

Notice and Agenda of a Meeting of the Beaumont Basin Watermaster

Wednesday, February 4, 2015 at 10:00 a.m.

Meeting Location:

Beaumont Cherry Valley Water District
560 Magnolia Avenue
Beaumont, California 92223
(951) 845-9581

Watermaster Members:

City of Banning
City of Beaumont
Beaumont Cherry Valley Water District
South Mesa Water Company
Yucaipa Valley Water District

I. Call to Order

II. Roll Call

City of Banning: Duane Burk (Alternate: Arturo Vela)
City of Beaumont: Dave Dillon (Alternate: Kyle Warsinski)
Beaumont Cherry Valley Water District: Eric Fraser (Alternate: Tony Lara)
South Mesa Water Company: George Jorritsma (Alternate: Dave Armstrong)
Yucaipa Valley Water District: Joseph Zoba (Alternate: Jennifer Ares)

III. Pledge of Allegiance

IV. Public Comments

At this time, members of the public may address the Beaumont Basin Watermaster on matters within its jurisdiction; however, no action or discussion may take place on any item not on the agenda. To provide comments on specific agenda items, please complete a Request to Speak form and provide that form to the Secretary prior to the commencement of the meeting.

V. Consent Calendar

- A. Meeting Minutes
 - 1. Approval of Meeting Minutes for December 3, 2014

VI. Reports

- A. Report from Engineering Consultant - Hannibal Blandon, ALDA Engineering
- B. Report from Legal Counsel - Keith McCullough, Alvarado Smith

VII. Discussion Items

- A. Reorganization of the Beaumont Basin Watermaster Committee - Chairman, Vice-Chairman, Secretary and Treasurer [[Memorandum No. 15-01, Page 10 of 45](#)]
Recommendation: That the members of the Watermaster either reaffirm the existing officers or conduct nominations for the appointment of officers of the Beaumont Basin Watermaster.
- B. Status Report on the Return Flow Analysis for Calendar Year 2013 and Calendar Year 2014 [[Memorandum No. 15-02, Page 11 of 45](#)]
Recommendation: No recommendation.
- C. Purchase of Water Level Monitoring Equipment for Installation at Twelve Sites in the Beaumont Basin [[Memorandum No. 15-03, Page 12 of 45](#)]
Recommendation: That the Watermaster members approve the purchase of water level monitoring equipment for a cost not to exceed \$16,000 and authorize an equal assessment to Watermaster members to fund the expense.

- D. Task Order No. 6 with ALDA for the Installation of Water Level Monitoring Equipment in the Beaumont Basin, Collection of Water Level Data, and Reporting to Watermaster Committee [Memorandum No. 15-04, Page 33 of 45]

Recommendation: That the Watermaster members approve Task Order No. 6 for a sum not to exceed \$18,490.00 and authorize an equal assessment to Watermaster members to fund the expense.

- E. Task Order No. 7 with ALDA for the Preparation of the 2014 Consolidated Annual Report, Estimate of the Basin Safe Yield, Update of the Groundwater Model, and Associated Consulting Services [Memorandum No. 15-05, Page 38 of 45]

Recommendation: That the Watermaster Committee approves Task Order No. 7 for a sum not to exceed \$80,790.

- F. Status Report and Discussion Regarding the Beaumont Basin Groundwater Model and Redetermination of the Safe Yield – Final Draft Presentation [Memorandum No. 15-06, Page 44 of 45]

Recommendation: That the Watermaster Committee schedules an agenda item for the consideration of the redetermination of the safe yield at the Watermaster meeting scheduled for April 1, 2015.

VIII. Topics for Future Meetings

- A. Recycled Water Recharge Policy
- B. Adoption of Safe Yield Determination and Basin Model

IX. Comments from the Watermaster Committee Members

X. Announcements

- A. The next regular meeting of the Beaumont Basin Watermaster is scheduled for Wednesday, April 1, 2015 at 10:00 a.m.

XI. Adjournment

Consent Calendar

**Record of the Minutes of the
Special Project Committee Meeting of the
Beaumont Basin Watermaster
December 3, 2014**

Meeting Location:

Beaumont-Cherry Valley Water District
560 Magnolia Avenue
Beaumont, CA 92223

I. Call to Order

Chairman Duane Burk called the meeting to order at 10:00 a.m.

II. Roll Call

<i>City of Banning</i>	<i>Duane Burk</i>	<i>Present</i>
<i>City of Beaumont</i>	<i>Kyle Warsinski</i>	<i>Present</i>
<i>Beaumont-Cherry Valley Water District</i>	<i>Eric Fraser</i>	<i>Present</i>
<i>South Mesa Water Company</i>	<i>George Jorritsma</i>	<i>Present</i>
<i>Yucaipa Valley Water District</i>	<i>Joseph Zoba</i>	<i>Present</i>

Keith McCullough was present representing legal counsel for the Watermaster.

Members of the public who registered their attendance were: John Covington, Bill Dickson, Patsy Reeley, Jennifer Myers, John Guldseth, Tom Shalhoub and Jennifer Ares.

III. Pledge of Allegiance

Counsel Jorritsma led the pledge of allegiance.

IV. Public Comments

No public comment was received at this time.

V. Consent Calendar

A. Meeting Minutes

- 1.** Approval of Meeting Minutes for October 1, 2014
- 2.** Approval of Meeting Minutes for October 15, 2014
- 3.** Approval of Meeting Minutes for October 29, 2014

Member Zoba motioned to approve consent calendar. The motion was seconded by Member Jorritsma passed 5-0.

VI. Reports

A. Report from Engineering Consultant – Hannibal Blandon, ALDA Engineering

Engineer Blandon reported the updates to the annual report for the Committee records, including the engineering reports requested and incorporating the comments provided at the last meeting. A PDF copy will be submitted to Member Zoba for online posting.

B. Report from Legal Counsel – Keith McCullough, Alvarado Smith

Legal Counsel McCullough reported on the CV Communities pending change of ownership as well as the pending request for two policies regarding return flows and new water. The policy request will be completed once a new safe yield has been determined and accepted by the committee.

VII. Discussion Items

- A. Authorization for ALDA to Prepare a Water Level Monitoring Assessment Plan [Memorandum No. 14-12, Page 13 of 71]

Recommendation: That the Watermaster Committee authorizes ALDA Inc. to conduct an assessment of existing monitoring wells and to develop a cost estimate to repair, maintain, and collect water data during Calendar Year 2015.

Engineer Blandon provided a brief history of the monitoring of the wells. The program for monitoring wells for water levels was established in 2006 and continued until 2011. The proposal includes a field assessment to determine the type of equipment used and their status, to identify additional wells to monitor, and prepare a memorandum with the findings including the cost of any equipment repairs by February 2016.

Public Comment:

John Covington suggested Mr. Blandon generate a list of well facility locations along with established or needed equipment for future monitoring. He also confirmed the information provided by Member Fraser regarding information being available from the United States Geological Survey (USGS).

After discussion, Chairman Burke made a motion to authorize ALDA Inc. to conduct an assessment of existing monitoring wells and develop a cost estimate with the amendment to add monitoring information from 2011 to current from either the individual districts or the USGS as they recently completed their own monitoring assessment of the basin. The motion was seconded by Member Zoba and passed 5-0.

- B. Amendment No. 1 to Task Order No. 3 Related to the Groundwater Model Update and Redetermination of Safe Yield [Memorandum No. 14-13, Page 15 of 71]

Recommendation: That the Watermaster Committee approves Amendment No. 1 to Task Order No. 3 with ALDA, Inc. for a sum not to exceed \$26,430.

Member Zoba explained the additional work for the safe yield study that will generate an increase in the cost per the recent Committee requests. After discussion, Chairman Burke motioned to approve the amendment. The motion was seconded by Member Fraser and passed 5-0.

- C. Review of Documents Pertaining to the Transfer of Overlying Water Rights from Sunny-Cal Egg & Poultry Company to CV Communities, LLC [Memorandum No. 14-14, Page 22 of 71]

Recommendation: That the Watermaster Committee reviews the attached documentation and provides direction to the Watermaster Legal Counsel.

Legal Counsel McCullough explained the request for recognition of the transfer with the associated overlying water rights as the property transfer is in name only. Several options were discussed in terms of a possible future resolution for global approval of transfers taking into consideration the overlying rights being transferred to the assessor and the information being documented in the annual report once reported to the Committee Engineer. As there were questions as to methods of tracking overlying right

retentions and potential issues with allocating water as projects are subdivided, a motion to table the item to the next meeting failed to receive a second. After continued discussions, Member Warsinski motioned to approve the transfer as documented by Legal Counsel. The motion was seconded by Member Fraser and passed 3-2 with Chairman Burk and Member Zoba dissenting.

- D. Presentation of Recycled Water Recharge Requirements by the California Department of Public Health and the Regional Water Quality Control Board [Memorandum No. 14-15, Page 64 of 71]

Recommendation: No recommendation.

Member Zoba explained the reason for the presentation being an explanation of the quantification of recycled water recharge after the definitions of discharge versus recharge were previously explained. Engineer Blandon presented the main points of their provided document, covering surface and subsurface applications explaining that recycled water for ground water replenishment will need to receive treatment to meet the definitions of filtered water and tertiary tier recycled water. These distinctions have to do with the clarity for recharge purposes and the disinfection process respectively. Engineer Blandon also explained how intrinsic, or tracers need to be monitored on a set schedule. The schedule measured percentage amount of the tracer received at different monitoring points over a given amount of time would be determined by the tracer type used. Mr. Blandon also explained the well monitoring requirements prior to operating a ground water recharge project. Member Fraser expressed the importance of all contributing entities conforming to the regulations as the recycled water recharge to the basin can have severe implications for boundary conditions, well installations, and overall basin water quality.

Public Comment

Luwanna Ryan questioned what entity would be responsible for scheduling the testing and state notifications. After Member Fraser explained that the project proponent would be responsible for the reporting and monitoring, she also expressed concern regarding a potential lack of oversight by the testing entity and requested a second party be involved with the monitoring and reporting.

As no recommendation was required, Chairman Burke thanked Engineer Blandon for the information and presentation.

- E. Reimbursement to Beaumont Cherry Valley Water District for the Water Meter Installation at Sunny Cal Egg Ranch [Memorandum No. 14-16, Page 65 of 71]

Recommendation: That the Watermaster Committee approves the water meter installation reimbursement for a sum not to exceed \$2,412.72.

Member Fraser explained the rules provision that allowed reimbursement when major producers are metered and the documents presented reflect those expenses for the Beaumont-Cherry Valley Water District. Chairman Burk motioned to approve the reimbursement for the water meter installation. The motion was seconded by Member Zoba and passed 5-0.

VIII. Topic for Future Meetings

- A. Other Topics

Legal Counsel McCullough reminded the Committee that they have the two policies pending the approved redetermination of the safe yield.

Member Fraser suggested a draft policy be considered for changes in storage or credit for recycled water recharge.

Member Zoba suggested the global policy of water rights be included with the next meeting and reminded the Committee that reorganization takes place after the 1st of each year and will be on the next agenda.

