

Mr. Bob Harrington
Inyo County Water Department
135 South Jackson Street
Independence, CA 93526

October 6, 2009

RE: Summary of Hydrologic Monitoring Activities
Rose Valley, Inyo County, California
Hay Ranch Project Conditional Use Permit #2007-03

Dear Mr. Harrington:

This letter is intended to summarize hydrologic monitoring activities conducted in September 2009 by TEAM Engineering & Management, Inc. (TEAM), related to the Hay Ranch Water Extraction Project and CUP #2007-03.

Baseline Data Collection

On September 16, 2009, static depth-to-water (DTW) measurements, one visual observation (of the Siphon Well Outflow) and one set of flow rates were collected by TEAM from 26 monitoring locations in the Rose Valley area, as summarized in the attached table (Table 1). Transducer pressure data were downloaded from 15 units, including one "BaroTroll" measuring barometric pressure. On September 8, a DTW measurement at LADWP 816 Well was taken by LADWP personnel.

A field event was conducted by Keith Rainville of TEAM and Randy Jackson of the Inyo County Water Department (ICWD) on September 10 to evaluate groundwater levels beneath Little Lake. Temporary drive-point piezometers were installed and then removed at four locations (Figure 1) in Little Lake to depths of four or more feet beneath the lake bottom. At all four locations, the measurements indicated a hydraulic gradient from Little Lake to groundwater beneath Little Lake (Table 2).

A surveying event was conducted at Little Lake Ranch with the following locations being surveyed: North Well, Dock Well, Stilling Well, Little Lake East and West Weirs, Coso Springs, Siphon Well head and discharge points, Pond 1 and Pond 2 Weirs, North Culvert, the Hotel Well and the three likely locations for the Little Lake outflow, Coso Springs and North Culvert flow monitoring devices.

Baseline Data Collection Exceptions

There were no notable baseline data collection exceptions.

Maintenance/Installation Activities

Data logging pressure transducers and well security were installed at four monitoring points: the Little Lake Ranch Hotel Well (RV-260), the Cal Pumice Well (RV-30), the Davis Ranch North Well (RV110), and the Davis Ranch South Flume (RV111). Security was installed at Lego Well (RV-140).

The Hay Ranch CUP Monitoring Point Matrix was updated.

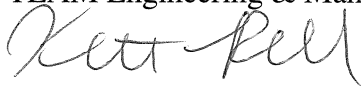
Preparation and scheduling for installation of flow monitoring flumes with pressure transducers at Little Lake Ranch also occurred.

Data Transmittal

A data transmittal system has been established between TEAM and Inyo County Water Department (ICWD) for the Hay Ranch Project using Microsoft Access. TEAM has posted this Access database and also posted the database export file (on the ICWD website). The project database contains manual DTW reads from TEAM, LADWP and Coso Operating Company through September 2009. This database also contains pressure transducer data from May through September 2009. TEAM has performed QA/QC work on the data included in the project database.

TEAM has also uploaded a Hay Ranch CUP overview map and Rose Valley hydrographs in PDF form to the ICWD website.

Sincerely,
TEAM Engineering & Management, Inc.



Keith Rainville
Staff Geologist

Table 1
Field Observations of Rose Valley Hydrologic Monitoring Points
September 2009

Project Name:	Hay Ranch Project HMMP	Date: September 30, 2009
Location:	Rose Valley, Inyo County	
Observer(s):	K. Rainville	Page: 1 of 1

