

INDIAN WELLS VALLEY GROUNDWATER AUTHORITY TECHNICAL ADVISORY COMMITTEE

Indian Wells Valley Water District 500 W. Ridgecrest Blvd. Ridgecrest, CA 93555

A G E N D A

Thursday, September 6th, 2018, Time 1:00 p.m.

In compliance with the Americans with Disabilities Act, if you are a disabled person and you need a disability-related modification or accommodation to participate in this meeting, please contact Ronald Strand at (760) 499-5002. Requests must be made as early as possible and at least one full business day before the start of the meeting. Documents and material relating to an open session agenda items that are provided to the IWVGA TAC Committee prior to a regular meeting will be available for public inspection and copying at Indian Wells Valley Water District, 500 W. Ridgecrest Blvd, Ridgecrest, CA 93555, or online at <https://iwvga.org/>.

Statements from the Public

The public will be allowed to address the Committee during Public Comments about subjects within the jurisdiction of the IWVGA Technical Advisory Committee and that are NOT on the agenda. No action may be taken on off-agenda items unless authorized by law. Questions posed to the Committee may be answered after the meeting or at future meeting. Dialog or extended discussion between the public and the Committee or staff will be limited in accordance with the Brown Act. The Public Comments portion of the meeting shall be limited to three (3) minutes per speaker. Each person is limited to one comment during Public Comments. Legal representatives are available for information regarding the Brown Act and will be present for comments if needed.

All remarks and questions should be addressed to the Committee as a whole and not to any individual member or staff. There will be time after each action item on the agenda to receive comments from the public. Again each speaker will be limited to three (3) minutes. Speakers should be brief and limit their comments to the specific subject being discussed. Persons will be limited to one comment per person unless directed by the Chair.

1. CALL TO ORDER

- a. Roll Call of TAC Members Attending

2. PUBLIC COMMENTS

This time is reserved for the public to address the Committee about matters NOT on the agenda. No action will be taken on non-agenda items unless authorized by law. Comments are limited to three minutes per person.

3. WATER RESOURCES MANAGER'S DISCUSSION OF DRAFT GSP SECTIONS (WORK IN PROGRESS)

- a. Plan Area and Basin Setting: Model Calibration Workshop Discussion (Attachment to be Provided)
 - i) Ad Hoc Discussion (Attachment to be Provided)
- b. Sustainable Management Criteria: Existing Monitoring Network (Attachment Provided)
- c. Sustainable Management Criteria: Stream Gages/Weather Stations (Attachment Provided)
- d. Plan Implementation: DMS Status Report (Attachment to be Provided)

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Meeting of September 6, 2018

- e. Projects and Management Actions: Sustainable Management Actions Modeling Scenarios (Attachment to be Provided)
- f. Projects and Management Actions: Alternative Water and Conservation (Attachment to be Provided)
- g. Projects and Management Actions: Recycled Water Tech Memo (Verbal)

4. FUTURE AGENDA ITEMS (OCTOBER TAC)

- a. Plan Area and Basin Setting: Baseline Model Assumptions
- b. Projects and Management Actions: Sustainable Management Actions Modeling Scenarios
- c. Sustainable Management Criteria: Data Gap Ad Hoc Report
 - i) New Monitoring Wells
 - ii) Aquifer Tests
 - iii) Water Quality and Stable Isotope Sampling
 - iv) Stream Gages/Weather Stations
- d. Sustainable Management Criteria: Monitoring Protocols
- e. Projects and Management Actions: Alternative Water and Conservation

