

MEETING NOTES

DATE	Wednesday, May 14, 2014, 9:00-12 with informal lunch 12:00-1:00
LOCATION	South Tahoe Public Utility District Offices, Board Room, 1275 Meadow Crest Drive
STRATEGIC ADVISORY GROUP CORRESPONDENCE LIST	Robert Lauritzen (El Dorado County), Jason Burke (City of South Lake Tahoe), Scott Carroll (CA Tahoe Conservancy), Brian Grey (Lahontan Regional Water Quality Control Board), Paul Nielsen (TRPA), Jennifer Lukins (Lukins Water Co), Steve Morales (LT Unified School District), Harold Singer (Community Rate Payer), John Thiel and Ivo Bergsohn (STPUD), Mike Maley (Kennedy/Jenks), Michelle Sweeney (Allegro Communications)
MEETING HOSTS	Ivo Bergsohn, John Thiel (STPUD), Mike Maley (Kennedy/Jenks)
FACILITATOR	Michelle Sweeney (Allegro Communications)

GROUNDWATER MANAGEMENT PLAN UPDATE GOALS

1. Update the Groundwater Management Plan to meet CA legislative requirements and DWR guidelines
2. Update the District ordinance for protecting and monitoring groundwater quality
3. Develop Groundwater Basin Management Objectives (BMOs) to provide a framework for maintaining a sustainable and reliable groundwater supply
4. Create a plan for collecting, compiling and reporting regional groundwater management data
5. Establish a stakeholder forum to host discussion about groundwater topics and facilitate collaborative action toward resolution of groundwater issues

MAY 14 MEETING GOAL & OBJECTIVES

GOAL

Generate potential draft content for the Groundwater Management Plan on the subjects of land use planning, education and monitoring and initiate discussion about stormwater management and the groundwater resource.

OBJECTIVES

1. Increase shared understanding of the current status of groundwater monitoring
2. Discuss potential approach to
 - Land use planning
 - Education
 - Monitoring
 implementation actions in the plan document
3. Identify collaboration opportunities in strategic topic areas within and outside of the Groundwater Strategic Advisory Group
4. Summarize findings of existing reports on stormwater-groundwater relationship

1) ASSESS RISK 2) PRIORITIZE ACTION ACCORDING TO RISK

It has been brought forward by Strategic Advisory Group members in the course of workshops 1 (April 16) and 2 (May 14) that any work not already being performed in the service of providing ample and safe

drinking water should be rooted in risk management—the identification, assessment and prioritization of risks followed by coordinated and economical application of resources to minimize, monitor and control the probability and/or impact of unfortunate events or to maximize the realization of opportunities.¹ The SAG and District staff have identified the following pertaining to risk:

QUANTITY

Near-term risk to water supply (quantity) is deemed low relative to other California systems given that the South Tahoe groundwater basin is a headwater system with a record of ample recharge. In this context the SAG recommends actions such as

1. Continuously strive to enhance understanding of the groundwater recharge system and dynamics at play in groundwater recharge
2. In context of the above, conduct a long-range, comprehensive groundwater supply risk assessment. Include in such assessment attention to
 - Climate change (models and management implications)
 - Coordination with the USFS Lake Tahoe Basin Management Unit to derive source water pertinent information from regional climate change and forest resource management studies
 - Investigation of the potential opportunity represented by District surface water rights under changing climate conditions
 - Risk and opportunity implied by regional, state and national climate information and policy related to water supply

QUALITY

Near-term risk to water quality is deemed low relative to other California systems given that the South Tahoe groundwater basin is in a watershed where allowable land uses are tightly controlled and agricultural and industrial uses are at a minimum. Residential and commercial land uses are not expanding out of the current development “footprint” as these are tightly controlled by the Tahoe Regional Planning Agency and its congressional mandate to protect the Basin and its natural resources. In this context the SAG recommends actions including

