated in the NRCS STAC held on December 9th.  |
| 1. Participate in Nevada NRCS State Technical Advisory Committee meetings to encourage the use of Farm Bill funding towards water quality improvement.                    |  |
| 2. Meet with NRCS to discuss Farm Bill programs, develop shared watershed priorities and water quality restoration goals and identify project or education opportunities. | Staff met with NRCS several times strategizing water quality goals in the newly selected NWQI watersheds in the Carson Valley. |
| 3. Partner with NRCS to transfer lessons learned from the NWQI to inform future water quality restoration via Farm Bill/EQIP funding.                                     | No work this quarter.  |
| 4. Engage NRCS in dialogue about state water quality priorities and watersheds; share maps and other information.   | Staff met with NRCS several times strategizing water quality goals in the newly selected NWQI watersheds in the Carson Valley. |

## **Objective B. Ensure consistency among local, state, federal programs and NDEP Nonpoint Source Pollution Management Plan.**

### **Strategy I. Ensure consistency between federal and state programs.**

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| <b>Milestones:</b>   | Staff receives all State Clearinghouse memos via email and reviews the announcement to see if there is comment needed regarding water quality and nonpoint source impacts. |
| 1. Review and comment as determined appropriate on EAs, EISs, Resource Area Management Plans and grazing allotment plans to ensure water quality concerns are addressed. |  |

**State Fiscal Year 2021 3rd Quarterly Report**  
**January 1 - March 31, 2021**  
**319(h) Grant #C9-97908120**

**EPA Strategic Plan**

All tasks delineated in this quarterly report support the Environmental Protection Agency's Strategic Goal 2: Protecting America's Waters and EPA's Objective 2.2: Protect and Restore Watersheds and Aquatic Ecosystems

**COMPONENTS OF NEVADA'S FFY 2019/SFY 2021 NPS MANAGEMENT PLAN**

**Goal #1: Prevent and reduce nonpoint source pollution in impaired waters and improve watershed health.**

**GENERAL**

**Objective A. Implement NPS Projects in Priority Watersheds and Document Successes.**

**Strategy I. Build and maintain strong partnerships to implement a successful NPS Program statewide.**

<b>Milestones:</b>	The 2020 Integrated Source Water and 319(h) Watershed Protection Plan for Public Water Systems and the Truckee River in the Truckee Meadows (Plan) is complete. The Plan is fully digital, online and has been developed as a GIS planning tool. It is located at <a href="http://washoecountycleanwater.org">washoecountycleanwater.org</a> . The Plan has been submitted to EPA for review and comment. Staff presented the Truckee River online plan to Carson River Subconservancy to ask them to be a main stakeholder in the upcoming effort in Douglas County and to translate the existing watershed based plan to a GIS-based online plan. The Virgin River Coalition interviewed Watershed Coordinator candidates to coordinate and implement their plan.
1. Coordinate with stakeholders in priority watersheds to develop watershed based plans, alternative restoration plans, and to prioritize and/or identify projects to implement.	
2. Manage and oversee subgrants in priority watersheds.	Staff oversaw subgrants to ensure that they were on schedule and on budget. Staff reviewed subgrant quarterly reports and processed invoices and attended coordination meetings. Staff developed Scope of Works and budgets for three new subgrants. Detail in sheet 2.

**Strategy II. Document and report progressive achievement or success toward environment improvement.**

<b>Milestones:</b>	When SOWs were developed, appropriate metrics were included in subgrant reporting requirements. Due to COVID, metrics in education and outreach subgrants were re-evaluated and Scope of Works were amended based on distance learning and COVID-compliant events.
1. Incorporate measurable metrics into scope of works for subgrants.	
2. Report metrics annually in reports to EPA.	Metrics were reported to EPA in the Annual Report, which was submitted on October 1, 2020. Each subgrant was summarized with metrics reported.

3. Develop and publicize at least one success story per year.

A progressive success story was submitted with the Annual Report for SFY 20 describing the efforts and results at South Fork State Recreation Area. Another progressive success story will be developed and submitted with the SFY 21 Annual Report in September 2021.

4. Evaluate progress of implementation of watershed based plans and/or alternative restoration plans.

The Carson River Adaptive Stewardship plan is being implemented on schedule. The Las Vegas Wash Comprehensive Adaptive Management Plan is being implemented on schedule. The Lake Tahoe TMDL is being implemented on schedule. EPA is reviewing the completed joint Source Water/Watershed Plan for the Truckee River.

### **Strategy III. Provide efficient and effective administration of NPS Program.**

#### **Milestones:**

1. Invest in water quality improvement and environmental education projects that are likely to provide long-term load reductions and changes in behavior to achieve watershed wide improvement in water quality.

a. Release annual Grant Funding Opportunity that clearly specifies program priorities and requirements; review applications; select projects for funding based on established prioritization criteria.

Annual GFO was released August 10 and closed October 2, 2020. Fourteen applications were received. The Technical Advisory Committee reviewed, ranked and interviewed all applicants. Eleven subgrants were awarded funding in the amount of \$1,005,821. Nine projects are implementation and two are education and outreach focused.

b. Ensure selected proponents have sufficient resources, technical skills and commitments to implement and maintain the project for the design life of the project.

Scope of work and budgets were prepared for the subgrants of awarded proposals. Several remain to be subgranted. Subgrantees will be actively managed to ensure they have the resources to implement their projects successfully.

2. Enter and maintain grant and project information in EPA Grants Reporting and Tracking System within required timeline.

GRTS data for load reductions during calendar year 2020 were entered prior to the new March 31, 2021 deadline. As subgrants are executed resulting from the SFY 21 GFO, data will be entered into GRTS.

3. Report to EPA quarterly to document incremental progress toward achieving annual grant milestones.

This report satisfies this requirement for reporting for 3rd Quarter SFY 21.

4. Report to EPA annually to document progress in achieving SMP and grant milestones including information submitted by outside agencies.

Annual Report for SFY 20 was submitted October 1, 2020. Annual Report for SFY 21 will be submitted in September, 2021.

5. Submit to EPA all required financial reports within required timeline.

All financial reports will be submitted.

### **Strategy IV. Provide Best Management Practice Resources.**

#### **Milestones:**

BMP Resource links provided in the toolbox are periodically

- |  |   |
|--|---|
| 1. Maintain BMP Toolbox with statewide BMP resources available online.                               | reviewed and updated, with new resources added as appropriate. Broken links were fixed. |
| 2. Provide technical BMP assistance to contractors, local agencies, or property owners as requested. | Technical assistance provided as requested.   |

#### Strategy V. Continue Collaboration with Integrated Source Water Protection Program.

##### Milestones:

- |  |  |
|--|--|
| 1. Complete Source Water/Watershed Management (SW/WS) Planning process for the Truckee River Watershed in Washoe County.                 | Completed plan was presented to EPA during three technical sessions held 1/14, 1/21 and 2/3. EPA is currently reviewing the plan and comments are expected next quarter. Edits will be made as appropriate, and the final plan will be approved by the State 4th quarter SFY 21.   |
| 2. Assist stakeholders in Washoe County to implement components of the SW/WS Management Plan.  | Two projects identified under the plan were submitted under the Grant Funding Opportunity and were awarded funds. They are the City of Reno Chalk Creek Stabilization and Erosion Control project and the One Truckee River Public Restroom Installation and Urban River Education. Once the plan is formally approved, stakeholders will have ability to compete for the larger pot of project money granted annually from EPA. |
| 3. Identify potential other watersheds/counties to coordinate SW/WS Planning Processes.  | Four HUC-12s in the Carson Valley have been identified for collaboration between the SW and WS planning processes. Stakeholder building for the Carson River has begun. The Truckee River online tool was presented to CWSD on 2/9/21 to bring them onboard as the Watershed Coordinating agency to translate the CRASP to a GIS-online based plan.  |
| 4. Attend SW or NPS conferences, working group meetings, webinars, etc. to discuss coordinating SW and NPS Programs.                     | While in-person conferences have been halted due to COVID complications, many online webinars and other virtual meeting platform opportunities were attended by NPS and SW staff. Meetings were held with CWSD, NRCS, Nevada Rural Water and others were held to start to build stakeholders for the upcoming Douglas County/Carson River effort.  |
| 5. Attend Ground Water Protection Task Force meetings and Western States Source Water conferences to further coordinate SW/NPS Programs. | The Western States Source Water Conference planned to be held in Reno, hosted by NDEP, and highlighting the SW/WS coordination effort was translated into a two hour virtual conference held on February 24, 2021. GWPTF meetings were attended by staff.  |

#### Strategy VI. 401 Certification Program.

##### Milestones:



1. Issue 401 certifications for all federally permitted projects to ensure water quality standards are met and NPS issues are addressed.

Three 401 Certifications were issued with conditions this quarter. There are currently 12 active projects seeking 401 Certification at various stages of the Certification process. Staff have been communicating with project applicants, consultants, public employees (city, county, and state), and Army Corps of Engineers staff to provide guidance and coordinate the new 401 Certification process. The NDEP 401 Certification website was updated to reflect the new 401 Certification process.

## Strategy VII. Update NPS State Management Plan

### Milestones:

1. Evaluate SMP for update needs based on Integrated Report and discussions with watershed stakeholders.
2. Submit draft revised plan to EPA for review and discussion.
3. Submit final plan to EPA for approval.

No tasks this SFY year. SFY 21 is year one of the 2020-2024 Nevada NPS State Management Plan, which was approved in September, 2020.

## CARSON RIVER BASIN

### Strategy I. Implement Carson River Adaptive Stewardship Plan

### Milestones:

1. Restore 1,250 feet of Carson River channel (250 feet per year) to reduce sediment by 50 tons/year and phosphorus by 50 lbs/year.

CVCD and The Nature Conservancy are both designing and implementing restoration projects on the prioritized reaches of the Carson River. The TAC awarded funds to CVCD and the Washoe Tribe of California and Nevada for more restoration on the Carson River. CVCD implemented bioengineered techniques on --- feet of the Carson River from Genoa Lane to Washoe Tribe property line. The Nature Conservancy planted 700 cottonwood cuttings and 200 willow cuttings along the Carson River and its tributaries, and two volunteer bareroot shrub planting days occurred in March to support bioengineering and restoration efforts. Staff developed the Scope of Work and Budget for the Washoe Tribe of Nevada and California's Bank Stabilization and Restoration Project along Carson River and is currently awaiting tribal authorization.

2. Conduct environmental education programs to increase awareness of water quality issues and promote actions to reduce NPS pollution.

Environmental education was performed in the Carson River watershed by CWSD through the "I am Carson Watershed" campaign, by River Wranglers, and Sierra Nevada Journeys. CWSD conducted a Carson River Watershed educational series called Watershed Wednesdays which was held each Wednesday in March addressing a diversity of topics within the Carson River Watershed. NDEP staff participated in multiple webinar sessions. River Wranglers developed online curriculum as an adaptation to distance learning and piloted the program with three Carson City schools, and conducted Trout in the Classroom.

3. Implement the CRASP and increase efforts on NDEP's prioritized river segments. Perform geomorphology study on prioritized segments to prioritize restoration projects. Develop a more cohesive strategy for implementation of river restoration projects in coordination with CWSD, DVCD, CVCD, AWG and TNC and develop phased approach.

CVCD worked with RO Anderson and Wildscape to create a geomorphological study of the reach of the Carson River below Genoa Lane. Bioengineering plans were drawn up and reviewed, and restoration projects were prioritized. The first prioritized project was designed by RO Anderson and implementation was initiated this quarter. Coordinated with CWSD, DVCD, CVCD, and TNC as well as the Washoe Tribe to initiate and implement restoration on the Carson River. A more cohesive strategy for coordination will be addressed as the effort in Douglas County is rolled out with stakeholders.

4. Utilize new technology (drones, etc.) to more effectively plan and monitor results of restoration on the Carson River.

CWSD staff had a 106 subgrant and performed drone data flyovers of the Carson River. That information was shared with stakeholders and used to help design the prioritized restoration project with Carson Valley Conservation District. The 106 grant was concluded. CWSD filmed drone footage, created a video and established post restoration monitoring data set for AWG's 4th Crossing Project. CWSD presented the results during CWSD's Watershed Wednesdays and at the Western States Source Water Protection Forum. Charley Palmer with Alaska Department of Environmental Conservation also presented at the Western States Forum regarding their work utilizing drones for source water protection.

5. Coordinate with AWG on their development and implementation of Vision plan for the West Fork of the Carson River segments in CA, and encourage development of a plan for the East Fork of the Carson River.

Carson Water Subconservancy District coordinated with USFS, American Rivers and AWG on the West Fork Vision Project. CWSD finalized the 4th Crossing drone video.

6. Work with stakeholders to identify and implement additional projects for 319 or other agency funds.

Potential projects were discussed with CVCD, CWSD, DVCD and others.

**Milestones:**

1. Assist in implementation of outreach and education plan to support the CRFMP and increase understanding of the importance of floodplains in maintaining water quality.
2. Support the Living River approach with stakeholders through implementation of projects that release the Carson River to the floodplain.

CWSD developed and presented "Watershed Wednesdays." Two of the events focused on floodplain protection (March 17) and floodplain management (March 31). All of the videos are available on Youtube under Carson River Watershed account.

All currently subgranted projects support the Living River approach, with banks laid back, bioengineering stabilization techniques engaged, and minimal hardscaping of banks to minimize impacts downstream.

**LAS VEGAS WASH****Strategy I. Implement Las Vegas Wash Comprehensive Adaptive Management Plan****Milestones:**

1. Fund priority projects consistent with CAMP to reduce sediment and other nonpoint source pollutants to the Las Vegas Wash and Lake Mead.
2. Conduct environmental education programs to increase awareness of water quality issues and promote actions to reduce NPS pollution.
3. Conduct site visits to funded projects and to further coordinate efforts with identified stakeholders.

SNWA and CCWRD have open subgrant agreements with BWQP. SNWA has a second draft Subgrant Agreement pending approval.

SNWA and CCWRD continue to conduct education programs utilizing new platforms compatible with Covid 19 restrictions. Both SNWA and CCWRD are producing outreach videos to supplement outreach efforts that require gatherings, including workshops and fieldtrips. SNWA created nine professionally produced outreach videos to augment magnet school field trips impacted by Covid-19 restrictions. The useful life of these products will outlive Covid and continue to bolster NPS outreach efforts into the future.

Covid 19 travel policies have prevented project site visits that require extensive travel from being completed.

**LAKE TAHOE BASIN****Strategy I. Manage the Lake Tahoe Total Maximum Daily Load Program to meet the Clarity Challenge of 24 meters by 2026.****Milestones:**

1. Work with Urban Implementing Partners to identify projects and actions to meet load reduction targets and milestones contained in Interlocal Agreements.
2. Provide funding and staff support for water quality improvement project implementation and program operations improvement.

Staff reviewed draft Annual Stormwater Reports submitted by Nevada urban implementers. Nevada jurisdictions exceeded 2020 credit targets specified in ILAs, achieving 689 credits which translates to a load reduction of just over 138,000 lbs/year. Jurisdictions also submitted the Water Year 2020 Annual Stormwater Monitoring Report on March 31. Staff participated in Road RAM assessments during the quarter.

Staff participated in the NDSL combined Lake Tahoe License Plate Grant and Water Quality and Erosion Control Grant technical advisory committee meeting.

3. Collaborate with Lahontan Water Board to execute the annual TMDL Management System cycle; including updating, maintaining and reporting implementation progress for urban and non-urban sources through the Lake Clarity Tracker.

Staff coordinated with Lahontan Water Board and TMDL Agency executives to finalize drafts of the 2020 Findings and Recommendations Memo and 2021 TMDL Annual Strategy. Drafts were circulated to stakeholders for review. One substantive and a handful of non-substantive comments were addressed in finalization of these documents which were subsequently posted to the Lake Clarity Tracker along with the 2020 Decision Record Memo that formalizes executive decisions with respect to program improvement recommendations. Along with these documents, executives approved the final Stormwater Tools Reference Manual to guide users in the use of the Lake Tahoe Info Stormwater Tools, as well as Lake Clarity Crediting Program Handbook version 2.2. that was updated to align with the improved registration platform and several policy updates previously approved by executives.

4. Renew Interlocal Agreements including updated commitments and schedule of load reduction and associated credit targets.

Staff coordinated with Nevada Urban Implementers on initial schedule and concept for updating Interlocal Agreements.

5. Participate in Tahoe Science Advisory Council meetings to provide TMDL Management Agencies' perspective on key questions, information needs, and workplan development and prioritization.

Staff participated in committee and project meetings of the Tahoe Science Advisory Council (TSAC). Staff reviewed the final Lake Clarity Model Assessment project report, and participated in the initial meeting for the Data Synthesis and Analysis (DSA) project aimed at assembling, analyzing, and interpreting data to lend broad scientific insight into the previous years annual clarity value as well as an initial outlook for what clarity may be anticipated for the current year. NDEP received the final report for the Seasonal Clarity Assessment project during the previous quarter, and integrated findings and recommendations into the 2020 Findings and Recommendations Memo

## **Strategy II. Coordinate with partner organizations to protect water quality, watershed health, and ensure the effective use of public funding.**

1. Participate on the Stormwater Quality Improvement Committee to coordinate stormwater planning and design activities and to fulfill LTRA project prioritization and reporting requirements.

Staff participated in one SWQIC meeting.

2. Coordinate with the Tahoe Regional Planning Agency to advance Regional Plan goals and Threshold attainment.

A contract with TRPA was initiated for the 319 grant and 604(b) funding that was awarded.

3. Participate on grant committees and technical advisory committees as needed.

Staff participated in the NDSL combined Lake Tahoe License Plate Grant and Water Quality and Erosion Control Grant technical advisory committee meeting.

## **Strategy III. Coordinate with agency partners to address nearshore water quality.**

**Milestones:**

1. Coordinate with Nearshore Agency Workgroup agencies to implement the Nearshore Resource Allocation Program.
2. Coordinate TMDL and nearshore program activities and look for opportunities to prioritize implementation actions where multi-benefit objectives may be achieved.

Staff participated in several NAWG meetings, focusing on crafting an RFP to develop a comprehensive algal monitoring program.

No activity.

**TRUCKEE RIVER BASIN****Strategy I. Develop Source Water/Watershed Management Plan and get local and EPA Approval.****Milestones:**

The SW/WS Plan and the Tributary Plan are both complete.