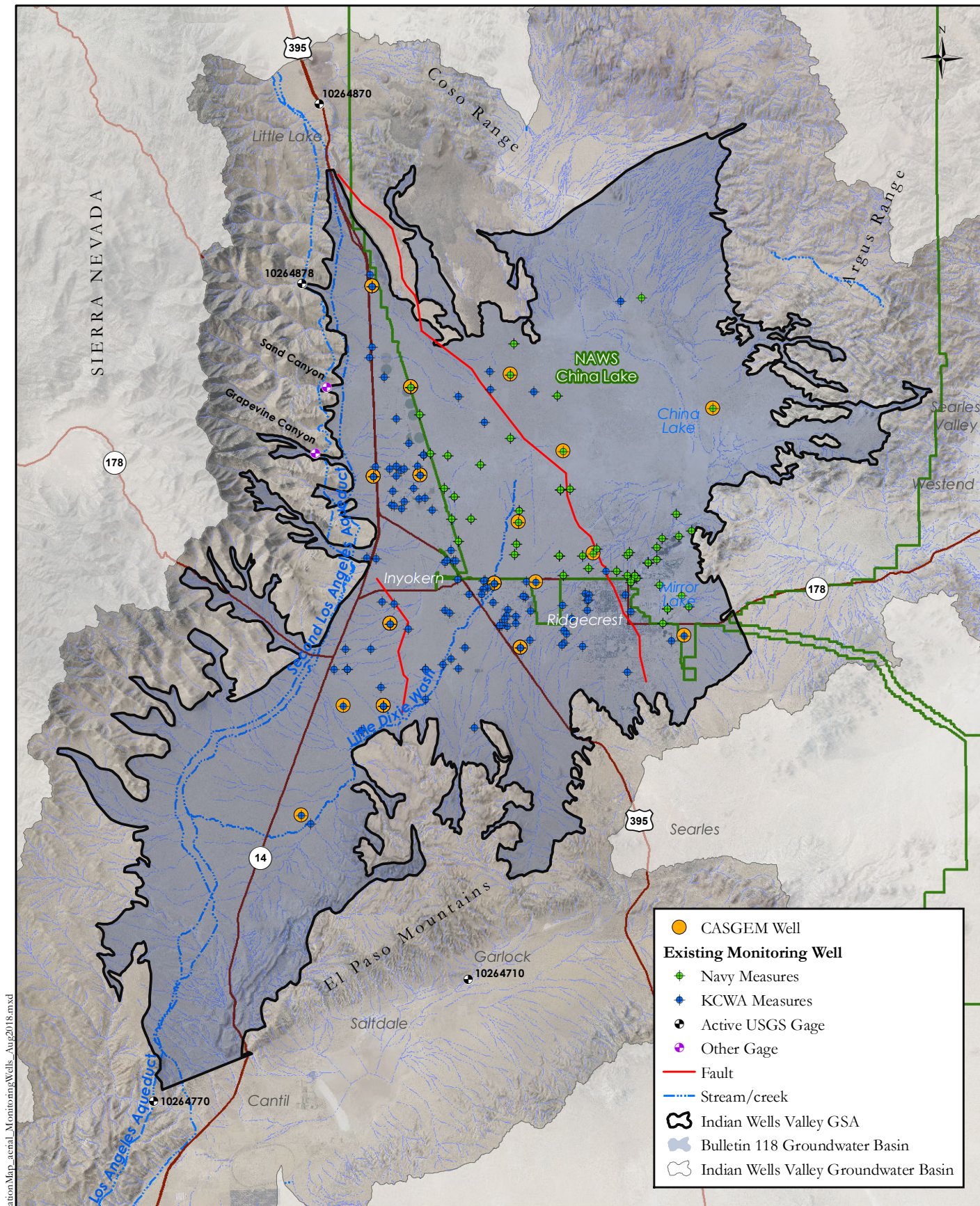
5. FUTURE TAC MEETING DATES

- a. Next three month planned dates:
 - i) October 4th , November 1st and December 6th

6. WATER RESOURCES MANAGER/COMMITTEE MEMBER ANNOUNCEMENTS OR COMMENTS

- a. WRM – No items at this time
- b. TAC – Membership Announcement

7. ADJOURN



DRAFT
8/28/2018

2018 EXISTING MONITORING WELLS 192 WELLS (17 CASGEM LOCATIONS) INDIAN WELLS VALLEY

192	33	57	184		KCWA DB	KCWA DB	51
Sate ID	CASGEM	NAVY	KCWA	Other WELL NAME	SWN	WellType	hydrograph
24S/38E-16J02			field msr		24S/38E-16J02	Domestic	
24S/38E-21A01	358414N1178717W001		field msr	USBR 10-S	24S/38E-21A01	Monitor	v✓
24S/38E-21A02	358414N1178717W002		field msr	USBR 10-SM	24S/38E-21A02	Monitor	v✓
24S/38E-21A04	358414N1178717W004		field msr	USBR 10-D	24S/38E-21A04	Monitor	v✓
24S/38E-33J02			field msr		24S/38E-33J02	Unknown	
24S/39E-34D01		Navy	NAWS	Baker-North; Howard Ranch well	24S/39E-34D01	Unknown	✓
24S/40E-20J			NAWS	WINDMILL	24S/40E-20J	Stock Well	
24S/40E-21K02		Navy		TTIWV-MW15; N. Centerline			
25S/38E-03G			field msr		25S/38E-03G	Unknown	✓
25S/38E-11D01			field msr	Bates	25S/38E-11D01	Domestic	
25S/38E-12L01	357762N1178411W001	Navy	field msr	USBR 6-S	25S/38E-12L01	Monitor	v✓
25S/38E-12L02	357762N1178411W002	Navy	field msr	USBR 6-M	25S/38E-12L02	Monitor	v✓
25S/38E-12L03	357762N1178411W003	Navy	field msr	USBR 6-D	25S/38E-12L03	Monitor	v✓
25S/38E-13J01		Navy	field msr		25S/38E-13J01	Stock Well	✓
25S/38E-14Q01			field msr	HILL	25S/38E-14Q01	Domestic	
25S/38E-25C			field msr	PEACHIE	25S/38E-25C	Domestic	
25S/38E-25J01			field msr	NR 1-S	25S/38E-25J01	Stock Well	
25S/38E-25J02			field msr	NR 1-M	25S/38E-25J02	Stock Well	
25S/38E-25J03			field msr	NR 1-D	25S/38E-25J03	Monitor	
25S/38E-25M			field msr	Goldsmith	25S/38E-25M	Domestic	
25S/38E-34A01			field msr	MEANS-395	25S/38E-34A01	Domestic	
25S/38E-34G01	357181N1178709W001		transducer	USBR 5-S	25S/38E-34G01	Monitor	v✓
25S/38E-34G02	357181N1178709W002		field msr	USBR 5-M	25S/38E-34G02	Monitor	v✓
25S/38E-34G03	357181N1178709W003		field msr	USBR 5-D	25S/38E-34G03	Municipal	v✓
25S/38E-35A			field msr	HLEDIK	25S/38E-35A	Domestic	
25S/38E-35B01			field msr		25S/38E-35B01	Unknown	✓
