

HydroLynx Systems, Inc.

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Real Time Data Telemetry Systems

- HydroLynx Systems, Inc. manufactures, installs, and maintains Real Time Data Telemetry Systems.
- These systems provide our customers accurate and timely hydrological data.
- Our customers use this data to make decisions that protect lives and property in their communities.

World Wide Installations

- We install, service and support systems through out the world.
- Including exotic locations such as...
- The Panama Canal



Our Partners

- HydroLynx Systems, Inc. teams with other companies to provide installation and maintenance of systems and software.
 - Water & Earth Technologies, Inc.
 - Trilynx Systems

Onsite Training

- Training is provided during installation to teach our customers how to maintain and add onto their system.



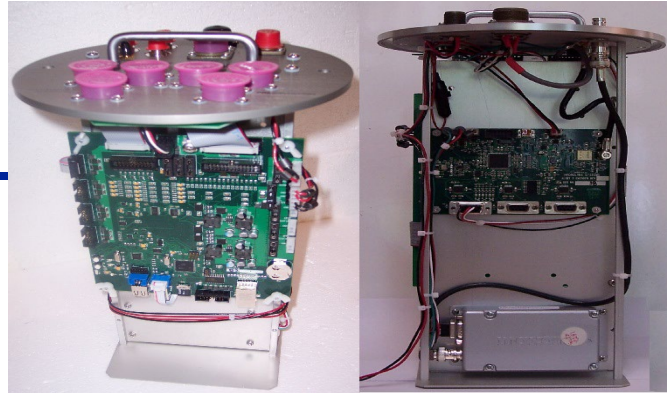
Data Collection Unit



50388 Data Collection Unit

- The 50388 Data Collection Unit can be configured as a transmitter, receiver, or repeater with ALERT one-way or SCADA two-way radios.
- ALERT, ScadaLynx, and MODBUS protocol support.
- Collects, analyzes, controls, and transmits analog, digital, serial, SDI-12, and virtual sensor data on events and timed intervals.
- On board 16 Gbytes of data logging.
- Configuration is programmable using the Microsoft Windows based ScadaLynx Toolbox software.

50388 Data Transmitter



- The 50388 Real-Time Data Transmitter collects, processes, and transmits analog and digital sensor data on events and timed intervals.
- Programmable parameters control the collection, processing, and transmission of sensor data.
- Sensor data can be transmitted using multiple communication paths like VHF/UHF Radio, Cellular, Satellite, Internet etc.
- Conveniently operates in ALERT protocol format

Automated Control Systems

- DCU at an upstream water level site monitors water level:
 - Pressure Transducer
 - Float switch
- When alarm water levels are detected, transmit secure alarm reports.
- DCU at a downstream site receives alarm reports transmitted by the upstream water level site and triggers the control:
 - Flashing roadway signs
 - Siren

