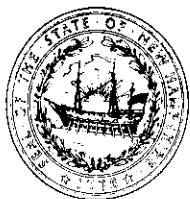


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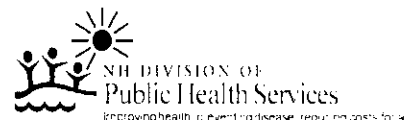
36 Ben



STATE OF NEW HAMPSHIRE

DEPARTMENT OF HEALTH AND HUMAN SERVICES

29 HAZEN DRIVE, CONCORD, NH 03301-6503
603-271-4612 1-800-852-3345 Ext. 4612
Fax: 603-271-4827 TDD Access: 1-800-735-2964



Jeffrey A. Meyers
Acting Commissioner

Marcella Jordan Bobinsky
Acting Director

May 31, 2016

Her Excellency, Governor Margaret Wood Hassan
and the Honorable Council
State House
Concord, New Hampshire 03301

REQUESTED ACTION

Authorize the Department of Health and Human Services, Division of Public Health Services, to amend an existing sole source contract with the United States Geological Survey, Purchase Order #1044260, Vendor #175772-R001, 196 Whitten Road August, ME 04330, by increasing the price limitation by \$45,000 from \$50,000 to an amount not to exceed \$95,000 to provide hydrologic and meteorological data and analyze those data to predict bacterial levels at New Hampshire's freshwater beaches, and extending the Completion Date from September 30, 2016 to September 30, 2017, effective the date of Governor and Council. This agreement was originally approved by Governor and Council on June 24, 2015, Item #52. Funds are 100% federal funds.

Funds are available in the following account for SFY 2017, with authority to adjust amounts within the price limitation and adjust encumbrances between State Fiscal Years through the Budget Office if needed and justified, without approval from Governor and Executive Council.

05-95-90-900510-5173, HEALTH AND SOCIAL SERVICES, DEPT OF HEALTH AND HUMAN SERVICES, HHS: DIVISION OF PUBLIC HEALTH, BUREAU OF PUBLIC HEALTH STATISTICS AND INFORMATICS, EPH TRACKING.

Table with 7 columns: State Fiscal Year, Class / Account, Class Title, Job Number, Current Modified Budget, Increase (Decrease) Amount, Revised Modified Budget. Rows include 2015, 2016, 2017, and Total.

EXPLANATION

Sole source approval is requested for this contract amendment. The original contract was approved as a sole source with the option to renew for two additional years because the Vendor is the only entity that has access to the necessary technical data and the ability to process the data in a way that is useful for public health purposes. The Department seeks to exercise one year of the renewal option.

Funds in this amendment will allow work started under the original contract to continue for another year. In addition to collecting and analyzing data at one study site for one year, as stipulated in the original contract, data will now be collected at two study sites for a second year. This two-year dataset, representing

conditions at two study sites, will better serve our needs. It will allow us to develop a predictive model for recreational water quality, thereby reducing the risk of exposure to bacteria at freshwater beaches. Under this amendment we will also focus on model validation and communication of results. A sole source contract is requested because the USGS is the only entity that has access to the necessary tools to collect this data, as well as the technical ability to process the data in a way that is useful for public health purposes. It is also important to note that through this sole source contract, USGS is able to leverage the NHDHHS contribution and provide \$85,000 in matching funds over the entire contract period.

Throughout the summer high bacteria concentrations at freshwater beaches can result in No Swimming Advisories. *E. Coli* counts greater than 158 in any single sample and greater than 88 in two samples cause New Hampshire Department of Environmental Services to issue a No Swimming Advisory. The Department of Environmental Services and the New Hampshire Department of Health and Human Services are partnering with the USGS to develop a predictive model that operates in near real-time so that beach advisories can be issued immediately based on current conditions rather than a day or two later based on laboratory analysis. This model will enable public health officials to issue water quality advisories prior to exposure.

The data resulting from phase 1 work (FY 2016) will be fed into the predictive model which will then estimate bacteria concentrations for that day and the next day. The model will also provide recommendations on whether action should be taken by stakeholders (i.e., beach managers, park officials, the public). The project includes the design and development of a web-based early warning system to issue water quality alerts. In fulfillment of the original contract, we will have a beta warning system in operation this summer, and expect to have a fully functional warning system accessible to the public in place after Phase 2 (FY2017). This project is in partial fulfillment of a federal grant requirement that the State create and fund environmental health data utilization projects that can be practically applied at the local level.

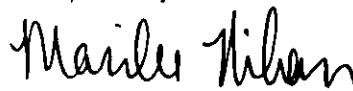
Should Governor and Executive Council not authorize this Request, the Department may not have all the data needed to develop a model to predict bacteria levels at New Hampshire's freshwater beaches, which may result in increased risk of exposure to potentially harmful levels of bacteria at freshwater beaches and therefore increased risk of waterborne illness.

Area served: Statewide.

Source of Fund: 100% Federal Funds from the US Centers for Disease Control and Prevention, National Environmental Public Health Tracking Program – Network Implementation.

In the event that the Federal Funds become no longer available, General Funds will not be requested to support this program.

Respectfully submitted



Marilee Nihan, MBA
Deputy Commissioner

Approved by:



Jeffrey A. Meyers
Commissioner



State of New Hampshire
Department of Health and Human Services
Amendment #1 to the Hydrologic & Meteorological Data Collection for Inland Beaches
Contract

This first Amendment to the Hydrologic & Meteorological Data Collection for Inland Beaches contract (hereinafter referred to as "Amendment #1") dated this 25th day of April, 2016, is by and between the State of New Hampshire, Department of Health and Human Services (hereinafter referred to as the "State" or "Department") and US Geological Survey (hereinafter referred to as "the Contractor"), with a place of business at 196 Whitten Road, Augusta, ME 04330.

WHEREAS, pursuant to an agreement (the "Contract") approved by the Governor and Executive Council on June 24, 2015 (Item #52), the Contractor agreed to perform certain services based upon the terms and conditions specified in the Contract as amended and in consideration of certain sums specified; and

WHEREAS, the State and the Contractor have agreed to make changes to the scope of work, payment schedules and terms and conditions of the contract; and

WHEREAS, pursuant to the General Provisions, Paragraph 18, the State may modify the scope of work and the payment schedule of the contract, by written agreement of the parties;

WHEREAS, the parties agree to extend the contract completion date, increase the price limitation, and amend the scope of work;

NOW THEREFORE, in consideration of the foregoing and the mutual covenants and conditions contained in the Contract and set forth herein, the parties hereto agree as follows:

1. Change the completion date on form P-37, Block 1.7 of the General Provisions, to read:

September 30, 2017

2. Change the price limitation on form P-37, Block 1.8, of the General Provisions, to read:

\$95,000

3. Delete Exhibit A and replace it with:

Exhibit A Amendment #1

4. Delete Exhibit B and replace it with:

Exhibit B Amendment #1

5. Add Exhibit B-4 Amendment #1

New Hampshire Department of Health and Human Service
Hydrologic & Meteorological Data Collection for Inland Beaches



This amendment shall be effective upon the date of Governor and Executive Council approval.

IN WITNESS WHEREOF, the parties have set their hands as of the date written below,

State of New Hampshire
Department of Health and Human Services

5/31/16
Date

Brian Dyer
Name: Brian Dyer
Title: Bureau Chief

US Geological Survey

5/20/16
Date

Heather Adams New England WSC Director
Name
Title

Acknowledgement:

State of New Hampshire, County of Merrimack on May 20, 2016, before the undersigned officer, personally appeared the person identified above, or satisfactorily proven to be the person whose name is signed above, and acknowledged that s/he executed this document in the capacity indicated above.

Signature of Notary Public or Justice of the Peace

[Signature]
Name and Title of Notary or Justice of the Peace

TYLER R. POND, Notary Public
State of New Hampshire
My Commission Expires April 22, 2020

US Geological Survey

Contractor Initials LD
Date 5/20/16

New Hampshire Department of Health and Human Service
Hydrologic & Meteorological Data Collection for Inland Beaches



The preceding Amendment, having been reviewed by this office, is approved as to form, substance, and execution.

OFFICE OF THE ATTORNEY GENERAL

4/12/16
Date

[Signature]
Name: Megan Y. [unclear]
Title: Attorney

I hereby certify that the foregoing Amendment was approved by the Governor and Executive Council of the State of New Hampshire at the Meeting on: _____ (date of meeting)

OFFICE OF THE SECRETARY OF STATE

Date

Name:
Title:



Exhibit A- Amendment #1

Scope of Services

1. Provisions Applicable to All Services

1.1. The Contractor shall work to make environmental data related to predicting bacteria concentrations at New Hampshire inland beaches available to the Division of Public Health Services and its partners in order to create an Early Warning System that will communicate whether action should be taken by stakeholders regarding recreational water quality on a daily basis.

1.2. The Contractor shall complete services in two (2) phases:

1.2.1. Phase I: Data Collection and Data Sharing.

1.2.2. Phase II: Predictive Model Development and Dissemination of Findings

2. Scope of Work – Phase I: Data Collection & Data Sharing

2.1. The Contractor shall transmit buoy data in real time to the USGS NWIS database from the near-beach buoy (at one lake) upon the contract effective date. Data shall include, but not be limited to:

2.1.1. Water temperature.

2.1.2. Specific conductance.

2.1.3. pH level.

2.1.4. Dissolved oxygen.

2.1.5. Water level data at 15 min. intervals

2.2. The Contractor shall transmit meteorological data from the meteorological beach station to the USGS database at 15 minute intervals from June through September of 2016. Data shall include, but not be limited to:

2.2.1. Wind speed and direction.

2.2.2. Precipitation.

2.2.3. Air temperature.

2.3. The Contractor shall make accessible:

2.3.1. Daily data on bacteria, geese counts, geese feces, swimmer counts and other relevant data such that hydrologic and meteorological data can be related including relevant calculated variables.

2.3.2. Test data of model outputs in the USGS database, which summarizes the predicted bacteria counts and closure recommendation.

2.4. The Contractor shall assist the NH EPHT with:

2.4.1. Connecting to the USGS database.

2.4.2. Technical questions related to the analysis of the data.



Exhibit A- Amendment #1

- 2.4.3. Developing metadata related to the database objects.
- 2.4.4. Developing messaging related to the data and surveillance tools and/or services.
- 2.5. The Contractor shall make available to NH EPHT near real time hydrologic and meteorological data that can be used to explain and predict high bacteria concentrations in New Hampshire's inland beaches.
- 2.6. The Contractor shall develop a preliminary predictive model to analyze hydrologic and meteorological data along with other related data, such as swimmer numbers and geese counts that uses predictive models for beach advisories.
- 2.7. The Contractor shall deliver data on hydrological and meteorological conditions in public USGS databases ensuring the data is QA/QC'd and available for query and reporting on the web with USGS support for accessing and using the data.

3. Scope of Work – Phase II: Predictive Model Development and Dissemination of Findings

This pilot effort will shed light on the process of predicting bacteria concentrations at inland beaches in New Hampshire and will have applicability to beaches throughout the State and elsewhere in New England. *Note: these costs do not include preparation and publication of a report in FY 17.* Public release of the tool/models will be contingent on documentation in a peer-reviewed publication.