25S/38E-35C			field msr	Murrin(previously Seizmore)	25S/38E-35C	Domestic	
25S/38E-35H			field msr	HOFFMAN	25S/38E-35H	Domestic	
25S/38E-36B01			field msr	WELL 27 (NWWF 04)	25S/38E-36B01	Monitor	
25S/38E-36D			field msr	WOOD	25S/38E-36D	Domestic	
25S/38E-36G01	357187N1178427W001		transducer	NR-1 (Shallow)	25S/38E-36G01	Monitor	
25S/38E-36G02	357187N1178427W002		field msr	NR-2 (Middle)	25S/38E-36G02	Monitor	T✓
25S/38E-36G03	357187N1178427W003		field msr	NR-3 (Deep)	25S/38E-36G03	Monitor	
25S/38E-36P			field msr	PAGE	25S/38E-36P	Domestic	
25S/39E-03R01	357850N1177618W001	Navy	NAWS	BAKER RANGE	25S/39E-03R01	Monitor	
25S/39E-04R01			NAWS	WELL-21	25S/39E-04R01	Municipal	
25S/39E-09J01			NAWS	WELL-20	25S/39E-09J01	Municipal	
25S/39E-11N01			NAWS		25S/39E-11N01	Domestic	
25S/39E-12R01		Navy	NAWS	WELL-22	25S/39E-12R01	Domestic	
25S/39E-17D01			NAWS		25S/39E-17D01	Stock Well	
25S/39E-21D01			NAWS		25S/39E-21D01	Domestic	
25S/39E-22J01		Navy	NAWS	S. Baker Ranch	25S/39E-22J01	Unknown	
25S/39E-28P01		Navy	NAWS	Baker 4-NE	25S/39E-28P01	Stock Well	
25S/39E-29M01		Navy	field msr		25S/39E-29M01	Stock Well	
25S/39E-30E01		Navy	field msr	31F1	25S/39E-30E01	Stock Well	
25S/39E-31R01		Navy	field msr		25S/39E-31R01	Monitor	
25S/40E-30E01	357325N1177203W001	Navy		G1-Charley; TTBK MW14			
25S/40E-31P		Navy	field msr	26/40-6B1?	25S/40E-31P	Stock Well	
25S/41E-18R01	357597N1176015W001	Navy		TTBK MW12[CASGEM]			
26S/38E-01E03			field msr	CURT CAREY	26S/38E-01E03	Domestic	
26S/38E-01G02			field msr	JOHN CARR	26S/38E-01G02	Domestic	
26S/38E-01H03			field msr	STANDARD	26S/38E-01H03	Domestic	
26S/38E-01H05			field msr	STANDARD	26S/38E-01H05	Domestic	
26S/38E-01H06			field msr	STANDARD	26S/38E-01H06	Domestic	
26S/38E-01M05			field msr	Fields	26S/38E-01M05	Domestic	
26S/38E-02B01			field msr	PIERCE	26S/38E-02B01	Domestic	
26S/38E-02Q01			field msr		26S/38E-02Q01	Domestic	
26S/38E-02Q02			field msr	KILLINGER	26S/38E-02Q02	Domestic	
26S/38E-02R01			transducer	Means; Mohave Pistachio	26S/38E-02R01	Monitor	T✓
26S/38E-22B			field msr	OSTRICH RANCH	26S/38E-22B	Domestic	
26S/38E-22D			field msr	HOMESTEAD	26S/38E-22D	Monitor	
26S/38E-35B			field msr		26S/38E-35B	Domestic	