1. Conduct a comprehensive groundwater quality risk assessment evaluating uncertainty related to threats in any of the following areas: infrastructure failure (of any kind, from any source), natural causes and disasters, deliberate attack, accidents, legal liabilities and financial and political systems.
2. Once a comprehensive risk assessment has identified all possible risk associated with source water quality then define where each risk lies on a spectrum from high-to-low risk based on a standard set of criteria.
3. Separately, define where each risk lies on a spectrum related to the District and partner agencies’ ability to mitigate risk based on a standard set of criteria.
4. Integrate the risk and feasibility spectrums to derive a spectrum of prioritized risk management actions—actions that will result in cost-effective risk reduction.
5. Identify opportunities to better-protect groundwater

In this context Strategic Advisory Group members, District staff and consultants have identified the following

Potential risks associated with groundwater

Gasoline – and additives current and future
MTBE currently in the ground and select wells

¹ Risk Management, source: Wikipedia, May 27, 2014

Private wells
 Sewer system
 Stormwater system – roads and stormwater collection system
 Monitoring wells...

Opportunities to better-protect groundwater

Interagency collaboration (data and information exchange and capacity-building agreements)
 Land use – groundwater recharge management
 Education...

SOURCE WATER EDUCATION

The Strategic Advisory Group in the April 16, 2014 meeting identified education as a priority action area to be addressed in the Groundwater Management Plan document. In this, May 14, meeting, the group reconvened discussion on the subject of education as it might be integrated into the Plan.

GROUNDWATER STRATEGIC ADVISORY GROUP | A ROLE IN THE FUTURE?

Members identified several opportunities to kickstart collaboration among the groups represented on the SAG. Bergsohn said, “I’m very hopeful that this [Advisory Group] will continue and as far as education I think that is going to be a very important goal of this group. Lukins added, “I think that after the plan is created we should continue to meet on an annual basis or something to meet and confer and see what the TRPA has been doing, to see what the CTC has been doing, see what the utilities have been doing in order to promote the groundwater protection and see if there are new ideas and programs that we could come up with and ways to educate and promote. I think also educating each other as to what each other is doing is a big part as well. Just maintaining the relationships after the plan is created is a critical part.”

Collaboration – Leverage existing programs

Singer underscored the opportunities inherent in leveraging existing programs both at the District and via collaboration with other agencies. He emphasized the opportunity inherent in using existing education vehicles to reach a variety of audiences. Singer pointed out too, the value of official collaboration between agencies with the suggestion, “get an MOU with another entity that does more frequent work [on individual properties]—where that entity can look out for things that are pertinent to your need for protecting the groundwater.” In this statement Nielsen provided an example of such opportunity, “As Harold points out, regulators show up on private property for a variety of business—whether to address an illicit discharge or NPDES inspection or BMP inspection or coverage verification—to leverage those interactions I agree is a great opportunity.”

John Thiel and Paul Nielsen identified two apparent opportunities to leverage existing programs and field visits as follows:

City and County Building Permits

Thiel: “When City and County inspectors go out and do building inspections for new construction and remodels [source water protection] could be a component— they could remind the contractor or the homeowner about [source water protection] opportunities.”

TRPA Standard Conditions Approval

Nielsen: “At TRPA we have Standard Conditions of Approval that are attached to different types of projects and we could amend those standard conditions of approval easily at staff level to include, ‘please don’t do this...’, ‘please be aware...’. We do it for idling restrictions, fugitive dust... We would be happy to amend those to talk about source water protection.”

TABLE A | POTENTIAL COLLABORATION AND LEVERAGING OPPORTUNITIES, EDUCATION

Table A summarizes other potential education collaboration and “leveraging” opportunities identified in the May 14 group discussion.

Resource type	Home Agency
STPUD	educators
County	household hazardous waste collection program
County	historic water education program
CTC	public outreach specialist
TRPA	contractors workshop
TRCD, NTC	inspectors & garden advisors

Source Water Protection “Motto” and Materials

Sweeney offered this suggestion to the group—streamline your source water protection message: “I think part of what can come out of this discussion and can be integrated into the plan is your thinking in response to the question; What’s the groundwater or source water story in 2-4 words? What is the story that we want all of our educators across disciplines to carry with them into the field?”