- 3.1. The Contractor shall work in conjunction with scientists from NHDES NHDHHS to meet the requirements of Phase II: Predictive Model Development and Dissemination of Findings.
- 3.2. The Contractor shall develop a minimum of one (1) surveillance tool or service that:
 - 3.2.1. Provides predictive data indicating the likelihood of high bacteria concentrations in real time.
 - 3.2.2. Evaluates the performance of the underlying data and models.
- 3.3. The Contractor shall deliver a surveillance tool based on predictive models using:
 - 3.3.1. General linear regression.
 - 3.3.2. Partial least squares regression.
 - 3.3.3. Boosted regression trees.
- 3.4. The Contractor shall collaborate with DES and DHHS scientists to assess the surveillance tool in Section 3.3:
 - 3.4.1. For the efficacy of predicting high bacteria concentrations.
 - 3.4.2. Using cross validation and/or holdout data.
- 3.5. The Contractor shall provide recommendations to DHHS on extending the surveillance tool to inland beaches across New Hampshire and New England.
- 3.6. The Contractor shall provide the Department with a written description of model development.
- 3.7. The Contractor shall conduct preliminary evaluations of performance (uncertainty, classification tables, cross validation output) for predictions of bacteria concentrations (or thresholds) based on explanatory variable data.



Exhibit A- Amendment #1

4. Work Plan Timeline

Task	USGS FY 15					USGS FY 16										USGS FY 17																							
	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S										
	Phase 1															Phase 1																							
Data collection	X	X	X	X	X											X	X	X	X																				
Data checking		X	X	X	X												X	X	X																				
	Phase 2															Phase 2																							
Data analysis						X	X	X											X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Model Development								X	X	X	X							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Report Preparation												X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Reivew with DHHS and DES	X			X			X						X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		

Note: Black Xs represent prior contract activities. Blue Xs represent amended contract activities.

5. Deliverables

- 5.1. The Contractor shall complete data analysis and development no later than December 31, 2016
- 5.2. The Contractor shall conduct review meetings with NHDES and NHDHHS in June 2016, September 2016, December 2016, and March 2017.
- 5.3. The Contractor shall conduct final review meetings with NHDES and NHDHHS before September 30, 2017.



Method and Conditions Precedent to Payment

1. The State shall pay the Contractor an amount not to exceed the Price Limitation, block 1.8, for the services provided by the Contractor pursuant to Exhibit A, Scope of Services.
2. The State shall have no obligation to expend funds under this agreement unless and until USGS is able to meet their financial contributions to the project.
3. The Hydrologic & Meteorological Data for the Inland Beaches Project is funded in the amounts specified in Exhibit B-4 Amendment #1, Joint Funding Agreement.
4. This contract is funded with federal funds made available under the Catalog of Federal Domestic Assistance, CFDA #93.070, Federal Award Identification Number (FAIN) #U38EH000947, from the US Centers for Disease Control and Prevention, Program Title, National Environmental Public Health Tracking Program – Network Implementation.
5. Payment for said services shall be made as follows:
 - 5.1. The Contractor will submit an invoice by the tenth working day of each month, which identifies and requests reimbursement for authorized expenses incurred in the prior month. The State shall make payment to the Contractor within thirty (30) days of receipt of each invoice for Contractor services provided pursuant to this Agreement.
 - 5.2. The invoice must be submitted to:

Department of Health and Human Services
Division of Public Health Services
29 Hazen Drive
Concord, NH 03301
Email address: DPHScontractbilling@dhhs.state.nh.us
6. A final payment request shall be submitted no later than sixty (60) days from the Form P37, General Provisions, Contract Completion Date, block 1.7.
7. Notwithstanding anything to the contrary herein, the Contractor agrees that funding under this Contract may be withheld, in whole or in part, in the event of noncompliance with any State or Federal law, rule or regulation applicable to the services provided, or if the said services have not been completed in accordance with the terms and conditions of this Agreement.
8. When the contract price limitation is reached, the program shall continue to operate at full capacity at no charge to the State of New Hampshire for the duration of the contract period.
9. Notwithstanding paragraph 18 of the Form P-37, General Provisions, an amendment limited to transfer the funds within the budget and within the price limitation, can be made by written agreement of both parties and may be made without obtaining approval of the Governor and Executive Council.

EXHIBIT B-4
AMENDMENT #1

UNITED STATES DEPARTMENT OF THE INTERIOR
U. S. GEOLOGICAL SURVEY
AMENDMENT OF JOINT FUNDING AGREEMENT
FOR
WATER RESOURCES INVESTIGATIONS

15ENNH000000009
6000000093
GC16LG40G1U0000
TIN #: 026000618

This amendment is for the agreement dated May 1, 2015

1. The parties hereto agree that subject to the availability of appropriations and in accordance with their respective authorities there shall be maintained in cooperation **COLLECT HYDROLOGIC AND METEOROLOGICAL DATA AND ANALYZE/MODEL THOSE DATE TO PREDICT BEACH BACTERIA LEVELS**, herein called the program.

2. Paragraph 2a of the agreement is hereby X increased/ decreased by \$25,000.00 to read as follows:

(a) \$ 110,000.00 by the party of the first part during the period
May 1, 2015 to September 30, 2017.


Paragraph 2b of the agreement is hereby X increased/ decreased by \$45,000.00 to read as follows:

(b) \$ 135,000.00 by the party of the second part during the period
May 1, 2015 to September 30, 2017.

Billing for this agreement will be rendered QUARTERLY. Payments of bills are due within 60 days after billing date. If not paid by the due date, interest will be charged at the current Treasury rate for each 30-day period, or portion thereof, that the payment is delayed beyond the due date. (31 USC 3717; Comptroller General File B-212222, August 23, 1983.)

UNITED STATES
DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

STATE OF NEW HAMPSHIRE
DEPARTMENT OF HEALTH AND HUMAN SERVICES

By 
(Signature)

by _____
(Signature)

Keith W. Robinson
(Name)

(Name)

Director, New England Water Science Center
(Title)

(Title)

Date March 9, 2016

Date _____



United States Department of the Interior

U.S. GEOLOGICAL SURVEY
New England Water Science Center
New Hampshire/Vermont Office
331 Commerce Way, Suite #2
Pembroke, NH 03275

CERTIFICATE OF AUTHORITY

I, Keith Robinson of the U.S. Geological Survey, do hereby certify that:

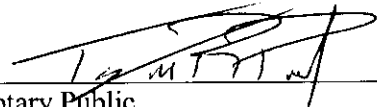
1. I am the duly appointed Director of the USGS New England Water Science Center;
2. I was appointed to the post of Director on November 1, 2005, with the authorization to make and sign agreements. The Director has the authority to enter into any and all agreements, amendments, renewals, revisions or modifications thereto, with the State of New Hampshire, acting through its Department of Health and Human Services.
3. IN WITNESS WHEREOF, I have here unto set my hand as the Director of this agency this 20th day of May, 2016.



Keith W. Robinson, Director

STATE OF NH
COUNTY OF MERRIMACK

The foregoing instrument was acknowledged to me on this 20th day of May, 2016 by Keith Robinson.



Notary Public
My commission expires on: 04/22/2020

TYLER R. POND, Notary Public
State of New Hampshire
My Commission Expires April 22, 2020



United States Department of the Interior

U.S. GEOLOGICAL SURVEY

USGS New England Water Science Center

331 Commerce Way, Suite #2

Pembroke, NH 03275-3718

<http://nh.water.usgs.gov>

(603) 226-7807

The Mission of the USGS is to serve the Nation by providing reliable scientific information to describe and understand the Earth; minimize loss of life and property from natural disasters; manage water, biological, energy, and mineral resources; and enhance and protect our quality of life.



United States Department of the Interior

U.S. GEOLOGICAL SURVEY
New England Water Science Center
New Hampshire/Vermont Office
331 Commerce Way, Suite #2
Pembroke, NH 03275

May 17, 2016

Bobbie Aversa
Contracts & Procurement Unit
State of NH, DHHS
129 Pleasant Street, Brown Building
4th Floor, Concord, NH 03301

Dear Ms. Aversa:

This letter addresses the issue of the United States government being self-insured, meaning that the United States government does not carry insurance. Information provided by the US Department of Interior Regional Solicitors Office follows:

For a discussion of the policy of government self-insurance, refer to several opinions of the Comptroller General: Wrap-Up Insurance for the Capitol Visitor Center; B-290162 (October 22, 2002), citing 21 Comp. Gen. 928, 929 (1942); Matter of: Claims for Reimbursement for Extra Collision Insurance for Rental Vehicles, B-256669 (August 31, 1994).

Also, two GAO reports: B-202656 (March 30, 1981) and B-168106 (April 14, 1972) describe the state of self-insurance. These reports are available from the GAO's website <http://www.gao.gov>.

In a discussion of the Federal Tort Claims Act (FTCA), the website <http://www.house.gov/content/vendors/leases/tort/php> states the following:

The federal government acts as a self-insurer, and recognizes liability for the negligent or wrongful acts or omissions of its employees acting within the scope of their official duties. The United States is liable to the same extent and individual would be in like circumstances. The statute substitutes the United States as the defendant in such a unit and the United States-not the individual employee-bears any resulting liability.

I trust this letter provides the information you need for determining self-insurance of the United States government. Feel free to contact me at kwrobins@usgs.gov if you need further information on this topic.

Sincerely,

Keith W. Robinson
Director, New England Water Science Center

US Geological Survey Leadership Staff

Director, Suzette Kimball, Acting, 703-648-7411, suzette_kimball@usgs.gov

Deputy Director, William Werkheiser, 703-648-7412, wherkhe@usgs.gov

Chief of Staff, Judy Nowakowski, 703-648-4411, jnowakowski@usgs.gov

Associate Director – Office of Budget, Planning, and Integration, Cynthia Lodge, 703- 648-4430, clodge@usgs.gov

Associate Director -Communications and Publishing, Barbara Wainman, 703-648-5750, bwainman@usgs.gov

Director, Office of Science Quality and Integrity, Alan Thornhill, 703-648-6601, athonhill@usgs.gov

Chief - Office of Diversity and Equal Opportunity, Ray Campbell, 703-648- 7770, rcampbell@usgs.gov

Director, Office of International Programs, Vic Labson, 703-648-6206, vlabson@usgs.gov

Chief - Office of Enterprise Information, Tim Quinn, 703-648-6839, tsquinn@usgs.gov

Associate Director -Ecosystems, William Lellis (Acting), 703-648-4061, willess@usgs.gov

Associate Director -Climate and Land-Use Change, Virginia Burkett (Acting), 703-648- 5215, virginia_burkett@usgs.gov

Associate Director -Natural Hazards, David Applegate, 703-648-6600, applegate@usgs.gov

Associate Director – Water, Don Cline, 703-648-4557, dcline@usgs.gov

Associate Director -Energy and Minerals, and Environmental Health, Pierre Glynn (Acting), 703-648-6403, pglynn@usgs.gov

Associate Director -Core Science Systems, Kevin Gallagher, 703-648-5747, kgallagher@usgs.gov

Associate Director -Administration, Jose Aragon, 703-648-7200, jaragon@usgs.gov

Regional Director - Southeast, Jacklynn Gould (Acting), 702-271-2180, jgould@usbr.gov

Regional Director - Northeast, Michael Tupper, 703-648-6660, mtupper@usgs.gov

Regional Director - Midwest, Leon Carl, 734-214-7207, lcarl@usgs.gov

Regional Director - Alaska, Aimee Devaris (Acting), 907-786-7091,

adevaris@usgs.gov

Regional Director - Southwest, Max Ethridge, 303-236-5440, methridge@usgs.gov

Regional Director - Northwest, Rich farrero 206-795-4527, rferrero@usgs.gov

Regional Director - Pacific, Mark Sogge, 916-278-9550, mark_sogge@usgs.gov

Richard G. Kiah

U.S. Geological Survey
NH-VT Office, New England Water Science Center
361 Commerce Way
Pembroke, NH 03275
(603) 226-7819; rkiah@usgs.gov

Educational History:

B.S., May, 1992, Water Resource Management, University of New Hampshire, 148 Semester Hours
Minor: Hydrology

USGS Career Experience:

2011-present: **Hydrologic Network Operations Chief**, NH-VT Office, New England Water Science Center

Major duties include:

- 1) Hydrologic Applications and Network Operations – manage and maintain surface-water, ground-water, and water-quality networks in the States of New Hampshire and Vermont to meet the needs of local, state, and federal cooperators; collect and process hydrologic data using established USGS protocols; coordinate field operations for the WSC (NH and VT offices); compute, check, and review hydrologic records for publication in the annual Data Report.
- 2) Managing and balancing budgets to ensure operations are done on time and within budget.
- 3) Program development—contact and work with cooperative water-resource program partners; negotiate fiscal aspects of programs; write and submit proposals.