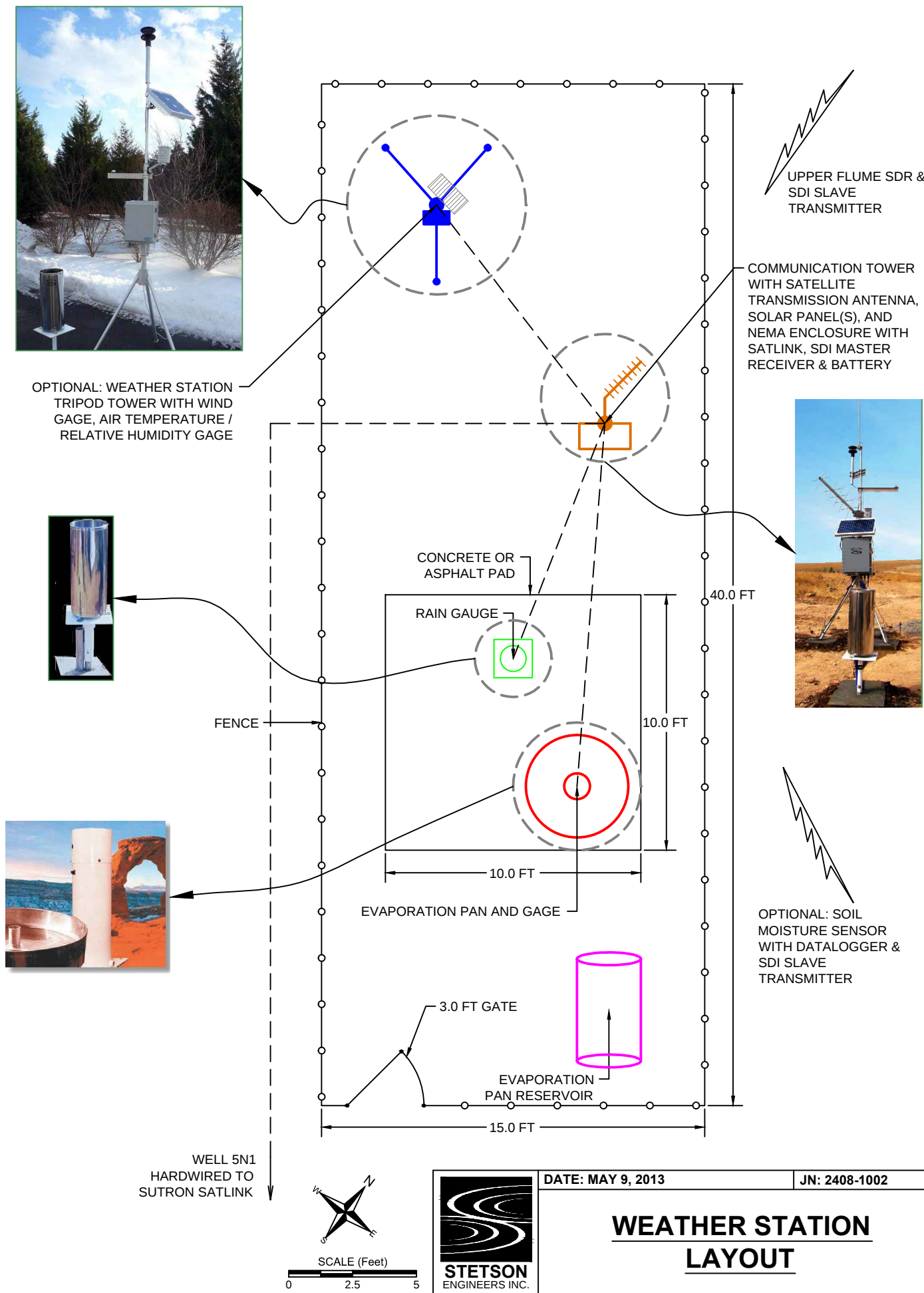
Sate ID	CASGEM	NAVY	KCWA	Other WELL NAME	SWN	WellType	hydrograph
26S/38E-35D			field msr		26S/38E-35D	Unknown	
26S/39E-01A01		Navy	field msr		26S/39E-01A01	Stock Well	
26S/39E-01A02		Navy	field msr		26S/39E-01A02	Stock Well	
26S/39E-02N01		Navy	field msr		26S/39E-02N01	Stock Well	
26S/39E-03B01			field msr	CURRY	26S/39E-03B01	Domestic	
26S/39E-05F01		Navy	field msr	WELL 23-INACTIVE	26S/39E-05F01	Unknown	
26S/39E-06P01			field msr	CORCORAN	26S/39E-06P01	Domestic	
26S/39E-08F		Navy	field msr		26S/39E-08F	Stock Well	
26S/39E-09E		Navy	field msr		26S/39E-09E	Stock Well	
26S/39E-11E02	356885N1177556W001	Navy	field msr	Sandquist Spa	26S/39E-11E02	Monitor	
26S/39E-13R03		Navy	field msr	USNS-01	26S/39E-13R03	Stock Well	
26S/39E-13R04		Navy	field msr		26S/39E-13R04	Monitor	
26S/39E-14E01		Navy	field msr		26S/39E-14E01	Stock Well	
26S/39E-15J		Navy	field msr		26S/39E-15J	Stock Well	
26S/39E-17G02		Navy	field msr	KERR MCGEE #4	26S/39E-17G02	Monitor	
26S/39E-17M01			field msr	MEHRA	26S/39E-17M01	Domestic	
26S/39E-20C01			field msr	CLODT OLD WELL	26S/39E-20C01	Domestic	
26S/39E-20C02			field msr	CLODT NEW WELL	26S/39E-20C02	Domestic	
26S/39E-20L			field msr		26S/39E-20L	Stock Well	
26S/39E-20N01			field msr	ICSD MW #2	26S/39E-20N01	Monitor	
26S/39E-20N02			field msr	ICSD MW #3	26S/39E-20N02	Monitor	
26S/39E-26A03	356497N1177421W001		transducer	USBR 4-SM	26S/39E-26A03	Monitor	✓
26S/39E-26B02			field msr	BERTRAND	26S/39E-26B02	Unknown	
26S/39E-26P01			field msr	QUIST #1	26S/39E-26P01	Irrigation	
26S/39E-26P02			field msr	QUIST #2	26S/39E-26P02	Irrigation	
26S/39E-27C			field msr		26S/39E-27C	Unknown	
26S/39E-27D02	356485N1177749W002		field msr	MW 32-SM	26S/39E-27D02	Monitor	v✓
26S/39E-27D03	356485N1177749W003		field msr	MW 32-DM	26S/39E-27D03	Monitor	v✓
26S/39E-27D04	356485N1177749W004		field msr	MW 32-D	26S/39E-27D04	Monitor	v✓
26S/39E-28B01			field msr	SIERRA BREEZE MH PAR	26S/39E-28B01	Domestic	✓
26S/39E-28B03			field msr	DAME (New Well)	26S/39E-28B03	Domestic	
26S/39E-28G02			field msr	OMSTEAD	26S/39E-28G02	Domestic	
26S/39E-28G03			field msr	Davis	26S/39E-28G03	Domestic	
26S/39E-28L02			field msr	OMSTEAD	26S/39E-28L02	Domestic	
26S/39E-29J02			field msr	PATRICIA SORENSON	26S/39E-29J02	Domestic	
26S/39E-31R03			field msr	DONNA SUE WATER CO.	26S/39E-31R03	Domestic	
26S/39E-32L01			field msr	STEELE	26S/39E-32L01	Domestic	
26S/39E-34C01			field msr	DALY	26S/39E-34C01	Unknown	
26S/39E-34D01			field msr	PETTY-WITCHER	26S/39E-34D01	Domestic	✓
26S/39E-34E			field msr	Yellow Bird Water Co	26S/39E-34E	Unknown	
26S/39E-34G05			field msr	DECKER	26S/39E-34G05	Domestic	
26S/39E-34J01			field msr	JENNIFER VENOLA	26S/39E-34J01	Domestic	
26S/39E-34K03			field msr	FISHER	26S/39E-34K03	Domestic	
26S/39E-34P04			field msr	SIZEMORE	26S/39E-34P04	Domestic	
26S/39E-34Q01			field msr	Demay	26S/39E-34Q01	Domestic	
26S/39E-34R02			field msr	WOODWORTH	26S/39E-34R02	Domestic	
26S/39E-35G01			field msr	QUIST #4	26S/39E-35G01	Irrigation	
26S/40E-12C		Navy	field msr	N. Pole Line	26S/40E-12C	Stock Well	
26S/40E-12R01		Navy	field msr	Chub Med	26S/40E-12R01	Stock Well	
26S/40E-13C02		Navy	field msr	CHINA LAKE PLAYA; NE of WWTF	26S/40E-13C02	Monitor	
26S/40E-14B01		Navy	field msr	Pole Line near Ponds	26S/40E-14B01	Stock Well	
26S/40E-14L01		Navy	field msr	Pole Line near Ponds	26S/40E-14L01	Stock Well	
26S/40E-15N01		Navy	field msr	S. Fuel Farm	26S/40E-15N01	Stock Well	
26S/40E-15N02		Navy	field msr	E. Fuel Farm	26S/40E-15N02	Stock Well	
26S/40E-17J01		Navy	field msr	Hangar 5 area	26S/40E-17J01	Stock Well	
26S/40E-17N01		Navy	field msr	Airfield homestead well	26S/40E-17N01	Stock Well	
26S/40E-17Q01	356665N1176968W001	Navy		S. Hangar 5; 96030-1	26S/40E-17Q01		
26S/40E-19N02		Navy	field msr		26S/40E-19N02	Monitor	
26S/40E-20L01		Navy	field msr		26S/40E-20L01	Stock Well	
26S/40E-21N			NAWS		26S/40E-21N	Stock Well	
26S/40E-21Q		Navy	field msr		26S/40E-21Q	Stock Well	
26S/40E-22H01		Navy	field msr	Pole Line and Lauritsen	26S/40E-22H01	Stock Well	
26S/40E-22H02		Navy	field msr	Pole Line and Lauritsen	26S/40E-22H02	Stock Well	