A LAKE TAHOE BASIN-WIDE SOURCE WATER PROTECTION MAP

Bergsohn introduced the Source Water Protection Map as a tool for making risk-to-source-water evident, “I know in the GWMP we are going to have a source water protection map. If you could show that map and say your site is here, and this proximity to a drinking water source and you’re in a “red zone” (very close) or a “yellow zone”, or “blue zone”, it makes a difference as far as your heightened awareness. [Such a map could give an indication as to] the potential effect of various activities on our drinking water.” (p. 14 of 50)

In the course of the May 14 discussion the Source Water Protection Map became a frequent point of reference. Further discussion on this topic can be found in the Land Use Planning and Stormwater sections of these notes.

TABLE B | POTENTIAL EDUCATION APPROACHES AND TOPICS

Table B lists approaches and topics the Advisory Group offered for consideration in the Education element of the Groundwater Management Plan document

Concise motto and message for translation across platforms
The Why of Water Conservation
Water Conservation in a Sustainability context
Water Conservation as Ecosystem Service
Personal Responsibility and drinking water

LAND USE PLANNING

OPPORTUNITIES TO UPDATE EXISTING SOURCE WATER PROTECTIONS | LAND USE

The Tahoe Regional Planning Agency (TRPA) has an existing source water protection ordinance and associated map. The agency is willing to undertake an update of both, incorporating a new map that may come from the efforts being discussed by this SAG.

Nielsen - The (current TRPA) ordinance says that if you have a land use, redevelopment new use that meets certain criteria (in the ordinance) industrial, commercial, then that's a trigger to contact the local water purveyor and get comments on proposed development and see if there are source water protection measures that need to be incorporated like spill plans or special containment facilities, and then incorporate that into our approvals. So our ordinance is really a trigger.

Singer - Now that's TRPA...does that relate back to the City then too that they have the same obligation?

Nielsen - For those projects that they permit on our behalf through the delegation MOU, the answer is yes. So we would like to update those.

PRIVATE WELLS AND SOURCE WATER SYSTEM VULNERABILITY

The following bullet points summarize discussion on the topic of private wells as a source water risk

- While the District has a private well inventory it is incomplete
- The "inventory effort" would significantly benefit from interagency collaboration (example – TRPA site assessments might integrate private well evaluation; private well locations from Lukins' jurisdiction; County data on private well applications and closures)
- A private well GIS layer combined with other source water maps would facilitate a risk evaluation associated with private wells
- Tailored risk-reducing actions could then be designed and implemented across the "private well landscape" correspondent to the level of risk posed by private wells
- A long-term, collaborative program to reduce risk from private wells could ensue

A LAKE TAHOE BASIN-WIDE SOURCE WATER PROTECTION MAP

The concept of a Lake Tahoe Basin-wide source water protection map arose in group discussion at several points during this workshop. At this interval it was discussed 1) as a tool in the context of mapping private well and associated water system vulnerability and 2) as a tool for triggering project review by water purveyors where re/development projects may have connectivity to source waters.

Private Wells Map Layer

Bergsohn - I think putting together a private well inventory is a great idea and I think we already have it. There are probably holes in it...it could be improved, that is definitely something for the future. I love the idea of TRPA including that in their property surveys. That would be great just to know that you have if there are other wells out there that we don't have to worry.

TRPA Source Water Protection Ordinance

Bergsohn to Nielsen - So do you think TRPA then would be open to incorporating or using our map as a basis for triggering your ordinance?

Nielsen - Yes. After the last meeting, I spoke to Joanne our Executive Director and told her what was happening. I said, best available information is what we need to use. Right now the maps are at I think the 500’ radius around the well. (Whether that at the time was the best available information or model ordinances – I don’t know what it was). I have to think that from a geologic standpoint there is a better way to do it now. Maybe it’s polygons based on geology or soils or something.

NB: TRPA, having Lake Tahoe Basin-wide jurisdiction, would seek to have the full Tahoe Basin source water protection map updated.

