

CHARLOTTE HARBOR WATER ATLAS IMPLEMENTATION

STATEMENT OF WORK

OCTOBER 1, 2010 – SEPTEMBER 30, 2011

OBJECTIVE

The objective of this project is to implement a Charlotte Harbor National Estuary Program Water Atlas that will consolidate surface water related information from multiple agencies and disseminate the information to the public, decision makers, and scientists. The Atlas will be available as an interactive website designed to make science and watershed management understandable to all readers. The Atlas will serve as an archive of historical data and a continuously improving reference for new water resource information.

INTRODUCTION

The Charlotte Harbor National Estuary Program (CHNEP) and its local government partners and state and national agencies (Southwest Florida Water Management District, the South Florida Water Management District, the Florida Department of Environmental Protection, the Florida Fish and Wildlife Conservation Commission, the United States Geological Survey (USGS), the Florida Department of Health, the Florida Department of Agriculture and Consumer Services) collect water quality, flow, rainfall, and water level data for many of the estuaries, rivers, lakes and watercourses found within the CHNEP Study Area (Study Area). Despite the abundance of information, no single source exists where all of these data are archived and made readily available to government leaders and staff, scientists, and citizens who study or are interested in a better understanding of the water resources within the Study Area. The purpose of this project is to implement and maintain the Water Atlas as a single source of water resource data using existing information management technologies in a citizen-friendly interface. The information system technologies used in the Atlas design include internet-based GIS, database systems, and database-driven server-side web pages. The goal of this effort is to implement a web-based, data (spatial and non-spatial) and information management and visualization system that supports the realization of the CHNEP water quality, hydrology and habitat quantifiable objectives.

The Florida Center for Community Design and Research, located at the University of South Florida (University), has used all of the above-mentioned technology and developed an internet-based Water Atlas application (<http://www.wateratlas.org>). The Water Atlas was designed to present data in "citizen-friendly" terms, using descriptive help pages, illustrative images, easily understood trend-graphs, and map-based navigation tools. In addition, the Atlas has been designed for efficient and rapid updating as sampling locations, protocol, and conditions change.

It is proposed that the University implement this existing application to serve the needs of the CHNEP. This internet-based Charlotte Harbor National Estuary Program Water Atlas will make tabular and parametric data and predominantly water resource data available to a maximum number of people in an efficient and cost-effective manner. In addition, the document catalog section of the Atlas will provide a location where historical and management information related to water resources can be presented, including photographs, management reports, historical narratives, as well as current events. Finally, as

part of the geographic interface, Charlotte Harbor National Estuary Program citizens will have access to a vast number of water resource related geographic information map layers, such as parks, environmental lands, recreation sites and others. The management of CHNEP's water resources requires an informed citizenry and the cooperation of multiple government agencies. For this reason, it is envisioned the Water Atlas will be a primary tool for assisting the citizens, scientists, and community leaders to manage water resources in the CHNEP Study Area.

The Intellectual rights of both the University and the CHNEP will be defended at all times and both parties agree to the “Disclosure and Ownership Document” that is included as an [attachment](#) to this statement of work and shall comply with the provisions of Chapter 119, Florida Statutes (Public Records Law).

PROJECT DESCRIPTION

The Water Atlas application was built upon server-side technologies. The technologies utilized by the existing Atlas include: Microsoft SQL Server, ESRI ArcIMS, and Microsoft Internet Information Server. Table 1 describes each component of the Atlas application and a description of the existing technologies required to run the Atlas.

Table 1. Atlas application components and a description of the existing technologies required to run the Atlas.