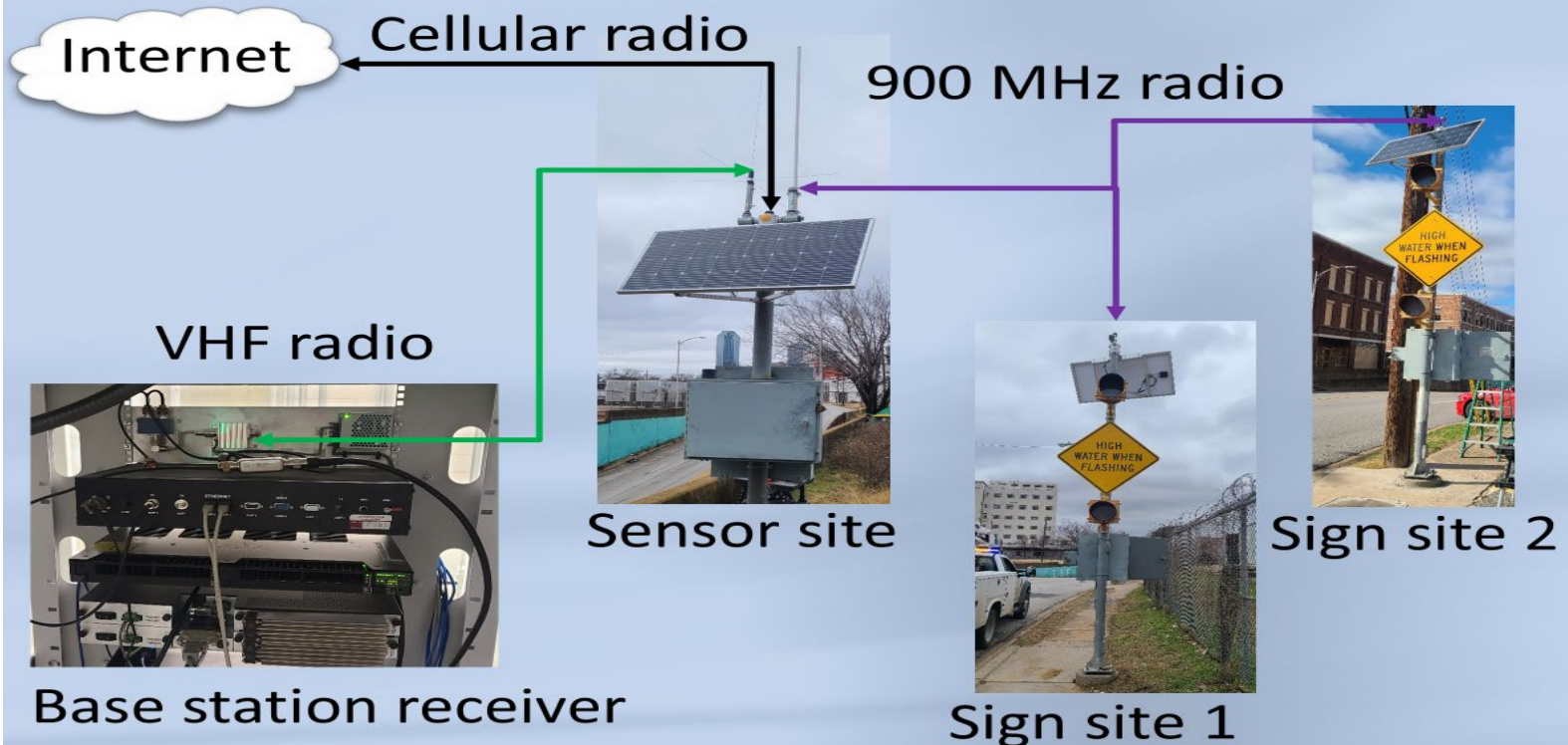
Flashing Roadway Sign

- Upstream water level triggers flashing roadway signs when water flows over roadway.



City of Dallas FRWS

City of Dallas FRWS System Redesign





Receiver/Decoder Unit

- Receiver/ Decoder receives radio data transmissions from remote sites and provides a serial and TCP/IP data output for the base station computer
- The Receiver and Decoder are combined in a single desktop enclosure
- The ALERT2 Decoder supports multiple server and client TCP/IP network connections from base station computers
- The ALERT2 data from the Receiver can be collected by Novastar5, Datawise and Contrails

Base Station Software

- The NovaStar base station software collects data from multiple watersheds, displays text and graphical reports, and checks for alarms.
- Web page data access of current and historical text and graphical data.
- Alarm warnings with digitized voice dialers, email, and pager notification.
- Siren and low water crossing light status viewing and control from web page.
- Automated data export in text, SHEF, and XML.

NovaStar 5 Software Advantages

- Multi-user web page access to base station database
 - No client access software required
 - User preferences kept on client workstations
 - Client side user interface keeps band width low
- SQL database design allow open access to database
 - SQL replication used to synchronize master database with backup database servers
- Linux operation system
 - Reliable and robust operating system
 - Operating system not subject to Microsoft virus attacks
 - Can be installed on virtual servers

NovaStar 5 Database Advantages

NovaStar5 server can be local, or cloud based

- Locally hosted database
 - Data is kept onsite to insure ownership
 - Local access to data continues when external internet access goes down
- Local database backups
 - Multiple database servers with synchronized database
 - A change in the master database is immediately copied to backup databases through SQL replication
- Scheduled database backups
 - Intranet database backup to local backup servers
 - Internet database backup to HydroLynx