Sate ID	CASGEM	NAVY	KCWA	Other WELL NAME	SWN	WellType	hydrograph
26S/40E-22H03		Navy	field msr	Pole Line and Lauritsen	26S/40E-22H03	Stock Well	
26S/40E-22N01		Navy	field msr	In Propane Yard	26S/40E-22N01	Stock Well	
26S/40E-22P02		Navy	field msr	PW Substation 3	26S/40E-22P02	Stock Well	
26S/40E-22P03		Navy	field msr	PW Substation 1	26S/40E-22P03	Monitor	
26S/40E-22P04		Navy	field msr	PW Substation 2	26S/40E-22P04	Monitor	
26S/40E-23C01		Navy	field msr	S. of WWTF	26S/40E-23C01	Stock Well	
26S/40E-25P		Navy		MK22-MW10 (217')			
26S/40E-26F01		Navy	field msr	W-Side Mirror Lake	26S/40E-26F01	Stock Well	
26S/40E-27D01		Navy	field msr	NW PW Compound	26S/40E-27D01	Stock Well	
26S/40E-27D02		Navy	field msr	W-Side PW Compound	26S/40E-27D02	Stock Well	
26S/40E-28J01			field msr	HOSPITAL	26S/40E-28J01	Municipal	
26S/40E-29M01			field msr	WOODMAN	26S/40E-29M01	Domestic	✓
26S/40E-29M02			field msr	AMSTER	26S/40E-29M02	Domestic	✓
26S/40E-29N01			field msr	KLEINSCHMIDT	26S/40E-29N01	Domestic	✓
26S/40E-29P01			field msr	CHUN	26S/40E-29P01	Domestic	✓
26S/40E-31D01				HOPPER KCWA well. MDS	26S/40E-31D01		✓
26S/40E-31D02			field msr	CHILINA	26S/40E-31D02	Domestic	✓
26S/40E-31D03				KCWA well. MDS	26S/40E-31D03		✓
26S/40E-31K01			field msr	BURNS	26S/40E-31K01	Domestic	✓
26S/40E-32E01			field msr	WELCOME	26S/40E-32E01	Domestic	✓
26S/40E-34F			field msr	City of Ridgecrest	26S/40E-34F	Cathodic	✓
26S/40E-35H01		Navy	field msr	Satellite Lake 1 (west)	26S/40E-35H01	Stock Well	
26S/40E-35H02		Navy	field msr	Satellite Lake 2 (east)	26S/40E-35H02	Stock Well	
26S/40E-35Q02		Navy	NAWS	S.E. Line	26S/40E-35Q02	Stock Well	
26S/40E-36A01		Navy	field msr	N side Pilot Plant Rd	26S/40E-36A01	Stock Well	
27S/38E-01C			field msr	Warkentin	27S/38E-01C	Domestic	
27S/38E-02C01	356228N1178576W001		field msr	USBR 2-S	27S/38E-02C01	Stock Well	v✓
27S/38E-02C02	356228N1178576W002		field msr	USBR 2-M	27S/38E-02C02	Stock Well	v✓
27S/38E-02C03	356228N1178576W003		field msr	USBR 2-D	27S/38E-02C03	Stock Well	v✓
27S/38E-08R01			field msr		27S/38E-08R01	Monitor	
27S/38E-09C01			field msr	AB303-03	27S/38E-09C01	Monitor	
27S/38E-09P01			field msr	Father Crowley	27S/38E-09P01	Monitor	
27S/38E-09Q02			field msr	AB303-02	27S/38E-09Q02	Monitor	
27S/38E-10B01			field msr	AB303-04	27S/38E-10B01	Monitor	
27S/38E-13A01			transducer	Sea Bee Well	27S/38E-13A01	Monitor	T✓
27S/38E-13A02			field msr	AB303-01	27S/38E-13A02	Monitor	
27S/38E-15R01			field msr	AB303-05	27S/38E-15R01	Monitor	
27S/38E-21L01	355699N1178959W001		field msr	AB303-06	27S/38E-21L01	Monitor	
27S/38E-23F01	355696N1178629W001		field msr	USBR 1-S	27S/38E-23F01	Monitor	v✓
27S/38E-23F02	355696N1178629W002		field msr	USBR 1-SM	27S/38E-23F02	Monitor	v✓
27S/38E-23F04	355696N1178629W004		field msr	USBR 1-D	27S/38E-23F04	Monitor	v✓
27S/38E-27M01			field msr	USNS-03	27S/38E-27M01	Monitor	
27S/39E-02K			field msr	ASPHALT CONST. CO	27S/39E-02K	Industrial/Dust Control	
27S/39E-03C01			field msr	FARRELL	27S/39E-03C01	Domestic	
27S/39E-03C02			field msr	Dewhurst	27S/39E-03C02	Domestic	
27S/39E-04C01			field msr	Padgett Well	27S/39E-04C01	Domestic	
27S/39E-07R01			field msr	INYO	27S/39E-07R01	Monitor	✓
27S/39E-08A01			field msr	WIDTFELDT	27S/39E-08A01	Domestic	✓
27S/39E-08M02			field msr	IWV MW #1	27S/39E-08M02	Monitor	✓
27S/39E-08P02			field msr	IWV MW # 2	27S/39E-08P02	Monitor	✓
27S/39E-11D01	356073N1177549W001		field msr	USBR 3-S	27S/39E-11D01	Monitor	v✓
27S/39E-11D02	356073N1177549W002		field msr	USBR 3-M	27S/39E-11D02	Monitor	v✓
27S/39E-11D03	356073N1177549W003		field msr	USBR 3-D	27S/39E-11D03	Monitor	v✓
27S/39E-19E01			field msr	IWV MW #3	27S/39E-19E01	Stock Well	
27S/39E-28L01			field msr	ROCK QUARRY	27S/39E-28L01	Domestic	
27S/40E-01K02	356144N1176260W001		field msr	George Air Corridor	27S/40E-01K02	Monitor	
27S/40E-02J01			field msr	DMP Cemetery	27S/40E-02J01	Irrigation	
27S/40E-02P01			field msr	FAIRGROUNDS RICHMOND RD	27S/40E-02P01	Unknown	
27S/40E-06D01			iwwvd trnsdcr	Dist. Well 12	27S/40E-06D01	Monitor	T✓
27S/40E-06E01			field msr	TURNER	27S/40E-06E01	Domestic	✓
27S/40E-06F01			field msr	FRISBEE	27S/40E-06F01	Domestic	✓
27S/40E-06L02				N MDSIMA surveyed. KCWA we	27S/40E-06L02		✓
27S/40E-06N01			field msr	MANOS	27S/40E-06N01	Domestic	✓