Component	Description	Existing Technology
Water Resource Atlas Database (WRAD)	The WRAD is the staging area database where all water resource data are stored and served to users via the web-based Atlas user interface.	Microsoft SQL Server
Atlas User Interface	The Atlas user interface is the database-driven website that users see when visiting the Atlas.	Active Server Page and .NET technology
Atlas Map Navigator	The Atlas Map Navigator provides users with a map-based interface to navigate to a specific basin or waterbody and to view additional geographic information such as land use data.	ArcIMS Map Application Server, and ArcSDE
Atlas Online Graphing	The online graphing portion of the Atlas allows users to graph water quality and hydrologic data upon request via a server-side graphing application.	WebCharts and Dundas Chart for .NET server-side graphing applications

WRAD Web-based Administration	This tool provides a secure, user-friendly web interface that allows agency, CHNEP and CHNEP partner staff and Water Atlas staff, other than the Database Administrator, to perform certain administrative functions on the WRAD database, such as approving photographs and other submissions by citizens for display on the Atlas and adding/deleting/editing document catalogs. Without this tool, a database administrator would be required each time one of these tasks was undertaken.	Active Server Page and .NET technology designed to administer Microsoft SQL Server
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In order to function, the Water Atlas application also requires several datasets: a hydrographic GIS base map of all water bodies that will be accessible to users; parametric data (e.g., water quality, hydrology, etc.) related to these water bodies; a corresponding sample site GIS map to allow parametric datasets to be accessible to users; and a watershed/basin GIS map that will be used to organize basin information on the Atlas. In addition to these datasets, reference information is typically desired for inclusion on the Atlas, such as aerial photographs of water bodies and educational documents related to water resources.

The Charlotte Harbor National Estuary Program Water Atlas will employ the existing Water Atlas website design for coastal areas. That is to say, it will be similar in function and general look to coastal CHNEP Water Atlas sites (www.volusia.wateratlas.org and www.sarasota.wateratlas.org). The University will make modifications to the basic site designs to accommodate specific CHNEP requirements. These modifications will include custom graphic designs for the Water Atlas User Interface as well as minor structural changes (if necessary) to the Water Atlas User Interface to modify specific parameter presentation. Page layout will remain nearly identical to the existing Water Atlas application and will include the major components of: *Navigator, Digital Library, Education, Research and Data Download, Get Involved and News and Events*. All Water Atlas sites include individual water resource pages for watersheds, lakes, rivers and streams, and the interactive ArcIMS mapping component. The Charlotte Harbor National Estuary Program Water Atlas will include water resource pages for each of the fourteen (14) CHNEP bay segments in addition to the traditional water resource and watershed pages found on typical water atlas websites.

PROPOSED PROJECT WORKPLAN

TASK 1: PROJECT SETUP AND CONCEPTUAL DESIGN PHASE

The University will work with CHNEP staff to host a project kick-off meeting. Invitees to this kick-off meeting will be as recommended by the Charlotte Harbor National Estuary Program staff. A two hour kick-off meeting will be held to present and discuss the negotiated technical approach and administration aspects of the project. CHNEP will coordinate with the University in setting up the kick-off meeting. The kick-off meeting will include an introduction of the project objectives, primary contacts for project management, and review of the Scope of Work and invoicing/payment procedures.

As part of this task, the University will work with CHNEP staff to identify data sources for parametric and GIS datasets to be included in the Atlas. CHNEP staff will assist by making the initial contact and collecting abbreviated metadata (e.g., format, period of record, etc.) for all potential local data providers such as CHNEP-operated laboratories. The University will be responsible for acquiring abbreviated metadata regarding relevant parametric and GIS datasets collected by the United States Geological Survey, the Florida Department of Environmental Protection, the Southwest Florida Water Management District, South Florida Water Management District, Florida LAKEWATCH and the Florida Fish and Wildlife Conservation Commission. These data sources will include water quality data available from Florida STORET for the general area to be serviced by the Water Atlas. The University will prepare a set of kick-off meeting minutes to be delivered in electronic format to the CHNEP for distribution to the City and CHNEP staff. This task also includes all PI management, refreshments as required for meeting and travel associated with the project.

Task 1 Cost: \$17,511

Task 1 Deliverables:

Detailed Project Plan (list of primary tasks and start and completion dates for these tasks)

Kick-off meeting

Preliminary list of parametric and GIS data sets with preliminary metadata.