1992-2011: **Hydrologic Technician**, New Hampshire/Vermont Water Science Center.

Major duties include:

- 1) Hydrologic Applications and Network Operations - maintain surface-water, ground-water, and water-quality networks in the States of New Hampshire and Vermont to meet the needs of local, state, and federal cooperators; collect and process hydrologic data using established USGS protocols; coordinate field operations for the WSC (NH and VT offices); compute, check, and review hydrologic records for publication in the annual Data Report.
- 2) Project Chief (2006-2008) – Stream quality assessment at the Ely Mine superfund site, VT – 2 year project, \$240k (multidisciplinary project with Eastern Minerals Resources Team and Columbia Environmental Research Center).
- 3) Project Chief (2005-2007) – Stream quality assessment at the Pike Hill Mine, VT – 2 year project, \$275k (multidisciplinary project with Eastern Minerals Resources Team and Columbia Environmental Research Center).
- 4) Project Chief (2004-2007) – Characterization of water-quality at Pike Hill Mine, VT— 3 year project, \$350k (multidisciplinary project with Eastern Minerals Resources Team).

Project chief duties include: design and implement study; management of the project; strong relations with cooperators; managing and balancing budgets in Basis+; developing workplans and field activities; statistically analyze and interpret chemical, hydrological, and biological data; present formal talks describing technical findings to peers, cooperators, and at scientific conferences; writing technical reports; critically review reports of others; water-quality record computation; written/oral quarterly reviews.

5) Provide technical assistance to the Hydrologic Investigations and the Research Program for:

- (a) Relation of Lake-Floor Characteristics to the Distribution of Variable Leaf Water-Milfoil in Moultonborough Bay, Lake Winnepesaukee (2005-2007); design and implement a study that integrates geophysics, water, and sediment surveys to investigate the distribution of milfoil in a NH Lake; collect and process acoustic ground discrimination system data to characterize lake bottom sediments and submerged aquatic vegetation; coordinate field operations involving personnel from the USGS Science Center for Coastal and Marine Geology; analyze and report findings in a Scientific Investigations Report,
- (b) FEMA Flood Insurance Study Program (1997-1998); assist in the implementation of a project to define floodways in multiple towns in NH and VT; survey stream channel cross-sections and compute roughness coefficients; compile and execute data into HEC-2 model for delineation of flood boundaries for publication in a FEMA FIS,
- (c) Savage Well Superfund Site (1994-1996); assist in the implementation of a project to assess transient hydrology of the Milford-Souhegan glacial-drift aquifer; collect and process hydrologic data using established USGS protocols; compute, check, and review hydrologic data for publication in a USGS Open-File Report, and
- (d) Sleepers River Water, Energy, Biogeochemical Balance (1992); assist in the implementation of the WEBB program in a northern deciduous forest; install gaging stations, weirs, and ground-water wells; collect and process surface-water, ground-water, and climatological data using established USGS protocols; compute, check, and manage data.

Publications and Abstracts:

- Kiah, R.G., Jarvis, J.D., Hegemann, R.F., Hilgendorf, G.S., and Ward, S.L., 2013, Hydrologic conditions in New Hampshire and Vermont, water year 2011: U.S. Geological Survey Open-File Report 2013-1135, 36 p., <http://pubs.usgs.gov/of/2013/1135/>.
- Seal, R.R.II, Kiah, R.G., Piatak, N.M., Besser, J.M., Coles, J.F., Hammarstrom, J.M., Argue, D.M., Levitan, D.M., Deacon, J.R., and Ingersoll, C.G., 2010, Aquatic assessment of the Ely Copper Mine Superfund site, Vershire, Vermont: U.S. Geological Survey Scientific Investigations Report 2010-0584, 131 p. [ONLINE REPORT at <http://pubs.usgs.gov/sir/2010/5084/>].
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- Coakley, M.F., Ward, S.L., Hilgendorf, G.S., and Kiah, R.G., 2002, Water Resources Data, New Hampshire and Vermont, Water Year 2001: U.S. Geological Survey Water-Data Report NH-VT-01-1.

Coakley, M.F., **Kiah, R.G.**, Ward, S.L., and Hilgendorf, G.S., 2000, Water Resources Data, New Hampshire and Vermont, Water Year 199: U.S. Geological Survey Water-Data Report NH-VT-99-1.

Coakley, M.F., Olimpio, J.R., **Kiah, R.G.**, and Ward, S.L., 1998, Water Resources Data, New Hampshire and Vermont, Water Year 1997: U.S. Geological Survey Water-Data Report NH-VT-97-1.

Hammond, R.E., Coakley, M.F., Keirstead, Chandlee, and **Kiah, R.G.**, 1996, Water Resources Data, New Hampshire and Vermont, Water Year 1995: U.S. Geological Survey Water-Data Report NH-VT-95-1.

Deacon, J.R., **Kiah, R.G.**, Brayton, M.J., 2002, Stack The River Odds In Your Favor: Taking advantage of USGS river-flow information can help paddlers plan safe and enjoyable trips: Canoe and Kayak Magazine World Wide Web site.

Harte, P.T., and **Kiah, R.G.**, 1997, Information on hydrologic and physical properties of water to assess transient hydrology of the Milford-Souhegan glacial-drift aquifer, Milford, New Hampshire: U.S. Geological Survey Open-File Report 97-414.

Other Qualifications:

40-Hour Hazardous Waste Site Personnel Basic Health and Safety Certification
USDI Motorboat Operator Certification

James Franklin Coles

EDUCATION:

George Mason University, Fairfax, VA

Degree: Ph.D., Environmental Science and Public Policy, 1992

George Mason University, Fairfax, VA

Degree: M.S., Aquatic Ecology, 1982

University of Virginia, Charlottesville, VA

Degree: B.A., Biology, 1977

WORK EXPERIENCE:

Job Title: Ecologist for the New England Water Science Center

Organization: USGS New England Water Science Center, Pembroke, NH

Dates Employed: 04/2007 to Present

Grade Level: GS-13

Supervisor: Kenneth W. Toppin

Duties

Directed the data analysis, interpretation, and report writing for a National USGS study group that has investigated the effects of urbanization on stream ecosystems (EUSE). Supervised the completion of a USGS Circular that summarizes key findings across nine regions of the U.S. by describing how various physical, chemical, and biological factors associated with stream ecosystems are altered by urban development. Major findings of the study were presented at a Congressional Briefing in November 2012. While working on the EUSE investigation, I collaborated with USEPA, the State of Maine, and Duke University in a Bayesian model that predicts how various stressors associated with urban development can affect stream health. The model is responsive to levels of environmental stressors associated with urban development in order to predict changes to the diversity and function of aquatic biological communities. The predicted biological community assessment is then linked to a stream-health value (excellent to poor) that is based on biological indicator metrics developed specifically for the region.

Other responsibilities include collaborating projects between the New England Water Science Center, USEPA, and the New England states. These projects generally are associated with more localized disturbances to streams in the region and are focused on effects to stream biota. I have coordinated with EPA and the state environmental agencies to identify biological endpoints that are relevant to problems being assessed, and designed studies to relate variation in the biological endpoints to the level of disturbance. Projects include Pike Hill Brook and Schoolhouse Brook in Vermont, which have been degraded from mine waste, and the Androscoggin River in New Hampshire, which has sections that have been contaminated by mercury.

Job Title: USGS Liaison to EPA Region 1, Office of Site Remediation & Restoration

Organization: USGS/Biological Resources Discipline

Patuxent Wildlife Research Center, Laurel, MD

Duty Station: EPA New England, Boston, MA

Dates Employed: 10/2002 to 04/2007

Grade Level: GS-13

Supervisor: Harry N. Coulombe

Duties

Provided technical guidance to EPA Region 1 in methods for conducting ecological assessments of aquatic ecosystems. Responsibilities included the design and implementation of studies to characterize the level of ecological risk associated with point-source disturbances; supervised field collection efforts and analyses and interpretation of data; collaborated with USGS scientists involved in related studies. Trained EPA colleagues and their consultants on various sampling and analysis methods developed by USGS for characterizing aquatic ecosystems. Responsible for preparing reports to evaluate the affects of environmental stressors on aquatic ecosystems, and collaborate with EPA remedial project managers (RPMs) to integrate these reports into Ecological Risk Assessment documents.

Member of the EPA Region 1 Science Council, which functions as an advisory board for the Office of the Regional Administrator and, additionally, serves as a technical forum to enhance science proficiency in the region. Also served as the USGS representative on EPA's Biological Technical Advisory Group (BTAG), which consisted of scientists from Federal agencies (USGS, EPA, FWS, NOAA) and state environmental agencies in New England. The BTAG provides comprehensive information exchange on EPA projects associated with contaminant cleanup efforts, and promotes innovative approaches for improving ecological assessments.

General Responsibilities: Evaluated workplans submitted to EPA by environmental contractors that were designed to identify the level of impairment at locations that were ecologically degraded. Coordinated work agreements between USGS scientists and EPA to collaborate on projects that required expert knowledge by USGS on problems related to stream hydrology, water chemistry, and biological condition. Participated in EPA Superfund management review meetings to discuss scientifically valid methods for quantifying ecological risk to impaired streams, and how best to communicate the results in ways that are understood by the general public.

Job Title: Lead Study Unit Ecologist, National Water Quality Assessment (NAWQA) Program
Organization: USGS Massachusetts/Rhode Island Water Science Center
Dates Employed: 05/1992 to 09/2002
Grade Level: GS-12
Supervisor: Wayne H. Sonntag

Duties

I was lead ecologist for two regional studies administered by the National Water Quality Assessment (NAWQA) Program – The Connecticut River Basins Study and the New England Coastal Basins Study. I designed investigations to address specific problems related to stream ecology in watersheds throughout all six New England states and a section of eastern New York. I directed and supervised fieldwork to collect biological, physical, and chemical data relevant to stream ecosystems, including: macroinvertebrate, fish, and algal assemblage samples for assessments of community condition; surveys of in-stream and riparian-zone habitat to assess geomorphic changes related to land use; nutrients, pesticides, and field parameters to assess water-quality conditions; bed sediment and fish tissue to estimate the occurrence and distribution of trace elements and organic compounds in the regions. As part of a joint NAWQA/BRD study to identify the extent of endocrine disruption and compromised health in fish in the U.S., I coordinated the sample collection, processing of biomarkers, and data analysis of fish in degraded streams in the Northeast.

