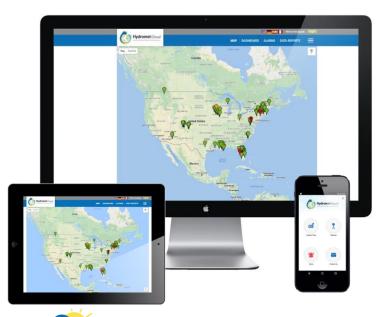




### Hydromet Cloud Presentation



### Overview



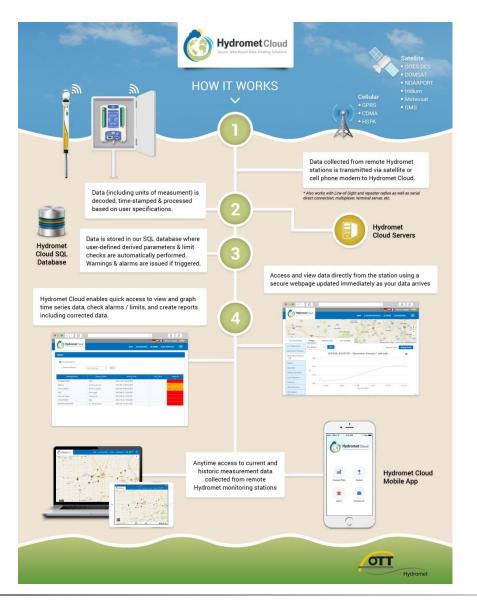
Hydromet Cloud provides secure realtime data access from almost anywhere in the world via <u>Hydromet</u> <u>Cloud.com</u> and the Hydromet Cloud Mobile App.



## Hydromet Cloud

#### Secure Web-Based Data Hosting Solutions





# Hydromet Cloud Monitoring Solution

- This includes the backend infrastructure to:
  - Receive
  - Ingest
  - Decode
  - Process
  - Display
  - Store measurement data
- From nearly any remote Hydromet monitoring station via a cloudbased data hosting platform



Hydrology – water level, flow/velocity, and precipitation

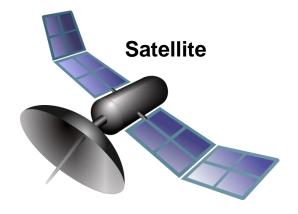
**Groundwater** – water level and water quality

**Water quality** – pH, DO, conductivity, salinity, temperature, turbidity, nutrients, ...

**Meteorology** – air temperature, relative humidity, wind speed, wind direction, barometric pressure, ...







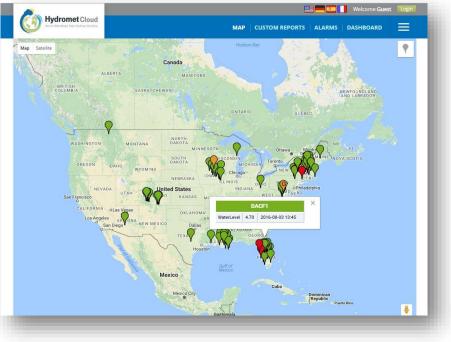
OTT, Sutron collect and transmit data through:

- Satellite: GOES DCS, DOMSAT, NOAAPORT, Iridium, Meteosat, GMS
- **Cellular:** GPRS/HSPA/CDMA Modems
- Static IP: connect to station with fixed IP on schedule

Cellular







Hydromet Cloud Map View

Anytime access to current and historic measurement data collected from remote hydrometeorological monitoring stations

- Secure password protected log-in for multiple users
- User-established management / administration
- Measurement data backed-up in the cloud and stored for at least one year



#### Quickly view current data

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Note: You can toggle the links of desired Sensor Graph to turn on/off its visibility.		Note: You can toggle the link	ks of desired Sensor Graph to	turn on/off its visibili	<i>y</i> .		
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#### Quickly view current data to check current conditions and know the station is running properly

- Map view, based on Google Maps, provides quick view of station location and most recent station data
- Station tab provides quick access to current and recent data, including graphs
  - Customizable dashboard enables user defined views of time series data



#### **Customize Dashboard**

Hydromet Cloud		📖 🔜 🛄 🛛	/elcome: sutronwin (SutronWIN) Logout
Secure Web-Based Data Hosting Solutions		MAP   DASHBOARD   A	ALARMS   DATA REPORTS 🗮
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#### Design your own dashboard to quickly view and export current and recent measurement data