IX. Comments from the Watermaster Committee Members

No comments were received.

X. Announcements

- A. The next regular meeting of the Beaumont Basin Watermaster is scheduled for Wednesday, February 4, 2015 at 10 a.m.

XI. Recess the Meeting to a Beaumont Basin Watermaster Special Project Committee

The Committee recessed at 11:16 a.m.

The Committee reconvened at 11:25 a.m.

XII. Reconvene the Meeting of the Beaumont Basin Watermaster – Special Project Committee of Beaumont Cherry Valley Water District, City of Banning, Yucaipa Valley Water District, and South Mesa Mutual Water Company

- A. Status Report on the Beaumont Basin Groundwater Model and Redetermination of Safe Yield
[Memorandum No. 14-17, Page 71 of 71]

Engineer Tom Harder provided an overview of the safe yield process and the steps taken since the last meeting as well as an analysis of the return flow methodology by appropriator. The draft safe yield analysis included the recommendation to remove all artificial recharge reporting, an initial evaluation of a refined return flow analysis, an evaluation of losses and an assessment of where those losses are occurring in the basin, as well as an analysis of imported water into the basin as requested by the Beaumont-Cherry Valley Water District based on the information that was provided. Examples were provided separating the high and low density, commercial, landscape irrigation, and urban classifications. The next step would be to approve or provide comments on the methodology, provide the appropriate boundaries for each appropriator, and to approve the safe yield evaluation for a draft final.

Member Fraser gave additional information regarding how the methodology is validated and Member Zoba commented on the assumptions made and the importance of actual data with parcel information for the future. After discussion, the Committee consensus is to allow the Engineers to draft a final report providing budget information as they incorporate additional information.

XIII. Adjournment

Chairman Burk adjourned the meeting at 11:59 a.m.

Duane Burk, Member
Beaumont Basin Watermaster

Reports

Discussion Items

BEAUMONT BASIN WATERMASTER

MEMORANDUM NO. 15-01

Date: February 4, 2015

From: Joseph Zoba, Treasurer

Subject: Reorganization of the Beaumont Basin Watermaster Committee - Chairman, Vice-Chairman, Secretary and Treasurer

Recommendation: That the members of the Watermaster either reaffirm the existing officers or conduct nominations for the appointment of officers of the Beaumont Basin Watermaster.

The purpose of this agenda item is to provide the Watermaster Committee members with the opportunity to reaffirm the existing officers or solicit nominations for the appointment of new officers for the organization.

The current officers are:

Chairman - Duane Burk
Vice Chairman - George Jorritsma
Secretary - Eric Fraser
Treasurer - Joseph Zoba

BEAUMONT BASIN WATERMASTER

MEMORANDUM NO. 15-02

Date: February 4, 2015

From: Hannibal Blandon, ALDA

Subject: Status Report on the Return Flow Analysis for Calendar Year 2013 and Calendar Year 2014

Recommendation: No recommendation.

The ALDA and Thomas Harder & Company team will provide a brief presentation on the status of the data requested from the various water agencies to conduct the Return Flow Analysis for 2013 and 2014.

This analysis will be conducted on a yearly basis to estimate the amount of return flow that could be credited to the Appropriators for delivery of water for potable use within the Beaumont Basin boundary. The results of the analysis will be incorporated into the annual report and will be used in future groundwater modeling efforts.

Water consumption information for Calendar Year 2013 was initially requested in late October 2014. While some of the information has been submitted by the participating agencies, there are significant data gaps that need to be addressed.

BEAUMONT BASIN WATERMASTER

MEMORANDUM NO. 15-03

Date: February 4, 2015

From: Hannibal Blandon, ALDA

Subject: Purchase of Water Level Monitoring Equipment for Installation at Twelve Sites in the Beaumont Basin

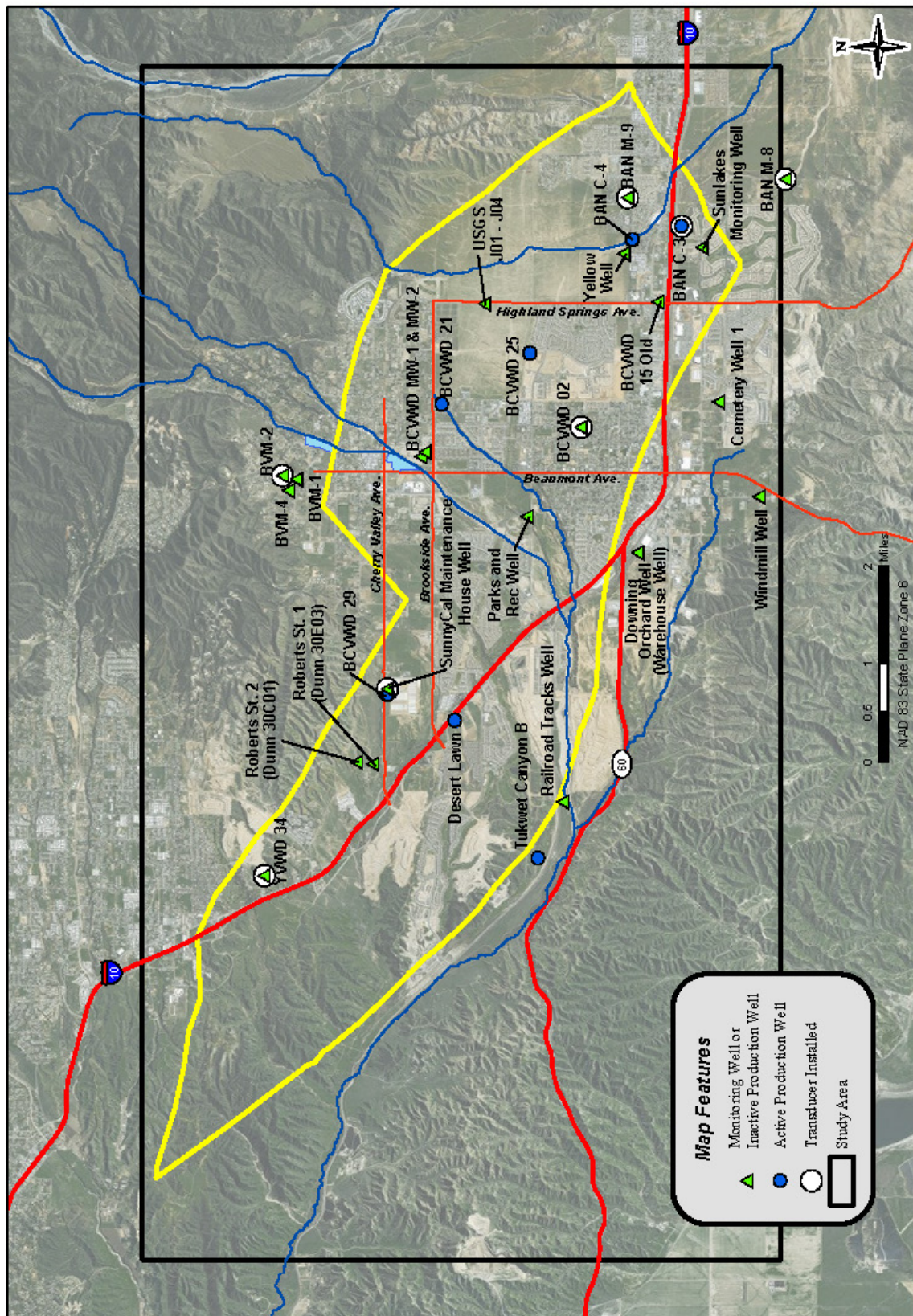
Recommendation: That the Watermaster members approve the purchase of water level monitoring equipment for a cost not to exceed \$16,000 and authorize an equal assessment to Watermaster members to fund the expense.

At the Beaumont Basin Watermaster meeting on December 3, 2014, the Watermaster members authorized ALDA to assess the conditions of the monitoring wells that were used to record water levels at various locations in the groundwater basin during the period between 2007 and 2011. The objectives of the assessment were: a) identify the conditions of existing monitoring equipment, b) evaluate additional wells that could be considered for monitoring, and c) provide a construction cost estimate for consideration by the Board.

Field visits to monitoring sites were conducted in mid-January. Of the 12 probes that were initially installed, only six were found in the field. Water level data was downloaded from three of these probes as the batteries for the remaining units were totally discharged. All probes were manufactured by Solinst, a Canadian company that specializes in monitoring equipment. Additional potential sites were also visited to identify necessary improvements at each site. A total of 23 sites, including existing sites, are being considered for selection of 12 final sites. Attached is a summary of the 23 potential sites including brief descriptions of field conditions and equipment and improvements needed at each site.

Equipment costs were solicited from Solinst for 12 sites. A Solinst quote is attached along with technical documentation on the equipment to be used. The recommended equipment includes: 12 Levelloggers 3001 LT Edge with a 10 year battery, 1 Barologger, 5,600 ft of direct read cable, a direct read communication package, a water level meter, and miscellaneous equipment. Final cost of equipment will be determined upon selection of final sites and it is estimated not to exceed \$15,000.00. An additional \$1,000.00 will need to be budgeted to construct the necessary improvements at some of the final selected sites.

The following Watermaster Memorandum No. 15-04 includes the installation costs for the monitoring wells.







Potential Well Sites for Monitoring Water Levels




DRAFT

Alda, Inc. in association with
 Thomas Harder & Co.
 Groundwater Consulting
 29-Jan-15





Beaumont Basin - Potential Well Sites to Monitor Water Levels

Well Name & Type	Comments	Photo	Materials / Repairs
Yucaipa VWD No. 34 (YVWD - Observation well)	Well has an active transducer. Data was downloaded and transducer left in place. Water level at 220 ft.		1.- New Levellogger Edge 3001 2.- 400 ft of Direct Read Communications Cable
Roberts Street 1 & 2 (Private - Abandoned well)	Two wells off Roberts Street. Wells have been logged by SGPWA. 24" Outer casing and 12" inner casing. Needs well head cover and 2" access port.		1.- New Levellogger Edge 3001 2.- 400 ft of Direct Read Communications Cable 3.- Well head cover plate and lock
Tukwet Golf Course Well B (Private - Being Rehabilitated)	Well currently being developed. It is likely that a pump will be installed in the near future to meet irrigation demands. Water levels are relatively shallow - less than 100 ft. Outside Beaumont Basin legal boundary.		1.- New Levellogger Edge 3001 2.- 200 ft of Direct Read Communications Cable 3.- Well head access yet to be determined depending on final configuration
Railroad Tracks Well (Private - Abandoned well)	Well has been logged by SGPWA in the past. Access may be an issue. Shallow water level. Existing well head has a plate, but needs a 2" access port to be drilled. Outside of Beaumont Basin legal boundary.		1.- New Levellogger Edge 3001 2.- 200 ft of Direct Read Communications Cable 3.- Drill a 2" access port on existing well head cover plate and provide lock



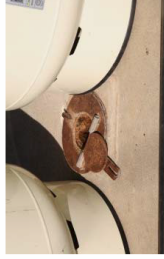
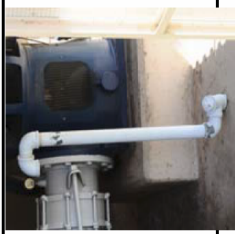
Beaumont Basin - Potential Well Sites to Monitor Water Levels

Well Name & Type	Comments	Photo	Materials / Repairs
Desert Lawn Cemetery (Private Production well)	Well is currently active and supplies lake at cemetery to meet irrigation needs. Pumps a few hours during the summer. Cemetery manager has given verbal approval. Well head has 1" access port that can be used for logger.		1.- New Levellogger Edge 3001 2.- 400 ft of Direct Read Communications Cable 3.- Minor modifications at existing 1" access port
BCVWD No. 29 (BCVWD - Production well)	Well had a transducer in the past, but was removed. A transducer could be installed through existing 2" sounding tube. WEI had difficulties installing transducer in the past. Static water level at about 500 ft. Well operates 18 hours during the summer months.		1.- New Levellogger Edge 3001 2.- 700 ft of Direct Read Communications Cable 3.- Minor modifications at existing 2" sounding tube.
Near Egg Ranch Well (Private - Observation well)	Well sits directly north of the Egg Ranch wells 1 and 2 and east of BCVWD No. 29. Access through a private residence. 6-inch well has an existing probe with a stainless steel cable. Water level at about 500 ft.		1.- New Levellogger Edge 3001 2.- 700 ft of Direct Read Communications Cable 3.- Minor modifications at well head to install a well plate and lock.





