















Sutron Corporation - Representative Experience Summary



PROJECT CUSTOMER	PROJECT EQUIPMENT	CONTRACT #	\$ VALUE	DATES	PROJECT DESCRIPTION	PROJECT MGR & STAFF	APPLICATIONS
MINISTRY OF THE ENVIRONMENT THE BOLIVARIAN REPUBLIC OF VENEZUELA PURCHASER: UTE DOMINION ADASA	ADASA HYDRO-MET MONITORING SYSTEM <ul style="list-style-type: none"> ▶ 661 GOES Satellite Stations that monitor rainfall, hydrological, meteorological, & agricultural sensors <ul style="list-style-type: none"> ○ 96 Water Level Stations ○ 2 Rain Fall/Water Level Stations ○ 65 Climatic Stations ○ 407 Rain Fall Stations ○ 55 Synoptic stations ○ 10 Buoy Stations ○ 26 Agrometeorological Stations ▶ 1 Digital Direct Readout Ground Stations ▶ GOES Satellite ofware ▶ 3 Test Sets 	DNNE-MED- VEN-02004	\$4,786,735.00	9/2009 until current date ongoing O&M Contract	Supply of 661 GOES/GPRS Based Remote Monitoring Stations to be used as the primary source for the Country of Venezuela Forecasting Center. Supply and Install 1Digital Direct Readout Ground Station and System software (Tempest) as the primary software application to ingest transmitted data. The system software receives, decodes and formats the data in a customized format so it can be ingested in a Data base. Provide in-country Operation and Maintenance training on remote stations and system software.	Project Manager Ted Soto Project Staff Ashish Raval Daren Tagg Ted Soto Cristian Martillo Clara Patch Shweta Garg	 Hydrology Meteorology Tides/Oceans
NATIONAL INSTITUTE OF HYDROLOGICAL RESOURCES DOMINICAN REPUBLIC PURCHASER: INDHRI	The system is made of hydromet stations. Some are stream gauges with full weather stations. Some are stream gauges with tipping buckets. Other are just stream gauges that use either a radar water level sensor or a bubble gauge. The weather stations consist of an AT/RH sensor, a WS/WD sensor, a barometer and a tipping bucket rain gauge. All stations have two forms of telemetry. Data is sent to the control center via 900 MHz spread spectrum radio & by GOES.	501519	\$2,818,745.05	9/5/2013 until current date System expanding.	The purpose of the project is to develop a network of stream flow gauging and weather stations to lay the groundwork to develop a system of stream flow prediction and reservoir management models to maximize power production and mitigate flooding. Hydromet data will be sent to a hydromet server through the use of Sutron's XConnect software. This data will be made available to the EGEHID SCADA system as well as to a custom web page.	Project Manager Ashish Raval Project Staff Ted Soto Daren Tagg Ted Soto Cristian Martillo Clara Patch Shweta Garg	 Hydrology Meteorology
REPUBLIC OF IRAQ IN CONJUNCTION WITH THE US GEOLOGICAL SURVEY (USGS) IRAQI MINISTRY OF AGRICULTURE	150+ Agro-Meteorological Stations <ul style="list-style-type: none"> ▶ SatLink Satellite Transmitter & Logger ▶ XLite Datalogger 2 EUMETSAT Receive Sites XConnect Software Extensive In-Country Training	G10PD02457, G10PX02862, G10PD02697 G10PX3076 G11PXD0730	\$1,183,539.00	2010 on-going Training & O&M Contract	In conjunction with the USGS, Sutron built for Iraqi Water Resources a country-wide network of Agro-MetStations with EUMETSAT (satellite) communications. Data is collected in 2 locations via Sutron Satellite Receive Sites. Contract includes in-country training for 2 weeks. Stations monitor Wind, Air Temperature & Humidity, Air Pressure, Rain, Solar Radiation, Soil Temperature & Moisture.	Project Manager Faisal Al-Mtwali Project Staff Joe Sutphin Patrick Tchakounte	 Meteorology
REPUBLIC OF IRAQ MINISTRY OF WATER RESOURCES Contact: Hatem al-Tamimy Email: hatem_altamimy@yahoo.com	<ul style="list-style-type: none"> ▶ 56 Bubbler Water Level Measuring Stations ▶ 28 Radar Water Level Measuring Stations ▶ 7 Water Velocity Measuring Stations ▶ 50 Water Quality Measuring Stations ▶ 8 Snow Level Monitoring Stations ▶ 7 Current Profiling Instrument ▶ 5 Well Level Measuring Instruments 	W914NS- 04-D-0007	\$2,712,467	2007-2014 with on-going support	Hydrological Monitoring Network. Over 200 Hydrological/Water Quality & Discharge stations wit Eumetsat Satellite Telemetry. Project included the supply of a Eumetsat Ground station installed at Ministry Headquarters in Baghdad running Sutron's XConnect Data Acquisition Software. Extensive out of country and in-country training.	Project Manager Faisal Al-Mtwali Staff Clara Patch Daren Tagg Joe Sutphin Raul McQuivey & Ashish Raval	 Hydrology

