I was selected to lead one of three NAWQA pilot investigations for the Urban Land-Use Gradient studies (later, Effects of Urbanization on Stream Ecosystems, EUSE). The study characterized how various biological, physical, and chemical factors responded to urban development and resulted in degraded stream ecosystems in eastern New England. Over a two-year period, I directed all aspects of the investigation, supervised the fieldwork, and analyzed the data with the use of multivariate and multivariate methods. A unique aspect of the study (compared to other EUSE investigations) was in how we developed a model to predict the relative health of a stream based on the extent of watershed development. The results were published in a journal article and in a USGS Profession Paper, which received the David A. Aronson award for Report of the Year in 2004 for the Northeast Region.

Job Title: Research Assistant

Organization: George Mason University
Department of Biology
Fairfax, VA

Dates Employed: 12/1989 to 04/1992 (20 hours per week, while a student)
Supervisor: R. Christian Jones, PhD. (703) 993-1127

Duties

Instructed laboratory courses in aquatic ecology and introductory biology for science majors. Coordinated field and laboratory activities for a long-term ecological research project on the Potomac River near Washington, DC. Field collections included measurements of water-quality parameters, flow characteristics, and surveys of fish, invertebrate, and phytoplankton assemblages. Monitored the loss of native mussels from the Asiatic clam *Corbicula*. Instructed field crews and laboratory assistants on the methods of aquatic monitoring and data analysis. Supervised the research activities, equipment maintenance, and supply purchasing for the University's Fresh-Water Ecology Laboratory. Analyzed the biological and chemical components of water samples and compiled the information in an annually published technical report. Investigated the effects of temperature and light intensity on production rates of phytoplankton in a eutrophic system, and published the results in a major scientific journal. Collaborated with computer programmers in the development of a database to catalog aquatic biota in the Potomac River.

Job Title: Project Manager

Organization: Analysis and Technology, Inc.
Arlington, VA 22202

Dates Employed: 11/1984 to 12/1989

Supervisor: Capt. George B. Newton, USN (retired).

Duties

I provided technical support for U.S. Navy environmental programs and represented the Navy at meetings and conferences that addressed environmental issues. Produced annual reports of Research and Development Programs that were funded by the Navy, and compiled quarterly status reports of the programs. Developed a programmatic database from data collected by the Navy and NOAA, which provides seawater density profiles at precise geographic locations. Developed a FORTRAN program that generates sound velocity profiles from water density data collected during Navy cruises. Analyzed imagery from polar orbiting defense mapping satellites and compiled reports from the data that indicated the seasonal sea ice distribution and flow dynamics in Arctic regions. Coordinated information exchange with federal agencies and academia for the Navy's Arctic Information Database. Organized compendium of various organizations and institutions involved in environmental research related to Navy programs.

Job Title: Environmental Specialist

Organization: Virginia Department of Transportation, Water Quality Division
Richmond, VA

Dates Employed: 08/1977 to 08/1980

Supervisor: Melvin Thomas (retired)

Duties

I represented the department at monthly-scheduled coordination meetings to review highway projects and solicit recommendations from state and federal environmental agencies responsible for protecting the water quality of streams. Pertinent to Section 404 of the Clean Water Act, I filed permits with the Army COE for construction activities that potentially could impact waterways and wetlands. Delineated sensitive watershed parcels and stream segments that would likely be affected by roadway construction. Implemented best management practices (BMPs) to protect stream ecosystems from the effects of roadway construction. The effectiveness of the BMPs was evaluated by monitoring the condition of aquatic biological communities before, during, and after construction. The evaluations included surveys of fish, aquatic insects, and unionid mussels assemblages. Data were summarized in water-quality reports as part of environmental impact statements for highway projects. I attended public hearings on proposed projects and prepared reports documenting the issues and concerns that were expressed.

JOB-RELATED TRAINING COURSES

National Water Quality Assessment Program, Training and Methods of Sampling, 1992, 1998
Principles and Techniques of Electrofishing, 1993
Biogeochemistry of Natural Waters, 1993
Biomonitoring of Environmental Status and Trends, Biomarkers of Contaminants, 1994
Geomorphic Analysis of Fluvial Systems, 1995
Environmental Chemistry of Organic Pollutants, 1997
Multivariate Analysis of Hydrological, Biological, and Chemical Data, 2000
Hazardous Material Incident Response Operations, 2003
Ecological Risk Assessment, 2003
Freshwater Biomonitoring using Benthic Macroinvertebrates, 2004
Risk Assessment Guidance for Superfund, 2006
Analysis of Multivariate Data using PRIMER v6, 2007
Experimental Design and Data Analysis using PERMANOVA, 2011

JOB-RELATED SKILLS:

Data Analysis Software – CANOCO, SYSTAT, and PRIMER
Database – Microsoft ACCESS
Spreadsheet – Microsoft EXCEL
Word Processing – Microsoft WORD

JOB-RELATED CERTIFICATES AND LICENSES:

Permits to conduct fish community surveys and collect specimens by electrofishing,
in all New England States and New York.
Certified Motorboat Operator, U.S. Department of Interior.

JOB-RELATED HONORS, AWARDS, MEMBERSHIPS:

EPA Science Achievement Award, Aberjona River Project, 2006
Co-Recipient of EPA Regional Applied Research Effort (RARE) grant, 2006
Scientific Achievement Award, Patuxent Wildlife Research Center, 2005
USGS Report of the Year, Northeast Region, 2004
USGS Performance Award, 1993, 1994, 1995, 2003
USGS Special Act Service Award, 1996
Member of the Society for Freshwater Science

Publications as Primary Author:

J.F. Coles, G. McMahon, A.H. Bell, L.R. Brown, F.A. Fitzpatrick, B.C. Scudder Eikenberry, M.D. Woodside, T.F. Cuffney, W.L. Bryant, K. Cappiella, L. Fraley-McNeal, and W.P. Stack, 2012, Effects of urban development on stream ecosystems in nine metropolitan study areas across the United States. U.S. Geological Survey Circular 1373, 138 p.

J.F. Coles, T.F. Cuffney, G. McMahon, and C.J. Rosiu, 2010. Judging a Brook by its Cover – The Relation between Biological Condition of a Stream and Urban Land Cover in New England. *Northeastern Naturalist*, 17(1): 29-48.

J.F. Coles, A.H. Bell, B.C. Scudder, and K.D. Carpenter, 2009. The Effects of Urbanization and Other Environmental Gradients on Algal Assemblages in Nine Metropolitan Areas across the United States. U.S. Geological Survey Scientific Investigations Report 2009-5022, 18 p.

J.F. Coles, T.F. Cuffney, G. McMahon, and K.M. Beaulieu, 2004. The Effects of Urbanization on the Biological, Physical, and Chemical Characteristics of Coastal New England Streams. USGS Professional Paper 1695, 47 p.

J.F. Coles and R.C. Jones, 2000. Effect of Temperature on Photosynthesis-Light Response and Growth of Four Phytoplankton Species Isolated from a Tidal Freshwater River. *J. Phycol.*, 36: 7-16.

J.F. Coles, 1999. Length-Age Relations and PCB Content of Mature White Suckers from the Connecticut and Housatonic River Basins. *Northeastern Naturalist*, 6(3):263-275.

J.F. Coles, 1998. Organic Compounds in Fish Tissue from the Connecticut, Housatonic, and Thames River Basins Study Unit, 1992-94. USGS Water Resources Investigations Report 98-4075.

J.F. Coles, 1996. Organochlorine Compounds and Trace Elements in Fish Tissue and Ancillary Data for the Connecticut, Housatonic, and Thames River Basins Study Unit, 1992-94. USGS Open File Report 96-358.

Publications as Contributing Author:

K.M. Beaulieu, A.H. Bell, and J.F. Coles, 2012. Variability in stream chemistry in relation to urban development and biological condition in seven metropolitan areas of the United States, 1999-2004. U.S. Geological Survey Scientific Investigations Report 2012-5170, 27 p.

T.F. Cuffney, R.O. Kashuba, S.S. Qian, I. Alameddine, Y.K. Cha, B. Lee, J.F. Coles, and G. McMahon, 2011. Multilevel regression models describing regional patterns of invertebrate and algal responses to urbanization across the United States: *Journal of the North American Benthological Society*, 30(3): 779-786.

R.R. Seal II, R.G. Kiah, N.M. Piatak, J.M. Besser, J.F. Coles, J.M. Hammarstrom, D.M. Argue, D.M. Levitan, J.R. Deacon, and C.G. Ingersoll, 2010. Aquatic assessment of the Ely Copper Mine Superfund site, Vershire, Vermont: U.S. Geological Survey Scientific Investigations Report 2010-5084, 131 p.

Brown, L.R. Cuffney, T.F., Coles, J.F., Fitzpatrick, Faith, McMahon, Gerard, Steuer, J.J., Bell, A.H., and May, J.T., 2009. Urban streams across the USA: lessons learned from studies in nine metropolitan areas, *J. N. Am. Benthol. Soc.*, 28(4):1051-1069.

Giddings, E.M.P., Bell, A.H., Beaulieu, K.M., Cuffney, T.F., Coles, J.F., Brown, L.R., Fitzpatrick, F.A., Falcone, James, Sprague, L.A., Bryant, W.L., Pepler, M.C., Stephens, Cory, and McMahon, Gerard. 2009. Selected physical, chemical, and biological data used to study urbanizing streams in nine metropolitan areas of the United States, 1999-2004: U.S. Geological Survey Data Series 423, 11 p. + data tables.

M.R. Meador, D.M. Carlisle, and J.F. Coles, 2008. Use of tolerance values to diagnose water-quality stressors to aquatic biota in New England streams: *Ecological Indicators*, 8: 718-728.