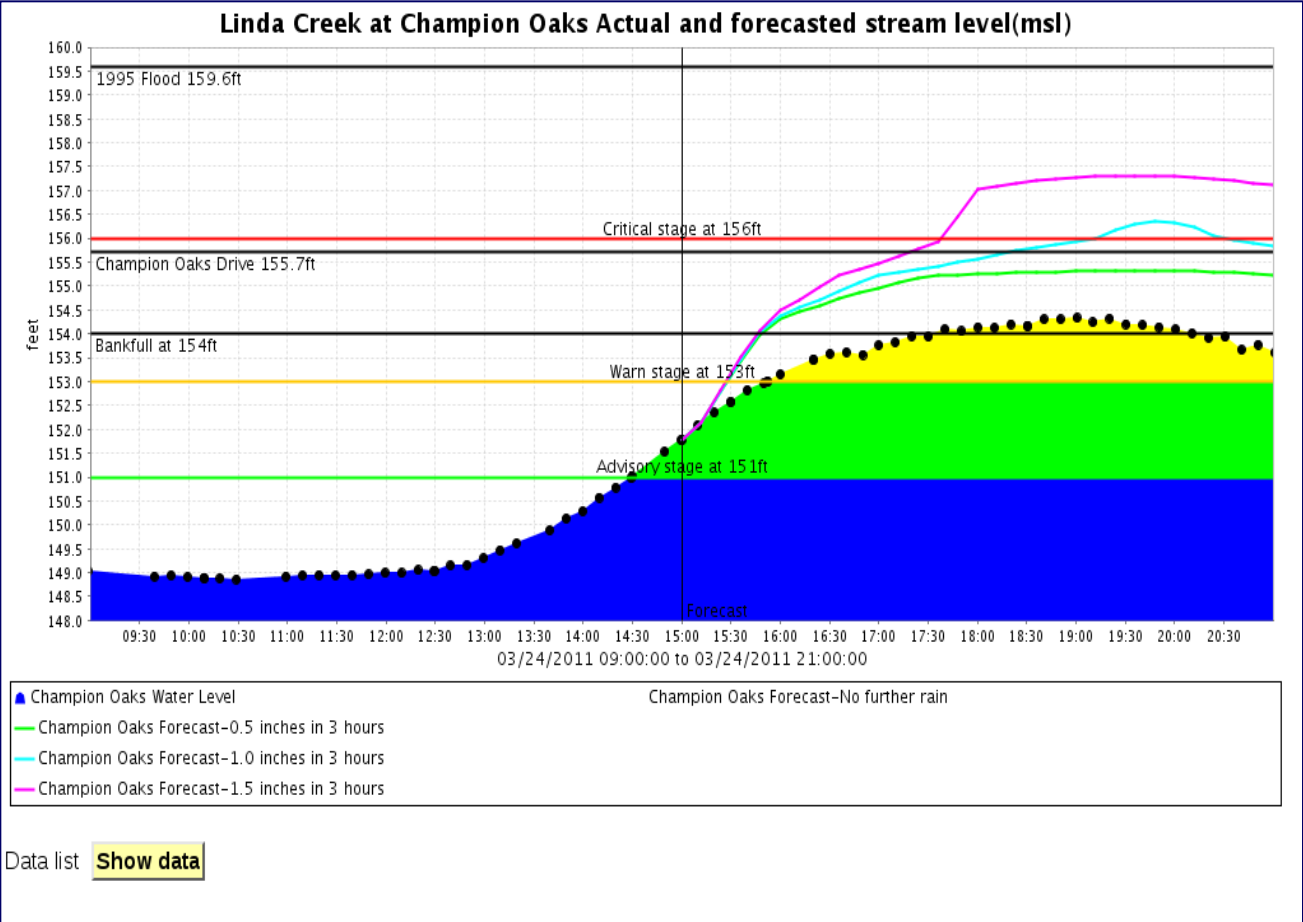
NovaStar 5 Data Collection Advantages

- All NovaStar servers collect ALERT1 and ALERT2 data
- Satellite and other agency (COE,USGS) imported from internet
- Use serial or network connections to decoders
 - A network connection allows a NovaStar server to connect to decoders at remote locations
- Data received from all decoders will be blended before filing in the NovaStar 5 master database
- In failover mode, data is filed in the local database

NovaStar 5 Data Processing

- Data validation and calibration
- Incremental precipitation and rating computation
- Check alarm conditions and notify
- Trigger equation computation
- Determine threat level
- Automate river forecasting
- Finished data exported to other agencies (NWS)
- Data edit

Create plot show observed and forecast data



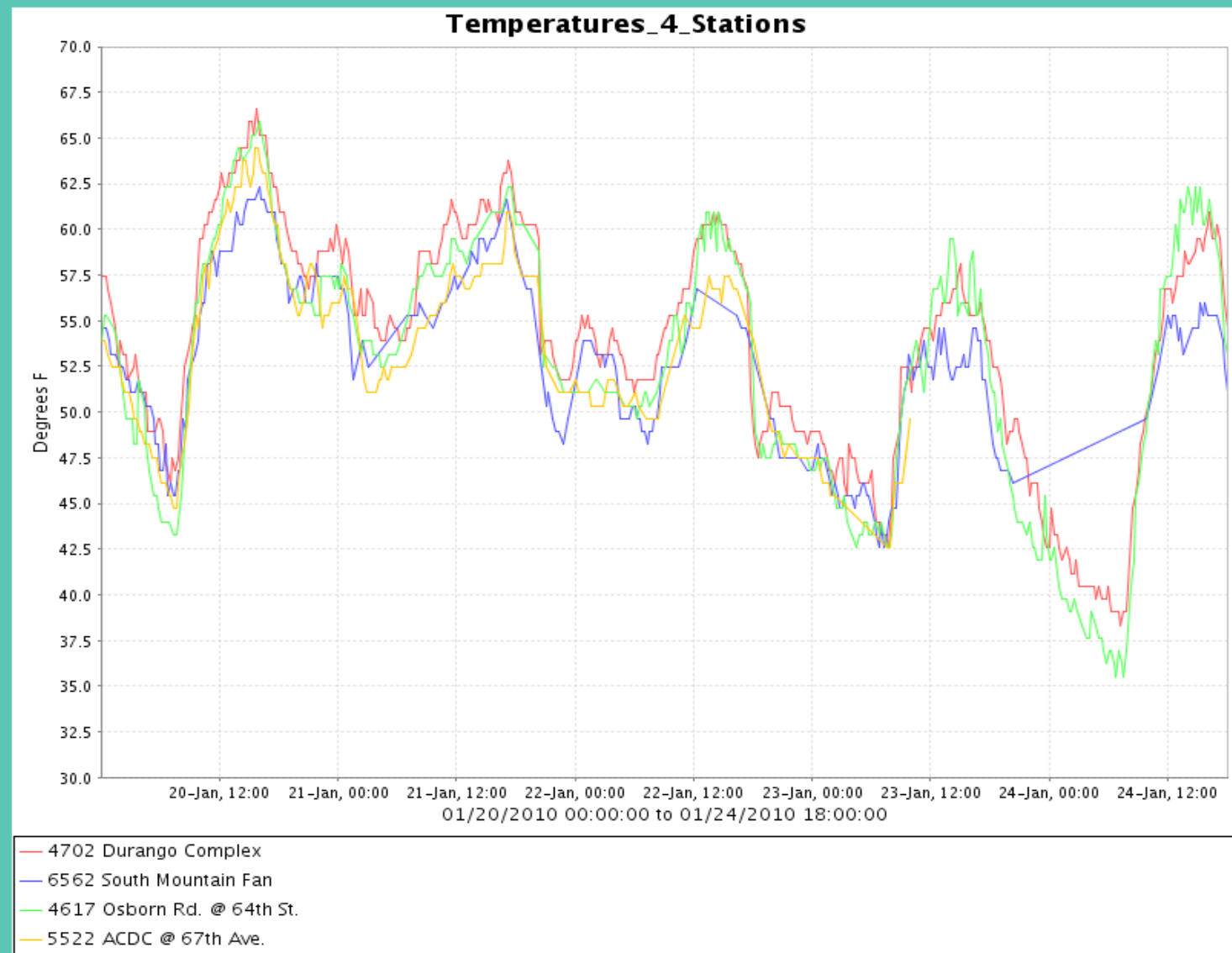
- Home
- Stations
- Points
- Alarms
- Data
- System
- Users
- Tabular Data
- Report Data
- Plot Data
- Data Request
- * Data Display
- Plot List
- Map Data
- About NovaStar 5
- Contact HydroLynx
- Log out

