

2015 GWMP Stakeholder Advisory Group Minutes

December 16, 2015
South Lake Tahoe, CA

Members Present

Ivo Bergsohn
Joey Keely
Jenn Lukins
Jason Burke

Robert Lauritzen
Harold Singer
Brian Grey

Bob Loding
Greg Trischler
John Thiel

Members Excused

Scott Carroll

Thomas Gavigan

Members Absent

Greg Daum

Doug Dame

Presentations

Lisa Dernbach, LRWQCB
Brad Herrema, BHFS (by telephone)

Dr. Greg Pohll, DRI
Ivo Bergsohn, STPUD

Others Present

See Sign-In List, attached.

OPEN FORUM

During Open Forum two items were raised for discussion; State-Mandated Urban Water Use Conservation Goals; and possible changes in the TRPA code of ordinances for improved water conservation.

Water Conservation Goals: The water purveyors provided a brief status report on achieving State-mandated urban water conservation targets. J. Lukins reported that LBWC is currently at 18% reduction in water usage compared to 2013. Challenges in meeting State-Mandated targets include increase in number of services (connections) compared to 2013, including acquisition of a former small community water system (Rockwater Apartments) and new construction within their water system area. J. Larson reported that TKWC water reductions were currently at about the 20% level compared to 2013. Success in achieving these reductions is attributed to implementation of a fine system to enforce water conservation measures. Challenges with meeting these targets include increased water demands from increased population in the Tahoe Keys area, compared to 2013. This is attributed to an improved economy resulting in more second homeowners and renters in the Tahoe Keys area. I. Bergsohn reported that STPUD has also been able to achieve 20% reductions in monthly water usage compared to 2013 during the prime urban irrigation period (June through August), but is having greater difficulty in achieving similar levels of reductions in September, October and November.



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B. Loding reported that Lakeside Park (LSP) instituted its water conservation program in May, limiting outdoor watering to three days per week. LSP primarily uses surface water (90%) that is supplemented by ground water (10%) to meet water system demands. Through November, LSP reported reductions on the order of 32% compared to 2013.

During November, Governor Brown issued another Executive Order that would extend emergency water conservation regulations through October 2016. Expectations are that water purveyors will need to continue implementing water conservation measures next summer. The challenge of estimating per capita water use in an area with a fluctuating population was raised and tabled for further discussion.

TRPA Code: S, Navarro, raised the topic of possible changes in TRPA Code that could better support water conservation efforts. These include extending coverage credits for artificial turf use on residential properties; changing landscape screening language and removing any other barriers in the Code that may inhibit water conservation efforts. This topic is currently being discussed at the TRPA staff level. S. Navarro is seeking input from the SAG.

APPROVAL of MINUTES

The SAG approved the meeting minutes from the April 22, 2015 SAG Workshop. Meeting Minutes will be posted on the District's website.

ANNUAL REPORT

I. Bergsohn (IB) started the discussion on the Annual Report focusing on the required components; data needs and schedule for completion. The SAG recommended that the District prepare a comprehensive report that satisfied both the reporting requirements of the TVS Basin GWMP, as well as the new requirements under the Sustainable Groundwater Management Act (SGMA). Having a comprehensive report would better fulfill future grant funding application requirements, if needed.

Water Production Data: Water production data for Community Water System (CWS) wells accounts for more than 90% of the groundwater extractions from the TVS Basin. The District requested water production data for individual wells on a monthly basis from each water CWS. Submitted data would be aggregated and reported by water system in the Annual Report. JL noted that LBWC has already provided this data to the District. J. Larson noted that TKWC was in the process of tabulating this information and would be providing this data to the District in the near future. B. Loding, noted that LSP regularly reports its water production data to the State Water Board in April. B. Loding indicated that LSP would CC the District on this submittal to reduce any duplication of effort. J. Keely noted that the USFS also reports water production



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to the State Water Board in April for wells operated on USFS-LTBMU lands. JK offered to make this data also available to the District for the Annual Report.

Annual Report Schedule: IB requested that water production data for CWS wells be provided to the District by Thanksgiving of each year for the previous water year. Using these data, a draft of the annual report would be completed by February of the following year for SAG review. The final draft report would then be presented in to the District's Board at a public hearing in March. This would allow completion and submittal of the Annual Report to DWR by April 1st, in accordance with SGMA reporting requirements.

SOUTH Y PCE INVESTIGATION

L. Dernbach, LRWQCB, provided an update along with preliminary data of the source area investigation, targeting suspected businesses that may have used PCE in their past operations. The impetus for this investigation was the impairment of water quality and removal from service of the LBWC #2 and #5 wells in 2014. The investigation included the collection of shallow water samples collected at the water table and from 10 feet below the water table. The collection of shallow water samples was believed to be adequate to identify potential PCE source areas. Preliminary results indicate that PCE was found at low concentrations (less than 2 ppb) in the water table samples and was not detected in the deeper water samples. The absence of PCE in the shallow water samples suggests to LD that PCE is deeper in the aquifer. LD believes that drawdown from neighboring water wells, caused contaminant movement into deeper portions of the shallow aquifer. The most significant preliminary finding is the levels of PCE detected in water samples collected from existing monitoring wells neighboring the BevMo property. PCE in these wells is attributed to contamination associated with the LT Laundry Works site. LD believes that this PCE contamination is likely migrating toward the TKWC #2 well.