SHARING INFORMATION, BUILDING COLLABORATION | GROUNDWATER MONITORING

The District requested that Strategic Advisory Group members provide an overview of who is doing what, where in terms of monitoring that may potentially be relevant to the source water resource. Bergsohn described that with this workshop segment “we would like to accomplish” two things 1) get to know what information everyone is collecting in order that 2) we can at a later time ascertain what can be done with that information in relation to the Plan document’s Basin Management Objectives

MONITORING CURRENTLY PERFORMED IN THE BASIN WITH POTENTIAL RELEVANCE TO SOURCE WATER

This table summarizes Strategic Advisory Group response to the request for information

TRCD	Basinwide constituent runoff concentration
CalTrans	Road contribution to stormwater flow
CalTrans	Shallow groundwater levels
CTC	Shallow groundwater levels
TRPA	Project-specific data pertaining to SEZs
LTIMP	Stream flow data
LTUSD	Pumping volumes and water use data
County	Meyers landfill monitoring data
Lukins	pumping volumes and ...

The SAG discussed how funding for LTIMP stream monitoring is diminishing. There was some inquiry into how valuable this data might be in a source water context. In closing on this topic, it was suggested that if stream monitoring data is of value to understanding the source water resource it would be worthwhile to incorporate “advocacy for LTIMP stream monitoring” in the Groundwater Management Plan document.

GROUNDWATER QUALITY AND STORMWATER MANAGEMENT

The Lake Tahoe TMDL has led to a high degree of organization in the Tahoe Basin toward the objective of maintaining a high degree of integrity in the stormwater system. The TMDL indicated that integrity of the stormwater system and road surfaces was one of the highest priority actions that could be taken toward improving Lake Tahoe clarity. A key function of the TMDL is collecting and tracking nutrient and fine sediment data, particularly in those segments of the watershed with direct connectivity to the lake. This data feeds into the Lake Tahoe Crediting Program.

While source water constituents of concern differ from the constituents of concern in the TMDL Crediting Program there are important elements of the TMDL-initiated stormwater program that might be leveraged to benefit source water over the long term. Among these elements are: an existing regional approach to stormwater management, collaboration (between CalTrans, County, the City of South Lake Tahoe, Lahontan WQCB, TRPA, the Conservation Districts and environmental conservation entities) in the form of the long-standing SQWIC, data sharing protocols, interagency agreements, maps and monitoring and data collection organizational capacity.

The TMDL looks at water quality in receiving waters as well as constituent runoff concentrations (CRC). The CRC data may be of interest to the District (Tahoe Resource Conservation District, TRCD, collects the CRC data). TRCD also collects data that contributes to understanding BMP effectiveness.

A LAKE TAHOE BASIN-WIDE SOURCE WATER PROTECTION MAP

As discussed both in the education and land use segments of the meeting (referenced above in these notes) a Lake Tahoe Basin-wide source water protection map is viewed as an instrumental tool in kicking off discussion and focused thinking about coordinated source water protection.

NB: Bob Larsen at Lahontan WQCB is the point person with the state of CA for Tahoe’s stormwater program under the TMDL.

The Tahoe Regional Planning Agency BMP retrofit requirement applies to all priorities—residential, commercial and industrial. This long-standing program is a one-size-fits-all approach that technically even requires installation of BMPs on industrial or commercial properties that may have subsurface contamination. The City is working with TRPA to update this program to consider subsurface contamination.² This is a worthwhile area of focus for the District’s GWMP implementation element.

Burke - Note that there is in Tahoe, the Environmental Improvement Program (EIP) and in this context there has been a decade of investment in large scale water quality improvement projects which are distinct from the TRPA parcel specific Best Management Practice retrofit program.

² This paragraph added in July 2014 in follow up correspondence with Jason Burke on the subject discussed May 14th. Additional to the paragraph above: Current TRPA parcel-specific BMP retrofit policy requires all properties to infiltrate the 20 year, 1 hour storm (approximately 1 inch of rain) and does not currently consider how this may affect subsurface contamination or source water protection.

In considering potential risk from the interaction of surface stormwater infrastructure and groundwater here are some things to consider.

Stormwater BMPs have 1) collection and conveyance (curbs, gutters and drain inlets 2) primary and pretreatment systems and 3) treatment and/or infiltration systems.

Features of stormwater BMPs with source water risk reduction potential

Stormwater BMPs have been installed in the Basin over the course of several decades. Given that the design of BMP components has been continually improved over this time, BMP components and design are different throughout the Tahoe Basin. (The TMDL emphasizes BMP maintenance irregardless of this structural disparity.)