TASK 2: GIS TEAM LOGICAL DATABASE DESIGN PHASE

The University will utilize local GIS data layers from CHNEP GIS to modify the National Hydrography Database (NHD). This corrected GIS layer will then be used as the basis for all water resources that will be included on the Atlas. For waterbodies not already named by CHNEP, naming resources to be used by the University typically include the USGS Geographic Names Information System (GNIS), Water Management District sampling station names, Florida LAKEWATCH, and the DeLorme Florida Atlas & Gazetteer. In addition to assigning names, the University will assign a unique water body identifier (wbodyid) to each unique water resource, such as Pine Island Sound and the Peace River, etc. The unique water resource identifier will be utilized as a primary key by the Atlas application to organize parametric data, documents, photographs, citizen information, and other datasets. Finally, each GIS layer will be populated with additional reference information such as location (section-township-range, USGS quadrangle, etc.), land use, normal high water elevation, and other meaningful information. The deliverables for this task will include abbreviated metadata to describe changes to the GIS datasets. Copies of the altered GIS datasets will be provided to CHNEP.

Task 2 Cost: \$4,745

Task 2 Deliverables:

Hydrographic GIS dataset(s) with unique water resource identifiers and metadata

TASK 3: GIS TEAM PHYSICAL DATABASE DESIGN PHASE

The University will work with CHNEP staff to determine the final list of data sources to be included in the year-one release of the Water Atlas. The University will then compile a sample site location GIS dataset from sample site latitude-longitude information provided by each data source. The University will conduct preliminary quality control on sample site locations in order to ensure that each chosen sample site is linked to an appropriate water body. The University, with assistance from CHNEP staff, will be responsible for linking each CHNEP Study Area sample site to the appropriate waterbody in the

hydrographic base-layer and will match the sampling locations from other data providers. Table 2 provides a summary of data sources, the tasks associated with those data sources, and those responsible for performing those tasks. Deliverables from Task 3 will include a comprehensive sample site GIS base-layer, as well as abbreviated metadata describing each data source.

Task 3 Cost: \$10,036

Task 3 Deliverables:

Final list of data sources

Comprehensive sample site GIS base-layer with metadata

Table 2. Charlotte Harbor National Estuary Program (CHNEP) Water Atlas data sources, primary tasks for posting data to the Atlas, and the organization responsible for those tasks.

Agency/Data Source/Laboratory	Data Formatting	Station ID Matching	Metadata	Has Existing SOP
USGS_NWIS Hydrology/Water Quality/USGS	USF	USF	USF	Y
SWFWMD_HYDRO/SWFWMD	USF	USF	USF	Y
STORET Data Sources/FDEP STORET	USF	USF/CHNEP	USF	Y
Legacy STORET Sources	USF	USF/CHNEP	USF	Y
Lee County/LCEL	USF	USF/CHNEP	CHNEP	N
Manatee County EMD	USF	USF	USF	Y
Sarasota County/Mote Marine Laboratory	USF	USF	USF	Y
Polk County/Polk County Laboratory	USF	USF	USF	Y
Mote Marine Laboratory	USF	USF/CHNEP	CHNEP	N
Charlotte County/Benchmark	USF	USF/CHNEP	CHNEP	N

TASK 4: DATABASE TEAM LOGICAL/PHYSICAL DESIGN PHASE

The University will work directly with data providers to establish protocols and schedules for data acquisition and updates. These protocols will be written as separate Standard Operating Procedure documents (SOP) for each datasource. In some cases (e.g., USGS and STORET, existing Water Atlas Partners), the University has established protocols and schedules for obtaining data and will use these same procedures and schedules when maintaining the Charlotte Harbor National Estuary Program Water Atlas. The University will work with CHNEP to develop the most appropriate data transfer SOP, including frequency of updates, for data sources for which USF does not already have active SOPs. The anticipated data sources that will need an SOP are indicated in column five of Table 2.