During group discussion a variety of questions and topics were raised. Depth of Contamination: IB indicated that the regional aquitard through the area is found at a depth of about 100 feet. The occurrence of PCE in District wells indicates that PCE contamination extends to the top of the regional aquitard. TKWC #2: Water samples have been collected from this well at various depths. PCE has been detected at 11 ppb from water samples collected from near the bottom of the well (approximately 400 feet deep). STPUD Investigation: District is focused on collecting data that could be used to develop a predesign for a pump and treat system to remove PCE contamination from groundwater. The investigation will be performed using the LBWC#4 well. The District issued an RFP for technical proposals on November 9th. Deadline for proposals is December 18th. The District hopes to award the project in January 2016. J. Larson offered to help review the technical proposals. TKWC Concerns: PCE has been increasing in the TKWC #2 Well. The wellhead treatment system used on this well limits water production to about half of the well capacity. Water conservation efforts have helped to reduce demands, but may not be



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adequate. TKWC is entering into a mutual aid agreement with District to insure an adequate water supply. TRPA BMPs: S. Navarro raised the issue of BMPs requiring infiltration of runoff and contaminated properties. TRPA is considering modifying requirement for properties with known subsurface contamination to only sediment control. TRPA is seeking information from CSLT to identify contaminated properties. IB offered information identifying Potential Contaminating Activity (PCA) sites that may be helpful. Trevor Coolidge (TC) inquired whether this should be considered on a property-level basis or should larger areas be considered such as wellhead protection zones. TRPA system uses APNs and is therefore geared to a property level data collection effort, but is open to considering broader areas.

SGMA UPDATE

Brad Herrema, District's legal counsel, provided a brief presentation on recent changes and amendments to the SGMA. A recent change that may be most germane to the District is a new provision requiring a completeness review of all Groundwater Sustainability Agency (GSA) Notifications submitted to DWR. This would also include the District's GSA formation notification, submitted this past July. As no protests were received during the comment period, BH did not anticipate that the findings of the DWR completeness review would affect the District's claim as the exclusive GSA for the TVS Basin.

TVS BASIN MODELING

Dr. Greg Pohll, UNR Desert Research Institute (DRI) presented interim results of the Phase 1 Modeling work being performed by DRI for the District. The objectives of this work are to: 1) combine previous groundwater (STPUD/UCDAVIS MODFLOW) and surface water models (DRI Tahoe Basin GSFLOW) into a new coupled groundwater-surface water model; and 2) use this coupled model to calculate a groundwater budget for the TVS Basin hydrologic system. The coupled model contains four layers representing the Alluvium, vertically defined to coincide with CWS well screen interval depths and simulate surface-water/groundwater interactions. Recharge for the model was extracted from the existing DRI GSFLOW model (previously calibrated). Plots of recharge distribution show the majority of groundwater recharge to the TVS Basin is from higher elevations within the contributing watersheds. Most of this groundwater recharge (about 30,000 AFY) is discharged as baseflow to surface streams. The ModFlow River Package is used to simulate surface water/groundwater interactions. The coupled model calibration was corroborated by comparing the predicted flux to streams to the observed groundwater flux (baseflow) using USGS stream hydrographs. The model slightly under predicted the observed flux, but predicted fluxes were within the observed range for most stations. Differences in flux are attributed to rain-on-snow events during the baseflow period that increase stream flows in the stream hydrographs, which are not predicted as part of the baseflow. Discharge to Lake Tahoe is simulated using a General Head Boundary based on



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average lake stage from 1959 to present. Using the model, the simulated groundwater flux to the lake (pre-development) is estimated at about 12,000 AFY. Hydraulic conductance and permeability values derived from available pumping test information were used to distribute the aquifers ability to transmit water. These initial values were adjusted by matching simulated water level elevations to observed elevations from well hydrographs for each of the model layers. The steady state water budget from the coupled model shows that the ratio of groundwater extractions (~8,000 AFY) to total groundwater recharge (~42,000 AFY) is very small (less than 0.2). The end of the presentation described next steps proposed by DRI for the on-going modeling work.

2015 GROUNDWATER LEVELS

I. Bergsohn, STPUD, provided a brief presentation showing the changes in groundwater levels through the TVS Basin during the current state-wide 2012-2015 drought event. The decline in total precipitation during the current drought is relatively moderate compared to the most significant periods of drought found in the long-term records for the Lake Tahoe Basin. However, the decline in snow pack in the surrounding watersheds that provides the majority of groundwater recharge to the TVS Basin is at historic lows. Hydrographs of wells from the District's Monitoring Network show that the rate of groundwater elevation decline generally increases from south to north across the TVS Basin. Rates of groundwater decline for selected hydrographs ranged from -0.2 to -0.9 feet per water year. Evaluation of 19 of the 27 wells used for groundwater elevation monitoring had seasonally high groundwater levels (May 2015) within the normal range; 6 wells were below normal; and 2 wells were above normal compared to the range of groundwater elevations measured in each well during the 10-year period preceding the start of the current drought (2001 – 2011).

NEXT STEPS

The following items were identified for further action during the workshop;

- Compare CWS per capita water use numbers to further consider the factors that may cause water use to vary between local area water systems;
- Review changes being considered by TRPA staff to improve ordinances/regulations that support rather than hinder water conservation efforts;
- Provide PCA geospatial data to TRPA for storm water ordinance consideration;
- Add J Larson to District's South Y Extraction Well Suitability Investigation technical proposal review team.
- Develop the 2015 Water Year Annual Report and provide the draft report for SAG review by the end of February;



SIGN-IN SHEET

South Tahoe Public Utility District

TAHOE VALLEY SOUTH BASIN (6-5.01) GROUNDWATER MANAGEMENT PLAN

STAKEHOLDERS ADVISORY GROUP WORKSHOP No.2

December 16, 2015
(9:00 AM - 12:00 PM)

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