



NOTICE OF MEETING:

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

Thursday, March 10, 2016 / New time: 12 pm to 4 pm
Incline Village Public Works
1220 Sweetwater Road, Incline Village, Nevada 89451

Conference call will be available: Call **1-877-594-8353** / when prompted, Enter Conference Dial-in **17757186**

Agenda for Thursday, March 10, 2016

Lunch will be provided

- A. Presentations:** Steve Teshara, Sustainable Community Advocates - "Initiative to Secure EIP Designation for Local Water Supply/Capacity/Delivery Infrastructure".
- B. Roll Call**
- C. Public Comment** – Conducted in accordance with Nevada Revised Statute Chapter 214.020 and limited to a maximum of 3 minutes in duration.
- D. Introduction of Guests**
- E. Approval of Agenda**
- F. Approval of Minutes:** 12/10/15 TWSA Board meeting & 1/7/16; 1/28/16; 2/11/16 subcommittee meetings.
- G. Reports**
 - 1. Staff Reports: Outreach / Events / Programs / Trademarking / Fiscal
 - 2. TWSA Chairman Report (Reed)
 - 3. Purveyor Board Member Updates (All)
 - 4. Status report on TWSA Mutual Aid subcommittee (Gibbons)
- H. General Business (for possible action)**
 - a. Board review of proposed 2016-2017 budget; vote requested.
 - b. Update on TKPOA IWMP status. Discussion on TWSA Board stances on any chemical use/acceptance by mitigation and monitoring. Discussion and vote needed from Board for future direction.

- c. TKPOA request for what would allow neutrality. Discussion and vote needed from Board for future direction.
- d. TKPOA request for partner support from TWSA for agency grant submittals. General consensus that we could support non-chemical grant proposals? No monetary support. Discussion and vote needed from Board for future direction.
- e. Discussion on RPF for consultant, ISSAM NAJM, Ph.D., P.E., BCEE.
 - Legal/Technical/Legislative opposition to herbicide usage.
 - Burden of Proof should be on applicant/TKPOA that they will not impact water quality.
 - Pursue legislative exemption for Tahoe for removal from Lahontan Basin Plan based on Tier 3 status.
 - Possible vote.
- f. TENTATIVE: Discussion on request from Dr. Schladow for support letter from TWSA on proposed study project of modeling chemical influence from Tahoe Keys area. Is there Board support and Board interest in funding? Possible vote.
- g. Public Comment
- h. Adjournment

TWSA Board of Directors

Greg Reed, Chairman, TWSA
 Carl Ruschmeyer, Nick Charles (alternate), Tim DeTurk (alt.)
 John Summers, Jeff Cady (alternate)
 Cameron McKay
 Joseph Pomroy, Bob Lochridge (alternate)
 Cameron McKay
 Bob Loding
 Suzi Gibbons, Duane Whitelaw (alternate)
 Tony Laliotis
 Lynn Nolan

Round Hill General Improvement District
 Douglas County Systems
 Edgewood Water Company
 Glenbrook Water Cooperative
 Incline Village General Improvement District
 Kingsbury General Improvement District
 Lakeside Park Association
 North Public Utility District
 Tahoe City Public Utility District
 South Tahoe Public Utility District
 [Associate Membership, non-voting]

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 Fri. 03/05/2016 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

/s/ Madonna Dunbar, Executive Director, TWSA, (775) 832-1212 office [/mod@ivgid.org](mailto: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.

**Sustainable Community Advocates
218 Elks Point Road, Suite 202
PO Box 1875
Zephyr Cove, NV 89448
775.588.2488**

Date: March 2, 2016

To: Members, Tahoe Water Suppliers Association (TWSA)

Fr: Steve Teshara, Principal

Re: **Request for TWSA Support**

Initiative to Secure TRPA approval to add Municipal Water Supply Projects to Improve Firefighting Capability to the adopted list of Environmental Improvement Program (EIP) Projects

Approximately 90 percent of the Lake Tahoe watershed is in public ownership. These include federal lands (78 percent) owned and managed by the US Forest Service, as well as lands owned and managed by the States of California and Nevada, respectively. Because of the need to help protect this large amount of public land from wildfire, the role of Tahoe's municipal fire agencies and water suppliers goes above beyond what would be their normal local responsibilities. It is appropriate that federal and state funds are provided to water suppliers to assist them, as they work partnership with local fire agencies, in protecting public lands from wildfire, in particular from those that may be ignited by a structure fire in the Wildland-Urban Interface (WUI).

At the request of the Tahoe Basin Fire Chiefs and with the encouragement of several members of the TWSA, Sustainable Community Advocates has undertaken development of a memorandum that will be addressed to Joanne Marchetta, Executive Director of the Tahoe Regional Planning Agency. The purpose of the memorandum is to support our request that TRPA consider and formally add municipal water supply projects for the purpose of improving firefighting capability to the list of projects adopted as part of the Lake Tahoe Environmental Improvement Program (EIP). In Chapter 15 of the TRPA Code of Ordinances, the TRPA Governing Board delegates the authority to amend the EIP to the Agency's Executive Director, based on the ability to make specific findings, as set forth in Section 15.4.1.A.

TRPA Code Chapter 15

The Purpose, Definition of EIP, and Eligibility Criteria for Inclusion on the EIP List is set forth in TRPA Code Chapter 15. Key excerpts from this chapter are cited below:

15.1. Purpose

Consistent with the Implementation Element of the Regional Plan Goals and Policies, the EIP is designed to attain, maintain, or surpass multiple environmental thresholds through an integrated approach. This chapter relates to projects, programs, and studies identified by TRPA that address the attainment, maintenance, or surpassing of the environmental thresholds. This chapter defines the program and addresses the role that development projects and land use activities play in the implementation of threshold-related improvements.

15.3. Definition of Environmental Improvement Program (EIP)

The EIP is a process for identifying and implementing threshold improvements. Tools used in the process include the TRPA Code of Ordinances, capital improvement planning, programs, studies, a monitoring and tracking system, and a finance plan. The capital improvement component of the EIP shall identify physical project needs related to the adopted thresholds. Other needs shall be identified as continuing programs that typically require resources beyond a physical improvement project or require a long period of time to implement, and studies that are needed to improve knowledge regarding threshold attainment.

15.4.1. Preparation of the Priority EIP Project List

TRPA, in conjunction with all appropriate public and private implementation entities, shall prepare a priority list of projects, studies, and programs that are anticipated or need to be completed for progressive threshold attainment. At a minimum, TRPA shall update the list annually.

A. Eligibility for Inclusion on the EIP List

Projects, programs, and studies shall be placed on the list if TRPA determines that:

1. The project, program, or study is needed for the attainment or maintenance of environmental thresholds;
2. The project, program, or study complies with the Goals and Policies, the applicable plan area statement, and the Code;
3. The project, program, or study is consistent with the priorities and schedule of the EIP; and
4. The project, program, or study meets the findings adopted pursuant to Article V (g) of the Compact as set forth in Chapter 4: Required Findings, in regards to consistency with Threshold attainment.

B. Five-Year Priority List

TRPA shall establish and maintain a five-year priority list of projects, studies, and programs. This list shall be based on evaluations of progress toward threshold attainment, funding availability, and feasibility of implementation.

C. Amendment of the EIP or Priority Lists

After adoption of the initial lists by TRPA's Governing Board, the list of projects, programs, and studies may be amended by TRPA's Executive Director provided that:

1. The findings in subparagraph 15.4.1.A are met for additions and for substitutes; and
2. For replacements, the project, program, or study is of equal or superior value to the one it is replacing.

15.4.2. Finance Plan

TRPA shall prepare a finance plan for the EIP that addresses all thresholds. It shall include short-term financing of the five-year priority list and long-term financing for threshold attainment. It shall be used to guide the implementation of the EIP and be updated annually.

Review of Pertinent Documents In Support of Our EIP Request

Several pertinent high profile documents identify and discuss the relationship between public and private water supply and distribution infrastructure and the important role this infrastructure plays in the suppression of all types of fires when they occur. For example, Finding 18 of *The Emergency California-Nevada Tahoe Basin Fire Commission Report* (May 2008) states: “Much of the Tahoe Basin public and private water distribution infrastructure is inadequate to provide the fire flows necessary to meet current fire codes and fire agency needs.” Our proposed focus in this initiative is to secure EIP project status for local water infrastructure capacity and distribution improvements that can help fire agencies keep structure fires from spreading rapidly in the Wildland-Urban Interface (WUI). According to the *Lake Tahoe Basin Community Wildfire Protection Plan* (August 2015), 117,954 acres in the Basin are in the Wildland-Urban Interface.

Note: The WUI is defined in the Healthy Forest Restoration Act of 2002 (Public Law 108-148) as “an area within or adjacent to an at-risk community that is identified in recommendations to the Secretary in a Community Wildfire Protection Plan.” The Act specified that federal agencies are required to use the Wildland-Urban Interface as defined in the *Community Wildfire Protection Plan* (CWPP) development process. Communities categorized as “at-risk” are identified in Federal Register 66(160): 43383-43435. Most of the communities in the Tahoe Basin are listed as “at-risk.”

Pertinent Documents

Values at Risk and Adopted Environmental Threshold Carrying Capacities

The *Lake Tahoe Basin Multi-Jurisdictional Fuel Reduction and Wildfire Prevention Strategy* (August 2014). The Strategy identifies the environmental and community values at risk from catastrophic wildfire:

- Air Quality
- Wildland habitat and forest vegetation
- Water quality, watersheds and riparian zones
- Recreation and scenic resources
- Communities and public safety
- Socioeconomic considerations

TRPA’s adopted Environmental Threshold Carrying Capacities (Thresholds) include standards and measurements for the purpose of achieving and maintaining the following thresholds, all of which could be negatively impacted by catastrophic wildfire:

- Air Quality
- Water Quality
- Soil Conservation
- Vegetation
- Wildlife Habitat
- Scenic
- Recreation

Section 3 of the *Multi-Jurisdictional Fuel Reduction and Wildfire Prevention Strategy* provides additional detail on the “Values at Risk” from the threat of catastrophic wildfire.