Well ID	Monitoring Point	Date	Time	DTW (ft)	Flow (gpm)	GWE (ft amsl)	Method	Transducer Log Interval	Notes
RV-10	Dews	09/16/09	9:25	232.14	-	3754.78	TEAM manual read	NA	
RV-20	LADWP 816	09/08/09	13:47	76.59	-	3438.47	LADWP manual read	NA	Data provided by LADWP
RV-30	Cal Pumice	09/16/09	8:19	240.75	-	3265.14	TEAM manual read	Hourly	PT installed 9/16/09
RV-40	Dunmovin	09/16/09	10:06	295.80	-	3252.07	TEAM manual read	NA	
RV-50	Hay Ranch North	09/16/09	9:42	191.70	-	3245.29	TEAM manual read	NA	
RV-60	Hay Ranch 1A	09/16/09	15:03	187.93	-	3244.24	TEAM manual read	Hourly	
RV-61	Hay Ranch 1B	09/16/09	15:12	188.89	-	3242.96	TEAM manual read	Hourly	
RV-62	Hay Ranch 1C	09/16/09	15:19	186.10	-	3245.40	TEAM manual read	Hourly	
RV-70	Hay Ranch South	09/16/09	15:30	178.47	-	3241.78	TEAM manual read	NA	
RV-80	Hay Ranch 2A	09/16/09	15:38	191.91	-	3241.09	TEAM manual read	Hourly	
RV-81	Hay Ranch 2B	09/16/09	15:45	194.14	-	3238.49	TEAM manual read	Hourly	
RV-82	Hay Ranch 2C	09/16/09	15:57	189.49	-	3242.61	TEAM manual read	Hourly	
RV-90	Coso Jct Ranch	09/16/09	10:28	171.23	-	3231.90	TEAM manual read	Hourly	
RV-100	Coso Jct Store #1	09/16/09	10:48	143.12	-	3229.00	TEAM manual read	Hourly	
RV-120	Red Hill Well (BLM)	09/16/09	12:19	140.17	-	3200.66	TEAM manual read	Hourly	
RV-130	G-36	09/16/09	11:51	180.13	-	3199.89	TEAM manual read	NA	
RV-140	Lego	09/16/09	11:36	222.29	-	3200.54	TEAM manual read	NA	Locking lid adds .01 to riser for Oct.
RV-150	Cinder Road	09/16/09	14:32	190.90	-	3187.06	TEAM manual read	Hourly	
RV-160	18-28 GTH	09/16/09	11:17	174.04	-	3188.54	TEAM manual read	Hourly	
RV-170	Fossil Falls Campground	09/16/09	14:25	141.15	-	3175.62	TEAM manual read	NA	
RV-180	LLR North Well	09/16/09	12:51	40.20	-	3158.95	TEAM manual read	Hourly	Surveyed 9/22/09
RV-210	LLR Dock Well	09/16/09	13:06	6.46	-	-	TEAM manual read	Hourly	Surveyed 9/22/09
RV-220	LLR Surface Level	09/16/09	13:16	3.94	-	-	TEAM manual read	Hourly	Surveyed 9/22/09
RV-250	LLR Siphon Discharge	09/16/09	13:48	-	Yes	-	TEAM visual read	NA	Discharging into Pond 2; Surveyed 9/22/09
RV-260	LLR Hotel Well	09/16/09	13:57	0.18	-	-	-	Hourly	PT installed 9/22/09; Surveyed 9/22/09
RV-110	Davis Springs North Well	09/16/09	17:46	6.47	-	-	TEAM manual read	Hourly	PT installed 9/16/09
RV-111	Davis Springs South Flume	09/16/09	16:59	-	4.3	-	TEAM manual read	Hourly	Bucket and watch; PT installed 9/16/09

NM - not measured; NA - not applicable; IO - Inoperative

DTW - Depth to water in feet below top of casing or other reference point

Table 2
Little Lake Ranch Piezometers
September 10, 2009

ID	General Location	GPS Coordinates (WGS 84, Dec. Deg.)		Gaining or losing	Depth Piezo screen below lake bottom	DTW in Piezo below lake surface
		West	North			
Piezo 1	North dock area	117.90318	35.95219	Losing	4.52	4.04
Piezo 2	South weir area	117.90650	35.94143	Losing	4.20	2.73
Piezo 3	West shore in bay	117.90459	35.94683	Losing	4.34	3.22
Piezo 4	East side	117.90060	35.94964	Losing	4.25	4.60

ID	General Location	Piezo Length to top of screen	Top of Piezo to lake bottom	Top of Piezo to lake surface	DTW in Piezo	Depth of Piezo screen below lake surface
Piezo 2	South weir area	8.23	4.03	0.81	3.54	4.69
Piezo 3	West shore in bay	8.24	3.90	2.91	6.13	5.33
Piezo 4	East side	8.23	3.98	1.72	6.32	6.51

Surface level of Little Lake measured at Stilling Well was 3.94 feet below top of casing

All measurements in feet, except for GPS coordinates (decimal degrees)

"Piezo" is a Solinst drive point piezometer

Piezo screened interval is .30 feet long

DTW: Depth to water measured with Solinst sounder

LEGEND:

Piezo 1 - Piezometer ID

● - Piezometer Location

Text - Gaining or Losing

