EXHIBIT # F-2
24 pages

SQUAW VALLEY
PUBLIC SERVICE DISTRICT

WATER SUPPLY ASSESSMENT AMENDMENT
VILLAGE AT SQUAW VALLEY PROJECT

DATE: February 24, 2015

TO: District Board Members

FROM: Mike Geary, General Manager

SUBJECT: Water Supply Assessment Amendment – *Village at Squaw Valley Specific Plan* (VSVSP) – Farr West Engineering Proposal

BACKGROUND: The Board approved the original contract in January, 2013 and it was completed in July, 2014 after significant changes were made to the VSVSP.

The intent of Senate Bills 610 (requiring a Water Supply Assessment) and SB 221 (requiring a Water Supply Verification) is to support long-term water resource planning and to ensure adequate water supplies are available to meet demand for the project, as well as existing and future water demands. The WSA completed in July, 2014 satisfies the requirements of SB 610; however, the WSA has not yet been considered for approval by the Placer County Board of Supervisors. This Amendment, although not required by law, will consider the severe drought in the years 2012-2014. This scope of work will amend the analyses already performed to include in the numerical groundwater model the last three years during which California has experienced one of the worst droughts in its recorded history.

DISCUSSION: Farr West Engineering prepared the attached proposal to prepare an Amendment to the WSA in cooperation with District staff, its consultants, SVRE, and County staff. The attached proposal includes the scope of work, schedule, and estimate of cost.

ALTERNATIVES: 1. Accept the proposal from Farr West Engineering, Reno, NV to prepare a WSA Amendment for the *Village at Squaw Valley Specific Plan* and authorize staff to enter into Additional Services Agreement #1 with Farr West Engineering to perform the work for a price not to exceed $121,600.

2. Do not accept the proposal.

FISCAL/RESOURCE IMPACTS: There remains approximately $13,000 from the $154,700 budget approved in January, 2013 to complete the original scope of work. The cost to prepare the WSA Amendment will be reimbursed to the District by SVRE. The District has funds on deposit from SVRE to be reimbursed for expenses it incurs related to the project.

RECOMMENDATION: Accept the proposal from Farr West Engineering, Reno, NV to prepare an Amendment to the Water Supply Assessment for the *Village at Squaw Valley Specific Plan* and authorize staff to enter into Additional Services Agreement (ASA) #1 with Farr West Engineering to perform the work for a price not to exceed $121,600.

ATTACHMENTS: Proposal from Farr West Engineering to prepare the Water Supply Assessment (WSA) Amendment for the *Village at Squaw Valley Specific Plan* (VSVSP); Additional Services Addendum (ASA) #1.

DATE PREPARED: February 16, 2015.

SQUAW VALLEY PUBLIC SERVICES DISTRICT

Additional Services Addendum (ASA) #1
to Professional Services Agreement for Water Supply Assessment (WSA),
dated 2/1/2013 between
SQUAW VALLEY PUBLIC SERVICES DISTRICT
and
FARR WEST ENGINEERING

This ASA, dated February _____, 2015 shall amend the referenced Agreement to include the following project with relevant description, compensation, and schedule addressed herein.

PROJECT DESCRIPTION
Farr West Engineering (Farr West) completed the Village at Squaw Valley Specific Plan (VSVSP) WSA in July 2014. Placer County, the project applicant (SVRE), and the District are amending the WSA to include the recent drought years of 2013-2014. To do so, the groundwater model used in the original WSA will be updated to include data for the three years of 2012-2014. The WSA Amendment will require the following tasks:

- Compile and review data (groundwater level, production pumping, snowmaking and irrigation, precipitation, streamflow, etc.);
- Update water demands;
- Update groundwater model; re-calibrate if necessary;
- Groundwater modeling to simulate WSA conditions; and
- Update the WSA.

SCOPE OF SERVICES
The WSA team incudes Farr West Engineering, HydroMetrics WRI and Todd Groundwater. Farr West Engineering will lead the team as well as update the current and projected future water demands. HydroMetrics and Todd Groundwater will work closely together to update the groundwater model and assess the sufficiency of the water supply from the proposed well field.

Services are fully detailed in the attached Scopes of Work (Exhibit A) prepared by Farr West Engineering, HydroMetrics WRI and Todd Groundwater and include:

- Task 1 – Collect and Evaluate Data
- Task 2 – Update Water Demands
- Task 3 – Update Groundwater Model and Re-Calibrate (if necessary)
- Task 4 – WSA Conditions Model Simulation
- Task 5 – Update WSA
- Task 6 – Project Management

PAYMENT TO CONSULTANT
Payment to be in accordance with Section 5. Compensation, of the Professional Services Agreement, as follows:

Compensation will be billed on a time and expense basis according to the 2015 Farr West Fee Schedule and the fee estimates prepared by HydroMetrics and Todd Groundwater in their respective scopes. Total amount of this addendum is not-to-exceed one hundred, twenty-one thousand and six hundred dollars ($121,600.00).