“Values are not only monetary, but include intrinsic, non-monetary values as well. These might include the beauty of the surrounding environment, diversity of vegetation and associated habitat, clean water and air, as well as recreational opportunities and cultural resources.”

Communities and Safety

“Within the Lake Tahoe Basin, 117,954 acres [56 percent] are within the wildland-urban interface. Communities at risk identified in the Federal Register (August 2001) include: Incline Village, Crystal Bay, Sand Harbor, Glenbrook, Kingsbury, Highway 50 Corridor, South Lake Tahoe, City of South Lake Tahoe, Homewood, Tahoe Pines, Sunnyside, Tahoe City, Dollar Point, Carnelian Bay, Tahoe Vista, and Kings Beach. However, all communities within the Basin are exposed to substantial wildland fire risks, even if not identified in the Federal Register.”

Socioeconomic Considerations

“The Lake Tahoe Basin economy is driven largely by recreation and tourism.” “The greatest concern with large fires in the Basin is life, property, and natural resource values that are threatened. Even a small wildfire in the Basin is potentially significant because of the alignment of high ignition potential, high density and value of human developments, and high fuel hazard.”

Recreation and Scenic Resources

“Lake Tahoe is a nationally and internationally renowned landscape. The dramatic beauty and ecological uniqueness of the region’s landscape defines it more than any fact or figure. Wildfire has the potential to affect the large-scale landscape character and scenic integrity.”

“Recreation opportunities in the Basin are some of the best in the country, including California and Nevada state parks, national forests, and the activities centered on Lake Tahoe. Recreation and related tourism shapes the social, economic, and ecological conditions, and influences policies in the region. Winter- and water-sports related recreation and resorts are a primary attraction for recreationists and drive local tourism and jobs.”

Water Quality, Watersheds, and Riparian Zones

“The clarity of Lake Tahoe is world renowned and the loss of that clarity is of concern to many. After steadily declining for 30 years, the lake’s clarity hit an all-time low in 1997. In 2013, researchers at the University of California-Davis reported that monitoring data indicates the clarity level trend had stabilized for the preceding decade (Schladow 2013). High-intensity wildfires could cause large amounts of erosion and sedimentation that would adversely affect water quality (Holl 2007). Allowing hazardous fuels capable of supporting a crown fire to build up in stream environment zones could have significant effects on water quality in the Lake Tahoe Basin. The loss of vegetation from wildfire would result in erosion and sedimentation, decreasing water quality (Holl 2007).”

Wildfire Habitat and Forest Vegetation

“Wildfire has the potential to damage or destroy suitable habitat for wildlife. Of particular concern are critical threatened, endangered, proposed and other special status species, such as the mountain yellow-legged frog, California spotted owl, northern goshawk, bald eagle, and osprey”

“High-intensity wildfires will directly result in high tree mortality in forest stands, especially within moderate- and high-density forests having increased horizontal and vertical fuel continuity. Tree mortality (representing severity of fire effects on vegetation) would probably be high in

areas that have not been treated to reduce fuels (areas where the vegetation is overly dense and multi-storied).”

“Native flora is also at risk as noxious weeds and invasive species tend to spread rapidly following wildfires. Wildfire areas are especially vulnerable to weed infestation because: (1) equipment used in wildfire suppression and burned area emergency rehabilitation may bring weed seeds into an area; and (2) burned areas provide ideal conditions for weed germination. Weed populations can easily gain a foothold before native vegetation has a chance to recover from the fire.”

Air Quality

“Many factors contribute to Lake Tahoe Basin’s air pollution, including pollution from urban areas, dust from roads, automobile emissions, and smoke from wood burning stoves. Wildfires also emit large amounts of particulate matter (PM 10 and PM 2.5) and carbon Monoxide, as well as nitrogen oxides (NOx) and volatile organic compounds (VOCs), which are precursors to ozone. Historically, almost all wildfires have exceeded the national and state standards for particulate matter, primarily due to high outputs of these pollutants over a short period of time. Other constituents of smoke (gases and chemicals) may also enter the lungs. Some components, such as benzo-a-pyrene and aldehydes, can be carcinogenic.”

“Wildfires typically result in twice the emissions per acre when compared to prescribed fire (Huff et al. 1995), and pollution commonly exceeds ambient air quality standards during large fires. Large fires also often occur under conditions of high temperature and low humidity, when high concentrations of ozone are most likely. Although there is currently no quantitative way to fully display the emissions from wildfire as compared to a prescribed burn, the intent of fuels reduction activities is to reduce the size of, and hence the emissions, from wildfire.”

Relationship of adequate water supply/distribution necessary to support wildland firefighting and reduce the threat of catastrophic wildfire

From *The Emergency California-Nevada Tahoe Basin Fire Commission Report* (May 2008) Finding 18 (pages 44 and 171)

“Much of the Tahoe Basin public and private water distribution infrastructure is inadequate to provide fire flows necessary to meet current fire codes and fire agency needs.”

Background and Supporting Evidence

“The vast majority of water distribution infrastructure within the Lake Tahoe Basin was intended to provide only domestic potable water, and was never designed to provide fire flows necessary to meet current fire codes. For the most part, these public water systems represent an amalgam of previously small independently owned water systems that have been interconnected into an aging and very complicated water distribution network. Since acquisition of these systems, and especially since the early 1990s, public agencies have made significant investment in water infrastructure improvements in an attempt to close the gap between existing capability and that desired by fire agencies. Even with these significant improvements, the overall challenge is in excess of \$100 million and, at current funding levels (2008), will likely take more than 20 years to complete. Additionally, there are a significant number of private water companies with similar infrastructure and funding challenges. Collectively, these constraints substantially limit the fire agencies ability to prevent structure fires from extending into the wildland urban interface (WUI) as evidenced by the Washoe Fire. It also hinders the suppression of large scale wildland fires in the WUI as seen in the Angora Fire.” (Underline emphasis added.)

**From the *Lake Tahoe Basin Community Wildfire Protection Plan* (August 2015)
North Tahoe Division Projects and Assessments (page 7)**

“A primary limiting factor for the Fire District’s wildland fire response capability is the fragmented water systems that serve communities within the District. Many of these have inadequate infrastructure to reliably deliver required flows for firefighting, especially private water purveyors that don’t have the same requirements as public utility districts. There is limited capacity for larger providers such as the Tahoe City Public Utility District to temporarily provide additional flow to nearby water zones.”

Wildland-Urban Interface at Lake Tahoe

In the Tahoe Basin there is generally no clear boundary between wildland fuels and developed communities. Wildland fuels exist throughout Tahoe communities with sufficient continuity that a wildland fire would readily burn through the community as though it were burning in wildland areas. The same is true for structure fires. If not controlled quickly, with adequate water supply and other resources, fires in the developed community could easily spread into the adjacent wildland areas.

The U.S. Forest Service is Tahoe largest landowner, managing some 78% of lands within the Basin. Many of Tahoe’s developed communities, including residential neighborhoods, are adjacent to or intermixed with federally managed lands. Some are adjacent to or intermixed with state owned lands. In view of its unique role and responsibilities, the Forest Service played a leadership role in organizing the Lake Tahoe Community Fire Protection Partnership, described below.

Federal Funding Support – The Lake Tahoe Community Fire Protection Partnership

Since 2008, the US Forest Service has prioritized and provided funding for municipal water infrastructure that significantly improves the firefighting capability of local public water purveyors in the Lake Tahoe Basin. The funding is managed by the South Tahoe Public Utility District (STPUD) and shared on a formula basis with members of the Partnership. Partner agencies are: Incline Village General Improvement District, Tahoe City Public Utility District, South Tahoe Public Utility District, Kingsbury General Improvement District, Round Hill General Improvement District, North Tahoe Public Utility District, Lakeside Park Association, Inc. (a mutual water company), Edgewood Water Company, and the water companies at Lake Tahoe operated by Douglas County. These systems are: Glenbrook Water, Zephyr Water Utility District, Cave Rock, and Skyland/Uppaway.

The federal funding is provided based on a priority established in the Forest Service Washington Office. It was deemed a Forest Service priority at Lake Tahoe following the catastrophic Angora Fire in 2007. California US Senator Dianne Feinstein was among the most vocal champions in urging the Forest Service set this priority. Each recipient is required to match the federal funding received on a one-to-one basis. The reality is that all partners exceed the minimum local match during project implementation.

The following is the annual amount budgeted and allocated by the Forest Service from 2008 through 2015.

Fiscal Year	Amount
2008	\$964,000
2009	\$5,000,000
2010	\$5,000,000

2011	\$1,000,000
2012	\$900,000
2013	\$765,000
2014	\$650,000
2015	\$1,000,000
Total	\$15,279,000

This federal funding and the local matching funds are not captured in the EIP Finance Plan, as these projects are not designated as EIP projects by the TRPA.

Lake Tahoe Restoration Act of 2015

S. 1724, includes a provision that authorizes funding under **Fire Risk Reduction and Forest Management** [Section 5 (d) (A) (viii)] for “Municipal water infrastructure that significantly improves the firefighting capability of local government within the Lake Tahoe Basin.”

A number of Basin stakeholders are tracking the potential for grants or other sources of funding from state sources that would be similar for similar purposes as the federal funds.

Our Request

Collectively, we believe the time is right for TRPA to consider and adopt municipal water supply projects for the purpose of improving firefighting capability as part of the Lake Tahoe Environmental Improvement Program (EIP).



TWSA Board Meeting Minutes
Thursday, October 1, 2015
Incline Village GID Public Works Conference Room

Board Meeting began at 12:10 p.m.

