



**TWSA BOARD MEETING
PACKET
For 3/11/2020**

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NOTICE OF MEETING:

The next regular meeting of the Tahoe Water Suppliers Association (TWSA) is:

Wednesday, March 11, 2020 / 12 noon to 4 pm

Lunch provided at noon

North Tahoe PUD Offices

875 National Ave, Tahoe Vista, CA 96148

(530)546-4212

Conference call will be available:

Call **1-877-594-8353** / when prompted, Enter Conference Dial-in **17757186**

Agenda

A. Introduction of Guests

B. Presentations: 12 pm to 1:30 pm

1. **Clean Up the Lake Project**, Colin West, E.D. (30 min.)
2. **TROA Water Inventory Reports** (1 hour)

Thomas Scott, California Dept. of Water Resources / Bunny Bishop, Nevada Division of Water Resources

C. Public Comment Conducted in accordance with Nevada Revised Statute (NRS) Chapter 214.020 and limited to a maximum of 3 minutes in duration.

D. Approval of Agenda for the March 11, 2020 TWSA Board Meeting

E. Approval of Minutes for the December 4, 2019 TWSA Board meeting

F. Reports

- a. **Staff Reports (Outreach, Events, Projects)**
- b. **Current budget** - see Open Gov link for current budget and expenses:

https://inclinevillageidnv.opengov.com/transparency#/13549/accountType=revenuesVersusExpenses&embed=n&breakdown=types¤tYearAmount=cumulative¤tYearPeriod=years&graph=bar&legendSort=coa&month=10&proration=false&saved_view=128547&selection=CB5BA873E200D4E06EB4E08C133688F5&projections=null&projectionType=null&highlighting=null&highlightingVariance=null&year=2020&selectedDataSetIndex=null&fiscal_start=2018&fiscal_end=latest

- c. **TWSA Chair Report**

G. General Business (for possible action):

- a. Clean Up the Lake Project
- b. 2020-21 proposed budget
- c. TKPOA Application/AIS Plan - General informational update

H. Purveyor Updates

I. Public Comment

J. Adjournment

2020 TWSA Board Meetings – First Wednesdays, quarterly, held from 12 to 4 pm on:

- June 10 (STPUD)
- Sept. 2 (IVGID)
- Dec. 2 (Edgewood)

TWSA Board of Directors

Suzi Gibbons (Chair)	North Tahoe Public Utility District
Andrew Hickman	Round Hill General Improvement District
Richard Robilliard; Pete Presidio (alternate)	Douglas County Systems
Patrick McKay; Mike McKee (alt.)	Edgewood Water Company
Cameron McKay	Glenbrook Water Cooperative
Joseph Pomroy; Bob Lochridge (alt.)	Incline Village General Improvement District
Cameron McKay; Brandon Garden (alt.)	Kingsbury General Improvement District
Nakia Foskett	Lakeside Park Association
Kim Boyd; Tony Laliotis (alt.)	Tahoe City Public Utility District
Lynn Nolan; Shelly Thomsen (alt.)	South Tahoe Public Utility District

For more information, please contact: Madonna Dunbar, TWSA Executive Director
 1220 Sweetwater Road, Incline Village, Nevada 89451
 (775) 832-1212 office / (775) 354-5086 cell /email: mod@ivgid.org

Certification of posting of agenda

I hereby certify that on or before Thursday March 5, 2020 at 9:00 am, a copy of this agenda was delivered to the post office addressed to the people who have requested to receive copies of IVGID's agendas; copies were either faxed or e-mailed to those people who have requested; and a copy was posted at the following locations within Incline Village/Crystal Bay in accordance with NRS 241.020:

1. IVGID Anne Vorderbruggen Building (Administrative Offices)
2. Incline Village Post Office
3. Crystal Bay Post Office
4. Raley's Shopping Center
5. Incline Village Branch of Washoe County Library

By, Madonna Dunbar, Executive Director, TWSA, (775) 832-1212 office / email: mod@ivgid.org

Notes:

Items on the agenda may be taken out of order; combined with other items; removed from the agenda; moved to the agenda of another meeting; moved to or from the Consent Calendar section; or may be voted on in a block. Items with a specific time designation will not be heard prior to the stated time, but may be heard later. Members of the public who are disabled and require special accommodations or assistance at the meeting are requested to call IVGID at 832-1212 at least 24 hours prior to the meeting.

Copies of the packets containing background information on agenda items are available for public inspection at the Incline Village Library. TWSA agenda packets are available at the TWSA website www.TahoeH2O.org or the TWSA office at 1220 Sweetwater Road, Incline Village, Nevada 89451.



The regular meeting of the Tahoe Water Suppliers Association (TWSA) was held on
Wednesday, December 4, 2019, noon to 4 pm
Edgewood Lodge, Stateline, NV.

MINUTES

A. Introduction of Guests – none scheduled

B. Presentations – none scheduled

C. Roll Call Members in Attendance: Suzi Gibbons (NTPUD), Rick Robillard (Douglas County), Lynn Nolan (STPUD), Cameron McKay (Glenbrook/ KGID), Joe Pomroy (IVGID), Kim Boyd (TCPUD), Nakia Foskett (LPA), Andrew Hickman (RHGID), Patrick McKay (Edgewood)

TWSA Staff in attendance: Madonna Dunbar and Sarah Vidra

C. Public Comment Conducted in accordance with Nevada Revised Statute (NRS) Chapter 214.020 and limited to a maximum of 3 minutes in duration.

No public comment given.

D. Approval of Agenda

Motion to approve agenda as submitted made by Cameron McKay, second by Joe Pomroy, all in favor; motion carried.

E. Approval of Minutes for the September 4, 2019 TWSA Board meeting.

Motion to approve the September 4, 2019 TWSA Board Meeting minutes as submitted, made by Joe Pomroy, second by Andrew Hickman, all in favor; motion carried.

F. Reports

a. Staff Reports

- Staff highlighted several activities from the quarter; a full activity report is available in the board packet.
- Staff completed and submitted to regulators the *TWSA 2019 Watershed Control Program Annual Report*.
- Water Fill Station Grant Project to date, 12 applications are active.

b. Year End Fiscal 2018-2019 Report

See Open Gov link for current budget and expenses.

- \$23K rollover from the 2018-2019 budget.
- \$150K in total reserve budget.

c. Current budget - see Open Gov link for current budget and expenses.

d. TWSA Chair Report

- Commended staff for production of the *TWSA 2019 Watershed Control Program Annual Report*, and the deployment of the 'Drink Tahoe Tap water stations' to events during the fourth quarter, see table below for event and attendance:

Event	Date	Attendance
Forest Gathering		200
Tahoe Truckee Comm. Foundation	9/21	50
Lost Sierra HoeDown	9/20-26	1,000
Liberty Utility Event	9/29	300
NorthStar Wine Event	9/21	500
Official Nevada Day Parade	10/26	500
Hangtown Music Festival	10/24-27	8,000
IVGID Pumpkin Patch	10/12	250
Total event attendance for Q4 water station distribution		10,800

- The Chair attended the October and November Tahoe Keys Stakeholder Committee meetings.
- The Chair attended the Placer County Environmental Crimes Task Force meeting, the following notes were provided.
 - California Assistant District Attorneys (CA ADAs) Task Force closed their case against the manufacturers of "flushable" wipes due to lack of evidence.
 - Samples that were provided by NTPUD and others showed that the wipes were ones that are not advertised as flushable.
 - I inquired if the CA ADAs were looking at the plastic water bottle manufacturers regarding microplastics in water.
 - Currently they are not since they don't have any evidence of microplastics in drinking water sources.

G. General Business (for possible action/vote):

1. Selection of TWSA Board Meeting 2020 dates

Motion to approve the 2020 TWSA Board Meeting Dates made by Cameron McKay, second by Nakia Foskett, all in favor; motion carried.

2020 Board Meeting Dates

- | | | |
|-------------------------|------------------------------|---------------------------|
| • March 4, 2020 (IVGID) | (< email vote rescheduled to | • Sept. 2, 2020 (IVGID) |
| • June 10, 2020 (STPUD) | March 11, 2020) | • Dec. 2, 2020 (Edgewood) |

2. TKPOA Application/ AIS Plan update

The Stakeholder Group is on hold until February 2020, when the Antidegradation Analysis and environmental documents are expected to be provided.

The Draft EIR/EIS is expected to be released for public comment on June 22nd, 2020 with a 30 day public comment period expected. The final EIR/EIS is predicted to be released and presented to the Lahontan Board for determination in Spring 2021. For project implementation in May 2021.

Alternatives that are being presented in the *Tahoe Keys Lagoons Aquatic Weed Control Methods Test (CMT)* are:

1. Herbicide Treatment, as presented in the NOP documents.
2. Mechanical (no herbicide) including dredging, laminar flow, UV-C light.
3. No Action

Of the alternatives provided, the mechanical only choice is the middle road for the Lahontan Board to choose.

The Executive Director believes that our advocacy of needing to test all other methods has resulted in the broad scope of mechanical methods that are included in both the mechanical and herbicide treatment alternatives.

The Chair would like to reconvene the AIS Subcommittee with the draft EIR/EIS.

Additional Topic- Laminar Flow Aeration (LFA) test at Ski Run Marina:

The pilot test of LFA at Ski Run Marina is working well at reducing organic sediment muck, with 6 inch to 1-foot reduction during the test period. The final report has not been published; it is staff's observation from meeting participation that organics reduction in the substrate is minimizing weed growth. The primary shared results are that sites which had 80% weed coverage have been reduced to 10% coverage, or less in some sites - LFA is providing reduction in plant density and height and reduction in muck organics.

No action taken.

H. Purveyor Updates

TCPUD – The TCPUD Board approved the requested rate increase in October 2019. The District is working with the State Water Board to secure an SRF loan for the West Shore Water Treatment Plant. An engineering firm has been chosen to complete the Master Plans for distribution system improvements at Tahoe Cedars and Madden Creek systems.

Douglas County – Introduction of Pete Presidio is the alternate for Douglas County. The County has fully scoped two CMAR projects with a 3-4 year timeline. The first project is at the Cave Rock System, to increase filtration capacity and redundancy at the Cave Rock Micro Filtration Plant, including upgrading the intake with inline submersible pump for low water level draw. The second water pipeline and services including meter pits throughout the Cave Rock Drive, Winding Way and Fingerling Streets. The first phase of the Cave Rock Drive project will begin on May 1, 2020 with 3,000 linear feet of pipe. ZWOOD will complete a PLC upgrade in fall 2020. The SCADA upgrade to combine the Lake Tahoe and Valley through VPN to one SCADA platform is currently in the demonstration and acceptance period, and the project should be completed in the first quarter of 2020.

STPUD – The PCE grant project has been moved to June 2020 due to problems finding feasible alternatives. STPUD will be 100% complete with their metering project in 2020, the project took 8 years. STPUD will be sending out the Lake Tahoe Restoration Act (LTRA) project list for review and comment.

IVGID – awarded the project for water tank safety and security upgrades for ladders, handrails and climbing. IVGID awarded a contract to replace the MCC at the Burnt Cedar Disinfection plant, during low flow water time. The District is putting together the summer 2020 Watermain Pproject, to replace 2-3K liner feet of old, aging, undersized steel water main, to meet fire flow requirements. Cleaning and inspection of water tanks was completed by LiquaVision, the epoxy lined tanks had no interior coding issues, and cleaned the ¼ inch of sedimentation. IVGID has been installing Cl monitors further out in the distribution system, to see the profile change in the higher elevation systems. A new emergency response plan will be submitted to Washoe Health. Positions open at IVGID include a senior engineer and pipeline operator.

LPA – the water company is fully staffed with 1.5 operators. There have been three major leaks, with the most recent being a 108 gpm at Manzanita St, distribution trends show that the leak may have started 1.5 years ago. The Skid Pump project will include two new pumps, will start in January 2020.

RHGID – The District implemented rate increase in October on both water and sewer. Due to issues purchasing Cl, and are looking into onsite Cl generation.

Edgewood – Finalizing 2020 budget, and looking into decommissioning the ozone system.

KGID – finishing the engineering on 2700 feet of water line replacement in a high rock density area, estimated cost is \$700K. KGID has signed up with ServeLine, a customer insurance for water leak coverage. The District is finishing engineering on their complete system water model, to see where to go next on waterline replacement in the next 3-4 years.

Glenbrook – Finished replacing two steel waterlines.

NTPUD – Board approved rate increase, first since 2007, and adjusting connection fees, taking place Jan. 1, 2020. The increase in rate will go to Capital Improvements. Carnelian System, had a bad Total Coliform result with late notification due to laboratory communication issues. The Cl tank that serves the system, has a coding that is causing a weird fibrous material, that looks like tissue paper, flaking off in the tank, will be sent off for identification. N. Lake Blvd water main leak, that has now been abandoned due to previous project covering the area. Kingswood West tank rehabilitation will be conducted in the beginning of 2020, with 7 temporary tanks needed during the project to meet demand and fire flow requirements during the project.

I. Public Comment

No public comment given.

J. Adjournment

Motion to adjourn made by Cameron McKay, second by Andrew Hickman, motion passes unanimously. The meeting adjourned at 3:15 pm.

MEMORANDUM

TO: TWSA Board
CC: Suzi Gibbons, TWSA Chair
FROM: Madonna Dunbar, IVGID Resource Conservationist
SUBJECT: TWSA – Q1 - 2020 Activities / Events
DATE: February 27, 2020

TWSA / Water Conservation / Water Quality:

Staff developed several articles for the IVGID Quarterly February 2020 issue, featuring Public Works programs and projects. DRINK TAHOE TAP ® articles were also featured.

https://www.yourtahoepace.com/uploads/pdf-ivgid/IVGID_Qrtly_Feb2020.pdf

Staff developed TWSA Budget and Board meeting preparations.

Staff continues working with Sierra Nevada University students on Service Learning Projects that assist the utilities goals while building the student's resume and experience. Frankie Sanchez will continue his work on DRINK TAHOE TAP ® – App/Research project in spring 2020.

Staff prepared an application submittal for the AWWA Exemplary Source Water Protection Awards for Tahoe Water Suppliers Association. Decision to be made in March 2020.

Staff provided DRINK TAHOE TAP ® water treatment education and hydration at the Science of Cocktails event hosted by TERC/UC Davis on 1/31.2020. 300 participants learned science topics while sampling food and beverages.

Staff was awarded a \$62,000 NDEP 319h Source Water Protection grant with the Tahoe Center for Environmental Sciences, for a 2-year educational campaign on micro-plastics pollution, and ways to reduce single use plastics from getting in the environment. Workgroup meetings have been initiated with student curriculum developed, and new campaigns graphics underway.

25 water bottles were donated to the Incline High School “Roots and Shoots” Club, and the AP Science class.

Staff began working with Incline High School (IHS) students by offering a plastic education session with the IHS “Roots and Shoots” Club, and the AP Science class on 1/27/20 (25 participants total). The first lesson plan offered by UC Davis, Sierra Watershed Education Partnership, and IVGID staff covered the types of plastics, what is recyclable, and a ‘waste dive’ analysis exercise. Several future lessons are planned including impacts at Lake Tahoe of single use plastics, market systems of solid waste, brainstorming on individual and community solutions. Students in these sessions may be part of the NDEP Micro-Plastics Grant consumer habits survey and other outreach efforts later in the spring.

Staff monitored the quarterly Nearshore Aquatic Weed Working Group meeting.

Staff monitored the monthly TRPA Shorezone Project Review Committee Project Application Meeting.

Staff attended the CWEA Awards Dinner on 2/8/2020.

The Tahoe Keys Integrated Weeds Stakeholder Management Plan (mediated) workgroup is on hiatus until March 2020 Website of current information is: <https://tahoekeweeds.org>.

Drink Tahoe Tap ad is running in the winter Tahoe.com regional publication.

Staff initiated the TWSA/Tahoe Fund DRINK TAHOE TAP ® Water Bottle Filling Station Grant Program (2019-20) on Aug. 1. Tahoe Fund has provided a \$10K match for the project. To date, 4 grants have been issued with 12 applications active.

Media coverage: <https://www.kolotv.com/content/news/Tahoe-business-owners-could-add-water-refill-station-inside-stores--525119571.html>

Work is also being conducted to bolster the number of available refill stations on the Tap App which will also help advertise newly installed units. Details are posted at www.DrinkTahoeTap.org.

The 'Cigarette Bin Collection Project' initiated between TWSA, League to Save Lake Tahoe and Keep America Beautiful (KAB) began region-wide bin distribution/installation in June 2019. KAB has provided 250 metal cigarette filter collection bins to IVGID Waste Not (for TWSA) for distribution and use within the Tahoe Basin. Project is ongoing.

IVGID's High-Efficiency Appliance Rebate program has processed 40 applications from customers for \$100 rebates for fulfilling requirements of the rebate program.

Sustainability Programs:

The production work and data compilation for the 2019 Public Works Sustainability Report is underway. The 2018 report is posting online at: <https://www.yourtahoeplace.com/public-works/waste-not/sustainability>

DRINK TAHOE TAP ® will be a featured topic during the educational panels offered at a free, one day, "Green Lodging" Workshop being planned for May 20th, 2020. The working group has been meeting monthly to develop the presentations, panelist list, program schedule, site logistics, advertising and registration for the event. Details are posted at : <http://events.r20.constantcontact.com/register/event?oeidk=a07eqxm57980f480962&llr=vmo4qyuab>

Mobile Water Station use has been inactive over the winter. There are currently 8 stations built and slated for rotation in summer 2020.

Professional Development/Other:

Joseph Hill has officially taken the lead role of the North Tahoe Environmental Education Coalition (NTEEC). NTEEC's mission is to promote collaboration and education to enhance scientific and environmental literacy to foster stewardship in the Tahoe/Truckee community.