NOTE: *Invoices shall bear Agreement Name as well as current billing amount, and total billed to date.*

PERIOD OF SERVICE

Services are expected to be substantially complete by July 31, 2015.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the day and year first written above.

DISTRICT:	**CONSULTANT:**
SQUAW VALLEY PUBLIC SERVICES DISTRICT	
By:	By:
Michael Geary, P.E. General Manager Date	Brent Farr, P.E. President Date
By:	
Kathy Obayashi-Bartsch, Board Secretary Date	
Address for Giving Notice:	*Address for Giving Notice:*
Squaw Valley Public Services District **PO Box 2026** **Olympic Valley, CA 96146-2026**	**Farr West Engineering** **5442 Longley Lane, Suite B** **Reno NV 89511**

DRAFT

FARR WEST
ENGINEERING

February 10, 2015

Mike Geary, P.E.
General Manager
Squaw Valley Public Service District
305 Squaw Valley Road
P.O. Box 2026
Olympic Valley, CA 96146-2026

RE: Scope of Work – Village at Squaw Valley Specific Plan (VSVSP) Water Supply Assessment Update

Dear Mike,

Farr West Engineering (Farr West) and the Water Supply Assessment (WSA) team, including Hydrometrics and Todd Groundwater, completed the VSVSP WSA in July 2014. The District et. al. have requested that the WSA be updated to include the recent drought years of 2013-2014. To do so, the groundwater model used in the original WSA will be updated to include data for 2012-2014. The WSA update will require the following tasks:

- Compile and review data (groundwater level, production pumping, snowmaking and irrigation, precipitation, streamflow, etc.);
- Update water demands;
- Update groundwater model; re-calibrate if necessary;
- Groundwater modeling to simulate WSA conditions; and
- Update the WSA.

The WSA team incudes Farr West Engineering, HydroMetrics WRI and Todd Groundwater. Farr West Engineering will lead the team as well as update the current and projected future water demands. HydroMetrics and Todd Groundwater will work closely together to update the groundwater model and assess the sufficiency of the water supply from the proposed well field.

The tasks associated with the preparation of the WSA Update are discussed below. Detailed scopes of work prepared by HydroMetrics and Todd Groundwater are also attached.

Task 1 – Collect and Evaluate Data

The WSA team will work in conjunction with the District and other local area water suppliers to collect and evaluate available data for the time period January 2012-January 2015 to include:

- Water level data for District and SVMWC production wells and Valley monitoring wells;
- Pumping data for District and SVMWS production wells, including horizontal wells;
- Precipitation data;
- Snow making and irrigation pumping data from the RSC and SVR;
- Squaw Creek streamflow data (from Sound Watershed);
- Monthly sewer flows from Highway 89 sewer flow meter; and
- District metered water use data.

This task also includes improvements necessary to the Olympic Valley Groundwater Database which will be performed by Hydrometrics.

Task 2 – Update Water Demands

Water demand projections through 2040 were presented in Appendix A of the July 2014 WSA. Current and projected water demands will be updated to include:

- SVR snowmaking demands;
- 2012-2014 District metered water use;
- VSVSP project demands based on recent occupancy rate data (provided by SVR and MacKay & Somps);
- VSVSP project irrigation demands;
- Cumulative non-project demands based on recent occupancy data;

Farr West will provide an update Appendix A Water Demand Projections Through 2040 to include monthly demands by pumping entity and existing and projected water demands in 5-year intervals. Through 2040.

Task 3 – Update Groundwater Model and Re-Calibrate (if necessary)

This task includes updating the groundwater model with the data collected in Task 1. Hydrometrics will run the updated model and compare the 2012-2014 results with the previous model to assess model adequacy. Hydrometrics will work with Todd Groundwater to determine if model recalibration is necessary.

In this task, Hydrometrics will also prepare a model update memorandum, similar to Appendix B of the July 2014 WSA.

Task 4 – WSA Conditions Model Simulation

This task will be performed by Hydrometrics and Todd Groundwater. Initially, Todd Groundwater will modify two well locations from the 2014 WSA. This task also includes:

- Developing update model input files;
- Model to simulate WSA conditions;
- Evaluation of model results (based on criteria in the 2014 WSA);
- Update Appendix C Sufficiency of Supply Assessment memorandum;

Task 5 – Update WSA

The WSA will be updated to include the updated water demands and the extended model period. **The update will provide a new complete version of the WSA**, including updated appendices as described in the previous tasks. The WSA Update will also include expanded discussion of water rights, the Truckee River Operating Agreement, and the recently passed California Sustainable Groundwater Management Act.