A. Presentations – none scheduled

B. Roll Call:

Members in Attendance were: Joe Pomroy (IVGID), Suzi Gibbons (NTPUD), Bob King (Edgewood), Cameron McKay (KGID/Glenbrook), Tony Laliotis (TCPUD), Greg Reed (RHGID), Bob Loding (LPA), Lynn Nolan (STPUD), Kim Garon (STPUD), Tim DeTurk (Douglas County)

Guests in Attendance: Reginald Lang (NDEP)

TWSA Staff in Attendance: Madonna Dunbar, Sarah Vidra

C. Public Comment – Conducted in accordance with Nevada revised statute Chapter 214.020 and limited to a maximum of 3 minutes in duration.

No members of the public present, no public comment given.

D. Introduction of Guests – no guests present

E. Approval of Agenda

Motion to move agenda item H. (a) before item F; made by Bob King, second by Tim DeTurk, All in favor, motion approved.

F. Approval of Minutes : 10/1/15; 11/4/15; 11/18/15; 12/2/15

Motion to approve minutes made by Bob Loding, second Suzi Gibbons, all in favor, motion passed to approve minutes from 10/1, 11/4, 11/18 and 12/2.

G. Reports

1. Staff Reports: Outreach / Events / Programs / Fiscal / Annual Report

TWSA staff has been focused on production of the 2014-2015 Watershed Control Program Annual Report. The report was sent to regulators on December 2, 2015 and purveyor copies will be mailed out today. This year's report included a supplemental appendix for CA regulators to meet the requirements as submission as a rolling update to the Sanitary Survey. TWSA Staff asked filtration purveyors if they would like to provide a bacteriological data set for inclusion in the next Annual Report, the data set would include Total Coliform and Fecal Coliform raw water results for the past 10 years (July 1, 2005 to present). Email request will be sent. Inclusion of this data will provide full dataset for all purveyors, and beef up the section.

TWSA staff has been focused on herbicide research and representing the TWSA at AIS stakeholder meetings including the Nearshore Aquatic Weed Working Group, and a biweekly meeting with the TKPOA, Sierra Club, and League to Save Lake Tahoe.

Staff attended the 2015 Watersmart Innovations Conference, and attended sessions related to water conservation and outreach. Continuing education units were received by Sarah toward renewal of Water Use Efficiency Practitioner certification.

The TWSA fiscal update includes \$90k in reserve and \$90k in operation with \$15-20k estimated to be rolling into reserve after this fiscal year.

2. TWSA Chairman Report (Reed)

The Chairmen has been representing the TWSA at AIS stakeholder meetings and most notably had the opportunity to speak with Dr. Lars Anderson (Anderson) about proposed AIS mitigation at the Tahoe Keys. Anderson would like to see grass carp used in the Tahoe Keys; he believes that the fish could remove the AIS weed problem within 1 -2 seasons. The fish would be contained in the Tahoe Keys with the use of chain link fence. Anderson may be waiting to be told 'no' by regulators on the use of herbicide so he can propose the grass carp method of weed removal.

The stakeholders represented at the Nearshore Aquatic Weed Working Group were very positive about the use of UV, as presented at the 11/18 special meeting of the TWSA board.

Even though we've been fighting Lahontan, we now know that the regulators are not focused on herbicide.

3. Purveyor Board Member Updates (All)

LPA

LPA is working on Capital Improvement Projects including distribution piping, 700 ft of waterline replacement, and coating of water storage tanks. Currently in the process of updating equipment in the filtration plant, ultrasonic transmitter, filters, replacing turbidity meters, screening and grating will be replaced with stainless steel; work to be completed by February 2016.

Douglas County

Check valves in the intake line were replaced by scuba divers. The county is investigating redundant data collection, all data is currently going to Cave Rock (CR) , and IT equipment upgrade is needed to collect information property.

Low water level. The intake pipeline was exposed at Cave Rock. 5 repair clamps were replaced where rocks were rubbing against the concrete case. No pipe penetration, but some wear.

If the drought continues, HDR did a study on the CR water system. The county is currently researching methodologies available to move forward with submersible pumps with state permission if the water level continues to drop.

There are concerns with the permits being granted on moving, jetties, anchors and buoys. Our intakes are where the people are. The check valve replaced showed throughout the years the vault had moved. Possible boat anchor issue?

Can the TWSA draft a letter to regulators about the placement of buoys within 600 ft. of intakes? The current Nearshore Ordinance is not written to enforce public health and safety. Douglas county and NTPUD have had similar “unenforcement” issues. Can the TWSA draft a letter to send to enforcement? What is the status of this item?

What does the current 600 ft restriction prevent? It currently states no boating, piers, buoys or moorings within 600 ft of an intake according to a clarification email received by NTPUD.

Suzi: Motion: Write a letter that addresses buoys, anchors, moorings within a 600 ft. radius of the entire intake line, to be sent to regulators and enforcement agencies. Second by Cameron McKay. All in favor, motion carries. What is the status of this item?

Glenbrook/ KGID

Leak in tank 10A 1.3 million gallon tank at Stagecoach. The tank was rehabbed two years ago, still leaking. RDC found old welds that were done improperly. \$3K to redo welds, by Bar Construction (RDC subcontractor). Fixed it in a short period of time.

Water Treatment Plant is not on line yet. Discussion on technical issues.

STPUD

STPUD is hiring in January. Check website for more information. STPUD providing water to (Lukins Water Company) until fall 2016. STPUD is the groundwater sustainability district lead for 5 systems, which have been regulated by CA to manage groundwater overdraft. NTPUD and TCPUD are a low category (don't have to do sustainability exercise now).

Fire suppression funding for 2016 will be awarded in February, appx. \$1M.

Forest Service, for projects similar in nature can allow a template for regulatory (resource/ biological assessment) with individual project sign-off /stamp.

TCPUD

All efforts made to protect water quality in regard to the Tahoe Keys Integrated Weed Management Plan have paid off, thanks Madonna and Greg. Back to where we need to be.

TCPUD is in design for Bunker 1-2million gallon tank. Bunker well/ replacement as well. More arsenic than anticipated, but can be dealt with. Well is producing 1,000 gallons per minute.

Completed 1000 feet of sewer line replacement; this includes the section over the Truckee River. Artwork added to exposed pipe over river.

The Truckee River AIS infestation is even worse now with the lack of water flow, the weeds are more aggressive due to temperature and lack of water velocity.

Continuing with Regional Water Treatment Plant, litigation from a neighboring property owner, the project is still moving forward with final design, with a land exchange with CTC. Pilot testing filters at Cave Rock to determine the correct type of equipment to be used.

NTPUD

Dolly Varden replacement project, needs to be done by August. Still trying to get the KB/Kingswood water storage tank on line after the rehabilitation project with Olympus and Associates is the contractor. Hopefully the tank will be online in two weeks.

Local hazard mitigation update with Placer County for NTPUD (FEMA Grant), the grant is open to any public agency who would like to participate. TCPUD participated as well. Eligible for FEMA grants for pre-disaster mitigation and post disaster funding.

The 2003 Army Core of Engineers Report on moving sewers away from the lake shore was requested; to be sent by TCPUD.

IVGID

The water intake is doing fine, but the District is working on a scope of work for low lake level contingency plan with CH2MHill. The District is also working on refreshing the Water Main Master Plan. Pipe-bursting will continue to be an option for water main replacement projects do to the success with this year's projects. We've had good results with the service line freezer; has prevented 20 main line shutdowns this year. Water valve exerciser is working well.

4. Status report on TWSA Mutual Aid subcommittee (Gibbons)

No meetings - draft with recommended changes, draft agreement is done. Rates received from KGID and IVGID. The next meeting will discuss FEMA rates vs. loaded employee rates. The group will charge an average equipment rate between all agencies when the final agreement is in place. Lynn uses Cal-Trans rates as the STPUD rates; Lynn will send to Suzi.

Next Steps - Send rates (if overhead is included in equipment rate); rates will be in an exhibit. Please have rates to Suzi by January 15th, 2016. Glenbrook and Lakeside agree with the subcommittee findings.

H. General Business (for possible action)

a. Discussion on TKPOA IWMP status

The TWSA was copied on the distribution of the Lahontan Regional Water Boards comment letter to the Tahoe Keys Property Owners Association (TKPOA) on the Draft Integrated Weed Management Plan (IWMP) submitted in September of 2015. The letter is clear that non-chemical methods need to be explored and tested to the fullest before the water board will ascertain the use of Herbicides. The TWSA believes that herbicides will be out of the IWMP for the foreseeable future (3-5 years).

TWSA staff believes that the final IWMP will include pilot studies of several non-chemical methods for controlling Aquatic Invasive Species (AIS). One of these pilots will be rotovating, a method that the TWSA has been proposing to the TKPOA in place of the current harvesting.

The TKPOA will still submit a Nonpoint Source Plan and Aquatic Weed Survey by the deadline of January 31, 2016. The IWMP will need an extension for completion to comply with the comments received in the December 7th letter.

Board discussion highlights include the following:

- If the TKPOA were to use Andersons' grass carp suggestion they would be restricting their boating use, and then would be in favor of a coffer dam.
- The AIS that are infesting the Truckee River downstream of the dam are still vibrant, and are accessing the water table for survival, and the Tahoe Keys will still be similarly wet, and eradication of weeds will be difficult by just dewatering.
- Concern over the fiscal impact of rewriting the IWMP, and will it get homeowners to do their own drastic weed removal?
- The TKPOA is not the whole area of the Tahoe Keys, and a Regulatory Agency will need to push other stakeholders in the keys to produce a cohesive plan for the region.
- The TWSA still needs to keep up on the issues surrounding the TKPOA and the IWMP to make sure that nothing sneaks into the plan that we are not in favor of.
- The letter received from Lahontan does not mean that we back off on the use of herbicide in Lake Tahoe.
- Should the board continue with biweekly special meetings?