Madonna participated in the RCAC online course "Nevada's Open Meeting Law; Changes and Review".

Madonna participated in the RCAC Webinar: Surface Water Treatment Rule.

**INCLINE VILLAGE GENERAL IMPROVEMENT DISTRICT
STATEMENT OF OPERATING SOURCES AND USES**

TAHOE WATER SUPPLIERS ASSOCIATION

CURRENT YEAR TO BUDGET COMPARISON

For Period Ending 02/29/2020

GL Account Number	GL Account Description	Current Month Budget	Current Month Actual	Month Budget Variance	Current YTD Budget	Current YTD Actual	YTD Budget Variance	Total Budget	Remaining Budget
OPERATING SOURCES									
200-28-990-4417	Service & User Fees	0.00	0.00	0.00	149,200.00	159,200.00	10,000.00	199,200.00	-40,000.00
	Sales and Fees	0.00	0.00	0.00	149,200.00	159,200.00	10,000.00	199,200.00	-40,000.00
	Fines and Penalties	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	TOTAL OPERATING SOURCES	0.00	0.00	0.00	149,200.00	159,200.00	10,000.00	199,200.00	-40,000.00
OPERATING USES									
200-28-990-5010	Regular Earnings	3,742.56	1,152.70	2,589.86	32,480.09	31,278.58	1,201.51	48,787.00	17,508.42
200-28-990-5016	Accrued Hourly	0.00	1,608.79	-1,608.79	0.00	1,608.79	-1,608.79	0.00	-1,608.79
200-28-990-5020	Other Earnings	0.00	0.00	0.00	648.00	0.00	648.00	648.00	648.00
	Salaries and Wages	3,742.56	2,761.49	981.07	33,128.09	32,887.37	240.72	49,435.00	16,547.63
200-28-990-5050	Taxes	290.11	85.84	204.27	2,517.72	2,373.38	144.34	3,781.78	1,408.40
200-28-990-5100	Retirement Fringe Ben	656.06	187.88	468.18	5,693.72	5,170.20	523.52	8,552.26	3,382.06
200-28-990-5200	Medical Fringe Ben	1,138.13	285.81	852.32	9,105.04	5,539.70	3,565.34	13,657.50	8,117.80
200-28-990-5250	Dental Fringe Ben	98.49	24.88	73.61	787.92	502.49	285.43	1,181.92	679.43
200-28-990-5300	Vision Fringe Ben	10.44	2.80	7.64	83.52	59.29	24.23	125.32	66.03
200-28-990-5400	Life Ins Fringe Ben	13.17	0.00	13.17	105.36	24.36	81.00	158.00	133.64
200-28-990-5500	Disability Fringe Ben	20.08	8.43	11.65	160.64	160.33	0.31	241.00	80.67
200-28-990-5600	Unemployment Fringe Ben	56.86	15.10	41.76	493.45	417.34	76.11	741.15	323.81
200-28-990-5700	Work Comp Fringe Ben	91.04	27.67	63.37	790.14	761.40	28.74	1,186.83	425.43
	Employee Fringe	2,374.38	638.41	1,735.97	19,737.51	15,008.49	4,729.02	29,625.76	14,617.27
	Total Personnel Cost	6,116.94	3,399.90	2,717.04	52,865.60	47,895.86	4,969.74	79,060.76	31,164.90
200-28-990-6030	Professional Consultants	0.00	0.00	0.00	40,000.00	0.00	40,000.00	50,000.00	50,000.00
	Professional Services	0.00	0.00	0.00	40,000.00	0.00	40,000.00	50,000.00	50,000.00
200-28-990-7010	Advertising - Paid	1,000.00	0.00	1,000.00	8,000.00	6,388.84	1,611.16	12,500.00	6,111.16
200-28-990-7405	Office Supplies	116.67	0.00	116.67	933.36	129.98	803.38	1,400.00	1,270.02
200-28-990-7415	Operating	2,358.33	-420.00	2,778.33	18,866.64	13,956.89	4,909.75	28,300.00	14,343.11
200-28-990-7460	Postage	25.00	0.00	25.00	125.00	42.12	82.88	200.00	157.88
200-28-990-7470	Printing & Publishing	791.67	62.17	729.50	6,333.36	6,785.86	-452.50	9,500.00	2,714.14
200-28-990-7680	Training & Education	833.33	0.00	833.33	6,666.64	0.00	6,666.64	10,000.00	10,000.00
200-28-990-7685	Travel & Conferences	200.00	0.00	200.00	1,750.00	1,282.61	467.39	2,500.00	1,217.39
	Services and Supplies	5,325.00	-357.83	5,682.83	42,675.00	28,586.30	14,088.70	64,400.00	35,813.70
	Insurance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200-28-990-7840	Telephone	0.00	0.00	0.00	270.00	96.00	174.00	540.00	444.00
	Utilities	0.00	0.00	0.00	270.00	96.00	174.00	540.00	444.00
	Cost of Goods Sold	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200-28-990-7980	Central Services Allocation Cs	500.00	500.00	0.00	4,000.00	4,000.00	0.00	6,000.00	2,000.00
	Central Services Cost	500.00	500.00	0.00	4,000.00	4,000.00	0.00	6,000.00	2,000.00
	Defensible Space	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	TOTAL OPERATING USES	11,941.94	3,542.07	8,399.87	139,810.60	80,578.16	59,232.44	200,000.76	119,422.60
	OPERATING SOURCES(USES)	-11,941.94	-3,542.07	8,399.87	9,389.40	78,621.84	69,232.44	-800.76	79,422.60

Includes Labor

G/L#	EFFECTIVE DATE	DESCRIPTION	STP	SOURCE	JE#	DEPOSIT	CHECK	VENDOR	DEBIT	CREDIT	BALANCE
200-28-990-7010		Advertising - Paid							Balance	Forward	0.00
	07/26/2019	SIERRA NV MEDIA GRP ADV, web ads	AJ	GL	307843				62.50		62.50
	07/31/2019	Project Tahoe Tap Music Video	SYS	AP	306489		771706	Joaquin Fiorese	875.00		937.50
	08/19/2019	Advertising Contract & Invoice Fall - Winter 19/20	SYS	AP	309988		771892	ED MILLER Db Wild West Communications Group	295.00		1,232.50
	08/21/2019	400 Glass water bottles imprinted. Order # DM3843910	SYS	AP	309631		771827	Bel USA, LLC	1,570.84		2,803.34
	08/27/2019	SIERRA NV MEDIA GRP ADV, web media ads	AJ	GL	312431				62.50		2,865.84
	09/24/2019	Tahoe Film Fest Sponsorship 2019 "TERCGED"	SYS	AP	316016		772331	The Regents of the University of California	500.00		3,365.84
	09/27/2019	SIERRA NV MEDIA GRP ADV, Tahoe.com media ads TWSA	AJ	GL	317249				62.50		3,428.34
	10/01/2019	Mount Town Resort Planners Summit	SYS	AP	319517		772449	TRPA	500.00		3,928.34
	10/09/2019	Reimbursement - for sponsorship, Logo placement on "Don't Trash Tahoe T-shirts") wrote personal check, expedite time sensitive resp req by vendor.	SYS	AP	317920		2676	MADONNA DUNBAR	100.00		4,028.34
	10/25/2019	SIERRA NV MEDIA GRP ADV, monthly web ads Tahoe Tap	AJ	GL	321719				62.50		4,090.84
	11/27/2019	SIERRA NV MEDIA GRP ADV, monthly web ad - Tahoe Tap	AJ	GL	325932				62.50		4,153.34
	12/11/2019	Tahoe In Depth-Winter 2019 Issue 16, Bronze Underwriting Level	SYS	AP	326095		772887	TRPA	500.00		4,653.34
	12/27/2019	SIERRA NV MEDIA GRP ADV, monthly web ads Tahoe.com	AJ	GL	328637				62.50		4,715.84
	01/15/2020	North Lake Tahoe sponsorship for Earth Day event on 4/18/20.	SYS	AP	329491		773138	Tahoe Earth Day Foundation	500.00		5,215.84
	01/21/2020	Sponsorship-SouthLakeTahoe Earth Day- 04/25/2020	SYS	AP	329939		773185	Tahoe Earth Day Foundation	500.00		5,715.84
	01/27/2020	SIERRA NV MEDIA GRP ADV, Tahoe.com magazine TAHOE TAP winter ad TOTAL	AJ	GL	331661				673.00		6,388.84
									6,388.84	0.00	6,388.84
200-28-990-7405		Office Supplies							Balance	Forward	0.00
	12/01/2019	laminating	SYS	AP	328481		773028	Rainbow Printing & Office Supplies, Inc.	129.98		129.98
		TOTAL							129.98	0.00	129.98
200-28-990-7415		Operating							Balance	Forward	0.00
	07/09/2019	10 FOLDING RULE, 78-3.4 IN., STANDARD	SYS	AP	301801		771485	Grainger, Inc.	111.60		111.60

G/L#	11	EFFECTIVE DATE	DESCRIPTION	STP	SOURCE	JE#	DEPOSIT	CHECK	VENDOR	DEBIT	CREDIT	BALANCE
		07/18/2019	Kathleen & Leo Craft	AJ	JL	303157					80.00	31.60
		07/26/2019	WPY UC DAVIS TAHOE ENVIRO, 2019 State of the Lake with Dr. Schladow, for TWSA Team.	AJ	GL	307843				15.00		46.60
		07/26/2019	AMZN MKTP US MH87M9RM1, water station supplies	AJ	GL	307843				357.47		404.07
		08/27/2019	MUTT MITT, 5 metal dog waste bag stations	AJ	GL	312431				497.25		901.32
		08/27/2019	ARTEMIS MEDITERRANEAN GRI, lunch for crew after Summit	AJ	GL	312431				70.41		971.73
		09/25/2019	Reimbursement - used personal credit card for snacks for volunteers, beach cleanup event 09/21/19	SYS	AP	315945	2615		MADONNA DUNBAR	73.01		1,044.74
		09/25/2019	One time payment -\$500 TWSA Water Bottle Fill Station Grants.	SYS	AP	315954	772271		Tunnel Creek Properties LLC	500.00		1,544.74
		09/27/2019	AMAZON.COM FI17D3RS3 AMZN, sun protection	AJ	GL	317249				60.95		1,605.69
		09/30/2019	September 2019 Charges acct 5000473	SYS	AP	316863	2643		Raley's	46.98		1,652.67
		09/30/2019	Acct 4244 -September 2019 In-Store Chgs	SYS	AP	316869	772337		Village Ace Hardware	7.80		1,660.47
		10/25/2019	AMZN MKTP US PB1JS5KF3, dog waste bags rolls	AJ	GL	321719				133.93		1,794.40
		10/25/2019	AMZN MKTP US HB7BG3PL3, dog waste bag rolls	AJ	GL	321719				324.95		2,119.35
		10/25/2019	AMAZON.COM VJ30M6H93 AMZN, pressure reducing valves for water stations	AJ	GL	321719				83.90		2,203.25
		11/27/2019	CROSS BORDER TRANS FEE, currency exchange	AJ	GL	325932				25.45		2,228.70
		11/27/2019	sampling net ENVIRONMENTAL ANALYTICAL, microplastic sampling net	AJ	GL	325932				2,545.00		4,773.70
		11/27/2019	MY THAI & NOODLE, lunch after TRPA meeting	AJ	GL	325932				24.38		4,798.08
		12/06/2019	Mourelators Lakeshore Resort	AJ	JL	324819					200.00	4,598.08
		12/17/2019	Water Fill Station Grant Program - 2 stations installed 2X\$500	SYS	AP	326218	773037		North Tahoe PUD	1,000.00		5,598.08
		12/17/2019	Water Fill Station Grant Program - 2 stations installed 2X\$500	SYS	AP	328341	773037		North Tahoe PUD		1,000.00	4,598.08
		12/17/2019	Water Fill Station Grant Program - 2 stations installed 2X\$500	SYS	AP	328342	773037		North Tahoe PUD	1,000.00		5,598.08
		12/17/2019	Water Fill Station Grant Program - 2 stations installed 2X\$500	SYS	AP	328496	773037		North Tahoe PUD		1,000.00	4,598.08
		12/17/2019	Water Fill Station Grant Program - 2 stations installed	SYS	AP	328500	773037		Tahoe City Public Utility District	1,000.00		5,598.08

G/L#	12	EFFECTIVE DATE	DESCRIPTION	STP	SOURCE	JE#	DEPOSIT	CHECK	VENDOR	DEBIT	CREDIT	BALANCE
			2X\$500									
		12/27/2019	SP EARN YOUR BEER, Shirts Don t Trash Tahoe Tahoe tap sponsor	AJ	GL	328637				102.50		5,700.58
		12/27/2019	MERRELL.COM, boots	AJ	GL	328637				71.44		5,772.02
		12/27/2019	CROSS BORDER TRANS FEE, fee	AJ	GL	328637				0.35		5,772.37
		12/27/2019	CANARY ISLAND RETREATS, reference book download - legitimate charge	AJ	GL	328637				35.25		5,807.62
		12/27/2019	DISCOUNTMUGS.COM, water bottles - metal	AJ	GL	328637				910.00		6,717.62
		12/28/2019	water fill station grant program- 1 station installed HMR North Lodge 1x\$500	SYS	AP	328551	773011		Homewood Village Resorts, LLC	500.00		7,217.62
		01/24/2020	1000 Easy Pour 22 oz glass bottles	SYS	AP	330461	3096		AIA Corporation	2,758.90		9,976.52
		01/27/2020	DISCOUNTMUGS.COM, 900 metal bottles	AJ	GL	331661				2,768.97		12,745.49
		01/27/2020	THE WEBSTAIRANT STORE, water station dispenser supplies	AJ	GL	331661				32.74		12,778.23
		01/27/2020	AMZN MKTP US 8E4ZL1LY3, water station supplies dog bags	AJ	GL	331661				740.44		13,518.67
		01/31/2020	flex fit caps w/embroidery	SYS	AP	330362	773236		W & T Graphix	858.22		14,376.89
		02/10/2020	Brooke Laine and Jose Olivares	AJ	JL	330811					420.00	13,956.89
			TOTAL							16,656.89	2,700.00	13,956.89
200-28-990-7460			Postage							Balance	Forward	0.00
		12/06/2019	Water-Shipping -- Annual Reports	SYS	AP	325146	772803		FedEx	21.24		21.24
		01/03/2020	Engineering and PW shipping	SYS	AP	328400	773002		FedEx	10.44		31.68
		01/03/2020	Engineering and PW shipping	SYS	AP	328400	773002		FedEx	10.44		42.12
			TOTAL							42.12	0.00	42.12
200-28-990-7470			Printing & Publishing							Balance	Forward	0.00
		07/01/2019	36 month maintenance contract for PW Admin Xerox effective 1/1/18.	SYS	AP	302074	2246		Sierra Office Solutions	62.17		62.17
		07/31/2019	Sign Shop 19-994	AJ	GL	305335				236.00		298.17
		09/03/2019	36 month maintenance contract for PW Admin Xerox effective 1/1/18.	SYS	AP	317091	2645		Sierra Office Solutions	62.17		360.34
		09/27/2019	STICKER MULE, DTT magents	AJ	GL	317249				120.00		480.34
		10/03/2019	36 month maintenance contract for PW Admin Xerox effective 1/1/18.	SYS	AP	317105	2645		Sierra Office Solutions	62.17		542.51
		11/01/2019	36 month maintenance contract for PW Admin Xerox effective 1/1/18.	SYS	AP	320965	2765		Sierra Office Solutions	62.17		604.68
		11/13/2019	Color Copy Double Sided 8.5x11	SYS	AP	323243	772705		Rick's AEC Reprographics, Inc.	2,749.60		3,354.28
		12/02/2019	36 month maintenance contract for PW Admin Xerox effective 1/1/18.	SYS	AP	324261	2867		Sierra Office Solutions	62.17		3,416.45

G/L#	13	EFFECTIVE DATE	DESCRIPTION	STP	SOURCE	JE#	DEPOSIT	CHECK	VENDOR	DEBIT	CREDIT	BALANCE
		01/09/2020	36 month maintenance contract for PW Admin Xerox effective 1/1/18.	SYS	AP	329060		3035	Sierra Office Solutions	62.17		3,478.62
		01/27/2020	STICKER MULE, holographic stickers	AJ	GL	331661				19.00		3,497.62
		01/30/2020	10,500-white vinyl decals-Drink Tahoe Tap	SYS	AP	330191	773236		W & T Graphix	3,034.07		6,531.69
		01/31/2020	Sign Shop 19-859 (20-laminated Tahoe Tap on dibond)	AJ	GL	330119				192.00		6,723.69
		02/03/2020	36 month maintenance contract for PW Admin Xerox effective 1/1/18.	SYS	AP	330446		3126	Sierra Office Solutions	62.17		6,785.86
			TOTAL							6,785.86	0.00	6,785.86
200-28-990-7685			Travel & Conferences							Balance	Forward	0.00
		07/26/2019	INFINITE CONFERENCING INC, conference call TWSA Board	AJ	GL	307843				65.93		65.93
		07/30/2019	Mileage Reimbursement July 2019	SYS	AP	308022		2372	MADONNA DUNBAR	85.84		151.77
		08/20/2019	July-August 2019 Mileage Reimbursement	SYS	AP	312576	772074		Sarah Vidra	68.50		220.27
		09/27/2019	SQ MOUNTAIN HIGH S, catering Board meeting 9/4	AJ	GL	317249				154.81		375.08
		09/30/2019	September 2019 Mileage reimbursement	SYS	AP	317917		2676	MADONNA DUNBAR	49.88		424.96
		10/25/2019	INFINITE CONFERENCING INC, conference call TWSA Board meeting	AJ	GL	321719				89.72		514.68
		12/27/2019	EB WILD AMP SCENIC FI, conference pass	AJ	GL	328637				136.38		651.06
		01/27/2020	EDGEWOOD FOOD AND BEVERAG, TWSA Board lunch	AJ	GL	331661				248.50		899.56
		01/27/2020	INFINITE CONFERENCING INC, conference call	AJ	GL	331661				72.05		971.61
		01/27/2020	NORTHERN QUEEN INN, room during conference	AJ	GL	331661				228.17		1,199.78
		01/31/2020	reimburse expenses-Environmental education confer-NV City	SYS	AP	331004		3146	MADONNA DUNBAR	82.83		1,282.61
			TOTAL							1,282.61	0.00	1,282.61
200-28-990-7840			Telephone							Balance	Forward	0.00
		09/19/2019	1st QTR Stipend 7/1/2019 - 9/30/2019	SYS	AP	314819		2575	MADONNA DUNBAR	48.00		48.00
		12/31/2019	2nd QTR Stipend 10/1/2019 - 12/31/2019	SYS	AP	327750		2965	MADONNA DUNBAR	48.00		96.00
			TOTAL							96.00	0.00	96.00
200-28-990-7980			Central Services Allocation Cs							Balance	Forward	0.00
		07/31/2019	Record Central Svc Cost Alloc Jul 2019	AJ	GL	307935				500.00		500.00
		08/31/2019	Record Central Svc Cost Alloc Aug 2019	AJ	GL	307936				500.00		1,000.00
		09/30/2019	Record Central Svc Cost Alloc Sept 2019	AJ	GL	307937				500.00		1,500.00
		10/31/2019	Record Central Svc Cost Alloc Oct 2019	AJ	GL	307938				500.00		2,000.00