All parties will have a role composing the WSA Update. The WSA will be prepared first in draft form for review and comment by not only the consulting team, but also the District, Squaw Valley Real Estate, LLC, the District Board, Placer County, and any other local party as determined by the District. The draft WSA will also be reviewed by the District's third party hydrogeologic consultant, Interflow Hydrology, Inc. Farr West will take the responsibility of providing the draft WSA to the reviewing parties.

Farr West, HydroMetrics, and Todd Groundwater will address comments on the draft and incorporate these comments into a final WSA and submit to Farr West for final review and distribution. It is anticipated that Farr West will provide the District with five (5) bound and one (1) unbound hard copy of the final WSA Update, as well as one (1) electronic copy in PDF format for distribution to the required parties. One (1) CD will also be provided that will include all Excel, Word, and other related electronic documents that make up the WSA.

Task 6 – Project Management

This task includes overall project management throughout the project. Project management tasks include, but are not limited to, coordination with the District and subconsultants, preparation of monthly status reports and invoices and associated administrative time.

This task also includes project meetings to be held at key milestones throughout the WSA Update preparation.

Schedule

The project team has already begun preparation of the WSA Update. Currently, the project team is waiting for the data requested in Task 1. With the extensive groundwater modeling that is required to

Reference: Scope of Work – VSVSP WSA Update

complete this WSA Update, it is expected that the update will take approximately 16-20 weeks to complete based on the following:

- February 2015
  - Data collection and evaluation – 4 weeks
- March-April 2015
  - Water demands update – 2 weeks
  - Groundwater model update, simulation, and evaluation – 4-6 weeks
- May-July 2015
  - WSA Update Draft– 4 weeks
  - WSA team WSA Update review period and review meeting – 2 weeks
  - WSA Update Final – 2-4 weeks
- July 2015
  - Deliver WSA Update Final by July 17 for Board package
  - Present at District Board meeting July 28

Farr West Engineering and the project team propose to perform the above scope of services for an estimated fee not to exceed $121,600.00. The estimated fee will not be exceeded without prior authorization. The work will be billed on a time and expense basis according to the 2015 Farr West Fee Schedule and the fee estimates prepared by HydroMetrics and Todd Groundwater in their respective scopes.

Please contact me at (775) 853-7263 if you have any questions regarding this SOW. We are prepared to commence work immediately upon your authorization.

As always, I look forward to working with you on this project.

Sincerely,

David T. Hunt, P.E.
Principal Civil Engineer

Attachments:

Fee Estimate
Farr West 2013 Rate Schedule
Hydrometrics WRI Scope of Work
Todd Groundwater Scope of Work

Squaw Valley Public Service District
VSVSP WSA Update
Fee Estimate

	Principal Civil Engineer	Project Engineer	Administration	Total Labor		Expenses (a)	Todd Groundwater	Hydrometrics WRI	TOTAL
TASKS **Rate ($/hr)**	$130	$90	$60	Hours	($)	($)	($)	($)	($)
1.0 Collect and Evaluate Data									
Collect and Evaluate Data	8			8	$1,040		$3,673	$8,338	$13,051
Update Olympic Valley Groundwater Database								$2,508	$2,508
Subtotal	**8**			**8**	**$1,040**		**$3,673**	**$10,846**	**$15,600**
2.0 Update Water Demands									
	16	40	4	60	$5,920		$4,074		$9,994
Subtotal	**16**	**40**	**4**	**60**	**$5,920**		**$4,074**		**$10,000**
3.0 Update Groundwater Model and Re-Calibrate (if necessary)									
	6			6	$780		$3,843	$38,302	$42,925
Subtotal	**6**			**6**	**$780**		**$3,843**	**$38,302**	**$42,900**
4.0 WSA Conditions Model Simulation									
	6			6	$780		$13,175	$3,333	$17,288
Subtotal	**6**			**6**	**$780**		**$13,175**	**$3,333**	**$17,300**
5.0 WSA Update									
	30			30	$3,900		$19,244	$2,838	$25,982
Subtotal	**30**			**30**	**$3,900**		**$19,244**	**$2,838**	**$26,000**
6.0 Project Management									
Monthly Reports, Progress Billings	4		4	8	$760				$760
Coordination and Meetings	40			40	$5,200	$500		$3,388	$9,088
Subtotal	**44**		**4**	**48**	**$5,960**	**$500**		**$3,388**	**$9,800**
TOTAL	**110**	**40**	**8**	**158**	**$18,380**	**$500**	**$44,009**	**$58,707**	**$121,600**