Certain features of the stormwater BMPs have implications for source water protection. For example, drop inlets with concrete bottoms facilitate removal of sewage and diesel spills before these contaminants get into the infiltration system. Some BMPs have concrete bottoms. Not all do.

Other features of stormwater BMPs that can have implications for source water protection include: sand oil separators, underground settling chambers using weirs, continuous deflection or detention, etc.³

The City's stormwater infrastructure has many of these protective features throughout. However, in rural areas (such as the unincorporated County sections of the Tahoe Basin) CalTrans may have older infrastructure that does not necessarily have these risk-reducing features.

Maley - A variety of land uses will have a variety of associated risks. Stormwater from a residential area may pose less risk than that from a commercial/industrial area.

Source Water Protection Map overlaying land uses and stormwater infrastructure and maintenance

So an inventory of the stormwater system would be helpful to the source water protection cause. The source water protection map might feature the following:

- Well information
- Groundwater recharge and aquifer features
- Land use (commercial, industrial, residential, etc.)
- Stormwater infrastructure (location, components, maintenance, etc.)

Much of this information already exists. The source water protection initiative would be to bring the data and information from diverse agencies into focus on a source water protection map. From this could be derived source water best practices. The next step would involve integrating these best practices into MOUs and formal practice by the entities installing and maintaining stormwater infrastructure and creating a monitoring system to provide feedback on the effectiveness of these practices in reducing risk.

COLLABORATIVE PROBLEM-SOLVING OPPORTUNITIES PROJECTED TO EMERGE FROM BASIN-WIDE SOURCE WATER PROTECTION MAP

City/County and State Service Station Inspections

Bergsohn - "I know there are sites in town that have drywells for storm water collection that are right down slope from service stations. [A standard inspection visit] might be an opportunity right there to make the station operators aware of the potential problem/issue. That may go a long way to stop from contamination/gasoline running into a storm drain if there is some awareness that there is a potential

³ Underground chambers can include weirs as a way to separate out sediment and pollutants. Underground chambers could also be settling tanks without weirs. Either way, there are several "underground chamber-type" stormwater BMPs whose construction and components can have implications for source water protection.

problem. [When inspecting a site does Lahontan] make the operators aware of those types of potential environmental liabilities?" (p.12 of 50)

Singer – "It seems that the County has more interactions with those types of operations on a routine basis more than anybody else does because they are the regulative authority."

Lauritzen: "Our UST inspectors wouldn't recognize a drywell, probably, if they saw it. But if the County was aware of a drywell at a service station and it was a potential issue and somebody brought that to light to us I think we could bring some pressure to bear on the property owner."

SOUTH TAHOE PUBLIC UTILITY DISTRICT EARLY DETECTION ORDINANCE

The District is inviting the Strategic Advisory Group (SAG) to comment on the existing Groundwater Management Plan, in particular the Early Detection and Response sections. This will be an agenda topic in Workshop 3 on June 4. In order to familiarize the SAG with the topic and discussion questions Ivo Bergsohn provided an introduction and clarifying questions and discussion were exchanged. The following notes provide an overview of this preliminary exchange.

South Tahoe Public Utility District Groundwater Management Plan, EDIR sections

7.6.5	Findings Regarding Zones of Contribution Surrounding District Wells
7.9	Groundwater Monitoring
7.9.3-7.9.11	EDIR Monitoring Wells
7.10	Response to Contamination
7.11	Enforcement

The existing Groundwater Management Plan is the first such plan created by the District. The Plan was written during a time when the gasoline additive MTBE posed a significant threat to groundwater. The plan emphasized reducing future risk from MTBE or similar components of gasoline. At present, the threat of MTBE to groundwater supply is diminishing as the additive was outlawed more than a decade ago. Gasoline and additives to it are considered a persistent threat to groundwater though. And while significant barriers have been put in place to protect groundwater from exposure to contaminants from service stations, the bottom line is, there is no such thing as zero risk. In this context, the District is seeking expert opinion from SAG members regarding the level of protection provided by county and state programs from potential service station contaminant sources.