Plot Data Display

Plot: Temperatures - 4 Stations

Ending time: 1/24/2010 18:00:00

Resize:

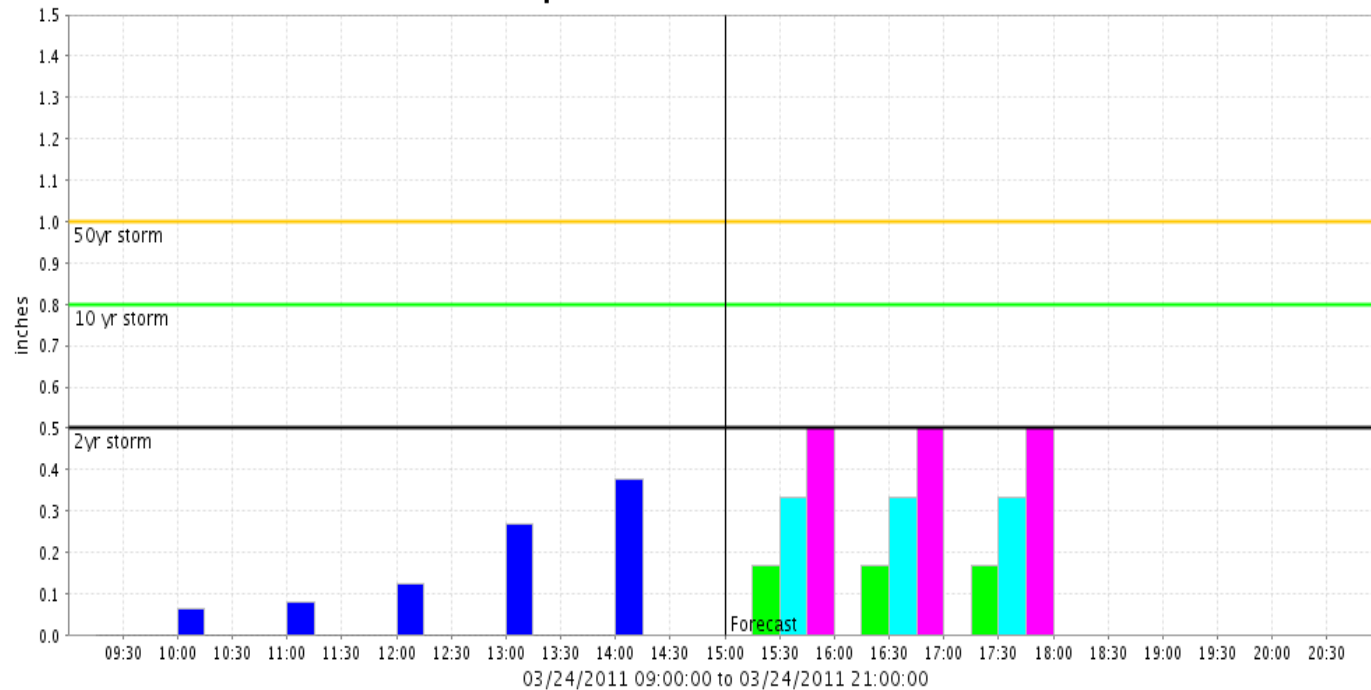


Data list

Overlay time series data plots show trends



Linda Creek at Champion Oaks Actual and simulated 1hr rainfall



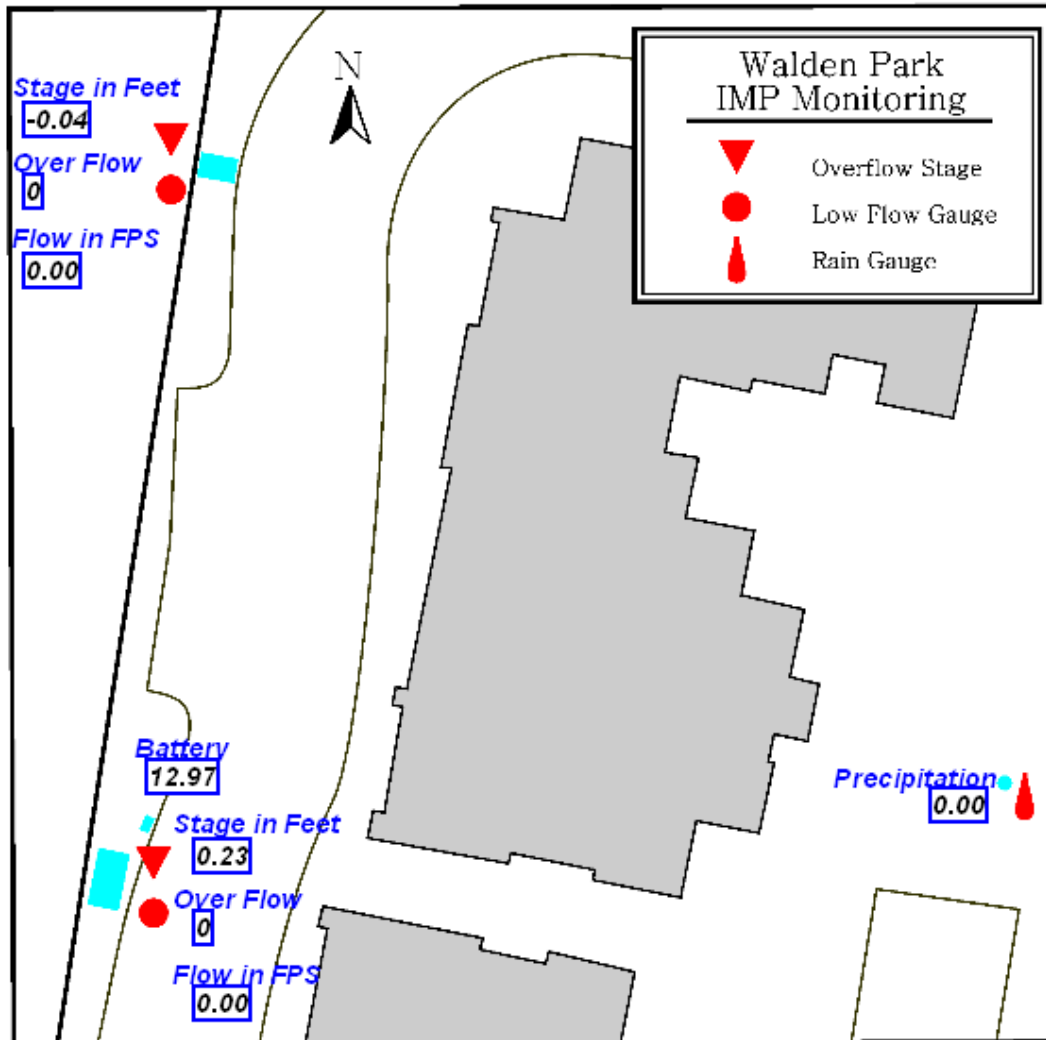
- Linda Creek at Champion Oaks Forecast Actual Rainfall