FARR WEST
ENGINEERING

2015 RATE SCHEDULE

Title	Hourly Rate	Title	Hourly Rate
Principal Civil Engineer	$130	Senior Designer	$90
Project Manager	$105	GIS Analyst	$105
Project Engineer, EIT	$90	GIS Technician	$75
Project Engineer, EIT II	$80	Water Rights Surveyor	$125
Senior Hydrogeologist	$130	Water Rights Specialist	$105
Hydrogeologist	$90	Water Rights Technician	$75
Hydrogeologist II	$75	Water Rights Technician II	$65
Principal Electrical Engineer	$150	Professional Surveyor	$115
Environmental Scientist	$105	Survey Technician	$75
Construction Inspector	$90	Survey Technician II	$60
Plan Check/Building Inspector	$75	2 Man Survey Crew	$135
Senior Administrator	$70	3 Man Survey Crew	$155
Project Assistant	$60	Intern	$45
Administrator	$45		

Other Fees and Charges:

1. All direct project expenses, including subconsultants, will be billed at actual cost plus 15%.
2. Vehicles used for travel to meetings, deliveries, etc. will be charged at the current federal reimbursement rate.
3. GPS receivers will be charged at a rate of $10/hr/receiver.
4. Density gauges will be charged at a rate of $100/day.
5. An overtime surcharge of 25% will be applied to the hourly rates of non-salaried employees for authorized overtime work.

TODD GROUNDWATER

February 9, 2015

MEMORANDUM

To: Dave Hunt, Farr West Engineering

From: Chad Taylor, Senior Hydrogeologist

Re: Village at Squaw Valley Specific Plan Water Supply Assessment Update

The Water Supply Assessment (WSA) for the Village at Squaw Valley Specific Plan (Specific Plan) was completed in July 2014. The WSA used the existing groundwater model for the Olympic Valley Groundwater Basin (Basin) to assess sufficiency of supply for the Specific Plan. When the WSA was completed, the groundwater model was calibrated through December 2011. There was concern that the model period did not include the recent drought years of 2013 through 2014. However, the data required to run the model through the recent dry years was not available until recently. Now that these data are available, the Squaw Valley Public Service District (SVPSD), Placer County Planning Department (County), and the project proponent (Squaw Valley Real Estate, SVRE) wish to refine the WSA with an updated model that runs through the end of January 2015. This proposal has been prepared in coordination with the other members of the team that prepared the original WSA, Farr West Engineering (Farr West) and HydroMetrics Water Resources Inc. (HydroMetrics). For the purpose of this proposal the WSA Project Team is the SVPSD, SVRE, County, Farr West, HydroMetrics, and Todd Groundwater.

1. SCOPE OF WORK

TASK 1. COLLECT AND COMPILE DATA

The data collection and compilation phase of this project is scheduled to be short and efficient. The WSA team has experience with the datasets required for the WSA. These datasets are primarily associated with updating the groundwater model to include the recent time period from January 2011 through January 2015. The WSA update will also include limited revisions to water demand estimates. The datasets for all the components of this update have already been requested from the originators to expedite the process.

Our role in the collection and compilation of data will be to collect selected datasets and assist in the review and compilation of the remaining data. The datasets that we will collect, review, and compile are the snowmaking and irrigation water use from the Squaw Valley Resort (SVR) and Resort at Squaw Creek (RSC). In addition, we will assist Farr West and HydroMetrics in reviewing the other model update, water demand, and model input datasets required for this WSA update.

Deliverables: SVR and RSC snowmaking and RSC irrigation pumping records by month for January 2011 through January 2015 delivered electronically to entire project team.

Meetings: One teleconference with project team to confirm model update data receipt.

TASK 2. ASSIST WITH AND VERIFY MODEL UPDATE

The existing groundwater model will be updated to extend the time period through January 2015. This update will be primarily undertaken by HydroMetrics, with assistance from us as needed. We have coordinated with HydroMetrics in scoping this task to avoid duplication of effort or inefficiency. For scoping purposes we assume that our involvement in updating the model will be limited to assisting in the development of selected model input files and review of model calibration. It is not clear at this time if the model update will require a re-calibration. HydroMetrics has indicated that they will evaluate the need for re-calibration following the completion of the model update and time extension. If HydroMetrics indicates that re-calibration is unnecessary, our review will occur immediately following the completion of the model extension. If re-calibration is required, we will review the results with HydroMetrics when they have a complete calibrated model.

Following successful completion of the model update and calibration confirmation, HydroMetrics will complete a model update memorandum to document the changes to the model. We will review and comment on the draft model update memorandum during this task so that it can be included in the updated WSA.

Deliverables: None

Meetings: One meeting with HydroMetrics to review model calibration and one teleconference with project team to discuss model update results.

TASK 3. UPDATE WATER DEMAND

We will work with Farr West and SVRE to confirm the water demand estimates used in the July 2014 WSA and update them as necessary. Based on preliminary discussions of the WSA update with the entire WSA Project Team, it appears that only the snowmaking and occupancy rate components of the combined water demand estimates will need to be updated from the 2014 WSA.