Suzi Gibbons motioned to suspend the biweekly special meetings, and continue with the monthly herbicide subcommittee, motion second by Cameron McKay, all in favor, motion carries.

b. Discussion on RFP for consultants

The project to build an RFP for a consultant to do work with the TWSA on the TKPOA herbicide issue is tabled, until we see the next draft.

Board members would like to continue to reach out to prospective professionals to start building relationships. The Chairman will continue with the list provided at the last special meeting.

Joe Pomroy motioned to have general business items H (a) & H (b) referred back to the subcommittee. Motion second by Tony Lalotis, all in favor, motion carries.

c. Discussion on Take Care campaign survey: "Drink Tahoe Tap!" messaging was the #1 next message suggested for regional promotion. Does TWSA Board wish to allocate \$3,000 funding to develop graphics for this specific message in the larger campaign?

The Tahoe Fund has requested a teaming opportunity for the TWSA to lend the "Drink Tahoe Tap" message to their "Take Care" campaign. The steering committee at the Tahoe Fund voted this message as their first choice for the 2016 outreach program.

The Tahoe Fund had their creative consultant mock up several ideas for the project; the examples were shared with the board. Other Lake Tahoe organizations that have teamed with the Tahoe Fund for the "Take Care" Campaign are: the League to save Lake Tahoe, TRPA and four others.

Member of the TWSA board questioned if this was the same marketing campaign that we had seen and motioned not to participate in six months ago, to which the answer is yes. The change is that the Tahoe Fund is now coming to the table with examples directly linked to DRINK TAHOE TAP, rather than water conservation.

Joe Pomroy motioned to invest the \$3k requested by the Tahoe Fund for the creation of a "Drink Tahoe Tap" Take Care campaign, with final approval of creative by the TWSA Board, second by Cam McKay. All members in favor, motion carries.

Board discussion included the following:

- Would the campaign show the TWSA trademark of "Drink Tahoe Tap"
 - Could we delay payment of the \$3k until we have proofed the final product? Or half now, and half at project completion.
 - No publicity for our message is bad publicity, we should move forward.
 - Full funding of the \$3K, since they have already done "free" work to come up with the examples reviewed.
- d. Vote on 2016 TWSA Board General Meeting Dates: Proposed for 2nd Thursdays; quarterly from 12 pm to 4 pm = March 10 (IVGID); June 9 (KGID) ; Sept. 15 (3rd week) IVGID; Dec. 8 (KGID)

Staff provided the board with the dates for 2016 TWSA board meetings. There was discussion on moving the meetings to every other month vs. quarterly, but the board finds this unnecessary at this time.

Motion to adopt the 2016 TWSA Board Meeting Dates as provided made by Bob King, second by Tim DeTurk, all in favor, the motion carries.

- e. Discussion and revision of TWSA Goals

Motion by Joe Pomroy to adopt the TWSA Goals as provided with no changes or modification, second by Tony Laliotis, all in favor, motion carries

I. Public Comment

Cameron McKay would like to thank the subcommittee for their hard work in regard to the proposed use of herbicide at the Tahoe Keys.

J. Adjournment

Motion to adjourn made by Tony Laliotis, second by Suzi Gibbons, all in favor, motion carries.

Meeting Adjourns at 2:26pm



**Tahoe Water
Suppliers
Association**
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www.TahoeH2O.org

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Glenbrook Water Cooperative
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Lakeside Park Association
North Tahoe PUD
Round Hill GID
Skyland Water Company
South Tahoe PUD
Tahoe City PUD
Zephyr Water Utility

A Tahoe Water Suppliers Association (TWSA)
Aquatic Invasive Species (AIS) subcommittee meeting was held on:
Thursday, Jan. 7, 2016 from 1-2:30 pm
Incline Village GID Public Works Building, 1220 Sweetwater Road, Incline Village, Nevada 89451

Agenda / MINUTES

- A. Presentations - none
- B. Roll Call: Bob Loding, Cameron McKay, Tim DeTurk, Greg Reed, Madonna Dunbar, Sarah Vidra
- C. Agenda modifications - none
- D. General Business (for possible action)
 1. TKPOA IWMP:
Review of presentation from TKPOA stakeholder workgroup on 1/4/16:
Group reviewed slides (attached) from TKPOA stakeholder meeting.
 2. Review of status update of IWMP and NPS plans:
NPS Plan to be submitted end of month, with stakeholder cursory review provided before submittal. IWMP extension plan submittal will be requested to later in spring (May 31, 2016).
 3. Discussion on TWSA Board stances on any chemical use/acceptance by mitigation and monitoring.
Add item to 3/10/16 Board meeting agenda.
Discussion and vote needed from Board for future direction.
 4. TKPOA request for what would allow neutrality.
Add item to 3/10/16 Board meeting agenda.
Discussion and vote needed from Board for future direction.
 5. TKPOA request for partner support from TWSA for agency grant submittals.
General consensus that we could support non-chemical grant proposals.
Add item to 3/10/16 Board meeting agenda.
Discussion and vote needed from Board for future direction.

6. TERC Proposal:

Request from Dr. Schladow for support letter from TWSA on proposed study project of modeling chemical fate from Tahoe Keys area.

TWSA potential partner; not confirmed.

Add item to 3/10/16 Board meeting agenda.

Discussion and vote needed from Board for future direction.

E. Discussion on potential actions:

Tim DeTurk proposed we be ready, perhaps hire our own expert. Suggested Najim Assam, has extensive experience in CA water quality issues, could develop a 'regulatory' opposition (Tier Greg Reed to contact. Add item to 3/10/16 Board meeting agenda. Discussion and vote needed from Board for future direction.

F. Adjournment



Proposed 2016 IWMP Activities

TKPOA IWMP January 4, 2016 Meeting with Key Stakeholders

Tahoe Keys IWMP and NPS Plan Goals for CY2016

- ▶ Complete Non-Point Source Water Quality Plan
- ▶ Complete and Implement IWMP
- ▶ Meet WDR requirements
- ▶ Obtain meaningful information needed to inform adaptive management for 2017 and beyond

Tahoe Keys 2016 Major IWMP Program Activities

- ▶ Complete and Implement Non-Point Source Water Quality Plan
- ▶ Complete Integrated Weed Management Plan
- ▶ Seek Public Review and Agency Approvals for Pilot (Field) Demonstrations
- ▶ Evaluate Additional Methods and Operations for Controlling Aquatic Plants
- ▶ Seek Community and Funding Support (Grants/Cost-Shares) for Implementing Actions
- ▶ Additional WDR Compliance Activities (e.g., aquatic macrophyte survey)
- ▶ Year 1 Adaptive Management Exercise and Reporting

Tentative 2016 Pilot (Field) Demonstrations of Aquatic Weed Control Methods

- ▶ Bottom Barriers (Single Property Owners and TKPOA Managed Areas)
- ▶ Modified Harvesting Practices and Fragment Control Testing
- ▶ Diver-Assisted Hand Pulling and Suction Removal (West Channel)
- ▶ Small-Scale Rotovator Testing
- ▶ Small-Scale Herbicide Testing

2016 Paper Evaluations of Additional Potential Control Methods

- ▶ Sterile Grass Carp Trial
- ▶ TKPOA Water Circulation System (with/without filtration)
- ▶ Dredging
- ▶ UV Light
- ▶ Weed Rollers
- ▶ Additional Biological Controls

Update on IWMP

- ▶ Lahontan RWQCB December 4, 2015 Comment Letter on Draft IWMP
- ▶ TKPOA to Request to Extend Date for Final IWMP Submittal (Spring 2016)
- ▶ Extension to Include Courtesy Stakeholder Review of Revised Draft
- ▶ TKPOA Responses to Stakeholder, Public, and Resource Agency Comments Received

Update on NPS Plan

- ▶ Draft NPS Plan Prepared and Reviewed by TKPOA
- ▶ Revised Draft Under Preparation – Review Meeting Planned with LRWQCB
- ▶ Final NPS Plan on Schedule for Submittal by end of January 2016

Proposed Components of Continued Collaboration

- ▶ Public Support for Extension to Deadline for Final IWMP Submittal to Lahontan RWQCB
- ▶ Agreement on 2016 Field Demonstrations and Additional Evaluations
- ▶ Public Support for Regulatory Approvals of 2016 Field Trials
- ▶ Written Support on Grant Applications/Funding Requests for Cost-Sharing
- ▶ Participation in Review Group for 2016 Field Activities and Reports
- ▶ Participation in 2016 Adaptive Management Process Program Report



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 Kingsbury GID
 Lakeside Park Association
 North Tahoe PUD
 Round Hill GID
 Skyland Water Company
 South Tahoe PUD
 Tahoe City PUD
 Zephyr Water Utility

MINUTES FOR SPECIAL MEETING OF THE TAHOE WATER SUPPLIERS ASSOCIATION

Held Thursday, Jan. 28, 2016 from 1-2:30 pm

Incline Village GID Public Works Building, 1220 Sweetwater Road, Incline Village Nevada 89451

Agenda

A. Presentations - No scheduled presentation

B. Roll Call

Members in Attendance were: Greg Reed (RHGID), Tim DeTurk (Douglas County), Cameron McKay (KGID/Glenbrook), Suzi Gibbons (NTPUD), Bob Loding (LPA)

Guests in Attendance: No Guests in Attendance

TWSA Staff in Attendance: Madonna Dunbar, Sarah Vidra

C. Agenda modifications

D. General Business (for possible action)

1. TKPOA IWMP: Review of "Non-Point Source Plan" from TKPOA workgroup
 The working group that Greg R and Madonna D participate in with the Sierra Club, League to Save Lake Tahoe, and the TKPOA were allowed the opportunity to review the TKPOA NPS plan and provide comments.