HIGHLIGHTS FROM MAY 16 STRATEGIC ADVISORY GROUP EDIR DISCUSSION

Bergsohn - The District has a groundwater monitoring program in the ordinance that says th District "may install wells in close proximity to active underground storage tanks". The intent of the program was to allow the District to install early detection wells. In the event of a contaminant release coming out of the Underground storage tank the well would provide an early indication. Another component of the ordinance is an emergency response plan. This provision requires the service station to have a plan pre-negotiated with the County and Lahontan.

In the late 1990's there was a long lag time between the identification of release, and... cleanup. The intent of the ordinance was to enable a service station operator to immediately initiate interim remediation measures.

Singer - I understand that the ordinance is intended to give the District a means to initiate protective action before there is a major problem. [Today you are asking us to consider] Is it a good use of District resources to implement the ordinance given the other protections in place?

The District has not implemented the program in the decade the ordinance has existed. Bergsohn cited cost-benefit considerations as the primary factor in the decision not to implement. However, he noted that should these elements of the ordinance not be removed in this plan update, then it would be because the benefit of having such provisions was deemed cost-effective and therefore implementation would begin.

ARE NON-DISTRICT PROTECTIVE MEASURES ADEQUATELY REDUCING RISK?

The SAG transitioned to discussion about existing protective measures outside of the EDIR elements of the District ordinance. The risk being discussed here is specifically the risk to groundwater from gasoline and gasoline-related potential contaminants.

Are non-district early detection and response programs adequate?

Lauritzen observed that double-walled storage tanks are highly-desirable for reducing risk. The County does not require that double-walled storage tanks replace single-wall tanks but does require that single wall tanks be lined and any new tanks installed be double-walled.

Thiel noted that the District has information on tank location but not construction. The District doesn't know which tanks are single vs double walled.

Grey offered that the state UST program includes a leak prevention component. Lauritzen added the County has an ongoing monitoring program.

Lauritzen noted that in the event of catastrophic failure to an underground tank the existing protection framework offers inadequate protection.

Is the District having its own early detection mechanism an irreplaceable asset? Is it as viable a protection mechanism as it was believed to be?

Are there changes to service station protocols and county and state programs that would provide adequate protection if the District were to eliminate the monitoring and emergency response plan requirements of the ordinance?

Singer – 1) ...Are the new systems and everything in place (not only the physical system but the monitoring systems, etc...) are they protective enough to negate the need for the sentry wells and even the response plan? 2) From a rate payer perspective, I guess the question really is, is that a good use of District resources to actually implement that ordinance given the other things that are in place?

Carroll - I can see the benefit of a mechanism that allows the District to trigger immediate response to a problem.

In closing the SAG left off with the above questions and the following considerations: 1) Are District early detection wells a unique (and therefore irreplaceable) asset in risk management 2) Is a District-required early response plan from the service stations a unique asset in risk management and one that the District can reasonably "enforce"?

FOLLOW-UP DISCUSSION REGARDING EDIR

Following the May 14 Strategic Advisory Group workshop Ivo Bergsohn initiated the following correspondence on May 15:

Hi Robert & Brian-

Near the tail end of yesterday's workshop, question was raised for discussion about the need to maintain Section 7.9 Groundwater Monitoring in the updated Groundwater Management Plan (GWMP). For your benefit, I've attached a copy of the District's current GWMP, with the relevant sections highlighted. Because this is a very important topic, I would like to confirm my understanding of your opinions on this matter. I have tried to paraphrase, as best I could, my understanding of what I was able to capture from this conversation below.

From Roberts response, it is my understanding that even though the County does not require full double-wall containment for existing UST installations, as some single-wall lined USTs are still in operation; improvements in UST systems design and UST leak testing technologies, no longer make EDIR monitoring a necessity.

From Brian's response; it is my understanding that that as all large groundwater contamination issues within the basin have been addressed; MtBE is no longer used in gasoline; and that existing regulatory programs, including the low threat case closure policy, are adequate to control groundwater contamination; there is no need to maintain EDIR Monitoring in the GWMP.

Would you please let me know if I have adequately characterized your opinions on this matter. If I have not, I sincerely apologize and would appreciate if you would reply with any needed clarifications.

Robert - I would also appreciate if you could send me any relevant information about improvements in UST systems design and leak testing technologies employed in El Dorado County since 2000. This information would help the District reach an informed decision on this matter.