- Customize dashboard to quickly view data from multiple stations or sensors
- Add dashboard panels to view time series or tabular data
- Simple export option for .CSV and .MIS data files

Hydromet

### Plot data

Hydrome	et Cloud			MAP CUSTOM REPORT	S ALARMS	Welcome Gue	st Login
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View recent data and trends

Plot data to view and analyze recent and historic trends to identify how the data is trending and the duration of the trend

- Quickly plot predefined range (ex: 24 hrs, 2-day, 7-day, month, etc or customized date range)
- Compare current or recent measurements from multiple sensors or stations
- Create and save custom plot templates using the mobile App to quickly view current and historic measurement data from one or more sensors



Current Alarms Historical Alarms	Last Two days 🔹	View.		
Station Name	Sensor Name	Assert Time	End Time	Severity
8310A01-Iridium	AT	2014-10-08 16:15 EDT		VIII
8310A02-GPRS	BPAT	2016-08-03 10:00 EDT		-989
Cherry_Grove	Surface_%DO	2016-08-03 14:15 EDT		VYH
Cherry_Grove	W_Wind_speed	2015-09-29 08:05 EDT	12	VYL
HCD	Pool Stage	2015-06-25 13:00 EDT		- 0.001
Howard_Creek	WaterLevel	2015-02-04 17:00 EST		3000
ILINK_ROOF3	Batt	2016-07-08 13:00 EDT	-	- V(68)
SUTRON_ROOFTOP	Air Temperature	2016-03-10 10:12 EST	-	(it)
SUTRON_ROOFTOP	Battery	2016-08-03 14:05 EDT	2	VYH

Automatic Alarms

#### Receive automatic alarm messages via email, text message, or voice message for sensor values triggering alarm limits

- User definable value limits, rate of change limits, and alarm groups
- Automatic limit checking includes data value and rate-of-change limits
- Separate limits can be set for warning/critical levels
- Colored coded (green, yellow, red) map pins, data values, and limit lines based on received alert and level
- Use mobile App to receive automatic push notification on your iOS or Android smart phone





Selection Criteria     Plot     Report       Select Time Series:     Sort By:
alisites - All Sites alisites - USACE Sites in Florida alisites - USACE Sites in Iowa alisites - USACE Sites New New Orleans
Ch2mhill - Tyco Stations Ch2mhill - Tyco Stations Chorda - USGS Sites in Florida Loby - Libby Stations Lubby - Libby Stations Long Bay Hypoxia Monitoring Consortium Louislana - USACE Sites New New Orleans LOUNA - Lake of the Woods Association, VA
Gonda - USGS Sites in Florida Iowa - USACE Sites in Iowa Lubby - Lubby Stations Long Bay Hypoxia Monitoring Consortium Louisiana - USACE Sites New New Orleans LOWA - Lake of the Woods Association, VA
Iowa - USACE Sites in Iowa Libby - Libby Stations Long Bay Hypoxia Monitoring Consortium Louisiana - USACE Sites New New Orleans LOUIA - Lake of the Woods Association, VA
Coulsiana - USACE Sites New New Orleans COWA - Lake of the Woods Association, VA
□ LOWA - Lake of the Woods Association, VA
In National Park Service
In New England - USACE Sites in New England
Ohio EPA
C D PCMCD
RWEACT - Rio Grande Watershed Emergency Action Coordination Team, CO
Choharie_Satlink - Schoharie, NY Satlink Streamgauge Stns
In Sutron Demo Stations - Sutron Demo Stations
Select Time Range:
Pre-Defined Range : Last Two days
Start Date/Time:

Custom data reports

# Create and download custom data reports in tabular or graphical format

- Export predefined range (ex: 24 hrs, 2-day, 7-day,etc...) or customized date range
- Export data report as an Excel or OTT MIS file
- User configurable Dashboard to retrieve frequently viewed data displayed as a plot, table, or values
- Use mobile App to view and send/share data directly from your smart phone