1. Work with local jurisdictions and stakeholders to integrate and complete the SW/WS plan, including the Tributary Plan developed by the TMSWPCC.

2. Present final plan to local boards and commissions for approval. Submit to EPA as a 9-element plan and a Source Water Protection Plan.

All Boards and Commissions accepted the plan unanimously in Quarter 2. The online tool portion of the plan was submitted to EPA via [washoecountycleanwater.org](http://washoecountycleanwater.org). Demonstration modules were presented to EPA to help guide them through the plan components for understanding and to help them in their review. Comments from EPA are expected next quarter.

**Strategy II. Implement Approved Plan.****Milestones:**

1. Implement projects and steps delineated in the plan. Fund competitive projects through annual GFO consistent with the plan.

Three projects identified in the plan have been submitted for consideration to the GFO Technical Advisory Committee and two were funded.

**Strategy III. Coordinate with One Truckee River and OTR Stakeholders to continue implementation of OTR Plan.****Milestones:**

1. Participate on OTR Board.
2. Participate in OTR Partnership meetings and events.
3. Support water quality components of the OTR Plan.

NPS Branch Supervisor attended monthly board meetings as a member.

The Partnership Council met on January 25th. The Council prioritized milestones under each of the four main goals of the OTR Plan for 2021.

Action plan item under Goal 1 was completed in the SW/WS Based Plan conclusion. Subgrant with OTR funding a restroom attendant and outreach position was overseen. An additional subgrant with OTR to fund a second restroom is being developed.

**Strategy IV: Continue and/or build new partnerships to implement NPS related projects.****Milestones:**

1. Work with current and new partners to identify additional implementation or education projects.

Project Profiles were developed in the creation of the SW/WS Plan, identifying implementation and education projects and partners. New projects continue to be identified and developed in coordination with partners.

2. Conduct environmental education programs to increase awareness of water quality issues and promote actions to reduce NPS pollution.

Environmental education was delivered throughout the watershed by Sierra Nevada Journeys. The Scope of Work and Budget were developed to continue supporting Sierra Nevada Journeys' Watershed Education Initiative and a subgrant agreement was executed.

## **VIRGIN RIVER BASIN**

### **Strategy I. Collaborate with existing and emerging natural resource related local working groups and support efforts that may maintain or improve water quality.**

#### **Milestones:**

1. Attend local working group meetings when deemed appropriate, including with the Virgin River Coalition.

One Coalition Workshop, two Coordinator interviews-onboarding meetings, one Steering Committee meeting, and one Recreation Working Group meeting was attended virtually.

2. Provide technical assistance and grant funding to support local working groups.

A Subgrant Agreement with the Nature Conservancy, the fiduciary agent for the Virgin River Coalition was executed, and Watershed Coordinator interviews were conducted.

3. Identify other resources to facilitate implementation of water quality projects.

No new activity.

4. Encourage local efforts to adapt watershed plan to cover the 9 required EPA elements.

Several meetings with the Coalition, Steering Committee and Working Groups were attended by staff to maintain communication and stress the importance of keeping water quality and NPS pollution management a key component of the Coalition's watershed improvement strategy.

## **WALKER RIVER BASIN**

### **Strategy I. Work with local, state, federal and private resources to address nonpoint source pollution in the Walker River Basin.**

#### **Milestones:**

1. Restore 500 feet of Walker River channel (100 feet per year) to reduce sediment by 20 tons/year and phosphorus by 20 lbs/year.

Native vegetation was planted and cottonwoods were propagated by Walker River State Park staff. Invasive weeds were eradicated with spot weed burning and herbicide treatments.

2. Conduct environmental education programs to increase awareness of water quality issues and promote actions to reduce NPS pollution.

Walker River State Park staff held virtual learning sessions regarding the Walker River.

### **Strategy II. Coordinate with Walker River State Park to improve water quality in Walker River watershed.**

#### **Milestones:**

1. Work with Nevada Division of State Parks and the Walker River Conservancy to implement ecological restoration projects at a park-scale (14,000 acres) at Walker River State Park.

Native vegetation was planted and cottonwoods were propagated by Walker River State Park staff. Invasive weeds were eradicated with spot weed burning and herbicide treatments.

2. NDEP will approach State Parks regarding being a main stakeholder in the development of an alternative restoration plan or watershed based plan. Other stakeholders (Federal, State, Local, Nonprofit, Private and Tribal) will be invited if they are.
- NDEP discussed potential next projects with Deputy Director of State Parks.

**Goal #2. Educate and inform the public about nonpoint source pollution, watershed stewardship and water quality protection to increase awareness, promote behavior change and empower effective water quality protection actions.**

**Objective A. Implement high quality, effective NPS Environmental Education Program.**

**Strategy I. Implement Environmental Education Strategic Plan.**

**Milestones:**

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| 1. Develop next five year Environmental Education Strategic Plan.  | The new education and outreach coordinator was hired and started on February 8th.  |
| 2. Conduct Project WET Workshops for teachers and other community educators.   | Get Outdoors Nevada held several online Project WET workshops.   |
| 3. Conduct and/or assist with environmental education events including Earth Day, river snapshot monitoring, green-ups, school environmental science classes, etc.                       | Staff have provided assistance as needed to support the planning and organization of the Truckee River and Carson River Snapshot Day event. Great Basin Outdoor School conducted watershed awareness spring break camps and field trips for Washoe County teachers and students. One Truckee River and the Karma Box conducted river clean up days and educational field days for homeless individuals who live along the river banks in the urban river areas of Reno |
| 4. Publish Watershed Ed newsletter.  | E-blasts have been sent out in place of the newsletter with education information and opportunities. The Newsletter concept and content strategy is currently being revised.   |
| 5. Maintain and regularly update Environmental Education web site.   | Project WET website was updated and improved.  |
| 6. Provide education and training opportunities on water quality topics of concern to watershed partners, stakeholder organizations, and education institutions upon request.            | OTR staff provided presentations to the Northern Nevada Water Planning Commission and the Western Regional Water Commission.   |
| 7. Provide high quality EE materials to school and community educators and the public including Project WET curriculum guides, activity booklets, fact sheets, maps and other resources. | Staff has provided education curriculum resources, activities, and online training opportunity announcements upon request and to all members of the Water Education list serv.   |

**Strategy II. Support local or regional environmental education projects.**

**Milestones:**

Subgrants with Sierra Nevada Journeys, Great Basin Outdoor

1. Invest in environmental education projects that encourage behavior change and citizen involvement in water quality improvement efforts.

School, River Wranglers, Get Outdoors Nevada and CWSD supported environmental education efforts throughout the state. These subgrants were overseen by staff and many adjusted their Scope of Works and budgets due to transitions to distance learning techniques due to COVID. The Scope of Work and Budget were developed for Sierra Nevada Journeys' Watershed Education Initiative and a subgrant agreement was executed to support environmental education throughout the state.

2. Continue education and training on environmental program effectiveness measurements and standards.

Position was filled in February, 2021. New staff will work on ensuring that all education programs funded in part by the NPS Program will have effective measures and reportable standards that will be reported to EPA.

3. Require appropriate program measurement metrics to determine efficacy of funded education projects.

Appropriate measures were built into the Scope of Works of new education subgrants.

4. Participate with watershed partner programs to support and evaluate.

Evaluations occur at the end of the year and the end of the subgrant.

**Goal #3 Coordinate with State, Federal, local agencies and Tribes to prevent and reduce nonpoint source pollution impacts to surface and groundwater.**

**Objective A. Maintain and improve existing partnerships and build new partnerships with other agencies, nonprofit organizations, local watershed groups and private landowners.**

**Strategy I. Provide opportunities for local, State and Federal agencies, Tribes, environmental organizations, etc. to coordinate and collaborate on NPS related issues.**

**Milestones:**

1. Identify and contact appropriate agencies and stakeholders including BLM, USFS, NRCS, Tribes, NDOW, Nevada Association of Conservation Districts, The Nature Conservancy and others regarding collaboration opportunities.

Staff continues to collaborate and meet with all the partners listed to the left. Meetings were held with BLM, USFS, NRCS, and TNC.

2. Provide technical assistance, education and training to stakeholders on water quality related topics and how to develop project proposals.

Technical assistance was given to several partners.

3. Maintain and update contact information to notify agencies of the release of Grant Funding Opportunity for 319 funds.

The NPS GFO Contact List was updated and utilized to notify parties of the 2020 319(h) GFO. The contact list will be updated again before the 2021 GFO is released.

4. Provide opportunity for agencies to participate in triennial review of State water quality standards.

No triennial review this quarter.

**Strategy II. Coordinate with NRCS to implement National Water Quality Initiative and other Farm Bill Programs.**

**Milestones:**

1. Participate in Nevada NRCS State Technical Advisory Committee meetings to encourage the use of Farm Bill funding towards water quality improvement.

Staff participated in the NRCS STAC held on March 22nd.



2. Meet with NRCS to discuss Farm Bill programs, develop shared watershed priorities and water quality restoration goals and identify project or education opportunities.

Staff met with NRCS several times strategizing water quality goals in the newly selected NWQI watersheds in the Carson Valley.

3. Partner with NRCS to transfer lessons learned from the NWQI to inform future water quality restoration via Farm Bill/EQIP funding.

No work this quarter.

4. Engage NRCS in dialogue about state water quality priorities and watersheds; share maps and other information.

Staff met with NRCS several times strategizing water quality goals in the newly selected NWQI watersheds in the Carson Valley.

## **Objective B. Ensure consistency among local, state, federal programs and NDEP Nonpoint Source Pollution Management Plan.**

### **Strategy I. Ensure consistency between federal and state programs.**

#### **Milestones:**

1. Review and comment as determined appropriate on EAs, EISs, Resource Area Management Plans and grazing allotment plans to ensure water quality concerns are addressed.

Staff receives all State Clearinghouse memos via email and reviews the announcement to see if there is comment needed regarding water quality and nonpoint source impacts.

State Fiscal Year 2021 4th Quarterly Report

April 1 - June 30, 2021

319(h) Grant #C9-97908120

EPA Strategic Plan

All tasks delineated in this quarterly report support the Environmental Protection Agency's Strategic Goal 1.2 A Cleaner, Healthier Environment and Objective 1.2: Provide for Clean and Safe Water.

COMPONENTS OF NEVADA'S FFY 2019/SFY 2021 NPS MANAGEMENT PLAN

Goal #1: Prevent and reduce nonpoint source pollution in impaired waters and improve watershed health.

GENERAL

Objective A. Implement NPS Projects in Priority Watersheds and Document Successes.

Strategy I. Build and maintain strong partnerships to implement a successful NPS Program statewide.

Milestones:

1. Coordinate with stakeholders in priority watersheds to develop watershed based plans, alternative restoration plans, and to prioritize and/or identify projects to implement.

The 2020 Integrated Source Water and 319(h) Watershed Protection Plan for Public Water Systems and the Truckee River in the Truckee Meadows (Plan) is complete. The Plan is fully digital, online and has been developed as a GIS planning tool. It is located at [washoecountycleanwater.org](http://washoecountycleanwater.org). The Plan was been submitted to EPA for review and comment. EPA submitted comments and staff replied in June. Staff is building a stakeholder group in the Carson River watershed to translate the existing watershed plan to an online plan like the Truckee's plan. Staff met with NRCS several times to determine next steps to get eligible producers onboard for conservation practices in the Carson Valley. The Virgin River Coalition Watershed Coordinator organized and implemented a River Clean-Up event on May 22, 2021 that included 41 Volunteers/82 manhours and the removal of 4000 lbs. of trash and debris. The Coordinator has been working with the VRC Steering Committee to further develop a Watershed Outreach Plan. As part of this effort, a Coalition Logo has been designed to be included in outreach material to be disseminated to the public. The final vacancy on the NPS Branch has been filled and that staff member will initiate development of a stakeholder group to kick off an alternative restoration plan for the Walker River watershed.

2. Manage and oversee subgrants in priority watersheds.

Staff oversaw subgrants to ensure that they were on schedule and on budget. Staff reviewed subgrant quarterly reports and processed invoices and attended coordination meetings. Staff developed Scope of Works and budgets for three new subgrants. Detail in sheet 2.

Strategy II. Document and report progressive achievement or success toward environment improvement.

Milestones:

When SOWs were developed, appropriate metrics were

1. Incorporate measurable metrics into scope of works for subgrants.	included in subgrant reporting requirements. Relaxation of COVID restrictions is allowing education subgrants to return to more normal operations, with precautions taken.
2. Report metrics annually in reports to EPA.	Metrics were reported to EPA in the Annual Report, which was submitted on October 1, 2020. Each subgrant was summarized with metrics reported. The next Annual Report will be submitted by September 1, 2021.
3. Develop and publicize at least one success story per year.	A progressive success story was submitted with the Annual Report for SFY 20 describing the efforts and results at South Fork State Recreation Area. Another progressive success story will be developed and submitted with the SFY 21 Annual Report in September 2021.
4. Evaluate progress of implementation of watershed based plans and/or alternative restoration plans.	The Carson River Adaptive Stewardship plan is being implemented on schedule. The Las Vegas Wash Comprehensive Adaptive Management Plan is being implemented on schedule. The Lake Tahoe TMDL is being implemented on schedule. EPA reviewed the completed joint Source Water/Watershed Plan for the Truckee River and provided comments. Staff responded to comments in June, 2021. Projects from the Truckee River plan have been funded and subgrants initiated.

### Strategy III. Provide efficient and effective administration of NPS Program.

#### Milestones:

1. Invest in water quality improvement and environmental education projects that are likely to provide long-term load reductions and changes in behavior to achieve watershed wide improvement in water quality.	
<ul style="list-style-type: none"> <li>a. Release annual Grant Funding Opportunity that clearly specifies program priorities and requirements; review applications; select projects for funding based on established prioritization criteria.</li> <li>b. Ensure selected proponents have sufficient resources, technical skills and commitments to implement and maintain the project for the design life of the project.</li> </ul>	<p>Annual GFO was released August 10 and closed October 2, 2020. Fourteen applications were received. The Technical Advisory Committee reviewed, ranked and interviewed all applicants. Eleven subgrants were awarded funding in the amount of \$1,005,821. Nine projects are implementation and two are education and outreach focused. GFO is scheduled to be release on August 9, 2021 upon receipt of 319(h) award from EPA.</p> <p>Scope of work and budgets were prepared for the subgrants of awarded proposals. Three were executed this quarter. Subgrantees will be actively managed to ensure they have the resources to implement their projects successfully.</p>
2. Enter and maintain grant and project information in EPA Grants Reporting and Tracking System within required timeline.	GRTS data for load reductions during calendar year 2020 were entered prior to the new March 31, 2021 deadline. As subgrants are executed resulting from the SFY 21 GFO, data will be entered into GRTS.

3. Report to EPA quarterly to document incremental progress toward achieving annual grant milestones.

This report satisfies this requirement for reporting for 4th Quarter SFY 21.

4. Report to EPA annually to document progress in achieving SMP and grant milestones including information submitted by outside agencies.

Annual Report for SFY 20 was submitted October 1, 2020. Annual Report for SFY 21 will be submitted in September, 2021.

5. Submit to EPA all required financial reports within required timeline.

All financial reports will be submitted.

#### **Strategy IV. Provide Best Management Practice Resources.**

##### **Milestones:**

1. Maintain BMP Toolbox with statewide BMP resources available online.

BMP Resource links provided in the toolbox are periodically reviewed and updated, with new resources added as appropriate. Broken links were fixed. Toolbox can be accessed at <https://ndep.nv.gov/water/rivers-streams-lakes/nonpoint-source-pollution-management-program/best-management-practices-toolbox>.

2. Provide technical BMP assistance to contractors, local agencies, or property owners as requested.

Technical assistance provided as requested. Staff provided soil conservation and strategic planning assistance to the Nevada Association of Conservation Districts. Staff provided erosion control technical resources for the development multi-agency publication.

#### **Strategy V. Continue Collaboration with Integrated Source Water Protection Program.**

##### **Milestones:**

1. Complete Source Water/Watershed Management (SW/WS) Planning process for the Truckee River Watershed in Washoe County.

Comments were received from EPA on the Plan. Staff responded to EPA's comments in writing in June. Staff is hoping to get approval for the Plan before the GFO closes.

2. Assist stakeholders in Washoe County to implement components of the SW/WS Management Plan.

Two projects identified under the plan were submitted under the Grant Funding Opportunity and were awarded funds. Subgrants were executed for both projects this quarter. They are the City of Reno Chalk Creek Stabilization and Erosion Control project and the One Truckee River Public Restroom Installation and Urban River Education. Once the plan is formally approved, stakeholders will have ability to compete for the larger pot of project money granted annually from EPA.

3. Identify potential other watersheds/counties to coordinate SW/WS Planning Processes.

Four HUC-12s in the Carson Valley have been identified for collaboration between the SW and WS planning processes. Stakeholder building for the Carson River has begun. Two meetings were held with NRCS to discuss how to identify eligible producers for NWQI and SW initiatives. New staff will begin scoping the stakeholder building process in the Walker River watershed. Staff is creating a crosswalk to determine what the existing Virgin River Watershed Plan needs to be added to become an EPA-approvable plan and then determine how to fill the gaps.

4. Attend SW or NPS conferences, working group meetings, webinars, etc. to discuss coordinating SW and NPS Programs.

While in-person conferences had been halted due to COVID complications, many online webinars and other virtual meeting platform opportunities were attended by NPS and SW staff. Many meetings were held with multiple stakeholders. Staff received direction to return to the office at the beginning of SFY 22 with telework options, so meetings will most likely become a mix between virtual and in-person meetings.

5. Attend Ground Water Protection Task Force meetings and Western States Source Water conferences to further coordinate SW/NPS Programs.

The Western States Source Water Conference planned to be held in Reno, hosted by NDEP, and highlighting the SW/WS coordination effort was translated into a two hour virtual conference held on February 24, 2021. GWPTF meetings were attended by staff.

#### **Strategy VI. 401 Certification Program.**

##### **Milestones:**

1. Issue 401 certifications for all federally permitted projects to ensure water quality standards are met and NPS issues are addressed.

NDEP 401 Certification actions this quarter include: seven conditional Certifications, one waiver, and one project withdrawal by the applicant during the Certification Request step. There are currently 18 active projects seeking Water Quality Certification at various stages of the Certification process. Staff have been regularly communicating and meeting with project applicants, consultants, public employees (city, county, and state), and Army Corps of Engineers staff to provide guidance and to coordinate the new 401 Certification process.