We will work with Farr West to use the recent snowmaking use data to generate future demand estimates on a monthly basis. These snowmaking demand estimates will be based on recent peak use plus a margin to account for future increases in snowmaking demand.

Recent updates to measured occupancy rates will be used by Farr West and MacKay & Somps to modify project and non-project demand estimates. The recent occupancy rate data will be used only where it increases water demand in total or in the driest months of the year. We will assist both Farr West and MacKay & Somps in applying the recent

occupancy rate measurements to the future demand estimates for inclusion in the updated WSA.

Demand estimates may need to include irrigation demands for new irrigation related to possible mitigation measures addressing potential impacts to streambank vegetation. The need for and volumes of this irrigation demand will be planned with the entire WSA team prior to inclusion in the updated WSA demands.

Ultimately, all of the future demand estimates corresponding to completion of the development of the Specific Plan and other growth in 2040 will be compiled by Farr West into a single updated water demand analysis memorandum. We will assist Farr West in completion and review of this memorandum as needed.

Deliverables: None

Meetings: One teleconference with project team to plan for the demand estimate changes and a second teleconference to present and discuss the updated demand estimate volumes.

TASK 4. MODIFY WELL LOCATIONS

Two well locations from the 2014 WSA need to be modified slightly. One well was very slightly within a parcel with restrictions of well construction (Lot 1, formerly owned by the Poulsens). The second well that needs to be moved is on the PlumpJack property, and the property owner has prepared a development plan with a proposed well location different from the one in the 2014 WSA. The revised well locations will be checked with the WSA Project Team prior to completion of this task.

Deliverables: Draft well location map showing old and new well locations and plans or restrictions relevant to each well location.

Meetings: One teleconference with project team to confirm well locations.

TASK 5. RUN MODEL TO SIMULATE WSA CONDITIONS

This task includes the development of the updated WSA condition model inputs, application of the model using these inputs, and evaluation of the results.

Task 5.1. Develop Updated Model Input Files

We will use the updated demand estimates prepared by Farr West in Task 3 and combine these estimates with the proposed well locations from Task 4 into model input files that can be used in the application of the updated model. These files will be prepared in a format that is useable by HydroMetrics for direct input into the model.

Deliverables: Model input files for monthly recharge and pumping for the entire model period.

Meetings: None.

Task 5.2. Application of Model

HydroMetrics will apply the updated model to simulate WSA conditions using the inputs we developed in Task 5.1. We will assist HydroMetrics in applying the model as necessary and with any troubleshooting of model application that may be required. For scoping purposes we assume that application of the model will only require the time indicated for this subtask in the attached Table 1.

Deliverables: None.

Meetings: None.

Task 5.3. Evaluation of Model Results

We will work with HydroMetrics to extract and review model results following completion of Task 5.2. This model results extraction will be limited to simulated groundwater elevations in the western wellfield wells for further evaluation of the sufficiency of supply. These model results will be imported into evaluation spreadsheets to assess the simulated percent saturation in each of the western wellfield wells and the average percent saturation for the entire wellfield in each month of the model period. The results of this evaluation will be presented verbally to the WSA Project Team as soon as they are available.

Deliverables: Graphs and datasets for transmittal to WSA Project Team to facilitate discussion of model results.

Meetings: One teleconference with WSA Project Team to discuss model results and percent saturation prior to updating sufficiency of supply memorandum.

Task 5.3.1. Update Sufficiency of Supply Memo

Once the model simulated results have been processed and evaluated, the sufficiency of supply memorandum will be updated to include the revised demand estimates, model period, and model results as they relate to the WSA criteria of percent saturation. If the evaluation of the model results in Task 5.3 indicates that supply is not sufficient to meet the demands estimated in the WSA, the sufficiency of supply memorandum will not be updated. In this instance, the alternatives for next steps will be discussed with the WSA Project Team prior to proceeding with any of the following tasks.

Deliverables: Updated draft and final *Sufficiency of Supply Assessment for Village at Squaw Valley and Other Growth* technical memorandum.

Meetings: One teleconference with project team to discuss comments on draft sufficiency of supply memorandum for inclusion of comments into final memorandum.

TASK 6. UPDATE WSA

The WSA will be updated to include the extended model period and modified demand estimates. This WSA update will include modifications of the text of the July 2014 WSA to produce a new complete version of the document. This will include updated or new versions of the memoranda that were attached as appendixes to the original WSA. An administrative draft and public draft of the updated WSA will be completed to allow the WSA Project Team, peer reviewer, SVPSD Board, and the public to submit comments before the document is finalized for submittal to the County. The updated WSA will also include expanded discussion of water rights, the Truckee River Operating Agreement (TROA), and the recently passed California Sustainable Groundwater Management Act (SGMA).