- Linda Creek at Champion Oaks Forecast-0.5 inches of rain in 3 hours
- Linda Creek at Champion Oaks Forecast-1.0 inches of rain in 3 hours
- Linda Creek at Champion Oaks Forecast-1.5 inches of rain in 3 hours

Data list [Show data](#)

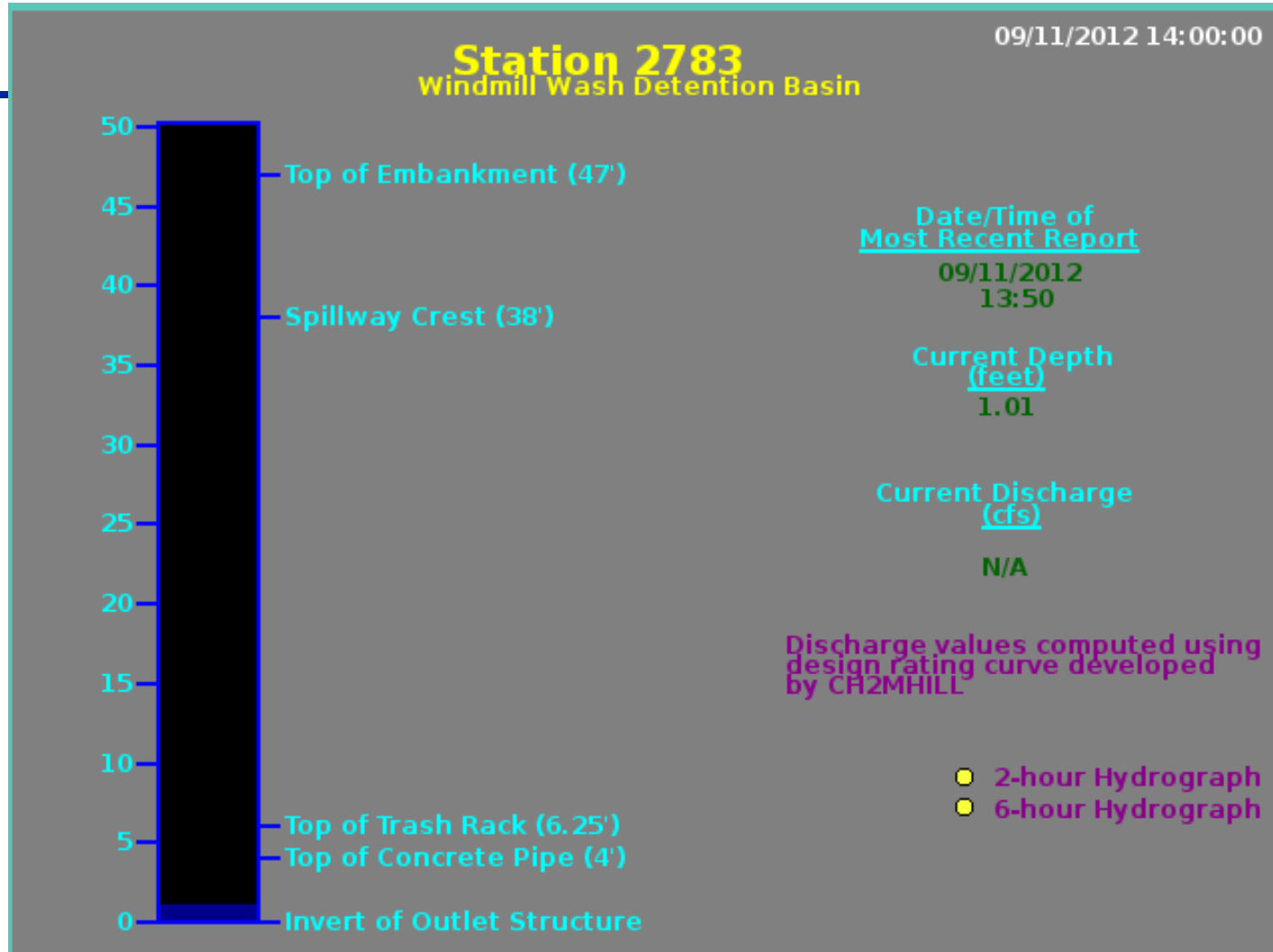
[Plot precipitation data](#) [Show watershed precipitation](#)