#### **Strategy VII. Update NPS State Management Plan**

##### **Milestones:**

1. Evaluate SMP for update needs based on Integrated Report and discussions with watershed stakeholders.

No tasks this SFY year. SFY 21 is year one of the 2020-2024 Nevada NPS State Management Plan, which was approved in September, 2020.

2. Submit draft revised plan to EPA for review and discussion.

3. Submit final plan to EPA for approval.

#### **CARSON RIVER BASIN**

#### **Strategy I. Implement Carson River Adaptive Stewardship Plan**

##### **Milestones:**

CVCD and The Nature Conservancy are both designing and

1. Restore 1,250 feet of Carson River channel (250 feet per year) to reduce sediment by 50 tons/year and phosphorus by 50 lbs./year.

2. Conduct environmental education programs to increase awareness of water quality issues and promote actions to reduce NPS pollution.

3. Implement the CRASP and increase efforts on NDEP's prioritized river segments. Perform geomorphology study on prioritized segments to prioritize restoration projects. Develop a more cohesive strategy for implementation of river restoration projects in coordination with CWSD, DVCD, CVCD, AWG and TNC and develop phased approach.

implementing restoration projects on the prioritized reaches of the Carson River. The TAC awarded funds to CVCD and the Washoe Tribe of California and Nevada for more restoration on the Carson River. CVCD implemented bioengineered techniques on 3415 feet of the Carson River from Genoa Lane to Washoe Tribe property line. This restoration was installed from January through the end of April when flows got too high. The restoration included laying back banks and installing extensive bioengineering techniques including juniper revelements, willow fascines, willow mats and live willow pole plantings. CWSD is planning implementation of phase II of the project. TNC planted approximately 2000 plants (Woods' rose, golden currant, and silverleaf buffaloberry) in April-May at the River Fork Ranch and is currently focusing on irrigating and monitoring these plantings in response to higher temperatures and dry conditions. Representatives from the Washoe Tribe of Nevada and California are finalizing their Bank Stabilization and Restoration Project design taking into consideration historical paths of the river, future erosional issues along the Carson River, and preservation of existing riparian vegetation..

Environmental education was performed in the Carson River watershed by CWSD, River Wranglers, TNC River Fork Ranch, and Douglas County Stormwater Program. River Wranglers held education events for homeschool and summer school programs, and participated in Carson City Parks & Rec summer camps. The RW and TNC collaborated on a community work day that educated the participates about the river and NPSP from agriculture, among many other water quality discussions. CWSD continues to market and outreach about the Carson River Watershed through their "I am Carson River" campaign, through social media and videos.

CVCD worked with RO Anderson and Wildscape to create a geomorphological study of the reach of the Carson River below Genoa Lane. Bioengineering plans were drawn up and reviewed, and restoration projects were prioritized. The first prioritized project was designed by RO Anderson and implementation occurred this quarter. Funding for the second phase of these restoration projects was awarded. Coordinated with CWSD, DVCD, CVCD, and TNC as well as the Washoe Tribe to initiate and implement restoration on the Carson River. A more cohesive strategy for coordination will be addressed as the effort in Douglas County is rolled out with stakeholders.

4. Utilize new technology (drones, etc.) to more effectively plan and monitor results of restoration on the Carson River.

CWSD staff had a 106 subgrant and performed drone data flyovers of the Carson River. That information was shared with stakeholders and used to help design the prioritized restoration project with Carson Valley Conservation District. The 106 grant was concluded. CWSD filmed drone footage, created a video and established post restoration monitoring data set for AWG's 4th Crossing Project. CWSD presented the results during CWSD's Watershed Wednesdays and at the Western States Source Water Protection Forum. Charley Palmer with Alaska Department of Environmental Conservation also presented at the Western States Forum regarding their work utilizing drones for source water protection.

5. Coordinate with AWG on their development and implementation of Vision plan for the West Fork of the Carson River segments in CA, and encourage development of a plan for the East Fork of the Carson River.

Carson Water Subconservancy District coordinated with AWG and USFWS regarding plans for Lahontan cutthroat trout recovery.

6. Work with stakeholders to identify and implement additional projects for 319 or other agency funds.

Potential projects were discussed with CVCD, CWSD, DVCD and others.

#### **Strategy II. Implement Carson River Floodplain Management Plan**

##### **Milestones:**

1. Assist in implementation of outreach and education plan to support the CRFMP and increase understanding of the importance of floodplains in maintaining water quality.

Education and Outreach Coordinator attended Carson River Coalition Education Group meetings to coordinate flood awareness week which is coming up in the fall.

2. Support the Living River approach with stakeholders through implementation of projects that release the Carson River to the floodplain.

All currently subgranted projects support the Living River approach, with banks laid back, bioengineering stabilization techniques engaged, and minimal hardscaping of banks to minimize impacts downstream.

#### **LAS VEGAS WASH**

#### **Strategy I. Implement Las Vegas Wash Comprehensive Adaptive Management Plan**

##### **Milestones:**

1. Fund priority projects consistent with CAMP to reduce sediment and other nonpoint source pollutants to the Las Vegas Wash and Lake Mead.

SNWA and CCWRD have open subgrant agreements with BWQP. SNWA has a second draft Subgrant Agreement pending approval.

2. Conduct environmental education programs to increase awareness of water quality issues and promote actions to reduce NPS pollution.

SNWA and CCWRD continue to conduct education programs utilizing new platforms compatible with Covid 19 restrictions. Both SNWA and CCWRD are producing outreach videos to supplement outreach efforts that require gatherings, including workshops and fieldtrips. SNWA created nine professionally produced outreach videos to augment magnet school field trips impacted by Covid-19 restrictions. The useful life of these products will outlive Covid and continue to bolster NPS outreach efforts into the future. In addition to use of the videos to supplement their field trip offerings, the videos were made available to the Clark County School District, where the videos were viewed by 1644 students.

3. Conduct site visits to funded projects and to further coordinate efforts with identified stakeholders.

Covid 19 travel policies have prevented project site visits that require extensive travel from being completed. This will likely end in the first quarter of SFY 22.

## LAKE TAHOE BASIN

### Strategy I. Manage the Lake Tahoe Total Maximum Daily Load Program to meet the Clarity Challenge of 24 meters by 2026.

#### Milestones:

1. Work with Urban Implementing Partners to identify projects and actions to meet load reduction targets and milestones contained in Interlocal Agreements.

Staff reviewed and approved final Annual Stormwater Reports submitted by Nevada urban implementers. Nevada jurisdictions exceeded 2020 credit targets specified in ILAs, achieving 689 credits which translates to a load reduction of just over 138,000 lbs./year. Staff reviewed Water Year 2020 Annual Stormwater Monitoring Report. Staff participated in Road RAM assessments conducted during the quarter.

2. Provide funding and staff support for water quality improvement project implementation and program operations improvement.

Staff participated in meetings and discussions regarding Washoe County's Lower Wood Creek Phase 1 project. The project went to bid and construction contractor retained. The project is set for construction summer 2021.

3. Collaborate with Lahontan Water Board to execute the annual TMDL Management System cycle; including updating, maintaining and reporting implementation progress for urban and non-urban sources through the Lake Clarity

Staff coordinated with Lahontan Water Board to initiate development of the 2021 TMDL Performance Report and produced a draft document.

4. Renew Interlocal Agreements including updated commitments and schedule of load reduction and associated credit targets.

Staff produced drafts of updated ILAs and passed on to NDEP management for review.



5. Participate in Tahoe Science Advisory Council meetings to provide TMDL Management Agencies' perspective on key questions, information needs, and workplan development and prioritization.

Staff participated in committee and project meetings of the Tahoe Science Advisory Council (TSAC), including meeting and discussions related to initial direction for next steps related to the Lake Clarity Model Assessment project; and participation in staff and executive level workshops related to the Data Synthesis and Analysis (DSA) project. NDEP reviewed and provided feedback on a press release announcing the annual clarity of the lake.

**Strategy II. Coordinate with partner organizations to protect water quality, watershed health, and ensure the effective use of public funding.**

1. Participate on the Stormwater Quality Improvement Committee to coordinate stormwater planning and design activities and to fulfill LTRA project prioritization and reporting requirements.

Staff participated in one SWQIC meeting.

2. Coordinate with the Tahoe Regional Planning Agency to advance Regional Plan goals and Threshold attainment.

Staff coordinated with TRPA to evaluate potential implications for TMDL strategy or attainment of TMDL milestones as a result of the agency amending the former nitrate deposition threshold standard (AQ14) to a per capita VMT standard to reduce reliance on the automobile, reduce GHG emissions, and promote mobility. No impacts were identified.

3. Participate on grant committees and technical advisory committees as needed.

No activity.

**Strategy III. Coordinate with agency partners to address nearshore water quality.**

**Milestones:**

1. Coordinate with Nearshore Agency Workgroup agencies to implement the Nearshore Resource Allocation Program.

2. Coordinate TMDL and nearshore program activities and look for opportunities to prioritize implementation actions where multi-benefit objectives may be achieved.

Staff participated in several NAWG meetings focused on: crafting an RFP to develop a comprehensive algal monitoring program, and continuation of human health monitoring at select locations throughout the basin.

No activity.

**TRUCKEE RIVER BASIN**

**Strategy I. Develop Source Water/Watershed Management Plan and get local and EPA Approval.**

**Milestones:**

1. Work with local jurisdictions and stakeholders to integrate and complete the SW/WS plan, including the Tributary Plan developed by the TMSWPCC.

The SW/WS Plan and the Tributary Plan are both complete. EPA provided comment and staff responded in writing in June, 2021. We hoping to have EPA approval before the GFO closes in September.

2. Present final plan to local boards and commissions for approval. Submit to EPA as a 9-element plan and a Source Water Protection Plan.

All Boards and Commissions accepted the plan unanimously in Quarter 2. The online tool portion of the plan was submitted to EPA via [washoecountycleanwater.org](http://washoecountycleanwater.org). Demonstration modules were presented to EPA to help guide them through the plan components for understanding and to help them in their review. Comments from EPA were received and staff responded in writing in June.

### Strategy II. Implement Approved Plan.

#### Milestones:

1. Implement projects and steps delineated in the plan. Fund competitive projects through annual GFO consistent with the plan.

Three projects identified in the plan have been submitted for consideration to the GFO Technical Advisory Committee and two were funded.

### Strategy III. Coordinate with One Truckee River and OTR Stakeholders to continue implementation of OTR Plan.

#### Milestones:

1. Participate on OTR Board.
2. Participate in OTR Partnership meetings and events.
3. Support water quality components of the OTR Plan.

NPS Branch Supervisor attended monthly board meetings as a member.

The Partnership Council met on May 25th.

Action plan item under Goal 1 was completed in the SW/WS Based Plan conclusion. Subgrant with OTR funding a restroom attendant and outreach position was overseen. An additional subgrant with OTR to fund a second restroom was executed.

### Strategy IV: Continue and/or build new partnerships to implement NPS related projects.

#### Milestones:

1. Work with current and new partners to identify additional implementation or education projects.
2. Conduct environmental education programs to increase awareness of water quality issues and promote actions to reduce NPS pollution.

Project Profiles were developed in the creation of the SW/WS Plan, identifying implementation and education projects and partners. BWQP staff has held multiple meeting with key education partners in Las Vegas to develop a larger effort and increase Project WET education in Southern Nevada. Staff also met with Nevada Outdoor School to strategize developing a Project WET program in the Elko area.

Environmental education to reduce NPS pollution was delivered throughout the watershed by Sierra Nevada Journeys' Watershed Education Initiative. Sierra Nevada Journeys provided interactive watershed education programs through our Virtual STEM Classrooms to 913 students and 32 educators in northern Nevada despite COVID-19 related difficulties. Great Basin Outdoor School conduct various field days and summer Adventure Day Camps on the Truckee River at the River School Farm, and conducted the annual Snapshot Days event where students enjoyed netting and identifying aquatic macroinvertebrates as indicators of water quality.

## VIRGIN RIVER BASIN

### Strategy I. Collaborate with existing and emerging natural resource related local working groups and support efforts that may maintain or improve water quality.

#### Milestones:

1. Attend local working group meetings when deemed appropriate, including with the Virgin River Coalition.	Multiple "Touch Base" virtual meetings (23) have been held with the Watershed Coordinator, Steering Committee, and Working Group members to insure Coalition Efforts align with the 319(h) grant scope of work and coalition mission. The first VRC Bi-Annual Workshop to be organized by the Watershed Coordinator occurred on April 22, 2021.
2. Provide technical assistance and grant funding to support local working groups.	A Subgrant Agreement with the Nature Conservancy, the fiduciary agent for the Virgin River Coalition was executed previously and an invoice for match expenditures was processed.
3. Identify other resources to facilitate implementation of water quality projects.	No new activity.
4. Encourage local efforts to adapt watershed plan to cover the 9 required EPA elements.	Several meetings with the Virgin River Coalition, Steering Committee and Working Groups were attended by staff to maintain communication and stress the importance of keeping water quality and NPS pollution management a key component of the Coalition's watershed improvement strategy.

## WALKER RIVER BASIN

### Strategy I. Work with local, state, federal and private resources to address nonpoint source pollution in the Walker River Basin.

#### Milestones:

- |  |   |
|--|---|
| 1. Restore 500 feet of Walker River channel (100 feet per year) to reduce sediment by 20 tons/year and phosphorus by 20 lbs./year.     | Native vegetation was planted and cottonwoods were propagated by Walker River State Park staff. Invasive weeds were eradicated with spot weed burning and herbicide treatments. |
| 2. Conduct environmental education programs to increase awareness of water quality issues and promote actions to reduce NPS pollution. | Walker River State Park staff held virtual learning sessions regarding the Walker River.  |

### Strategy II. Coordinate with Walker River State Park to improve water quality in Walker River watershed.

#### Milestones:

- |  |   |
|--|---|
| 1. Work with Nevada Division of State Parks and the Walker River Conservancy to implement ecological restoration projects at a park-scale (14,000 acres) at Walker River State Park.   | Native vegetation was planted and cottonwoods were propagated by Walker River State Park staff. Invasive weeds were eradicated with spot weed burning and herbicide treatments. |
| 2. NDEP will approach State Parks regarding being a main stakeholder in the development of an alternative restoration plan or watershed based plan. Other stakeholders (Federal, State, Local, Nonprofit, Private and Tribal) will be invited if they are. | NDEP discussed potential next projects with Deputy Director of State Parks.   |

## Goal #2. Educate and inform the public about nonpoint source pollution, watershed stewardship and water quality protection to increase awareness, promote behavior change and empower effective water quality protection actions.

### Objective A. Implement high quality, effective NPS Environmental Education Program.

#### Strategy I. Implement Environmental Education Strategic Plan.

#### Milestones:

New staff member has been coordinating with existing

1. Develop next five year Environmental Education Strategic Plan.	partners and evaluating the next steps for the education plan, while maintaining current efforts.
2. Conduct Project WET Workshops for teachers and other community educators.	Get Outdoors Nevada held several online Project WET workshops for Clark County teachers. Great Basin Outdoor School held an in person teacher training Project WET workshop at the River School Ranch, and Keep Truckee Meadows Beautiful held their Watershed Warriors teacher training component which includes PWET activities.
3. Conduct and/or assist with environmental education events including Earth Day, river snapshot monitoring, green-ups, school environmental science classes, etc.	Staff have provided assistance as needed to support the planning and organization of the Truckee River. Great Basin Outdoor School conducted the annual Snapshot Days event in May. Staff assisted and participated in a watershed and floodplain modeling education event held at Mills Park with key educators in the Carson River watershed. Southern Nevada Water Authority conducted the 36th annual Las Vegas Wash Green Up Event, which was the first time the event has been held since the COVID hit.
4. Publish Nevada Water Quality News newsletter.	A new newsletter concept was developed and renamed as the Nevada Water Quality news, was developed during April and May and was distributed to a listserv of over 2000 Nevada educators in June.
5. Maintain and regularly update Environmental Education web site.	Project WET website was updated and improved.
6. Provide education and training opportunities on water quality topics of concern to watershed partners, stakeholder organizations, and education institutions upon request.	OTR staff provided presentations to the Northern Nevada Water Planning Commission and the Western Regional Water Commission.
7. Provide high quality EE materials to school and community educators and the public including Project WET curriculum guides, activity booklets, fact sheets, maps and other resources.	Staff has provided education curriculum resources, activities, and online training opportunity announcements upon request and to all members of the Water Education list serv.

## Strategy II. Support local or regional environmental education projects.

### Milestones:

1. Invest in environmental education projects that encourage behavior change and citizen involvement in water quality improvement efforts.	Subgrants with Sierra Nevada Journeys, Great Basin Outdoor School, River Wranglers, Get Outdoors Nevada, CWSD, and SNWA supported environmental education efforts throughout the state. These subgrants were overseen by staff and many adjusted their Scope of Works and budgets due to transitions to distance learning techniques due to COVID. Sierra Nevada Journeys successfully implemented the Watershed Education Initiative through virtual programming. The Initiative inspired students to learn about their local watersheds and non-point source pollution, and empowered them to take care of their local water sources.
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2. Continue education and training on environmental program effectiveness measurements and standards.

Position was filled in February, 2021. New staff has worked to ensure that all education programs funded in part by the NPS Program will have effective measures and reportable standards that will be reported to EPA.

3. Require appropriate program measurement metrics to determine efficacy of funded education projects.

Appropriate measures were built into the Scope of Works of new education subgrants.

4. Participate with watershed partner programs to support and evaluate.

Evaluations occur at the end of the year and the end of the subgrant.

**Goal #3 Coordinate with State, Federal, local agencies and Tribes to prevent and reduce nonpoint source pollution impacts to surface and groundwater.**

**Objective A. Maintain and improve existing partnerships and build new partnerships with other agencies, nonprofit organizations, local watershed groups and private landowners.**

**Strategy I. Provide opportunities for local, State and Federal agencies, Tribes, environmental organizations, etc. to coordinate and collaborate on NPS related issues.**

**Milestones:**

1. Identify and contact appropriate agencies and stakeholders including BLM, USFS, NRCS, Tribes, NDOW, Nevada Association of Conservation Districts, The Nature Conservancy and others regarding collaboration opportunities.