D.M. Argue, R.G. Kiah, N.M. Piatak, R.R. Seal II, J.M. Hammarstrom, E. Hathaway, and J.F. Coles, 2008. Selected water- and sediment-quality, aquatic biology, and mine-waste data from the Ely Copper Mine Superfund Site, Vershire, VT, 1998-2007: U.S. Geological Survey Data Series 378

R.G. Kiah, J.R. Deacon, N.M. Piatak, R.R. Seal II, J.F. Coles, and J.M. Hammarstrom, 2007. Surface-water hydrology and quality at the Pike Hill Superfund Site, Corinth, Vermont, October 2004 to December 2005, U.S. Geological Survey Scientific Investigations Report 2007-5003, 61 p

M.R. Meador, J.F. Coles, and H. Zappia, 2005. Fish Assemblage Responses to Urban Intensity Gradients in Contrasting Metropolitan Areas: Birmingham, Alabama and Boston, Massachusetts. *AFS Sym.* 47: 409-423

C.M. Tate, T.F. Cuffney, G. McMahon, E.M.P. Giddings, J.F. Coles, and H. Zappia, 2005. Use of an Urban Intensity Index to Assess Urban Effects on Streams in Contrasting Environmental Settings. *AFS Sym.* 47: 291-316

T.M. Short, E.M.P. Giddings, H. Zappia, and J.F. Coles, 2005. Urbanization Effects on Stream Habitat Characteristics in Boston, Massachusetts; Birmingham, Alabama; and Salt Lake City, Utah. *AFS Sym.* 47: 317-332

M. Potapova, J.F. Coles, E.M.P. Giddings, and H. Zappia, 2005. A Comparison of the Influences of Urbanization on Stream Benthic Algal Assemblages in Contrasting Environmental Settings. *AFS Sym.* 47: 333-360

T.F. Cuffney, H. Zappia, E.M.P. Giddings, and J.F. Coles, 2005. Effects of Urbanization on Benthic Macroinvertebrate Assemblages in Contrasting Environmental Settings: Boston, Massachusetts; Birmingham, Alabama; and Salt Lake City, Utah. *AFS Symposium* 47: 361-408

K.W. Robinson, S.M. Flanagan, J.D. Ayotte, K.W. Campo, A. Chalmers, J.F. Coles, T.F. Cuffney, 2004. Water quality in the New England coastal basins; Maine, New Hampshire, Massachusetts, and Rhode Island, 1999-2001. USGS Circular 1226, 38 pp.

G. McMahon, J.D. Bales, J.F. Coles, E.M.P. Giddings, and H. Zappia, 2003. Use of Stage Data to Characterize Hydrologic Conditions in an Urbanizing Environment. *J. Am. Water Resources Assoc.*, 39(6):1529-1546.

S. Tessler, J.F. Coles, and K.M. Beaulieu, 1999. Inventory of Selected Freshwater Ecological Studies from the New England Coastal Basins (Maine, New Hampshire, Massachusetts, Rhode Island), 1937-97. USGS Open File Report 99-467.

S.M. Flanagan, M.G. Nielsen, K.W. Robinson, and J.F. Coles, 1998. Water Quality Assessment of the New England Coastal Basins in Maine, Massachusetts, New Hampshire, and Rhode Island: Environmental Settings and Implications for Water Quality and Aquatic Biota. USGS Water Resources Investigations Report 98-4249.

S.P. Garabedian, J.F. Coles, S.J. Grady, E.C. Trench, and M.J. Zimmerman, 1998. Water Quality in the Connecticut, Housatonic, and Thames River Basins, Connecticut, Massachusetts, New Hampshire, New York, and Vermont, 1992-95. USGS Circular 1155.



United States Department of the Interior

U.S. GEOLOGICAL SURVEY
New England Water Science Center
New Hampshire/Vermont Office
331 Commerce Way, Suite #2
Pembroke, NH 03275

KEY ADMINISTRATIVE PERSONNEL

Keith W. Robinson
Director of New England Water Science Center
USGS
Pembroke, NH 03275

Richard G. Kiah
Hydrologic Network Operations Chief
USGS
Pembroke, NH 03275

James F. Coles
Ecologist
USGS
Northboro, MA 01532



Nicholas A. Toumpas
Commissioner

José Thier Montero
Director

STATE OF NEW HAMPSHIRE JUN04'15 PM 2:33 DAG

DEPARTMENT OF HEALTH AND HUMAN SERVICES

29 HAZEN DRIVE, CONCORD, NH 03301-6527
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G&C APPROVED
Date: 6/24/15
Item #52

May 12, 2015

Her Excellency, Governor Margaret Wood Hassan
and the Honorable Council
State House
Concord, NH 03301

REQUESTED ACTION

Authorize the Department of Health and Human Services, Division of Public Health Services to enter into a **sole source** agreement with the U.S. Geological Survey (Vendor # 175772-R001) located at 196 Whitten Road, Augusta, ME 04330 for the provision of hydrologic & meteorological data collection services in an amount not to exceed \$50,000 effective upon Governor and Executive Council approval, through September 30, 2016. 100 % Federal Funds.

Funds to support this request are available in the following account for State Fiscal Year 2015 and anticipated to be available in the following account in State Fiscal Year 2016 contingent upon the availability and continued appropriation of funds in the future operating budget with authority for the Budget Office to adjust amounts within the price limitation and amend the related terms of the contract without further approval from Governor and Executive Council.

05-95-90-900510-5173- HEALTH AND SOCIAL SERVICES, DEPT. OF HEALTH AND HUMAN SERVICES, HHS: DIVISION OF PUBLIC HEALTH, BUREAU OF PUBLIC HLTH STATS AND INFORMATICS, EPH TRACKING

SFY	Class	Class Title	Activity Code	Amount
2015	102-500731	Contracts for Program Services	9004100	\$25,000
2016	102-500731	Contracts for Program Services	9004100	\$25,000
			Total:	\$50,000

EXPLANATION

This **sole source** agreement will be used to provide support to the United States Geological Survey for the purpose of collecting hydrologic and meteorological data as needed to develop a model to predict beach-specific bacteria levels. An improved ability to predict unsafe bacterial levels will enable public health officials to issue freshwater beach usage advisories as is currently the case for the marine environment. A sole source contract is requested because the US Geological Survey is the only entity that has access to the necessary technical data as well as the ability to process the data in a way that is useful for public health purposes.

High bacteria counts obtained at freshwater beaches result in no-swimming advisories which can occur at inopportune times and with frequent recurrence. E. Coli counts of greater than 158 in any single sample and greater than 88 in two samples cause the New Hampshire Department of Environmental Services to issue a no swimming advisory. The Department of Environmental Services and the New Hampshire Department of Health and Human Services are partnering with the United State Geological Service and Plymouth State University to develop a means of predicting high bacterial concentrations in real time so that beach advisories can be issued immediately based on current conditions rather than a day or so later after analysis of bacteria samples has been completed and exposure to pathogens has already occurred.

The work will involve hiring the United State Geological Service to make environmental data related to predicting bacteria counts in New Hampshire lakes available to the Division of Public Health Services and its partners. The data resulting from phase 1 work (FY 2015) will be fed into a predictive model which will then estimate waterbody-specific bacteria counts for the coming day and provide a recommendation on whether action should be taken by stakeholders/customers (i.e., beach managers, park officials, the public). The project includes the design and development of a Web-based application to issue water quality warnings.

We do not expect to have a fully functional warning system in place until after Phase 2 (FY2016). Phase 2 will focus on refinements of the model, validation of the predictive ability of the output, and refinement of the delivery of guidelines to decision-makers.

This project is in partial fulfillment of a federal grant requirement that the state create and fund environmental health data utilization projects that can be practically applied at the local level.

Should the Governor and Executive Council not approve this request, the Department will not have the data needed to predict bacteria levels at New Hampshire's freshwater beaches which may in turn have a potential impact on the health of residents and on NH tourism.

Area Served: Statewide

Source of Funds: 100% Federal Funds from the US Department of Health and Human Services, Centers for Disease Control and Prevention, CFDA # 93.070, Federal Award Identification Number (FAIN) U38EH000947.

In the event that the Federal Funds become no longer available, additional General Funds will not be requested to support this contract.

Respectfully submitted,



Marcella Jordon Bobinsky, MPH
Acting Director

Approved by:



Nicholas A. Toumpas
Commissioner




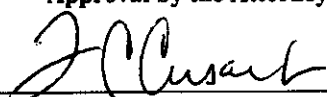
Subject: Hydrologic & Meteorological Data Collection for Beaches

AGREEMENT

The State of New Hampshire and the Contractor hereby mutually agree as follows:

GENERAL PROVISIONS

1. IDENTIFICATION.

1.1 State Agency Name Department of Health & Human Services Division of Public Health Services		1.2 State Agency Address 29 Hazen Drive Concord, NH 03301	
1.3 Contractor Name U.S. Geological Survey		1.4 Contractor Address USGS Building 196 Whitten Road Augusta ME 04330	
1.5 Contractor Phone Number (207) 622-8201	1.6 Account Number 05-95-90-900510-5173	1.7 Completion Date September 30, 2016	1.8 Price Limitation \$50,000
1.9 Contracting Officer for State Agency Eric D. Borrin		1.10 State Agency Telephone Number (603) 271-9558	
1.11 Contractor Signature 		1.12 Name and Title of Contractor Signatory Keith Robinson, Water Science Center Director	
1.13 Acknowledgement: State of <u>NH</u>, County of <u>Urrinmogh</u> On <u>5/14/15</u> , before the undersigned officer, personally appeared the person identified in block 1.12, or satisfactorily proven to be the person whose name is signed in block 1.11, and acknowledged that s/he executed this document in the capacity indicated in block 1.12			
1.13.1 Signature of Notary Public or Justice of the Peace [Seal] 			
1.13.2 Name and Title of Notary or Justice of the Peace Maria Becker, Banker		MARIA R. BECKER, Notary Public My Commission Expires January 15, 2019	
1.14 State Agency Signature 		1.15 Name and Title of State Agency Signatory Brian Dyer	
1.16 Approval by the N.H. Department of Administration, Division of Personnel (if applicable) By: _____ Director, On: _____			
1.17 Approval by the Attorney General (Form, Substance and Execution) By:  On: <u>5/27/15</u>			
1.18 Approval by the Governor and Executive Council By: _____ On: _____			

2. EMPLOYMENT OF CONTRACTOR/SERVICES TO BE PERFORMED. The State of New Hampshire, acting through the agency identified in block 1.1 ("State"), engages contractor identified in block 1.3 ("Contractor") to perform, and the Contractor shall perform, the work or sale of goods, or both, identified and more particularly described in the attached EXHIBIT A which is incorporated herein by reference ("Services").

3. EFFECTIVE DATE/COMPLETION OF SERVICES.

3.1 Notwithstanding any provision of this Agreement to the contrary, and subject to the approval of the Governor and Executive Council of the State of New Hampshire, this Agreement, and all obligations of the parties hereunder, shall not become effective until the date the Governor and Executive Council approve this Agreement ("Effective Date").

3.2 If the Contractor commences the Services prior to the Effective Date, all Services performed by the Contractor prior to the Effective Date shall be performed at the sole risk of the Contractor, and in the event that this Agreement does not become effective, the State shall have no liability to the Contractor, including without limitation, any obligation to pay the Contractor for any costs incurred or Services performed. Contractor must complete all Services by the Completion Date specified in block 1.7.

4. CONDITIONAL NATURE OF AGREEMENT.

Notwithstanding any provision of this Agreement to the contrary, all obligations of the State hereunder, including, without limitation, the continuance of payments hereunder, are contingent upon the availability and continued appropriation of funds, and in no event shall the State be liable for any payments hereunder in excess of such available appropriated funds. In the event of a reduction or termination of appropriated funds, the State shall have the right to withhold payment until such funds become available, if ever, and shall have the right to terminate this Agreement immediately upon giving the Contractor notice of such termination. The State shall not be required to transfer funds from any other account to the Account identified in block 1.6 in the event funds in that Account are reduced or unavailable.

5. CONTRACT PRICE/PRICE LIMITATION/PAYMENT.

5.1 The contract price, method of payment, and terms of payment are identified and more particularly described in EXHIBIT B which is incorporated herein by reference.

5.2 The payment by the State of the contract price shall be the only and the complete reimbursement to the Contractor for all expenses, of whatever nature incurred by the Contractor in the performance hereof, and shall be the only and the complete compensation to the Contractor for the Services. The State shall have no liability to the Contractor other than the contract price.