Madonna D provided comment NOT on behalf of the TWSA. Her comments include the following:

- The Plan dismissed responsibility for the storm drains stating that they are the sole responsibility of the City of South Lake Tahoe.
- The plan does not include Nutrient Monitoring
- A time line which is required is not provided in the plan.
- Inconsistency in the training plan

Group member discussion on the opportunity to offer comments to the draft NPS plan included:

- Will the comments provided from stake holders be included in the submittal of the NPS to the LRWQCB? To which the group doesn't know the answer at this time, since it was a courtesy review of the plan not an official review.
- The plan should be an operational plan.

- The Consultant used in the NPS plan is R.O. Anderson, the currently are trying to get their foot in the door in the basin, they currently do work in the Carson Valley.
- Hopefully Lahontan will be looking for accuracy when reviewing the NPS plan.

2. Review of status update of IWMP and NPS plans

Unknown at this time if the TKPOA will meet the regulatory deadline of the IWMP of January 31, 2016, it is likely that they will ask for a 90 day extension.

3. Review of Take Care Campaign potential 'headlines' – edit list down.

Staff members have narrowed the Take Care Campaign slogans to 10. Board members will send their favorites to Madonna.

To be addressed at March TWSA Board meeting:

4. Discussion on TWSA Board stances on any chemical use/acceptance by mitigation and monitoring

The subcommittee is looking for clarity on where the board is currently positioned to take a stance against the TKPOA. We need to be on the record to either accept mitigation or not in terms of the use of herbicides to control AIS. The vote will be a Yes/No.

5. TKPOA request for what would allow neutrality

6. TKPOA request for partner support from TWSA for agency grant submittals

The TWSA could support for projects/grants that are non-chemical, clearly state that we are not financially supporting them.

7. TERC Proposal: Request from Dr. Schladow for support letter from TWSA on proposed study project of modeling chemical fate from Tahoe Keys area –

The study would be a second study to show “chemical fate” of pollutants leaving the Tahoe keys. Members at the subcommittee are concerned about the term “chemical fate”, would monitoring chemical influence vs. chemical fate.

Dr. Schladow is on the non-chemical camp, and lacks confidence in the current dye study produced by Dr. Anderson. Dr. Schladow hopes to provide the stakeholders involved in the Tahoe Keys AIS issue a creditable second opinion. Dr. Schladow will provide the full board a presentation on the project if he believes that funding through the grant process is available.

Members of the subcommittee are interested in funding the study if other funding is not available.

8. Consultants

Two sides: Legal → no chemicals no matter what. Technical → no chemicals detectable at the intakes.

The burden of proof is on the applicant (TKPOA) in the permit process to prove to the TWSA that they will not impact the water and how mitigation will protect.

Perhaps pursue federal legislation to give Lake Tahoe an exemption out of the LRWQCB. The TWSA has been proposing the exemption of Lake Tahoe from the basin plan amendment since the beginning of this process. With our stance that “This is a Tier III waterbody” and should be exempt.

Does TWSA has the legislative power to circumvent the whole process of meeting LRWQCB permitting process that could allow the use of herbicides if the project meets the requirements stated in the Basin Plan Amendment?

A legislative move by the TWSA, even if unsuccessful, would raise awareness.

If the consultant (Issam) is hired then the TWSA would have an A team, with the consultant and the new study from Dr. Schladow. Greg will continue to have discussions with the consultant to draft a proposal; an update will be provided to the Board.

E. Discussion on potential actions

F. Adjournment



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Skyland Water Company
South Tahoe PUD
Tahoe City PUD
Zephyr Water Utility

MINUTES FOR SPECIAL MEETING OF THE TAHOE WATER SUPPLIERS ASSOCIATION

Held Thursday, Feb. 11, 2016 from 1-2:30 pm

Incline Village GID Public Works Building, 1220 Sweetwater Road, Incline Village Nevada 89451

A. Presentations - No scheduled presentation

B. Roll Call – 1:05pm

Members in Attendance were: Greg Reed (RHGID), Tim DeTurk (Douglas County), Suzi Gibbons (NTPUD), Bob Loding (LPA)

Guests in Attendance: No Guests in Attendance

TWSA Staff in Attendance: Madonna Dunbar, Sarah Vidra

C. Agenda modifications

a. No modifications made

D. General Business (for possible action)

1. TKPOA IWMP: Review of Non-Point Source Plan , Bottom Barrier report and Macrophyte Study from TKPOA workgroup

The TKPOA provided TWSA staff with their submittal to the Lahontan Regional Water Board of the following documents in compliance with the Lahontan Regional Water Quality Control Board (LRWQCB) Order No. R6T-2014-0059 Section II.D Annual Reports and Updates:

- TKPOA 2016 NPS Plan
- 2015 Bottom Barrier Monitoring Report
- 2015 TKPOA Survey Report_Final
- Final Water Quality Certification Report to LRWQCB 02012016

Discussion on these documents includes the following:

The Non-Point Source Plan was provided to the LRWQCB on February 1, 2016. The TKPOA working group stakeholders (TWSA, League to Save Lake Tahoe, Sierra Club) were given the opportunity to give comments on the NPS with an extremely short turnaround time (24 hrs.). Madonna and Greg both gave personal comments, not on behalf of TWSA

that were in line with the other comments submitted by the working group. Key points in comments were:

- The NPS is missing a physical water monitoring plan, the plan only include a paperwork monitoring plan.
- Need to work with the City of South Lake Tahoe on the relationship that storm water has with their system. You can't separate non-point source pollution from storm water input from the municipal storm water system.
- A non-point source plan is not only about nutrient loading; it is to include all types of pollution (chemical, biological, etc...).
- There are not quantifiable milestones or a timeline

The TWSA will participate in a possible future meeting with Lahontan and the working group to go over concerns with the NPS plan before the document is discussed it is an agenda item, with public comment, at the March LWQCB meeting. The TWSA will only participate in this meeting if it is appropriate venue to communicate with the LWQCB.

The 2015 Bottom Barrier Monitoring Report includes an annual report of the Two (2) residents of the TKPOA who utilized bottom barriers in 2015 to control weeds at their properties/parcels. The two parcels used equipment rented from the TRCD, and they were put in place by the home owner. The barriers were installed from June 2015 – September 2015. The two bottom barrier sites and the proposed sites for 2016 are provided in the Image below from Page 4 of the 2015 Bottom Barrier Monitoring Report.



Figure 1. Location of 2015 and Proposed 2016 Bottom Barriers

Subcommittee member’s discussion on the results of the 2015 Bottom Barrier program as reported includes the following:

- The program should be run in a more goal oriented way, this would include starting in one area and moving strategically though out the keys.

The 2015 TKPOA Survey Report is an update to the previous aquatic plant survey. The survey was conducted June 2015-July 2015. The TKPOA provided a summary of survey results were they state that the species composition was found to be similar to that of the previous years. The hydroacoustic data showed that the abundance and biovolume of plants in the Tahoe Keys in 2015 was substantial. More than 75% of the water volume was filled with plant matter. Species occurring in the Tahoe Keys Lagoons include: Eurasian watermilfoil, Curlyleaf pondweed, conntail, Richardson’s pond week, leafy pondweed, elodea, water shield, white water-buttercup, nitella spp., chara spp. Spirogyra spp., and other filamentous algae.

Species	East Basin	West Basin	Lake Tallac
● Eurasian watermilfoil (<i>M. spicatum</i>)	42.0%	49.7%	42.1%
● Coontail (<i>C. demersum</i>)	66.4%	37.4%	94.7%
● Curlyleaf Pondweed (<i>P. crispus</i>)	0%	3.1%	0%
● Leafy Pondweed (<i>P. foliosus</i>)	0%	4.9%	2.6%
● Nitella (<i>Nitella sp.</i>)	1.5%	6.7%	0%
● Elodea (<i>Elodea sp.</i>)	0.7%	6.1%	2.6%
● Spirogyra spp.	1.1%	0%	0%
● Richardson's Pondweed (<i>P. richardsonii</i>)	0%	3.1%	0%
● Watershield (<i>B. schreberi</i>)	0%	0%	7.9%

● Native species
● Invasive species

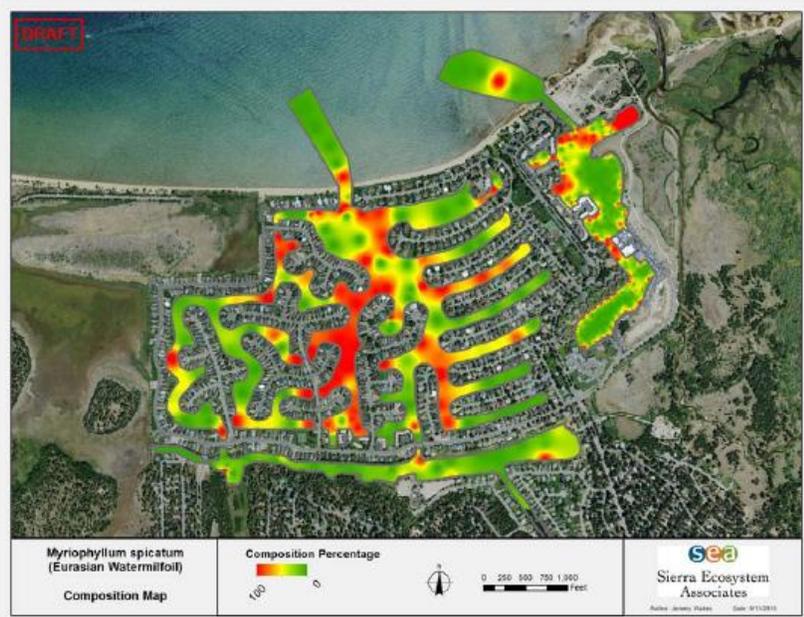


Figure 5. Myriophyllum spicatum (Eurasian Watermilfoil) Composition Map

TWSA Subcommittee member’s notes on the 2015 TKPOA Survey Report include:

- The concentrations of plants found in the study are predominantly native species. The TKPOA has received comments from the LRWQB that the native species present in the Keys are not to be considered a nuisance.