Staff continues to collaborate and meet with all the partners listed to the left. Meetings were held with BLM, USFS, NRCS, and TNC.

2. Provide technical assistance, education and training to stakeholders on water quality related topics and how to develop project proposals.

Technical assistance was given to several partners.

3. Maintain and update contact information to notify agencies of the release of Grant Funding Opportunity for 319 funds.

The NPS GFO Contact List was updated and utilized to notify parties of the 2020 319(h) GFO. The contact list will be updated again before the 2021 GFO is released.

4. Provide opportunity for agencies to participate in triennial review of State water quality standards.

No triennial review this quarter.

**Strategy II. Coordinate with NRCS to implement National Water Quality Initiative and other Farm Bill Programs.**

**Milestones:**

1. Participate in Nevada NRCS State Technical Advisory Committee meetings to encourage the use of Farm Bill funding towards water quality improvement.

No STAC meetings this quarter.

2. Meet with NRCS to discuss Farm Bill programs, develop shared watershed priorities and water quality restoration goals and identify project or education opportunities.

Staff met with NRCS several times strategizing water quality goals in the newly selected NWQI watersheds in the Carson Valley.

3. Partner with NRCS to transfer lessons learned from the NWQI to inform future water quality restoration via Farm Bill/EQIP funding.

No work this quarter.

4. Engage NRCS in dialogue about state water quality priorities and watersheds; share maps and other information.

Staff met with NRCS several times strategizing water quality goals in the newly selected NWQI watersheds in the Carson Valley.

**Objective B. Ensure consistency among local, state, federal programs and NDEP Nonpoint Source Pollution Management Plan.**

**Strategy I. Ensure consistency between federal and state programs.**

**Milestones:**

1. Review and comment as determined appropriate on EAs, EISs, Resource Area Management Plans and grazing allotment plans to ensure water quality concerns are addressed.

Staff receives all State Clearinghouse memos via email and reviews the announcement to see if there is comment needed regarding water quality and nonpoint source impacts.

## Appendix B: Load Reduction Reporting



DATE: April 21, 2021

TO: Birgit Widegren, NPS Program Branch Supervisor,  
Water Quality Planning

FROM: Jon Paul Kiel, Environmental Scientist,  
Water Quality Planning

RE: EPA Grants Reporting and Tracking System (GRTS) Annual Load Reduction Reporting  
and Database Administration for the State of Nevada

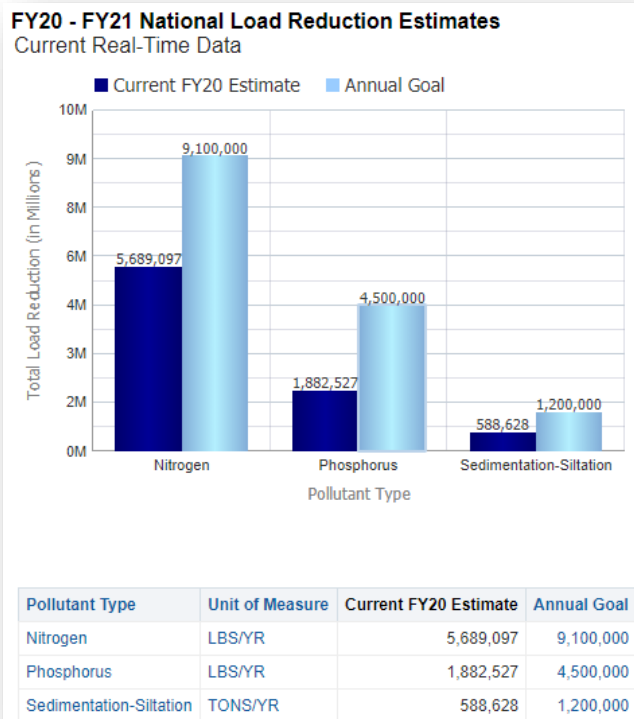
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I have completed GRTS 319(h) Grant Project Load Reduction database entries for calendar year 2020. This year entries were due to EPA on or before March 31, 2021. Data was entered prior to the deadline for projects that implemented BMPs in 2020, or where a substantial number of BMPs were installed during the year for projects with multiyear BMP installations.

### GRTS Load Reduction Outputs

GRTS Load Reduction OBI (Oracle Business Intelligence) Reporting Outputs are shown below. All OBI data outputs in this report were obtained on April 20, 2021.

#### National Numbers





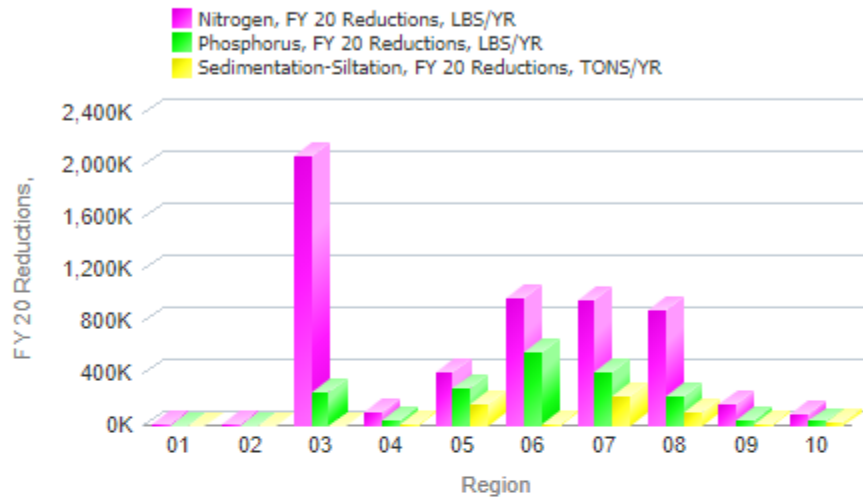
## Regional Numbers

### FY20 - FY21 Load Reduction Estimates by State/Region

Current Real-Time Data

By Region ▼

#### FY 20 Reductions



	Nitrogen	Phosphorus	Sedimentation-Siltation
	FY 20 Reductions	FY 20 Reductions	FY 20 Reductions
Region	LBS/YR	LBS/YR	TONS/YR
01	19,557	4,211	643
02	9,860	2,629	68
03	2,071,391	264,922	1,043
04	103,247	42,810	18,079
05	413,908	287,209	173,783
06	979,066	564,569	11,543
07	962,949	411,651	231,179
08	883,303	222,551	108,575
09	159,779	46,381	12,081
10	86,036	35,594	31,634
Grand Total	5,689,097	1,882,527	588,628

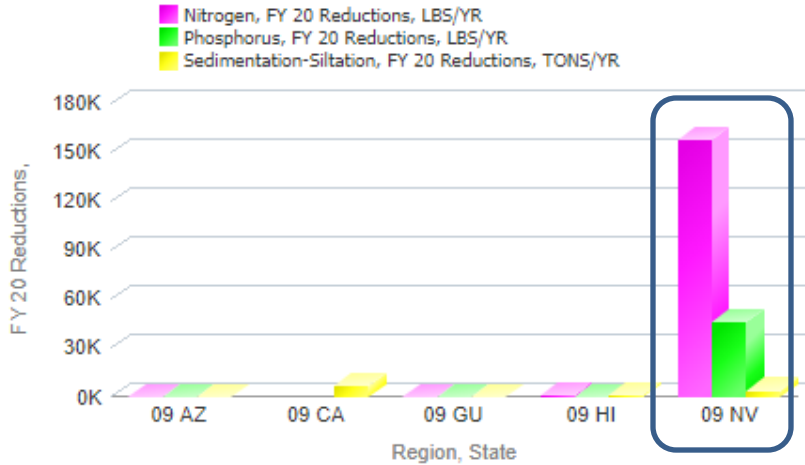
## State Numbers

### FY20 - FY21 Load Reduction Estimates by State/Region

Current Real-Time Data

By Region ▼

#### FY 20 Reductions

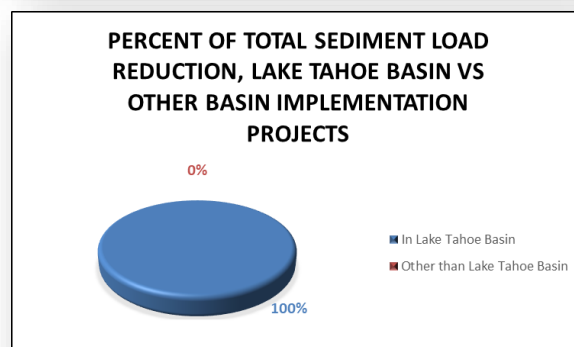
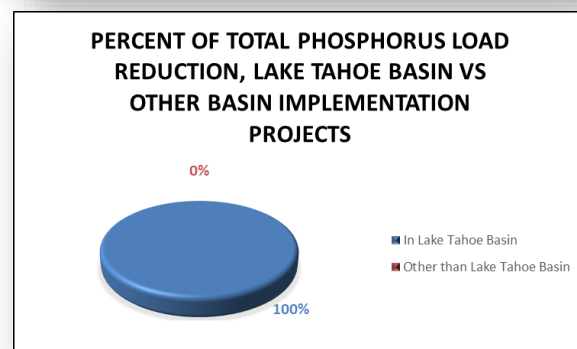
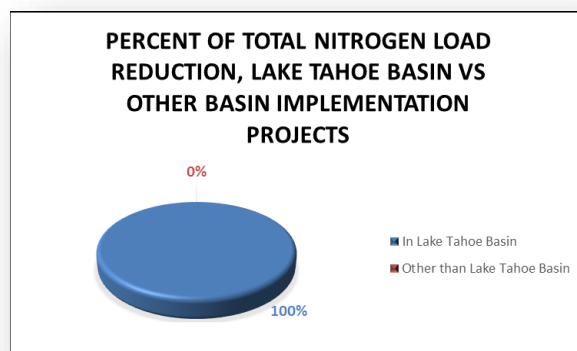
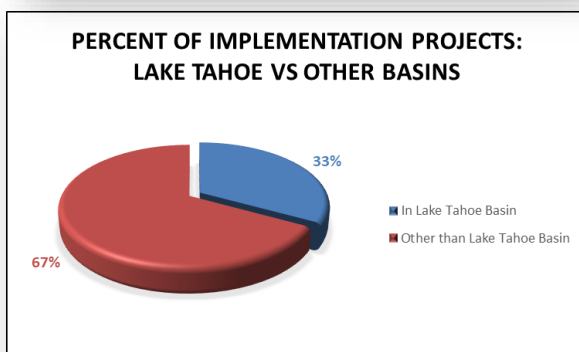
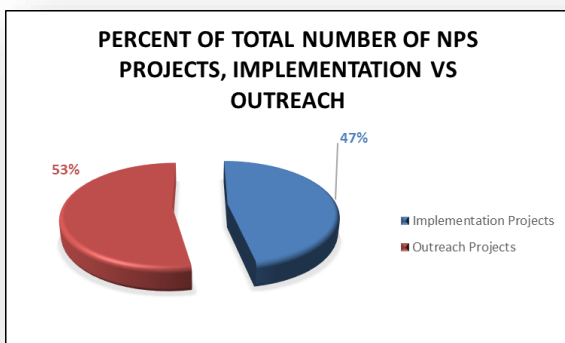


		Nitrogen	Phosphorus	Sedimentation-Siltation
		FY 20 Reductions	FY 20 Reductions	FY 20 Reductions
Region	State	LBS/YR	LBS/YR	TONS/YR
09	AZ	176	88	326
09	CA			7,041
09	GU	6	1	0
09	HI	1,533	262	739
09	NV	158,064	46,030	3,975
Grand Total		159,779	46,381	12,081

Note: GRTS OBI outputs indicate load reductions that are slightly higher than those inputted by Nevada. The discrepancies calculate out to a difference of 0.003%, 0.005% and 2.89% for N, P, and Sediment respectively between Nevada's inputted numbers and GRTS OBI outputs. The slightly lower load reduction numbers are represented in the figures, tables and graphs to follow.

## Nevada's Active 319(h) Grant Supported Project Inventory

Nevada's 2020 active 319(h) project inventory contained 53 percent public outreach and education projects, and 47 percent BMP Implementation projects. Most public outreach projects do not include a measurable load reduction element. Conversely, many implementation projects include a public outreach element. Of the load reductions realized as a result of BMP implementation, BMPs installed in the Lake Tahoe Basin comprised nearly 100 percent of the reductions realized during calendar year 2020. All projects except one that were able to report load reductions were located in the Lake Tahoe Basin. There are several ongoing implementation projects in the Carson, Colorado, and Walker Basins, but since they remain uncompleted, load reduction numbers for these projects will be reported in 2022 or later.



## Nevada Load Reduction Trends

Nevada's 2020 GRTS OBI outputs show that load reduction amounts for nutrients and sediments replicated 2014 levels. Reductions in pounds and tons are shown below:

Nevada 319(h) Load Reductions by Year, Average Load Reduction												
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Average LR
Nitrogen, lbs	171,151	126,642	276,559	112,200	166,416	202,357	298,144	70,043	224,146	80,113	158,059	171,439
Phosphorus, lbs	48,877	34,005	78,361	29,883	37,993	50,197	192,020	18,007	64,067	21,059	46,028	56,409
Sediment, tons	4,598	3,883	11,179	6,407	3,706	5,256	12,183	1,846	5,231	4,739	3,860	5,717

Load reductions attributed to BMP installations and retrofits to commercial and multifamily properties on the Nevada side of the Lake Tahoe Basin comprised nearly 100 percent of the state's total load reductions, including reductions attributed to new technology incorporated into roadway operations in the Basin. Tahoe Basin roadways are receiving less traction sand during winter, and material recovery has improved with the use of more efficient sweepers.

As noted above, approximately half of Nevada's 319(h) grant dollars go to public outreach and education efforts. A load reduction metric cannot be used to evaluate the effectiveness of these projects, yet without these ongoing efforts to educate citizens, nonpoint source pollution particularly in populated areas would certainly be worse. Reducing nonpoint source pollution in Nevada is and will continue to be a challenge but remains important in the nation's driest state where water resources are scarce.



The nonpoint source pollution prevention message above was developed by Clark County Water Reclamation District for use on billboards.

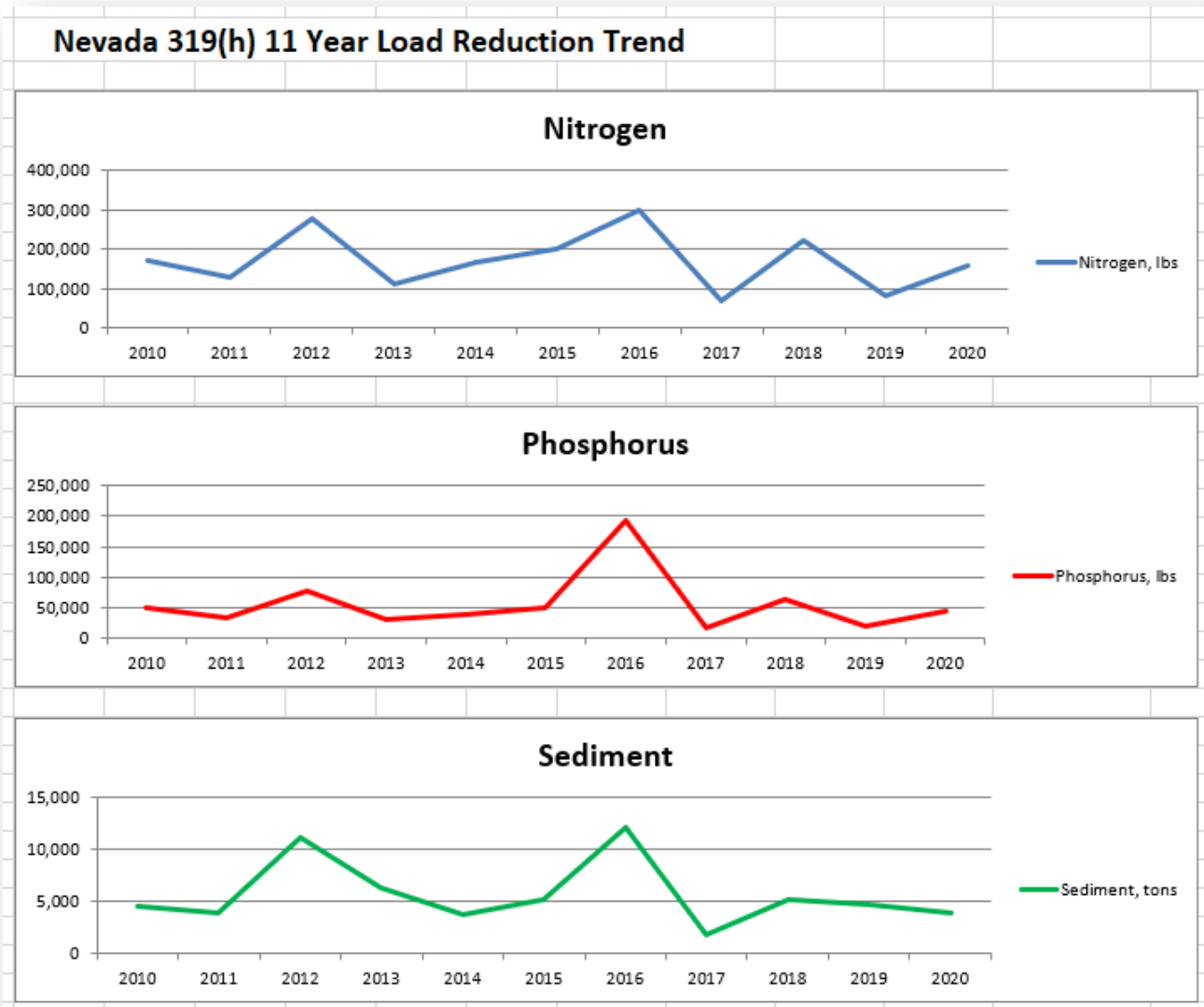
## The Value of Watershed Planning and Relation to Load Reductions

In recent years, including in 2020 during a Pandemic, Nevada's Nonpoint Source Pollution Management Program has put increased effort into local watershed planning. Hundreds of staff hours have been expended working with stakeholders in various watersheds on planning efforts ultimately designed to improve outcomes related to NPS pollution management, and in the case of the Truckee River, source water protection. While past planning efforts in the Humboldt River Basin have fallen flat, more recent efforts in the Truckee River and Virgin River watersheds are resulting in development and approval of watershed plans by local stakeholders. These plans have the potential to include the nine elements required of EPA to allow for more flexible grant funding options for projects in these watersheds. In the Humboldt River Basin, recent planning efforts have been scaled back to focus on the South Fork of the Humboldt River. Yet, none of these planning efforts directly result in load reductions of nitrogen, phosphorus, sediment, or any other constituent of concern in the watershed. Does this mean that these planning efforts should not be pursued? Certainly not.