It is anticipated that parametric data updates for the CHNEP-directed sampling will occur on a monthly basis and that GIS base map layer updates from CHNEP will occur quarterly (when necessary). All laboratories retain responsibility for internal QC of their parametric data; CHNEP retains responsibility for QC of base map GIS data. The University is responsible for data upload and posting of all data. Whenever possible, automated or semi-automated procedures have been and will be used to update data on the Atlas to ensure that the Atlas is populated with the very latest available water quality, hydrologic, and other data. For example, updated USGS hydro data are obtained once per day via an application programmed to acquire data from the USGS website. Figure 1 is an example of one of the automatic reports generated as part of the data quality program for Water Atlas data.

This message was sent with High importance.
 From: FCCORSQL (fcdrsq@arch.usf.edu) Sent: Fri 6/25/2010 8:00
 To: Scolero, Jason; Helluri, Teja; Chandler, Ron; Griffin, Jim; Landry, Shawn; Eilers, David
 Cc:
 Subject: SQL Server - Data Integrity Exceptions

Overdue Data Providers Exceptions

The following data provider entries are just a warning that their data may be outdated and a more recent update should be available. Verification of each provider should be performed to ensure whether newer data exists.

Data Source	Latest Sample	Last Processed	= Days	Cutoff Days	Contact Name	Phone #	Status
HILLCO_STORM_WQ	Mar 15 2010 12:00AM	May 17 2010 12:49PM	102 Days	65	Dawn Jaspard	(813) 627-2600 x1032	
LAKEWATCH_SUPP	Nov 12 2008 12:00AM	Jul 24 2009 12:42PM	590 Days	400	Christy Horsburg	352-273-3625	Not provided in April update
LEON_WQ	Dec 22 2009 12:00AM	Jun 15 2010 12:34PM	185 Days	180	Johnny Richardson	850-606-1541	
PINELLAS	Dec 22 2009 1:23PM	Feb 25 2010 1:14PM	185 Days	180	Natasha Dickrell	(727)-464-4425	
STORET_21FLGFWF	May 5 2008 12:00AM	Jan 1 2010 9:52PM	781 Days	380	Laurence L. Connor	(352) 742-6438	Email sent, awaiting reply.
STORET_21FLMANA	Feb 24 2009 12:00AM	Oct 20 2009 4:08PM	486 Days	420	Greg Blanchard	(941) 742-5980	

Figure 1. Overdue Data Provider automatic email.

The University will provide SOPs to each new data provider for review and then finalize these procedures based on comments and suggestions. Following final development of the SOP document, data will be uploaded into the Atlas database. In addition to parametric data, the University will upload for display on the Atlas a reasonable number of related GIS datasets and aerial photographs provided by CHNEP.

Task 4 Cost: \$7,982

Task 4 Deliverables:

- SOPs for all CHNEP/City or otherwise new data sources
- Initial Atlas database upload

TASK 5: WEB TEAM LOGICAL/PHYSICAL DESIGN PHASE

The University will modify and implement the existing Water Atlas to serve the needs of CHNEP. The primary focus of this task will be:

- Develop customized graphic elements for the "home page" and all internal web pages to ensure a professional design consistent with CHNEP and CHNEP Partner official logos, and the "look and feel" for both corporate and GIS web pages.
- Install and configure the website, database, mapping, and other components on the University's servers. All data and applications are hosted by the University.
- Limit bugs and errors (including grammatical and spelling) by providing structured alpha testing of the web application.
- Provide acceptance testing of the website for CHNEP staff and the Advisory Group.

In addition to implementing the Atlas interface, the University will provide a draft Content Management Technical Manual and three, two-hour training assistance sessions, to be held via a web meeting using interactive web meeting software (GoToMeeting), to train staff on procedures for populating the document catalog, photograph library and practical utilization of the Atlas user interface. As is typical with each Atlas project, all relevant documents are cataloged and made available to Atlas users. Additional technical assistance will be provided as required during the contract period. In addition, photographs (current and historical) that are provided and approved by CHNEP are uploaded and linked to each water resource.

CHNEP will be responsible for uploading and cataloging all documents and photographs using the online administration section of the Atlas. The University will assist by transferring general educational documents from other water atlas websites to the Charlotte Harbor National Estuary Program Water Atlas. CHNEP staff will be provided up to two (2) months of technical assistance to complete the initial upload of documents and photographs. Updating of documents and photographs will be the responsibility of CHNEP staff.

