

Real-Time Web Hosting, Data Processing, Delivery, Storage & Alarms!

SutronWIN Web Hosting Water & Weather Information Network



- ▶ Real-Time Web Service for Hydro-Meteorological Data Collection & Dissemination
- ▶ Direct Data, Warnings & Control via the Web, in Any Format You Want, Ready to Use
- ▶ Reliable Data On-Demand, Event-Triggered & Scheduled via SMS, EMAIL or ON-LINE

Telemetry Types

Iridium Satellite Stations

- ▶ Sutron is the only IRIDIUM Value Added Reseller (VAR) in the remote environmental data collection industry.
- ▶ Sutron's IridiumLink includes Iridium modem and datalogger in one compact package (6" x 8").

All Geostationary Satellite Stations

- ▶ Stations communicating with satellites all over the world including GOES, DCS, DOMSAT, NOAAPORT, METEOSAT, GMS, INSAT, ARGOS, etc.

GSM/GPRS Stations, PSTN/Modem Stations, All LOS Radio & Repeater Stations, IP-Accessible Stations, Direct-Connect, etc.

- ▶ Real-Time Communications are Sutron's #1 Strength.

SutronWIN Is Designed For...

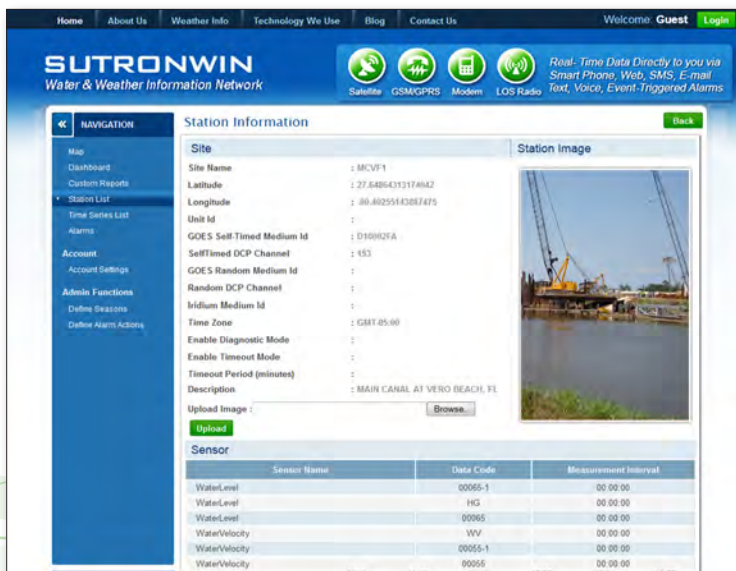
- ▶ Users who need a back-up server (not located in their geographical area), back-up data & back-up alarms
- ▶ Large System Users
- ▶ Small Monitoring Systems Users who don't want the hassle of data collection, storage, decoding, analysis, etc.
- ▶ Any Users who want Sutron to simplify their data collection (which is complicated, expensive & time consuming)
- ▶ Users who want a complete, turn-key, end-to-end solution.

All Hydro-Met Applications & Stations - Existing, Upgraded or New

- ▶ Any application where **data from multiple sources** needs to be **seamlessly distributed to many users** without interruption.
- ▶ Monitoring, Warning & Control Systems
- ▶ All Satellite Transmitter Data Decoded from **Any Manufacturer** including Campbell, Design Analysis, YSI, Forest Technology Service, OTT, Stevens.

Advantages

- ▶ Hosted by Sutron
- ▶ No capital investments for the Central Station
- ▶ Minimal monthly recurring costs
- ▶ No maintenance costs or upgrades costs
- ▶ No special resources required for customers (DBA, software engineers, etc)



SutronWIN: Water & Weather Information Network

SutronWIN - How It Works



1. We collect data from your Hydro-Met Station(s), *from Existing, Upgraded & New Systems*, by Satellite, GSM/GPRS, Radio, Modem, Cellular, etc.