Sutron Corporation - Representative Experience Summary

	 Hydrology	 Meteorology	 Tides/Oceans	 Aviation	 Geotechnical	 Air Quality	
MARINEMET WEST AFRICA TIDE GAUGE PROJECT Purchaser: World Meteorological Organization on behalf of Department of Water Resources of the Republic of Gambia Ministry of Transportation of Senegal Meteorological Service of Mauritania National Institute of Meteorology & Geophysics of Cape Verde	6 TIDE STATIONS Stations contain the following: ▶ XPert Datalogger ▶ SatLink Satellite Transmitter (Meteosat) ▶ GPRS Modem ▶ MIROS Wave Sensor (2) ▶ Radar Water Level Sensor (4) ▶ Submersible Pressure Sensor (6) ▶ WS/WD Sensor (Wind) ▶ AT/RH Sensor ▶ Pyranometer ▶ Barometer ▶ Tipping Bucket Rain Gauge AUTOMATIC WEATHER STATIONS Stations contain the following: ▶ XPert Datalogger ▶ SatLink Satellite Transmitter (Meteosat) ▶ GPRS Modem ▶ WS/WD Sensor (Wind) ▶ AT/RH Sensor ▶ Pyranometer ▶ Barometer ▶ Tipping Bucket Rain Gauge	501128 501129 501130 501131	\$1,260,766.02	2011 - 2014 with on-going support & future expansion	Spain's State Meteorological Agency (AEMET) established a trust fund in the WMO to support the Cooperation Programme for West African Countries. The directors of the National Meteorological and Hydrological Services of the countries of West Africa and North Africa developed the scope of the project, which is to develop the marine meteorology & oceanographic products & to improve the marine meteorological services for maritime safety and fisheries management of the beneficiary countries. The Phase 1 objective of MARINEMET was to provide 6 tide stations & 4 automatic weather stations to Senegal, Gambia, Cape Verde and Mauritania. The project included site survey, supply & installation of the equipment, commissioning and training. Tide data & meteorological information from the stations is available locally within the country as well as transmitted via METEOSAT to AEMET in Spain. From the AEMET database the data is automatically exported into ESEOO-XML format to the Puertos del Estado database & web-page. Additionally WMO bulletins are generated in CREX format and transmitted via GTS on the Main Telecommunications Network (MTN) of WMO.	Project Manager Daren Tagg	 Tides/Oceans  Meteorology
AFGHANISTAN MINISTRY OF ENERGY & WATER	174 STREAM GAGING STATION NETWORK 174 Stations - All measure Water Level, Precipitation (Rain Gages that also measure snowfall), Air Temperature, Relative Humidity. Some also measure Water Quality, Conductivity, Turbidity & Temperature. 56 Automatic Weather Stations & Snow Stations	Supply and Installation of Hydrological Network ICB No, GH-102 IFB No: GH102 Loan/Credit No.CR-3845-AF	\$11,315,314 Supply & Installation O&M Contract: \$1,749,150	2007 - 2014 with O&M support	STATION DISTINCTIONS 163 Stations - Bubbler Gages for measuring water levels 11 Stations - Radar Level Sensors for high sediment, wide rivers w/ unstable banks & available suitable bridge (mount radar) 20 Stations - Water Quality measurement (conductivity, temperature, turbidity) 56 Automatic Weather Stations & Snow Stations Iridium Communications	Project Manager Ashish Raval Project Staff Clara Patch Faisal Al-Mtwali Joe Sutphin Daren Tagg Gang Chen Shweta Garg Raul McQuivey	 Hydrology  Meteorology
HYDROMET SERVICES DIVISION KINGDOM OF BHUTAN	Phase 1 of the System consists of one Central Control Station, 17 Siren Stations and 6 Hydro-Met Monitoring Stations: 4 stations monitoring water level (AWLS) and 2 stations monitoring water level and weather combined (AWS). The System is divided into two geographical areas: the Upper Sites near the glacial lakes, the source of the GLOF, and the Lower Sites of the PunakhaWangdu Valley where the majority of the population is located. Phase 2 expanded the station network & upgraded the control center software.	500893 & DHMS/HD/ GLOF-UNDP/ 2014-13	\$779,851.00	2010 & 2013 on-going support services	Glacial Lake Outburst Flood (GLOF) Iridium*Based Early Warning System,	Project Manager: Daren Tagg Project Staff Clara Patch Shweta Garg Cristian Martillo	 Hydrology  Meteorology