Beaumont Basin - Potential Well Sites to Monitor Water Levels

Well Name & Type	Comments	Photo	Materials / Repairs
Icon Warehouse Well (Private - Observation well)	Well sits in warehouse parking lot near the City of Banning DP-7. Well head has been nicely constructed to install observation probe. SGPWA has manually logged well in the past. Water level at about 200 ft.		1.- New Levellogger Edge 3001 2.- 300 ft of Direct Read Communications Cable 3.- Minor modifications at well head to install probe hanging mechanism.
Beaumont Cherry Valley Parks and Recreation Well (Public - Non Production well)	Well sits in Noble Creek Park on Oak Valley Road; logged by SGPWA. Well head has a 2" sounding tube. Water level at approximately 430 ft.		1.- New Levellogger Edge 3001 2.- 600 ft of Direct Read Communications Cable 3.- Minor modifications at well head 2" sounding tube cap.
Bonita Vista Wells 1, 2, or 3. (BCVWD - Observation well)	These 3 wells are located north of basin boundary. Well 2 has a water level probe that was pulled and data downloaded. Probe was put back into well. Water level is about 100 ft. Well head needs a new cover plate, access port, and lock.		1.- New Levellogger Edge 3001 2.- 200 ft of Direct Read Communications Cable 3.- New well head cover, access port and lock are needed.
BCVWD - MW1 or MW2 (BCVWD - Observation well)	These 2 wells are located in the middle of the spreading grounds and could easily accommodate the installation of a monitoring probe. Well head cover and lock will be needed. Water level is about 500 ft.		1.- New Levellogger Edge 3001 2.- 700 ft of Direct Read Communications Cable 3.- New well head cover, access port and lock are needed.





Beaumont Basin - Potential Well Sites to Monitor Water Levels

Well Name & Type	Comments	Photo	Materials / Repairs
Windmill Well (Private - abandoned well)	Near intersection of California Avenue and Beaumont Ave. South of basin boundary. Unknown whether a probe can be lowered with with existing pump in place. Pump may need to be pulled. Authorization will be needed from owner prior to commencing work.		1.- New Levellogger Edge 3001 2.- 400 ft of Direct Read Communications Cable 3.- Pull well pump and modify well head plate.
BCVWD No. 2 (BCVWD - Observation well)	Well had an existing probe hung by stainless steel wire in the sounding tube. Probe was pulled to download data, but battery was not working. Water level at 453 ft		1.- New Levellogger Edge 3001 2.- 600 ft of Direct Read Communications Cable 3.- Minor modifications at sounding tube cap.
Cemetery Well No. 1 (Private - Observation well)	Well is located south of Beaumont Basin legal boundary. A 1" hole will need to be drilled for the logger to be installed. Water level is at about 70 ft.		1.- New Levellogger Edge 3001 2.- 200 ft of Direct Read Communications Cable 3.- Drill 1" hole in existing plate cover.
BCVWD No. 21 (BCVWD - Production well)	Well had a transducer in the past, but was removed. A transducer could be installed through existing 2" sounding tube. Static water level at about 530 ft. Well operates 18 hours during the summer months.		1.- New Levellogger Edge 3001 2.- 700 ft of Direct Read Communications Cable 3.- Minor modifications at sounding tube cap.

Beaumont Basin - Potential Well Sites to Monitor Water Levels

Well Name & Type	Comments	Photo	Materials / Repairs
BCVWD No. 25 (BCVWD - Production well)	Well had a transducer in the past, but was removed. WEI had difficulties installing probe in the past through existing 2" sounding tube. Static water level at about 500 ft. Well operates 18 hours during the summer months.		1.- New Levellogger Edge 3001 2.- 700 ft of Direct Read Communications Cable 3.- Minor modifications at sounding tube cap
USGS J01 th J04 (USGS - Nested observation wells)	Well site has four observation wells at different depths. No monitoring equipment needed. Data can be accessed from USGS semi-annually.		None
Yellow Well (Private - Abandoned well)	Well sits in the middle of a field near intersection of Wilson Avenue and Appex Road. Water level is monitored by SGPWA and is currently at about 420 ft. Access to property would need to be authorized by private owner.		1.- New Levellogger Edge 3001 2.- 600 ft of Direct Read Communications Cable 3.- 2" access port on well head plate and lock
Old BCVWD No. 15 (City of Banning owns well - Observation well)	Well sits in a Chevron gas station parking lot. Water level at approximately 500 ft. A 2" access port needs to be constructed at existing well head plate along with a locking mechanism		1.- New Levellogger Edge 3001 2.- 700 ft of Direct Read Communications Cable 3.- 2" access port on well head plate and lock

Beaumont Basin - Potential Well Sites to Monitor Water Levels

Well Name & Type	Comments	Photo	Materials / Repairs
Banning C-4 (City of Banning - Production well)	Well does not have a logger, but one could be installed through 2" sounding tube. Water level is approximately 450 ft.		1.- New Levellogger Edge 3001 2.- 600 ft of Direct Read Communications Cable 3.- Minor modifications at 2" sounding tube well cap.
Banning C-3 (City of Banning - Production well)	Well has an existing logger, but could not be pulled. Data could not be collected at the time of visit, but may be able to be downloaded if battery is still working. Water level at approximately 450 ft.		1.- Not a feasible site as existing logger could not be pulled. Collect data as long as battery has power, then abandon site.
Sun Lakes Well (Well may be owned by the City of Banning - Observation well)	Well located in driveway of Sun Lakes Private community. Triangular cover with a 2" pipe. Minor work required at access port. Water level may be 400-500 ft deep.		1.- New Levellogger Edge 3001 2.- 700 ft of Direct Read Communications Cable 3.- Minor modifications at access port cap.
Banning M-8 (City of Banning - Production well)	Existing logger was pulled, but data could not be downloaded as battery was not working. Water level at about 350 ft. Minor modifications at 2" sounding tube cap.		1.- New Levellogger Edge 3001 2.- 500 ft of Direct Read Communications Cable 3.- Minor modifications at 2" sounding pipe cap



Quotation # Q000050372

Customer/Prospect #: 253

Date Printed: Jan-26-2015
Quote Date: Jan-26-2015

Bill To:

Ship To:

ALDA Inc.
CA
UNITED STATESALDA Inc.
CA
UNITED STATESSolinst Canada Ltd.
35 Todd Road
Georgetown ON L7G 4R8
Canada
Fax: 905-873-1992/800-516-9081
Phone: 905-873-2255/800-661-2023Attention: Hannibal Bhandon
909 587 9916

Attention:

email: instruments@solinst.com
web: www.solinst.com

Quote Validity	Ship Via	Shipping Terms	Duty & Brokerage	HST	GST		State Tax		Terms
33 days	UPSG	DDP	Included	TAX 0%	GST EX		Customer rem it		Net 30 QAC
Qty	Part #	Description	U-M	List Price	Disc 1	Disc 2	Net Price	Ext Price	
12.00	110183	3001 LT Levlogger Edge, /M00/P100	EA	597.00	0.00	0.00	597.000	7,164.00	
1.00	110179	3001 LT Levlogger Edge, /M1.5rP5	EA	310.00	0.00	0.00	310.000	310.00	
2.00	104768	3001 Direct Read Cable Assy (200ft) for the levlogger	EA	215.00	0.00	0.00	215.000	430.00	
10.00	107083	3001 Direct Read Cable Connector Assembly (to 1.500ft)	EA	75.00	0.00	0.00	75.000	750.00	
3,600.00	110891	3001 Direct Read Cable (to 1500ft - 3/ft)	FT	0.70	0.00	0.00	0.700	2,520.00	
Custom Direct Read (4 X 400 ft, 4 X 600 ft, 2 X 800 ft)									
Signed Order Acceptance required									
1.00	102405	3001 SS Cable Assembly & Hooks (500ft) for the Levlogger	EA	135.00	0.00	0.00	135.000	135.00	
1.00	102403	3001 SS Cable Assembly & Hooks (200ft) for the Levlogger	EA	60.00	0.00	0.00	60.000	60.00	
6.00	110099	3001 Well Cap Assembly (2) for the Levlogger	EA	24.00	0.00	0.00	24.000	144.00	
1.00	107379	3001 Direct Read Comm. Package (USB) for the Levlogger	EA	390.00	0.00	0.00	390.000	390.00	
1.00	108354	3001 Levlogger Cold (RS232/USB) c/w Cables	EA	614.00	0.00	0.00	614.000	614.00	
1.00	109249	102 Water Level Meter, P3/N2 (1000ft (base marked))	EA	1,154.00	0.00	0.00	1,154.000	1,154.00	
0.00	110241	3001 LT Levlogger Junior Edge, /M5rP1.5 (1 year Warranty)	EA	782.00	0.00	0.00	782.000	0.00	
0.00	110242	3001 LT Levlogger Junior Edge, /M10rP30 (1 year Warranty)	EA	782.00	0.00	0.00	782.000	0.00	

RFQ: Beaumont Basin Water Level Monitoring

Sale Amount:	15,071.00
Order Disc (0.0000%):	0.00
Surcharge:	N/A
Misc Charges:	0.00
GST:	0.00
HST:	0.00
Total Amount:	15,071.00
	US Dollar


Quotation # Q000050372

Customer/Prospect #: 253

Date Printed: Jan-26-2015

Quote Date: Jan-26-2015

Bill To:

Ship To:

Solinst Canada Ltd.