Even for those watershed plans that do not include EPA's *Nine Elements of a Watershed-Based Plan*, these planning efforts and resulting plans strengthen stakeholder involvement and support and inform the local citizenry about conservation actions being pursued in their watershed. These plans eventually direct implementation of projects deemed important not necessarily by NDEP or EPA, but by the most important people involved in the effort: The people who live in the watershed. If project selection follows a priority scheme that includes load reductions as a metric, these higher priority projects are also more likely to result in higher load reduction numbers.



The line graphs below show Nevada's reportable load reductions by year due to NPS Pollution Management Grant Program project implementation:



Load reductions by watershed with reportable amounts for the Calendar Year are shown below:

Load Reduction by Watershed				
		Nitrogen, lbs	Phosphorus, lbs	Sediment, tons
	Lake Tahoe Basin	158,048.00	46,026.50	3,859.66
	Truckee River Basin	11.50	1.30	0.30

### Calculation of Load Reductions

Load reduction numbers for calendar year 2020 were generated using EPA's STEPL load reduction model, and in the case of reductions reported for Lake Tahoe BMP implementation, using the Tahoe Region's Pollutant Load Reduction Model (PLRM) with variable assumption inputs related to a specific project type.

There are several open 319(h) grant funded projects across the state in other watersheds. These projects are scheduled to be completed in 2021 or later, at which time any associated load reductions will be reported.

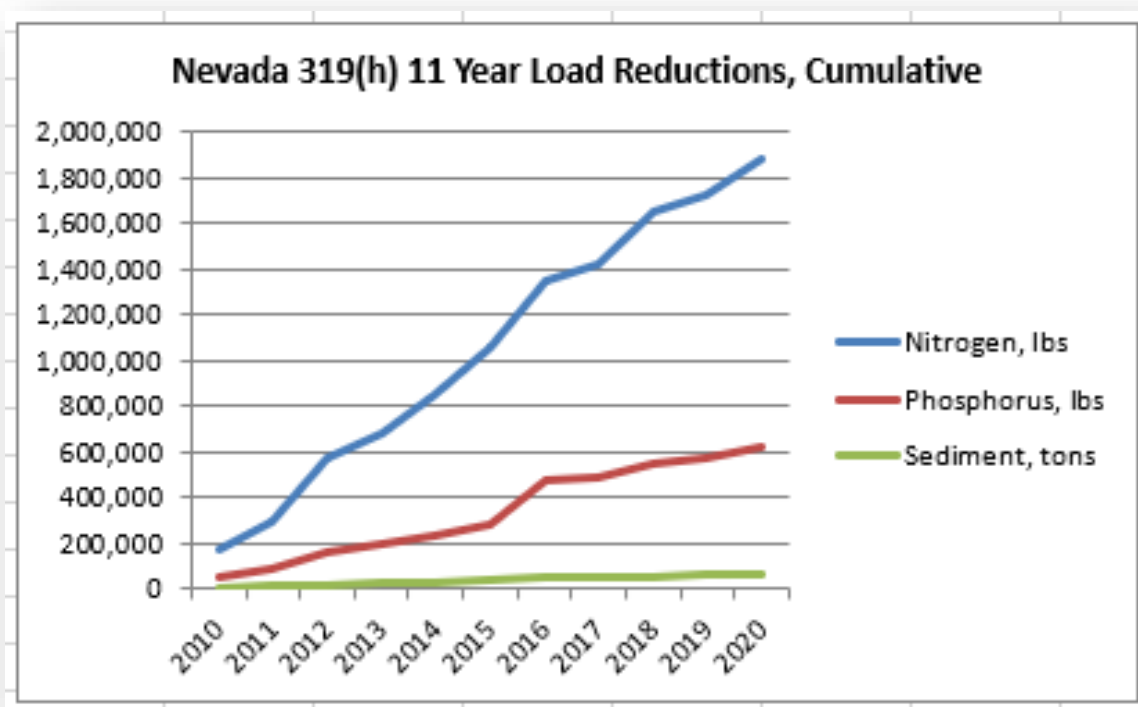
### Program Cumulative Load Reductions

Annual fluctuations in reportable load reductions occur for a variety of reasons. One example alone is where an active implementation project is scheduled to have BMPs installed once at the conclusion of a grant contract's term. If a multiyear project, in early years no load reductions can be attributed to the project. Because of timing alone, a state could have the exact same suite of project types being implemented between years, but the load reductions could be different due to timing of actual BMP installation.



Nevada's eleven-year, cumulative load reduction numbers and curves for nitrogen, phosphorus, and sediment are shown below:

Nevada 319(h) 11 Year Load Reductions, Cumulative											
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Nitrogen, lbs	171,151	297,793	574,352	686,552	852,968	1,055,325	1,353,469	1,423,512	1,647,658	1,727,771	1,885,830
Phosphorus, lbs	48,877	82,882	161,243	191,126	229,119	279,316	471,336	489,343	553,410	574,469	620,497
Sediment, tons	4,598	8,481	19,660	26,067	29,773	35,029	47,212	49,058	54,289	59,028	62,888



### Reported Calendar Year Load Reductions versus Cumulative

In addition to load reductions associated with public education efforts that cannot be measured or otherwise captured, EPA's Grant Reporting and Tracking System does not account for load reductions resulting from continued BMP performance beyond the load reduction reporting calendar year. Cumulative load reduction metrics are not captured via GRTS, and therefore are not reported to Congress. Yet the benefits of installed BMPs typically continue well beyond the reporting year. These benefits are not reported in part because the performance of BMPs over an extended time can be extremely variable. The accuracy in calculating cumulative loading in most cases would be so low as to make this information unreliable. States and EPA acknowledge the ongoing, cumulative benefit but simply do not attempt to quantify it.



The variable that has the greatest impact on continuing BMP performance is BMP maintenance. In many cases, BMP monitoring is needed to evaluate maintenance needs. Both are dependent upon resources that are often not included in a BMP project budget, so it is common for BMPs that would benefit from maintenance to not receive it. Despite a lack of maintenance in some instances, when a BMP performs at a high level for more than a year, the cumulative load reduction benefit over time that is not captured by GRTS is an important factor that deserves mention in the context of NPS pollution management.

### **GRTS Mandated Elements**

Nevada GRTS Reports (OBI Query outputs) currently indicate 11 project records with Mandatory Element Errors for *project years* 2002 through 2020, and zero Load Reduction errors. These errors act as flags to GRTS Regional Administrators. They point to projects that are likely to report load reductions in future years, and due to the database's structure, are appropriate to remain. They will be eliminated when actual load reduction numbers are inputted.

States are required to use GRTS to report all nationally mandated elements described in the most recent GRTS memorandum located on the GRTS website ([www.epa.gov/nps/grts](http://www.epa.gov/nps/grts)). The mandated elements are comprised of parameters that EPA reviews to account for and report to congress the accomplishments of the § 319 program from a nutrient and sediment load reduction standpoint.

### **Projects with Missing Load Reductions**

Nevada GRTS Reports (OBI reporting outputs) show no projects with missing load reductions.

### **Questionable Load Reductions**

Nevada GRTS Reports (OBI reporting outputs) show four projects with a questionable load reduction value (Too Small or Too Large?). Included in this group is the KGID Bulk Abrasive Spreader and Brine Maker Purchase with a reported load reduction that appears Too Small. Unlike sweepers, abrasive spreaders and brine makers target and limit the application of abrasives so there is less abrasive material to remove or to be transported off paved surfaces by snowmelt. The amount of abrasive material not applied is the equivalent load reduction in this project's case. However, even small quantities of fine sediment particles (FSPs) that are prevented from entering Lake Tahoe are critical to steering lake clarity direction and trend. Another factor that appears to lower the performance of spreaders and sweepers is weather. During dry/drought years, with less precipitation in the form of snow, there is less need to brine roadways and subsequently spread, and sweep roadway abrasives. This translates to a smaller sediment load reduction than would occur during an average snow year.

On the other hand, Lake Tahoe BMP Installation and Maintenance related load reductions appear too large. This "single project" reports the installation of BMPs on hundreds of developed parcels in the Lake Tahoe Basin on which this project provided technical assistance. Although the respective load reduction per parcel may be small, cumulatively, these load reductions add up to large amounts.

## Covid-19 Project Impacts

Several 319(h) grant funded projects were impacted by the Covid-19 Pandemic in 2020. Public Outreach projects that typically engage large gatherings of students, volunteers, and the general public have had to either cancel events or reinvent their project to successfully complete outreach tasks. One example of a Covid-19 impacted project task is the semi-annual Green-Up Event held by the Southern Nevada Water Authority. This event gathers hundreds of volunteers that meet to revegetate floodplain terraces and wetlands previously infested with tamarisk. This event includes a BBQ luncheon, and periodically requires volunteers to be bused to worksites. Between state Covid policies restricting gatherings to 50 persons or less, and the inability to socially distance at a BBQ or on a bus, convening a Green-Up event became problematic. To date, two spring and one fall Green-Up events have been cancelled. However, other outreach tasks during Covid-19 have been reinvented to avoid the close gatherings, yet still offer the outreach originally intended to be provided.

Several grantees have employed digital technology to reach their audience while avoiding gatherings. Video productions are becoming a common tool to dispense information relating to the protection of water quality. Used sparingly in the past, videos and other digital tools are becoming more common, and will continue to be employed after the pandemic when gatherings can resume safely. Click the link here to view an example of an educational video created by the Southern Nevada Water Authority: [The Las Vegas Wash](#)

Implementation projects have been impacted less by Covid-19. Meetings required to conduct permit and design review are being held virtually, and groundwork continues weather permitting.

## Funds are Adequately Leveraged

Nevada appears to have successfully leveraged the relatively small percentage of 319(h) funding budgeted nationally (0.85 percent). Nevada's match to grant ratio, as reported by EPA GRTS query outputs, compares to other Region 9 states as follows:

R9	Total 319(h) funds Expended, 2002 - 2020	Total Match Expended	Match Ratio
AZ	\$26,597,368.00	\$6,454,702.00	0.24
CA	\$85,144,993.00	\$90,451,920.00	1.06
HI	\$16,258,182.00	\$8,455,536.00	0.52
NV	\$17,411,670.00	\$24,503,031.00	1.41

The ratios reported above represent cost share expenditures originally budgeted for a project. In many cases, the actual cost share expenditure is higher than the original contractual amount.

In the coming months, as new project contracts are executed, new project information will be entered into the database and Mandatory Errors addressed as soon as possible.

Please contact me should you have any questions concerning the above reporting.

## Appendix C: Project Updates

# Kingsbury GID Street Sweeping Operations

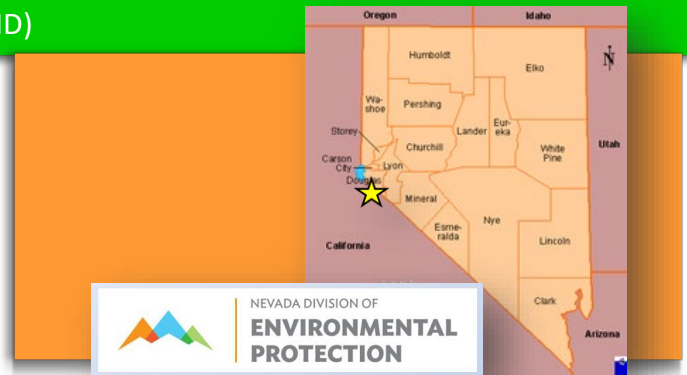
Kingsbury General Improvement District (GID)

## Project Partners:

Douglas County

## Project Location: ★

Lake Tahoe Basin, Nevada



## Project Goals:

- ✓ *Research, test, select and purchase an appropriate high performance sweeper*
- ✓ *Provide updated procedures and a sweeping schedule to Douglas County to update the Road Operations (ROP) associated with the KGID road registration*
- ✓ *Operate and maintain the new sweeper according to ROP protocols and procedures, and make appropriate protocol adjustments to optimize reduction of FSP in urban stormwater runoff to Lake Tahoe*
- ✓ *Provide support to Douglas County for the purposes of assessing and reporting sweeping activities and effectiveness*

## Project Summary:

Kingsbury General Improvement District (KGID) will purchase a high efficiency street sweeper for use on GID-maintained roads within its boundary. A high efficiency street sweeper is a mobile BMP (best management practice) used to remove sediment and other pollutants accumulated on roads. The effect is to reduce loadings of pollutants of concern in stormwater runoff and improve the clarity of Lake Tahoe.

## Project Progress

- ✓ *Sweeping activities during winter and spring of 2021 recovered 255 yds<sup>3</sup> of debris from 1049 miles of road.*

## Fiscal Summary:

319(h) funds	\$155,000
Non-federal match funds	<u>\$287,769</u>
Total Project Cost	\$442,769

## Project Status:

Ongoing



## Related Project Web-links

<https://stormwater.laketahoeinfo.org/RoadRegistration/Detail/3>

# Lower Wood Creek Phase I Water Quality Improvement Project

Washoe County Community Service

## **Project Partners:**

Nevada Division of State Lands  
Tahoe Regional Planning Agency  
Nevada Department of Transportation  
Incline Village General Improvement District  
Nevada Tahoe Conservation District  
Nichols Consulting Engineers

## **Project Location:**



Lake Tahoe Basin, Nevada



## **Project Goals:**

- ✓ *Implement the Lake Tahoe TMDL by planning, designing and constructing capital improvements that prevent stormwater pollution from entering the lake.*
- ✓ *Provide for public safety by designing a project that has no adverse effects on public safety.*

## **Project Summary:**

Lower Wood Creek contributes a relatively high fine sediment particle load from directly connected catchments to Lake Tahoe. Notable water quality concerns within the project area include unprotected and erodible road shoulders that experience heavy parking pressure; bare earth ditches that serve as the primary drainage conveyance; and Wood Creek culverts with limited ability to convey greater than the average annual creek flow. This project will address each of these concerns to reduce fine sediment particle loads in stormwater to Lower Wood Creek and improve infrastructure capacity to convey stormwater during high flow events.

## **Project Progress**

- ✓ *Project implementation started July 2021 with anticipated completion of date of October 2021*

## **Fiscal Summary:**

319(h) funds	\$200,000
Non-federal match funds	<u>\$undetermined</u>
Total Project Cost	\$2,707,000

## **Project Status:**

In progress

**Project Web-links:** <https://eip.laketahoeinfo.org/Project/FactSheet/01.01.01.0111>

# Reclaiming Tahoe's Lakebed: A SCUBA-enabled underwater litter clean up in Lake Tahoe

Clean Up The Cayes

## Project Partners:

Nevada Division of Environmental Protection  
Nevada Division of State Lands  
Desert Research Institute

## Project Location: ★

Lake Tahoe Basin, Nevada



## Project Goals:

- ✓ Recover litter from six one-mile sections of Nevada's Lake Tahoe's nearshore lakebed
- ✓ Assess the type, usage category, location, amount, and weight of all recovered litter

## Project Summary:

Clean up The Cayes and its dive partners will remove nearshore litter during six separate one-day cleanup dives. Each dive will cover approximately 1 mile of nearshore terrain enlisting between 6 to 8 divers and 3 surface support personnel. Project leaders will partake in each dive as the core, underwater logistics team, which includes scouting the nearshore lakebed and directing the dive team's efforts towards zones characterized by high litter accumulation. They will also geolocate large, heavy items for retrieval in a later clean up phase. The remaining divers will work in pairs to collect small to medium sized (e.g. items < 20 lbs.) litter in dive bags and employ a range of methodologies to bring collected litter to the surface for removal from the lake for subsequent analysis and reporting.

## Project Progress

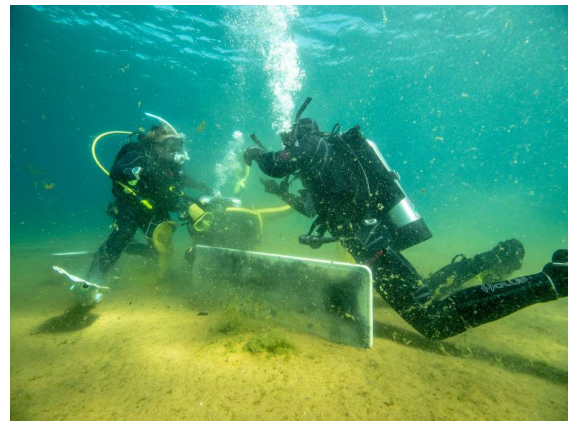
- ✓ 6 dives were successfully completed and documented
- ✓ 1,758 lbs. of litter were removed from over 7.1 miles of the nearshore during 2020
- ✓ Final report was submitted

## Fiscal Summary:

EPA funds	\$ 15,000
Non-federal match funds	\$ <u>49,717</u>
Total Project Cost	\$ 64,717

Project Status: Completed

Project Web-links: <https://cleanupthelake.org/>





# Washoe County Lake Clarity Crediting Program Implementation

Nevada Tahoe Conservation District

## **Project Partners:**

Washoe County  
Northwest Hydraulic Consultants

## **Project Location:** ★

Lake Tahoe Basin, Nevada



## **Project Goals:**

- ✓ Register Washoe County priority pollutant controls in the Stormwater Tools system on LT Info to meet NDEP Interlocal Agreement obligations.
- ✓ Conduct Pollutant Load Reduction Model (PLRM) modeling to estimate load reductions expected from implemented pollutant controls.
- ✓ Perform inspections to assess and report the condition of key and essential pollutant controls.

## **Project Summary:**

This is a continuation project to assist Washoe County to fulfill obligations and commitments contained in the Interlocal Agreement (ILA) to Implement the Lake Tahoe Total Maximum Daily Load (TMDL) with the Nevada Division of Environmental Protection (NDEP). The Nevada Tahoe Conservation District (NTCD) will work closely with Washoe County and NDEP to implement technical elements of the Lake Clarity Crediting Program and document attainment of load reduction milestones and associated credit targets contained in the ILA. Specifically, pollutant controls identified in the jurisdictions' load reduction plans will be registered and inspected using the updated suite of stormwater tools.