#### Data corrections





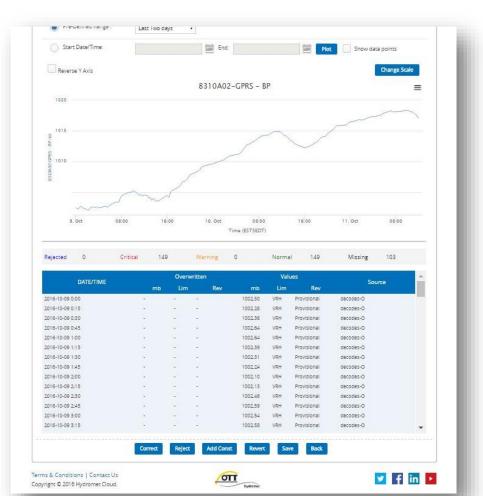
#### 2016-10-09 0:30 1002.36 VRH Provisional decodes-O 2016-10-09 0:45 1002.64 decodes-O VRH Provisional 2016-10-09 1:00 1002.64 VRH Provisional decodes-O 2016-10-09 1:15 1002.39 VRH decodes-O Provisional 2016-10-09 1-30 1002.31 VRH Provisional decodes-O 2016-10-09 1-45 1002.24 VRH. Provisional decodes-O 2016-10-09 2:00 1002.10 VRH Provisional decodes-O 2016-10-09 2:15 1002.13 VDH. Provisional decodes-O 2016-10-09 2:30 1002.46 VPH. Provisional decodes-O 2016-10-09 2:45 1002.59 decodes-O VRH Provisional 2016-10-09 3:00 1002.54 decodes-O VRH Provisional 2016-10-09 3:15 1002.58 VDH Provisiona decodes-O Correct Relect Add Cons Terms & Conditions | Contact Us 🕑 f in 🕨 OTT Copyright © 2016 Hydromet Cloud.

## Use data corrections to reject or correct measurement data

- Reject or accept provisional data
- Enter correct value for individual measurements
- Apply offset to multiple measurement values

#### **Derived parameters**





#### **Option to create derived parameters**

Combine parameters (e.g. add coefficients), stage/ flow rating calculation, periodic averages, incremental precip, sum, min /max, etc.



#### Hydromet Cloud App

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	5/ 4 519		Q		Alarm : Curr	ent Historical		MY PLOTS	CUSTOM PLOTS
	0	2nd_Avenue			Site : Sensor Name :	2nd_Avenue Bottom_DO	_	T Edit My Plots T	Plot Sav
	romet Cloud	Battery	2016-08-31 05:30:00	13.40	Assert Time : End Time :	2016-08-31 05:30:00	>	Predefined Range:	Last One Day
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		Bottom_DO	2016-08-31 05:30:00	3.87	Sensor Name : Assert Time :		>	Range:	One Day
		Bottom_chlorophyll	2016-08-31 05:30:00	4.00	End Time : Severity :	VYL.		Sort by: Stations/Sensors	Sensors/Static
611		Bottom_depth	2016-08-31 05:30:00	5.36	Site :		_	Long Bay Hypoxia Monitoring	3 Consortium
Custom Prota	Stations	Bottom_pH	2016-08-31 05:30:00	7.96		2016-08-31 05:30:00	>	O 2nd_Avenue	
	2.0076000	Bottom_salinity	2016-08-31 05:30:00	36.25		VML.	_	O Battery	
		Bottom temperature	2016-08-31 05:30:00	84.88	Site : Sensor Name :	Cherry_Grove W_Wind_speed		O Bottom_%DO	
		Bottom_turbidity	2016-08-31 05:30:00	15.80	Assert Time : End Time :		>	O Bottom_chloroph	ıyll
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- Hydromet Cloud allows users to easily access their remote data from their field stations. Hydromet Clouds provides the latest station data and alarm status.
- Users can quickly view data in tabular and graphical form and save frequently graphed data as shortcuts for future use and recall.
- Quickly view current alarms



- **9400-0400** Hydromet Cloud Client Set Up (1-time fee for new Web Account)
- **9400-0402** Hydromet Cloud Station Set Up (1-time fee per new station)
- **9400-0403** Hydromet Cloud per Station Annual Fee for first 25 Stations
- **9400-0404** Hydromet Cloud Service Discounted Recurring Fee for Stations 26-50
- **9400-0405** Hydromet Cloud Service Discounted Recurring Fee for Stations 51+