Sate ID	CASGEM	NAVY	KCWA	Other WELL NAME	SWN	WellType	hydrograph
27S/40E-06N02			field msr	TIPTON	27S/40E-06N02	Domestic	✓
27S/40E-15D01			field msr	BUCKET WELL	27S/40E-15D01	Domestic	
28S/38E-18F01	354993N1179284W001		field msr	ABANDONED WELL	28S/38E-18F01	Stock Well	
28S/38E-18R			field msr	BLACK HILLS WELL	28S/38E-18R	Stock Well	

FIGURE 1

F:\DATA\24081005 - Lake O'Neill Support\AutoCAD\Weather Station Layout.dwg



DATE: MAY 9, 2013

JN: 2408-1002

WEATHER STATION LAYOUT

SatLink3 Logger/Transmitter SL3-1



Overview

Sutron's SatLink3 provides a cost-effective way to measure, log, calculate and transmit data from remote locations around the world. The unit monitors 32 independent measurements of most hydrological, meteorological, environmental or related sensors. SL3 has built-in support for all CGMS satellites including GOES, Eumetsat, Insat and MTSAT for operation anywhere. Most often used directly connected to sensors and transmitting data on a user-set schedule, the Satlink3 has options for cellular and Iridium communications.

Satlink3 builds upon Sutron's 30 years' experience providing reliable satellite communications. Satlink3 does everything an SL2 did with the following enhancements:

- ▶ Expanded measurements from 16 to 32
- ▶ Improved analog accuracy & additional analog channels
- ▶ Expanded SDI capacity with 2 independent SDI-12 inputs
- ▶ Optional cell/Iridium modems for redundant 2-way communications
- ▶ Expanded log from 120,000 to 1,000,000 readings
- ▶ Improved GUI program that runs on Android, iPhone, PC or MAC devices

Whether used in a simple 2-input station or a complicated station with multiple inputs & communication modes, SL3 is the perfect DCP solution.

Features

- ▶ Support for all Geostationary Environmental Satellites including including GOES, METEOSAT, INSAT, MTSAT & CGMS.
- ▶ Built-in SDI-12, Analog, Digital, RS485 & 4-20mA measurement circuitry with lightning protection
- ▶ 2 Switched Power Outputs w/overload protection & 2 Digital Outputs for pulse or on/off control of attached devices
- ▶ Log Capacity: 1,000,000 readings (32MB), flash memory
- ▶ Internal microSD card slot accepts up to 32GB SDHC card.
- ▶ Optional modems for additional cellular or Iridium communications
- ▶ Supports up to **32 measurements with independent schedules**
- ▶ Equation processing & multiple level averaging
- ▶ Built-in WiFi simplifies set up using smart phone/tablet/PC or connect directly to a PC USB port
- ▶ GUI interface for intuitive programming (Android, iPhone, PC, MAC)
- ▶ Expanded Operating Temperature Range (-40° C to +70° C)

Satellite Operability

GOES	300, 1200 BPS	INSAT	4800 BPS
EUMETSAT	100, 2400 BPS	ARGOS/SCD	4800 BPS
MTSAT	100, 300 BPS	CGMS	100 BPS

Optional Communications *(check with your sales representative for availability)*

- ▶ Iridium Satellite SBD
- ▶ Cellular communications: HSPA, CDMA, GPRS
- ▶ Sutron wireless communications



Measurements Interface



Dashboard

SPECIFICATIONS @ 25°C*Specifications subject to change without notice***GENERAL INFORMATION**

Size	6.06 in. x 9.24 in. x 2 in.
Weight	3.1 lbs (1.42kg)
IP rating	IP63
Operating Temperature	-40° C to +70° C

POWER REQUIREMENTS

Voltage	9-20 VDC, , 1.5A transmitting with 1.25W TX power
Quiescent Measuring	< 2 mA typ @12.5 VDC

SDI-12

Independent channels	2
Compliance	V1.3 logger
Power	500mA max

ANALOG - SINGLE ENDED

Number of inputs	2
Range	0-5V
Accuracy @ 25°C	0.004% typ
Resolution	0.298 μ V

ANALOG - DIFFERENTIAL

Number of Inputs	3
Range	± 39 mV, ± 312 mV, ± 2.5 V
Accuracy @ 25°C	0.004% typ
Resolution	0.298 μ V @ ± 2.5 V scale

ANALOG - 4-20ma

Number of inputs	1
Range	0-22mA
Accuracy @ 25°C	0.02%
Load	Internal 200 Ω

DIGITAL - Inputs/Outputs

Number of inputs	2, 0-15 V, optional low level input
Input type	Status, counter, frequency
Input voltage	0-5VDC, internal pull
Max input frequency	10KHz, optional debouncing
Number of outputs	2
Output types	On/off/pulse Open collector w/100 ohm limiting resistor. 100mA, 15V max

OTHER I/Os & CONNECTIONS

Precision analog reference	2.5V 10.0 mA
Switch 12V	1.0 A (2 available)
Protected 12V	1.0 A
RS485	
Internal SPI expansion	
GPS INPUT	SMA-F
RS232	DB9
USB (OTG)	USB MICRO AB
USB Host	Type A
microSD	Internal up to 32 GB