## **Project Progress**

- ✓ Since project inception, ten registrations have been registered within the Stormwater Tools for a total of 389 credits secured by end of water year 2020.
- ✓ Coordinated with Washoe County to update baseline loads for FSP, total nitrogen and total phosphorus for WY2020 Annual Stormwater Report and continue to assist with BMP and Road RAM inspections.

## **Fiscal Summary:**

	old contract	new contract (2/20)
319(h) funds	\$ 45,911	\$ 39,229
Non-federal match funds	\$ 75,911	\$ 56,617
Total Project Cost	\$121,822	\$ 92,846

## **Project Status:**

Ongoing

## **Project Web-links:**

<https://stormwater.laketahoeinfo.org/Registration/Index>



# TRPA Parcel BMP Assistance

Tahoe Regional Planning Agency

## Partners:

Washoe County  
Douglas County

## Project Location: ★

Lake Tahoe Basin, Nevada

## Project Goals:

- ✓ *Improve clarity of Lake Tahoe implementing parcel BMPs as pollutant controls.*
- ✓ *Reduce fine sediment load reaching Lake Tahoe from urban development.*
- ✓ *Track parcel BMP implementation and maintenance to assess ongoing load reduction.*

## Project Summary:

TRPA and NDEP coordinate to achieve co-objectives of the TRPA Environmental Improvement Program and NDEP's Lake Tahoe TMDL. The TRPA Parcel BMP Program and Lake Clarity Crediting Program focus on reducing clarity-diminishing urban stormwater and pollutant loads. TRPA estimates 3,770 Nevada parcels do not have BMP certificates and 8,222 do. Maintenance outreach is needed on higher loading land use parcels. The grant partly supports the Stormwater Management Program (SMP) which facilitates installation and maintenance of parcel BMPs. The SMP provides BMP planning, design, permitting, and maintenance guidance and water quality information to hundreds of residents and visitors. TRPA focuses BMP implementation in County-identified fine sediment reduction priority areas and provides parcel level BMP status data used to estimate pollutant load reductions for the TMDL.

## Project Progress

- ✓ TRPA reissued **142 BMP Certificates** (two of which were source control certificates and two were part of an area-wide treatment project) for Nevada Tahoe properties and notified 40 parcels of the need BMP maintenance.
- ✓ Current total pollutant load reductions since the start of the project are 3,854 tons per year of TSS, 79 tons per year of total nitrogen, and 23 tons per year of total phosphorus.

## Fiscal Summary:

319(h) funds	\$184,502
Non-federal match funds	<u>\$184,503</u>
Total Project funds	\$369,005

## Project Status:

Closed

## Related Project Web-links

<http://www.tahoebmp.org/bmpresources.aspx>





# To Sink or Swim: A Snapshot on the Fate and Transport of Plastics in Lake Tahoe

UC Davis Tahoe Environmental Research Center

## **Project Partners:**

Tahoe Water Suppliers' Association

## **Project Location:** ★

Lake Tahoe Basin, Nevada

## **Project Goals:**

- ✓ Determine the concentration and composition of microplastic particles in pelagic water and deep-water sediment
- ✓ Determine if microplastic particles are accumulating in filter feeding organisms and higher trophic levels
- ✓ Determine whether microplastic particles found in source water are also present in municipal waters



## **Project Summary:**

This project is designed to provide a snapshot of the distribution of microplastic particles across representative environmental and biological matrices in Lake Tahoe. The horizontal and vertical distribution of microplastics in Tahoe's pelagic waters, and in a municipal water supply derived from the lake, will be characterized over a 12-month period to capture spatial and temporal variability in microplastic concentrations in lake water. Deep water sediment samples will be collected to determine if microplastics are depositing to the lakebed. Asian clams will be assayed to determine if microplastics are entering the food web through filter feeding organisms. Kokanee salmon will be assayed to determine if microplastics are accumulating up the food chain.

## **Project Progress**

- ✓ 11 of the 12 monthly horizontal trawl sampling events and 3 of the 4 quarterly vertical water sampling events were conducted. Remaining sampling events anticipated to be completed in August 2021.
- ✓ 1 Municipal Water sampling event was completed and 3 additional will be collected by Dec 2021.
- ✓ Asian clam and Kokanee sampling was postponed because of lab closure, however sampling is scheduled for August- September 2021.

## **Fiscal Summary:**

319(h) funds	\$25,000
Non-federal match funds	<u>\$13,640</u>
Total Project Cost	\$38,640

## **Project Status:**

In progress

**Project Web-links:** <https://tahoe.ucdavis.edu/microplastics>



# Pilot Project to Reduce Sourcewater Plastic Pollution at Lake Tahoe

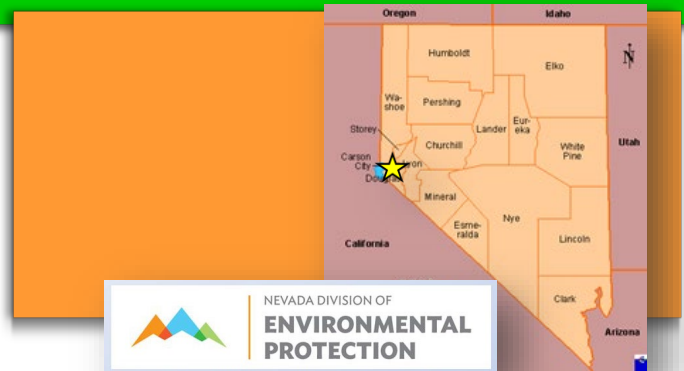
Incline Village GID

## Project Partners:

Tahoe Water Suppliers Association  
UC Davis TERC  
Sierra Watershed Education Partnerships  
Incline High School

## Project Location: ★

Lake Tahoe Basin, Nevada



## Project Goals:

- ✓ *Raise public awareness of plastic pollution in the environment and the impacts of consumer choices*
- ✓ *Reduce the presence of plastic in Lake Tahoe and on beaches through reduction of single-use plastics*

## Project Summary:

The presence of microplastics in Lake Tahoe's waters and on its beaches has been confirmed. With no commercial fishing, shipping, or wastewater discharges permitted to Lake Tahoe, conventional sources of microplastic in the lake are presumed to be litter from single-use items improperly disposed of in and around the lake. This project seeks to provide a solution to plastic pollution stemming from single use plastics through a through a multifaceted behavioral-change approach involving market and scientific research, public outreach and education, and local business partnerships.

## Project Progress

- ✓ *Local High School students partnered with Incline Village Raley's to further sustainability measures and reduce plastics in their stores.*
- ✓ *Klean Kanteen bottles will be sold in additional stores, up to 80 in the Northern California region. 11,000 custom bottle roll-outed in June 2021.*
- ✓ *The TERC microplastics exhibit was finalized and installed at the UC Davis Tahoe Science Center in Incline Village. The facility was under Covid-19 restrictions, however did open to the public in June 2021.*

## Fiscal Summary:

319(h) funds	\$ 61,995
Non-federal match funds	\$ 78,200
Total Project Cost	\$140,195

**Project Status:** In progress

**Project Web-links:** <https://takecaretahoe.org/drink-tahoe-tap/>



# Carson River Watershed Environmental Education Program

River Wranglers

DEP S 20-014

## **Project Partners:**

Carson Water Subconservancy District  
Carson Valley Conservation District  
Dayton Valley Conservation District

## **Project Location:**



Carson River Watershed:  
Douglas, Lyon, Storey, Churchill County,  
Carson City County and Alpine County, CA



**Project Goals:** *Maintain partnerships with local schools and offer opportunities for increased knowledge and understanding of nonpoint source pollution (NPSP) on a watershed basis by fulfilling the following tasks:*

*Inform students and educators, clubs and service groups about watershed concepts, with the message that what they do on land affects the health of local streams and water bodies.*

- ✓ *Provide the materials and knowledge to integrate EE programs into school curriculums, and club and service groups' ethos and culture.*
- ✓ *Conduct workshops, training sessions, and field days in the Carson River watershed.*
- ✓ *Facilitate a change in "citizen" behavior by informing participants how their personal habits and lifestyles impact their environment.*

## **Project Summary:**

The Environmental Education Program introduces, promotes, and sustains an environmental education focus on NPSP prevention for local schools, clubs and service groups within the Watershed. The program recognizes that youth and children are our future leaders and policy makers, and are proven and effective messengers to older age groups (Lisboa 2001). Additionally, River Wranglers' core environmental education model engages high school student mentors to teach younger students environmental stewardship of our riparian areas.

## **Project Outcomes to Date:**

- ✓ *Provided education to numerous schools, clubs and service groups throughout the watershed.*
- ✓ *Held Snapshot Day on the Carson River with over 300 students.*
- ✓ *Developed/updated Logic Model for River Wranglers.*
- ✓ *Pre- and post-tests administered.*

## **Fiscal Summary:**

319(h) grant award \$114,373.78

Non-federal match generated \$121,589.76

**Related Project Weblinks:** <http://www.riverwranglers.org/>  
<https://www.facebook.com/riverwranglersnv/>

**Project Status:** In progress, contract terminates 12/31/21.



*Learning about macroinvertebrates*

# Westwood Neighborhood and Douglas High School NPS Outreach and LID/BMP Implementation Project

Douglas County Stormwater Management

DEP S #21-033

## **Project Partners:**

Carson Water Subconservancy District  
River Wranglers  
Douglas County High School

## **Project Location:**



Carson River Watershed: Douglas County



## **Project Goals:**

- ✓ create a grounds management plan for Douglas High School that reduces erosion off fields and nutrients entering the storm drain.
- ✓ Plan, coordinate and develop an education, design, and maintenance plan for a High School low impact development/pre-treatment pilot project
- ✓ Conduct a non-point source and conservation landscaping neighborhood workshop.
- ✓ Reduce NPS pollution from lawns in the Westwood neighborhood into the East Fork Carson River

## **Project Summary:**

Douglas County, with partner support, will conduct a NPS stormwater management outreach and implementation project focusing on low impact development (LID) practices and fertilizer use management with area residents and Douglas High School students and staff. Educational outreach will be targeted to the Westwood neighborhood residents to improve NPS issues related to potential nutrient loading from lawn runoff into the East Fork Carson River. Efforts will result in awareness about water quality issues at the neighborhood scale and may result in improving localized water quality adjacent to the neighborhood. LID and BMP's will be implemented in the Westwood neighborhood and at the Douglas High School fields.

## **Project Outcomes to Date:**

- ✓ Planning with Douglas County HS has begun to implement BMPS on the grounds and storm drain maintenance
- ✓ The neighborhood NPS educational workshop took place on July 14th, 2021.

## **Fiscal Summary:**

319(h) grant award	\$28,776.00
Non-federal match generated	\$32,657.00

**Project Status:** In progress, contract terminates 6/30/2023

# Carson River Watershed Environmental Education Program

*River Wranglers*

DEP S 20-014

## **Project Partners:**

Carson Water Subconservancy District  
Carson Valley Conservation District  
Dayton Valley Conservation District

## **Project Location:**



*Carson River Watershed:*  
*Douglas, Lyon, Storey, Churchill County,*  
*Carson City County and Alpine County, CA*



**Project Goals:** *Maintain partnerships with local schools and offer opportunities for increased knowledge and understanding of nonpoint source pollution (NPSP) on a watershed basis by fulfilling the following tasks:*

*Inform students and educators, clubs and service groups about watershed concepts, with the message that what they do on land affects the health of local streams and water bodies.*

- ✓ *Provide the materials and knowledge to integrate EE programs into school curriculums, and club and service groups' ethos and culture.*
- ✓ *Conduct workshops, training sessions, and field days in the Carson River watershed.*
- ✓ *Facilitate a change in "citizen" behavior by informing participants how their personal habits and lifestyles impact their environment.*

## **Project Summary:**

The Environmental Education Program introduces, promotes, and sustains an environmental education focus on NPSP prevention for local schools, clubs and service groups within the Watershed. The program recognizes that youth and children are our future leaders and policy makers, and are proven and effective messengers to older age groups (Lisboa 2001). Additionally, River Wranglers' core environmental education model engages high school student mentors to teach younger students environmental stewardship of our riparian areas.

## **Project Outcomes to Date:**

- ✓ *Provided education to numerous schools, club and service groups throughout the watershed.*
- ✓ *Held Snapshot Day on the Carson River with over 300 students.*
- ✓ *Developed/updated Logic Model for River Wranglers.*
- ✓ *Pre- and post-tests administered.*

## **Fiscal Summary:**

319(h) grant award \$114,373.78

Non-federal match generated \$118,378.03

**Related Project Weblinks:** <http://www.riverwranglers.org/>  
<https://www.facebook.com/riverwranglersnv/>

**Project Status:** In progress, contract terminates 6/21



*Learning about macroinvertebrates*



# Valuing and Protecting our Tahoe Watershed

Great Basin Outdoor School

DEP 21-007

## Project Partners:

Tahoe Environmental Research Center  
Galilee Camp and Conference Center  
Marine Research and Education, Inc.  
Nevada Fish & Wildlife, and more

## Project Location:



State-wide

Primarily Lake Tahoe, Truckee  
and Carson River Watershed

STATEWIDE



NEVADA DIVISION OF  
**ENVIRONMENTAL  
PROTECTION**



## Project Goals:

- ✓ Promote critical thinking about local environmental issues including water quality.
- ✓ Promote personal responsibility for improving and protecting the environment.
- ✓ Increase awareness of point and nonpoint source pollution.
- ✓ Promote student academic achievement and support curriculum standards.
- ✓ Promote interpersonal relationship and social skills and community involvement.

## Project Summary:

This program offers youth and adults an opportunity to learn as they participate in a four-day residential camp with field studies that build academic and social skills and develops understanding of the natural world. Fifth and sixth grade classes, high school and college students, and teachers study local ecology with standards-based lessons at Camp Galilee, Lake Tahoe during spring, fall, and winter programs. Service-learning projects and place-based education help to instill and develop a commitment to sustainability and a connection to the earth.

## Project Outcomes:

- ✓ Hosted the annual Project WET Teacher Training at the River School Farm
- ✓ Spring and Summer break Adventure day camps were held where students learn about the Tahoe Watershed
- ✓ Truckee River Snapshot Days was conducted with St. Teresa School
- ✓ Education staff trained in preparation for Adventure Summer camp

319(h) grant award \$ 76,209.00  
319(h) carry forward \$18,360.00  
Non-federal match generated \$132,489.00  
Related Project Weblinks: <http://www.greatbasin-os.org/>

## Project Status:

In progress at 50% completion, 12/31 termination



Day camp students audit litter collected beside the river and learn about their watershed, Snapshot Day volunteers sample Truckee tributaries, students observe aquatic macroinvertebrates, and teachers learn Project WET activities to take back to their classrooms.



# Genoa West Fork Carson River Bank Stabilization Phase 1

Carson Valley Conservation District (CVCD) DEP S 20-062

## **Project Partners:**

Carson Water Subconservancy District  
Multiple stakeholders

## **Project Location:**

Carson River Watershed, Douglas County

## **Project Goals:**

- ✓ Perform geomorphological study of reach of Carson from Genoa Lane to Washoe Tribal Property
- ✓ Determine best sites to perform bank stabilization on and prioritize
- ✓ Design and implement highest priority restoration project
- ✓ Utilize drone data to monitor and track success
- ✓ Mitigate erosion, enhance wildlife habitat and improve water quality

## **Project Summary:**

Execute geomorphology study and locate and prioritize restoration projects for reach of West Fork Carson River. Restore vertical cutbanks approximately ¾ mile long and 12-15 feet high. Combine hard structure (riprap) with bioengineering techniques to stabilize the soil, improve water quality and re-establish desirable vegetation for wildlife.

## **Project Outcomes:**

- ✓ Seven projects prioritized along the reach for implementation
- ✓ Geomorphological study draft completed
- ✓ Phase 1 project completed: 3,415 feet of streambank stabilized, 1,350 feet of juniper revetments installed, 7,040 willows planted, willow mats and fascines installed
- ✓ Drones were utilized to fly the reach for pre- and post- project data collection
- ✓ Load reductions will be reported in SFY 22 using Region 5 model and drone data

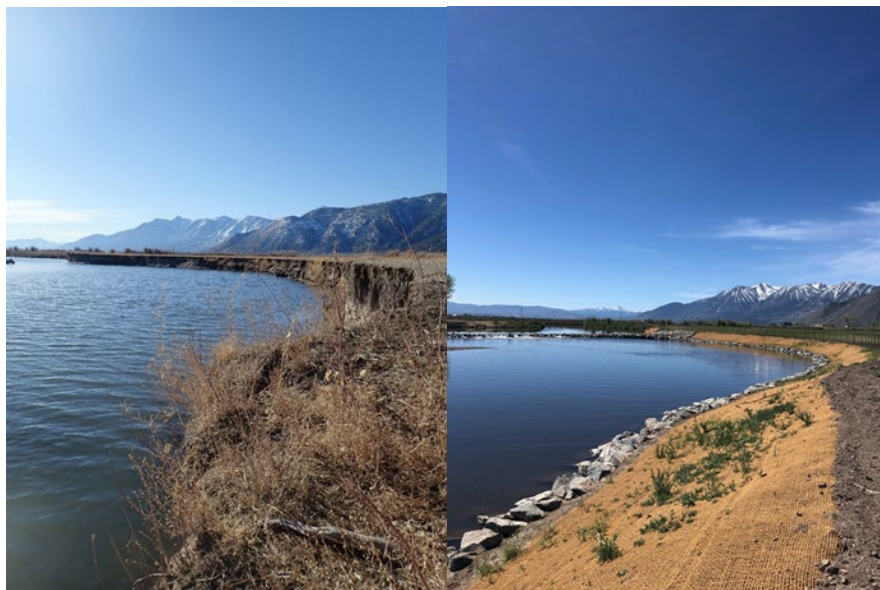
## **Fiscal Summary:**

319(h) grant award	\$ 100,000.00
319(h) funds expended to date	\$ 99,999.82
Non-federal match	\$ 340,439.83*

\*amount of match reduced due to loss of Division of Water Resources funds

**Project Status:** Initiated 4/28/20. Subgrant closed early upon completion 6/30/21.

Pictures depict site "Charney #2 midstream looking up" on 12/18/20 (before) and 5/14/21 (after) This is one site of many.