Warning! This report contains provisional data from automated gages and has **NOT** been verified for accuracy.

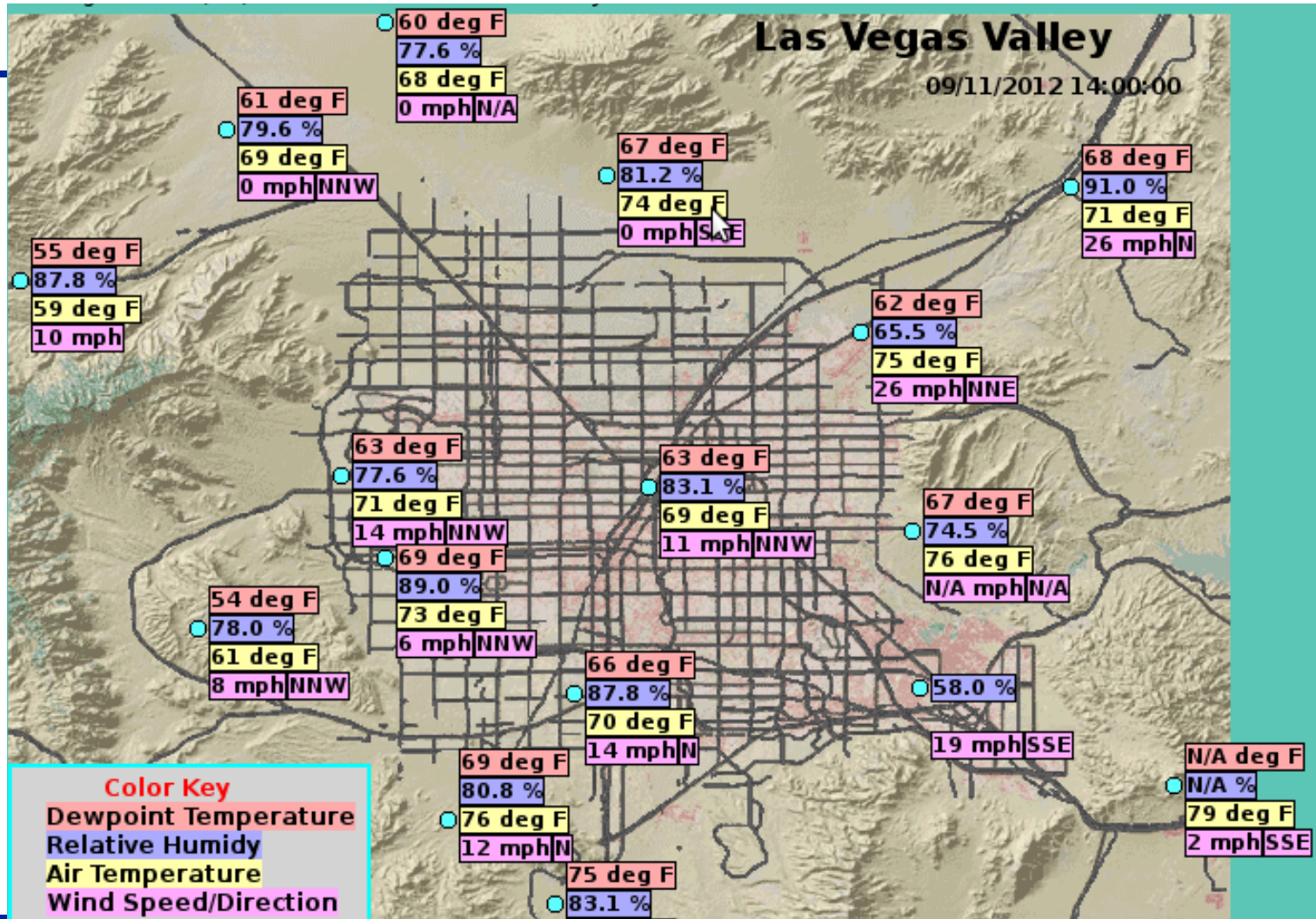
Custom graphic panels show area features and data readouts