Task 6.1. Prepare Administrative Draft Updated WSA

The Administrative Draft Updated WSA will be prepared to be a complete document suitable for review by the entire WSA Project Team and the SVPSD selected peer reviewer. This document will be circulated to the reviewing parties for one round of comments prior to completion of the Public Draft Updated WSA.

Task 6.2. Prepare Public Draft Updated WSA

The Public Draft Updated WSA will be prepared to address comments from the Administrative Draft Updated WSA. This document will be a complete version of the updated WSA suitable for release and review in advance of SVPSD Board acceptance. The SVPSD will be responsible for collecting and transmitting comments on the public draft document to the WSA Project Team so that appropriate modifications can be made prior to finalization. The comment and response period will be set by SVPSD.

Task 6.3. Finalize Updated WSA

The Updated WSA will be finalized following the end of the comment period. Appropriate comments and responses will be discussed with the WSA Project Team prior to finalization of the updated WSA. For scoping purposes we assume that one draft final version of the document will be circulated to the WSA Project Team prior to finalization and submittal to the County.

Deliverables: One version of the Administrative Draft Updated WSA, one version of the Public Draft Updated WSA, one version of the draft Final Updated WSA, and one Final Updated WSA. In addition, we will prepare a presentation to the SVPSD Board prior to finalization of the updated WSA.

Meetings: Three teleconferences with the WSA Project Team to discuss comments on draft versions of the Updated WSA and one in person SVPSD Board meeting to present the updated WSA.

2. PROJECT STAFFING

Our staff for the WSA includes Chad Taylor, Maureen Reilly, and Iris Priestaf, which is the entire Todd team from the original July 2014 WSA. This continuity will streamline the process of updating the WSA and make completing the process in the available time achievable. This team may be assisted by additional staff as needed.

3. ESTIMATED BUDGET

Our proposed budget is summarized in the attached Table 1.

The estimated budget for this updated WSA has been prepared based on our experience with the level of effort required for the original WSA. The total estimated budget for our role in updating the WSA is $40,008. This budget assumes the following: project alternatives will not have numerous changes in terms of water demand and supply, a finding of sufficient water supply, no meetings other that those identified above, and relatively few comments on the draft WSA. Todd Groundwater submits monthly invoices on a time and materials basis and we regard this as a not-to-exceed budget.

Table 1. Cost Estimate - Updated Water Supply Assessment 2015

Job Name: Water Supply Assessment Update 2015
Client: Farr West and Squaw Valley PSD
Job Description: Water Supply Assessment Update 2015

2015 Hourly Rates	Project Management and Review Hours $225	Senior Hydrogeologist Hours $200	Senior Engineer Hours $200	GIS / Graphics Hours $105	Admin Hours $95	Total Labor Hours	Technical Labor Costs	Comm. Fee 2%	GIS / Graphics Costs	Admin Costs	Direct Costs	Expense Fee 15%	Total Todd Groundwater Costs
Task 1. Collect and Compile Data	2	10	4	0	0.25	16.25	$ 3,250.00	$ 65.00	$ -	$ 23.75	$ -	$ -	$ 3,338.75
Task 2. Assist with and Verify Model Update	1	8	8	0	0.00	17.00	$ 3,425.00	$ 68.50	$ -	$ -	$ -	$ -	$ 3,493.50
Task 3. Update Water Demand Estimates	1	10	6	2	0.00	19.00	$ 3,425.00	$ 68.50	$ 210.00	$ -	$ -	$ -	$ 3,703.50
Task 4. Modify Well Locations	0	4	2	2	0.00	8.00	$ 1,200.00	$ 24.00	$ 210.00	$ -	$ -	$ -	$ 1,434.00
Task 5. Run Model to Simulate WSA Conditions													
Task 5.1 Develop Updated Model Input Files	*1*	*8*	*6*	*0*	*0.00*	*15.00*	*$ 3,025.00*	*$ 60.50*	*$ -*	*$ -*	*$ -*	*$ -*	*$ 3,085.50*
Task 5.2 Application of Model	*0*	*2*	*4*	*0*	*0.00*	*6.00*	*$ 1,200.00*	*$ 24.00*	*$ -*	*$ -*	*$ -*	*$ -*	*$ 1,224.00*
Task 5.3 Evaluation of Model Results	*2*	*6*	*6*	*2*	*0.00*	*16.00*	*$ 2,850.00*	*$ 57.00*	*$ 210.00*	*$ -*	*$ -*	*$ -*	*$ 3,117.00*
Task 5.3.1 Update Sufficiency of Supply Memo	*2*	*8*	*4*	*2*	*0.00*	*16.00*	*$ 2,850.00*	*$ 57.00*	*$ 210.00*	*$ -*	*$ -*	*$ -*	*$ 3,117.00*
Task 5 Totals	**5**	**24**	**20**	**4**	**0.00**	**53.00**	**$ 9,925.00**	**$ 198.50**	**$ 420.00**	**$ -**	**$ -**	**$ -**	**$ 10,543.50**
Task 6. Update WSA													
Task 6.1 Prepare Adminstrative Draft Updated WSA	*2*	*14*	*12*	*5*	*0.00*	*33.00*	*$ 5,650.00*	*$ 113.00*	*$ 525.00*	*$ -*	*$ -*	*$ -*	*$ 6,288.00*
Task 6.2 Prepare Public Draft Updated WSA	*2*	*20*	*8*	*2*	*0.00*	*32.00*	*$ 6,050.00*	*$ 121.00*	*$ 210.00*	*$ -*	*$ 380.00*	*$ 57.00*	*$ 6,818.00*
Task 6.3 Finalize Updated WSA	*2*	*10*	*8*	*2*	*0.50*	*22.50*	*$ 4,050.00*	*$ 81.00*	*$ 210.00*	*$ 47.50*	*$ -*	*$ -*	*$ 4,388.50*
Task 6 Totals	**6**	**44**	**28**	**9**	**0.50**	**87.50**	**$ 15,750.00**	**$ 315.00**	**$ 945.00**	**$ 47.50**	**$ 380.00**	**$ 57.00**	**$ 17,494.50**
Total Budget	**15**	**100**	**68**	**17**	**1**	**201**	**$ 36,975**	**$ 740**	**$ 1,785**	**$ 71**	**$ 380**	**$ 57**	**$ 40,008**