Sutron Corporation - Representative Experience Summary

	 Hydrology	 Meteorology	 Tides/Oceans	 Aviation	 Geotechnical	 Air Quality	
KENYA METEOROLOGICAL DEPARTMENT	<p>KENYA SYNOP AWS</p> <ul style="list-style-type: none"> ▶ 54 Automatic Weather Stations ▶ 3 Tide Stations ▶ 11 Local Base Stations ▶ 1 Central Base Station <p>SENSORS: Air Temperature, Relative Humidity, Rainfall, Barometric Pressure, Wind Speed, Wind Direction and Solar Radiation</p> <p>TELEMETRY: Maxstream 2.4 GHz radios to communicate with the local PCs. GSM modems to transfer the data to the Central Station over the local cellular network.</p>		\$1,636,410	2007 with on-going support	<p>PARAMETERS:</p> <ul style="list-style-type: none"> Rain (Accumulated Rain) Barometric Pressure (QNH, QFE, Tendency) Solar Radiation (W/m², Hours of Sun) Wind Speed (Gust, Instantaneous, Average) Wind Direction (Instantaneous, 2minute Average, 10 minute Average) Air Temperature (Ambient Temperature, Maximum, Minimum, Temp. of Evap.) Relative Humidity (Humidity, Dew Point) 	<p>Project Manager Ashish Raval</p> <p>Project Staff Clara Patch Faisal Al-Mtwali Patrick Tchakounte Joe Sutphin</p>	 Tides/Oceans  Meteorology
POLAND - IMGW WORLD BANK'S EMERGENCY FLOOD RECOVERY PROJECT	<p>AUTOMATIC WEATHER STATIONS and FLOOD WARNING SYSTEM FOR POLAND</p> <ul style="list-style-type: none"> ▶ 1033 Dataloggers (analog digital) ▶ 107 SDI-12 Shaft Encoders ▶ 345 Bubble Gauges ▶ 57 Radar Water Level Sensors ▶ Spares ▶ Software Support 	Ref: World Bank Project Component B2.1.3	\$3,135,596	January 2004-2014	Poland's Hydrological and Meteorological Telemetric Measurement Network, under direction of Poland's Institute of Meteorology & Water Management, the Emergency Flood Recovery Project will restore basic infrastructure damaged by severe flooding in recent years	<p>Project Manager Dan Farrell</p> <p>Project Staff Raul McQuivey Paul Delisi Joe Sutphin</p>	 Hydrology  Meteorology
SWITZERLAND Swiss Meteorological Service Krahbuhlstrasse 58 CH8044 Zurich, Switzerland	50 - Dataloggers (Sutron 9000) , System Software and Telephone Modems	Multiple including 86000640-642	\$792,684	1990-2014 with on-going support & spares	Primary Automatic Weather Stations in Switzerland including System Software	<p>Project Manager Dan Farrell</p> <p>Project Staff Raul McQuivey Hank Fallek</p>	 Meteorology
NEW ZEALAND Meteorological Service of New Zealand Gordon Saggars 64 4 297 0129	43 - Dataloggers (Sutron 9000s and Sutron 9210s) and Sensors	Multiple including 9210s	\$1,076,406	1990-2014 with on-going support & spares	GMS Satellite, Automatic Weather Stations	<p>Project Manager Dan Farrell</p> <p>Project Staff Raul McQuivey Hank Fallek</p>	 Meteorology
INDIA CENTRAL WATER COMMISSION (CWC) UPPER GODAVARI DIVISION	<p>HYDRO-MET SYSTEM W/ INSAT TRANSMITTERS & RECEIVE SITES</p> <ul style="list-style-type: none"> ▶ 30 Rainfall Only Stations ▶ 127 River Water Level & Rain gauge Stations ▶ 6 Reservoir Water Level & Rain gauge ▶ 5 River Water Level & Rain Gauge & Met sensors: AT/RH, Evaporation, Sunshine Duration & Wind Speed/ Direction ▶ 2 DDRGS ▶ XConnect Software 	No. UGD/ Telemetry/ FF/7998-8002 UGD/ Telemetry/IV (A)/FF/8358-84	\$4,,838,790	2006 on-going O & M Contract	<p>Supply, Installation, Testing, Commissioning & Maintenance of Real-Time Data Acquisition Network for Collection, Transmission & Processing of Hydro Meteorological Data, Gauging Equipment, Satellite Telemetry & Assoc. Systems.</p> <p>INSAT Satellite Communications for Stations. VSAT Communications between Existing Digital Direct Readout Ground Station Facilities located at Burla & Jaipur & various locations in Krishna & Godavari Basin, Brahmaputra & Barak Basin Organization, Mahanadi & Eastern Rivers, Lower Ganga Basin & Yamuna Basin.</p>	<p>Project Manager Ashish Raval</p> <p>Project Staff Raul McQuivey Dan Farrell Chris Buchner Paul Delisi Daren Tagg</p>	 Hydrology  Meteorology