5.3 The State reserves the right to offset from any amounts otherwise payable to the Contractor under this Agreement those liquidated amounts required or permitted by N.H. RSA 80:7 through RSA 80:7-c or any other provision of law.

5.4 Notwithstanding any provision in this Agreement to the contrary, and notwithstanding unexpected circumstances, in no event shall the total of all payments authorized, or actually made hereunder, exceed the Price Limitation set forth in block 1.8.

6. COMPLIANCE BY CONTRACTOR WITH LAWS AND REGULATIONS/ EQUAL EMPLOYMENT OPPORTUNITY.

6.1 In connection with the performance of the Services, the Contractor shall comply with all statutes, laws, regulations, and orders of federal, state, county or municipal authorities which impose any obligation or duty upon the Contractor, including, but not limited to, civil rights and equal opportunity laws. In addition, the Contractor shall comply with all applicable copyright laws.

6.2 During the term of this Agreement, the Contractor shall not discriminate against employees or applicants for employment because of race, color, religion, creed, age, sex, handicap, sexual orientation, or national origin and will take affirmative action to prevent such discrimination.

6.3 If this Agreement is funded in any part by monies of the United States, the Contractor shall comply with all the provisions of Executive Order No. 11246 ("Equal Employment Opportunity"), as supplemented by the regulations of the United States Department of Labor (41 C.F.R. Part 60), and with any rules, regulations and guidelines as the State of New Hampshire or the United States issue to implement these regulations. The Contractor further agrees to permit the State or United States access to any of the Contractor's books, records and accounts for the purpose of ascertaining compliance with all rules, regulations and orders, and the covenants, terms and conditions of this Agreement.

7. PERSONNEL.

7.1 The Contractor shall at its own expense provide all personnel necessary to perform the Services. The Contractor warrants that all personnel engaged in the Services shall be qualified to perform the Services, and shall be properly licensed and otherwise authorized to do so under all applicable laws.

7.2 Unless otherwise authorized in writing, during the term of this Agreement, and for a period of six (6) months after the Completion Date in block 1.7, the Contractor shall not hire, and shall not permit any subcontractor or other person, firm or corporation with whom it is engaged in a combined effort to perform the Services to hire, any person who is a State employee or official, who is materially involved in the procurement, administration or performance of this Agreement. This provision shall survive termination of this Agreement.

7.3 The Contracting Officer specified in block 1.9, or his or her successor, shall be the State's representative. In the event of any dispute concerning the interpretation of this Agreement, the Contracting Officer's decision shall be final for the State.

Contractor Initials: ill
Date: 5/6/15

8. EVENT OF DEFAULT/REMEDIES.

8.1 Any one or more of the following acts or omissions of the Contractor shall constitute an event of default hereunder ("Event of Default"):

- 8.1.1 failure to perform the Services satisfactorily or on schedule;
- 8.1.2 failure to submit any report required hereunder; and/or
- 8.1.3 failure to perform any other covenant, term or condition of this Agreement.

8.2 Upon the occurrence of any Event of Default, the State may take any one, or more, or all, of the following actions:

- 8.2.1 give the Contractor a written notice specifying the Event of Default and requiring it to be remedied within, in the absence of a greater or lesser specification of time, thirty (30) days from the date of the notice; and if the Event of Default is not timely remedied, terminate this Agreement, effective two (2) days after giving the Contractor notice of termination;
- 8.2.2 give the Contractor a written notice specifying the Event of Default and suspending all payments to be made under this Agreement and ordering that the portion of the contract price which would otherwise accrue to the Contractor during the period from the date of such notice until such time as the State determines that the Contractor has cured the Event of Default shall never be paid to the Contractor;
- 8.2.3 set off against any other obligations the State may owe to the Contractor any damages the State suffers by reason of any Event of Default; and/or
- 8.2.4 treat the Agreement as breached and pursue any of its remedies at law or in equity, or both.

9. DATA/ACCESS/CONFIDENTIALITY/PRESERVATION.

9.1 As used in this Agreement, the word "data" shall mean all information and things developed or obtained during the performance of, or acquired or developed by reason of, this Agreement, including, but not limited to, all studies, reports, files, formulae, surveys, maps, charts, sound recordings, video recordings, pictorial reproductions, drawings, analyses, graphic representations, computer programs, computer printouts, notes, letters, memoranda, papers, and documents, all whether finished or unfinished.

9.2 All data and any property which has been received from the State or purchased with funds provided for that purpose under this Agreement, shall be the property of the State, and shall be returned to the State upon demand or upon termination of this Agreement for any reason.

9.3 Confidentiality of data shall be governed by N.H. RSA chapter 91-A or other existing law. Disclosure of data requires prior written approval of the State.

10. TERMINATION. In the event of an early termination of this Agreement for any reason other than the completion of the Services, the Contractor shall deliver to the Contracting Officer, not later than fifteen (15) days after the date of termination, a report ("Termination Report") describing in detail all Services performed, and the contract price earned, to and including the date of termination. The form, subject matter, content, and number of copies of the Termination

Report shall be identical to those of any Final Report described in the attached EXHIBIT A.

11. CONTRACTOR'S RELATION TO THE STATE. In the performance of this Agreement the Contractor is in all respects an independent contractor, and is neither an agent nor an employee of the State. Neither the Contractor nor any of its officers, employees, agents or members shall have authority to bind the State or receive any benefits, workers' compensation or other emoluments provided by the State to its employees.

12. ASSIGNMENT/DELEGATION/SUBCONTRACTS. The Contractor shall not assign, or otherwise transfer any interest in this Agreement without the prior written consent of the N.H. Department of Administrative Services. None of the Services shall be subcontracted by the Contractor without the prior written consent of the State.

13. INDEMNIFICATION. The Contractor shall defend, indemnify and hold harmless the State, its officers and employees, from and against any and all losses suffered by the State, its officers and employees, and any and all claims, liabilities or penalties asserted against the State, its officers and employees, by or on behalf of any person, on account of, based or resulting from, arising out of (or which may be claimed to arise out of) the acts or omissions of the Contractor. Notwithstanding the foregoing, nothing herein contained shall be deemed to constitute a waiver of the sovereign immunity of the State, which immunity is hereby reserved to the State. This covenant in paragraph 13 shall survive the termination of this Agreement.

14. INSURANCE.

14.1 The Contractor shall, at its sole expense, obtain and maintain in force, and shall require any subcontractor or assignee to obtain and maintain in force, the following insurance:

14.1.1 comprehensive general liability insurance against all claims of bodily injury, death or property damage, in amounts of not less than \$250,000 per claim and \$2,000,000 per occurrence; and

14.1.2 fire and extended coverage insurance covering all property subject to subparagraph 9.2 herein, in an amount not less than 80% of the whole replacement value of the property.

14.2 The policies described in subparagraph 14.1 herein shall be on policy forms and endorsements approved for use in the State of New Hampshire by the N.H. Department of Insurance, and issued by insurers licensed in the State of New Hampshire.

14.3 The Contractor shall furnish to the Contracting Officer identified in block 1.9, or his or her successor, a certificate(s) of insurance for all insurance required under this Agreement. Contractor shall also furnish to the Contracting Officer identified in block 1.9, or his or her successor, certificate(s) of insurance for all renewal(s) of insurance required under this Agreement no later than fifteen (15) days prior to the expiration date of each of the insurance policies. The certificate(s) of insurance and any renewals thereof shall be attached and are incorporated herein by reference. Each

Contractor Initials: WCC
Date: 5/6/15

certificate(s) of insurance shall contain a clause requiring the insurer to endeavor to provide the Contracting Officer identified in block 1.9, or his or her successor, no less than ten (10) days prior written notice of cancellation or modification of the policy.

15. WORKERS' COMPENSATION.

15.1 By signing this agreement, the Contractor agrees, certifies and warrants that the Contractor is in compliance with or exempt from, the requirements of N.H. RSA chapter 281-A ("Workers' Compensation").

15.2 To the extent the Contractor is subject to the requirements of N.H. RSA chapter 281-A, Contractor shall maintain, and require any subcontractor or assignee to secure and maintain, payment of Workers' Compensation in connection with activities which the person proposes to undertake pursuant to this Agreement. Contractor shall furnish the Contracting Officer identified in block 1.9, or his or her successor, proof of Workers' Compensation in the manner described in N.H. RSA chapter 281-A and any applicable renewal(s) thereof, which shall be attached and are incorporated herein by reference. The State shall not be responsible for payment of any Workers' Compensation premiums or for any other claim or benefit for Contractor, or any subcontractor or employee of Contractor, which might arise under applicable State of New Hampshire Workers' Compensation laws in connection with the performance of the Services under this Agreement.

16. WAIVER OF BREACH. No failure by the State to enforce any provisions hereof after any Event of Default shall be deemed a waiver of its rights with regard to that Event of Default, or any subsequent Event of Default. No express failure to enforce any Event of Default shall be deemed a waiver of the right of the State to enforce each and all of the provisions hereof upon any further or other Event of Default on the part of the Contractor.

17. NOTICE. Any notice by a party hereto to the other party shall be deemed to have been duly delivered or given at the time of mailing by certified mail, postage prepaid, in a United States Post Office addressed to the parties at the addresses given in blocks 1.2 and 1.4, herein.

18. AMENDMENT. This Agreement may be amended, waived or discharged only by an instrument in writing signed by the parties hereto and only after approval of such amendment, waiver or discharge by the Governor and Executive Council of the State of New Hampshire.

19. CONSTRUCTION OF AGREEMENT AND TERMS. This Agreement shall be construed in accordance with the laws of the State of New Hampshire, and is binding upon and inures to the benefit of the parties and their respective successors and assigns. The wording used in this Agreement is the wording chosen by the parties to express their mutual intent, and no rule of construction shall be applied against or in favor of any party.

20. THIRD PARTIES. The parties hereto do not intend to benefit any third parties and this Agreement shall not be construed to confer any such benefit.

21. HEADINGS. The headings throughout the Agreement are for reference purposes only, and the words contained therein shall in no way be held to explain, modify, amplify or aid in the interpretation, construction or meaning of the provisions of this Agreement.

22. SPECIAL PROVISIONS. Additional provisions set forth in the attached EXHIBIT C are incorporated herein by reference.

23. SEVERABILITY. In the event any of the provisions of this Agreement are held by a court of competent jurisdiction to be contrary to any state or federal law, the remaining provisions of this Agreement will remain in full force and effect.

24. ENTIRE AGREEMENT. This Agreement, which may be executed in a number of counterparts, each of which shall be deemed an original, constitutes the entire Agreement and understanding between the parties, and supersedes all prior Agreements and understandings relating hereto.



Exhibit A

Scope of Services

1. Provisions Applicable to All Services

1.1. The Contractor shall work to make environmental data related to predicting bacteria counts in New Hampshire lakes available to the Division of Public Health Services and its partners in order to provide recommendations on whether action should be taken by stakeholders regarding beach quality on a daily basis.

1.2. The Contractor shall complete services in two (2) phases:

1.2.1. Phase I: Data Collection and Availability.

1.2.2. Phase II: Surveillance Tool Development

2. Scope of Work – Phase I: Data Collection & Availability

2.1. The Contractor shall transmit buoy data in real time to the USGS NWIS database from the near-beach buoy (at one lake) upon the contract effective date. Data shall include, but not be limited to:

2.1.1. Water temperature.

2.1.2. Specific conductance.

2.1.3. pH level.