G/L#	EFFECTIVE DATE	DESCRIPTION	STP	SOURCE	JE#	DEPOSIT	CHECK	VENDOR	DEBIT	CREDIT	BALANCE
14	11/30/2019	Record Central Svc Cost Alloc Nov 2019	AJ	GL	307939				500.00		2,500.00
	12/31/2019	Record Central Svc Cost Alloc Dec 2019	AJ	GL	307940				500.00		3,000.00
	01/31/2020	Record Central Svc Cost Alloc Jan 2020	AJ	GL	307941				500.00		3,500.00
		TOTAL							3,500.00	0.00	3,500.00
		GRAND TOTAL							63,239.91	173,640.33	110,400.42 CR

Does Not include labor

MARCH 2020 CHAIRPERSON REPORT

- Attended the March 3rd Tahoe Keys Stakeholder Committee meeting
 - o No meetings have been held since November
 - o Topics discussed:
 - Proposed test project and alternatives
 - 2019 water quality studies
 - Nutrient cycling and baseline conditions
 - Communication and engagement plan
 - FAQs for website
- Attended the March 4th Tahoe Keys Stakeholder Consultation Circle meeting

2020-21 TWSA BUDGET WORKSHEET (200.28.99)

	Proposed 2020-21	Approved 2019-20
Paid Advertising		
ADS: TV/Radio/Print	\$ 6,000	\$ 6,000
Tahoe In Depth Sponsorship (\$500 x 3)	\$ 1,500	\$ 1,500
Earth Day events (North and South Shore) sponsorships (\$500 each)	\$ 1,000	\$ 1,000
Regional conference sponsorships	\$ 1,500	\$ 1,500
State of the Lake Report sponsorship	\$ 2,500	\$ 2,500
Total:	\$ 12,500	\$ 12,500
Office Supplies		
Monthly Xerox machine costs, Board materials, brochures, in-house printing	\$ 1,400	\$ 1,400
Total:	\$ 1,400	\$ 1,400
Operating General		
TWSA staff uniforms / member logo trademarked clothing	\$ 1,000	\$ 1,000
NDEP Grant - water bottles	\$ 10,000	
NDEP Grant campaign, design,	\$ 21,000	
TWSA Water Bottles	\$ 16,000	\$ 16,000
Board meeting hospitality (lunches)	\$ 1,600	\$ 1,600
Monitoring Supplies	\$ 600	\$ 600
Snapshot Day	\$ 600	\$ 600
Water Fill Station Rebate Program	existing budget rollover /reserves	\$ 10,000
Dog Waste Campaign (bags, small dispensers)	\$ 2,500	\$ 2,500
Booth fees and event supplies	\$ 1,000	\$ 1,000
Total:	\$ 54,300	\$ 33,300
Postage		
Annual Report and general correspondence		
Total:	\$ 200	\$ 200
Printing / Publishing		
'Drink Tahoe Tap' stickers	\$ 6,000	\$ 6,000
Annual Report Printing (outsourced)	\$ 2,500	\$ 2,500
Watershed Protection signs	\$ 1,000	\$ 1,000
Total:	\$ 9,500	\$ 9,500
Professional Services		
Professional Services (WQTS estimate for technical reviews) ^	25,000	\$ 50,000
Reserve fund	\$ 15,000	\$ 10,000
Total:	\$ 40,000	\$ 60,000
Travel / Conferences		
Annual Mileage - personal vehicles	\$ 1,000	\$ 1,000
Phone	\$ 200	\$ 200
Regional Conference	\$ 800	\$ 800
Conference Call service for meetings	\$ 500	\$ 500
Total:	\$ 2,500	\$ 2,500
Grand Total Operating:	\$ 120,400	\$ 119,400
Total Budgeted Salary and Benefits	\$ 81,805	\$ 79,800
1366 combined hours, annual (MOD&SGV)		
Total Annual Budget (Operating & Salaries)	\$ 202,205	\$ 199,200
Revenue from reserves allocated to WQTS professional services^	\$ (25,000)	\$ (50,000)
Grant Funds (NDEP - Microplastics)	\$ (31,000)	
Total Budget minus reserves/grant funds	\$ 146,205	\$ 149,200
STPUD Fee (10% of total budget minus addl. revenue)	\$ (14,621)	\$ (14,920)
Members Cost share TOTAL minus STPUD fee	\$ 131,585	\$ 134,280
IVGID Share	\$ (30,768)	\$ (32,753)
Total fees all other members	\$ 100,817	\$ 101,527

Total Reserve (deferred revenue) for TWSA = \$149,030.31 (2/26/2020)
Current Budget Remaining Balance = \$79,422.60 (2/26/2020)

Shared	\$61,876	TOTAL TO
Depend	\$69,708	SHARE
		\$131,584

2020-21 TWSA Cost Share (PROPOSED) based on 3 year average / production daily flow

	Shared Costs	Dependent Costs	Avg Daily Flow gpd	Member cost share	% of Total	Shared Cost	Depend Cost	Flow Ratio
Incline Village General Improvement District	9.10%	36.06%	2,675,216	\$ 30,768	23.38%	\$5,631	\$25,137	0.361
Kingsbury General Improvement District	9.09%	9.75%	723,529	\$ 12,423	9.44%	\$5,625	\$ 6,799	0.098
Round Hill General Improvement District	9.09%	2.47%	183,092	\$ 7,345	5.58%	\$5,625	\$ 1,720	0.025
Edgewood Water Company	9.09%	7.60%	563,842	\$ 10,923	8.30%	\$5,625	\$ 5,298	0.076
Zephyr Water Utility	9.09%	2.84%	210,734	\$ 7,605	5.78%	\$5,625	\$ 1,980	0.028
Glenbrook Water Company	9.09%	4.00%	296,635	\$ 8,412	6.39%	\$5,625	\$ 2,787	0.040
Tahoe City Public Utility District	9.09%	16.38%	1,215,339	\$ 17,044	12.95%	\$5,625	\$11,420	0.164
Skyland	9.09%	2.58%	191,040	\$ 7,420	5.64%	\$5,625	\$ 1,795	0.026
Cave Rock	9.09%	2.58%	191,040	\$ 7,420	5.64%	\$5,625	\$ 1,795	0.026
Lakeside Park Association	9.09%	1.8%	133,777	\$ 6,882	5.23%	\$5,625	\$ 1,257	0.018
North Tahoe Public Utility District	9.09%	13.94%	1,034,317	\$ 15,343	11.66%	\$5,625	\$ 9,719	0.139
Total to split	100.00%	100.00%	7,418,561	\$ 131,584	100.00%	\$61,876	\$69,708	1
STPUD				\$14,920				
Total Budget to split				\$ 131,584				
IVGID share				\$ (30,768)				
Total other agencies shares (less IVGID/less STPUD)				\$ 100,816				

Shared Costs are 25% staff/75% operating

Dependent Costs are 75% staff/25% operating

CLEAN UP THE LAKE

PARTNERSHIP & DONOR DECK

501(c)3 - Non Profit Organization

Registered Charity in Nevada, California & Washington



“Lake Tahoe is about to undergo what may be the biggest underwater cleanup in its history.”

-The Weather Channel



PRESS PHENOMENON



THE SACRAMENTO BEE

“Scuba divers plan unprecedented Tahoe clean-up ”

-Seattle PI



“Their scuba diving effort will be the largest-ever underwater cleanup of Lake Tahoe’s history.” -KRON4 (bay area TV network)

INTRODUCTION

OUR NPO & THE CLEANUP

Clean Up The Lake 501(c)(3)*

A TAHOE based 501c3 NPO focused on scuba clean ups, beach + community clean ups, and waste reduction strategies in the Lake Tahoe region.

72 Mile Cleanup

Goal: Diving and cleaning every square inch of the subsurface 72 mile shoreline of Lake Tahoe.

Strategy:

- 8 divers per day, 3 days/week, between 6/1/2020 till 9/31/2020 until our team has cleaned every inch of the lake-floor shoreline.
- Shoreline to 30 feet deep dives.

Tactics:

- Utilize a team of 8 divers at a time, 14 divers on our team total.
- Shoreline focus, most concentrated & efficient trash removal.
- Surface support with boats + PWCs to transport trash + divers
- 3x person jump boat team for heavy trash areas
- 2/8 Divers = Daily Leads: Matt Meunier and Colin West
- Lead Divers will use GPS marking for “problem areas” & heavier items to monitor & remove in the future. PWC will carry GPS & radio comms to divers below.
- Use of lift bags and cranes where needed in 2020-2021

Clean Up begins 6/1/2020

* Please note the 501(c)3 NPO is legally titled “Clean Up The Cayes” after initially being inspired by pollution in Belize, and a DBA for Clean Up The Lake is currently in progress.



WHY DONATE?

WHAT IS UNDER THE SURFACE OF TAHOE?

2 x TEST CLEAN UP'S FINDINGS:

Aug 2018: In ONE DAY, CUTL Partner Tahoe Dive Center helped to host a scuba clean up at Bonzai Rock that pulled over **600+ pounds of trash** from under the surface in one tiny cove about 1/4 mile long.

Sept 2019: In ONE DAY, CUTL strategized a larger clean up on 3/4 mile of shoreline from the north end of Whale Beach to Secret Beach and pulled out **311 pounds of trash**, with much trash left behind due to not having the tools to reach it between the Granite Rocks.

2 Clean Ups = +/- 1000 pounds of trash in 1 mile of Tahoe!!!

LAKE TAHOE'S TRASHY SECRET:

- **FACT:** Lake Tahoe's residents were not always as environmentally conscious, and trash has been collecting.
- **FACT:** Over 115 aluminum cans were pulled out of .75 of shoreline in one day with pull tab closures, that closure stopped in the 1980's.
- **FACT:** Microplastics were discovered in Lake Tahoe by both DRI and UC Davis in Summer 2019.

There has not been another organization 100% dedicated to scuba cleaning what's under the surface of Tahoe until Clean Up The Lake. Trash has been collecting, literally UNTOUCHED for decades waiting to be removed!

With your help in donating we can do a full scale clean up of the Lake Tahoe shoreline's sub-surface and have the resources to continue to monitor and keep Lake Tahoe clean long into the future.



WE NEED YOUR HELP

[CLICK HERE TO DONATE!](#)

Choose An Option + DONATE!

We are asking your help to make this cleanup a reality. Will you join us by donating \$1,000 or more to be an official partner?

1) Donate Any Amount You Can?

We THANK YOU for your amazing support!

2) Donate \$1,000 USD on our Adopt A Mile Program

Get the benefits listed on the next page...

3) Be a Gold / Silver / Bronze Partner of Clean Up The Lake

Be a much larger part of the solution, get a larger tax write off, and enjoy partner benefits listed on the next page!

4) Donate \$1K or more now & set a total fiscal goal to raise from now till this summer through fundraising events & other fundraising strategies!

Commit to a mile or gold/silver/bronze, and set a fiscal goal to raise a certain level of Funds by the time the clean up is underway. Gold? Silver? Bronze? Grow your partnership level. How much can you raise when it comes to protecting Lake Tahoe for future generations?

As a Thank You - We Will Give You...

GOLD PARTNERS - \$10K

Customizable Partnership

-unique to this level & above

Largest Plaque at sculpture in Tahoe City

-will be top of the list of donors, plaque in GOLD.

Partnership Mention in Each Press Release

SILVER PARTNERS - \$5K

On-Site Event Branding

Prominent Logo Placement on Film & Website

Largest Plaque at sculpture in Tahoe City

-Beneath Gold on the list of donors, plaque in SILVER.

BRONZE PARTNERS - \$2.5K

Largest Plaque at sculpture in Tahoe City

\$1K - ADOPT A MILE

1 x Discovery Scuba per mile

- Experience your first breath underwater with Tahoe Dive Center.

Tax Deductible Receipt by 501c(3)

Digital Marketing

- Listed with link on CUTL Website
- Social Media Business recognition

Credit in Feature Film

-Your Name or business will be honored in the credits.

Plaque at Sculpture in Tahoe City



ABOUT THE TEAM

Clean Up The Lake 501c3

* Please note the 501(c)3 NPO is legally titled "Clean Up The Cayes" after initially being inspired by pollution in Belize, and a DBA for Clean Up The Lake is currently in progress.



Colin West

Founder & Executive Director



Matt Meunier

Dive Operations Manager



Meghan Burk

President of the Board



Leslie Broderson

Project Lead - Dive Safe
Dive Smart

Where Your Donation Will Go:

- § Thorough cleaning of the sub-surface Tahoe's shoreline!
- § Logistical Preparation & 12 Months of Staff Planning
- § Finances to procure equipment & procure special tools
- § Wages for Employees & Contractors to dedicate their time
- § Surface Support Vehicles (Boats/PWCs)
- § Gasoline/General Clean Up Supplies/Maintenance
- § Dive Gear (scuba + dive trash bags + full face mask + comms)
- § Various additional Costs as incurred

more info available upon request on use of funds



“MAKE A DIFFERENCE”

Feature Documentary Film

The Film

Colin West and his film team will be producing a feature length documentary, titled “Make A Difference”, that will focus on those actively making a difference in the battle against plastic pollution across the globe. The 72 mile scuba cleanup of Lake Tahoe will be THE highlight within this film.

CLICK BELOW TO VIEW TRAILER



CONTACT US

POINT OF CONTACT: COLIN WEST



cleanupthelake@gmail.com



[Go Fund Me](#)



+1 (530) 562 - 7131



PO Box 385 Tahoe City, CA
96145

3.21.1 Cumulative Setting

Table 3.20-1 provides a list of cumulative projects that could occur simultaneously with implementation of the proposed program.

Table 3.20-1 Cumulative Projects List

Project Name	Location	Description	Project Status
UV Light Pilot Control Project	Tahoe Keys, Lakeside Marina and Lakeside Beach	Involves use of ultraviolet-C light to damage the DNA and cellular structure of invasive plants.	2019–2020
2014 Lake Tahoe Aquatic Invasive Plant Control Implementation Project	Lake Tahoe, marinas, Truckee River	Uses various control methods to treat aquatic invasive plants.	Ongoing, funding dependent
Lake-wide Control of Aquatic Invasive Plant Project Lake Tahoe, California and Nevada with new methods proposed	Lake Tahoe, marinas, Truckee River	Uses various control methods to treat aquatic invasive plants.	Environmental review currently in progress
Truckee River Eurasian Watermilfoil Removal	Truckee River	Map and implement control efforts to remove Eurasian watermilfoil.	Ongoing, funding dependent
Asian Clam Control and Removal	Sand Harbor	Includes installation of rubber bottom barriers and use of diver assisted suction removal.	Ongoing, funding dependent
Veliger monitoring	Fallen Leaf Lake, Elks Point, Tahoe Keys, Emerald Bay, Meeks Bay, North Tahoe Marina, Sand Harbor, Obexers Marina, Cave Rock, and Echo Lake.	Involves monitoring for larva of bivalve mollusks using plankton tows.	Ongoing, seasonal annual monitoring
Ski Run Marina Aquatic Invasive Plant Control Pilot Project	Ski Run Marina	Uses laminar flow aeration to determine efficacy of aquatic invasive plant control.	Ongoing

Project Name	Location	Description	Project Status
Tahoe Keys Aquatic Weed Control Methods Test	Tahoe Keys Lagoons and Marina	Would involve use of three different types of herbicides followed by a maintenance period using non-chemical control methods. It would also involve use of laminar flow aeration.	Environmental review in progress.
General Creek Aquatic Plant Control Project	General Creek	Surveillance monitoring and removal of Eurasian watermilfoil.	Ongoing
Meeks Bay Aquatic Invasive Species Plant Control and Monitoring Project	Meeks Bay Marina	Removal of Eurasian watermilfoil and monitoring.	Ongoing
Taylor and Tallac Ecosystem Restoration Project, Phase 1	Tallac and Taylor Creek	Restore ecological processes and functions by eradicating/controlling aquatic invasive species.	No current activities
Baldwin Beach Eurasian Watermilfoil Removal Project	Offshore Baldwin Beach	Surveillance monitoring and removal of Eurasian watermilfoil.	Ongoing
Pope Marsh Eurasian Watermilfoil Removal Project	Pope Marsh	Surveillance monitoring and removal of Eurasian watermilfoil.	Ongoing
Camp Richardson Eurasian Watermilfoil Removal Project	Camp Richardson	Surveillance monitoring and removal of Eurasian watermilfoil.	Ongoing
Upper Truckee River and Marsh Restoration Project	Upper Truckee River and Marsh	Restore Upper Truckee Marsh and remove the sailing lagoon. Invasive species control for Eurasian watermilfoil and curly-leaf pondweed will be implemented.	Ongoing
Timber Cove Eurasian Watermilfoil Removal Project	Timber Cove	Surveillance monitoring and removal of Eurasian watermilfoil.	Ongoing
Nevada Shoreline Aquatic Invasive Plant Control	Wavoka Estates rock crib	Removal of Eurasian watermilfoil followed by surveillance monitoring.	Ongoing
	Tahoe Beach Club	Removal of Eurasian watermilfoil followed by surveillance monitoring.	Ongoing
	Burke Creek	Removal of Eurasian watermilfoil followed by surveillance monitoring.	Ongoing
Elk Point Eurasian Watermilfoil Removal Project	Elk Point Rock Crib	Removal of Eurasian watermilfoil followed by surveillance monitoring.	Ongoing
Elk Point Marina Aquatic Invasive Plant Control Project	Elk Point Marina	Removal of Eurasian watermilfoil and curlyleaf pondweed populations in Elk Point Marina followed by surveillance monitoring.	Ongoing

Source: Compiled by Ascent Environmental 2019

2018 TRPA BEST IN

TKPOA Bubble Curtain and Seabin Project

By Gregory J. Hoover, TKPOA WQ Manager / AIS Management Coordinator

THE TAHOE KEYS PROPERTY OWNERS ASSOCIATION

(TKPOA) was awarded the 2018 Tahoe Regional Planning Agencies (TRPA) Best in Basin Award and a Certificate of Commendation from Nevada Senator Catherine Cortez Masto for the West Channel Bubble Curtain and Seabin Project. The Water Quality Staff received this prestigious award with five other Lake Tahoe Basin Agencies at the December 18, 2019 TRPA Governing Board Meeting. The Best in the Basin awards program annually recognizes and showcases public and private projects that demonstrate exceptional planning, implementation, and compatibility with Lake Tahoe's environment and communities.