 ALDA Inc.
CA
UNITED STATES

 ALDA Inc.
CA
UNITED STATES

 35 Todd Road
Georgetown ON L7G 4R8
Canada
Fax: 905-873-1992/800-516-9081
Phone: 905-873-2255/800-661-2023

 Attention: Hannibal Bhandon
909 587 9916

Attention:

 email: instruments@solinst.com
web: www.solinst.com

Quote Validity	Ship Via	Shipping Terms	Duty & Brokerage	HST	GST		State Tax	Terms		
33 days	UPSG	DDP	Included	TAX 0%	GST EX		Customer remit	Net 30 QAC		
Qty	Part#	Description			UOM	List Price	Disc 1	Disc 2	Net Price	Ext Price

E&OE

Delivery 5 Days ARO

Freight extra unless otherwise indicated

Please allow additional time for transit

ALL PRICES ARE SUBJECT TO PRODUCT AVAILABILITY AT TIME OF ORDER

Salesperson: Lcit, Susan

SIGNATURE _____

Solinst®

Levellogger Series

Model 3001 Data Sheet

Levellogger Edge

Model 3001

The Levellogger Edge records highly accurate groundwater and surface water level and temperature measurements. It combines a pressure sensor, temperature detector, 10-year lithium battery, and datalogger, sealed within a 7/8" x 6.25" (22 mm x 159 mm) stainless steel housing with Titanium based PVD coating.

The Levellogger Edge measures absolute pressure using a Hastelloy pressure sensor, offering excellent durability and reliability. Combined with the Titanium based PVD coating, both elements have high corrosion resistance in harsh environments, allowing stable readings in extreme pressure and temperature conditions. The Hastelloy sensor can withstand 2 times over-pressure without permanent damage.

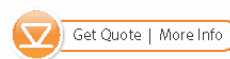
The Levellogger Edge features a wide temperature compensated pressure range (0 to 50°C, -10 to 50°C for Barologger Edge), and rapid thermal response time. The Levellogger Edge has high resolution and an accuracy of 0.05% FS. The convenient Barologger Edge provides the easiest and most accurate method of barometric compensation.

Applications

- Aquifer characterization: pumping tests, slug tests, etc.
- Watershed, drainage basin and recharge monitoring
- Stream gauging, lake and reservoir management
- Harbour and tidal fluctuation measurement
- Wetlands and stormwater run-off monitoring
- Water supply and tank level measurement
- Mine water and landfill leachate management
- Long-term water level monitoring in wells, surface water bodies and seawater environments



Fast communication and downloading speeds
with a high speed Optical Reader



Features

- 0.05% FS Accuracy
- Corrosion resistant Titanium based PVD coating
- Robust Hastelloy pressure sensor
- Accurate temperature compensation
- Memory for up to 120,000 readings
- Basic and advanced data compensation options

The Levellogger Edge has a battery life of 10 years based on a 1-minute sampling rate. It has FRAM memory for 40,000 sets of data points - or up to 120,000 using the compressed linear sampling option.

The Levellogger Edge uses a Faraday cage design, which protects against power surges or electrical spikes caused by lightning. Its durable maintenance-free design, high accuracy and stability, make the Levellogger Edge the most reliable instrument for long-term, continuous water level recording.

Flexible Communication

Levellogger PC Software is streamlined, making it easy to program dataloggers, and to view and compensate data, in the office or in the field. The software has useful programming options, including compressed and repeat sampling, and future start/stop. Data compensation has been simplified, and allows multiple data files to be barometrically compensated at once.

The extremely intuitive Solinst Levellogger App, and Levellogger App Interface on your in-field Levelloggers, creates a wireless system connecting your Levelloggers to your smart device. Also an option, the Levellogger Gold is a field-ready data transfer unit designed specifically for the Levellogger Series.

For remote monitoring, options include STS Telemetry Systems and RRL Remote Radio Link. In addition, Levellogger Edge Series dataloggers are SDI-12 compatible.

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High Quality Groundwater and Surface Water Monitoring Instrumentation

Solinst®



Levellogger Series

Levellogger Setup

Programming Levelloggers is extremely intuitive. Simply connect to a PC using an Optical Reader or PC Interface Cable. All in one screen fill in your project information and sampling regime. Templates of settings can be saved for easy re-use.

The Levellogger time may be synchronized to the computer clock, or Leveloader clock. There are options for immediate start or future start and stop times. The percentage battery life remaining and the amount of free memory are indicated on the settings screen.

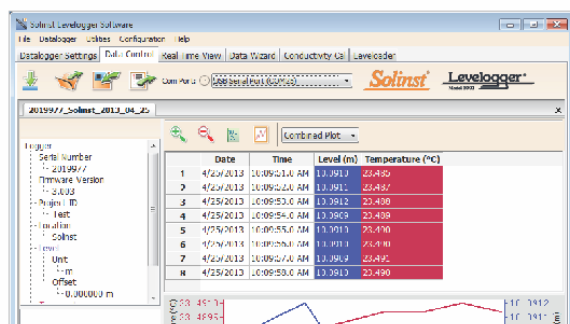
Levelloggers can also be programmed with a sampling regime and start/stop times using the Solinst Levellogger App on your smart device.

Convenient Sampling Options

Levelloggers can be programmed with linear, event-based, or a user-selectable sampling schedule. Linear sampling can be set from 1/8 second to 99 hours. The Levellogger Edge can be programmed with compressed linear sampling, which increases memory from 40,000 to up to 120,000 readings.

Event-based sampling can be set to record when the level changes by a selected threshold. Readings are checked at the selected time interval, but only recorded in memory if the condition has been met. A default reading is taken every 24 hours if no "event" occurs.

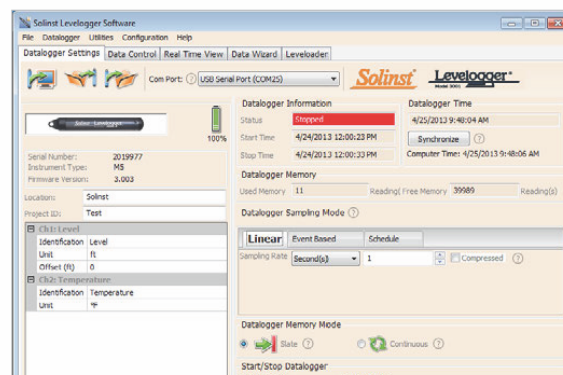
The Schedule option allows up to 30 schedule items, each with its own sampling rate and duration. For convenience, there is an option to automatically repeat the schedule.



Solinst Levellogger App & Levellogger App Interface

The Levellogger App Interface uses Bluetooth® wireless technology to connect your Levellogger to your Apple® smart device. With the Solinst Levellogger App, you can download data, view real-time data, and program your Levelloggers. Data can be e-mailed from your smart device directly to your office (see Model 3001 Solinst Levellogger App & Interface data sheet).

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Levellogger Edge Settings Software Windows

Data Download, Viewing and Export

Data is downloaded to a PC with the click of a screen icon or with the push of a button on the Leveloader. There are multiple options for downloading data, including 'Append Data' and 'All Data'. The software also allows immediate viewing of the data in graph or table format using the 'Real Time View' tab.

The level data is automatically compensated for temperature, and the temperature data is also downloaded. Barometric compensation of Levellogger data is performed using the Data Wizard, which can also be used to input manual data adjustments, elevation, offsets, density, and adjust for Barometric efficiency.

The software allows easy export of the data into a spreadsheet or database for further processing.

The Solinst Levellogger App also allows you to view and save real-time, or logged data right on your smart device.

Helpful Utilities

The 'Self-Test Diagnostic Utility' can be used in case of an unexpected problem. It checks the functioning of the program, calibration, backup and logging memories, the pressure transducer, temperature sensor and battery voltage, as well as enabling a complete Memory Dump, if required.

A firmware upgrade will be available from time to time, to allow upgrading of the Levellogger Edge, as new features are added.



High Quality Groundwater and Surface Water Monitoring Instrumentation



Levellogger Series

Standard Cable Deployment

Levelloggers may be suspended on a stainless steel wireline or Kevlar® cord. This is a very inexpensive method of deployment, and if in a well, allows the Levellogger to be easily locked out of sight and inaccessible. Solinst offers stainless steel wireline assemblies and Kevlar cord assemblies in a variety of lengths.

Solinst 3001 Well Cap Assembly

The 2" Locking Well Caps are designed for both standard and Direct Read Cable deployment options.

The well cap has a convenient eyelet for suspending Levelloggers using wireline or Kevlar cord. The Well Cap insert has two openings to accommodate Direct Read Cables for both a Levellogger and Barologger. Adaptors are available to fit 4" wells.

The cap is vented to equalize atmospheric pressure in the well. It slips over the casing, and the cap can be secured using a lock with a 3/8" (9.5 mm) shackle diameter.



*Levellogger 2" Locking Well Cap Installations
(see Well Caps data sheet for more details)*

Direct Read Cables

When it is desired to get real-time data and communicate with Levelloggers without removal from the water, they can be deployed using Direct Read Cables. This allows viewing of the data, downloading and/or programming in the field using a portable computer or Leveloader.

Levelloggers can also be connected to an SDI-12 datalogger using the Solinst SDI-12 Interface Cable attached to a Direct Read Cable.

Cable Specifications

Direct Read Cables are available for attachment to any Levellogger in lengths up to 1500 ft. The 1/8" dia. (3.175 mm) coaxial cable has an outer polyethylene (MDPE) jacket for strength and durability. The stranded stainless steel conductor gives non-stretch accuracy.



*Barologger and Levellogger
installed in Well Using
Direct Read Cables*

Accurate Barometric Compensation

The Levellogger Edge measures absolute pressure (water pressure + atmospheric pressure) expressed in feet, meters, centimeters, psi, kPa, or bar.

The most accurate method of obtaining changes in water level is to compensate for atmospheric pressure fluctuations using a Barologger Edge, avoiding time lag in the compensation.

The Barologger is set above high water level in one location on site. One Barologger can be used to compensate all Levelloggers in a 20 mile (30 km) radius and/or with every 1000 ft. (300 m) change in elevation.

The Levellogger Software Data Compensation Wizard automatically produces compensated data files using the synchronized data files from the Barologger and Levelloggers on site.

The Barologger Edge uses pressure algorithms based on air rather than water pressure, giving superior accuracy.

The recorded barometric information can also be very useful to help determine barometric lag and/or barometric efficiency of the monitored aquifer.

The Barologger Edge records atmospheric pressure in psi, kPa, or mbar. When compensating submerged Levellogger Edge, Gold or Junior data, Levellogger Software Version 4 can recognize the type of Levellogger and compensate using the same units found in the submerged data file (Levellogger Gold and Junior measure in feet, meters, or centimeters). This makes the Barologger Edge backwards compatible.

