

**ANNUAL WORK PLAN
FOR
AGREEMENT BETWEEN
THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
CENTER FOR OPERATIONAL OCEANOGRAPHIC PRODUCTS AND SERVICES
AND
ST. CHARLES PARISH**

**Implementation, Operation, and Maintenance of a St. Charles Parish Real-Time Water
Level Monitoring Network**

NOS Agreement Code: MOA-2003-31 (AWP 001)/929

I. IMPLEMENTATION OF THE ANNUAL WORK PLAN

- A. In accordance with the underlying Agreement (MOA-2003-31) between the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Center for Oceanographic Products and Services (CO-OPS) and the St. Charles Parish (SCP), Louisiana, this Annual Work Plan (AWP), AWP 001, has been mutually developed by NOS and SCP and describes work to be accomplished during the performance period of February 1, 2003 through January 31, 2004.
- B. This AWP is for the installation, operation, and maintenance of two long-term water level measurement systems, one on Lake Pontchartrain and the second on Lake Salvador, and a real-time data collection and display system at the SCP offices.

II. RESPONSIBILITIES OF THE PARTIES

A. NOS Responsibilities

Water Level Measurements

- 1. Perform a detailed reconnaissance of potential installation sites for the two water level stations. One will be on the south side of Lake Pontchartrain and the second will be on the west end of Lake Salvador. Following the

reconnaissance, NOS will meet with SCP and select the final sites for the water level station installations.

2. Procure two water level measurement systems, including meteorological sensors (wind speed, air/water temperature, and barometric pressure), which conform with NOS National Water Level Observation Network specifications. These systems will be equipped with GOES satellite and line-of-sight radio data telemetry systems. Once procured, NOS will perform inspection/acceptance tests and calibrate system sensors prior to deployment.
3. Install the two long-term water level stations at the selected sites. NOS shall provide for inspection and acceptance of all contractor work. All work performed shall be accomplished in accordance with NOAA standards.
4. Operate and maintain the water level stations in accordance with NOAA standards.
5. Final published datums will become available in FY04.

Data Acquisition and Display System

1. Install a primary and secondary data acquisition system (DAS) in the basement of the St. Charles Parish court house in the Emergency Operations Center (EOC). The DAS will be a rack mount configuration with a local display. The system requires phone and Internet connectivity to function properly.
2. Install a line-of-sight radio base station at EOC, which will provide direct data telemetry between the DAS and the two water level stations installed under this AWP.
3. NOS will develop software for the DAS display to provide the following capabilities:
 - a. The display will be an interactive system allowing the operators to zoom in on a particular water level station;
 - b. It will have a set of local display pages through which the operators will have access over their Local Area Network (LAN);

- c. It will have a set of web pages on the NOS/CO-OPS web site, which mirrors the local display. The web displays are designed so that the emergency operators will have a direct communications link from the DAS while the public will access data through the NOS/CO-OPS web site; and
 - d. The local display will provide real-time (updated every six minutes) water level and meteorological information from the two water level stations installed pursuant to paragraph II.A.2. above. This data will be acquired via the line-of-sight radio system GOES telemetry as a backup communications method. In addition, the local display will also contain near real-time information from NOS stations at Southwest Pass, LA (water levels) and Grand Isle, LA (water levels and meteorological data). The information from these stations will be updated hourly; however, during significant storm events, this information will be updated every 18 minutes. The data telemetry from these systems will be via GOES satellite with the data being collected on the NOS computer system in Silver Spring, MD and then transferred to the local DAS through an Internet connection.
4. - NOS will also provide telephone access to the information from the four water level stations described above through a voice data response system. This interactive system will be accessed via a toll-free telephone number. The cost associated with the toll-free phone access will be funded by SCP.
 5. NOS will provide for Internet connectivity from the DAS to the Continuously Operational Real-Time Monitoring System (CORMS), but will require the EOC to provide Internet connectivity until that circuit can be installed. CORMS will provide data quality control to assure the only quality data is distributed to users.

B. SCP Responsibilities

1. Provide adequate space at the EOC for the local DAS and display, as well as providing conditioned, battery backed up, AC power for the systems.
2. Provide temporary Internet connectivity until NOS' Internet circuit is installed.

III. SCHEDULE AND FUNDING

- A. With the signing of this AWP, the SCP assumes responsibility for funding in accordance with the detailed budgets found below in this AWP. Funding must be provided in advance for the AWP before work proceeds. The water level stations and the local DAS and display system will be installed within three months of receipt of funds. The operation and maintenance of the water level stations and data acquisition and display system after January 31, 2004, as well as possible additional station implementations, will be addressed through follow-on AWPs.

- B. AWP 001 budget total is for \$120,000 and includes funding for the acquisition and installation of two water level gauges and the associated local DAS. SCP will assume responsibility for annual operation and maintenance of the gauges (\$20,000) with AWP 002, which begins on January 31, 2004.

**Funding to NOS for Water Level Station Installations,
Local Data Acquisition System, System Support, and Operation and Maintenance**

Component	Equipment	Installation	Annual Operation & Maintenance
Water level Station (Includes primary and backup WL gauge with satellite data telemetry.)	\$28,000	\$10,000	\$8,000
Meteorological Sensor Package Option (wind, air/ water temp, pressure)	\$7,000	\$2,000	\$2,000
CO-OPS data collection, quality assurance, processing, archival, dissemination, and oversight.		\$6,000	
Cost per Station	\$35,000	\$18,000	\$10,000
Local Data Acquisition System	\$12,000	\$2,000	
AWP Project Total (2 WL Stations, Equipment and Installation)		\$120,000	
Follow-on Yearly Recurring Costs			\$20,000

IV. OTHER TERMS AND CONDITIONS

Except as provided for in this AWP, the other terms and conditions of the underlying Agreement remain in full force and effect.

V. APPROVALS

APPROVED AND ACCEPTED FOR THE
U.S. DEPARTMENT OF COMMERCE,
NATIONAL OCEANIC AND
ATMOSPHERIC ADMINISTRATION,
NATIONAL OCEAN SERVICE

APPROVED AND ACCEPTED FOR THE
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DATE 4/4/03

DATE 4/22/2003