The TKPOA introduced the Boat Backup Station in the West Channel in 2016 to help combat the number of plant fragments that are transported into Lake Tahoe. During the 2018 season, TKPOA installed a Bubble Curtain in the West Channel to help reduce the number of fragments spreading out into Lake Tahoe. In 2019, TKPOA installed the first of two Seabins in the West Channel to further reduce the number of fragments spreading out into Lake Tahoe by halting the plants at the Bubble Curtain and collecting them into the Seabin.

This is the first time that these two technologies have been combined together to form an intergraded system used for fragment control from Aquatic Plants. The objective of the Bubble Curtain and Seabin Project is to (1) create a barrier in the West Channel which would reduce the amount of plant fragments and debris from entering Lake Tahoe, (2) collect the diverted weed fragments and debris and (3) integrate these methods that have only been used independently of each other. This program aims to monitor and record the integration of these methods, and their efficiency and effectiveness.

The bubble curtain setup design consists of a "V"-shape formation. The purpose for this design was to

create three collection points for plant fragments and garbage to collect, one in the center and two on either of the channel near the bulkhead. The Seabin was placed on the West Channel bulkhead next to the Bubble Curtain. It was strategically placed at this location due to the Bubble Curtain design and placement. The Seabin, along with the Bubble Curtain, ran for 24 hours a day and seven days a week.

The Bubble Curtain and Seabin collection and monitoring took place twice daily, five days a week from June, 2019 to October 2019. Over the 131 days of monitoring, 159.32 ft³ of weed fragments were collected, sorted and identified. These plants and their percentages were: Eurasian Water Milfoil, (*Myriophyllum spicatum*) 49.91%, Coontail (*Ceratophyllum demersum*) 29.94%, Curly Leaf Pondweed (*Potamogeton crispus*), 10.90%, Elodea (*Elodea canadensis*) 4.81%, Richardson Pondweed (*Potamogeton richardsonii*) 2.51%, Leafy Pondweed (*Potamogeton foliosus*) 1.0%, Common Bladderwort (*Utricularia macrorhiza*) 0.04%, other plants .35% and common grass clippings 0.18%.

Due to the integration of these technologies and the success that the project has had in its first year, it was awarded the **2018 Tahoe Regional Planning Agency (TRPA) Best in Basin**. Due to the success that we have had, the WQ Staff is looking at installing both a similar system into the East Channel and smaller systems throughout the West Channel in the 2020/2021 seasons.

We would like to thank Jessie Patterson and the League to Save Lake Tahoe who partnered with the TKPOA and provided \$5000 in grant funding for this project. We would also like to thank the Water Quantity Committee and the Water Quantity Staff for all of their hard work on this project over the last two seasons.

BASIN



During the 2018 season, TKPOA installed a Bubble Curtain in the West Channel to help reduce the number of fragments spreading out into Lake Tahoe



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The new prohibitions in the Executive Order apply to all Californians and will take effect immediately upon approval of the regulation by the Office of Administrative Law, these include:

- *Irrigation with potable water of ornamental turf on public street medians;*

Because of this Prohibition on watering public street medians, the TKPOA was required to stop watering the Tahoe Keys and Ala Wai Boulevard medians.

On February 8th, 2017 the State of California – State Water Resources Control Board extended the “Emergency Regulations”, prohibitions against wasting Water.

On April 26th, 2017 the State of California – State Water Resources Control Board rescinded this Prohibition. Since this Prohibition has been rescinded the TKPOA has only continued to provide drip irrigation to the trees on these medians and basic landscaping to trim and weed the existing turf per Board direction to continue water conservation efforts and to seek a long

term solution. Since 2017 TKPOA Staff has provided proposals for “phased” median landscaping projects, but based on cost and timing none have been approved to move forward.

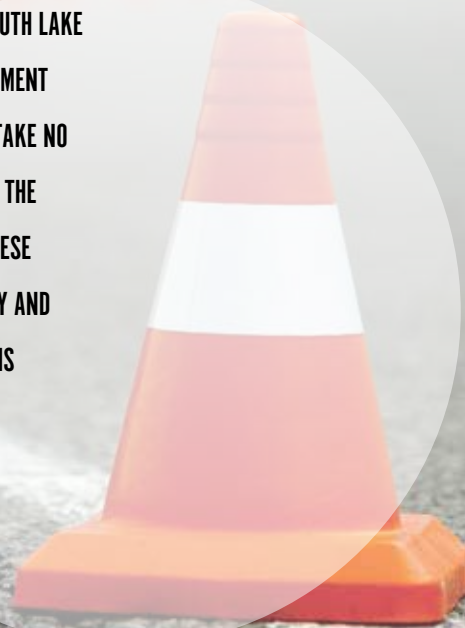
In past meetings with the City of South Lake Tahoe (CSLT) – Public Works Department they have indicated that they will take no responsibility for the medians that are located on the Tahoe Keys and Ala Wai Boulevards, even though these streets and medians have been dedicated to the City and they have also indicated they have no existing plans or schedules for street or curb maintenance to provide at this time.

If you are interested in submitting a “Board Subcommittee Individual Request to be Appointed Form” for this “Tahoe Keys Boulevard Median Project Subcommittee”, or if you have any additional questions regarding this subcommittee please contact Angela LaTella, TKPOA Administrative Assistant at the TKPOA Office, at 356 Ala Wai Blvd., South Lake Tahoe, CA 96150, (530) 542-6444, or email at ALaTella@tahoekeyspoa.org.



**IN PAST MEETINGS WITH THE CITY OF SOUTH LAKE
TAHOE (CSLT) – PUBLIC WORKS DEPARTMENT
THEY HAVE INDICATED THAT THEY WILL TAKE NO**

**RESPONSIBILITY FOR THE MEDIANS THAT ARE LOCATED ON THE
TAHOE KEYS AND ALA WAI BOULEVARDS, EVEN THOUGH THESE
STREETS AND MEDIANS HAVE BEEN DEDICATED TO THE CITY AND
THEY HAVE ALSO INDICATED THEY HAVE NO EXISTING PLANS
OR SCHEDULES FOR STREET OR CURB MAINTENANCE TO
PROVIDE AT THIS TIME.**



MEMBERSHIP VOTE

to Replace the “Second Payment” of the Approved 2017 Water Quality Special Assessment

By Kirk J. Wooldridge, General Manager

AT THE SATURDAY DECEMBER 21ST, 2019 Board of Directors – Executive Session Board Meeting, the Board approved RESOLUTION TKPOA No. #2019-0087 to authorize a Vote of the TKPOA Membership. A Membership vote to replace the “Second Payment” of the Approved 2017 Water Quality Special Assessment for **“The Authorization to Pursue Regulatory Approvals for the Use of Aquatic Herbicides to Control Aquatic Invasive Weeds in the Tahoe Keys Lagoons”** [RESOLUTION TKPOA #2017-001].

Water Quality Special Assessments:

There are two remaining payments of the already approved “2017 Water Quality Special Assessment” – each in the amount of \$600 per TKPOA Property Owner (\$1,200 total) that had been expected to be collected in 2019 and 2020 respectively. The Water Quality Committee (WQC) has recommended to the Board for a 2020 Water Quality Special

Assessment to replace the current approved “2017 Water Quality Special Assessment” – “Second Payment” to a reduced amount discussed later within this letter. The WQC proposes collecting the **“Second Payment”** during the first half of 2020. Furthermore, the WQC anticipates a delay in the collection of the Third Payment. This delay is based on the Environmental Impact Report (EIR) required by the California Environmental Quality Act (CEQA) and Lahontan Regional Water Quality Control Board (LRWQCB), and an Environmental Impact Statement (EIS) required by the Tahoe Regional Planning Agency (TRPA).

The TKPOA has been actively investigating approaches to control the aquatic invasive weeds in the Tahoe Keys Lagoons since 2011. To date the past and current Boards have proceeded with efforts to control the Aquatic Invasive Species (AIS) weeds based upon input from experts, stakeholders, and community members, including TKPOA Property

Owners. We still believe the most feasible and cost-effective way to control the aquatic weeds is through the use of aquatic herbicides.

In 2017, the TKPOA received a positive majority vote for the Ballot – RESOLUTION TKPOA #2017-001 for the “Authorization to Pursue Regulatory Approvals for the Use of Aquatic Herbicides to Control Aquatic Invasive Weeds in the Tahoe Keys Lagoons, and the Water Quality Special Assessment”. This positive vote authorized the Board to approve a Special Assessment of not more than \$1,600 per property (\$400, \$600 and \$600) to fund the actions necessary to obtain regulatory approvals for the use of aquatic herbicides. This positive vote allowed the Board to collect and bill for the “First Payment of the Special Assessment” of \$400 in June 2017. This “First Payment” generated \$611,600 in funding for this project.

The final reconciliation has shown that all of the funds from the “First Payment” of the Special Assessment have been utilized during the 2017–2019 fiscal years, as reported in the May 2018 and June 2019 *Keys Breeze* monthly magazine.

The Remaining Two Payments as Voted – 2017

Per the 2017 “Authorization to Pursue Regulatory Approvals for the Use of Aquatic Herbicides to Control Aquatic Invasive Weeds in the Tahoe Keys Lagoons, and the Water Quality Special Assessment” Ballot language:

“As planned the second payment would be not more than \$600 conditioned on receipt of the requisite regulatory approvals to conduct a small-scale test of aquatic herbicides in the Tahoe Keys Lagoons and would be payable 45 days after receipt of approval and past due 30 days later. This payment would cover the cost of completing all aspects of a small-scale aquatic herbicide test and continued efforts to obtain grant funding. This is projected to occur in 2018”.

“The third payment would be not more than \$600 conditioned on successful completion of the small-scale herbicide test and acceptance of the test results and would be payable 45 days after receipt of regulatory approval of the small-scale test results and past due 30 days thereafter. This is projected to occur in 2019. This payment would cover the cost of work through gaining approval for full-scale use of herbicides during 2021, 2022, and 2023”.

The TKPOA has been unable to collect the “Second and Third Payments” as stated above due to the requirements and timing of EIR required by CEQA and LRWQCB, and the EIS required by the TRPA.



*The final reconciliation has shown that all of the funds from the “First Payment” of the Special Assessment have been utilized during the 2017–2019 fiscal years, as reported in the May 2018 and June 2019 **Keys Breeze** monthly magazine.*

THE GOOD NEWS – 2019 “Funding and Grants”

The TKPOA has successfully submitted the “Tahoe Keys Lagoons Aquatic Weed Control Methods Test Application” that triggered the need for EIR/EIS and CEQA. The Control Methods Test application proposes the use of targeted herbicides as one weed control method to test alongside and in combination with other methods to reduce and control the abundant growth of invasive and nuisance aquatic weeds that are compromising water quality and degrading beneficial uses of the Tahoe Keys lagoons, as well as threatening the future ecosystem and water quality of Lake Tahoe.

The environmental analysis will determine if the use of U.S. Environmental Protection Agency (EPA) and the California Department of Pesticide Regulation (DPR) approved herbicides can meet the strict environmental standards of Lake Tahoe’s classification as a Tier Three, Outstanding National Resource Water (ONRW).

The original estimated cost of obtaining regulatory approvals that was presented in 2017 to use aquatic herbicides was estimated to be \$2.4 million between 2017 and 2020. The Board, consultants and staff had worked very hard to identify all costs, expenses and anticipated receivables. The costs provided were the best estimates based on what is known at that time.

Since this 2017 estimate was determined, the TRPA has been able to secure funding from the United States Army Corp of Engineers (USACE) – from the Lake Tahoe Restoration Act for up to \$3.0 million dollars to conduct this regulatory process review of the TKPOA’s submitted application. Being the first of its kind, with a significant amount of data collection needed this is on the higher end of any EIS the TRPA has conducted. The “Facilitation Process” has been contracted with Zephyr Collaboration through 2021 for \$250,000, the “Environmental Monitoring and Investigation” has been contracted with ESA for \$750,000 and the “EIS/EIR Documentation” work has been contracted with TRC Solutions Inc. for \$750,000. In addition to this the TRPA has contracted with Inventive Resources for Ultraviolet Light (UV) test applications by Boat for AIS weed control in the Tahoe Keys. At this time the total investment for this TKPOA application funded by the TRPA through 2021 is estimated at approximately: \$2.5 million.

With that said, this TKPOA application is a priority project at TRPA, they have staff assigned to this project that have spent over 2500 hours for calendar year 2019, which does not include the time of the TRPA Executive Director, legal, communications or finance teams. The

TRPA currently plans to carry over the same level of commitment each year through 2021. The TRPA has worked diligently over the last several years carrying the message to Washington, D.C. and working with the Tahoe delegation to receive this federal funding dedicated to this project application, which has allowed the TRPA move forward with the environmental documentation and stakeholder process.

The TRPA, as one of the lead agencies on this project, had convened a core committee of stakeholders to select neutral facilitation services and an independent environmental consulting firm for the environmental analysis process. This “Stakeholder Committee” is composed of representatives from LRWQCB, TKPOA, TRPA, Tahoe Water Suppliers Association, and The League to Save Lake Tahoe. This Stakeholder Committee provided the selection of Zephyr Collaboration, TRC Solutions, Inc., with the USACE funding these contracts. The goal of this collaborative, multi-stakeholder process is to ensure stakeholder concerns and perspectives are addressed during the environmental analysis, resulting in a project plan that is science-based, broadly supported, and effective at controlling aquatic weeds in the Tahoe Keys lagoons.

The collaborative process design addresses a wide range of topics including establishing a project inquiry process, milestones that correspond with the EIR/EIS analysis and permitting schedule, designing a transparent, collaborative process that includes broad stakeholder perspectives and concerns, inviting an even broader Stakeholder Consultation Circle (SCC) and public to workshops at strategic milestones, and developing public outreach materials including a project website: www.tahoekeysweed.org. The regulatory and collaborative process has now produced the required “Tahoe Keys Aquatic Weed Control Methods Test” - Scoping Report as of October 31st, 2019.

In addition to this TRPA funding the TKPOA has received multiyear grant funding from the League to Save Lake Tahoe to implement additional AIS Weed technology based projects which include: Laminar Flow Aeration (LFA) with 10 diffusers, the West Channel Bubble Curtain and Sea Bins.

Much of these expenses were included in the TKPOA’s original estimates for the “Second and Third Payment” of “2017 Water Quality Special Assessment” of \$600 each, representing \$1.8 million dollars which was planned to be collected in 2019 and 2020 respectively. Now that the TKPOA and the WQC have reached these smaller project milestones with a better understanding of the future larger milestones, timing

and outside funding sources, it is time to review and reconcile these original approved plans for the “Second and Third Payment” of this approved “2017 Water Quality Special Assessment”.

Moving Forward 2019–2020

The Board and the WQC have now determined a replacement Special Assessment for “Second Payment” of the “2017 Water Quality Special Assessment” for the TKPOA Property Owners to vote on.

The proposed **new replacement “Second Payment” for the Special Assessment would be \$400 per Property Owner** to generate approximately \$611,600 for costs to be incurred in the 2020-2021 Fiscal Years to support the “Tahoe Keys Lagoons Aquatic Weed Control Methods Test Application” and the EIR/EIS and CEQA requirements. This “Second Payment” is less than the original \$600 per Property Owner due to the current and projected future funding that has been provided through the TRPA EIR/EIS process, as well as additional grants. This “Second Payment” Special Assessment would replace the \$600 Per Property Owner cost as approved in 2017.