*Synchronize & Streamline Your
Barometric Compensation Efforts,
Across Your Entire Site*



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High Quality Groundwater and Surface Water Monitoring Instrumentation



Levellogger Series

Levellogger Edge Specifications

Level Sensor:	Piezoresistive Silicon with Hastelloy Sensor
Accuracy:	± 0.05% FS (Barologger Edge: ± 0.05 kPa)
Stability of Readings:	Superior, low noise
Units of Measure:	m, cm, ft., psi, kPa, bar, °C, °F (Barologger Edge: psi, kPa, mbar, °C, °F)
Normalization:	Automatic Temperature Compensation
Temp. Comp. Range:	0° to 50°C (Barologger Edge: -10 to +50°C)
Temperature Sensor:	Platinum Resistance Temperature Detector (RTD)
Temp. Sensor Accuracy:	± 0.05°C
Temp. Sensor Resolution:	0.003°C
Battery Life:	10 Years - based on 1 reading/minute
Clock Accuracy:	± 1 minute/year (-20°C to 80°C)
Operating Temperature:	-20°C to 80°C
Maximum # Readings:	40,000 readings FRAM memory, or up to 120,000 using linear data compression
Memory:	Slate and Continuous
Communication:	Optical Infrared Interface. Conversion to RS-232, USB, SDI-12. Serial at 19,200 bps, 38,400 bps with USB
Size:	7/8" x 6.25" (22 mm x 159 mm)
Weight:	4.6 oz. (129 grams)
Corrosion Resistance:	Titanium based PVD coating
Other Wetted Materials:	Delrin®, Viton®, 316L stainless steel, Hastelloy, Titanium based PVD coating
Sampling Modes:	Linear, Event & User-Selectable with Repeat Mode, Future Start, Future Stop, Real-Time View
Measurement Rates:	1/8 sec to 99 hrs
Barometric Compensation:	Software Wizard and one Barologger in local area (approx. 20 miles/30 km radius)

Models	Full Scale (FS)	Accuracy
Barologger	Air only	± 0.05 kPa
F6, M2	6.6 ft., 2 m	± 0.003 ft., 0.1 cm
F15, M5	16.4 ft., 5 m	± 0.010 ft., 0.3 cm
F30, M10	32.8 ft., 10 m	± 0.016 ft., 0.5 cm
F65, M20	65.6 ft., 20 m	± 0.032 ft., 1 cm
F100, M30	98.4 ft., 30 m	± 0.064 ft., 1.5 cm
F300, M100	328.1 ft., 100 m	± 0.164 ft., 5 cm
F600, M200	656.2 ft., 200 m	± 0.328 ft., 10 cm

Levellogger Junior Edge: See Levellogger Junior Edge Data Sheet.

Conductivity: See Model 3001 LTC Levellogger Junior Data Sheet

Leveloader Gold

The Leveloader Gold is a data transfer unit designed for use with all versions of the Solinst Levellogger, Barologger and Rainlogger. It is used to download and store multiple data files.

The 8 Mb FLASH memory stores up to 1,390,000 LT readings, 930,000 LTC readings, or 34 full Levellogger downloads. It can also be used to display data in real-time, and has optional password protection.

Simply use the connector cables for attachment to a Levellogger, or to a direct read cable, to allow downloading or reprogramming of the Levellogger settings in the field. It comes with cables for USB and RS-232 connection to a PC for data transfer (see Model 3001 Leveloader data sheet).



STS Telemetry

The STS Telemetry System provides an economical and efficient method to send Levellogger data from the field to your desktop. Built for Levelloggers, the system combines high quality dataloggers, intuitive software, and wireless communication, to create a remote monitoring solution.

Communication options give the flexibility to suit any project. Systems are suitable for both small to large networks. STS Systems are designed to save costs by enabling the self-management of data. Alarm notification, remote firmware upgrades and diagnostic reporting make system maintenance simple (see Model 9100/9200 data sheet).

RRL Telemetry

The inexpensive RRL Remote Radio Link is ideal for short range applications up to 20 miles or 30 km; distances can be increased by using some radios as relay stations. Ideal for creating closed-loop monitoring networks using Levelloggers (see Model 9100/9200 data sheet).

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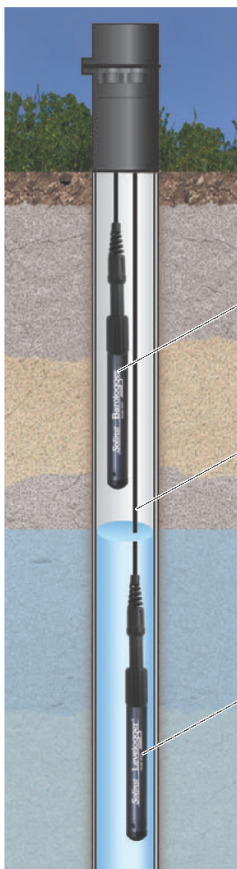
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Levellogger Deployment



Barologger Suspended in Air
Typically 1 Barologger per 30 km (20 mile) radius and/or every 300 m (1000 ft.) of elevation change from well to well

Direct Read Cable
Lengths up to 1500 ft. (450 m)

Submerged Levellogger

Direct Read Cable Deployment

Use this method when you want direct communication via a field laptop, Leveloader Gold, or the Solinst Levellogger App while your Levellogger is downhole. Pre-program Levelloggers (Edge, Barologger, LTC or Junior) in the office using an Optical Reader. In the field use a laptop and PC Interface Cable, a Leveloader Gold, or the Solinst Levellogger App on your smart device and Levellogger App Interface, to program, view or download data.



The Direct Read Communication Package from Solinst includes an Optical Reader, PC Interface Cable and Levellogger Software & User Guide CD.



The Solinst 2" Lockable Well Cap has openings for two Direct Read Cables and an opening for other monitoring equipment, such as a Water Level Meter.



Levellogger App Interface connected to a Direct Read Cable provides a wireless connection between the Levellogger and the Solinst Levellogger App on your smart device.



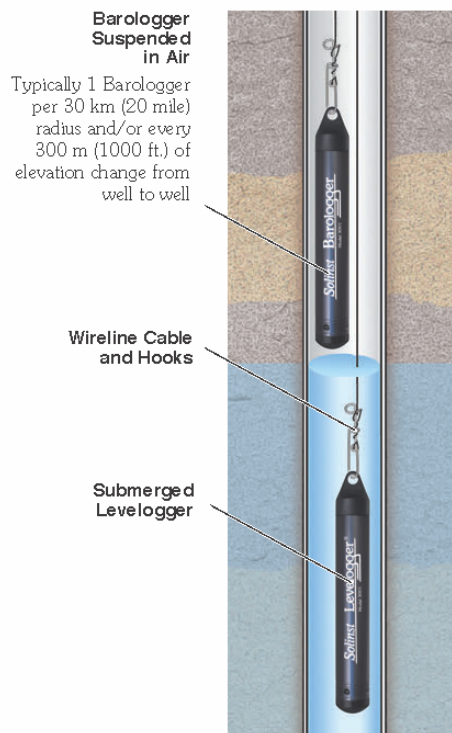
Leveloader connected to a Direct Read Cable using a DRC Interface Cable.

High Quality Groundwater and Surface Water Monitoring Instrumentation

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Levellogger Deployment



Wireline/Rope Deployment

Use this method when you wish to minimize up front costs, and pre-program Levelloggers (Edge, Barologger, LTC or Junior) in the office. Lower into the well, suspended on wireline or Kevlar cord from a 2" or 4" Well Cap. To retrieve data or re-program, remove the Levellogger from the well and use an Optical Reader attached to a portable or office computer.

Standard Communication

Use a USB Optical Reader connected to your laptop or desktop PC, to program as many Levelloggers as required. **The Standard Communication Package** from Solinst includes an Optical Reader and Levellogger Software & User Guide CD.

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SOLINST TECHNICAL BULLETIN

Ensuring Proper Use and Maintenance of Levelloggers

Knowing What to Expect

As with any groundwater or surface water monitoring project, you should determine the best instruments to use, and how to maintain those instruments, based on the monitoring environment specific to your application.

When using Levelloggers, this means selecting the appropriate pressure range, ensuring the monitoring temperatures are within the instruments specifications, making sure the wetted materials are compatible with your site's chemistry, and determining the proper deployment method.

A maintenance schedule and precautionary measures should be determined early on, especially if you suspect your monitoring environment to be harsh on the instrument sensors.

Selecting the Proper Levellogger

Levelloggers are available in a variety of pressure ranges, from F6/M2 to F600/M200, which can withstand submergence from 6 feet (2 meters) to 600 feet (200 meters), respectively. The Levellogger Edge can withstand 2 times overpressure, but outside the stated pressure range, accuracy is not guaranteed. Using outside the overpressure range can damage the sensor.

A temperature detector is used to accurately compensate for temperature changes, within the range of 0 to +50°C for the Levellogger Edge. The Levellogger will record temperature in its thermal range of -20 to +80°C, but outside the compensation range, readings will be less accurate. Using beyond the thermal range can damage the unit.

Levellogger data sheets provide a list of wetted materials to help check for chemical compatibility with the monitored water. Before deploying your Levellogger, you can also check the chemical compatibility of your instrument's wetted materials, by obtaining a sample of the water you will be monitoring in, and measuring the chemicals of concern for your site.



Solinst has various documents to help determine the best deployment method for your Levellogger, including the Levellogger User Guide and Technical Bulletins found on the Solinst website.

Placing your Levellogger in that water for a closely monitored test period, although actual expected pressure and temperature conditions may not be emulated, will give you a good idea of how your Levellogger will react and perform in the chemical environment. This type of test can be done with any instrument, including pumps, water level meters, etc.

Scheduling Maintenance

If you are not sure how your Levelloggers are going to perform in, and/or react to your monitoring environment, it is recommended to schedule staged site inspections to physically check your units and their function periodically during the monitoring term.

If you do not check your site regularly, you will not know how the monitoring environment is affecting your instruments. The photos below show different types of biofouling that can occur. Biofouling, sediment accumulation, or corrosion on a pressure sensor or conductivity cell can compromise the accuracy of their measurements.



Photo Credit: Tom Shinskey, The Louis Berger Group

It is also recommended to take manual water level measurements each time you inspect your Levellogger. These manual water level measurements can be used to compare to Levellogger readings to ensure the Levellogger is performing as it should. If your readings appear to be inaccurate, it may be a sign that your Levellogger needs to be cleaned. All sensors experience some long-term drift from their original calibrated state, but not routinely performing maintenance checks and cleaning, can lead to accelerated sensor degradation.

Determining how frequent your site visits should be, is again based on your monitoring environment - specifically water quality. In good quality freshwater, such as a municipal production well, inspecting a Levellogger and taking manual measurements may just be done seasonally; actually cleaning the Levellogger may only be needed annually. While, in harsher environments, such as at contaminated sites, inspections and cleaning should be more frequent. **Your ongoing maintenance schedule will be based on your own experience and knowledge of the monitoring site, and based on the results of your staged site inspections.**

Continued overleaf...

High Quality Groundwater and Surface Water Monitoring Instrumentation

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Ensuring Proper Use and Maintenance of Levelloggers

Preventative Maintenance

If you are familiar with the conditions of your monitoring site, and know you are going to require extra corrosion-resistance, biofouling protection, or protection from ice accumulation, there are precautionary steps that can be taken.

Although the Levellogger Edge has a corrosion-resistant titanium based PVD coating and a Hastelloy pressure sensor diaphragm, in extremely corrosive environments, you can further protect the Levellogger using a balloon filled with deionized water or tap water. As pressure changes, the fluid encasing the loggers will transmit the pressure differential to the logger's pressure transducer, without exposing it to corrosive conditions.