Task 5 Cost: \$20,543

Task 5 Deliverables:

Fully functional Water Atlas website as verified through acceptance testing
Training session

TASK 6: WEBSITE LAUNCH

Once complete, the website will be made available for acceptance testing to Charlotte Harbor National Estuary Program staff and the Advisory Group for a period of one (1) month. Based upon the results of this testing, the University will correct all bugs and make minor changes to the Atlas and will help launch the "official" website on the University's active server.

Task 6 Cost: \$10,986

Task 6 Deliverables:

Final website acceptance

TOTAL CHNEP WATER ATLAS IMPLEMENTATION COST: \$71,832 (including USF mandated overhead)

The total cost of completing tasks 1-6 reflects an estimate of work effort-driven costs for a standard water atlas with components similar to the latest Water Atlas designs (see Volusia Water Atlas site at <http://www.volusia.wateratlas.usf.edu/>).

CHNEP WATER ATLAS SERVICES

The CHNEP staff has elected to add additional services, one of which has already gone through the design/development/implementation stages, and one new component. These costs are not part of a standard design and are included in the next Water Atlas Services Section. The cost of including these components was presented to CHNEP staff and the CHNEP TAC, CAC, Policy and Management Committees and is part of the package approved for the CHNEP 2011 Work Plan.

TASK 7: Water Quality Contouring Tool for Charlotte Harbor

The University will modify and implement the existing Water Atlas to serve the needs of CHNEP. The primary focus of this task will be:

- Establish advisory group and schedule workshops via "GoToMeeting"
- Determine parameters and stations to be used as the primary database for the Water Quality Contour Tool (WQCT)
- Develop conceptual specifications for WQCT
- Design Alpha Version of WQCT

- Conduct review with advisory group
- Design Beta Version of WQCT
- Conduct review with advisory group
- Conduct acceptance testing
- Implement WQCT

In addition to implementing the WQCT, the University will provide one, two-hour training session for CHNEP staff to be held via a web meeting using interactive web meeting software (GoToMeeting).

Task 7 Cost: \$8,172

Task 7 Deliverables:

Final Water Quality Contour Tool for Charlotte Harbor installed and operational on the CHNEP Water Atlas and training session.

TASK 8: CHNEP Comprehensive Conservation Management Plan (CCMP) Tracking Database and Reports System.

The University will assist the CHNEP staff in developing a web-based CCMP database and a CCMP tracking component that will allow the CHNEP to manage data necessary in determining progress in meeting Quantifiable Goals established in the 2008 CCMP. The role of the Water Atlas staff will be that of database developer, web-component designer and developer and final web-based component implementer. Essentially the Water Atlas staff will implement the design developed and approved by the CCMP. The envisioned tasks for this effort include:

1. Establish CCMP Tracking Advisory Group (CTAG) and schedule workshops via “GoToMeeting”;
2. Convert existing CHNEP CCMP Tracking Access Database into a web-based data management system;
3. Conduct review with CTAG
4. Modify web-enabled CCMP Tracking database system based on CTAG recommendations;
5. Design mapping interface for CCMP Tracking Component
6. Conduct review with CTAG
7. Modify mapping interface based on CTAG recommendations;
8. Design data-driven web pages to explain and display tracking items for each of the CCMP Quantifiable Objectives
9. Conduct review with CTAG
10. Modify web pages based on CTAG recommendations
11. Develop a Beta Version of CHNEP CCMP Tracking Component
12. Conduct review with CTAG
13. Modify Beta Version based on CTAG recommendations
14. Conduct Acceptance Testing
15. Implement CCMP Tracking Component
16. Write Training Document
17. Conduct two training session via GoToMeeting.

Task 8 Cost: \$9,996

Task 8 Deliverables:

Final CCMP Tracking Component installed and operational on the CHNEP Water Atlas;
Two training sessions.