Sutron Corporation - Representative Experience Summary



Hydrology



Meteorology



Tides/Oceans



Aviation



Geotechnical










Air Quality

INDIA METEOROLOGICAL DEPARTMENT GOVERNMENT OF INDIA	AWS System w/INSAT Satellite Transmitters <ul style="list-style-type: none"> ▶ 100 Automatic Weather Station Remote Terminal Units (RTU) ▶ INSAT satellite transmitter with antenna, cabling and mounting hardware ▶ Datalogger, Solar Equipment, Voltage Regulator, other electronic peripherals ▶ AWS equipment: sensors, signal conditioning, interfacing, data conversion, formatting, storage and transmission sub-system 	CPU/54 /0903 /4042 /129F	\$1,839,879	2005 - 2014 O & M Contract	<ul style="list-style-type: none"> ▶ Extensive Met System including 100 Automatic Weather Stations ▶ Receive Site (replace existing warning system) ▶ Uplink AWS data to satellite compatible with INSAT/ KALPANA-1 DRT's (Annexure-II). ▶ Procure AWS data reception (Earth Station) & processing equipment for installation at Pune. ▶ Install, final checkout & commissioning - all ▶ Provide spares/testing/measuring equipment ▶ Provide Data Conversion, Storage & Transmission for unattended operation for at least 1 year using a 12V single-sealed battery. ▶ Built-in memory capable w/data storage for at least 12 mnths, retrievable on a PCMCIA card (or any compact solid state memory device). ▶ Built-in testing for monitoring & displaying 	Project Manager Ashish Raval Project Staff Clara Patch Dan Farrell Chris Buchner Raul McQuivey	 Meteorology
INDIA CWC, Central Water Commission of India	54 - Stations 2 DDRGS and System Software	ICB/DSARP/ FF /HOCN /1/9/8 /52-13 18	\$1,584,421	1998 - 2014 O & M Contract	System provides satellite transmitted data for flood forecasting in the Mahanadie and Chambal Basins. System consists of 21 rain only stations, 27 river stations, 5 river and rain stations and 1 weather station.	Project Manager Ashish Raval Project Staff Clara Patch Dan Farrell Chris Buchner Raul McQuivey	 Hydrology
INDIA Ministry of Defense Snow & Avalanche Study Est. (SASE) R&D Center HIMPARIASAR Sector 37-A Chandigarh - 160 036	SNOW & AVALANCHE STUDY 70 - DCPs, Automatic Weather Stations 1 DDRGS and System Software	Multiple Contracts	\$1,388,607	1998 - 2014	Automatic Weather Stations in the Himalayas, System Software and Services, INSAT Satellite	Project Manager Ashish Raval Project Staff Clara Patch Dan Farrell Chris Buchner Raul McQuivey	 Meteorology
CHINA THREE GORGES DAM	465 (Total) Remote Monitoring Hydro-Met Stations <ul style="list-style-type: none"> ▶ Remote Stations with Xpert Dataloggers and bubbler type water level sensors ▶ Portable Weather Stations 		\$2,402,955	2004 Spares & support through 2014	In 2004 Sutron received sales orders to implement 120 stations. In 2007 Sutron received contracts from 3 customers in China totaling \$1,020,742 for equipment including dataloggers, sensors and ancillary equipment for 345 remote monitoring stations.	Project Manager Dan Farrell Project Staff Ashish Raval Chris Buchner Paul Delisi	 Meteorology Hydrology