Solinst offers a Biofoul Screen that can be used to protect the Levellogger against biofouling. The Delrin copper-coiled screen naturally reduces biofouling. The Biofoul Screen simply slips onto the sensor end of the Levellogger where it is held in place with its compression fitting. It allows water to freely enter the pressure transducer inlets, and/or conductivity cell.



The Levellogger on the right was protected using a Biofoul Screen, while the Levellogger on the left was deployed unprotected and shows signs of biofouling on the sensor end.

To avoid icing, the easiest method is to lower the Levellogger to a point in the water column below the frost line or ice formation depth. In shallow streams, wetlands or ponds where icing/freezing may penetrate to the bottom, install the Levellogger in a vented stilling well imbedded into the bottom of the water body beyond the frost line. Alternatively, place the Levellogger inside, rubber balloons filled with a non-toxic, non-corrosive anti-freeze solution or saltwater solution. The antifreeze solution will protect the Levellogger from ice expansion; yet transmit any pressure and temperature fluctuations.

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Maintaining Levelloggers

Generally, cleaning your Levellogger consists of rinsing and using a mild, non-residual, non-abrasive, household cleaner with a very soft plastic bristled brush. Do not insert any object through the pressure transducer inlets at the sensor end of the Levellogger.

Some cases may require specific maintenance:

Hard Water

Hard water can result in the precipitation of calcium and magnesium deposits on the Levellogger body and pressure transducer. These deposits can be dissolved using a diluted solution ($\leq 10\%$) of acetic or phosphoric acid. Commercially available products designed for household use can also be used.

Suspended Solids

High suspended solid loads may block the pressure transducer inlets or clog the internal pressure cell. To minimize this, Levelloggers should be placed in areas with higher flow. Simply rinse the Levellogger inlets to remove any particles.

Bacteriological or Chemical Fouling

Sessile bacteria, other microorganisms, barnacles, mussels and algae can buildup on the Levellogger body, as well as the sensors. Chemical deposits can also be a result of electrical charge differential between the Levellogger and the monitored liquid. Both forms of fouling can be removed by soaking in a diluted ($\leq 10\%$) solution of sulfuric acid. Hard-to-remove deposits may require several hours of soaking.

LTC Conductivity Pins

LTC conductivity pins are platinum-coated; therefore, they should not be roughly cleaned or touched with any metal. They can be cleaned with a soft bristle brush, Q-Tip, or cloth. Almost any diluted ($\leq 10\%$) acid solution can be used. Soaking time should be monitored and kept to a minimum.

O-Ring Damage

There are o-rings on Levellogger optical ends and in the Levellogger caps, which are designed to prevent leaks. Depending on your application, you may be unscrewing the caps and/or direct read cables from the Levellogger optical end more frequently. This could result in damage to the o-rings. These o-rings should be inspected regularly and replaced as required (contact Solinst for replacements).

Storage Tips

Before storing Levelloggers for any extended period, they should be stopped from recording (using Levellogger Software), cleaned as described above, and stored with the cap on to protect the optical eyes and to prevent unnecessary battery drainage.

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SOLINST TECHNICAL BULLETIN

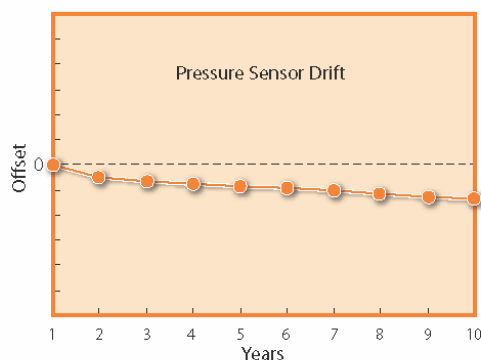
Understanding Pressure Sensor Drift

Pressure Sensor Drift

All pressure transducers - no matter what they are made of, how expensive they are, or how accurate - are susceptible to sensor drift over time. Pressure sensor drift is a gradual degradation of the sensor and other components that can make readings offset from the original calibrated state.

Based on their intended application, sensors are engineered from various materials. When exposed to certain conditions, the sensors will respond differently depending on the physical properties of the materials chosen.

Every sensor will undergo some expansion and contraction when subject to pressure and temperature cycles. Pressure change frequency and amplitude, temperature extremes, material responses and environmental changes are all factors contributing to drift. The magnitude a sensor will drift varies with actual usage and the conditions it is exposed to.



Example of Pressure Sensor Drift from the Calibrated Zero Point Over Time

Pressure Sensor Calibration

It is important to note that manufacturers test and calibrate their sensors in closed environments to achieve desired specifications and a zero point. Some manufacturers provide a value for the expected drift or long term stability, but these numbers are still based on use in very stable environments, making them somewhat irrelevant in normal use.



Solinst Levelloggers

Solinst Levelloggers are water level data loggers that use an absolute pressure sensor to detect the depth (or pressure) of water above the logger. For the Levellogger Edge, Solinst chose to use a Hastelloy pressure sensor because of durability, long term stability, accuracy, and corrosion resistance.

Hastelloy pressure sensors are more tolerant when it comes to being over-pressurized. Other sensors, such as ceramic sensors, tend to be more brittle and can shatter when they experience over-pressurization, ice accumulation, or water hammer effects.

Correcting for Drift

Factory re-calibration can be attempted to correct for drift, but may not be required. Regular "field zero readings" will serve to eliminate the effects of drift on pressure sensor readings.

The best recommendation is to compare barometrically compensated Levellogger data with a manually measured water level value (depth to water using a Model 101 or 102 Water Level Meter, or a staff gauge depending on your application).

By routinely taking manual water level measurements, and comparing these readings to those recorded by the Levellogger at the same time, an offset value can be determined. This offset value can then be used to correct future Levellogger readings.

If using a depth to water measurement for comparison, the deployment depth of the Levellogger, minus the manual depth to water measurement, should equal the compensated Levellogger reading. If not, the difference between the two readings is the offset value, or calculated sensor drift.

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Leveloader Gold

For Use with Model 3001

Leveloader Gold

Model 3001

The Leveloader™ Gold is a field-ready, backwards compatible data transfer unit designed for use with all versions of the Solinst Levellogger®, Rainlogger and Barologger. It is used to download, store and transfer multiple data files, using 8 Mb of non-volatile FLASH memory.

The Leveloader Gold has a rugged, water-resistant, ergonomic exterior and stores up to 1,390,000 LT readings, 930,000 LTC readings or 34 full Levellogger downloads. Stored data can be scrolled through before transfer to a PC. The Leveloader Gold can also be used to display data in real-time, which is ideally suited for conducting conventional pumping tests.



Field Friendly

Field-located Levelloggers can be reprogrammed on site with a 'future start' or 'start now' option. For convenience, up to 10 personalized settings files can be pre-programmed in the Levellogger PC Software at the office and transferred to the Leveloader Gold for use in the field. These settings files each store a customized sampling regime, instrument location, and identification. The Leveloader Gold can be synchronized to your PC clock. In turn you can synchronize Levellogger times to the Leveloader time, to maintain consistency between field-deployed Levelloggers.

The Leveloader Gold also displays useful information on battery life, memory levels and firmware versions for both the Leveloader itself and the attached Levellogger. As with the Levellogger, the Leveloader Gold has upgradeable firmware, which allows future improvements to be added to older units. Users can download and install any future improvement to the onboard software, free of charge. For security, there is password protection built into the Leveloader, which can prevent unauthorized changes to the Levellogger settings, logging sessions or stored data.

Transferring Data

The Leveloader Gold eliminates the need for a laptop or PDA. The Leveloader uses proprietary software and hardware, which is dedicated to the Levellogger Series of dataloggers. In the field, it can perform almost all the functions the user can do with a desktop computer and the Levellogger Software.

The Leveloader Gold comes with sturdy cables for USB and RS232 connection to a PC, a cable for a direct connection to a Levellogger and a cable for connection to a Direct Read Cable of a Levellogger deployed in the water. On return to the PC, the Levellogger Software allows downloading of individual files or all files at the same time.

Advantages

- Real-Time View option
- Robust, water-resistant, ergonomic exterior
- 8 Mb non-volatile FLASH memory
- Holds over 1.3 million readings
- Stores 10 personalized logging setups

Features

- Dedicated to Levelloggers
- Backwards compatible
- Solinst designed hardware and software
- Free upgradeable firmware
- High accuracy real-time clock
- Easy-read screen



Levellogger App & Interface

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35 Todd Road, Georgetown, Ontario Canada L7G 4R8

Web Site: www.solinst.com E-mail: instruments@solinst.com





High Quality Groundwater and Surface Water Monitoring Instrumentation

Solinst Canada Ltd.

35 Todd Road
Georgetown, ON
Canada L7G 4R8

Tel: (905) 873-2255; (800) 661-2023
Fax: (905) 873-1992; (800) 516-9081

E-mail: instruments@solinst.com
Web Site: www.solinst.com

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Solinst Canada Ltd. (Solinst) hereby warrants to the user, subject to the conditions outlined herein, that all standard products manufactured by Solinst, will be free of defects in workmanship and materials for a period of three years from the date of shipment from Solinst, with the exception of the 3001 Levellogger® Junior Series, Power Reels, Telemetry Systems (9100 & 9200), 401 Waterloo Multilevel Systems and 403 CMT Multilevel Systems, which have limited warranties of one year.

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In no event shall Solinst be liable for any direct, indirect, consequential or special damages, abuse, acts of third parties, environmental conditions, force of nature, or for installation, adjustment or other expenses which may arise in connection with such defective equipment. Further, this warranty shall not apply to damage to the equipment caused by incorrect installation, usage, storage, alteration or inadequate care.

This warranty does not apply to parts, assemblies or devices not manufactured by Solinst which are covered by other manufacturers' warranties. There are no warranties except as specifically provided in writing herein.