At the Saturday October 19th, 2019 the Tahoe Key Property Owners Association (TKPOA) Board of Directors (Board) Regular Meeting, the Board approved the 2020 Operating Budget and Reserve Funding Plans that have resulted in Quarterly Assessment of **\$709**.

In additional to this reduction in the “Second Payment”, if approved, **an additional reduction will be realized in the \$709 Quarterly 2020 Assessment to \$688 for the Quarterly 2020 Assessment for the Second, Third and Fourth quarters.** The reduction in Quarterly Assessments would be due to the transfer of Water Quality Reserve Expenses scheduled for 2020 from the Quarterly Assessments to the new “Second Payment” Special Assessment for the “Tahoe Keys Lagoons Aquatic Weed Control Methods Test Application” and the EIR/EIS and CEQA requirements.

If approved the replacement “Second Payment” \$400 Special Assessment will be due in full by April 30th, 2020.

This revised replacement “Second Payment” assessment and related costs are detailed in the attached tables:

A. AIS AND HAB MANAGEMENT		QUANTITY	TOTAL
1. HARVESTING ENHANCEMENT			
	a. Aqua Harvester	1	\$54,000
	b. Tiger Cat	1	\$80,160
	c. Mobile conveyor	1	\$16,000
2. FRAGMENT CONTROL ENHANCEMENTS			
	a. Internal bubble curtains	3	\$15,000
	b. Larger bottom barriers for use under bubble curtains	10	\$2,500
	c. Additional skimmer boats	3	\$9,000
	d. Staffing - additional skimming crew	4	\$32,000
	e. New compressor for West Channel bubble curtain	1	\$6,000
	f. Dock Bubblers	5	\$2,750
3. HAB MANAGEMENT			
	a. LG Sonic Mezzo DB units	3	\$7,800
	b. Additional focused AIS fragment/HAB monitoring	1	\$15,000
	c. LFA Dye Circulation Study	1	\$9,500
	d. Internal bubble curtains	0	\$0
4. MISCELLANEOUS			
	a. Additional dataloggers	10	\$15,000
	b. YSI Exo Logger	1	\$6,000
	c. Weather Station	3	\$4,500

B. NUTRIENT MANAGEMENT		QUANTITY	TOTAL
1. WATER CIRCULATION			
	a. Components of Domenichelli recommendations	1	\$50,000
	b. West Lagoon to Tallac pumping evaluation	1	\$12,000
2. OFFSITE SOURCE MANAGEMENT			
	a. Yellow Pond Lily removal	1	\$22,500
	b. Test Phos-Loc in Tallac canal after pond lily removal	1	\$12,500
	c. Test Floating Island Wetlands in Tallac after pond lily removal	1	\$15,000
	d. P-Fertilizer ban throughout SLT	1	\$2,500

C. PROGRAM MANAGEMENT		QUANTITY	TOTAL
1. TECHNICAL SUPPORT FOR WDRS AND EIR/EIS PROCESS			
	a. Dr. Lars Anderson	1	\$9,000
	b. Sierra Ecosystem Associates (SEA)	1	\$56,000
	c. EMKO	1	\$49,000
2. OUTSIDE SERVICES TO SUPPORT ASSOCIATION EFFORTS			
	a. Downey Brand	1	\$12,000
	b. Outreach Consultant	1	\$2,400
3. AIS TECHNICIAN			
	a. Increase 2 position to year-round from seasonal for 2 years	4	\$68,000

D. RESERVE FUNDING		QUANTITY	TOTAL
1. WATER QUALITY RESERVE FUNDING			\$25,490
TOTAL			\$611,600
New "Second Payment" Special Assessment			\$400

The "Third Payment" of the 2017 Water Quality Special Assessment" will continue to stand for now, conditioned on successful completion of the EIR required by the CEQA and LRWQCB, and an EIS required by the TRPA, for the approval of the small scale testing of aquatic herbicides. This payment would cover the cost of work required to receive the approvals for full-scale use of herbicides in the future. This third payment would be payable 45 days after receipt of regulatory approval for the small-scale tests to take place and past due 30 days thereafter.

This will be reviewed and reconciled during the 2021 Annual Operating Budget development process. Moving forward, the use of projected to significantly reduce the density of the aquatic invasive species weeds so that they can be controlled in the future using non-herbicide control methods. The use of aquatic herbicides, combined with non-herbicide control

methods, is projected to reduce the cost of future weed control activities (estimated harvesting cost reductions are 30% following the first year of herbicide use and an additional 50% following the second year of herbicide use as part of future TKPOA Water Quality – Operating Budgets).

What is the Effect of Your Vote?

A **For (approval)** vote would replace the "Second Payment" of the 2017 Water Quality Special Assessment of \$600 with a revised replacement 2020 "Second Payment" a \$400 Special Assessment and also reduce the Second, Third, and Fourth 2020 regular Quarterly Assessments from \$709 to \$688. The actions following approval by a majority of the TKPOA Property Owners voting would be:

The \$611,600 generated from this **“Second Payment”** Special Assessment will be used to:

- Provide technical and legal support for the application that was submitted in July 2019 for approval to conduct a 13.7-acre aquatic herbicide demonstration within the Tahoe Keys.
- Continue AIS and Harmful Algae Bloom (HAB) Management with the use of new technology and equipment for the TKPOA Water Quality Staff and related Consultants
- Continue and improve Nutrient Management in the Tahoe Keys Lagoons through analysis and testing of portions of the Circulation System, implementation and testing of “Offsite Source Management” projects
- Continue Program Management to include the Technical Support for Waste Discharge Requirements (WDR’s), and the EIR/EIS process, Outside Services to Support the Association’s efforts and changing the current TKPOA staff AIS Technician positions from part time to full time for two years for required monitoring and sampling.
- Continue efforts to obtain grant funds to reduce costs.
- Continue outreach to non-member stakeholders and public education efforts.

All of these Special Assessment payments can be characterized as an investment in the future of the Tahoe Keys. Greatly reducing or eliminating the aquatic weeds from the Tahoe Keys Lagoons is anticipated to improve the quality of boating, recreation, and aesthetics thereby improving property values throughout our community.

There are risks associated with pursuing permits for the use of aquatic herbicides in Lake Tahoe. The risks include:

- The application for the small-scale aquatic herbicide demonstration in the Tahoe Keys Lagoons may not be approved.
- The small-scale herbicide demonstration may not be deemed successful.
- The application for permits for the full-scale use of herbicides in the Tahoe Keys Lagoons may not be approved.
- Any of the regulatory permit processes could be stalled or stopped by challenges to the environmental impact evaluation process.

These risks will be mitigated:

- The subsequent “Third Payment” Special Assessment payment is conditioned on completion of defined milestones in the regulatory permit process.
- The proposed small-scale aquatic herbicide demonstration will provide information on both the effectiveness of the aquatic herbicides and the practices needed to monitor and control the impact of the herbicides.

All of these Special Assessment payments can be characterized as an investment in the future of the Tahoe Keys.



An **Against (Disapprove)** vote would direct the Board to continue the use of the current aquatic weed control methods consisting of continued harvesting, weed fragment control, and mandated monitoring and reporting.

The actions following an Against vote would include:

- TKPOA would continue to meet regulatory requirements with respect to monitoring and reporting as specified in the regulatory operating permit for the Tahoe Keys Lagoons.
- TKPOA would continue to manually harvest aquatic weeds to keep the lagoons open to boat traffic and it would continue efforts to control the weed fragments created by harvesting.
- TKPOA would take legal action as required to protect the Association from liability claims, regulatory actions, or third-party lawsuits.
- Would not allow TKPOA to acquire better-suited equipment, which would thus prevent TKPOA from improving fragment collection around docks and difficult areas and would not allow TKPOA to try new ways to reduce HABs and improve water quality in the lagoons
- The Second, Third, and Fourth 2020 regular Quarterly Assessments would not be reduced and would remain at \$709, and could potentially increase in future years to maintain the same level of service because improvements in weed and HAB management would not be implemented.
- The “2017 Water Quality Special Assessment” approved “Second Payment” would remain in effect at \$600, along with the conditions required to trigger the collection of this assessment.

There are risks associated with continuing historical methods of aquatic weed control. The risks include:

- Allowing the aquatic invasive infestation to continue to grow increases future weed harvesting costs and negatively impacts boating, recreation, and water quality. This, in turn, adversely impacts property values and rental income.
- Lack of action will continue to increase the spread of aquatic invasive weeds in Lake Tahoe.
- The LRWQCB could mandate action (e.g. boat inspections prior to entering Lake Tahoe from the Tahoe Keys Lagoons, extensive use of bottom barriers each year until aquatic invasive weeds have been eradicated) which would likely increase future aquatic invasive weed control costs. This action could also lead to extended and costly litigation.
- Under the Federal Clean Water Act, individuals could bring litigation to either force LRWQCB to act or to force TKPOA to act to control the aquatic invasive weeds.





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ENTRY FORM

Deadline for Submission: January 15 of a given year

Submission Requirements: Completed entry form and the application report (described below) to awards@awwa.org

Submit To: email

Name of organization: Tahoe Water Suppliers Association (TWSA)

State(s)/Province(s) in which the organization operates: CA / NV

Organization Contact:

Name: Madonna Dunbar

Title: Executive Director

Mailing Address: 1220 Sweetwater Road

Incline Village NV 89451

Tel: (775) 832 1212 Fax: ()

E-mail: mod@ivgid.org

Is your organization a water system? Yes No

If the organization is a water system, is it a Utility or Small System Member of AWWA?

Yes, Multiple AWWA Members in TWSA - Home agency is Incline Village General Improvement District (IVGID)

There are 12 TWSA members:

- Cave Rock Water System
- Edgewood Water Company
- Glenbrook Water Cooperative
- Incline Village General Improvement District
- Kingsbury General Improvement District
- North Tahoe Public Utility District
- Round Hill General Improvement District
- Skyland Water Company
- South Tahoe Public Utility District
- Tahoe City Public Utility District
- Zephyr Water Utility
- Lakeside Park Association

AWWA Membership Number (Incline Village GID)

Population Served by the water system: FULLTIME: Each primary member (surface water) = under 10K; STPUD = 25K (groundwater)
<50,000 year round members collective; >100,000 daily in high season

For wholesaler, provide total population served by all consecutive system: collective<50K

Average daily water production for the water system (mgd) ≤ 1MGD

Does this application apply to protection of surface water, groundwater, or both types of sources?

Tahoe Basin, surface water and groundwater

Entry Form - Exemplary Source Water Protection AwardAPPLICATION REPORT

Questions to address in the Application Report:

1. Please describe your source water protection program *vision* and how it was developed.
[5 points]

The Tahoe Water Suppliers Association (TWSA) is a Lake Tahoe based partnership comprised of California and Nevada municipal water agencies, dedicated to providing clean and safe drinking water. Our water source is Lake Tahoe, allowing us to deliver some of the finest drinking water in the world. The vision of the TWSA is to protect the quality of the purveyors' drinking water from waterborne contaminants that are potentially harmful to human health. Source water protection is an effective tool in a multi-barrier approach to protecting drinking water. Six of the TWSA members maintain filtration exemption treatment status, which drives our collective efforts on source water protection in the Tahoe Basin.

In accordance with federal and state guidelines, members of the association have established a Watershed Control Program (WCP) and report annually on their progress. This information is documented annually, in the publication of the *TWSA Watershed Control Program Annual Report*. Eight areas have been identified as the focus of the WCP including: education, monitoring, data management, regulatory, mapping, administration, water conservation, and water rights.

“The mission of the Tahoe Water Suppliers Association is to develop, implement and maintain an effective watershed control program in order to satisfy recommendations in watershed sanitary surveys, advocate for the protection of Lake Tahoe as a viable source of drinking water, and to satisfy additional state and federal requirements.”

In 2002, with encouragement from Nevada State Health officials, the Nevada Tahoe Water Suppliers Association (NTWSA) was formed. Six purveyors from the original partnership formed an association under a multi-party agreement to address federal and state source water protection regulations, and fulfill recommendations of previous sanitary surveys. The Tahoe Water Suppliers Association (TWSA), formerly Nevada Tahoe Water Suppliers Association, changed its name in December 2005 with the addition of the first California water purveyor, North Tahoe Public Utility District. In 2019, TWSA celebrated its 17th year as an Association.

There are now 12 members in the Association:

Cave Rock Water System, Edgewood Water Company, Glenbrook Water Cooperative, Incline Village General Improvement District, Kingsbury General Improvement District, North Tahoe Public Utility District, Round Hill General Improvement District, Skyland Water Company, South Tahoe Public Utility District, Tahoe City Public Utility District, Zephyr Water Utility, Lakeside Park Association

Appointed staff members from each agency form the TWSA board. The largest partner, IVGID, offered its Resource Conservationist as the association's Executive Director. The agreement stipulates cost sharing of expenses incurred by IVGID on behalf of the association. Members pay an annual fee, in part proportional to the size of their service areas and in part, in equal amounts representing common administrative costs. The TWSA budget averages \$150,000, annually, for staff and operating costs.

2. Please describe your source water *characterization*.
[5 points]

The purpose of describing a watershed that affects a drinking water supply is to provide information that will help to evaluate the vulnerability of the source (EPA 1999). TWSA purveyor members are located around Lake Tahoe, in California and Nevada. 11 of the 12 TWSA members use the lake as a primary or

secondary water source. Water is taken directly from the lake to service both a permanent and visitor population. Several members have auxiliary groundwater sources. South Tahoe Public Utility District, utilizes groundwater sources only. The watershed description briefly summarizes general location and features of the basin and source water, water system, population and land ownership, and local agreements. The Lake's location, unique physical characteristics, and national support for its protection and preservation create a distinctive political backdrop and regulatory system.

Lake Tahoe is one of the deepest and clearest lakes in the world. As such, it is a highly sought out destination for recreation, tourism and home ownership. Clarity and exceptional water quality are the basis of Lake Tahoe water quality goals. These important features give Lake Tahoe important designations.

Both the federal government and California government have designated Lake Tahoe an "Outstanding National Resource Water (ONRW) Tier 3" which is the highest designation available. Nevada has designated Lake Tahoe a "Water of Extraordinary Ecological or Aesthetic Value". At the same time, Lake Tahoe had been identified as an impaired body of water for not meeting applicable water quality standards established through the Clean Water Act. Along with this designation, came the requirement to establish Total Maximum Daily Loads (TMDL) for the pollutants that contribute to the water quality impairments.

Lake Tahoe is a high alpine lake located within both the Nevada and California state lines. It is 22 miles long and 12 miles wide, with a surface area of 122,200 acres or 193 sq. miles. Approximately two-thirds of the land area is within California and one-third within Nevada. To the west, the Sierra Nevada Mountain range borders the basin across from the Carson Range on the east side of the lake. The basin is described as a high alpine and sub-alpine ecosystem. The primary soil type is granite (USGS 2003).

In addition to aesthetic enjoyment, the exceptional quality of water in the Lake Tahoe Basin supports a number of beneficial uses related to human and environmental health, including drinking water supply, water contact recreation, wildlife habitat, and aquatic life and habitat. During the development of the Lake Tahoe TMDL, the plan created to reverse the decline in deep-water transparency in Lake Tahoe and to restore clarity, it was discovered that up to two thirds of the decrease in clarity of Lake Tahoe can be attributed to fine sediment particles (FSP = less than 16 microns). Also determined through the development of the TMDL was that storm water runoff originating in urban areas accounted for 72% of the FSP that eventually enters the lake. Most urban development exists along the lake's shoreline, with the largest concentration at South Lake Tahoe in the south, Tahoe City in the northwest, and Incline Village in the northeast. The north and west shores are less densely populated. Much of the east shore is undeveloped.

Lake Tahoe is the largest alpine lake on the North American continent and the second deepest lake in the United States. Lake Tahoe is the eleventh-deepest lake in the world with a maximum depth of 1,657 feet (505 meters) and an average depth of 1,027 feet (313 meters). The source of water for Lake Tahoe is precipitation. A majority of the precipitation falls into the lake directly (USGS 2003). The Lake Tahoe Basin (USGS watershed #16050101) has 63 sub watersheds draining into the lake and one outlet, the Truckee River.

Lake Tahoe contains an estimated 39.75 trillion gallons or 122 million acre feet of water. That's enough water to cover the entire state of California to a depth of 14.5 inches. The water that evaporates daily is 1.4 million tons, enough to supply the needs of 3.5 million people on a daily basis. The water in Lake Tahoe is 99.7 percent pure, about the same as distilled water.

With one outlet, it takes an average of 650-700 years for a particle to leave the lake (CTC 2003).

Historically, a white plate called a Secchi disk could be seen in the lake at depths of 100 feet. A Secchi disk is an indirect measurement of clarity. The clarity has been reduced on average by 1 foot per year over the last thirty years. The decrease in clarity was attributed to storm water runoff, urban development, air quality and erosion (EPA 2005).

3. Please describe your source water protection *goals* and how they were developed. [5 points]
The TWSA Board conducts annual goal setting and review. The goals are developed together by TWSA agency members. Below are the current Goals:

- Continue and increase emphasis on extensive education and outreach on focus topics of source water protection (Protect the Source) and the value of municipal tap water (Drink Tahoe Tap) .
- Continue advocacy efforts for federal infrastructure funding, especially for fire flow capacity.
- Continue a strong communication relationship with Tahoe Regional Planning Agency (TRPA), Nevada Department of Environmental Protection (NDEP), Lahontan Regional Water Quality Control Board (LRWQCB) and other regulatory agencies on source water protection.
- Maintain and improve project review / involvement process with Tahoe Regional Planning Agency, NV State Lands, Lahontan Water Board and other planning/regulatory agencies.
Current active projects include:
 - Aquatic Invasive Species (AIS) Programs (threats/prevention programs, treatment methods, Integrated Weeds Management Plan)
 - Groundwater Contamination at the ‘Y’ / PCE Plume Project
 - Tahoe Regional Planning Agency Shoreline Plan and Project Reviews
 - Nevada State Lands notifications on occupancy of lake bottom
 - Truckee River Operating Agreement (TROA) Ongoing regulatory updates
 - Ongoing federal and state regulatory updates
 - Utilize regional studies/projects to determine how they affect source water quality. Maintain active partnership with local research groups.