TODD GROUNDWATER

PLANNING • DEVELOPMENT • MANAGEMENT • PROTECTION

SCHEDULE OF CHARGES

January 2015

Professional Services	**Hourly Rate**
Principal Consultant	$ 225 to $ 235
Principal Geologist/ Hydrogeologist	$ 225 to $ 235
Principal Engineer	$ 225 to $ 235
Senior Geologist/Hydrogeologist/Engineer	$ 225 to $ 235
Senior Geochemist	$ 205 to $ 225
Senior Hydrologist	$ 205 to $ 215
Associate Geologist/Hydrogeologist/Engineer	$ 160 to $ 170
Staff Geologist/Hydrogeologist/Engineer	$ 145 to $ 150
Technical Services	
CAD/GIS/Graphics	$ 105 to $ 110
GIS/Drafting Support	$ 100 to $ 100
Clerical	$ 95 to $ 97

Rates are subject to adjustment semi-annually, in January & July

Communications
2% of Professional Services

Travel Time
Travel time will be charged at regular hourly rates.

Litigation, Depositions, and Testimony
Deposition and trial testimony are charged at twice hourly rates.

Outside Services
All services not ordinarily furnished by Todd Groundwater, including printing, subcontracted services, local mileage, travel by common carrier, etc. are billed at cost + 15%. Local mileage is billed at the current Federal mileage rate, which is $0.575 as of January 1, 2015.

1814 Franklin St., Suite 501
Oakland, CA 94612

Mr. Dave Hunt
Farr West Engineering
5442 Longley Lane, Suite B
Reno, NV 89511

February 10, 2015

Subject: Squaw Valley Real Estate Supplemental WSA Scope and Cost

Mr. Hunt:

This letter constitutes HydroMetrics WRI's proposed scope and cost for completing the supplemental Water Supply Analysis modeling. We have not included a schedule because we assume you will fold our scope into the previously agreed to schedule.

SCOPE

TASK 1: COMPILE AND REVIEW DATA

This task involves reviewing and manipulating data collected between 2012 and 2014. Data will be reviewed to ensure:

- All necessary data have been provided;
- The data are similar to pre-2012 data;
- There are no data outliers;
- The data reflect the expected response to 2012 through 2014 climate conditions

Early in this task, we will review groundwater elevation data to assess whether adequate groundwater recovery has occurred to warrant the proposed WSA update. Groundwater elevation fluctuations observed in 2014 must be significant enough that regulators and the public are convinced the model performs adequately during and after a drought.

We will additionally manipulate the data into information that can be easily imported into the existing groundwater model. This may include converting daily or hourly streamflow data into monthly streamflow data; converting daily precipitation data into monthly data; adjusting precipitation data to ensure consistency with other precipitation data; and estimating monthly recharge from precipitation and water delivery data.

TASK 2: VERIFY MODEL ACCURACY, AND RECALIBRATE GROUNDWATER MODEL IF NECESSARY

The data collected and reviewed in Task 1 will be incorporated into the groundwater model to verify the ability of the model to accurately simulate dry conditions seen in 2013 and 2014. If necessary, the model will be recalibrated to improve its ability to simulate 2013 and 2014 conditions. Specific activities in this task will include:

- Extend the model time period through January, 2015
- Incorporate updated recharge data
- Incorporate updated pumping data
- Incorporate updated streamflow data
- Include new groundwater elevation data
- Run the updated simulation and extract results
- Compare 2012 through 2014 results with previous results to assess model adequacy.
- Recalibrate model as necessary

Model results will be presented to SVPSD, SVRE, and their consultants after the verification simulation. If HydroMetrics WRI decides that recalibration is necessary, the model results will be presented to SVPSD, SVRE, and their consultants only after recalibration.