RF POWER OUTPUT

RF output power	1.25-14 Watts depending on settings
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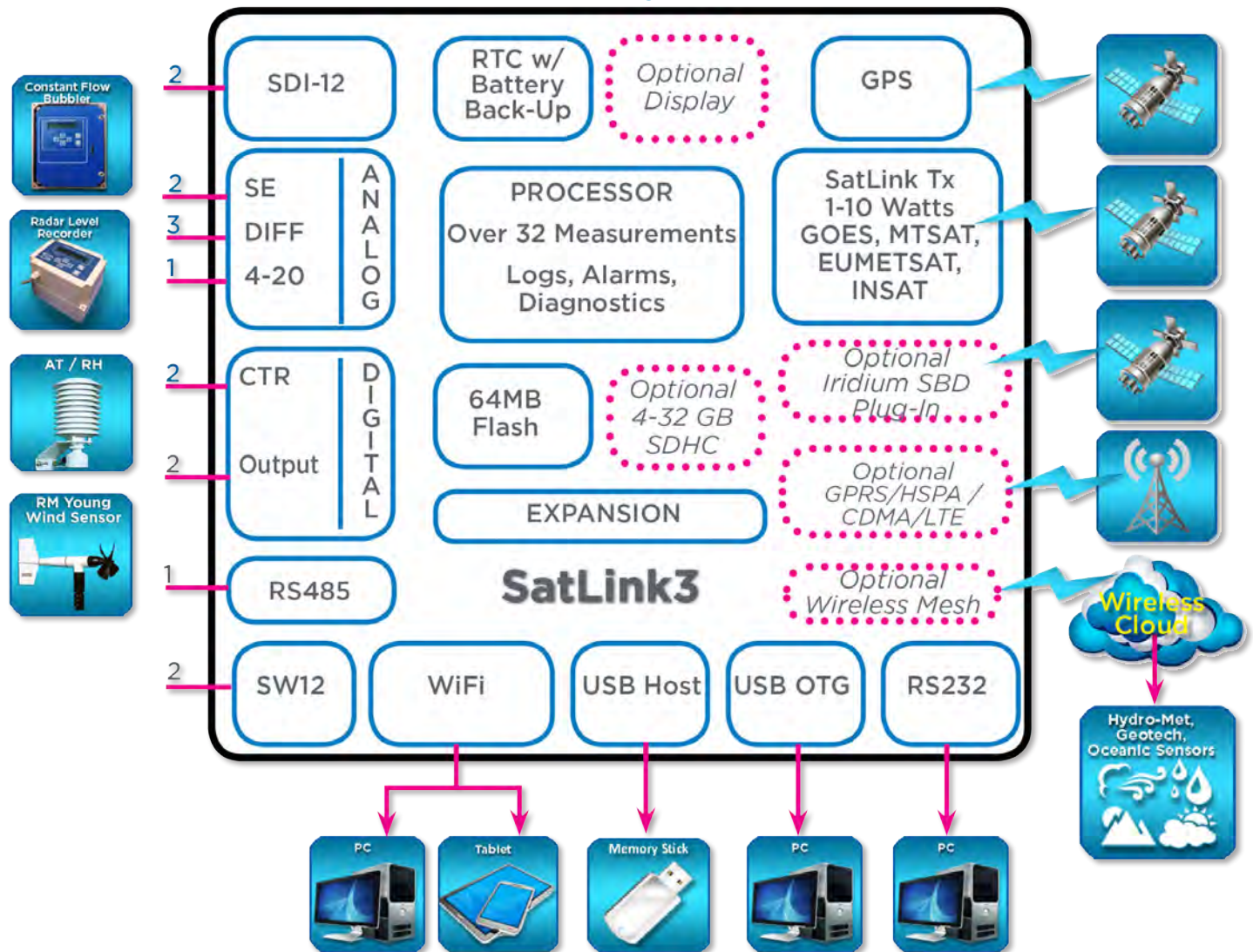
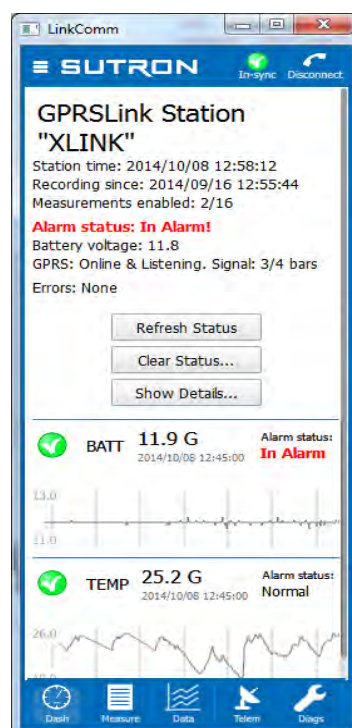
NOTE: In humid/hostile environments we **RECOMMEND** installing SatLink in a NEMA 4 enclosure. Sutron also recommends adding a lightning protection module such as the Sutron 6461-1240 for remote systems.

ORDERING

SL3-1	SatLink3 Logger/Transmitter
RECOMMENDED ACCESSORIES	
PART #	ANTENNA
5000-0020-1	OMNI-Directional Antenna, Half-Wave
5000-0021-1	OMNI Satellite Antenna, Full-Wave
5000-0100	GPS Antenna, SMA with 15 ft. cable
5000-0155-1	YAGI GOES Satellite Antenna
5000-0156-1	YAGI GOES Satellite Antenna, Stainless Steel Mast & Elements
5000-0170	GPS Antenna, Bullet (High Gain)
POWER SUPPLY	
5100-0020-3	Battery Charger, Float
5100-0010, 5100-0030, 5100-0040	Battery, 12VDC: 7 AH, 24 AH, 105 AH
5100-0406	Solar Panel, 53 Watts (Mount 2271-1049 & Cable 6411-1017-3 ordered separately)
5100-0410-1	Solar Panel, 20 Watts unregulated, w/ Mount (Order cable 6411-1017-3 separately)
5100-0400-1	Solar Panel, 10 Watts unregulated including 10 ft. Cable & Mount
5100-0407	Solar Panel Charger Regulator, 4 amp
5100-0408	Solar Panel Charger Regulator, 8 amp
5100-0411	Solar Regulator, 3 amp
ENCLOSURES	
SL3-ENC-1	Enclosure (dimensions: 12.5" x 11" x 6.5")
SL3-ENC-DISP-1	Includes enclosure & display
SL3-ENC-DSP-2	Includes enclosure, display & modem
INSTALLATION, MOUNTING, CABLES, CONNECTORS	
6211-1209-1	Mounting for 5000-0170 Bullet Antenna
6411-1162-1	Cable Assembly, Antenna, 15 ft**
6411-1561-1	Cable, 5M for 5000-0170 Bullet Antenna
6411-1561-2	Cable 10M for 5000-0170 Bullet Antenna
6411-1613	USB Type A Cable for USB Mini Type B (6 ft USB cable provided upon request.)
2271-1061-1	Tower Mount Arm for 5000-0170 Bullet Antenna(Uni-Strut Solid Wall)
2911-1066-1	Mounting Hardware, Antenna to Tower
LIGHTNING PROTECTION	
8111-1113-1	RF COAX Cable Lightning Protection. Bulkhead mount, 36" RG-58 N to N cable (for mounting in NEMA enclosure)
8111-1099-1	Protector, Coax with Cable (wall/panel mount)



*Optional Modem
(Future Release)*

SatLink3 Block Diagram*SatLink3 Sample GUI for Mobile Devices*

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How to become a User

Use of the GOES Data Collection System is regulated, by law, to the collection of environmental data by U.S. federal, state, and local government agencies, and by international government agencies and research organizations with a U.S. government sponsor ([sponsor.html](#)).