4. Please describe your source water protection *action plan* and how it was developed. [20 points]

This plan was developed over the past 17 years by TWSA Board and staff to include extensive involvement in regulatory process, community outreach and support of infrastructure improvements, especially fire flow capacity, interconnections and treatment redundancy.

TWSA ACTION PLAN

TWSA members use the following ‘Action Plan’ to accomplish the goals of the Watershed Control Program.

PROGRAM	ACTION	RESPONSIBLE PARTY AND PARTNERS	TIMELINE
Education			
1.0	Continue to improve the TWSA education program by redefining the theme and message.	TWSA, TRPA, NTCD, HOAs, USFS	2006-ongoing
1.1	Provide current information, education materials and reports on TWSA websites (www.TahoeH2O.org and www.DrinkTahoeTap.org).	TWSA	Updated quarterly, 2004-ongoing
1.2	Create and distribute posters, flyers, brochures, inserts, web media, reminder stickers, booth materials, and print and radio media.	TWSA, NTEEC, NTCD, HOAs, USFS, Local and State officials/agencies and PIO’s	2005-ongoing
1.3	Include source water protection information in current customer information mailings, CCRs, new customer mailings, BMP/Water Auditing.	TWSA, member agencies	2005-ongoing
1.4	Distribute information at community events for example: regional Earth Days, chamber mixers, community meetings, etc.	TWSA, HOA’s, community partners and environmental groups	2006-ongoing

1.5	Participate in industry level source water protection efforts (American Water Works Association, WEFTEC, others). Provide local professional development opportunities for TWSA members.	TWSA	2006-ongoing 2007-ongoing
1.6	Track customer responses, outreach efforts, web visits, and summarize activities.	TWSA	2005-ongoing
1.7	Participate in 2nd Drinking Water Forum.	TWSA, EPA—Region 9, TRPA, NRWA, NTCD	tabled
1.8	Incorporate parameters of concern to TWSA partners into surface water monitoring programs in the Lake Tahoe Basin.	TWSA, UNR, LTEEC, NTCD, TRPA, NDEP Lahontan RWQCB	2005-ongoing
1.9	Incorporate Aquatic Invasive Species (Quagga Mussel/ NZ mudsnail/plants) information in TWSA outreach.	TWSA, TRCD, TRPA	2008-ongoing
Monitoring			
2.0	Improve current surface water monitoring programs by improving the sampling programs, refining analyses, and reporting success.	TWSA, UNR, LTEEC, NTCD, TRPA, NDEP, TCS	Fall 2005-ongoing
2.1	Incorporate potential parameters of concern into surface water monitoring programs in the Lake Tahoe Basin.	TWSA, UNR, NTEEC, NTCD, TRPA, NDEP, LRWQCB	Fall 2005-ongoing
2.2	Prepare a project proposal with the University of Nevada-Reno to study climatic effects on source water quality and potential sources of pollution.	TWSA, UNR, DRI, TSC, TERC	Other research being conducted (DRI, TSC, TERC, UNR)
2.3	Research potential grant funding for monitoring programs.	TWSA, UNR, USACE	ongoing
2.4	Define the elements of a surface water risk assessment. Provide information to local planning agencies.	TWSA, TERC, AWWA Source Water Protection, Black and Veatch	Phase 2 has been completed June 2014 with funding from NDEP and TWSA. Posted on website. Model and final report Phase 1 was issued Oct. 2008.
Data Management			
3.0	Improve reporting process for intake samples; annual submission of Watershed Control Plan.	TWSA board and staff	2003-ongoing
3.1	Gather, track, and report regularly on TWSA partners' operations, management, project, planning or other changes that may affect water quality.	Planning agencies, local water districts, environmental education programs, recreation facilities.	2003-ongoing
Regulatory			
4.0	Participate in regional planning efforts, including general and technical committees, TRPA Shorezone Ordinance Amendment process, Lahontan Regional	TWSA staff and board, partners, regulating authorities	2004-ongoing

	Water Quality Control Board Amendment Process.		
4.1	Promote TWSA objectives and goals by attending stakeholder meetings and offering presentations or testimony.	Planning agencies, local water districts, environmental education programs, recreation facilities	2006-ongoing
4.2	Set trigger for water supplier notification during a plan review that includes activities that may affect drinking water quality.	TRPA, TWSA, NDEP, LRWQCB	2007-ongoing
4.4	Public comment and working group involvement in Aquatic Invasive Species management plans and projects.	Planning agencies, TWSA, other local water districts, TKPOA, HOAs, environmental education programs	2006-ongoing

46 Mapping			
5.0	Mapping of potential contaminating sources.	TRPA/Counties/ TWSA staff	2004-ongoing
Administration			
	Develop a plan to incorporate new members into TWSA. Notes: New contract and financial system established July 2007. Bylaws revision finalized for March 2017.	TWSA	2005-ongoing
6.1	Review other agencies to improve the annual reporting process	TWSA	2006-ongoing
6.2	Submit Annual Report to NDEP –BSDW; CA DDW; members and other regulators. Post on website.	TWSA	Annual December
6.3	Review TWSA Association goals	TWSA	Annual March 2009-ongoing
Water Conservation			
7.0	Incorporate water conservation and source water protection information into packets and education programs	TWSA, NTCD, TRCD	2005-ongoing
7.1	Research current water use and water conservation programs in the Lake Tahoe Basin	TWSA	2005-ongoing
7.2	Develop collaborative water conservation program/plan	TWSA, NTCD, other partners	2005-ongoing
7.3	Research potential grant funding	TWSA, NTCD, other partners	2005-ongoing
Water Rights			
8.0	Review Tahoe annual diversions report prepared by the Nevada State Engineers office	TWSA, member agencies	ongoing

Acronyms

AWWA: American Water Works Association
 BMP: Best Management Practices
 BSDW: Bureau of Safe Drinking Water (NV)
 CCR: Consumer Confidence Report
 DDW: Division of Drinking Water (CA)
 DRI: Desert Research Institute
 EPA: Environmental Protection Agency
 HOA: Home Owners' Association
 IWMP: Integrated Weeds Management Plan
 LRWQCB: Lahontan Regional Water Quality Control Board (CA)
 LT2ESWTR: Long Term 2 Enhanced Surface Water Treatment Rule
 NRWA: Nevada Rural Water Association
 NDEP: Nevada Department of Environmental Protection
 NTEEC: North Tahoe Environmental Education Coalition
 NTCD: Nevada Tahoe Conservation District
 PIO: Public Information Officer
 TCS: Tahoe Science Consortium
 TKPOA: Tahoe Keys Property Owners Association
 TRPA: Tahoe Regional Planning Agency
 TRCD: Tahoe Resource Conservation District
 TWSA: Tahoe Water Suppliers Association
 UNR: University of Nevada, Reno
 USEPA: United States Environmental Protection Agency
 USFS: United States Forest Service
 USACE: US Army Corps of Engineers

5. Please describe your *implementation* of the action plan. [20 points]

Staff produces a 500+ page annual report on watershed conditions, water quality provided to customers, and inter-agency activities towards Lake Tahoe Basin's source water protection. Annual activities are documented in the TWSA Annual Report posted at https://www.yourtahoepace.com/uploads/pdf-public-works/TWSA_2019_Watershed_Control_Program_Annual_Report_-_full_document_11-8-2019_-_NO_MAPS.pdf.

Numbers refer to the action plan above. Below are select 2019 Agency highlights:

The TWSA Annual Report documents more than 15 years of water quality data for individual and collective membership data. Long term data analysis shows continual compliance in providing outstanding drinking water.

2.1 Raw Water Monitoring

Under the Surface Water Treatment Rule, TWSA non-filtering water suppliers are required to complete turbidity (NTU) and total coliform or fecal coliform analyses on raw drinking water, 40 CFR §141.71(a). Samples are taken from the first pump station from the drinking water intake pipe prior to treatment. Sample frequency is dependent on the flow of raw water relative to community demand. For example, TCPUD's McKinney Quail System helps serve an increase in the seasonal community and often does not pump or sample raw water daily during the winter months. The non-filtering water suppliers currently test raw water for total coliform and E. coli coliform. State standards are met based on total coliform results. The filtering water suppliers are not required to test for total coliform and E. coli coliform on raw water but do monitor turbidity. LPA and TCPUD also monitor for coliform, even though they are a filtration system.

All purveyor results are detailed in the Annual Report.

All water suppliers are required to submit the maximum and mean of the regulated impurities to the Nevada Department of Environmental Protection Bureau of Safe Drinking Water and the California State Water Resources Control Board, Division of Drinking Water Programs, on a monthly basis. Any violations of monitoring or water quality parameter levels must be reported immediately. Violations may require additional monitoring, reporting, customer alerts including boil orders, or ongoing treatment, dependent on the violation type and duration.

To help suppliers identify potential problems and future treatment processes, TWSA developed a combined database which includes:

- maximum turbidity
- mean turbidity
- median turbidity
- maximum total coliform and E. coli coliform
- mean total coliform and E. coli coliform
- median total coliform and E. coli coliform
- total coliform and E. coli coliform colony counts and percentage of positive samples per year
- 90th percentile of constituent readings

The Annual Report summarizes, for each of the purveyors, raw water data for the reporting year, and long term data dating back more than 15 years for many members. TWSA maintains a database with many purveyors' data, archived from 1997. The graphic data analysis includes the following:

- monthly mean and maximum turbidity
- annual mean and maximum turbidity
- monthly mean and maximum total coliform
- annual mean and maximum total coliform

III. MONITORING AND DATA MANAGEMENT

TWSA OPERATORS UNDER FILTRATION EXEMPTION *

Ozone plus Ultraviolet Disinfection; chlorine residual for delivery:

- Incline Village General Improvement District (IVGID)
- Kingsbury General Improvement District (KGID)
- Edgewood Water Company (Edgewood)
- Zephyr Water Utility District (ZWUD)
- Glenbrook Water Cooperative (Glenbrook)

Ultraviolet (UV) disinfection and chlorine residual for delivery:

- North Tahoe Public Utility District (NTPUD)

TWSA OPERATORS USING FILTRATION TREATMENT

Filtration and chlorine residual for delivery:

- Tahoe City Public Utility District (TCPUD), the McKinney Quail System
- Skyland Water Company (Skyland)
- Cave Rock Water System (Cave Rock)
- Round Hill General Improvement District (RHGID)
- Lakeside Park Association (LPA)

*Treatment Requirements for Filtration Avoidance		
Water Quality Parameter	Surface Water Treatment Rule (SWTR)	SWTR + LT ₂ ESWTR
Giardia	3-log removal/inactivation	3-log removal/inactivation
Virus	4-log removal/inactivation	4-log removal/inactivation
Cryptosporidium		2-log removal/inactivation
Turbidity	<5 Nephelometric Turbidity Unit (NTU)	<5 NTU
Total coliform	<100/100 mL	<100/100 mL
Fecal coliform	<20/100 mL	<20/100 mL

Source: USACE Risk Assessment Report 2008

The goal of the analysis is to identify trends and to develop methods of maintaining and improving the supply and treatment processes. Climactic influences are researched to account for turbidity events.

Table 5.2: Comparison of TWSA purveyors annual maximum turbidity at results for the July 1, 2008-June 30, 2019 reporting years.

(units NTU)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Edgewood	1.43	0.80	1.00	0.80	0.75	0.45	0.75	0.70	0.70	0.92	0.66
KGID	1.83	2.15	1.78	0.95	0.61	0.61	0.66	0.60	4.28	0.81	1.38
TCPUD	0.34	0.26	0.43	0.51	0.42	0.42	0.31	0.40	0.50	0.60	0.50
IVGID	0.39	0.40	0.50	0.41	0.53	0.38	0.78	0.63	0.79	0.76	0.80
CaveRock/ Skyland	2.04	1.21	2.11	3.55	1.00	0.99	1.00	0.26	0.46	0.39	0.30
Glenbrook	0.10	0.90	0.22	0.35	0.35	1.00	7.21	1.37	0.59	0.77	0.81
RHGID	0.46	0.66	0.30	0.30	0.26	0.23	0.29	0.27	0.35	0.29	0.38
ZWUD	0.50	0.75	0.77	0.67	0.94	0.81	0.91	0.57	0.48	0.83	0.90
NTPUD	2.42	2.01	0.99	1.30	0.85	5.01	0.99	0.92	1.03	0.65	0.50
LPA	2.00	2.00	1.40	1.40	1.00	1.00	1.00	5.60	20.20	1.67	17.00

Table 5.3: Comparison of TWSA purveyors annual mean turbidity at results for the July 1, 2008-June 30, 2019 reporting years.

(units NTU)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Edgewood	0.20	0.15	0.21	0.18	0.19	0.14	0.18	0.15	0.16	0.21	0.24
KGID	0.28	0.25	0.27	0.25	0.19	0.17	0.18	0.19	0.24	0.23	0.19
TCPUD	0.22	0.18	0.26	0.31	0.22	0.19	0.22	0.20	0.21	0.60	0.22
IVGID	0.14	0.13	0.15	0.15	0.14	0.12	0.14	0.14	0.18	0.18	0.19
Cave Rock/ Skyland	0.16	0.17	0.14	0.14	0.39	0.23	0.22	0.17	0.21	0.23	0.16
Glenbrook	0.28	0.08	0.10	0.10	0.15	0.12	0.23	0.23	0.17	0.22	0.19
RHGID	0.17	0.17	0.13	0.13	0.11	0.10	0.11	0.12	0.14	0.13	0.12
ZWUD	0.26	0.24	0.21	0.18	0.16	0.18	0.17	0.16	0.16	0.24	0.26
NTPUD	0.42	0.31	0.31	0.28	0.27	0.43	0.24	0.26	0.23	0.27	0.21
LPA	0.73	0.76	0.65	0.60	0.33	0.30	0.31	0.30	0.62	0.23	0.26

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Table 5.6: Comparison of TWSA purveyors annual maximum total coliform results for the July 1, 2008-June 30, 2019 reporting years.

(units CFU)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Edgewood	100.00	130.00	28.00	20.00	27.50	26.20	16.10	60.90	20.30	35.50	36.40
KGID	32.40	56.00	30.60	22.20	200.50	200.50	200.50	83.10	200.50	144.00	118.40
TCPUD	2.00	47.80	53.00	16.40	2.00	3.10	13.70	3.10	5.10	67.70	55.40
IVGID	12.00	1.00	24.00	20.00	20.00	69.00	43.00	37.00	16.00	76.00	1.00
Glenbrook	73.80	7.50	9.90	28.80	40.60	30.60	40.60	62.40	16.40	28.80	28.80
ZWUD	13.20	8.70	56.00	11.10	50.40	30.60	19.20	32.40	38.40	29.00	22.20
NTPUD	30.00	50.00	130.00	220.00	50.00	50.00	110.00	50.00	70.00	500.00	23.00
LPA	14.00	57.00	33.00	32.80	160.70	52.00	12.10	7.50	10.90	613.00	29.50

Table 5.7: Comparison of TWSA purveyors annual mean total coliform results for the July 1, 2008-June 30, 2019 reporting years.

(units CFU)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Edgewood	2.37	2.31	1.54	1.52	2.10	1.64	1.20	1.71	2.95	7.33	0.09
KGID	2.05	2.46	2.67	1.66	2.90	3.25	5.82	2.70	9.78	6.30	5.42
TCPUD	0.00	19.20	2.00	3.20	0.00	0.00	1.00	1.02	3.73	18.22	15.13
IVGID	0.46	0.03	0.30	0.21	0.24	0.56	0.46	0.35	0.24	1.95	0.01
Glenbrook	5.12	0.84	1.32	1.34	4.00	1.98	3.14	4.01	2.48	3.45	2.82
ZWUD	1.20	0.84	1.95	1.25	3.20	1.79	3.19	2.51	3.54	3.07	3.06
NTPUD	1.34	1.89	2.93	4.32	2.25	3.07	4.42	2.97	2.52	11.21	1.85
LPA	1.91	6.06	9.01	5.51	11.80	6.82	2.32	1.12	1.84	69.36	4.92

1.5: Provide local professional development opportunities for TWSA members.

TWSA staff members maintain professional water industry certifications; all hold AWWA Water Efficiency Practitioner level 1 certifications. Staff members are trained regional ‘Eyes on the Lake’ team members for aquatic invasive species (AIS) identification. Staff members also attended Project WET and Project WILD curriculum training classes. In addition, staff self-learn on emerging topics with independent research.

1.1 to 1.9: Provide educational materials

The main emphasis of TWSA’s outreach program is to provide ongoing education to the public about watershed protection and the water quality/ high value of local tap water. TWSA staff promotes multiple messages, including trademarked slogans, through wide-ranging event and presentation schedules. TWSA also employs other communication methods such as video, web and print media.

TWSA’s website is www.Tahoe H2O.org.

An estimated 200,000+ persons annually receive the TWSA and IVGID Waste Not messages through various outreach methods.

“DRINK TAHOE TAP”® Stickers

In 2015, based on the campaign popularity and brand recognition, TWSA initiated and completed the trademark registration process for “Drink Tahoe Tap”® and “I Drink Tahoe Tap!”®. More than 90,000 “Drink Tahoe Tap”® stickers have been distributed since the campaign launched in 2008.