- The metric of plants removed in 2015 was 16,000 Cubic Yards, which is on par with the previous 5 years of removal.

2. Review of status update of IWMP

The TKPOA has been granted a final submission date of May 31, 2016 to provide the LRWQCB with an update to the draft submitted in August 2015, which has been accepted by the LRWQC for meeting the waste discharge requirements of an IWMP.

To be addressed at March TWSA Board meeting:

3. Discussion on TWSA Board stances on any chemical use/acceptance by mitigation and monitoring
 4. TKPOA request for what would allow neutrality
 5. TKPOA request for partner support from TWSA for agency grant submittals
 6. TERC Proposal: Request from Dr. Schladow for support letter from TWSA on proposed study project of modeling chemical fate from Tahoe Keys area.
 7. TRPA EIP for Fire Infrastructure
 8. 2016-2017 Budget
 9. Consultant
- E. Discussion on potential actions
No actions taken
- F. Adjournment
2:00pm

2016-2017 TWSA BUDGET WORKSHEET (200.28.99)

	2016-17 Proposed	2015-16 APPROVED	2014-15 APPROVED
Paid Advertising			
ADS: TV/Radio/Print	\$ 6,000	\$ 7,500	\$ 7,500
Tahoe In Depth Sponsorship (\$500 x 2)	\$ 1,000		
Earth Day event (North and South Shore) sponsorships (\$500 each)	\$ 1,000		
Conference sponsorships	\$ 1,500		
State of the Lake Report Sponsorship	\$ 2,500	\$ 1,000	\$ 5,600
Total:	\$ 12,000	\$ 8,500	\$ 13,100
Office Supplies			
Monthly Xerox machine costs, Board materials, brochures, in-house printing	\$ 1,400		
Total:	\$ 1,400	\$ 2,000	\$ 2,600
Operating General			
TWSA staff uniforms / member logo trademarked clothing	\$ 1,000	\$ -	\$ -
Water Bottles (\$3.50 each avg.)	\$ 10,000	\$ 8,000	\$ 8,000
Board meeting hospitality (15 lunches @\$15/head x 4 meetings)	\$ 900	\$ 300	\$ 300
Monitoring Supplies	\$ 600	\$ 600	\$ 750
Snapshot Day	\$ 800	\$ 800	\$ 800
Scholarship Fund (4 x \$500)	\$ 2,000	\$ 2,000	\$ 2,000
Dog Waste Campaign (bags, small dispensers)	\$ 2,500	\$ 2,500	\$ 2,500
Booth fees and event supplies	\$ 1,000	\$ 800	\$ 800
Total:	\$ 18,800	\$ 15,000	\$ 15,150
Postage			
Annual Report and general correspondence			
Total:	\$ 200	\$ 200	\$ 200
Central Office Services /Internet			
IVGID central office services (monthly @ \$500 x 12)	\$ 6,000		
Freeze page software (public records archive TWSA webpages)	\$ 600		
Total:	\$ 6,600	\$ 6,000	\$ 6,000
Printing / Publishing			
'Drink Tahoe Tap' stickers	\$ 6,000	\$ 6,000	\$ 4,000
Annual Report Printing (outsourced in 2015)	\$ 2,500		
Watershed Protection signs	\$ 1,000	\$ 1,000	\$ 1,000
Total:	\$ 9,500	\$ 7,000	\$ 5,000
Reserve / Misc			
Books and resource materials		\$ -	\$ -
Education Course Sponsorship	\$ -	\$ 6,000	\$ 6,000
Risk Assessment/Legal/Consultants	\$ 20,000	\$ 25,000	\$ 25,000
Total:	\$ 20,000	\$ 31,000	\$ 31,000
Travel / Conferences			
Annual Mileage - personal vehicles	\$ 1,500	\$ 1,000	\$ 750
Regional Conference	\$ 500	\$ 500	\$ 750
Conference Call service for meetings	\$ 500	\$ 150	\$ 150
Total:	\$ 2,500	\$ 1,650	\$ 1,650
Grand Total Operating:	\$ 71,000	\$ 71,350	\$ 74,700
Total Budgeted Salary and Benefits (MOD & SGV)	\$ 67,901	\$ 63,225	\$ 58,323
1351 hours combined hours (MOD&SGV) \$37,723 base salaries x 1.8 benefits factor = \$67,901			
Total Annual Budget (Operating & Salaries)	\$ 138,901	\$ 134,575	\$ 133,023
STPUD Fee	\$ 2,000	\$ 2,000	2,000
Total membership fees	\$ 140,901	\$136,575	\$ 135,023
(IVGID Share)	\$ 31,029	\$29,720	\$ 27,966
Total Fees from other members	\$ 109,872	\$ 106,855	\$ 107,057

Shared	\$70,225	total
Depend	\$68,676	\$138,901

2016-17 TWSA Cost Share (proposed)

	Shared Costs	Dependent Costs	Avg Daily Flow gpd	Total Costs & Shares	% of Total	Shared Cost	Depend Cost	Flow Ratio	CostShare previous year
Incline Village General I	9.10%	35.88%	2,903,000	\$ 31,029	22.34%	\$6,390.48	\$ 24,638.54	0.359	\$ 27,966
Kingsbury General Impr	9.09%	10.72%	867,361	\$ 13,745	9.90%	\$6,383.45	\$ 7,361.53	0.107	\$ 13,347
Round Hill General Impr	9.09%	2.73%	220,752	\$ 8,257	5.94%	\$6,383.45	\$ 1,873.58	0.027	\$ 8,111
Edgewood Water Comp	9.09%	8.52%	689,799	\$ 12,238	8.81%	\$6,383.45	\$ 5,854.51	0.085	\$ 12,006
Zephyr Water Utility	9.09%	2.59%	209,468	\$ 8,161	5.88%	\$6,383.45	\$ 1,777.81	0.026	\$ 8,064
Glenbrook Water Comp	9.09%	3.69%	298,340	\$ 8,916	6.42%	\$6,383.45	\$ 2,532.09	0.037	\$ 8,376
Tahoe City Public Utility	9.09%	15.14%	1,225,000	\$ 16,780	12.08%	\$6,383.45	\$ 10,396.91	0.151	\$ 16,065
Skyland	9.09%	2.04%	164,911	\$ 7,783	5.60%	\$6,383.45	\$ 1,399.64	0.020	\$ 7,763
Cave Rock	9.09%	2.04%	164,911	\$ 7,783	5.60%	\$6,383.45	\$ 1,399.64	0.020	\$ 7,763
Lakeside Park Associatic	9.09%	1.5%	124,367	\$ 7,439	5.36%	\$6,383.45	\$ 1,055.54	0.015	\$ 7,285
North Tahoe Public Utili	9.09%	15.12%	1,223,739	\$ 16,770	12.07%	\$6,383.45	\$ 10,386.20	0.151	\$ 16,277
Voting member total	100.00%	100.00%	8,091,648	\$ 138,901.00	100.00%	\$70,225.00	\$ 68,676.00	1	\$ 133,023
STPUD (auxiliary Member- non-voting)				\$ 2,000					
Total budget				\$140,901					
IVGID share				\$31,029					
Total other agencies fees				\$109,872					

Project	Task	Staff	
		(MOD) Res Con	(SGV) Res. Tech.
Data Mgmt.			
	climatological events		8
	treatment changes	5	
	Monthly data	5	40
	Track Research in Tahoe	50	10
	Monitor Regional Planning efforts	50	0
Watershed Monitoring			
	Beachsampling / lab logistics	0	25
	Snapshot Day / volunteer sampling events	20	40
	Research grants	5	10
	Maintain purveyor database ; monthly Turb and Coli.	0	70
	Coordinate with Stakeholders	50	30
Public Education			
	Prepare print, news, radio ads, press releases	20	10
	Update Website	20	0
	Attend applicable meetings	50	50
	Prepare and complete presentations	10	15
	Prepare community event booths and attend events	60	100
	Develop/Distribute Educational Info	40	20
	Review / research other programs	10	10
WQ & WC			
	Develop universal education outreach materials	10	10
	Publishing / printing	10	10
	Distribute wcp material	10	15

	Research wc grants and other programs	10	10	
	Submit collaborative grant requests	10	10	
Annual Report / Risk Assessment				
	Prepare Maps	5	40	
	Research including: spills recreation, fire, EIP, forest service changes, county purchases etc.	40	15	
	Review/ Risk Assessments	10	40	
	Prepare Annual Report	100	70	
	Hardcopy & Digital Publishing - Annual Report	30	10	
Administration				
	Prepare Agendas	20		
	Prepare Meeting Minutes	10	40	
	Coordinate Board	20		
	Prepare Board Packets and Distribute	20		
	Prepare Annual Budget	10		
	Maintain Files	10		
	Manage Agreements	5		
	Billing/Budget prep/tracking	15		
	Education/Training	10	10	
	WQ Protection tracking / letters	40	20	
	subtotal estimate staff hours	790	738	1528
Total Staff Hours	IVGID **** BUDGETED HOURS*****	665	686	1351
	Wages (updated to new estimated rate for 2017)	\$33.00	\$23.00	
		\$ 21,945	\$ 15,778	
	Salary Multiplier x 1.8	1.8	1.8	
	Total Staff Costs	\$39,501	\$ 28,400	

Grand Total Staffing Costs

*****BUDGETED*****

\$ 67,901.40

2016 UPCOMING TAHOE AREA ECO-EVENTS (TWSA)

Friday, April 15, 2016

TWSA Scholarship deadline

Saturday, April 16

Tahoe Truckee Earth Day

Village at Squaw Valley

11 am to 5 pm

A free, family friendly event which is the largest eco-event held in the Tahoe Truckee area; now in its 17th year! Learn how to care for Mother Earth by visiting the 60+ interactive educational booths hosted by area non-profits and eco-vendors. The day's free entertainment includes live music by Joaquin and the Love Lights and the Kitchen Dwellers, the ever popular SWEP/Truckee Envirolution Club's 'Fashion Trashion Show' and dance performances by the ASHA World Dancers. For the kids, there will be a huge activity area hosted by the Nevada Discovery Museum. A "zero waste event", attendees are encouraged to bring their own utensils, plates and beverage glasses for those great food and beverage offerings, to bike or grab the TART (free rides on the return). www.tahoetruckeeearthday.org

Saturday, April 23

South Lake Tahoe Earth Day Festival

10 am to 3 pm

Bijou Community Park

Come celebrate Mother Earth at the South Lake Tahoe Earth Day Festival on Saturday, April 23 from 10am to 3pm at the Bijou Community Park! Free admission. Join a whole host of area non-profits offering interactive environmental education displays and information, plus a great kid's activity area. A "zero waste event", attendees are encouraged to bring their own utensils, plates and beverage glasses for those great food and beverage offerings. www.southtahoeearthday.org

Saturday, April 30

Prescription Drug Round-Up Day

10 am to 2 pm

Raley's Pharmacy, Incline Village, NV

(Also at other locations throughout Nevada)

A free community event for the proper disposal of prescription and non-prescription drugs. For information: call 775-832-1284.