Sutron Corporation - Representative Experience Summary

	 Hydrology	 Meteorology	 Tides/Oceans	 Aviation	 Geotechnical	 Air Quality	
CHINA NUOZHADU HYDROPOWER STATION Huaneng Lancang River Hydropower Company, a subsidiary of Huaneng Group, the parent company of Huaneng Power International (NYSE:HNP), Inc.	<ul style="list-style-type: none"> 8310 data recorder w/ Ethernet for measuring up to 32 sensors Sensor modules for Vibrating wire (VW), Differential resistance (DR), Piezoresistive (PR), Potentiometer (POT), EL Inclinator string, and EL Inclinator standard type sensors. Fiber interface for network communications using TCP/IP AC/DC power supply & AC lightning protection Battery Backup to operate the station for 7 days NEMA-4 enclosure 		Contract #NZD2011/TW \$1,887,371	2014 (on-going)	Sutron will provide monitoring of over 4,000 dam safety sensors installed in the Dam during its construction as well as equipment testing, development of safety monitoring information management and comprehensive analysis system software and observation during the contract period, automated equipment maintenance, and compilation of monitoring data in the Safety Monitoring Automation Program of Nuozhadu Hydropower Station Key Project .	Project Manager Ashish Raval Project Staff Raul McQuivey Dan Farrell Robin Ovington Blaine Van Dyke	 Geotechnical
VIETNAM Southern Airport Authority of the Republic of Vietnam Airports Corp of Vietnam	AIRPORT WEATHER OBSERVATION SYSTEM SAWS Supply & Installation of 3 Airport Weather Systems including cloud height and RVR/Visibility		\$1,023,298	2007-2014	State-of-the-art, turn-key Airport Weather System to at 7 airports as per new ICAO and WMO recommendations. System uses fiber optic and wireless communications. Operation is for CAT3.	Project Manager Ashish Raval Project Staff Cristian Martillo Clara Patch	 Aviation
SULTANATE OF OMAN PUBLIC AUTHORITY FOR CIVIL AVIATION	TIDE STATIONS Supply, Installation Training and 3 Year Maintenance. Setup of Oman's Tidal Station System used for Tsunami Warning. 10 stations totally, 7 newly installed Sutron Tide Stations & 3 existing Sutron Tide Stations.		\$993,000	2012 - 2014 with O&M continuing	Project included the supply of 7 Tide Stations with Main & Redundant Tide Gauge measuring Main and Redundant Water Level with weather parameters. Telemetry includes Eumetsat, GPRS and Radio. Also supplied was a Main & Redundant Data Acquisition System running Sutron's TEMPEST Software with SutronWin.	Project Manager Faisal Al-Mtwali	 Tides/Oceans
WMO SIDS-CARIBBEAN PROJECT Antigua & Barbuda, Barbados, Cuba, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, St. Kitts & Nevis, St. Lucia, St. Vincent & the Grenadines & Trinidad & Tobago.	SYSTEM: 32 AWS/AWOS/AGRI-MET STATIONS & 17 BASE STATIONS <ul style="list-style-type: none"> 21 Synoptic Weather Stations 11 Airport Weather Observation Stations at domestic airports 5 AWOS at international airports for Aeronautical weather analysis and forecasting 11 Agri-Met Stations 17 Data-Receiving Base Stations at Airport Meteorological Offices Joint venture between WMO & Finland	15.073-03/T/C SIDS-Caribbean	\$819,227	Sept 2003 with on-going support	Project(Preparedness to Climate Variability & Global Change in Small Island Developing States, Caribbean) Goal: build an extreme weather early warning system, provide real-time weather data at airports and strengthen the National Meteorological Services of SIDS countries in order, ultimately, to facilitate member countries' socio-economic development, to save lives & infrastructure and to provide support & improved planning for sustainable development. Sutron designed, manufactured, tested, integrated, installed, trained, and still maintains AWS, AWOS, Agri-Met & Synoptic Weather Systems, WMO-Compliant, in 13 Caribbean Countries.	Project Manager Ashish Raval Project Staff Cristian Martillo Clara Patch Faisal Al-Mtwali	 Aviation  Meteorology
COLOMBIA CVC (ordered via Comundial) Cra 56 No. 11-36 Cali - Colombia	GOES SATELLITE RECEIVE SITE <ul style="list-style-type: none"> 16-Channel DDRGS, accessories XConnect software SatLink Transmitter with Built-In Datalogger Sensors 	558505	\$748,671	2006 - 2014	Supply DDRGS and Software data collection equipment to monitor rainfall for agricultural applications	Project Manager Chris Buchner Project Staff Dan Farrell	 Meteorology


















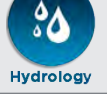
Sutron Corporation - Representative Experience Summary



Hydrology	Meteorology	Tides/Oceans	Aviation	Geotechnical	Air Quality		
COLOMBIA DGCA Direccion General de Aviacion Civil c/o APCYTEL, Ltda., Carrera 29A No. 70A-87, Santafe de Bogota, D.C., A.A., 090526,	AIRPORT WEATHER OBSERVATION SYSTEM SAWS3 Airport Weather Systems including cloud height and RVR/Visibility for all domestic and international airports		\$1,217,267	Awarded 2005 to 2006 On-going Support through 2014	State-of-the-art, turn-key Airports Weather System to provide information at 7 Airports as per new ICAO and WMO recommendations. The system provides voice transmission,	Project Manager Chris Buchner Project Staff Dan Farrell Raul McQuivey Ted Soto Paul Delisi	
COLOMBIA IDEAM Transversal 15, No.119-89 Bogota, Colombia	<ul style="list-style-type: none"> ▶ 111 - DCPs ▶ GOES Receive Site and System Software ▶ Sensors ▶ Automatic Weather Stations 	Multiple Contracts	\$1,858,053	1998-2001	Hydromet stations, Tidal stations, Agrimet stations and Climatological stations.	Project Manager Chris Buchner Project Staff Dan Farrell Raul McQuivey Ted Soto Paul Delisi	
VENEZUELA EDELCA Calle Caruachi Cruce	150 DCPs with Satellite Telemetry & Sensors DDRGS System Software	086 60 3303 / 603269	\$2,500,000	1994 - 2008	Hydromet stations for hydropower production & flood control purposes	Project Manager Ashish Raval Project Staff Ted Soto	
HONDURAS (ordered via Alfacom)	GOES SATELLITE RECEIVE SITE <ul style="list-style-type: none"> ▶ DSR Receiver ▶ XConnect software with Database & Utilities 	NA-002SUT	\$447,307	9/2006 thru 2014	Provide DDRGS to monitor rainfall and river flows for disaster mitigation application	Project Manager Ashish Raval	
NICARAGUA & EL SALVADOR NWS Central American Flood Forecasting & Reconstruction Computer Sciences Corporation	<ul style="list-style-type: none"> ▶ DCPs/VHF ▶ Automatic Weather Stations ▶ System Software 	S800850 5900301	\$783,400	Nov. 2000	Automatic weather stations with satellite & VHF, Water and Weather Monitoring Stations for Flood Forecasting including System Software	Project Manager Ashish Raval Project Staff Ted Soto Joe Sutphin Clara Patch	
HONDURAS & GUATEMALA NWS Central American Flood Forecasting & Reconstruction Project Litton PRC, Inc.	DCPs/VHF, Automatic Weather Stations, System Software	Multiple Contracts	\$706,322	May 2000	Automatic weather stations with satellite & VHF, Water and Weather Monitoring Stations for Flood Forecasting including System Software	Project Manager Ashish Raval Project Staff Ted Soto Joe Sutphin Clara Patch	