DRINK TAHOE TAP” Blind Water Taste Test

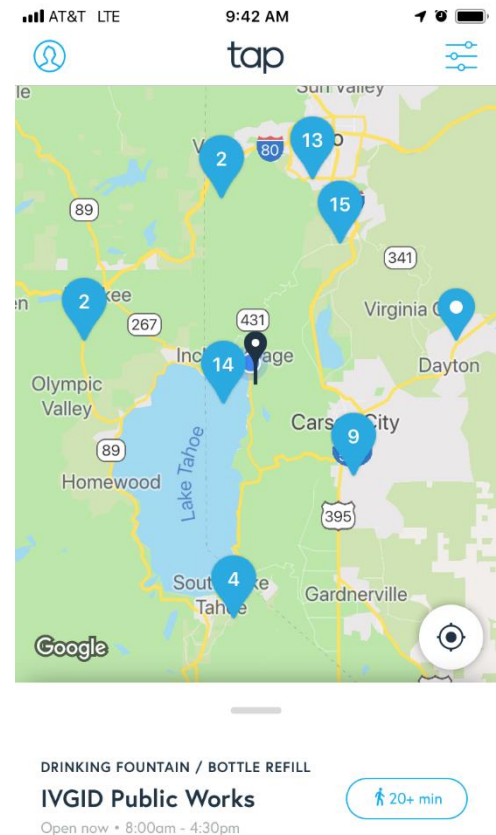
TWSA staff provides a ‘blind taste test’ at our outreach booth at local events. Staff provides the waters in 3 unmarked, dispensers using a 2 oz. compostable plastic cup. Each participant votes and the votes are recorded. The taste tests results are consistent; tap water is selected over bottled waters, every event.

TWSA Water Taste Test Awards

In 2017, Cave Rock/Skyland won “Best Tasting Water in Nevada” at the Nevada Rural Water Conference. In January 2016, Kingsbury GID took home the “Gold Medal for Best Tasting Water” at the national Rural Water Rally, in Washington D.C., after receiving “Best Tasting Water in Nevada” in at the 2015 annual Nevada Rural Water Association Conference. IVGID received the “Best Tasting Water in Nevada” at the 2016 Nevada Rural Water Association Conference; also in 2012 and 2011.

Distribution of DRINK TAHOE TAP” Refillable Water Bottles

Each year, between 3,000 to 6,000 customized, refillable water bottles or pouches are distributed at various events. In 2010, TWSA began this formal program of distributing free, refillable water bottles to attendees at selected events. Since 2010, approximately 40,000 bottles and pouches have been distributed. In 2013, TWSA began offering an extremely popular, refillable, US made, custom glass bottle. Our largest single distribution event is the annual Tahoe Summit providing drinking water containers and water filling stations for the 500-3000 attendees.



DRINK TAHOE TAP® Water Refill Network - using the TAP APP for refill locations

As part of a service learning project for Sierra Nevada College, student Frankie Sanchez helped re-design and made initial business contacts for the re-establishment of an app based, bottle refill network. His project, “Drink Tahoe Tap Refill Network” resulted in 20 Tahoe locations signing up.

DRINK TAHOE TAP® Water Bottle Refill Station Grant Program with the Tahoe Fund

In August 2019, TWSA and the Tahoe Fund initiated the Tahoe Tap Water Bottle Refill Station Grant Program. Forty, \$500 rebates will be available to Tahoe Basin businesses and non-profits who install a bottle filler/upgraded water fountain. \$20,000 in total funding is available through a generous Tahoe Fund Match grant. Information posted at www.DrinkTahoeTap.org.

Mobile Water Stations - Free Tap Water Distribution at Public Events

More than 100,000 people were served at area events in 2019, greatly reducing the use of bottled water at public events. In 2014, TWSA built its first custom, mobile, tap water fill stations to accommodate the need for water distribution at public events. 10 stations have been built to date that are in use around the lake at various events. The water fill station construction designs are available online as free resource information at www.TahoeH2O.org. These stations connect up to standard outdoor faucets served by approved municipal water sources, have tap dispenser heads and a carbon filter system. They have proven to be extremely popular and have provided water at many large scale community events. TWSA provides these stations or 5 gallon water dispensers to local events for smaller needs.

Outreach / Watershed Education Events

Staff conducts outreach with the TWSA “Drink Tahoe Tap®” education booth at more than 25 community events annually. The booth features an interactive water taste test along with water conservation, watershed protection and tap water awareness information. Some of the annual events include the North and South Lake Tahoe Earth Day Festivals, Snapshot Day, Rock Tahoe half-marathon, Sand Harbor Shakespeare Festival, SnowFest Science Expo, 4th of July events, Children’s Environmental Science Day, the Tahoe Summit, regional music festivals, chamber mixers, ski area special events, and other events upon request.

Community Neighborhood, Stream and Beach Cleanups

More volunteer led efforts focus on developing the community stewardship culture. TWSA staff serves annually as the Tahoe East Shore/Nevada Coordinators for International Coastal Cleanup Day. North Shore cleanup efforts are coordinated by the League to Save Lake Tahoe and Keep Tahoe Clean for South Lake Tahoe. Annually, hundreds of volunteers collect more than a ton of trash from Tahoe’s beaches, streams and lakeside trails.



Sponsorships

TWSA provides support for a variety of conferences and educational programs in the form of fiscal donations or water bottle donations. In the past year, the Association has supported the production of the *State of the Lake Report*, *Tahoe In Depth* publications, Nevada Rural Water events, Eyes on the Lake trainings, the Tahoe Summit, North and South Lake Tahoe Earth Day events, Tahoe Film Festival, various conferences and additional events.

Snapshot Day

Each year, TWSA staff leads Snapshot Day, a large scale volunteer water quality monitoring event for the Tahoe region from Lake Tahoe to Pyramid Lake. At “Snapshot Day” (annually in May) 300+ volunteers spend the morning at 50+ locations within the watershed - collecting samples of turbidity, nutrients, dissolved oxygen and photographic documentation. Many sites have been repeated now for more than 15 years providing long-term watershed condition data. This event is a collaboration between multiple water quality focused agencies. This is one of the longest running watershed citizen monitoring events on the U.S. west coast.

Beach Water Quality Sampling

TWSA staff collects and analyzes raw water samples on a regular schedule from 6 Incline Village beach and stream zone locations. AIS inspections of shoreline conditions were added in 2015. Data from this sampling activity has been maintained in a centralized database since 2004.

School Programs

Staff provides school and civic group presentations on Tahoe Tap and source water protection, including water quality sampling lessons and streamside ecology activities in area schools. Since 2011, TWSA and TWSA members (TCPUD, NTPUD, IVGID) have partnered with the Sierra Watershed Education Partnership (SWEP) to offer water quality assemblies annually, to almost 2,000 North Tahoe elementary, middle and high school students. These assemblies feature a presentation by the Truckee High School Envirovolution Club’s *Trashion Show*, themed on appreciation of tap water, water conservation and watershed protection. At these shows, students receive custom refillable steel water bottles, shower timers and other water conservation education collateral.

TWSA Scholarship Fund

From 2012-2019, TWSA provided a scholarship fund for Tahoe high school students entering college with a focus on science, math, engineering or environmental studies. Four \$500 scholarships were offered annually; one for each Tahoe high school. This program ended FY 2018-19 due to low participation.

Outreach Campaigns

TWSA water conservation and water quality protection print publications are updated annually. Outreach materials include a leak detection information card with dye tabs, AWWA ‘value of water’ and water conservation brochures, TWSA source water protection information, a custom bone shaped dog waste bag holder and bag refills, DRINK TAHOE TAP® stickers and information on the issues of bottled water versus tap water. The regional *Take Care Tahoe* messaging is used extensively.

Tahoe Cigarette Disposal Program Bin Project with the League to Save Lake Tahoe

In 2019, a major project launched. The League to Save Lake Tahoe and the Tahoe Water Suppliers Association (TWSA) are distributing an initial run of 250 cigarette butt collection canisters



at key locations around Lake Tahoe. The aim of the *Tahoe Cigarette Disposal Program* is to reduce toxic chemicals from littered cigarette butts from leaching into the environment, to protect wildlife, and to reduce litter on Lake Tahoe's shoreline and vicinity. The bins were obtained through a Keep America Beautiful grant program. The League and TWSA plan to install canisters throughout the Lake Tahoe Basin beginning in June 2019 and running through 2021. The League will be coordinating on the South Shore and TWSA will be coordinating on the North Shore. The Tahoe Cigarette Disposal program is branded to fit in with the *Take Care Tahoe* campaign, and each canister is designed to be highly visible and include education on how cigarette butts have harmful impacts to the environment and wildlife. <https://www.keeptahoeblue.org/our-work/combating-pollution/cigdisposal>

“Be #1 at Picking Up# 2” – A Dog Waste Awareness Campaign – Take Care Tahoe

Initiated in 2010, information on the effects of dog waste on water quality is presented via an interactive pledge campaign. Individuals receive a free custom dog waste bag dispenser when they pledge to pick up after their dog. More than 7000 pledges have been collected to date. Refills rolls are also distributed to the public at events and in the IVGID Public Works lobby.

Dog Waste Pickup Station Sponsorship

Proper dog waste collection is an ongoing campaign. 88 dog waste stations sponsored by TWSA, are in use around Lake Tahoe. Bag dispensing stations, custom signage and collection receptacles are placed in high impact areas and monitored by volunteer or partner agency staff. Approximately 50,000 dog bags are provided by TWSA with an estimated 100,000 more bags being provided by our partners, annually. The graphics style *Take Care Tahoe* messaging on dog waste collection was incorporated into TWSA outreach materials in 2015. Approximately 10 stations are added annually, dependent upon volunteer or agency support. Stations are now located all around Lake Tahoe including the new Sand Harbor-Incline bike path, the Johnson Meadows property, Van Sickle State Park, Sand Harbor State Park, Bijou Park, Burke Creek/Kahle Drive, Lake Tahoe Nevada State Park, Brockway Lookout, Tahoe City Dog Park, Tahoe Vista Dog Park, Incline Village community lands, and in neighborhoods with streamside trails.

TWSA Advertising Program

TWSA is found on social media (Facebook) as Drink Tahoe Tap ®. In 2016, TWSA partnered with the regional *Take Care Tahoe* campaign, to develop Drink Tahoe Tap ® messaging to encourage the use of refillable water containers. Informational articles and advertisements on source water protection, water quality and water conservation are published regularly in visitor magazines such as *Tahoe In Depth*, *Tahoe Visitor Guide* and *Tahoe.com Summer/Winter* supplements. Each publication reaches an estimated audience of 60,000+ persons each summer and winter season. Issues are provided in the rooms of area hotels and are also distributed at shopping centers, visitor centers and local businesses. Water bottles and “Drink Tahoe Tap” ® stickers also serve as a major portion of the advertising campaign.

TWSA staff regularly tapes radio and television public service announcements. Tahoe Tap is featured on Lake Tahoe Television on multiple segments and TWSA runs “Drink Tahoe Tap”® ads.

Tahoe Tap Music Video Produced in 2019

Local musician, Joaquin Fiorese, wrote and produced an original song and music video. The “Drink Tahoe Tap Song”, features local musical talent in a unique collaboration.

It can be viewed at: https://www.youtube.com/watch?v=uaZ_tn4fRj0

Aquatic Invasive Species (AIS) Outreach and Leadership on Control Method Workgroups

AIS information has been incorporated into the TWSA outreach program since the issue emerged at the lake in 2007. TWSA outreach efforts include educating the public about Aquatic Invasive Species, including the transportation risks, ecological implications and preventive measures. Concerns about the introduction of Quagga and Zebra mussels, and their potential effect on drinking water infrastructure and water quality, are presented through customer signs installed at area boat ramps, and via website and brochures. In addition, TWSA staff is public comment is regularly offered on proposed AIS management options that may affect

water quality. TWSA staff and members are highly involved in providing public comment regarding the Tahoe Keys Water Quality and AIS Management Plans. This issue has become a major component of our work. TWSA support the implementation of non-chemical, water quality enhancing, control methods. The emerging technologies of Ultraviolet Light (UYVC) and Laminar Flow aeration, are showing promising results. TRPA, one of the lead agencies on this project, convened a core committee of stakeholders to select neutral facilitation services and an independent environmental consulting firm for the environmental analysis process. The selection team is composed of representatives from Lahontan Water Board, TKPOA, TRPA, Tahoe Water Suppliers Association, and The League to Save Lake Tahoe. The core team unanimously selected Zephyr Collaboration to provide facilitation services for the project, and TRC Solutions, Inc. to provide environmental consulting services.

Participate in regional source water protection efforts

Since its inception, TWSA staff has participated in regional government, regulatory and scientific research working groups, to keep the dialog about source water protection inclusive of drinking water services. We regularly partner with local non-profits and environmental group on programs, trainings and educational activities. TWSA staff and the water purveyor managers have been active partners in the Asian Clam removal projects and ongoing AIS removal/monitoring projects by the Tahoe RCD, TRPA and UC Davis. TWSA staff provided on-site water quality monitoring support on the Asian Clam Removal Projects occurring summer 2011 in the Marla Bay, Lakeside and Emerald Bay areas.

TWSA continues to support AIS prevention efforts by other regional agencies including Tahoe Regional Planning Agency (TRPA) and Tahoe Resource Conservation District (TRCD) as a member of the Lake Tahoe Aquatic Invasive Species Working Group (LTAISWG). TWSA staff and utility members are active participants in the LTAISWG, regularly attending meetings and participating in work plan development. TWSA's increased participation has helped resolve past problems related to a lack of communication during the clam removal pilot program with the applicable water agencies. In 2014, TWSA committed funding for the replacement of 20 rubber mats (\$5000) used by the AIS management team (bottom barrier, non-chemical treatment program) to smother weeds and asian clams.

TWSA/Tahoe Fund Bottom Barrier Challenge 2018

The TWSA partnered with the Tahoe Fund to purchase additional bottom barriers with a 1:1 grant match project which were put in use in 2018. <http://www.tahoefund.org/our-projects/active-projects/aquatic-invasive-bottom-barrier-challenge/>

Aquatic invasive plants affect water quality around the shoreline of Lake Tahoe. Through a well-coordinated program, the Tahoe Resource Conservation District has been able to remove aquatic invasive weeds with the use of bottom barriers and diver-assisted hand pulling. The inventory of bottom barriers was 1.6 acres short of the maximum 5 acres of coverage permitted for Tahoe. In 2017, the TWSA issued a matching challenge to raise a total of \$52,000 to purchase the remaining 175 barriers that would bring the inventory to the full 5 acres. With the full inventory of mats, more aquatic invasive weeds are removed from the lake and water quality is improved. Media coverage of the successful funding challenge is posted at:

<http://www.kolotv.com/content/news/Keeping-Lake-Tahoe-clean-with-bottom-barriers-490967561.html>

<http://www.ktvn.com/clip/14565568/tahoe-barriers-invasive-species>

<http://www.ktvn.com/story/38894280/crews-tackle-invasive-aquatic-plant-issue-at-lake-tahoe>

Several TWSA members have been working with Tahoe RCD on AIS controls using non-chemical methods on their properties. In 2017-18, Lakeside Park Association has hosted both UV light and bottom barrier installation sites. North Tahoe PUD used bottom barriers at one site, for non-herbicide weed controls.

1.6: Track customer responses / summarize activities

Through direct outreach and media contacts, staff estimates 200,000+ people receive TWSA/IVGID Waste Not information annually. TWSA maintains the websites: www.TahoeH2O.org (and)

www.DrinkTahoe.Tap.org. Source water protection, water conservation, TWSA annual reports and sanitary surveys are available for public review on this website.

2.4: Define the elements of a Surface Water Risk Assessment (SWRA). Provide information to local planning agencies.

In June 2012, the TWSA/USACE Lake Tahoe Source Water Risk Assessment (LTSWRA) was used to evaluate potential impacts to drinking water quality from proposed new beach access areas associated with the Edgewood Lodge Project. The project engineer (RO Anderson) provided extensive case study comparisons and conducted multiple runs of the risk model to assuage concerns voiced by NDEP and TWSA water providers to the Tahoe Regional Planning Agency during the project public comment period.

Lake Tahoe Flow Modeling, Potential Pathogen Transport and Risk Modeling Report

Phase 2 of the Lake Tahoe Risk Assessment Model developed in 2008 (Black & Veatch, B&V Project No. 41717). S. Geoffrey Schladow, Andrea Hoyer, Francisco Rueda and Michael Anderson / June 2014
Phase 2 was funded by NDEP and TWSA for \$95,000 in 2013-14. There had been significant improvement in the data available on lake currents since 2008, so the upgrades provided better modeling with more refined area grids based on this new data. This project re-analyzed lake water current patterns in the southeastern corner of Lake Tahoe, in the area of the Edgewood and Kingsbury intakes. The analysis is related to public water systems at Lake Tahoe and the impact that local potential contaminating activities have on the source water. In addition to new data, new potential contaminating activities had been proposed near the public water system intakes.

Flow Modeling and Pathogens (PO # S004422)

Executive Summary

Swimming and other body-contact recreational activities have been identified by the USEPA, the Nevada Division of Environmental Protection, the California Department of Health Services and other public health professionals as a potential source of microbiological contamination of recreational waters.