TOTAL CHNEP WATER ATLAS SERVICES COST: \$18,168 (including USF-mandated overhead)

The total cost of completing tasks 7 and 8 reflects an estimate of work effort-driven costs for advanced components similar to those found on the Sarasota and Hillsborough Water Atlas websites <http://www.sarasota.wateratlas.usf.edu/> and www.hillsborough.wateratlas.usf.edu).

TOTAL CHNEP WATER ATLAS DESIGN, DEVELOPMENT AND IMPLEMENTATION PLUS SERVICES COST: \$90,000 (including USF-mandated overhead).

The following University of South Florida faculty will participate in the project: Shawn Landry, Ron Chandler, Jim Griffin and Terry Johnson.

Table 2 provides cost the tasks outlined in this statement of work. While total cost is fixed by contract the cost within individual tasks can change due to task requirements. Additionally, the schedule for individual tasks (Figure 3) is an estimate at this time, although the project end date is set by the contract.

Table 2. Statement of Task Cost for Water Atlas Implementation

Task	Cost	Cost plus Overhead
Charlotte Harbor NEP Water Atlas Implementation 2010	71,976.97	89,971.21
Standard Water Atlas for Charlotee Harbor NEP	57,442.73	71,803.41
Task 1 Project Setup and Conceptual Design Phase	14,008.87	17,511.09
Task 2: GIS Team Logical Database Design Phase	3,796.28	4,745.35
Task 3: GIS Team Physical Database Design Phase	8,028.71	10,035.88
Task 4: Data Base Team Logical/Physical Design Phase	6,385.51	7,981.89
Task 5: Web Team Physical/Logical Design	16,434.71	20,543.39
Task 6: WEB Site Implementation	8,788.65	10,985.81
Water Atlas Services	14,534.24	18,167.80
Task 7: Water Quality Contouring Tool for Charlotte Harbor	6,537.42	8,171.78
Task 8: CHNEP CCMP Tracking Database and Report System	7,996.82	9,996.03

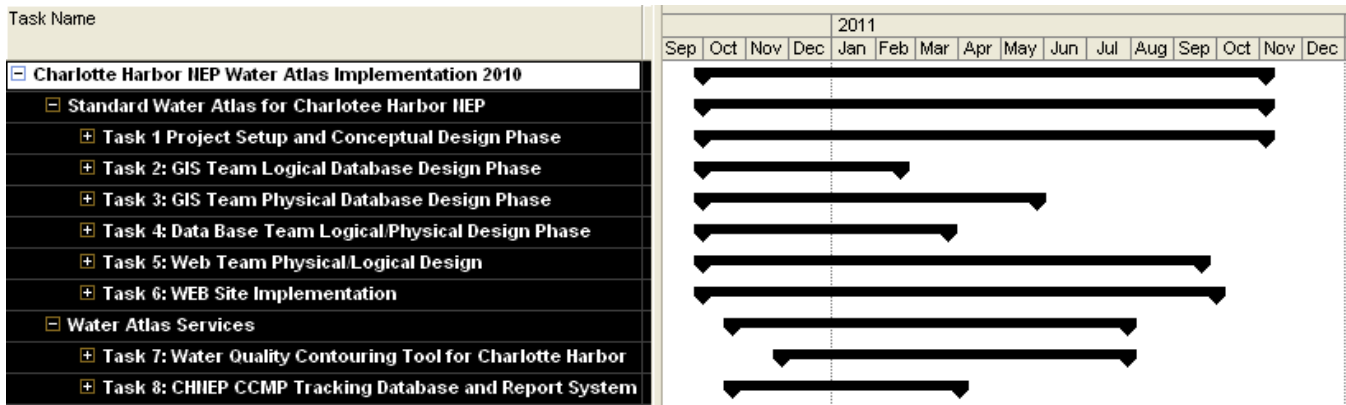


Figure 2. Major Task Schedule

All schedules, hourly costs and expenses listed above are estimates and subject to change based upon the needs of the project. All hourly rates include Florida Center administration costs such as printing, office supplies, postage, travel, computer hardware and software usage, facilities, lease and utilities, telephones and training which are not direct billed to the project. Administrative costs are prorated based upon the number of hours allocated for specific project personnel. Final contract cost of \$ 89,971 is guaranteed as the actual project cost and will change only upon written agreement of parties involved. Task 1 includes the cost of travel and expenses for faculty and staff members to attend project kick-off meeting. Total hours estimated for the project is just under 1800 hours. Primary work effort is conducted by senior staff and faculty.