TASK 3: SIMULATE WSA CONDITIONS WITH UPDATED MODEL

The updated groundwater model will be used to assess the adequacy of the proposed SVRE pumping plan. The simulation will be developed with the following assumptions:

- The historical hydrology (recharge and streamflow) will be used to simulate future hydrology
- All well locations and future pumping rates will be supplied in a MODFLOW compatible file by Todd Groundwater.

Results of the updated WSA simulation will be provided to Todd Groundwater for analysis. HydroMetrics WRI will review Todd Groundwater's analysis, and verify the results as necessary.

TASK 4: DRAFT MEMORANDUM AND PROVIDE WSA REVIEW

HydroMetrics WRI will draft a memorandum detailing the approach, assumptions, and results of the model update and WSA simulation. The memorandum will be a stand-alone document that can be incorporated as an appendix to the final WSA. HydroMetrics WRI will provide a draft memorandum to Farr West Engineering for review. Farr West Engineering may provide this draft memorandum to SVPSD, SVRE, or others for comment. HydroMetrics WRI will incorporate all comments, as appropriate, into the final document, and provide both hard copies and an electronic copy of the final memorandum to Farr West Engineering.

We anticipate that HydroMetrics WRI will be asked to review and comment on parts of the revised WSA that pertain to the groundwater model. We have included 12 hours of time for this review and comment activity.

TASK 5: PROJECT MANAGEMENT AND MEETINGS

This task includes limited project management time and meetings. We assume all meetings will be by phone, and we do not anticipate the need to travel to Squaw Valley to attend any meetings. If our attendance is needed in Squaw Valley, we reserve the right to request additional travel funds.

COST

HydroMetrics WRI's anticipated costs are shown in Table 1. Our not-to-exceed cost is $51,090.

Sincerely,

Derrik Williams
President, HydroMetrics Water Resources Inc.

Table 1: HydroMetrics WRI's Estimated Costs

	Derrik Williams	Sean Culkin	Hanieh Haeri				
	$215	$160	$125		Labor	ODC	Total
Tasks							
Task 1: Compile and review data	12	0	40		$7,580		$7,580
Task 2: Verify and Recalibrate Model	12	48	60		$17,760		$17,760
Task 3: Simulate WSA Conditions	4	12	2		$3,030		$3,030
Task 4: Draft Memorandum and Provide WSA Review	56	40	8		$19,440	$200	$19,640
Task 5: Project Management and Meetings	12	0	4		$3,080		$3,080
Totals					$50,890	$200	$51,090

1814 Franklin Street, Suite 501
Oakland, CA 94612

Mr. Mike Geary
General Manager, Squaw Valley Public Service District
PO Box 2026
Olympic Valley, CA 96146-2026

February 6, 2015

Subject: Proposal to Improve Olympic Valley Groundwater Database

Mr. Geary:

The Olympic Valley Groundwater Database was developed in 2010 and has since had periodic data updates performed by HydroMetrics Water Resources Inc. (WRI). This year, the District is updating the data itself and John O'Neal has pointed out a number of improvements that need to be made to the database in order to accommodate changed reference point elevations, new file formats, and new dataloggers. It should also be noted that this is the first time that the database has been used by anyone other than HydroMetrics WRI, and as such represents the first time the application is being tested by its intended user.

Specifically the work will involve:

1. Changed reference point elevations: the database currently has space for two reference point elevations to be entered. Because of changing wellhead completions to below ground, some wells have now two historic reference points and one new reference point. It is important to keep a record of the different reference points over time as this is how the groundwater elevations are calculated for the wells. To accommodate the growing number of reference points, a new database table for reference points needs to be constructed. After that, a number of the database components (queries, reports and forms) need to be edited to work with the new table to attach the correct reference point to each groundwater level entry.

2. The datalogger software, DiverOffice, was upgraded to the latest version and as a result, the automatic upload of the Diver logger data into the database was compromised by a file format change. The macros that enable the reformat and upload of the data need to be updated.
3. A number of Diver dataloggers have been replaced and District staff need direction on how to enter the new logger serial numbers into the database to allow it to upload the new data.

The estimated time to complete the above tasks and to answer District staff questions is 12 hours of my time. This equates to $2,280.

If you have any questions, please do not hesitate to contact me.

Sincerely,

Georgina King
Senior Hydrogeologist
HydroMetrics Water Resources Inc.