This study was undertaken to quantify the impacts of body contact recreation on microbial water quality at the Kingsbury General Improvement District (KGID) and Edgewood Water Company intakes on Lake Tahoe. This study builds upon the risk assessment conducted previously (Black and Veatch, 2008), and specifically incorporates 5 new features:

- (i) Findings of new 3-D hydrodynamic simulations for the nearshore southeastern portion of Lake Tahoe;
- (ii) Development of a finer-scale 50 m x 50 m finite-segment pathogen fate-consumer risk model;
- (iii) Additional recreational use associated with the proposed Beach Club and Edgewood Lodge/Resort developments;
- (iv) Risk assessment for the Edgewood Water Company intake; and
- (v) Treatment plant upgrades at KGID and Edgewood that included UV disinfection meeting the requirements of the Long Term 2 Enhanced Surface Water Treatment rule (LT2). As in the prior study, this risk assessment focused on *Cryptosporidium* because of its low infectious dose, environmental persistence and resistance to conventional disinfection.

The modeling results that underpinned these conclusions provide a number of additional insights to minimizing pathogen entrainment into drinking water intakes. Primarily, by using a technique developed under this project, it is now possible to determine the source area of pathogens (or any other contaminant) that arrives at a water intake. The results also provide insight into the complex interplay between the windfield, the strength of the lake's thermal stratification and the transport patterns of pathogens. Most notably, having an intake located below the maximum depth of the thermocline greatly reduces the frequency of pathogen arrival at the intake. This has other implications with respect to lake level and drought conditions.

3.1 : Gather, track, and report regularly on TWSA partners’ operations, management, project, planning or other changes that may affect water quality:

TWSA members and staff continue to annually report on planning or other changes that may affect drinking water quality. Raw water data (Turbidity, Fecal Coliform and Cryptosporidium levels) is collected and tracked from each of the water purveyors’ intakes on a monthly basis. Long term data sets are maintained. Operational upgrades, capital improvement projects and Tahoe area environmental improvement projects are recorded in the TWSA Watershed Control Annual Report. The USEPA Long Term 2 Enhanced Surface Water Treatment rule (LT2) required redundancy on treatment for filtration avoidance permit facilities. All TWSA members have met this requirement. Detailed water quality data for members is included in the report.

4.0-4.1: Participate in regional planning efforts, including general/technical committees, TRPA working group and Board activities, agency regulatory language and amendment/ordinance process. Promote TWSA objectives/goals by attending stakeholder meetings and offering presentations /testimony.

Public Drinking Water Protection Advocacy

2010-19 have been major years for TWSA drinking water quality advocacy. Much of this work has focused on research on source water protection and aquatic weeds management practices. The TWSA has been actively involved in dialog and discussion regarding the proposed aquatic weeds controls in the Tahoe Keys Property Owners Association (TKPOA) waterways. The TWSA supports the use of non-chemical methods, citing herbicide use’s applicability in a Tier 3 water is only as a last resort in aquatic weeds management; after all other methods are exhausted.

TKPOA submitted the Tahoe Keys Lagoons Aquatic Weed Control Methods Test Application, triggering the need for an [Environmental Impact Report](#) (EIR) required by the [California Environmental Quality Act](#) (CEQA) and Lahontan Regional Water Quality Control Board (Lahontan Water Board), and an Environmental Impact Statement (EIS) required by the Tahoe Regional Planning Agency (TRPA).

The Control Methods Test application proposes the use of targeted herbicides as one weed control method to test alongside and in combination with other methods to reduce and control the abundant growth of invasive and nuisance aquatic weeds that are compromising water quality and degrading beneficial uses of the Tahoe Keys lagoons, as well as threatening the future ecosystem and water quality of Lake Tahoe. The environmental analysis will determine if the use of U.S. Environmental Protection Agency (EPA) and the Department of Pesticide Regulation (DPR) approved herbicides can meet the strict environmental standards of Lake Tahoe’s classification as a Tier Three, Outstanding National Resource Water.

Starting in 2013, TWSA has maintained a presence on the Nearshore Aquatic Invasive Weeds Working Group (NAWWG) and the Tahoe Keys Integrated Weeds Management Plan Technical Advisory Group. In 2017-2019, TWSA became a key participant in the mediated Stakeholder Circle. Over the past 2 years, the mediated workgroup was organized by the TRPA to bring together regulatory partners and stakeholders. Current information is posted at: <https://tahoekeysweeds.org/>

TRPA, one of the lead agencies on this project, convened a core committee of stakeholders to select neutral facilitation services and an independent environmental consulting firm for the environmental analysis process. The selection team is composed of representatives from Lahontan Water Board, TKPOA, TRPA, Tahoe Water Suppliers Association, and The League to Save Lake Tahoe. The core team unanimously selected Zephyr Collaboration to provide facilitation services for the project, and TRC Solutions, Inc. to provide environmental consulting services. The goal of the collaborative, multi-stakeholder process is to ensure stakeholder concerns and perspectives are addressed during the environmental analysis, resulting in a plan for testing weed control methods that is science-based, broadly supported, and effective at controlling aquatic weeds in the Tahoe Keys lagoons.

As a first step in designing a collaborative process, an assessment of stakeholder interests, concerns and questions was completed by Zephyr Collaboration in October 2018. The [Stakeholder Assessment Report](#) summarizes various stakeholder interests and perspectives, and includes recommendations for a collaborative, transparent, inclusive stakeholder process to inform the Environmental Impact Statement/Environmental Impact Review (EIR/EIS) and [decision makers](#) in what has been described as one of the biggest environmental challenges facing Lake Tahoe.

Brief History:

The Lahontan Regional Water Quality Control Board's (LRWQCB) Basin Plan Amendment, was adopted by the Regional Water Board on December 7, 2011 and the CA State Water Board on May 15, 2012. It became effective with US EPA approval granted September 10, 2015. The new regulations allow for LRWQCB review of proposed herbicide/pesticide application projects in Lake Tahoe for aquatic invasive species management. Prior regulations upheld a prohibition on chemical use. TWSA involvement did yield enhanced public notification language in the Basin Plan (any proposed chemical use project now requires notification and solicitation of comments from potentially affected water providers, regardless of the distance of the provider's service area from the proposed projects.). LRWQCB staff continues to work with TWSA, NDEP and CDPH on the regulatory language and review process.

TWSA staff maintains ongoing participation with the TRPA, NDEP, Lahontan Water Board, The Tahoe Fund, City of Reno Sustainability Workgroup, Tahoe Environmental Research Center, Sustainable Tahoe and other working groups to maintain dialogue on source water protection.

Micro-Plastics – Pilot Project to Reduce Microplastic Pollution at Lake Tahoe 2020-2022

Micro-plastics have emerged as a potential contaminate of concern in freshwater surface waters, including Tahoe. Despite Tahoe's unique situation of a self-contained basin, with no major upstream influences such as industrial discharges or sewage, recent research has shown micro-plastics to be present in both shoreline sediment and storm water samples. Probable vectors of distribution include atmospheric deposition and trash/ urban runoff. Two area research agencies, Desert Research Institute (DRI) and Tahoe Center for Environmental Sciences (TCES-UC Davis) are conducting sampling efforts in both freshwater and storm-drains. Coming in 2020-2022 is a special outreach campaign on this topic. In October, 2019 - IVGID/TWSA was awarded a Nevada Division of Environmental Protection (NDEP) Nonpoint Source (NPS) Program 319h Grant for the 2 year plan titled "Pilot Project to Reduce Sourcewater Plastic Pollution in Lake Tahoe" for funding up to the amount of \$61,995.00. Total Project cost with cash and in-kind match is \$145,000. Project Partners include the Tahoe Center for Environmental Sciences (TCES-UC Davis) and Sierra Watershed Education Partnership (SWEP) and Tahoe Care Tahoe for educational exhibits, outreach campaign development and student engagement.

In additional, TERC secured \$25,000 in funding from the NDEP 2019 Multipurpose Grant Program to support a limited scope of research described in the proposal "*Baseline Plastics Research on the Fate of Plastics in Lake Tahoe.*" Monitoring will include both water column and raw water intake sampling for micro-plastics.

Emergency Preparedness

TWSA members are participants in the NvWARN and CalWARN emergency inter-local agreements. The WARN groups of water and wastewater utilities offer a web-driven, statewide mutual assistance program. Managed through the websites (<http://www.calwarn.org>) (<http://www.nvwarn.org>), CalWARN and NvWARN agreements provide a system for immediate assistance for member utilities during an emergency. Water and wastewater utilities can request equipment and personnel to assist during natural or man-made events that impact water and wastewater systems.

Mutual Aid

In 2014, a TWSA subcommittee began the revision of a Tahoe specific mutual aid agreement, this update was completed in 2017.

An *ArkStorm @ Tahoe Preparedness Workshop* was held on September 12, 2013, as part of the quarterly TWSA Board meeting. The TWSA members and other agency representatives spent 3 hours discussing the operations of water and sewer supply systems during a potential long-term storm event. The exercise was designed to address potential social and ecological impacts of extreme winter storm events in the Lake Tahoe region, such as those experienced this past winter.

Fire Flow Enhancements

TWSA members and South Tahoe Public Utility District have been working collaboratively on federal funding requests for infrastructure upgrades and inter-tie projects in order to address the need for adequate fire flows in the event of urban wildfire. The Lake Tahoe Community Fire Protection Partnership has worked to secure federal funding which, when matched dollar-for-dollar with local agency funding, allows construction of critical water infrastructure projects with a nexus to fire protection within the Lake Tahoe Basin. Between 2008-2015, more than \$31,000,000 in federal funds have been 50% matched by \$31,000,000 from Partnership members. (Source: USFS Funding/Lake Tahoe Fire Prevention Partnership). In 2017 the Fire Flow Partnership was formalized, with both TWSA and non-TWSA members. More information can be obtained by contacting Lynn Nolan, at South Tahoe PUD.

4.2: Set trigger for water supplier notification during a plan review that includes activities that may affect drinking water quality

Regulatory language in the LRWQCB Basin Plan Amendment requires water provider notification and solicitation of comments of potential chemical use projects.

It has been an ongoing task for TWSA to expand the zone of protection around drinking water intakes. Current TRPA language includes a 600 ft. buffer for lake intakes. In spring 2011 and again in 2017-2018 TWSA formally requested the TRPA standard change to a 1,320 ft. (1/4 mile) buffer zone of protection around drinking water intakes. This request is honored in the TRPA Shoreline Plan review process. A water provider notification triggers for any new proposed piers or permanent structures within 1,320 ft. of an intake. For buoy fields, the notification process is also triggered in the Project Review process. The planning review process currently includes a check mechanism for notification to a purveyor of any project within 600 ft. of groundwater or lake intake drinking water source at 1,320 ft. TRPA maps are flagged for drinking water sources. TWSA staff receives notification and hard copies of applications of a variety of use permits (piers, buoys) and potential projects as submitted by applicants to Nevada State Lands. These are forwarded to the applicable water providers so they can include comment and mitigation requirements such as turbidity and bacterial sampling for potential impact projects.

6. Please describe your periodic *evaluation and revision* of the entire program.

[10 points]

The TWSA Annual Report serves as the touchstone for annual review of programs and analysis of water quality. The report is re-edited and updated in its entirety, each fall, annually. Goals and Programs are evaluated by the TWSA Board of Directors annually. Long term data for the water providers is updated and reanalyzed annually.

6.1-6.2: Annual Reporting: The *TWSA Watershed Control Program Annual Report* is submitted to the Nevada Division of Environmental Protection Bureau of Safe Drinking Water and the California Division of Drinking Water Programs (Northern California Field Operations Branch) annually, each December. Reports are posted online at www.TahoeH2O.org. Hard copies of the report are distributed to personnel of area agencies upon request. *TWSA Watershed Control Program Annual Reports* have been published annually since 2003.

7. How effective is your program, and how do you measure this effectiveness?

[10 points]

Our success is measured by a variety of factors: customer ‘brand recognition’ and acceptance of Tahoe Tap, ongoing outstanding water quality, the number of partnerships we have formed with other agencies, the number

of collaborative programs we are engaged in and the prominent role we serve advocating for drinking water concerns in the complex Tahoe regulatory arena. For example, our partnerships with the Tahoe Environmental Research Center, Tahoe Fund, Tahoe RCD and the League to Save Lake Tahoe have solidified over the last several years, resulting in new projects on emerging environmental topics and changing community needs. We recently received more than \$70,000 in matching grant funding for 2 partnership programs (water fill station grants / microplastics). Our programs continue to receive positive feedback from community members and peer agencies. Tahoe Water Suppliers Association has matured into a recognized voice for watershed protection in the Basin. TWSA is present at the discussion table with TRPA, Lahontan, NDEP and others. Our intensive comments on the 'potential use of herbicides' has resulted in TWSA being on the Stakeholder Committee for the Tahoe Keys Restoration Project. We are one of only 2 private entities at that table. The TWSA Annual Report, has become a comprehensive publication documenting Tahoe Basin watershed activities each year.

8. How is your program innovative? [10 points]

We are huge proponents of collaborative projects, as detailed above. Our organization has expanded its focus and program offerings greatly over time. From its initial goal to document and produce the TWSA annual report, and offer basic watershed protection messaging - to our status now as a solid voice for source water protection at Lake Tahoe. We serve in advisory roles on regulatory process and lake-wide watershed restoration projects. We are the voice for drinking water as we negotiate through the difficult decision making process over the potential, unprecedented use of herbicides at Lake Tahoe. We have trademarked our 'product without a package' - "Tahoe Tap" in order to protect our 'public brand' and provide a marketable alternative product to packaged waters. We provide extensive community efforts on getting people to fill from the tap. We have a refill station grant program currently open for local businesses who install water fill stations. We are partnering on research projects and pollution prevention projects with other agencies. We have teamed up with research agencies to assist with monitoring efforts on microplastics, including intake water sampling. We have secured grant funding for a pilot education project to reduce single use plastics. We are partnering with our local Raley's supermarket to provide messaging on filling reusable bottles with Tahoe Tap as an alternative to purchasing bottled water. Our "Drink Tahoe Tap" bumper stickers have been distributed from Tahoe to South America.

9. What was the environment (political, social, environmental, and economic settings) in which this program was developed and has operated, what obstacles and difficulties existed, and how were these obstacles and difficulties overcome?

[10 points]

Tahoe has a complex political, social, environmental and economic setting. The TWSA has maintained a long record of engagement on source water protection issues at Tahoe, providing comments, research and project support to topics ranging from land development code, to storm water management to aquatic invasive species management. The Tahoe Basin, cradled between Nevada and California, presents a complex political backdrop for protecting Lake Tahoe as a water source. The local governments include: two states, six counties, one city and multiple special districts.

Lake Tahoe is one of the most regulated watershed basins in the country. Much of the attention of the regulatory authorities and scientific community have been directed towards Lake Tahoe's famous clarity, which does not directly address many of the concerns of the drinking water suppliers. An ongoing goal of TWSA members is to incorporate drinking water issues into basin planning, and community programs through education and outreach. Lake Tahoe was designated a Tier III Outstanding Natural Resource Water (303d) under the Clean Water Act in 1972. Lake Tahoe has the highest level of protection as an ONRW water body and non-degradation rule applies. The effort to protect Lake Tahoe consists of the participation and development of numerous regulatory agencies and special interest groups including: the Tahoe Regional Planning Agency, Lake Tahoe Basin Management Unit, Lahontan Regional Water Quality Control Board and the Nevada Department of Environmental Protection. Historically, the focus has been on protecting its unique clarity.

The Lake Tahoe Basin is a unique system that has gained world-wide recognition. The lake location and unique status as one of two alpine lakes in the world of its character (the other is Lake Baikal, in Siberia, Russia) creates a complex political system of government, non-profit, special district, and concerned citizens.

The Tahoe Regional Planning Agency (TRPA), a bi-state environmental regulatory agency, is responsible for balancing human development and environmental protection in the Lake Tahoe Basin. TRPA is responsible for meeting nine environmental thresholds. The thresholds include: water quality, air quality, soil conservation, vegetation, fisheries, wildlife, scenic resources, community design, recreation, and noise (Bi-Compact 1980). TRPA addresses source water protection issues in the TRPA Code of Ordinances. Lake Tahoe's nearshore conditions are now receiving more attention in the regulatory arena. As one of its strategic initiatives, the Tahoe Regional Planning Agency worked with community members and stakeholders for almost 20 years, to update its shoreline policies and regulations. The plan was approved in October, 2018. For more information about the Shoreline Plan, visit www.shorelineplan.org.

The Nevada Division of Environmental Protection and the Lahontan Regional Water Quality Control Board enforce state law and policies, respectively, to protect public health, water quality and to sustain ecosystems. The Lahontan Regional Water Quality Control Board (LRWQCB) also revised regulations relative to pollution discharges in its region. <http://www.swrcb.ca.gov/rwqcb/>. The California Bureau of Health Protection Services regulated water suppliers within California until June 30, 2014. On July 1, 2014, the CA Drinking Water Division was transferred into the State Water Board.

The Nevada Division of Environmental Protection Bureau of Safe Drinking Water is the regulating authority for Lake Tahoe water suppliers within Nevada.

The Tahoe region is undergoing development of several long term strategic plans. These include an updated Tahoe Regional Plan to serve as the guiding documents for TRPA. Because TRPA is exploring new territory in the field of environmental planning, the Regional Plan will continue to mature as we learn more about how man impacts the environment. The Code of Ordinances is the most visible of several documents that make up the Regional Plan. <http://www.trpa.org/regional-plan/code-of-ordinances>

A revised Basin Plan passed in 2012 removes the former prohibition on direct water application of herbicides/pesticides within the LRQWCB jurisdiction, replacing it with a project review/exemption review regulation. This statutory change opens up the potential for aquatic invasive species management within Lake Tahoe using chemical methods. TWSA remains a key stakeholder in the discussions concerning the potential approval to allow limited use of aquatic herbicides and pesticides in Lake Tahoe. TWSA supports non-chemical control methods for management.

10. Does your source water protection program have a person(s) responsible for carrying out the effort. (e.g., a Source Water Protection Program Manager)?

Yes No [5 points]

Madonna Dunbar

Name: _____
Executive Director

Position: _____

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