A prospective user must first apply for and be granted a System Use Agreement (SUA) by NESDIS, which is typically renewable every 5 years (1 year for manufacturers). Once the SUA has been approved and signed, the user must purchase equipment that has been certified to be compatible with the GOES DCS.

- [Copy of DCS Regulations \(dcsrule.html\)](#)
- [Goes DCS System Use Agreement \(appnewsua.html\)](#)
- [Sponsor \(sponsor.html\)](#)

Satellite Products and Services Division
Direct Services Branch
Phone: 301-817-4436

Mailing Address:
NSOF (E/SPO53)
1315 East-West Hwy
Silver Spring, MD 20910-3282 USA

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Page updated on May 8, 2017



(<http://www.commer>

**COMMENTS RECEIVED BY WATER RESOURCES MANAGER
FROM TAC MEMEBERS SINCE LAST TAC MEETING**

Comments and Suggestions on the Stetson Document “Alternative Opportunities and Constraints to Enhance Water Supplies” dated August 2, 2018

Prepared by Don Decker member of the GA TAC representing the IWV Domestic Well Owners, 080818

1. This draft document has been developed to the point that at least one importation project is defined with enough detail to allow tentative decisions to be made. Here are areas that clearly need to be further developed.
2. The details of an IWV water banking scheme really should be carried out in more detail even at the GSP stage. The Krieger and Stewart study is very preliminary.
3. It is clear that a banking project within the IWV basin would result in enhanced security over most if not all alternatives.
4. Direct injection will be likely required in all potential project areas.
5. Alternative Water Prioritization” (slide 7) has the priorities in the correct order from both a practical and a legal standpoint. Any water trading with DWP will involve Inyo or Mono County water and as this writer has pointed out, Inyo County has made it very clear that importation or trading of Inyo County water will require negotiation at a fundamental level.
6. An augmented importation scheme involving State water from AVEK and banking some of this water in the IWV would provide enhanced security but would be expensive.
7. Another source of water could be looked at which would come from an existing sea water desal plant (Santa Barbara) and used in a trade at a superior trade ratio.
8. The cost summaries are sobering but there is no choice.

Comments and Suggestions Concerning Stetson “Preliminary Draft GSP Outline” dated July 26, 2018

Prepared by Don Decker member of the GA TAC representing the IWV Domestic Well Owners,
August 2, 2018 Comments keyed to specific sections of the draft

1. There should be an additional section, 2.3. The basin overdraft is a singularly important aspect and should have its own section for emphasis. Here is a suggested section and subsections:
2.3 IWV Groundwater Basin Critical Overdraft
 - 2.3.1 Hydrology of the critical overdraft
 - 2.3.2 Magnitude of the Overdraft
2. Comments on section 3.1.3. The Prop 1 brackish water study will not have significant positive results by the time this section must be filled out. There are many difficult and likely unsolvable issues with IWV basin brackish water utilization as part of a sustainability plan. Not the least is the questionable availability of suitable water to treat. The major resource is located on Navy controlled property. The issues of brackish water extraction effects on the connected high quality water reserves and of subsidence cannot be simply dismissed.
3. Further comments on 3.1. There should be a section 3.1.6 Political and Legal Restrictions on Water Importation.
4. In section 4.5.2 why is there any mention of “data gaps”. This issue should be addressed before the GSP is underway
5. Here is a revised section 5 that has the complete list of elements in logical order:
Section 5 Implementation
 - 5.1 The Plan
 - 5.2 The Schedule
 - 5.3 Implementation Costs
 - 5.4 Progress Assessment and Reporting
 - 5.4.1 Progress reports to the Public
 - 5.4.2 Annual and 5 Year Reports to the State
 - 5.5 The GSP POAM

Comments on the Stetson draft Memorandum “Recycled Water Study” dated July 20, 2018

Prepared by Don Decker, member of the GA TAC representing the IWV Domestic Well owners, July 8, 2018

1. This Stetson Engineers prepared Memorandum is very well written and complete. It is clearly stated in the “Introduction” and “Purpose” that this document is a preliminary study done in preparation of the IWV GSP. (pp1 and 2). All of the ultimate elements of the GSP should have Introductions to identify the purpose of the elements so brought forth.
2. Recognition in the Memorandum of contributions made by the TAC is important and is appreciated. The discussion of the significance of the separation of the shallow and intermediate/deep aquifers in the “Study Area” section (pp2, 3) is very valuable to many potential project details brought up later in this report and to other parts of the GSP including the basin “Water Balance”.
3. The Memorandum is complex and can be substantially improved with the addition of a Table of Contents with page numbers for major sections.
4. In the Sections “Study Area” and “Existing Sources of Wastewater”, clear and important summaries of the basic details of this report are given. Again, very well written and complete. (pp3 through 13)
5. This author’s previous criticisms of excessive Stetson resources devoted to the development of the details of the conversion of rural septic disposal systems into a sewage collection system are borne out in the huge costs estimated for the treated water so obtained. That criticism still stands but the effort is now complete. (pp 5 and 6)
6. The “Regulatory Analysis” section is also very well written and clearly states the quality requirements that will be placed on categories of recycled water use. No mention is made of Federal requirements that will be in play in those scenarios where recycled water might be expected to reach Navy potable water wells.
7. The cost estimates for imported water purchases, treatment or transport facilities are offered throughout the Memorandum. These cost estimates are key to the value of this document to the ultimate decisions that will have to be made. Improved references to other studies and projects, engineering modeling and other appropriate sources would substantially improve the cost sections. Not every cost element needs to be referenced but the major costs really should be.