2. We process the data according to your specifications & decode it into time-tagged engineering units.

3. We store the data for 6 months* in our SQL database. And, we perform automatic computing of derived parameters & **automatic limit checking**.



SutronWIN Servers

*up to 10 yrs. for an additional cost

Alarm Actions	
Critical Alarm Notification	
<input checked="" type="checkbox"/> SMS Text	(To: Cell number)
<input checked="" type="checkbox"/> Email List	(To: Comm equipment email address)
Warning Alarm Notification	
<input checked="" type="checkbox"/> SMS Text	(To: Cell number)
<input checked="" type="checkbox"/> Email List	(To: Comm equipment email address)

4. Then we deliver. We provide a secure web-page to view your data graphically, on a map or in tabular form.



5. And, links to download data in any format: SHEF, A/E, Kisters ZRXP, CSV/TSV, Excel, Hydstra, USGS STDMSG, HTML, XML, Pi Historian, & many others.



6. Your messages, data, reports & alarms are delivered to your Desktop, Laptop, Smart Phone, Cell Phone, etc. Data is also available on demand by anyone you authorize, anywhere at all.

Limit Checking, Alarm Notifications, Voice & Data Messages, E-Mail, SMS, Web Cam Images, Tabular Data, Graphs, Station Maps, Derived Parameters, History, Diagnostics

* We will also deliver raw data as it is transmitted by the station if you prefer to process your own data. We will provide a secure download page which is updated immediately as your data arrives.



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Sutron is an authorized Iridium® Value Added Reseller (VAR).

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SutronWIN Web Hosting Water & Weather Information Network

Station Name	Status	Description	Last Report Time
AGLF1	Active	ALLIGATOR LAKE NEAR ASHTON, FL	22 Jul 2011 16:46 EDT
BLRF1	Active	BLACKWATER RIVER	18 May 2011 17:34 EDT
BLUF1	Active	BLUE CYPRESS CREEK NEAR FELLSMERE, FL	21 Jul 2011 15:19 EDT
BCTF1	Active	BOGGY CREEK NEAR TAFT, FL	18 May 2011 17:34 EDT
BCKF1	Active	BUCKHEAD LOCK AT S-127 NR OKEECHOBEE, FL	18 May 2011 16:30 EDT
CTFF1	Active	CATFISH CREEK NEAR LAKE WALES, FL	07 Oct 2009 17:18 EDT
DACF1	Active	DAVENPORT CREEK NEAR LOUGHMAN, FL	07 Oct 2009 17:18 EDT
ERNF1	Active	ESTRON - NORTH BRANCH ESTERO RIVER AT ESTERO, FL	07 Oct 2009 17:18 EDT
MRGF1	Active	HILLSBORO CANAL NR MARGATE, FLA.	07 Oct 2009 17:18 EDT
HWCF1	Active	HOWARD CREEK NEAR SARASOTA FL	07 Oct 2009 17:18 EDT
NOCF1	Active	JOSHUA CREEK AT NOCATEE FL	07 Oct 2009 17:18 EDT
KSPF1	Active	KISSIMMEE RIVER AT PC-33 (MICCOSH) NR BASINGER, FL	07 Oct 2009 17:18 EDT
LPCF1	Active	LAKE PIERCE NEAR WAVERLY, FL	21 Jul 2011 13:01 EDT
LOGF1	Active	LITTLE CREEK AT GREEN SWAMP ROAD NEAR CLERMONT, FL	07 Oct 2009 17:18 EDT
LONL1	Inactive	London Ave Canal 2a/2	07 Oct 2009 17:30 EDT
MCVF1	Active	MAIN CANAL AT VERO BEACH, FL	07 Oct 2009 17:18 EDT
NCTF1	Active	PEACE RIVER AT NOCATEE FL	07 Oct 2009 17:18 EDT
FOGF1	Active	PRARIE CREEK NEAR FORT OGDEN FL	07 Oct 2009 17:18 EDT
CHRF1	Active	ST JOHN'S RIVER NEAR CHRISTMAS, FL	07 Oct 2009 17:18 EDT