# Watershed Coordination Program

Carson Water Subconservancy District (CWSD) DEPS 20-058

## Project Partners:

Alpine Watershed Group, Carson City, Churchill, Douglas, Lyon and Storey Counties, Lahontan Regional Water Quality Control Board, River Wranglers, NRCS, Conservation Districts in Carson Watershed, other stakeholders

## Project Location:

Entire Carson River Watershed

## Project Goals:

- ✓ Implement the Carson River Watershed Adaptive Stewardship Plan and Regional Floodplain Management Plan
- ✓ Regional coordination of projects and programs that protect water quality and improve riparian areas
- ✓ Regional coordination to implement land use practices that protect the river system
- ✓ Continue to develop and implement Watershed Literacy Plan, including the "I am Carson River Watershed Campaign"

## Project Summary:

CWSD is charged by the Nevada Legislature to coordinate an integrated approach to watershed management, and was appointed by the Governor as the 208 Water Quality Planning entity for the Carson Basin. The Integrated Watershed Planning Process (IWPP) actively brings together diverse public and private parties that have a vested interest in the health of the Watershed. The Carson River Coalition (CRC) was formed in 1998 to address Watershed issues on an integrated, coordinated basis and to serve as the steering committee for the IWPP. The CWSD and the CRC developed a Stewardship Plan that meets EPA's nine required elements of a watershed-based plan. The Program will continue to work with stakeholders to implement this plan and to track and assist with the progress of projects identified in the plan.

## Project Outcomes:

- ✓ Coordinated with stakeholders implementing river rehabilitation and stabilization projects along the Carson River.
- ✓ Implemented Carson River Watershed Stewardship Plan and Regional Floodplain Management Plan.
- ✓ Worked with Carson City Douglas County to develop LID ordinance. Carson City approved their ordinance in Spring 2021 and Douglas County is working toward adoption.
- ✓ Implemented and continued to develop comprehensive Watershed Literacy Plan through multiple delivery mechanisms.
- ✓ Coordinate with stakeholders to develop Created a Recreation and Agricultural Working Group within the Carson River Coalition to increase breadth and reach of outreach.
- ✓ Delivered a highly attended virtual Carson River annual event called "Watershed Wednesdays," with professionals presenting across multiple topics and expertise. Presentations are still available on Carson River Watershed (CRW) Youtube at [https://www.youtube.com/channel/UC7gdKmh76lPiV\\_sgf1G-0nQ](https://www.youtube.com/channel/UC7gdKmh76lPiV_sgf1G-0nQ).
- ✓ Developed and rolled out new video called "Water Connects Us All," which is available at <https://www.cwsd.org/whats-happening/>.
- ✓ Coordinated and conducted Water Model training (Enviroscape, flood and groundwater models) for teachers, resource partners and citizen volunteers.
- ✓ Finalized 10 minute version of Working With the Carson River – Geomorphology 101 video at <https://www.youtube.com/watch?v=ItdlYDnJfSU&t=7s>.
- ✓ Coordinated with Carson River Coalition (CRC) Floodplain Management, Education and Outreach and Invasive Species Working Groups to implement integrated watershed management and water quality objectives.

## Fiscal Summary:

319(h) grant award	\$237,000.00
319(h) funds expended to date	\$137,594.41
Non-federal match generated	\$254,664.57

## Project Status:

In progress. Subgrant terms 12/31/21. Will likely be extended.

I am Carson River Watershed logo and flyer for "Watershed Wednesdays" virtual events





# Project WET and Discover a Watershed Development Workshops

Get Outdoors Nevada

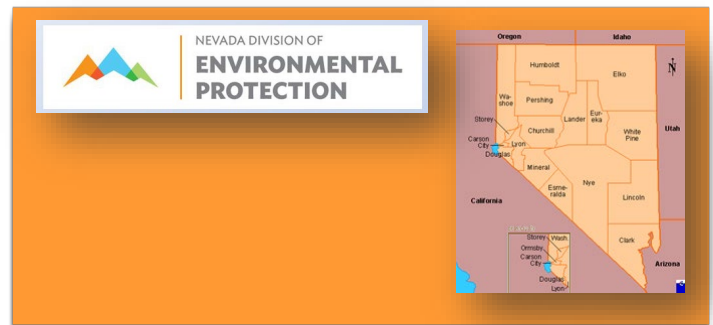
#20-028

## **Project Partners:**

National Park Service  
Bureau of Reclamation

## **Project Location:**

*Southern Nevada: Las Vegas Wash*



## **Project Goals:**

- ✓ *Provide Project WET and Discover a Watershed professional workshops to southern Nevada teachers*
- ✓ *Teachers will then be equipped to demonstrate principles of Nevada's water resources to students*

## **Project Summary:**

Get Outdoors Nevada will provide professional development education to Southern Nevada teachers through hands-on activities utilizing Project WET and Discover a Watershed.

## **Project Outcomes:**

- Significantly revised trainings to a virtual format online.
- Delivered water education workshops for 50 teachers in the Clark County School District who received professional development credits.
- Eight Project WET workshops and six Discover-a-watershed workshops were delivered virtually.
- Provided support to teachers with resources and expertise related to water education so they may in turn educate their students.

## **Fiscal Summary:**

319(h) funds	\$18,084.00
319(h) expended	\$18,084.00
Nonfederal match	\$18,547.00

Related Project Weblinks: [www.getoutdoorsnevada.org](http://www.getoutdoorsnevada.org)

## **Project Status:**

Subgrant expired 6/30/21



# Watershed Education Initiative

Sierra Nevada Journeys (SNJ)

DEP S #21-024

## Project Partners:

Washoe County School District  
Nevada Department of Wildlife  
The Nature Conservancy  
Project Learning Tree  
Truckee River Fund  
Nevada Division of Forestry  
Carson Water Subconservancy District

## Project Location:

Northern Nevada: Truckee and Carson Watersheds

## Project Goals:

- ✓ Provide engaging watershed education programs to 4,493 K-8<sup>th</sup> grade students and 166 educators
- ✓ Increase students' sense of stewardship and help reduce nonpoint source pollution

## Project Summary:

Sierra Nevada Journeys continues to successfully implement the Watershed Education Initiative through virtual programming. The Initiative inspired students to learn about their local watersheds and non-point source pollution and empowered them to take care of their local water sources. In this reporting period, **913 students and 32 educators** participated in the Watershed Education Initiative. Using the SNJ in-person, virtual and field-based model, the Watershed Education Initiative curriculum included lessons on watersheds, non-point source water pollution, water quality, the water cycle, riparian ecosystems and habitats, living systems, weathering and erosion within the watershed, and renewable/non-renewable resources. The curriculum is aligned to Nevada educational standards and the North American Association for Environmental Education's Guidelines for Excellence, as well as Next Generation Science Standards and Common Core State Standards.

## Project Outcomes:

- 913 students and 32 educators participated in spring 2021
- Live virtual and in-person programming provided to school districts in Washoe, Douglas, and Lyon Counties
- Elementary schools from Carson, Douglas, Lyon, Storey, and Washoe County School Districts were recipients of e-blasts, with teachers from these counties participating: Carson City, Churchill, Douglas, Elko, Lyon, Washoe, and White Pine
- To overcome COVID-19 challenges, virtual STEM Classrooms were developed to replicate the Classrooms Unleashed program for online use by teachers so that they can implement STEM lessons for at-home students and hybrid learning students.



## Fiscal Summary:

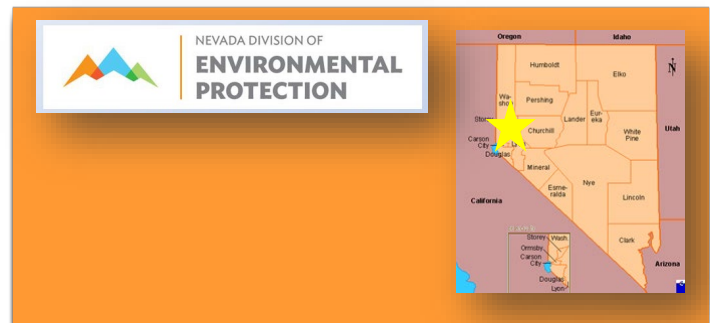
319(h) funds  
Non-federal match funds

\$70,000.00  
\$70,000.00

Related Project Weblinks:  
[www.sierranevadajourneys.org](http://www.sierranevadajourneys.org)

## Project Status:

Subgrant effective 2/9/2021 - 12/31/2022



# Building Spatial Awareness of NPS Pollution in the Truckee Meadows

Truckee Meadows Regional Planning Agency

#19-030

## Project Partners:

TMRPA  
Western Regional Water Commission  
Washoe County  
Cities of Reno and Sparks  
Truckee Meadows Water Authority  
One Truckee River, other stakeholders

## Project Location:

*Truckee Meadows in Washoe County*

## Project Goals:

- ✓ *Create and maintain a geospatially-enabled data manipulation tool designed to enhance awareness of factors contributing to nonpoint source pollution in the Truckee Meadows, specifically looking at the existing and future land use development.*
- ✓ *This online GIS-based tool will be utilized to inform development of the Watershed Management Plan and the larger Source Water/Watershed Protection Planning effort.*

## Project Summary:

TMRPA will build and maintain GIS data related to water planning in the Truckee Meadows. The tool will assist local planning staff in decision-making by providing a reliable set of data and tools which describe potential for NPS pollution to the water supply and surface waters. The tool is found at [washoecountycleanwater.org](http://washoecountycleanwater.org) and the NPS component paid for is part of a much larger effort: the 2020 Integrated Source Water and 319(h) Watershed Protection Plan for Public Water Systems and the Truckee River in the Truckee Meadows..

## Project Outcomes:

- Created GIS database tool to support analytics of water-related issues.
- Gathered relevant data to add to GIS layers germane to land use, NPS and source water issues.
- Collaborated with stakeholders to ensure their needs are being met by data sets.
- Maintained and updated online tool.
- Took on responsibility to house and maintain online tool in perpetuity as [washoecountycleanwater.org](http://washoecountycleanwater.org) as approved by TMRPA's Boards.

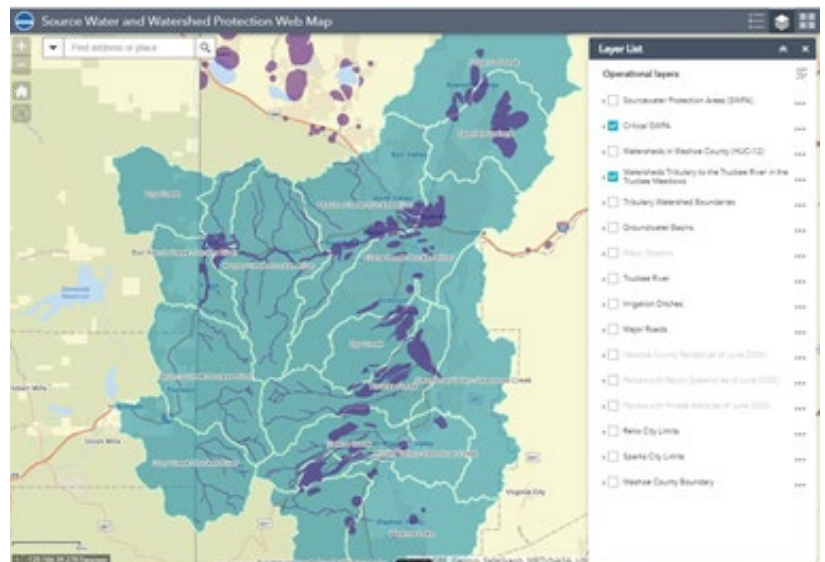
## Fiscal Summary:

319(h) funds	\$25,002.00
319(h) expended	\$10,224.00
Nonfederal match	\$0.00

**Project Status:** Subgrant terms 6/30/22



Related Project Weblinks: [washoecountycleanwater.org](http://washoecountycleanwater.org)



# River Fork Ranch Bank Restoration

The Nature Conservancy (TNC)

DEP S #20-064

## Project Partners:

Patagonia  
Ranch One  
Carson Water Subconservancy District  
Harley-Davidson Financial Services  
Washoe Tribe of Nevada and California  
River Wranglers

## Project Location:

Carson River Watershed, Douglas County

## Project Goals:

- ✓ Implement native vegetation establishment and bioengineering techniques to reduce streambank erosion along the Brockliss Slough and West Fork of the Carson River.
- ✓ Reduce sediment, filter nutrients, such as nitrogen and phosphorus, and minimize soil erosion on the banks and bed of the Carson River.

## Project Summary:

Streambank stabilization/bioengineering utilizing willow cuttings, coir logs, and erosion cloth was installed along approximately 700 linear feet of the Brockliss Slough and 300 linear feet of the Home Slough which connects to the West Fork of the Carson River. Approximately 1,028 feet of fencing was also installed along the Home Slough areas adjacent to the bank bioengineering. Approximately 750 cottonwood trees were harvested and planted along the Brockliss Slough and West Fork Carson River. Volunteer events engaged 35 individuals, during which groups helped plant 2,000 native bareroot shrubs and applied mulch around the plantings.

## Project Outcomes:

- ✓ Implemented cost-effective streambank stabilization techniques using native willows, trees, and shrubs to enhance riparian habitat, mitigate severe erosion, restore geomorphic form and function, and improve water quality.
- ✓ TNC showcased different planting techniques and restoration efforts to landowners, ranchers, land managers, the local community, and visitors to the Carson Valley.
- ✓ TNC hosted and coordinated four volunteer events (as COVID-19 precautions allowed) to educate community participants on nonpoint source pollution and ways streambank stabilization can improve water quality. Volunteers assisted with planting native willows, cottonwood trees, and shrubs to help reduce soil erosion and minimize impacts of local nonpoint source pollution.
- ✓ Photo monitoring and documentation of different planting techniques were collected twice per year.



Trees planted near West Fork Carson River.

## Fiscal Summary:

319(h) grant award	\$ 30,451.00
319(h) funds expended to date	\$ 25,846.89
Non-federal match	\$ 49,197.00

**Project Status:** Additional willow planting, photo monitoring, and grant administration will continue. Subgrant effective 2/24/2020 - 12/31/2022.



# Truckee Meadows Nature Study Area, Phase I

Truckee Meadows Parks Foundation

#20-029

## **Project Partners:**

City of Reno Parks

Community Foundation of Western Nevada

## **Project Location:**

Northern Nevada: Truckee Watershed

## **Project Goals:**

- ✓ Restore TMNSA to wetland, riparian and natural upland system
- ✓ Create educational and recreational activities in a natural ecology with a learning outdoor laboratory

## **Project Summary:**

During phase 1, restoration activities removed undesirable invasive species while concurrently revegetating with native plant species. Access for educational and recreational purposes were improved. Educational events and volunteer activities were held.

## **Project Outcomes:**

- 12,000 linear feet of river corridor was revegetated with native species.
- 40 acres of habitat was restored.
- Interpretive signage was installed.
- 500 community members were reached through events.

## **Fiscal Summary:**

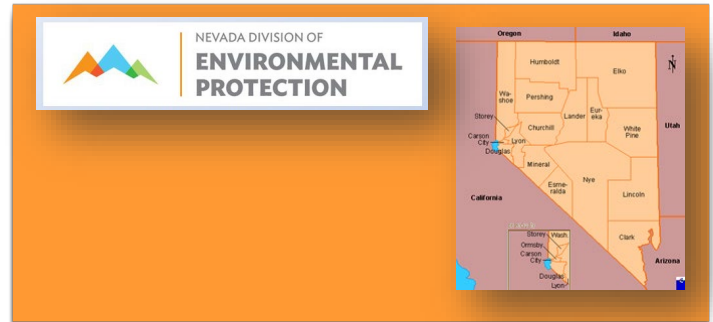
Related Project Weblinks: [www.tmparksfoundation.org/rosewood-project-overview](http://www.tmparksfoundation.org/rosewood-project-overview)

319(h) funds expended \$30,000.00

Nonfederal match to date \$179,316.05

## **Project Status:**

Subgrant expired 12/31/20



# Clark County NPS Pollution Prevention Education Program, 2020

Clark County Water Reclamation District

## Project Partners:

Las Vegas Wash Coordination Committee

## Project Location: ★

Colorado River Region

Las Vegas Wash, Clark County



## Project Goals:

- ✓ Provide educational awareness to citizens of Clark County about NPS Pollution
- ✓ To encourage behavioral change
- ✓ To provide information about stormwater management to residents and business owners

## Project Summary:

This project continues previously NPS grant funded efforts to educate residents and business owners about NPS Pollution and stormwater management. It includes further development and implementation of presentations, workshops, educational material, and advertising material that builds on the "Only Rain in the Storm Drain" message.

## Project Outcomes to Date:

- ✓ Outreach workshops and presentations to be scheduled
- ✓ Placement of additional Outreach Kiosks demonstrating stormwater management methods for various land uses.
- ✓ Purchase of "Only Rain in the Storm Drain" Take-Home items to be distributed during workshops and presentations
- ✓ Translation of Nonpoint Source Pollution information pamphlets from English to Spanish
- ✓ Use of digital billboard advertising to reach diverse audiences
- ✓ Publication of a Kids Stormwater Workbook

## Fiscal Summary:

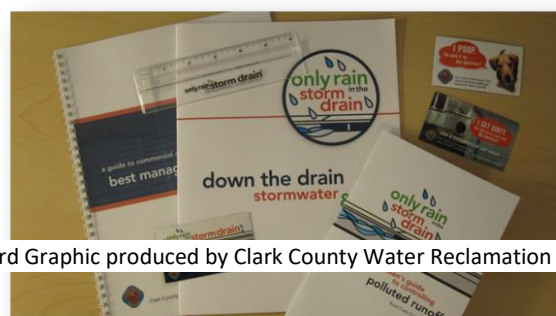
319(h) funds	\$47,000.00
Non-federal match funds	\$47,000.00
Total Project Cost	\$94,000.00

Related Project Weblinks:

<https://www.cleanwaterteam.com/Pages/default.aspx>

## Project Status:

Started



BMP Manuals, NPS Outreach Materials and Billboard Graphic produced by Clark County Water Reclamation District.