March 1, 2012

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BEAUMONT BASIN WATERMASTER

MEMORANDUM NO. 15-04

Date: February 4, 2015

From: Hannibal Blandon, ALDA

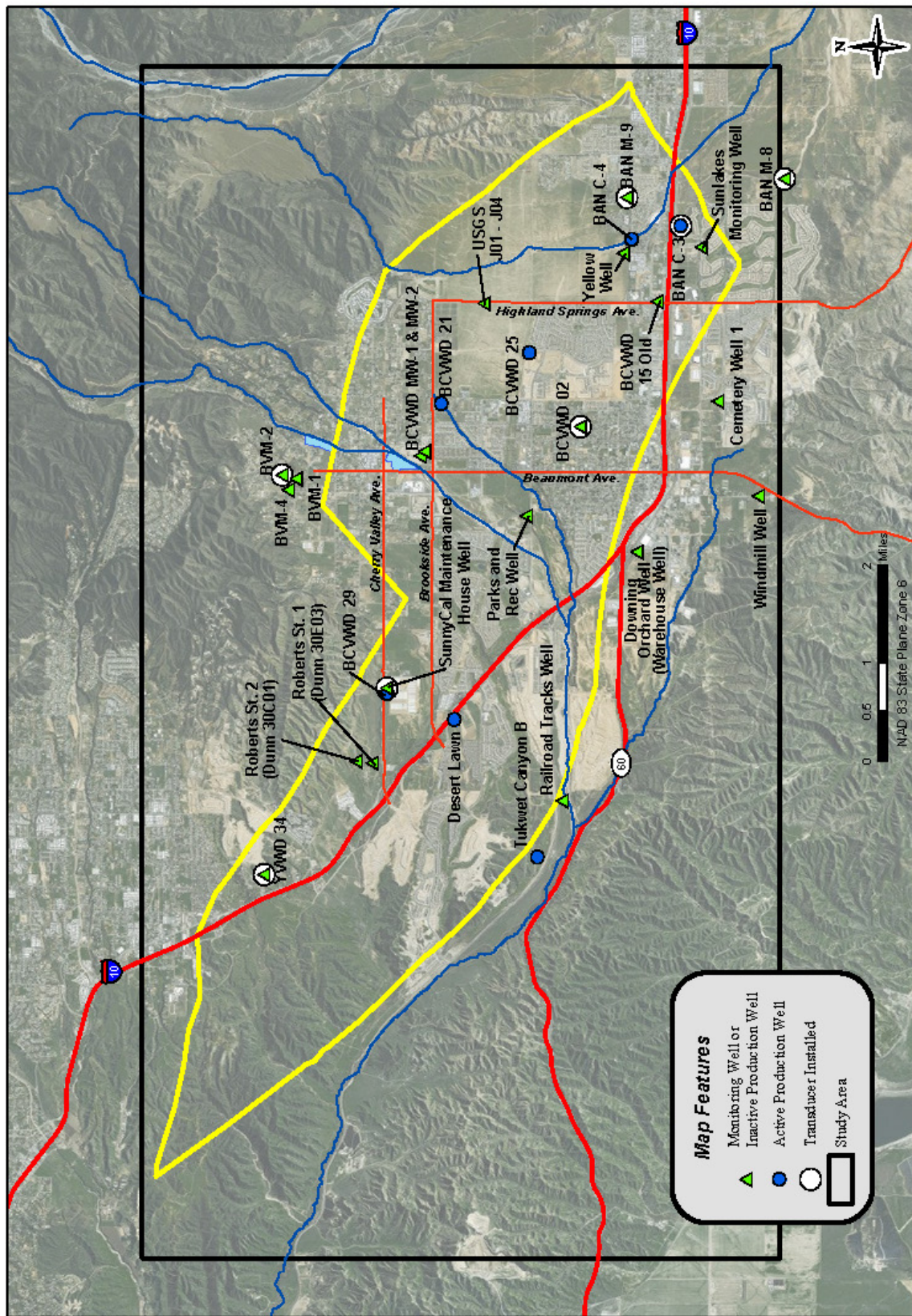
Subject: Task Order No. 6 with ALDA for the Installation of Water Level Monitoring Equipment in the Beaumont Basin, Collection of Water Level Data, and Reporting to Watermaster Committee

Recommendation: That the Watermaster members approve Task Order No. 6 for a sum not to exceed \$18,490.00 and authorize an equal assessment to Watermaster members to fund the expense.

This agenda item is directly related to Watermaster Memorandum No. 15-03 considered earlier during the meeting.

In order to install the groundwater level monitoring equipment at twelve selected sites, to maintain and collect the information, and to report water level trends at the regular Watermaster Committee meetings the Watermaster should also consider approving Task Order No. 6 with ALDA.

The financial impacts associated with the proposed contract would result in a budget line item of approximately \$18,500.00 and will require a direct assessment be levied upon the Watermaster members in equal amounts.



**Potential Well Sites for
Monitoring Water Levels**

DRAFT

Alda, Inc. in association with
 Thomas Harder & Co.
 Groundwater Consulting
 29-Jan-15

ALDA Inc.

5928 Vineyard Avenue
Alta Loma, CA 91701
Tel: (909) 587-9916
Fax: (909) 498-0423

January 30, 2015

Joseph B. Zoba, General Manager
Yucaipa Valley Water District
12770 Second Street
Yucaipa, California 92399

Subject: **Beaumont Basin Watermaster – Task Order No. 6
Installation and Maintenance of Water Level Monitoring Equipment**

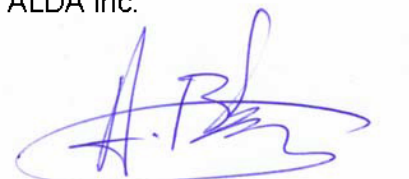
Dear Mr. Zoba:

Please find attached our proposed scope of services and consulting fee for Task Order No. 6 under the Engineering Services contract with the Beaumont Basin Watermaster dated May 10, 2012. The proposed scope of services includes a) coordination of equipment purchase and authorization from private owners, b) installation of monitoring equipment at 12 selected sites, c) operations and maintenance of equipment, and d) reporting to Watermaster Committee.

We welcome your thorough review of our proposed scope services. Should you have any questions on our proposed services or need further information, please contact us at 909-587-9916 during normal business hours.

Very truly yours

ALDA Inc.



F. Anibal Blandon, P.E.
Principal

Beaumont Basin Watermaster – Task Order No. 6

2015 Consolidated Annual Report and Associated Consulting Services

Jan 30, 2015

TASK OBJECTIVES

The objectives of Task No. 7 are as follows:

- A. Install Groundwater Level Monitoring Equipment at 12 Sites
- B. Conduct Operations and Maintenance of Equipment
- C. Report Water Level Conditions to Watermaster Committee

SCOPE OF SERVICES**Task 1 – Selection of Final Sites and Equipment Acquisition**

The ALDA/TH&Co team will select the final 12 monitoring sites for installation of water level monitoring equipment. Selection of the final sites will be based on a number of parameters including location within the basin, distance to pumping wells, accessibility to site, and on-site improvements requirement amongst others. As part of this effort, the ALDA/TH&Co team will contact property owners as applicable to obtain authorization for installation of monitoring equipment. Upon selection of final sites, a list of equipment will be developed and presented to Watermaster for ordering of the equipment.

Estimated Hours: 8 Hours

Estimated Cost: \$1,140.00

Task 2 – Installation of Monitoring Equipment

The ALDA/TH&Co team will install water level probes at each of the selected sites and one barologger probe at one site to record barometric pressure. Required modifications at some of the well head sites, such as installation of plates, locks, measurement ports, etc., will be coordinated by the ALDA/TH&Co team to make sure all sites operate adequately and the monitoring equipment is secured.

In addition, groundwater level at each site will be determined to calibrate the monitoring probes individually.

Estimated Hours: 48 Hours

Estimated Cost: \$5,400.00

Other Direct Cost: \$1,000.00

Task 3 – Operations and Maintenance of Selected Sites

The ALDA/TH&Co team will visit the selected sites every two months to download the collected data and to check that the probes are working as intended. In addition, probes will be calibrated twice a year. Close coordination with member agencies and selected private parties will be required to gain access to the sites during each visit. A total of five visits to each site is anticipated during Calendar Year 2015.

Estimated Hours: 84 Hours

Estimated Cost: \$9,240.00

Beaumont Basin Watermaster – Task Order No. 6
2015 Consolidated Annual Report and Associated Consulting Services

Jan 30, 2015

Task 4 – Reporting to Watermaster

The information collected at the selected sites will be tabulated and presented at the Watermaster Committee meetings as a regular agenda item. In addition, water level histograms will be prepared and incorporated into the annual report.

Estimated Hours: 12 Hours

Estimated Cost: \$1,710.00

COST ESTIMATE

Our estimated cost to perform the scope of work as outlined herein is \$18,490.00 (Eighteen Thousand Four Hundred Ninety Dollars and 00/100); this estimate is based on 152 technical and administrative hours and an estimated \$1,000.00 (One Thousand Dollars) in other direct cost to make modifications to existing sites. Services will be billed on a time and material basis up to the approved limit and according to the billing rates below.

Billing Rates for ALDA Inc.

Billing rates for Calendar Year 2015 are as follows:

<u>Position</u>	<u>Hourly Rate</u>
Project Manager	\$150.00
Project Engineer	\$135.00
Staff Engineer	\$110.00
Graphics / Designer Drafter	\$ 90.00
Drafter	\$ 75.00
Clerical	\$ 65.00

Billing Rates for Thomas Harder and Company

Billing rates for Calendar Year 2015 are as follows:

<u>Position</u>	<u>Hourly Rate</u>
Principal Hydro-geologist	\$160.00
Staff Hydro-geologist	\$ 90.00
Field Technician	\$ 70.00
Graphics	\$ 85.00
Clerical	\$ 65.00
Expert Witness	\$320.00

BEAUMONT BASIN WATERMASTER

MEMORANDUM NO. 15-05

Date: February 4, 2015

From: Hannibal Blandon, ALDA

Subject: Task Order No. 7 with ALDA for the Preparation of the 2014 Consolidated Annual Report, Estimate of the Basin Safe Yield, Update of the Groundwater Model, and Associated Consulting Services

Recommendation: That the Watermaster Committee approves Task Order No. 7 for a sum not to exceed \$80,790 and authorize an equal assessment to Watermaster members to fund the expense.

A new task order is necessary to authorize ALDA Inc. to provide technical support services to the Watermaster Committee during Calendar Year 2015.

The proposed scope of services for Task Order No. 7, consistent with previously years, provides for the preparation of the 2014 Consolidated Annual Report, estimate of the 2014 Safe Yield of the Beaumont Basin, and Associated Consulting Services in support to Watermaster activities. In addition, this task order incorporates the annual update of the groundwater model to 2014 hydrologic conditions.

The financial impacts associated with the proposed contract would result in a budget line item of approximately \$81,000.00.

ALDA Inc.

5928 Vineyard Avenue
Alta Loma, CA 91701
Tel: (909) 587-9916
Fax: (909) 498-0423

January 30, 2015

Joseph B. Zoba, General Manager
Yucaipa Valley Water District
12770 Second Street
Yucaipa, California 92399

Subject: **Beaumont Basin Watermaster – Task Order No. 7
Engineering Support Services for Calendar Year 2015**

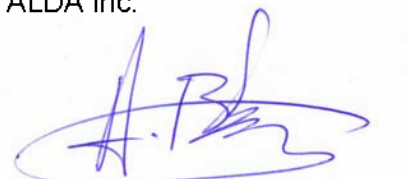
Dear Mr. Zoba:

Please find attached our proposed scope of services and consulting fee for Task Order No. 7 under the Engineering Services contract with the Beaumont Basin Watermaster dated May 10, 2012. The proposed scope of services includes a) prepare the consolidated Annual Report for 2014, b) estimate of the operating safe yield for 2014, c) update the groundwater model to include 2014 hydrologic data, and d) provide general consulting services in support to Watermaster activities.

We welcome your thorough review of our proposed scope services. Should you have any questions on our proposed services or need further information, please contact us at 909-587-9916 during normal business hours.

Very truly yours

ALDA Inc.