Series Id: 105 Site: AGLF1
 Name: WaterElev Param: WaterElev - irregular - Observed
 Num Values: 15352 Units: s
 Earliest: 2009-10-07 14:00:00 Latest: 2011-07-21 15:00:00

Limits
 Seasonal Limits All Year Limits RH YH RL YL

Select	Season	Start	End	Limits Enabled For
<input type="checkbox"/>	Summer	May 01 12:26:48	Aug 31 12:26:55	
<input type="checkbox"/>	Winter	Sep 19 17:29:18	Sep 22 17:29:19	

Value Limits & Alarms
 Enable value limit
 Reject High: []
 Red High: []
 Yellow High: []
 Normal: []
 Yellow High: []
 Red High: []

Rate Of Change Limits & Alarms
 Enable ROC limits
 Upper: [] Lower: []
 Per: [] Severity: []

DATE TIME	Air Temperature	Barometric Pressure	Battery	Day Rain	Precipitation	Relative Humidity	Snow Pellets	Wind Direction
2012-02-16 14:00	44.89	29.65	12.95	0.1	-	90.15	61.61	137
2012-02-16 14:05	44.84	29.72	12.95	0.08	-	91.00	63.65	189
2012-02-16 14:10	45.36	29.71	12.95	0.05	-	89.60	32.4	157
2012-02-16 14:15	44.06	29.73	12.96	0.05	-	85.92	97.69	148
2012-02-16 14:20	44.43	29.76	12.95	0.02	-	81.9	59.86	196
2012-02-16 14:25	43.61	29.8	12.97	0.02	-	82.34	163.64	141
2012-02-16 14:30	44.13	29.81	12.96	0	-	86.56	154.43	120
2012-02-16 14:35	44.73	29.83	12.95	0	-	85.11	34.94	148
2012-02-16 14:40	44.40	29.85	12.94	0	-	86.77	36.18	148
2012-02-16 14:45	43.23	29.82	12.94	0	-	82.84	-3.96	128
2012-02-16 14:50	43.52	29.86	12.95	0	-	82.04	-0.16	186
2012-02-16 14:55	41.9	29.87	12.94	0	-	72.73	-3.62	41
2012-02-16 15:00	41.9	29.87	12.95	0	-	66.08	-2.47	137
2012-02-16 15:05	40.49	29.88	12.94	0	-	66.97	3.95	149
2012-02-16 15:10	38.39	29.89	12.94	0	-	73.89	-3.78	17
2012-02-16 15:15	38.43	29.89	12.94	0	-	69.57	-0.16	244

WHAT'S INCLUDED

- ▶ All Receive Site & Server Hardware.
- ▶ Activation of the modems & satellite equipment. Activation of communications is a big problem for most independent users.
- ▶ Seamless real-time data distribution to PCs, Smartphones, etc.
- ▶ Custom web pages on SutronWIN or on your own site.
- ▶ Google map or static map showing all your station sites.
- ▶ Automatic limit checking for all monitored & derived parameters to determine if alarms or warnings need to be issued.
- ▶ Automatic alarms when limits are triggered. Additionally, authorized staff can generate alarms to send on demand.
- ▶ Automatic alarms sent via voice messages, email messages & SMS.
- ▶ In maintenance mode, raw data messages sent to Smartphone, etc.

RELIABILITY

- ▶ 2 new powerful servers that will act as hot backups for each other
- ▶ A new Server Monitoring Tool is installed. In case of outage, this tool sends an email to SutronWIN administrators.
- ▶ Future "Server Farms".
- ▶ SutronWIN clients will be informed of any outage immediately
- ▶ A SutronWIN staff person is assigned to check all websites twice daily including weekends.