Saturday, May 14

17th Annual Tahoe Truckee Snapshot Day

9 am to noon

Locations throughout Tahoe, Truckee and Reno - Preregistration required via website.

The 16th Annual Snapshot Day is the one-day volunteer based annual event that takes a picture of a moment in time of our Tahoe-Truckee-Reno watershed. Volunteer monitoring teams will perform a stream walk (visual assessment), collect field data, grab samples and take photos. Streams will be field tested for dissolved oxygen, conductivity, pH, and temperature. Water samples will be taken back to central meeting locations and measured for turbidity, nutrients and fecal coliform bacteria.

All necessary equipment will be provided. Snapshot Day is a terrific opportunity for you to gain hands-on experience and to interact with water resource professionals. We assign any student volunteers to a sampling site near to their schools.

NOTE: Sampling on the lower Truckee/Reno area will occur on Friday, May 13.

www.snapshotday.org

**TWSA Members:**

Cave Rock Water System
 Edgewood Water Company
 Glenbrook Water Cooperative
 Incline Village GID
 Kingsbury GID
 Lakeside Park Association
 North Tahoe PUD
 Round Hill GID
 Skyland Water Company
 South Tahoe PUD
 Tahoe City PUD
 Zephyr Water Utility

2/17/16

“Tahoe Tap” Member Glenbrook Water Cooperative wins “Best Tasting Water in the USA” Competition sponsored by the National Rural Water Association.

Washington, D.C / Lake Tahoe, Nevada. – With a cheer of celebration, Cameron McKay, from the Glenbrook Water Cooperative in Glenbrook, Nevada walked to the stage to accept the Gold Medal Award at the Great American Water Taste Test. Glenbrook was selected by a panel of judges, at the GAWTT finals at noon on Feb. 10, 2016 in Washington, D.C. Judges rated each water based on its clarity, bouquet and taste.

Glenbrook Water Cooperative, located on the east shore of Lake Tahoe, is a founding member of the Tahoe Water Suppliers Association (TWSA), which encourages residents and visitors to go without bottled water, and instead, DRINK TAHOE TAP®. The Glenbrook Water Cooperative holds a rare filtration exemption drinking water treatment status from the US EPA. It holds one of only 60 exemptions in the nation, attesting to the high quality and purity of Lake Tahoe’s source water. Glenbrook utilizes state of the art ozone and ultraviolet disinfection to provide exceptional drinking waters to its residents. Small systems like Glenbrook and tens of thousands of others around the country must meet all of the same water quality standards as those systems serving millions of people.

The Great American Water Taste Test is held annually at the National Rural Water Association’s annual Water Rally. Thirty-seven states competed at the national level this year, from thousands of entries in the individual states. Glenbrook Water Cooperative won the Nevada Rural Water Association Best Tasting Water competition in 2015, and this win was a first for Nevada in the national contest.

The Consolidated Rural Water and Sewer District #1 of Jefferson County from Hastings, Oklahoma won the Silver Award, with the City of Emporia, Kansas earning Bronze. The Northwest Dyersburg Utility District in Dyersburg, Tennessee and the City of Scottsbluff, Nebraska completed the top five.

A panel of preliminary judges selected the five finalists from entries submitted from across the nation. Rural Utility Service Administrator, Brandon McBride, Assistant Administrator for Water and Environmental Programs, Jacki Ponti-Lazaruk, RUS Senior Advisor Titilayo Ogunyale, Director for Rural Development’s Water Programs Division, Kent Evans, and USDA Engineering and Environmental Staff Director, Kelli Kubena served as the final judges.

You can watch a recording of the entire Taste Test at <http://nrwa.org/2016/02/glenbrook-nev-named-best-tasting-water-in-the-country>.



Cameron McKay (image left), Glenbrook Water Cooperative District Manager, accepts the Gold Award for “Best Drinking Water in the USA” at the 2016 National Rural Water Association’s “Great American Water Taste Test” .

Photo credit: NRWA website.

For More information, please contact:

Madonna Dunbar, TWSA Executive Director

Email: mod@ivgid.org

Mail: 1220 Sweetwater Road, Incline Village, NV 89451

Website: www.Tahoeh20.org

TKPOA IWMP-Related Activities

	2016*	2017*
Waste Discharge Requirements	<ul style="list-style-type: none"> • IWMP Updated (May) • NPS Water Quality Plan Management Implementation • Bottom Barrier Trials • Harvesting and Fragment Control • Annual Macrophyte Survey • Water Quality Certification Reporting • Grant Research and Applications 	<ul style="list-style-type: none"> • IWMP Update (Fall) • NPS Water Quality Plan Management Implementation • Bottom Barrier Trials • Harvesting and Fragment Control • Annual Macrophyte Survey • Water Quality Certification Reporting • Grant Research and Applications
Proposed Additional Field Activities	<ul style="list-style-type: none"> • Baseline WQ and Sediment Sampling • Diver Assisted Suction Dredging Trial • Rotovating Trial • Weed Roller Trial • Passive Fragment Skimmers • New Skimmer Boat • Modified Skimmers • Weed Conveyors • RWT Dye Study near channels • Mesocosm Study • UV Tank Trial • Boat Back-up Station 	<ul style="list-style-type: none"> • Baseline WQ and Sediment Sampling • Small Scale Herbicide Demonstration • Active Mounted Fragment Skimmers • Passive Mounted Fragment Skimmers • Diver Assisted Suction Dredging • Boat Back-up Stations
Proposed Additional Research Activities	<ul style="list-style-type: none"> • Sterile Grass Carp • Other Biological Controls • Water Circulation System Assessment Phase I • Floating Treatment Wetlands • Dredging/ Dewatering Evaluation 	<ul style="list-style-type: none"> • Water Circulation Assessment Phase II • Biological Control Methods

* 2016 and 2017 activities will depend on funding availability. 2017 Scheduled tasks will also depend on 2016 findings.



February 29, 2016

A. Gregory Reed
District Manager
Round Hill General Improvement District
P.O. Box 976
Zephyr Cove, NV 89448

Re: Proposal for On-Call Technical Support Services

Dear Mr. Reed:

On behalf of Water Quality & Treatment Solutions, Inc. (WQTS), I am pleased to submit to the Tahoe Water Suppliers Association (TWSA) this proposal to provide on-call technical and regulatory support services regarding the application of aquatic herbicides in Lake Tahoe. I will serve as the main technical engineer on this effort, and Dr. Dan Askenaizer will provide regulatory support.

The services provided could be in the form of any of the following activities, as requested by TWSA:

1. *Review and provide comments on proposals to use aquatic herbicides in Lake Tahoe,*
2. *Participate in conference calls to discuss various approaches and options,*
3. *Conduct site visits and meetings with TWSA members, and*
4. *Other on-call services as requested*

The scope of work is not currently defined. We will provide our services on a time-and-material (T&M) basis in accordance with the attached fee schedule. No activity will be undertaken without prior authorization from TWSA's representative. As a placeholder, we recommend that a not-to-exceed budget of \$25,000 be allocated to this effort. WQTS will invoice the TWSA on a monthly basis, and will report the remaining budget on each invoice.

We hope this proposal is acceptable to you, and we look forward to working with you on this effort. In the meantime, if you have any questions, please do not hesitate to contact me.

Sincerely,

Water Quality & Treatment Solutions, Inc.

A handwritten signature in black ink, appearing to read 'Issam Najm', is written over a light blue horizontal line.

Issam Najm, Ph.D., P.E.
President

Attachment



Water Quality and Treatment Solutions, Inc.
An environmental engineering and science consulting company.

STATEMENT OF STANDARD CHARGES

January – December, 2016

LABOR RATES:

Classification	Labor Rate
President	\$225/hr
Principal Engineer / Scientist	\$185/hr
Senior Engineer / Scientist	\$150/hr
Engineer / Scientist	\$125/hr
Associate Engineer / Scientist	\$100/hr
Administrative Assistant	\$90/hr

PROJECT-RELATED EXPENSES:

All project-specific non-labor costs and expenses are billed at cost plus 10% Administrative Cost. Example project-specific non-labor costs are travel costs, subcontractors, photocopies, equipment, mileage, and supplies. Mileage is charged at the prevailing IRS rate at the time of travel. The IRS set the **mileage rate for 2016 at \$0.54/mile**. General business costs, such as postage, computer, and telecommunications are part of the business overhead cost and not billed separately.

WATER QUALITY & TREATMENT SOLUTIONS, INC.