Sutron Corporation - Representative Experience Summary

	 Hydrology	 Meteorology	 Tides/Oceans	 Aviation	 Geotechnical	 Air Quality	
UNIVERSITY OF PUERTO RICO	Atlantic Tsunami Warning Center Turnkey System ▶ GOES DRGS RECEIVE SITE ▶ 6 NOS-Approved Tide Stations		1060656 \$480,184	January 2006 through 2014	▶ Provided 6 tidal monitoring stations ▶ Provided data telemetry & DRGS Receive Site ▶ Stations are compatible with the extensive network operated with the US National Ocean Service (NOS) ▶ NOS stations provide tsunami detection & immediate notification through the GOES satellite system	Project Manager Ashish Raval Project Staff Ted Soto Joe Sutphin	 Tides/Oceans
PUERTO RICO USGS PR District Office GSA Center 651 Federal Dr., Suite 400-15 Guaynabo, PR 00965	PUERTO RICO AUTOMATED DAM DATA ACQUISITION & ALARM REPORTING SYSTEM ▶ 25 SatLink2 GOES Satellite Transmitter ▶ 15 Bubbler water level sensors ▶ 5 XLite Dataloggers ▶ XConnect open database software ▶ Sutron GO ES Satellite Receiver Station ▶ Sutron engineering services	04ERCN0055 OPR-700716 OPR-700738 OPR-700742 OPR-700745 OPR-700765 OPR-700766	\$821,405	April 2004 through 2014 On-going spares & support	▶ The System obtains, monitors & analyzes, in real-time, critical data (i.e., inflows, outflows, gate openings, lake elevations) for 29 reservoirs. ▶ DCP & transmitter schedule all satellite transmissions. ▶ Data is collected and stored every 5 minutes & transmitted every hour. ▶ Because the last 2 hours of data is transmitted every hour, each transmission contains 1 hour of fully redundant data. ▶ Data received by central servers & stored in a relational database hydrologic software with a graphical user interface for easy access.	Project Manager Ashish Raval Project Staff Ted Soto Joe Sutphin Clara Patch John Humphreys Joe Sutphin	 Geotechnical  Hydrology  Meteorology
CHILE DGAC, Direccion General de Aeronautica	29 Airport Weather Observation Systems for domestic airports & a GOES Satellite Receive Station	031DGAC98	\$1,034,330	July 1998-2011	WMO-compliant Airport Weather Observation Systems provide real time data at domestic airports.	Project Manager Ashish Raval	 Aviation
PERU SENAMHI Servicio Nacional De Meteorologia e Hidrologia Lima, Peru	▶ 38 - Met Stations (GOES) ▶ 17 - HydroMet Stations ▶ 10 - Ocean Stations ▶ 65 - DCPs ▶ GOES Receive Sites	Multiple Contracts 011-L11-001-99-SENAMHI	\$1,474,630	2000 - 2014	Extensive system to provide automatic ocean, meteorological, and hydrological monitoring. Stations are installed along the coastal plains, in the Andes Mountains and at the headwaters of the Amazon River.	Project Manager Ashish Raval Project Staff Ted Soto Clara Patch Cristian Martillo	 Tides/Oceans  Hydrology  Meteorology
BRAZIL SIMEPAR Centro Politecnico da UFPR Caixa Postal 318 80001-970 Curitiba-PR-Brazil	176 - DCPs Automatic Weather Stations Sensors 2 GOES Receive Sites	Multiple Contracts	\$2,412,173	1996-2014 On-going spares & support	Hydromet Stations for hydropower production and flood control purposes.	Project Manager Ashish Raval Project Staff Dan Farrell Chris Buchner Ted Soto	 Meteorology  Hydrology