APPENDIX A

Proposed Water Atlas Out Year Maintenance Task and Cost Statement

This Appendix is not part of the scope of work. It is included only to provide an example of the estimated annual Water Atlas support costs.

The one (1) year web service support contract shown in Table A-1 is based on the new cost and work effort profiles that reflect network-wide cost reductions from consolidation of tasks through the use of a data warehouse approach (Staging Area). These costs are guaranteed for the first year of the web and database support contract to begin on October 1, 2011. Additional estimates of similar cost through 2015 are also provided in this appendix. Data update tasks allow the Water Atlas database to maintain currency. Updates occur at different periodicity based on the type of data, data source and frequency of update. Product improvement and upgrades ensure that the most current software upgrades and component improvements are made. Project management tasks cover all required direct support from FCCDR faculty to CHNEP. This support is necessary to ensure the Water Atlas operations meet expectations.

These costs represent minimum support costs. Additional tasks can be added to a support contract as negotiated by the Florida Center for Community Design and Research and CHNEP. The University's web server system employs the latest technology, hardware redundancy, web software and software updates to ensure minimum off-air time and peak performance. All partners share these costs, thus reducing any individual cost burden.

Table A-1. Guaranteed Cost for first year (2011-2012) of Water Atlas web and database support services

Task Name	Work	Cost	Cost (25% Overhead)
<input type="checkbox"/> WA_CHNEP_Apr10-Mar11	953.5 hrs	46,318.03	57,897.53
<input type="checkbox"/> Task 1. Basic Level of Services	365 hrs	20,000.00	25,000.00
<input type="checkbox"/> Shared Staffing Costs	365 hrs	17,800.00	22,250.00
<input type="checkbox"/> Shared Infrastructure Maintenance Expenses	0 hrs	2,200.00	2,750.00
<input type="checkbox"/> Task 2. Standard Level of Services	465 hrs	20,767.49	25,959.36
<input type="checkbox"/> Unique Data Updates and Content Management	152 hrs	4,736.17	5,920.22
<input type="checkbox"/> Product Improvement and Upgrades	137 hrs	6,029.49	7,536.86
<input type="checkbox"/> Project Management and Travel	176 hrs	10,001.83	12,502.28
<input type="checkbox"/> Task 3. Support Services	123.5 hrs	5,550.54	6,938.17
<input type="checkbox"/> WQDMS Support and Upgrades	95.5 hrs	4,330.89	5,413.61
<input type="checkbox"/> DotNet Design, Development and Implementatio	28 hrs	1,219.65	1,524.56
Charlotte Harbor Water Quality Contour Mappi	28 hrs	1,219.65	1,524.56

CHNEP WATER ATLAS MAINTENANCE YEAR ONE (2011-2012)

The primary focus of this phase of the project is to continue to maintain the Water Atlas web interface to serve environmental data to the citizens of the Southwest Florida Coastal Region (CHNEP Study Area). The deliverable product is for maintenance of a fully functional web site for a period of one year after the launch of the CHNEP Water Atlas, during which time data will be updated on the Atlas, new data sources will be added, and the application will be upgraded with additional functionality.