Along with the brief discussion on the continued need for EDIR Monitoring, question was also raised about the need for Groundwater Release Prevention and Response Plan (GRPRP) component, under Section 7.10 of the existing GWMP. I believe the Workshop ran out of time before we could explore this topic, so I'd like to raise the same question to both of you about whether you see any benefit to maintaining the GRPRP requirement in the GWMP? I would like to know your opinions on whether the GRPRP could serve to complement existing regulatory programs; or whether there are mechanisms within existing programs that could be used to serve the same function. As an example, the AST program has a requirement for owner/operators to file a Spill Prevention Control and Countermeasures Plan as a permit condition. Is there something similar that is used for permitting UST systems?

Thanks again for your participation on the SAG. I look forward to receiving your opinions on these matters.

Regards,

Ivo Bergsohn, P.G., C. Hg.

Brian Grey sent this response:

May 27, 2014 Email from Brian Grey, SAG #2 Workshop Follow up
Engineering Geologist

Lahontan Water Board- Region 6
Direct: 530 542-5421
email: BGrey@waterboards.ca.gov

As a member of the SAG, Water Board staff welcome the opportunity to participate in this discussion. The questions you raise and the clarification of issues requested are important topics.

Below is some information regarding leaking underground storage tank and site cleanup program cases to provide context for clarifying the issues.

Leaking Underground Storage Tank Cases

- Seven UST cleanup cases remain open in the groundwater basin, two of which are identified as eligible for closure.
- 76 UST cases have been closed within the groundwater basin.
- Five new UST cleanup cases have been opened in the last 10 years, all of these cases have been closed with the exception of one case opened in 2012 (Midas Muffler).
- The remaining open UST cases have not identified significant remaining source areas or are undergoing some form of investigation or remediation.
- MTBE was completely phased out of gasoline in CA by 2006.
- The Low Threat Underground Storage Tank Case Closure Policy (LTCCP) has a 60-day public participation component which allows for stakeholder concerns to be submitted.

Site Cleanup Program Cases

- Lahontan Water Board currently has 7 open Site Cleanup Program (SCP) cases in the groundwater basin; five of the seven open SCP cases are associated with PCE contamination around the "Y" and Stateline areas.
- The remaining two SCP cases are the Meyers Landfill and the Berry Hinckley Bulk Fueling Facility on James. The latter is a petroleum site eligible for closure under the LTCCP.
- Timely investigation and remediation are largely dependent on responsible party cooperation as there is no insurance fund like the UST cleanup fund for these types of releases.

While Water Board Staff welcomes additional data and acknowledges the benefit from detecting releases as soon as possible, Water Board Staff believe the decision to implement the EDIR is a discussion topic for the SAG, and not a decision for any individual entity. The SAG should collectively discuss the issue and offer a consensus opinion to the District. To facilitate this discussion, please consider a few questions below that could be discussed at the next SAG meeting to help guide the decision-making process.

Questions:

1. Why hasn't EDIR been implemented before? Are there instances in the last 10 years where EDIR would have been useful?
2. Should EDIR be focused solely on gas stations and petroleum products? Should EDIR consider other constituents of concern and/or types of activities?
3. What is District's primary concern with respect to gasoline stations and groundwater? Is it the contamination that has been left in place or new releases? Would EDIR be focused on sites with historical contamination left in place or at active stations within sensitive areas?
4. Are there plans to add previously removed wells to service?
5. Is MTBE the primary constituent of concern for the District? What other gasoline or man-made constituents of concern have been detected in District wells historically? What are current concentrations?

6. Would District water quality information be available to public/stakeholders, such as by uploading data to the State Water Board's Geotracker database?
7. Are sections 7.4 and 7.6 of the GWMP going to be updated to reflect current conditions?
8. Is the confirmation sampling schedule reasonable? Should a clear method to distinguish natural variation of residual contamination from a new release be added? Or would wells be installed in only areas known to be free of chemicals of concern?
9. What happens if the District doesn't adhere to the Plan?

Since I didn't have all the SAG member contact info readily available, could you please distribute to the rest of the SAG? I look forward to participating in the discussion on the need for an EDIR system at the next workshop. In the meantime, please let me know if you have any questions.