Sutron Corporation - Representative Experience Summary



Hydrology



Meteorology



Tides/Oceans



Aviation



Geotechnical










Air Quality

<p>CANADA HOSKIN SCIENTIFIC</p>	<p>1173 Data Loggers & GOES Satellite Transmitters (SatLink) Sensors Hoskin Scientific is Sutron's official distributor in Canada.</p>	<p>Multiple</p>	<p>\$19,903,940</p>	<p>1989 - 2014</p>	<p>Satellite Ocean, Water and Weather Monitoring Stations</p>	<p>Project Manager Raul McQuivey Project Staff All Sutron Engineers</p>	
<p>CANADA HYDRO-QUEBEC</p>	<p>2 Compaq high performance servers 2 High Data Rate Digital Direct Readout Ground Station chassis New feed/LNA assembly with hardware signal splitting 80 Dual Orifice Bubblers</p>		<p>\$375,533</p>	<p>2002 - 2014</p>	<p>GOES DDRGS & System Software Dual Orifice Bubblers</p>	<p>Project Manager Chris Bucher Project Staff Dan Farrell Clara Patch</p>	
<p>NOAA NATIONAL OCEAN SERVICE</p>	<p>TIDE STATIONS FOR NOAA 250 - DCPs/Tide Gauges Procurements for Sutron's state-of-the-art Tide Stations, the only NOS-approved detection & warning equipment designed specifically to meet NOS requirements for monitoring tides, storm surge, sea levels, tsunamis, & a number of other coastal parameters. Main Stations, Redundant Stations, Barometric Pressure Sensors, Redundant Gages, Hydrographic Gages, Sensors, Spares, & Peripherals.</p>	<p>Multiple Contracts</p>	<p>\$18,279,000</p>	<p>1989- 2014</p>	<p>Water level measurement systems monitoring the entire United States coast line and other worldwide tidal monitoring sites.</p>	<p>Project Manager Dan Farrell Project Staff Clara Patch Ashish Raval Chris Buchner Paul Delisi Gang Chen Shweta Garg</p>	
<p>NOAA/NWS (NATIONAL WEATHER SERVICE)</p>	<p>SUTRON FISCHER PORTER PRECIPITATION GAUGE REBUILD KIT Sutron's FP Rebuild Kit converts old FP gauges into digital recorders. Kit includes a precision load cell for measurements, Sutron datlogger, display, rechargeable battery & solar panel. It interfaces to GOES Satellite Transmitters & wireless modems to integrate into any DCP system. Additional measurements can be added at the factory.</p>	<p>DG 133W-08-CN-0198</p>	<p>\$1,162,000</p>	<p>2008 - 2012</p>	<p>The National Weather Service (NWS) operates a network of 2,200 rain gauges that record precipitation accumulation, at 15 min. intervals, on a punched paper tape. The rebuild kit provided by Sutron converts the gauge into a digital measuring system that can be installed in the field in under 1 hour. The kit includes a data recorder to automatically measure & record precipitation at user -set intervals & a display for easy viewing of data & setup. A 2-point calibration routine is built-in for simple field calibration of the gauge.</p>	<p>Project Manager Dan Farrell Project Staff Joe Sutphin Rob Mooney Paul Delisi Robin Ovington</p>	
<p>NOAA NATIONAL DATA BUOY</p>			<p>993,631</p>	<p>2009 - 2014</p>	<p>SatLink Transmitter/Logger for Tide Stations</p>		