ESTIMATED PROJECT COST: \$57,898

CHNEP WATER ATLAS MAINTENANCE YEAR TWO (2012-2013)

The primary focus of this phase of the project is to continue to maintain the Water Atlas web interface to serve environmental data to the citizens of the Southwest Florida Coastal Region (CHNEP Study Area). The deliverable product is for maintenance of a fully functional web site for a period of one year after the launch of the CHNEP Water Atlas, during which time data will be updated on the Atlas, new data sources will be added, and the application will be upgraded with additional functionality

ESTIMATED PROJECT COST: \$60,792

CHNEP WATER ATLAS MAINTENANCE YEAR THREE (2013-2014)

The primary focus of this phase of the project is to continue to maintain the Water Atlas web interface to serve environmental data to the citizens of the Southwest Florida Coastal Region (CHNEP Study Area). The deliverable product is for maintenance of a fully functional web site for a period of one year after the launch of the CHNEP Water Atlas, during which time data will be updated on the Atlas, new data sources will be added, and the application will be upgraded with additional functionality

ESTIMATED PROJECT COST: \$63,832

CHNEP WATER ATLAS MAINTENANCE YEAR FOUR (2014-2015)

The primary focus of this phase of the project is to continue to maintain the Water Atlas web interface to serve environmental data to the citizens of the Southwest Florida Coastal Region (CHNEP Study Area). The deliverable product is for maintenance of a fully functional web site for a period of one year after the launch of the CHNEP Water Atlas, during which time data will be updated on the Atlas, new data sources will be added, and the application will be upgraded with additional functionality

ESTIMATED PROJECT COST: \$67,024

Attachment 1 Disclosure of Intellectual Rights

1.11 Disclosure and Ownership of Documents.

The CHARLOTTE HARBOR NATIONAL ESTUARY PROGRAM (CHNEP) and the UNIVERSITY shall comply with the provisions of Chapter 119, Florida Statutes (Public Records Law).

CHNEP recognizes that under UNIVERSITY policy, the results of the project must be publishable and agrees that the UNIVERSITY project director or UNIVERSITY employees engaged in the project shall be permitted to present at symposia, national, or regional professional meetings, and to publish in journals, theses or dissertations, or otherwise of their own choosing, methods and results of project.

UNIVERSITY agrees that the UNIVERSITY Project Director will promptly disclose all intellectual property generated during the course of this Agreement to its Office of Research, per the employment contract with UNIVERSITY, and the Office of Research will promptly disclose such intellectual property to CHNEP.

Intellectual Property that originates solely with the UNIVERSITY Project Director or any other UNIVERSITY employee, shall be the property of UNIVERSITY. Intellectual property that originates jointly between the UNIVERSITY Project Director or any other UNIVERSITY employee, and with an CHNEP employee, UNIVERSITY and CHNEP shall jointly own the intellectual property. Any intellectual property that originates solely with a CHNEP employee shall be the property of CHNEP.

The parties agree that any existing background intellectual property and/or inventions and technologies of CHNEP, the UNIVERSITY, the UNIVERSITY Project Director or UNIVERSITY employees existing prior to the execution of this Agreement are their own separate property, respectively, and are not affected by this Agreement. Neither party shall acquire any claims to or rights in any background intellectual property and/or technologies in existence prior to the execution date of this Agreement.

If the attached Scope of Work pertains to the water atlas the UNIVERSITY will grant to CHNEP a non-exclusive, nontransferable, and non-assignable license to use the CHNEP water atlas. Title and all ownership and proprietary rights, including but not limited to copyright, patent, trade secret, and common law property rights relating to the CHNEP water atlas shall remain in UNIVERSITY and CHNEP shall secure and protect the CHNEP water atlas and documentation consistent with maintenance of UNIVERSITY's proprietary rights therein. CHNEP is not authorized and will not be licensed to distribute the CHNEP water atlas or use the water atlas for any use not associated with the CHNEP water atlas. UNIVERSITY reserves the right to grant rights to use the water atlas and all developments and improvements thereto under this Agreement to other persons or entities upon such terms and conditions as UNIVERSITY shall accept. Nothing contained in this Agreement shall be construed to limit University's rights to modify the water atlas and all developments and improvements thereto under this Agreement or to develop other products that are similar to or offer the same or similar modifications as any modifications developed by CHNEP.

All covenants, agreements, representations and warranties made herein, or otherwise made in writing by any party pursuant hereto, including but not limited to any representations made herein relating to

disclosure or ownership of documents, shall survive the execution and delivery of this Contract and the consummation of the transactions contemplated hereby.