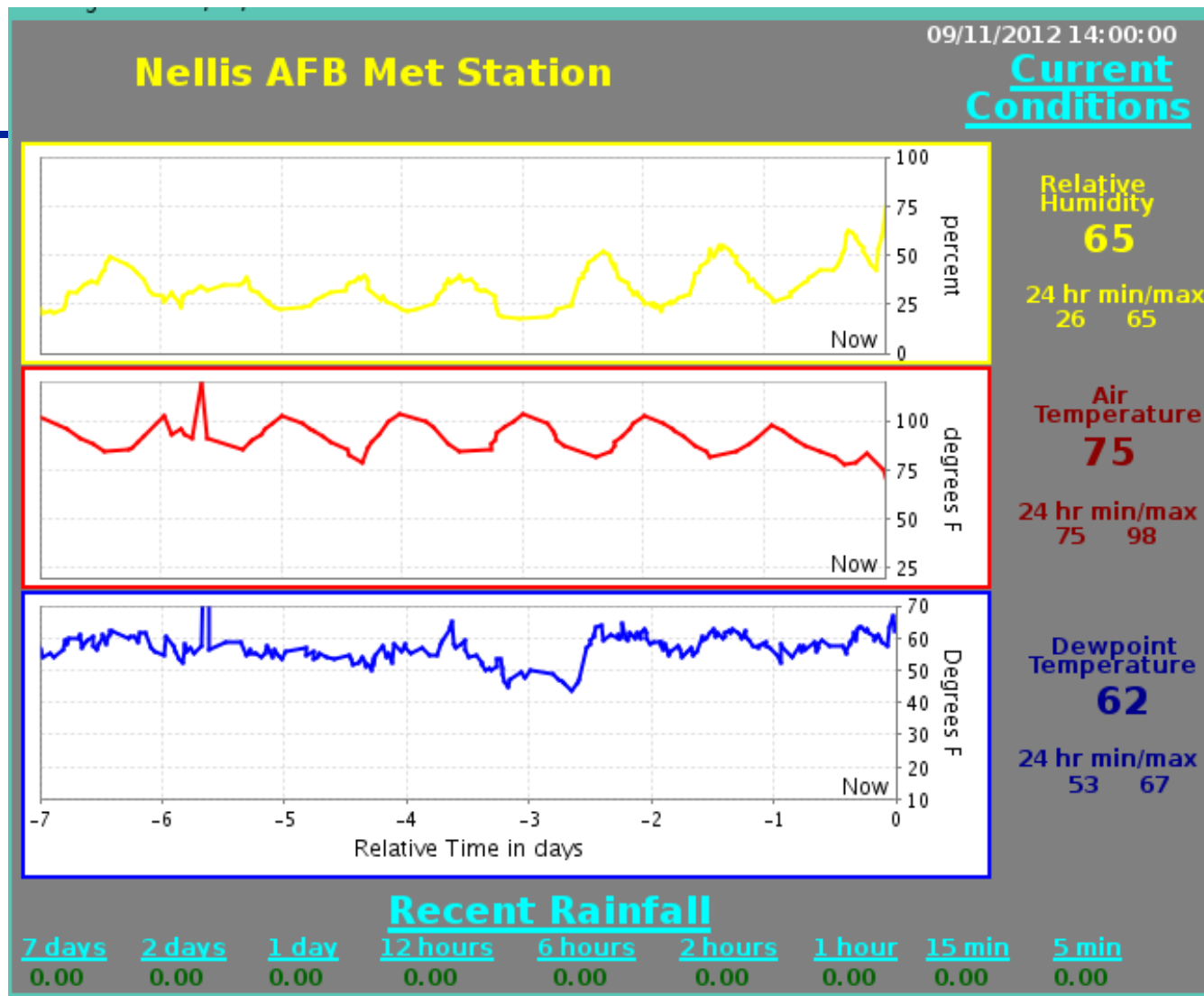
Custom Charts show critical levels



Display multiple sensors at sites



Stack time series on charts



Report Data Display - Mozilla Firefox

File Edit View History Bookmarks Tools Help

Report Data Request x Report Data Display x +

Home Stations Points Alarms Data Forecast System Users Tabular Data Report Data Data Request Data Display Report List Plot Data Map Data About NovaStar 5 Contact HydroLynx Log out