Issam Najm, Ph.D., P.E.
President



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January – December, 2016

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WATER QUALITY & TREATMENT SOLUTIONS, INC.

Issam Najm, Ph.D., P.E.
President

21018 Osborne Street, Ste. 1
Canoga Park, CA 91304
Tel: 818-435-4500 ext. 101
Fax: 818-484-3100
Email: issam.najm@wqts.com
URL: <http://www.WQTS.com>

EDUCATION:

Ph.D., Environmental Engineering, Univ. of Illinois at Urbana-Champaign 1990
M.S., Environmental Engineering, Univ. of Illinois at Urbana-Champaign 1987
B.S., Civil Engineering, American Univ. of Beirut, Lebanon 1985



REGISTRATION:

Professional Civil Engineer, State of California. Registration Number C 57496

TEACHING EXPERIENCE:

2004 – Present Adjunct Associate Professor
Civil & Environmental Engineering Department
University of California at Los Angeles
Physical & Chemical Processes in Water Treatment

1998 – 2004 Instructor
Civil & Environmental Engineering Department
University of California at Los Angeles
Physical & Chemical Processes in Water Treatment
Design of Water Treatment Plants

PROFESSIONAL EXPERIENCE:

Water Quality & Treatment Solutions, Inc.
Los Angeles, California
2000 – present: Founder and President

Montgomery Watson
Pasadena, California
1997 – 2000: Vice President and Manager, Applied Research Department
1994 – 1997: Principal Engineer; Applied Research Department
1992 – 1994: Supervising Engineer; Applied Research Department
1990 – 1992: Senior Engineer, Applied Research Department

SUMMARY:

Issam Najm is the founder and president of Water Quality & Treatment Solutions, Inc., a specialty environmental engineering and science consulting company whose mission is to provide water utilities with innovative and cost effective solutions to their water quality and treatment challenges. He is currently working on various projects including evaluating the performance of water treatment plants, conducting pilot-scale and bench-scale testing of water treatment technologies, development of source water monitoring plans, development of regulatory compliance plans, and development of models for

water treatment processes. He works with water utilities addressing water quality and treatment challenges, or with other engineering firms in support of water treatment design projects.

From 1990 through 2000, Dr. Najm was a member, and then Manager of the Applied Research Department of Montgomery Watson (currently MWH, Inc.), a global environmental engineering company. During his tenure with Montgomery Watson, Dr. Najm was responsible for a large number of water quality and treatment evaluation projects conducted for water utilities across the United States. Dr. Najm also led a number of research projects funded by the AWWA Research Foundation.

Dr. Najm is an adjunct Associate Professor of environmental engineering at the University of California Los Angeles (UCLA). His primary teaching focus is on the principles and design of water treatment processes. Finally, Dr. Najm is a registered Professional Civil Engineer in the State of California, and is a Board-Certified Environmental Engineer with the American Academy of Environmental Engineers.

RECOGNITIONS & AWARDS:

- The Dr. Pankaj Parekh Research Innovation Award – Water Research Foundation – 2014
- Best Paper Award, Water Quality & Treatment Division, AWWA, 2014
- Board-Certified Environmental Engineer, American Academy of Environmental Engineers
- Best Publication Award, American Water Works Association, 2006
- Best Research Paper Award, American Water Works Association, 2006
- Young Civil Engineer Achievement Award, University of Illinois at Urbana-Champaign, Civil & Environmental Engineering Alumni Association, 1999
- Academic Achievement Award for best doctoral dissertation, American Water Works Association, 1991

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS:

- American Water Works Association
- International Water Association
- American Chemical Society
- International Ozone Association

COMMITTEE MEMBERSHIP:

- AWWA CA-NV Section; Source Magazine Editorial Advisory Board, Chair; 2014 – Present
- AWWA; Water Research & Science Division Trustee; 2007 – 2014
- Journal AWWA Editorial Advisory Board: Chair – 2009 – 2013
- Journal AWWA Editorial Advisory Board: Member – 2001 to 2009
- Peer Review Editorial Board, Journal AWWA: Chair – 2006 to 2009
- AWWA; Inorganic Contaminants Committee: Chair 2002 – 2006
- AWWA; Organic Contaminants Research Committee: Chair 1998 – 2001
- Disinfection By-Products Technical Action Workgroup, AWWA: 2012 – Present

PUBLICATIONS:

Issam Najm has published more than 25 peer-reviewed technical articles and reports, and has made more than 45 technical presentations at regional, national, and international technical conferences.

21018 Osborne Street, Ste. 1
Canoga Park, CA 91304
Tel: 818-245-0443
Fax: 818-484-3100
Email: Dan.Askenaizer@wqts.com
URL: <http://www.WQTS.com>

EDUCATION

D. Env., University of California, Los Angeles	1988
M.P.H., University of California, Los Angeles	1982
B.A., Biology, University of California, San Diego	1979

EMPLOYMENT

WQTS, Inc.	Sept 2012-present
Glendale Water and Power	2006 –2012
McGuire Environmental Consultants/Malcolm Pirnie	2005-2006
MWH (Montgomery Watson Harza)	1991-2005
Metropolitan Water District of Southern California	1985-1990



SUMMARY

Dr. Askenaizer joined Water Quality & Treatment Solutions, Inc in September 2012 as a Principal Scientist. For the 6 years prior, Dan was the Water Quality Manager for the Glendale Water and Power. Under his leadership, the Water Quality Group conducted a demonstration-scale study of chlorite for nitrification control and a pilot-scale study of biological treatment for removal of nitrate. Dan has 25 years of experience working on projects dealing with regulatory, water quality and public health issues. Dan works with water utility clients to evaluate water quality and regulatory challenges and assist in planning for addressing these issues. He has given numerous presentations at workshops and roundtables across the country for water utilities. With WQTS, Dan provides regulatory and water quality support to a number of public water systems, prepared updates to watershed sanitary surveys, and prepared a corrosion control desk-top study to identify optimal corrosion control.

EXPERIENCE

Glendale Water and Power

Dan served as the Water Quality Manager for the utility. The group was responsible for meeting all Title 22 monitoring and reporting requirements, implementing a nitrification monitoring and control program, managing the water Department's NPDES permits and administering the City's cross connection control program. While at GWP, under Dan's leadership the utility conducted a demonstration-scale study on the use of chlorite for nitrification control and conducted a pilot-scale study of biological treatment for the removal of nitrate. Dan managed the effort to obtain two amended operating permits from DDW. One amended operating permit was for a new well and one was for modifications to an existing disinfection process.

McGuire Malcolm Pirnie

Dan provided ongoing regulatory support and advice for a utility in Northern California. He assisted a utility in the evaluation of potential sources of MTBE contamination in groundwater and gave presentations on perchlorate and membrane treatment technologies. Dan was Project Manager for water quality and regulatory compliance assessments for two large utilities including the New York Department of Environmental Protection.

MWH Americas

- Project Scientist for a Southern Nevada Water Authority (SNWA) project evaluating various treatment options for ensuring compliance with the Stage 2 Disinfection Byproducts (DBP) Rule for SNWA and its member agencies. Historical water quality and compliance data were collected and reviewed and recommendations were made for near-term studies to further define opportunities and options for regulatory compliance.
- Provided ongoing assistance to the City of Sunnyvale, California, with various regulatory compliance issues. Reviewed and helped implement the City's revised nine-year monitoring plan, the Stage 1 DBP Rule monitoring plan, the Lead and Copper Rule monitoring plan and provided revisions for the City's Consumer Confidence Report.
- Conducted an audit of compliance status of drinking water regulations for the Kansas City Board of Public Utilities. Historical water quality data, compliance reports and correspondence from the state primacy agency were collected and evaluated against current requirements. A final report and recommendations for future actions was prepared and submitted to the Board of Public Utilities.
- Conducted research to determine nutrient permitting approaches in different EPA regions of the US. This effort was conducted to assist the City of Los Angeles in their negotiations with the local permitting authority.
- Conducted an audit of the drinking water program for the Portland Water Bureau. Utility staff were interviewed, a tour of facilities was conducted and historical records were reviewed. A final report was prepared assessing compliance issues and providing recommendations for future activities.
- Assisted the City of Phoenix, AZ in responding to a Notice of Violation issued by the Arizona Department of Environmental Quality and the US Environmental Protection Agency. Assisted with the preparation of a groundwater blending plan to address elevated nitrate, an asbestos monitoring plan for the entire distribution system and sources, a policy and sampling plan documenting all steps the City took to ensure compliance with drinking water regulations, developed information on training procedures for City staff, and conducted a survey of state primacy agencies to evaluate various interpretations of regulatory language.
- Worked on the groundwater arsenic, radon and radionuclide assessment and mitigation program for the City of Houston. The project was designed to help ensure future compliance with state and federal regulations for arsenic, radon and all radionuclides in all City ground water supplies and to manage disposal of any treatment residuals.
- Member of a team that developed a new Water Quality Monitoring Program (WQMP) for the Tucson Water Department. Compiled information on existing and anticipated future regulations affecting monitoring requirements and managed the development of a revised total coliform monitoring plan. The final WQMP was the basis for a formal agreement between the primacy agency and Tucson Water for monitoring requirements for the current and future regulations.
- Project manager for conducting the desk-top study required under the Lead and Copper Rule for the Metropolitan Water District of Southern California. Project manager for contract with the Environmental Compliance Division of the Metropolitan Water District of Southern California. The project reviewed environmental legislation enacted by the State Legislature for possible impacts on facilities and operations at the District.

Metropolitan Water District of Southern California

As a Water Quality Specialist for Metropolitan Water District, Dan was responsible for providing technical and policy review of drinking water legislation and regulations that could impact the operations of the District. Dan reviewed state and federal legislation and regulations developed under the Safe Drinking Water Act, Porter-Cologne, and the Clean Water Act. Dan worked with Metropolitan Water District's public relations staff in disseminating water quality information to the public and presenting information to public interest groups.