2.1.4. Dissolved oxygen.

2.1.5. Water level data at 15 min. intervals

2.2. The Contractor shall transmit meteorological data from the meteorological beach station to the USGS database at 15 minute intervals from June through September of 2015. Data shall include, but not be limited to:

2.2.1. Wind speed and direction.

2.2.2. Precipitation.

2.2.3. Air temperature.

2.3. The Contractor shall make accessible:

2.3.1. Daily data on bacteria, geese counts, geese feces, swimmer counts and other relevant data such that hydrologic and meteorological data can be related including relevant calculated variables.

2.3.2. Test data of model outputs in the USGS database, which summarizes the predicted bacteria counts and closure recommendation.

2.4. The Contractor shall assist the NH EPHT with:

2.4.1. Connecting to the USGS database.

2.4.2. Technical questions related to the analysis of the data.

2.4.3. Developing metadata related to the database objects.



Exhibit A

2.4.4. Developing messaging related to the data and surveillance tools and/or services.

- 2.5. The Contractor shall make available NH EPHT near real time hydrologic and meteorological data that can be used to explain and predict high bacteria counts in New Hampshire's inland beaches.
- 2.6. The Contractor shall develop a preliminary tool to analyze hydrologic and meteorological data along with other related data, such as swimmer numbers and geese counts that uses predictive models for beach advisories.
- 2.7. The Contractor shall deliver data on hydrological and meteorological conditions in public USGS databases ensuring the data is QA/QC'd and available for query and reporting on the web with USGS support for accessing and using the data.

3. Scope of Work – Phase II: Surveillance Tool Development

This pilot effort will shed light on the process of predicting beach bacteria in New Hampshire and will have applicability to beaches throughout the State and elsewhere in the New England region. *Note: these costs do not include preparation and publication of a report in FY 17.* Public release of the tool/models will be contingent on documentation in a peer-reviewed publication.

- 3.1. The Contractor shall work in conjunction with scientists from NHDES and Plymouth State University to meet the requirements of Phase II: Surveillance Tool Development.
- 3.2. The Contractor shall develop a minimum of one (1) surveillance tool or service that:
 - 3.2.1. Provides predictive data indicating the likelihood of high beach bacteria counts in real time.
 - 3.2.2. Evaluates the performance of the underlying data and models.
- 3.3. The Contractor shall deliver a surveillance tool based on predictive models using:
 - 3.3.1. Logit regression.
 - 3.3.2. Regression.
 - 3.3.3. Classification models (RF and BRT).
- 3.4. The Contractor shall collaborate with DES and PSU scientists to assess the surveillance tool in Section 3.3:
 - 3.4.1. For the efficacy of predicting high beach bacteria counts.
 - 3.4.2. Using cross validation and/or holdout data.
- 3.5. The Contractor shall provide recommendations to the Department on extending the surveillance tool usage to inland lakes in New England.
6. The Contractor shall provide the Department with a written description of tool development .
7. The Contractor shall conduct preliminary evaluations of performance (uncertainty, classification tables, cross validation output) for predictions of bacteria counts (or thresholds) based on explanatory variable data.



Exhibit A

4. Work Plan Timeline

Task	FY 15					FY 16											
	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S
Phase 1																	
Collect data	X	X	X	X	X												
Data checking		X	X	X	X												
Phase 2																	
Data analysis - development						X	X	X									
Develop models								X	X	X	X						
Report prep / publication											X	X	X	X	X	X	
Reviews with NHDES/DHHS	X			X			X			X			X			X	

5. Deliverables

- 5.1. The Contractor shall complete data analysis and development no later than December 31, 2015
- 5.2. The Contractor shall conduct review meetings with NHDES and NHDHHS in May, April and November of 2015.
- 5.3. The Contractor shall conduct final review meetings with NHDES and NHDHHS in February, May and August of 2016.



Method and Conditions Precedent to Payment

1. The State shall pay the Contractor an amount not to exceed the Price Limitation, block 1.8, for the services provided by the Contractor pursuant to Exhibit A, Scope of Services in accordance with Exhibit B-1, Exhibit B-2 and Exhibit B-3.
2. The State shall have no obligation to expend funds under this agreement unless and until both the USGS or Plymouth State University are able to meet their financial contributions to the project.
3. The Hydrologic & Meteorological Data for Beaches Projected is funded in the amounts specified in Exhibit B-4, Joint Funding Agreement.
4. This contract is funded with federal funds made available under the Catalog of Federal Domestic Assistance, CFDA #93.283, Federal Agency, Centers for Disease Control and Prevention, Program Title, National Environmental Public Health Tracking Program – Network Implementation.
5. Payment for said services shall be made as follows:
 - 5.1. The Contractor will submit a quarterly invoice, which identifies and requests reimbursement for authorized expenses incurred in the previous months in accordance with Exhibit B-1, Exhibit B-2 and Exhibit B-3. The State shall make payment to the Contractor within thirty (30) days of receipt of each invoice for Contractor services provided pursuant to this Agreement.
 - 5.2. The invoice must be submitted to:

Financial Manager
Department of Health and Human Services
129 Pleasant Street
Concord, NH 03301
6. A final payment request shall be submitted no later than sixty (60) days from the Form P37, General Provisions, Contract Completion Date, block 1.7.
7. Notwithstanding anything to the contrary herein, the Contractor agrees that funding under this Contract may be withheld, in whole or in part, in the event of noncompliance with any State or Federal law, rule or regulation applicable to the services provided, or if the said services have not been completed in accordance with the terms and conditions of this Agreement.
8. When the contract price limitation is reached, the program shall continue to operate at full capacity at no charge to the State of New Hampshire for the duration of the contract period.
9. Notwithstanding paragraph 18 of the Form P-37, General Provisions, an amendment limited to transfer the funds within the budget and within the price limitation, can be made by written agreement of both parties and may be made without obtaining approval of the Governor and Executive Council.

New Hampshire Department of Health and Human Services
 COMPLETE ONE BUDGET FORM FOR EACH BUDGET PERIOD

Bidder/Program Name: U.S. Geological Survey

Budget Request for: Hydrologic & Meteorological Data Collection for Beaches

Budget Period: May 1, 2018 through June 30, 2018

1. Total Salary/Wages	\$ 3,358.40	\$ 2,732.03	\$ 6,090.43	\$ 956.54	\$ 790.56	\$ 1,740.12	\$ 2,396.66	\$ 1,957.45	\$ 4,350.31
2. Employee Benefits	-	-	-	-	-	-	-	-	-
3. Consultants	-	-	-	-	-	-	-	-	-
4. Equipment	-	-	-	-	-	-	-	-	-
5. Rental	407.00	337.09	738.09	116.29	84.80	210.89	290.71	236.49	527.20
6. Repair and Maintenance	-	-	-	-	-	-	-	-	-
7. Purchase/Depreciation	-	-	-	-	-	-	-	-	-
8. Supplies	-	-	-	-	-	-	-	-	-
9. Educational	-	-	-	-	-	-	-	-	-
10. Lab	-	-	-	-	-	-	-	-	-
11. Pharmacy	-	-	-	-	-	-	-	-	-
12. Medical	94.56	76.93	171.49	27.02	21.96	48.00	67.54	54.95	122.48
13. Office	-	-	-	-	-	-	-	-	-
14. Travel	-	-	-	-	-	-	-	-	-
15. Occupancy	-	-	-	-	-	-	-	-	-
16. Current Expenses	-	-	-	-	-	-	-	-	-
17. Telephone	-	-	-	-	-	-	-	-	-
18. Postage	-	-	-	-	-	-	-	-	-
19. Subscriptions	-	-	-	-	-	-	-	-	-
20. Audit and Legal	-	-	-	-	-	-	-	-	-
21. Insurance	-	-	-	-	-	-	-	-	-
22. Board Expenses	-	-	-	-	-	-	-	-	-
23. Software	-	-	-	-	-	-	-	-	-
24. Meetings/Communications	-	-	-	-	-	-	-	-	-
25. Staff Education and Training	-	-	-	-	-	-	-	-	-
26. Subcontract/Agreements	-	-	-	-	-	-	-	-	-
27. Other (Specify details in addendum)	-	-	-	-	-	-	-	-	-
TOTAL	\$ 3,859.96	\$ 3,149.06	\$ 7,005.91	\$ 1,162.28	\$ 897.18	\$ 2,000.81	\$ 2,707.51	\$ 2,242.89	\$ 5,000.00

Included As A Percent of Direct 87.3%

Contractor Initials: *MLL*
 Date: 5/6/18

New Hampshire Department of Health and Human Services
 COMPLETE ONE BUDGET FORM FOR EACH BUDGET PERIOD

Bidder/Program Name: U.S. Geological Survey

Budget Request for: Hydrologic & Meteorological Data Collection for Beaches

Budget Period: July 1, 2010 through September 30, 2010

1. Total Salary/Wages	\$ 13,785.57	\$ 11,214.43	\$ 25,000.00	\$ 10,358.18	\$ 8,410.82	\$ 18,768.00	\$ 3,448.39	\$ 2,803.81	\$ 6,250.00
2. Employee Benefits									
3. Consultants									
4. Equipment:									
Rental									
Repair and Maintenance									
Purchase/Depreciation									
5. Supplies:									
Educational									
Lab									
Pharmacy									
Medical									
Office									
6. Travel									
7. Occupancy									
8. Current Expenses									
Furniture									
Postage									
Subscriptions									
Audit and Legal									
Insurance									
Board Expenses									
9. Software									
10. Meeting/Communications									
11. Staff Education and Training									
12. Subcontract/Agreements									
13. Other (specify details mandatory)									
TOTAL	\$ 13,785.57	\$ 11,214.43	\$ 25,000.00	\$ 10,358.18	\$ 8,410.82	\$ 18,768.00	\$ 3,448.39	\$ 2,803.81	\$ 6,250.00

Indirect As A Percent of Direct 81.3%

Contractor Initials: *LLL*
 Date: *5/6/15*

Form 9-1366
(Oct. 2005)

**U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY**

Customer #: 600000093
 Agreement #: 1SENNH00000009
 Project #:
 TIN #: 02-600618
 Fixed Cost Agreement YES

JOINT FUNDING AGREEMENT

FOR

WATER RESOURCES INVESTIGATIONS

THIS AGREEMENT is entered into as of the, 1ST day of MAY, 2015 by the U.S. GEOLOGICAL SURVEY, UNITED STATES DEPARTMENT OF THE INTERIOR, party of the first part, and the STATE OF NEW HAMPSHIRE, DEPARTMENT OF HEALTH AND HUMAN SERVICES, party of the second part.