Report Data Display

Choose details... Back Print Refresh Bottom

Report: Precipitation report View

Ending time: 12/2/2009 17:00:00

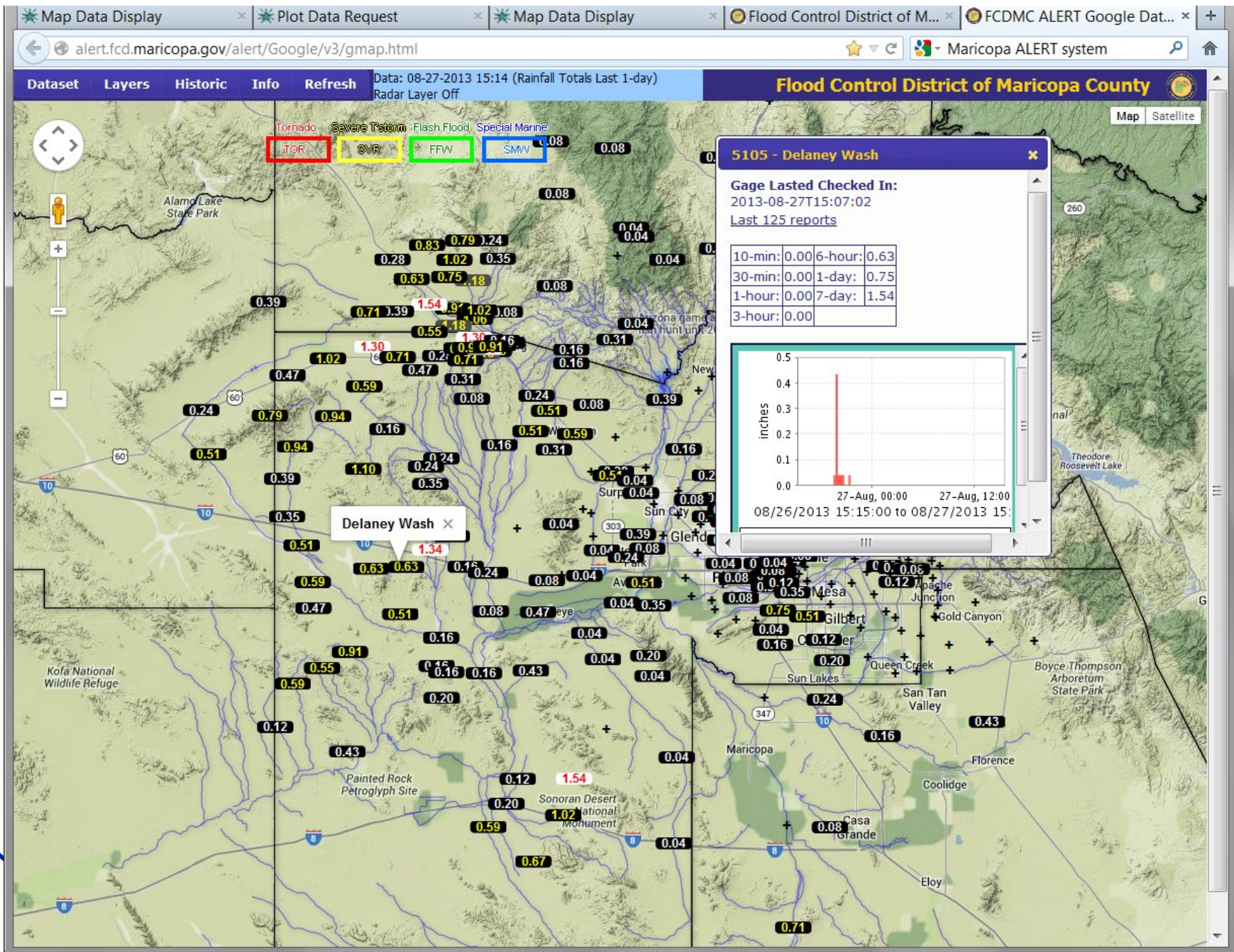
ID	Name	15min	1hour	12hour	1day	2day	7day	1month	1year
101	Denton Precipitation Gage	0.00	0.00	0.08	0.98	0.98	1.65	2.60	27.83
151	17 Boat Ramp Precipitation Gage	0.00	0.00	0.08	0.91	0.91	1.57	3.11	27.20
201	Tarrant Precipitation Gage	0.00	0.00	0.08	0.91	0.91	2.09	3.78	32.75
301	BL Koon Precipitation Gage	0.00	0.00	0.00	0.00	0.08	3.74	7.40	416.12
401	LM Garrett Precipitation Gage	0.00	0.00	0.08	0.98	0.98	2.09	3.35	30.87
501	Truman Hrabal Precipitation Gage	0.00	0.00	0.08	1.02	1.02	1.65	3.07	30.07
601	Green Pond Precipitation Gage	0.00	0.00	0.08	0.91	0.91	1.22	2.91	23.03
701	Spurgeon Precipitation Gage	0.00	0.00	0.08	0.83	0.83	1.18	2.05	23.94
801	Gus Grider Precipitation Gage	0.00	0.00	0.08	0.83	0.83	1.22	2.40	24.01
910	Lake Fork Dam Office Precipitation Gage	0.00	0.00	0.12	0.87	0.87	1.81	3.35	40.48
5001	Iron Bridge Dam Office Precipitation Gage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43

Report Data Display Choose details... Back Print Refresh Top

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Create custom reports

Click on data readout to show time series plot





FAS Home | FAS Site index | Bottom of page

FAS Lake Mead National Recreation Area Flood Alert System Flashing Roadway Sign

These data readings are preliminary

Reload data



Time of plot: 05/01/2006 10:07:14
Rain control: **on**
Base control: **off**
Sign trigger: **on**
Sign battery: 12.79 volts
DCU battery: 13.20 volts

Roadway sign is flashing

Turn On Sign

Turn Off Sign

Upstream Rainfall (in.)

ID	15 min.	1 hour	6 hour	1 day
120	0.80	1.10	1.10	1.10

Create panels to control remote warning sites

Your possibilities are endless

- HydroLynx Systems thanks you for the opportunity to make this presentation.
- Contact HydroLynx Systems for more information
 - 615-270-1400
 - ravig@hydrolynx.com
 - www.hydrolynx.com