THE FUTURE

- ▶ Station Transmission - This screen will display current transmissions from the station and the user will be drill down to raw and decoded data. Something similar to GOES DCP monitor.
- ▶ Corrections gui very similar to DCSToolkit where users can interpolate or correct the data values.
- ▶ Cross browser compatibility
- ▶ Online Training presentation / User Guide available on website
- ▶ Mobile App

We've solved the dilemma of retrieving data from many different station interfaces. And, we've mastered data & control directly to you via SMS, the web, email, etc. - any format you want, ready to use.

SutronWIN Web Hosting

Water & Weather Information Network

FEATURES

- ▶ **DERIVED PARAMETERS:** Combine parameters (e.g. add with coefficients), USGS Stage/Flow Rating Calculation, Periodic Averages, Incremental Precip, Sum, Min/Max, etc.
- ▶ **LIMIT CHECKING:** Value and rate-of-change limits. Separate limits can be set for warning/critical levels.
- ▶ **ALARM NOTIFICATION:** via web
- ▶ **ALARM NOTIFICATION IS ALSO AVAILABLE VIA EMAIL AND SMS** Text message for an additional cost.
- ▶ **VOICE:** Standard & User-Customized (additional cost)
- ▶ **PRICING: AFFORDABLE.** Whether you receive data from a single station or hundred, we charge a one-time setup fee and then a low recurring fee per station. Some services such as GPRS or Iridium may also incur nominal costs from the service provider. Please ask for a customized quotation.
- ▶ Sutron also provides **BACKUP ON-LINE DATA COLLECTION, STORAGE AND ANALYSIS** at **NO ADDITIONAL COST.**
- ▶ We can provide **ON-LINE WEB-HOSTING** through the SutronWIN web site., WWW.SUTRONWIN.COM. Data is available via a web interface as shown here or your own customized web pages using your own logo, etc.
- ▶ **STORAGE:** GOES data is stored on the NESDIS server for 72 hours. However, using Sutron's ILEX Tempest LRGs and Sutron's own local ground station, we receive ALL GOES DATA TRANSMITTED. Therefore, we can store all GOES data, in addition to your station data, and keep it available as long as specified.
- ▶ Secure password protected log-in
- ▶ Real-time data access from anywhere in the world
- ▶ GOOGLE map that shows the location of each Hydro-Met Station
- ▶ Dynamic bubble that shows current data, date and time when clicked & changes from GREEN to RED or YELLOW based on RECEIVED ALERTS.
- ▶ Data downloads & reports in tabular or graphical format
- ▶ Demo Site: <http://www.sutronwin.com/htm>
- ▶ Great back-up for Critical Gage Alarm Notification for Federal/State Govt.
- ▶ We store data for up to a year (minimum 90 days.) NESDIS stores raw messages for only 72 hours.

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SUTRONWIN

Water & Weather Information Network

Satellite GSM/GPRS Modem

NAVIGATION

- Map
- Dashboard
- Custom Reports
- Station List
- Time Series List
- Alarms
- Account
 - Account Settings
- Admin Functions
 - Define Seasons
 - Define Alarm Actions

Time Series Detail

Series Id: 109 Site:
Name: WaterElev Param:
Num Values: 15352 Units:
Earliest: 2009-10-07 14:00:00 Latest:

Limits

Current Alarms

Seasonal Limits All Year Limits RH, YH, RL, YL

Select	Season	Start	End
<input type="radio"/>	Summer	May 01 12:26:48	Aug 31 12:26:48
<input type="radio"/>	Winter	Sep 19 17:29:18	Sep 22 17:29:18

Season:

Value Limits & Alarms Rate

STANDARD NAVIGATION

- ▶ **Map:**
- ▶ **Dashboard**
- ▶ **Custom Reports**
- ▶ **Time Series List**
- ▶ **Alarms**
- ▶ **Settings**
- ▶ **Admin Functions**
 - Define Stations*
 - Define Alarm Actions*



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