Sutron Corporation - Representative Experience Summary



US AIR FORCE MATERIEL COMMAND	DESIGN/MANUFACTURE OF PROTOTYPE WIND SENSOR for USAF <ul style="list-style-type: none"> ▶ 303 FMQ-13(v)2 Wind Sensors ▶ 35 FMQ-13(v)2 Sensor Spares ▶ 108 FMQ-13(v)2 Sensor support equipment ▶ Maintenance Training ▶ 1 Year of Technical Support 	FA8720-04-C-0005	\$1,548,031	January 2004 - May 2005	Design & delivery of field-tested prototype FMQ-13 Wind Speed & Wind Direction Sensors. Purpose: to gather data on horizontal wind direction & wind speed used in military base weather stations & flight line systems worldwide. Units integrate into operating FMQ-13 weather systems previously supplied by Sutron.	Project Manager Dan Farrell Project Staff Chris Buchner Raul McQuivey	 Meteorology
US AIR FORCE LOGISTICS COMMAND McClellan Air Force Base Sacramento, CA	SYSTEMS - 1000 WIND MEASURING SENSORS Developed & produced 1000 sensors and integrated/installed at all Air Force, Navy and Army Air Bases around the world.	FO4606-85-C-0259	\$11,273,000	1985 to present	No moving parts digital wind measuring system at military air bases around the world.	Project Manager Dan Farrell Project Staff Chris Buchner Raul McQuivey Paul Delisi John Humphreys	 Meteorology
US ARMY CORPS OF ENGINEERS USACE NEW ORLEANS	LOCK MODERNIZATION PROJECT w/4 COMMs SIMULTANEOUSLY <ul style="list-style-type: none"> ▶ 12 Stations ▶ SatLink2 GOES Satellite Transmitters ▶ Iridium Modems ▶ Fiberoptic Modems ▶ Xpert Dataloggers ▶ Sensors 		\$2,049,164	2006 plus on-going support through 2014	Lock Modernization Project (in conjunction with Prime Controls) <ul style="list-style-type: none"> ▶ Sutron designed, supplied & installed 12 monitoring stations on New Orleans' primary drainage canals connecting the Mississippi River & Lake Pontchartrain. ▶ Integrated 3 Communication Options: GO ES Satellite, Fiberoptic & Iridium 	Project Manager Ashish Raval Project Staff Dan Farrell Wade Loseman Gang Chen Dan Farrell Daren Tagg	 Geotechnical  Hydrology
US ARMY CORPS OF ENGINEERS (All offices except New Orleans listed above)	1,435 DCPs with Satellite Telemetry, 3 GOES Rec Sites, System Software and Sensors	Multiple Contracts and Locations	\$20,165,523	1985-2014	Systems provide real time data for flood control purposes and basic data for design purposes. Covers all United States.	Project Manager Ashish Raval Project Staff Dan Farrell Wade Loseman Gang Chen Dan Farrell Daren Tagg	 Geotechnical  Hydrology
US GEOLOGICAL SURVEY 12201 Sunrise Valley Dr. Reston, VA 22092	10,000 - DCPs & Dataloggers w/ Satellite/LOS/Phone/Telemetry	Multiple Contracts and Locations	\$46,500,000	1985-2014	Systems monitor streamflow throughout the continental United States for design purposes.	Project Manager Raul McQuivey Project Staff All Sutron Engineers	 Hydrology



Sutron Corporation - Representative Experience Summary



Hydrology



Meteorology



Tides/Oceans



Aviation



Geotechnical



Air Quality

US BUREAU OF RECLAMATION	1000 - DCPs GOES Receive Site Locations and System SW	Multiple Contracts and Locations	\$7,400,000	1980-2014	Systems provide real-time data for flood control, hydro power production and irrigation distribution. Installed in all Western States.	 Geotechnical Hydrology
STATE OF COLORADO 1300 Sherman Denver, CO 80203	<ul style="list-style-type: none"> ▶ 435 DCPs with Satellite Telemetry ▶ GOES Receive Site, System Software ▶ 735 State Discharge Recorders ▶ Sensors 	Multiple Contracts	\$6,336,649	1984-2014	System provides real time data for managing all of the State of Colorado's water resources	 Hydrology
SOUTH FLORIDA WATER MANAGEMENT DISTRICT	MODERNIZE SCADA SYSTEM Conceptual & Architectural Design Site Inspections Detailed Engineering Design, drawings & specifications Fabrication & Certification of integrated MOSCAD Control Panel		\$8,808,728	2006 on-going through 2014	In 1998 the District began a program to modernize its proprietary SCADA systems that required new central SCADA computers and database systems to replace the C&C technology. Sutron was given the contract which also included Monitoring/Acceptance of Installation Software Development & Testing Final System Integration/Testing & Acceptance.	 Hydrology
LEON COUNTY & CITY OF TALLAHASSEE	CAPITAL AREA FLOOD WARNING NETWORK <ul style="list-style-type: none"> ▶ RF Radio Path ▶ Survey & Licensing ▶ 18 Automatic Rainfall Stations ▶ 1 Stream Gaging Station ▶ 1 Base Station with ▶ Flood Warning Web Posting System Software ▶ Installation & commissioning 		\$311,864	2004 with on-going support	The project establishes the basic infrastructure for real-time rainfall data collection to facilitate the identification of developing flood conditions, notification for emergency managers and initiation of the appropriate emergency management response.	 Meteorology Hydrology
TEXAS DISTRICTS Tarrant Reg. Water District	86 - DCPs Training Support Spares	444-6726, 444-6618 2882 580-8-1311 & 1312	\$803,110	Jun. 1999 through 2014	Provides flood monitoring system, collects hydrological, meteorological data making it available to NWS and TRWD. System provides water level measurements on streams, rivers throughout the State of Texas	 Hydrology
INTERNATIONAL BOUNDARY & WATER COMMISSION	<ul style="list-style-type: none"> ▶ 70 Remote DCPs ▶ 2 (DDRGS) High Data Rate Digital Direct Readout Ground Stations 		\$992,970	2001 - 2014 with on-going spares & support	Modernize existing hydrological data collection network for the Hydrographic Data Collection Rehabilitation Project along the border between the US & Mexico	 Hydrology