F. Anibal Blandon, P.E.
Principal

Beaumont Basin Watermaster – Task Order No. 7

2015 Consolidated Annual Report and Associated Consulting Services

Jan 30, 2015

TASK OBJECTIVES

The objectives of Task No. 7 are as follows:

- A. Prepare the consolidated Annual Report for CY 2014
- B. Estimate the Operating Safe Yield for Calendar Year 2014
- C. Update Groundwater Model to Include 2014 Hydrologic Data
- D. Provide general consulting support services

SCOPE OF SERVICES**Task 1 – Data Collection**

The ALDA/TH&Co team will collect, compile, and tabulate the following data:

- ✓ Climate and hydrologic information
- ✓ Monitoring and data collection programs
- ✓ Monthly water production from member agencies
- ✓ Monthly imported water recharge by each party
- ✓ Monthly rainfall from the USGS, Army Corps, and/or National Weather Service
- ✓ Monthly static groundwater levels at dedicated monitoring wells and selected production wells from the water agencies
- ✓ Monthly deliveries of imported water, groundwater from other basins, and surface water diversions from various water agencies
- ✓ Semi-annual static groundwater levels from production wells
- ✓ Water quality information as documented in the California Department of Public Health database.

Task 2 – Preparation of Expanded Annual Report

The expanded annual report will consolidate the topics discussed in previous annual reports and those included in the bi-annual Engineering Report. The ALDA/TH&Co team will prepare a draft and a final annual report documenting the operations of the Beaumont Basin Watermaster. This includes water levels, water transfers between agencies, water production, assessment of basin conditions, carryovers, replenishment obligations and water quality conditions throughout the basin. In addition, the report will incorporate the results of the Operating Safe Yield analysis, conducted under Task 3 and long term hydrographs from selected wells in the basin. The report will also include the annual independent financial reports (prepared by others) and a description of Watermaster activities and Board actions.

With regards to water quality, the analysis will focus on nitrate, TDS, and some trace metals. In addition, the report will document current water quality concentrations in relation to current Federal and State Drinking Water Standards.

Beaumont Basin Watermaster – Task Order No. 7

2015 Consolidated Annual Report and Associated Consulting Services

Jan 30, 2015

Ten color copies of the draft and final annual reports will be provided along with a digital file of the report. In addition, an editable database will be provided that includes all supporting information for the annual report.

Task 3 – Annual Determination of the Operating Safe Yield

The ALDA/TH&Co team will review groundwater levels, groundwater production, and groundwater recharge data for the Beaumont Basin area as a basis for determining the annual operating safe yield (OSY) of the basin for the Calendar Year 2013. The focus of the review will be groundwater level trends at the eight monitoring wells previously reported in the annual reports. Groundwater level trends will be evaluated in the context of groundwater production and basin and artificial recharge in order to make a determination of OSY.

The ALDA/TH&Co team will generate an Annual OSY Technical Memorandum (TM) that summarizes the analysis and provides a recommended OSY for the upcoming year. The TM will be suitable for incorporation into the Annual Report.

Task 4 – Update Groundwater Model to 2014 Conditions

The ALDA/TH&Co team will prepare and input the 2013 and 2014 groundwater levels, groundwater production, and artificial recharge into the groundwater flow model for analysis. The model will be run with the updated data and the results analyzed to validate the calibration. The budget for this task assumes that additional calibration will not be necessary.

Task 5 – Review of Rules and Regulations

The ALDA/TH&Co team will review the existing Rules and Regulations annually to determine whether it reflects current policies/practices and will make recommendations that will be documented as part of the annual report.

Task 6 – Meeting Attendance and Agenda Assistance

The ALDA/TH&Co team will prepare for, attend, and participate in up to six (6) Watermaster meetings in 2015. In addition, the ALDA/TH&Co team will assist in agenda preparation as required by Watermaster.

SCHEDULE

A draft of the expanded annual report and operating safe yield will be presented to the Beaumont Basin Watermaster at the April 2015 Board meeting. Comments on the draft annual report will be addressed and presented at the June 2015 Board meeting. General consulting support services will be provided throughout the year.

Beaumont Basin Watermaster – Task Order No. 7

2015 Consolidated Annual Report and Associated Consulting Services

Jan 30, 2015

COST ESTIMATE

Our estimated cost to perform the scope of work as outlined herein is \$80,790.00 (Eighty Thousand Seven Hundred Ninety Dollars and 00/100); this estimate is based on 644 technical and administrative hours and is summarized in the attached table by task and sub-task. Billing rates for the 2015 Calendar Year remain the same since 2012 and are included at the end of this proposal.

Beaumont Basin Watermaster Engineering Consulting Fee for Task Order No. 7

Beaumont Basin Watermaster - Task Order No. 7
Preparation of Expanded Annual Report and Operating Safe Yield for 2014 and General Support Services

Task / Subtask	ALDA Inc.					Thomas Harder & Co.				Total Hours	Cost (\$)
	Project Manager	Project Engineer	Staff Engineer	Graphics	Clerical	Principal Hydro- geologist	Staff Hydro- geologist	Graphics	Clerical		
Task 1 - Data Collection	18	28	44							90	\$ 11,320
Task 2 - 2013 Annual Report										328	\$ 39,190
2.1 - Document pumping for metered wells	4	16								20	\$ 2,760
2.2 - Document pumping for unmetered wells	4	8	8							20	\$ 2,560
2.3 - Document basin activities	4	16								20	\$ 2,760
2.4 - Develop groundwater contour maps	2					2	8	2		14	\$ 1,510
2.5 - Calculate change in storage	2					4	16	8		30	\$ 3,060
2.6 - Evaluate groundwater quality	16	32								48	\$ 6,720
2.7 - Incorporate long-term hydrographs	2	8				8	8			10	\$ 1,380
2.8 - Prepare draft report	8	32	16	20	16	8	8	12		120	\$ 13,140
2.9 - Prepare final report	6	16		8	8	4	4			46	\$ 5,300
Task 3 - Operating Safe Yield										66	\$ 7,560
3.1 - Review of data for 2013-14						2	20			22	\$ 2,120
3.2 - Preparation of OSY TMs for 2014	8					16	12	4	4	44	\$ 5,440
Task 4 - Update Groundwater Model to 2014	8	12				6	18			44	\$ 5,400
Task 5 - Rules and Regulations	16									16	\$ 2,400
Task 6 - Meeting Attendance										100	\$ 14,920
6.1 - Assistance with agenda preparation	24	8	8			12				52	\$ 7,480
6.2 - Attend Watermaster meetings	24					24				48	\$ 7,440
TOTALS:	146	176	76	28	24	78	86	26	4	644	\$ 80,790

Beaumont Basin Watermaster – Task Order No. 7
2015 Consolidated Annual Report and Associated Consulting Services

Jan 30, 2015

Beaumont Basin Watermaster
Billing Rates for Task Order No. 7

Billing Rates for ALDA Inc.

Billing rates for Calendar Year 2015 are as follows:

<u>Position</u>	<u>Hourly Rate</u>
Project Manager	\$150.00
Project Engineer	\$135.00
Staff Engineer	\$110.00
Graphics / Designer Drafter	\$ 90.00
Drafter	\$ 75.00
Clerical	\$ 65.00

Billing Rates for Thomas Harder and Company

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<u>Position</u>	<u>Hourly Rate</u>
Principal Hydro-geologist	\$160.00
Staff Hydro-geologist	\$ 90.00
Field Technician	\$ 70.00
Graphics	\$ 85.00
Clerical	\$ 65.00
Expert Witness	\$320.00

BEAUMONT BASIN WATERMASTER

MEMORANDUM NO. 15-06

Date: February 4, 2015

From: Joseph Zoba, Treasurer

Subject: Status Report and Discussion Regarding the Beaumont Basin Groundwater Model and Redetermination of the Safe Yield – Final Draft Presentation

Recommendation: That the Watermaster Committee schedules an agenda item for the consideration of the redetermination of the safe yield at the Watermaster meeting scheduled for April 1, 2015.

Earlier in January a draft-final of the Beaumont Basin Safe Yield Evaluation Study was made available via e-mail to members of the Special Project Committee for their review. The draft-final document incorporates additional analysis on return flows and safe yield estimates that were conducted since the presentation of the initial draft.

The ALDA and Tom Harder & Co team will make a formal presentation of the final-draft document to provide members of the Committee with an opportunity to ask questions and address any unresolved issues.

The intent of the presentation is to obtain final consensus on the study so that the Watermaster Committee may adopt the final document at the April 2015 meeting. A copy of the draft resolution is also attached for your review.

RESOLUTION NO. 2015 – 01
A RESOLUTION OF THE BEAUMONT BASIN WATERMASTER ADOPTING
THE FINAL 2013 REEVALUATION OF THE BEAUMONT BASIN SAFE YIELD REPORT
AND REDETERMINING THE SAFE YIELD OF THE BASIN

WHEREAS, the Stipulated Judgment filed February 4, 2004 establishing the Beaumont Basin Watermaster (Riverside Superior Court Case No. 389197) empowers Watermaster to adopt appropriate rules and regulations for the conduct of Watermaster affairs; and

WHEREAS, the Stipulated Judgment, per section VI.5.Y. requires Watermaster to redetermine the Safe Yield of the Beaumont Basin at least every 10 years beginning 10 years after the date of entry of the Stipulated Judgment; and

WHEREAS, a special projects committee, consisting of representatives from the City of Banning, the Beaumont-Cherry Valley Water District, the South Mesa Mutual Water Company, and the Yucaipa Valley Water District was commissioned to provide Watermaster with a recommendation concerning the redetermination of safe yield; and

WHEREAS, the special projects committee commissioned Thomas Harder & Co. in association with Alda, Inc. to prepare a report analyzing and recommending a redetermined Safe Yield as defined by Rule 4.1 of the Beaumont Basin Watermaster Rules and Regulations; and

WHEREAS, the special projects committee conducted several public workshops concerning the redetermination of the Safe Yield of the Beaumont Basin during which considered and analyzed studies and draft reports prepared by Thomas Harder & Co. in association with Alda, Inc., and also received and considered comments submitted by overlyers, appropriators and members of the public; and

WHEREAS, Thomas Harder & Co. in association with Alda, Inc. conducted studies and prepared a report entitled "Final 2013 Reevaluation of the Beaumont Basin Safe Yield" based on the projected water balance for the 10 year period between 2013 to 2022; and

WHEREAS, the Thomas Harder & Co. in association with Alda, Inc. report recommended the redetermined Safe Yield of the Beaumont Basin to be 6,700 acre-feet/yr for the next 10 years of operations within the Beaumont Basin; and

WHEREAS, the special projects committee has recommended to Watermaster that the Final 2013 Reevaluation of the Beaumont Basin Safe Yield report be approved and adopted, and that the redetermined Safe Yield of the Beaumont Basin be 6,700 acre-feet/yr;

NOW, THEREFORE, BE IT HEREBY RESOLVED BY THE BEAUMONT BASIN WATERMASTER that:

1. The Beaumont Basin Watermaster does accept and adopt the Final 2013 Reevaluation of the Beaumont Basin Safe Yield report; and
2. The Beaumont Basin Watermaster redetermines the Safe Yield of the Beaumont Basin to be 6,700 acre-feet/yr.

PASSED AND ADOPTED this 1st day of April, 2015.