# Initiatives to Reduce NPS Pollution in Southern Nevada, 2020

Southern Nevada Water Authority

## **Project Partners:**

Clark County Flood Control District

## **Project Location:** ★

Colorado River Region

Las Vegas Wash, Clark County

## **Project Goals:**

- ✓ *Reduce sediment and nutrient loadings to the Las Vegas Wash*
- ✓ *Improve floodplain habitat*
- ✓ *Increased knowledge about nonpoint source pollution*



## **Project Summary:**

This project continues previously NPS grant funded efforts to implement objectives of the Las Vegas Wash Comprehensive Adaptive Management Plan which includes revegetation, erosion control, water quality improvement and public education and outreach efforts. Replacing invasive weeds with native vegetation on the wash's floodplain is a major component of this project. The project includes magnet school field trips, including virtual field trips utilizing SNWA produced videos in the event pandemic impacts prevent in-person learning.

## **Project Outcomes:**

- ✓ *Up to 20 acres to be planted with 15,000+ native trees and shrubs over two events.*
- ✓ *300-600 volunteers are expected to participate in each Green-Up Event.*
- ✓ *Thousands of Clark County School District students receiving Nonpoint Source Pollution curriculum through Virtual Learning.*

## **Fiscal Summary:**

319(h) funds	\$67,500.00
Non-federal match funds	<u>\$74,500.00</u>
Total Project Cost	\$142,000.00

Related Project Weblinks:

<https://www.snwa.com/>

## **Project Status:**

Started



A Mabel Hoggard Magnet School student tests the pH level of a water sample. Photo Credit: SNWA

## Virgin River Coalition Watershed Coordination

*The Nature Conservancy*

### **Project Partners:**

City of Mesquite  
River's Edge West  
Kokapelli ATV Club  
Nevada Division of Wildlife  
Deborah Campbell & Associates

### **Project Location:** ★

Lower Virgin River Watershed  
Lower Virgin River, Clark County



### **Project Goals:**

- ✓ Enhance coordination between the Virgin River Coalition, Agricultural Users, and Local Municipalities to address NPS pollution in the Lower Virgin River
- ✓ Increase coordination capacity of the Virgin River Coalition to develop proposals and implement projects that support the Coalition's mission
- ✓ Maximize community awareness of Lower Virgin River resources and challenges

### **Project Summary:**

Through the hiring of a local Watershed Coordinator, this project aims to increase coordination, collaboration, and implementation of efforts identified in the Lower Virgin River Integrated Watershed Plan that will improve the human benefits and ecological health of the Virgin River for future generations of residents, businesses, recreational users, farmers, and ranchers.

### **Project Outcomes:**

- ✓ Organization of at least two educational community events
- ✓ Coordination of at least two volunteer events that improve conditions of the Lower Virgin River
- ✓ Logistical support and planning for at least two Virgin River Coalition Workshops



### **Fiscal Summary:**

319(h) funds	\$41,625.00
Non-federal match funds	<u>\$41,625.00</u>
Total Project Cost	\$83,250.00

Related Project Weblinks:  
[TNC - Nevada Chapter](#)

### **Project Status:**

Started





# Genoa West Fork Carson River Bank Stabilization Phase 2

Carson Valley Conservation District (CVCD) DEP S 21-027

## **Project Partners:**

Carson Water Subconservancy District

## **Project Location:**

Carson River Watershed, Douglas County

## **Project Goals:**

- ✓ Complete geomorphological study of reach from Carson to Genoa Lane to Washoe Tribal Property
- ✓ Develop final complete engineer plans
- ✓ Implement highest priority restoration project
- ✓ Utilize drone data to monitor and track success
- ✓ Mitigate erosion, enhance wildlife habitat and improve water quality

## **Project Summary:**

The Carson Valley Conservation District will restore vertical cutbanks on the West Fork of the Carson River in Genoa that are approximately 1 and  $\frac{3}{4}$  of a mile long and 12 to 15 feet high. The overall goal of the project is to use a combination of traditional rip-rap and bioengineering techniques to stabilize the soil, improve water quality and re-establish desirable vegetation for wildlife

## **Project Outcomes:**

- ✓ Stabilize and revegetate up to one mile reach of West Fork Carson River
- ✓ Implement restoration projects in Phases
- ✓ Improve water quality and wildlife habitat, and restore riparian function of the reach
- ✓ Outreach to landowners along the Carson River and develop more partnerships within the watershed and identify potential restoration sites for future projects.

## **Fiscal Summary:**

319(h) grant award	\$ 150,000.00
319(h) funds expended to date	
Non-federal match	\$ 275,000.00

**Project Status:** Initiated 3/30/21. Subgrant expires 6/30/2023



Upper Carson River Charney Ranch, Site #2B. Proposed restoration location. Up Stream Looking Down.

# Watershed Management Plan for the Truckee River and Support for One Truckee River Restroom Project

Nevada Land Trust

DEP #20-063

## Project Partners:

Truckee River Fund, One Truckee River, Keep Truckee Meadows Beautiful  
City of Reno, Western Regional Water Commission, City of Sparks  
Washoe County, Truckee Meadows Water Authority, Truckee Meadows Regional Planning Agency, Renown Health

## Project Location:

Truckee River Watershed in Washoe County

## Project Goals:

- Complete the Watershed Management Plan portion of the One Truckee River (OTR) Management Plan through the activities of a Watershed Coordinator and a Technical Assistance Subcontractor in coordination with City of Reno Public Works.
- Fund a "River Ambassador" position to conduct adult outreach activities and monitoring to support the One Truckee River Restroom Project.
- Address the impacts to water quality from homeless encampments along the Reno-Sparks urban river corridor.

## Project Summary:

This project supports the final conclusion of coordinating the Watershed Management Plan and integration of that plan into the larger Source Water/Watershed planning effort, which is a component of the OTR Plan, and supports the existing TMDL (1994) and the goal of collaboration to achieve water quality improvements. The Project Area includes the Truckee River watershed in Washoe County. The **Watershed Coordinator** and **Technical Assistance Subcontractor** will coordinate closely with NDEP and identified stakeholders to complete portions of the Watershed Management Plan that are coordinated, consistent with and complimentary to the Source Water/Watershed planning process. The plan is developed and is going to local, state and EPA for approval. Lastly, the project will support the development of the River Restroom Project listed under Strategy 1.3.c of the plan.

## Project Outcomes:

- *Completion of the 9 Element Watershed Management Plan*
- *Local and EPA Approval*
- *River Ambassador Outreach and Education*
- *Installation Portland Loo at William Brodhead Memorial Park*
- *Development and coordination of a vegetation management plan*

## Fiscal Summary:

#20-063

319(h) funds	\$99,875.00
Non-federal match generated	\$99,998.00

Related Project Weblinks: [onetruckeeriver.org](http://onetruckeeriver.org)

Project Status: In progress. Contract expirations 12/31/2021



River trash clean  
on (left) and  
Portland Loo  
Restroom  
installation  
(above)

# Watershed Management Plan for the Truckee River and Support for One Truckee River Restroom Project

Nevada Land Trust

DEP #20-063

## Project Partners:

Truckee River Fund, One Truckee River, Keep Truckee Meadows Beautiful  
City of Reno, Western Regional Water Commission, City of Sparks  
Washoe County, Truckee Meadows Water Authority, Truckee Meadows Regional Planning Agency, Renown Health

## Project Location:

Truckee River Watershed in Washoe County

## Project Goals:

- Complete the Watershed Management Plan portion of the One Truckee River (OTR) Management Plan through the activities of a Watershed Coordinator and a Technical Assistance Subcontractor in coordination with City of Reno Public Works.
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#20-063

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Related Project Weblinks: [onetruckeeriver.org](http://onetruckeeriver.org)

Project Status: In progress. Contract expirations 12/31/2021



River trash clean  
on (left) and  
Portland Loo  
Restroom  
installation  
(above)

## Appendix D: Incremental Success Story

Annual Project Report  
**Initiatives to Reduce Non-Point Source Pollution in Southern Nevada**  
Sub-grant Agreement  
NDEP Contract Control # DEP S20-073  
Reporting Period July 1, 2020 through June 30, 2021

**Background**

Sub-grant Agreement DEP S20-073 between the Nevada Division of Environmental Protection (NDEP) and Southern Nevada Water Authority (SNWA) became effective on August 5, 2020. Project funding was awarded to implement objectives of the Las Vegas Wash Comprehensive Adaptive Management Plan (CAMP) that address non-point source pollution issues in and around the Las Vegas Wash (Wash). The Wash is a 12-mile channel whose flows are comprised of urban runoff, stormwater, shallow groundwater, and highly treated effluent from local wastewater discharge.

The CAMP objectives addressed by this sub-grant agreement include revegetation, erosion control, water-quality monitoring, and public education and outreach efforts. Specific tasks funded by this sub-grant included: (1) implementation of two Wash Green-Up events, (2) Mabel Hoggard Math and Science Magnet School (MH) field trips for elementary students, and (3) a stormwater pollution poster contest.

**Sub-grant Tasks**

*Task 1 – Two Wash Green-Up Events* - Green-Up events are designed to involve the community in revegetation and habitat restoration activities. The fall 2020 event was cancelled due to the state and local health guidelines in place with the COVID-19 pandemic. (Since the spring 2020 event was also cancelled due to the pandemic, it is difficult to anticipate the number of volunteers that would have participated in the event. Typically, several hundred volunteers would have participated. For example, volunteer numbers from the fall 2019 event included 429 adults and 184 children under the age of 16.)

The spring 2021 Green-Up was held on May 1, with COVID safety protocols to ensure the safety of both SNWA employees and volunteers. To maintain social distancing, volunteers were divided into two cohorts through different time slot assignments and completed 90-minute planting sessions. Masks were required and everyone completed a COVID health questionnaire at check-in. 139 volunteers participated (100 adults and 39 children under the age of 16) in planting nine acres. In addition to the revegetation activities, which facilitate erosion control and water-quality improvement, Green-Up events also foster a sense of community, educating volunteers about the importance of the local watershed and the need to reduce non-point source pollution.

*Task 2 – MH Field Trips* - NDEP 319(h) sub-grant funding enables SNWA to introduce MH students to Lake Mead and the Wash to learn about the local watershed, water quality, the complexity of biological communities, and the importance of resource stewardship. Sub-grant DEP S20-073 was funded to provide MH field trips during the 2020-2021 school year. Due to the pandemic, MH students were in a distance-learning model for most of the school year. Scope of work and budget revisions were approved to shift from the in-person field trips to a virtual field-trip experience, including videos and virtual, real-time interaction with subject-matter experts.

Each class received a pre-virtual learning assessment to determine the students' baseline knowledge of Lake Mead, the Wash, and water-quality issues in general. Each class then viewed a series of videos (Wash Overview, Wildlife, Desert Creatures, Revegetation, Water Quality, and Food Webs) hosted by SNWA biologists and water-quality experts to learn more about the Wash and Lake Mead. To accompany the videos, SNWA staff provided real-time virtual lessons. After the visit concluded, students took a post-assessment to help SNWA staff understand this outreach program's effectiveness.

Students took the same pre- and post-assessment exams used in previous years. These exams are used to determine how effective SNWA staff are at getting information out to students, and how many students retain and understand this information. Additionally, a questionnaire was created for students to fill out while watching the videos to ensure the students were paying attention. To help make the virtual visit more of a hands-on experience, SNWA staff did a pH activity at the end of the visit. This activity consisted of having students guess the pH levels of different household items. The students enjoyed this interactive piece and being able to make educated guesses after learning all about pH in the Water Quality video.

*Task 3 – Poster Contest* – Due to distance learning, the Conservation District of Southern Nevada was not able to conduct the poster contest. With an approved scope of work modification, SNWA took on the task and completed virtual outreach to 41 classes in December 2020 and March 2021, reaching 910 students. Information only was sent to an additional six classes. 59 students completed posters and prizes were awarded to the top three entries.

### **Summary of Progress**

- a. One Green-Up event was not completed due to the COVID-19 pandemic. A spring Green-Up was held on May 1, 2021.
- b. Problems incurred during the 2020-2021 sub-grant year were directly related to the worldwide pandemic. To maintain compliance with evolving state and local health guidelines, the fall Green-Up was cancelled, and the field trips were revised to virtual classroom experiences.
- c.d.e. With project data provided to NDEP, NDEP calculates load reductions that result from revegetation efforts completed by SNWA using quantitative load reduction models approved by EPA. Although load reductions for Green-Up events are small (less than 1 ton of sediment, 10 pounds of nitrogen and phosphorus), they are quantifiable, and reported annually to EPA by NDEP staff. SNWA's revegetation efforts at the Wash are recognized by both SNWA and NDEP to provide benefits to water quality and habitat that the standard EPA-approved load reduction models do not capture and serve to educate the Las Vegas community about the problems posed by non-point source pollution in the Wash and within the larger Las Vegas Valley watershed.
- f. Task 1 - 139 volunteers participated in the spring Green-Up event (spring 2021). They revegetated nine acres with native trees and shrubs. See attached photos.

Task 2 - Three 5<sup>th</sup> grade classes (75 students) were introduced to Lake Mead and the Wash through the virtual field-trip experience funded by NDEP during the 2020-2021 school year. Assessments are still being evaluated. Results will be included in the final report. See attached photos.



- g. With the pandemic forcing the cancellation of the fall Green-Up and scaling down the spring Green-Up, the in-kind volunteer labor match will not be met. As of the most recently submitted invoice (March 31, 2021), SNWA has met zero percent of the promised in-kind match. When the spring event's in-kind match is included in the invoice for the period ending June 30, 2021, SNWA will have met 13 percent (\$3,819) of the promised match. With the most recently submitted invoice (March 31, 2021), SNWA has met 61 percent (\$15,313.54) of the promised cash match and is on-track to meet the promised cash match.

<u>Task</u>	<u>Current Project Budget</u>		
	<u>319(h)</u>	<u>Match - Cash</u>	<u>Match - In-kind</u>
Green-Up Event Supplies	\$18,740.00		
Green-Up Event Volunteer Lunch	\$10,000.00		
Green-Up Event Volunteer Labor			\$30,000.00
Green-Up Event Staff Salaries		\$12,000.00	
Mabel Hoggard Virtual Classroom: Video Production and Editing Services	\$10,160.00		
Mabel Hoggard Field Trip Staff Salaries		\$10,000.00	
Poster Contest Staff Salaries		\$3,000.00	
Workbook Distribution (Mileage)			\$50.00
Poster Contest Prizes	\$1,050.00		
Poster Field Trip Guides		\$123.00	
Poster Field Trip: Springs Preserve Staff Salary		\$100.00	
<b>Sub-Totals</b>	<b>\$39,950.00</b>	<b>\$25,223.00</b>	<b>\$30,050.00</b>
			<b>\$95,223.00</b>

## Task 1 – Two Wash Green-Up Events



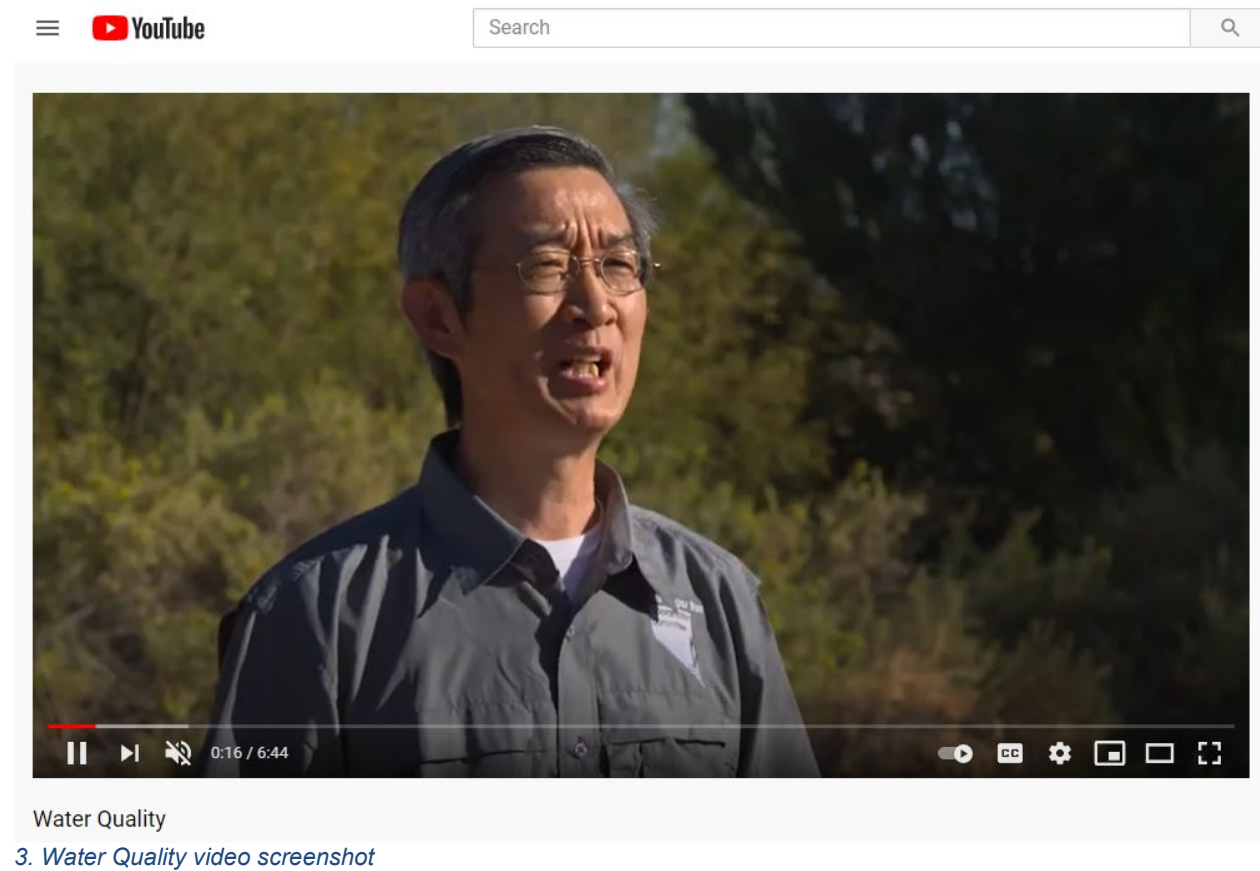
*1. Volunteers planting at the spring Green-Up*





*2. A volunteer selects a plant at the spring Green-Up*

## Task 2 – MH Field Trips: Virtual Classroom Experiences





LV Wash Overview

4. *Wash Overview video screenshot*