1. The parties hereto agree that subject to availability of appropriations and in accordance with their respective authorities there shall be maintained in cooperation COLLECT HYDROLOGIC AND METEOROLOGICAL DATA AND ANALYZE/MODEL THOSE DATE TO PREDICT BEACH BACTERIA LEVELS herein called the program. The USGS legal authority is 43 USC 36C; 43 USC 50; and 43 USC 50b.
2. The following amounts shall be contributed to cover all of the cost of the necessary field and analytical work directly related to this program. 2(b) Includes In-Kind Services in the amount of \$40,000.00
 - (a) by the party of the first part during the period

Amount	Date	to	Date
\$85,000.00	May 1, 2015		September 30, 2016
 - (b) by the party of the second part during the period

Amount	Date	to	Date
\$90,000.00	May 1, 2015		September 30, 2016
 - (c) Additional or reduced amounts by each party during the above period or succeeding periods as may be determined by mutual agreement and set forth in an exchange of letters between the parties.
 - (d) The performance period may be changed by mutual agreement and set forth in an exchange of letters between the parties.
3. The costs of this program may be paid by either party in conformity with the laws and regulations respectively governing each party.
4. The field and analytical work pertaining to this program shall be under the direction of or subject to periodic review by an authorized representative of the party of the first part.
5. The areas to be included in the program shall be determined by mutual agreement between the parties hereto or their authorized representatives. The methods employed in the field and office shall be those adopted by the part of the first part to insure the required standards of accuracy subject to modification by mutual agreement.
6. During the course of this program, all field and analytical work of either party pertaining to this program shall be open to the inspection of the other party, and if the work is not being carried on in a mutually satisfactory manner either party may terminate this agreement upon 60 days written notice to the other party.

Contractor Initials: UHL

Date: 5/6/15

3/18/2015


91366 - New Form


9-1366 (Continuation) Customer #: 6000000093 Agreement #: 15ENNH00000009

7. The original records resulting from this program will be deposited in the office of origin of those records. Upon request, copies of the original records will be provided to the office of the other party.
8. The maps, records, or reports resulting from this program shall be made available to the public as promptly as possible. The maps, records, or reports normally will be published by the party of the first part. However, the party of the second part reserves the right to publish the results of this program and, if already published by the party of the first part shall, upon request, be furnished by the party of the first part, at costs, impressions suitable for purposes of reproduction similar to that for which the original copy was prepared. The maps, records, or reports published by either party shall contain a statement of the cooperative relations between the parties.
9. USGS will issue billings utilizing Department of the Interior Bill for Collection (form DI-1040). Billing documents are to be rendered QUARTERLY. Payments of bills are due within 60 days after the billing date. If not paid by the due date, interest will be charged at the current Treasury rate for each 30 day period, or portion thereof, that the payment is delayed beyond the due date. (31 USC 3717; Comptroller General File B-212222, August 23, 1983).

<p>U.S. Geological Survey United States Department of the Interior</p> <p><u>USGS Point of Contact</u></p> <p>Name: Joseph Ayotte Address: 331 Commerce Way Pembroke, NH 03275 Telephone: 603-226-7810 Email: jayotte@usgs.gov</p>	<p>State of New Hampshire Department of Health and Human Services</p> <p><u>Customer Point of Contact</u></p> <p>Name: Brooke Dupee Address: 29 Hazen Drive Concord, NH 03301 Telephone: Email:</p>
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Signatures and Date

Signature:		Date:	5/6/15
Name:	Keith W. Robinson	Name:	
Title:	Director	Title:	

Signature:		Date:	5/18
Name:	Brook Dupee	Name:	
Title:	Bwan chief	Title:	

Contractor Initials: lll

Date: 5/6/15



SPECIAL PROVISIONS

Contractors Obligations: The Contractor covenants and agrees that all funds received by the Contractor under the Contract shall be used only as payment to the Contractor for services provided to eligible individuals and, in the furtherance of the aforesaid covenants, the Contractor hereby covenants and agrees as follows:

1. **Compliance with Federal and State Laws:** If the Contractor is permitted to determine the eligibility of individuals such eligibility determination shall be made in accordance with applicable federal and state laws, regulations, orders, guidelines, policies and procedures.
2. **Time and Manner of Determination:** Eligibility determinations shall be made on forms provided by the Department for that purpose and shall be made and remade at such times as are prescribed by the Department.
3. **Documentation:** In addition to the determination forms required by the Department, the Contractor shall maintain a data file on each recipient of services hereunder, which file shall include all information necessary to support an eligibility determination and such other information as the Department requests. The Contractor shall furnish the Department with all forms and documentation regarding eligibility determinations that the Department may request or require.
4. **Fair Hearings:** The Contractor understands that all applicants for services hereunder, as well as individuals declared ineligible have a right to a fair hearing regarding that determination. The Contractor hereby covenants and agrees that all applicants for services shall be permitted to fill out an application form and that each applicant or re-applicant shall be informed of his/her right to a fair hearing in accordance with Department regulations.
5. **Gratuities or Kickbacks:** The Contractor agrees that it is a breach of this Contract to accept or make a payment, gratuity or offer of employment on behalf of the Contractor, any Sub-Contractor or the State in order to influence the performance of the Scope of Work detailed in Exhibit A of this Contract. The State may terminate this Contract and any sub-contract or sub-agreement if it is determined that payments, gratuities or offers of employment of any kind were offered or received by any officials, officers, employees or agents of the Contractor or Sub-Contractor.
6. **Retroactive Payments:** Notwithstanding anything to the contrary contained in the Contract or in any other document, contract or understanding, it is expressly understood and agreed by the parties hereto, that no payments will be made hereunder to reimburse the Contractor for costs incurred for any purpose or for any services provided to any individual prior to the Effective Date of the Contract and no payments shall be made for expenses incurred by the Contractor for any services provided prior to the date on which the individual applies for services or (except as otherwise provided by the federal regulations) prior to a determination that the individual is eligible for such services.
7. **Conditions of Purchase:** Notwithstanding anything to the contrary contained in the Contract, nothing herein contained shall be deemed to obligate or require the Department to purchase services hereunder at a rate which reimburses the Contractor in excess of the Contractor's costs, at a rate which exceeds the amounts reasonable and necessary to assure the quality of such service, or at a rate which exceeds the rate charged by the Contractor to ineligible individuals or other third party funders for such service. If at any time during the term of this Contract or after receipt of the Final Expenditure Report hereunder, the Department shall determine that the Contractor has used payments hereunder to reimburse items of expense other than such costs, or has received payment in excess of such costs or in excess of such rates charged by the Contractor to ineligible individuals or other third party funders, the Department may elect to:
 - 7.1. Renegotiate the rates for payment hereunder, in which event new rates shall be established;
 - 7.2. Deduct from any future payment to the Contractor the amount of any prior reimbursement in excess of costs;



- 7.3. Demand repayment of the excess payment by the Contractor in which event failure to make such repayment shall constitute an Event of Default hereunder. When the Contractor is permitted to determine the eligibility of individuals for services, the Contractor agrees to reimburse the Department for all funds paid by the Department to the Contractor for services provided to any individual who is found by the Department to be ineligible for such services at any time during the period of retention of records established herein.

RECORDS: MAINTENANCE, RETENTION, AUDIT, DISCLOSURE AND CONFIDENTIALITY:

8. **Maintenance of Records:** In addition to the eligibility records specified above, the Contractor covenants and agrees to maintain the following records during the Contract Period:
- 8.1. **Fiscal Records:** books, records, documents and other data evidencing and reflecting all costs and other expenses incurred by the Contractor in the performance of the Contract, and all income received or collected by the Contractor during the Contract Period, said records to be maintained in accordance with accounting procedures and practices which sufficiently and properly reflect all such costs and expenses, and which are acceptable to the Department, and to include, without limitation, all ledgers, books, records, and original evidence of costs such as purchase requisitions and orders, vouchers, requisitions for materials, inventories, valuations of in-kind contributions, labor time cards, payrolls, and other records requested or required by the Department.
- 8.2. **Statistical Records:** Statistical, enrollment, attendance or visit records for each recipient of services during the Contract Period, which records shall include all records of application and eligibility (including all forms required to determine eligibility for each such recipient), records regarding the provision of services and all invoices submitted to the Department to obtain payment for such services.
- 8.3. **Medical Records:** Where appropriate and as prescribed by the Department regulations, the Contractor shall retain medical records on each patient/recipient of services.
9. **Audit:** Contractor shall submit an annual audit to the Department within 60 days after the close of the agency fiscal year. It is recommended that the report be prepared in accordance with the provision of Office of Management and Budget Circular A-133, "Audits of States, Local Governments, and Non Profit Organizations" and the provisions of Standards for Audit of Governmental Organizations, Programs, Activities and Functions, issued by the US General Accounting Office (GAO standards) as they pertain to financial compliance audits.
- 9.1. **Audit and Review:** During the term of this Contract and the period for retention hereunder, the Department, the United States Department of Health and Human Services, and any of their designated representatives shall have access to all reports and records maintained pursuant to the Contract for purposes of audit, examination, excerpts and transcripts.
- 9.2. **Audit Liabilities:** In addition to and not in any way in limitation of obligations of the Contract, it is understood and agreed by the Contractor that the Contractor shall be held liable for any state or federal audit exceptions and shall return to the Department, all payments made under the Contract to which exception has been taken or which have been disallowed because of such an exception.
10. **Confidentiality of Records:** All information, reports, and records maintained hereunder or collected in connection with the performance of the services and the Contract shall be confidential and shall not be disclosed by the Contractor, provided however, that pursuant to state laws and the regulations of the Department regarding the use and disclosure of such information, disclosure may be made to public officials requiring such information in connection with their official duties and for purposes directly connected to the administration of the services and the Contract; and provided further, that the use or disclosure by any party of any information concerning a recipient for any purpose not directly connected with the administration of the Department or the Contractor's responsibilities with respect to purchased services hereunder is prohibited except on written consent of the recipient, his attorney or guardian.



Notwithstanding anything to the contrary contained herein the covenants and conditions contained in the Paragraph shall survive the termination of the Contract for any reason whatsoever.

11. **Reports: Fiscal and Statistical:** The Contractor agrees to submit the following reports at the following times if requested by the Department.
 - 11.1. **Interim Financial Reports:** Written interim financial reports containing a detailed description of all costs and non-allowable expenses incurred by the Contractor to the date of the report and containing such other information as shall be deemed satisfactory by the Department to justify the rate of payment hereunder. Such Financial Reports shall be submitted on the form designated by the Department or deemed satisfactory by the Department.
 - 11.2. **Final Report:** A final report shall be submitted within thirty (30) days after the end of the term of this Contract. The Final Report shall be in a form satisfactory to the Department and shall contain a summary statement of progress toward goals and objectives stated in the Proposal and other information required by the Department.
12. **Completion of Services: Disallowance of Costs:** Upon the purchase by the Department of the maximum number of units provided for in the Contract and upon payment of the price limitation hereunder, the Contract and all the obligations of the parties hereunder (except such obligations as, by the terms of the Contract are to be performed after the end of the term of this Contract and/or survive the termination of the Contract) shall terminate, provided however, that if, upon review of the Final Expenditure Report the Department shall disallow any expenses claimed by the Contractor as costs hereunder the Department shall retain the right, at its discretion, to deduct the amount of such expenses as are disallowed or to recover such sums from the Contractor.
13. **Credits:** All documents, notices, press releases, research reports and other materials prepared during or resulting from the performance of the services of the Contract shall include the following statement:
 - 13.1. The preparation of this (report, document etc.) was financed under a Contract with the State of New Hampshire, Department of Health and Human Services, with funds provided in part by the State of New Hampshire and/or such other funding sources as were available or required, e.g., the United States Department of Health and Human Services.
14. **Prior Approval and Copyright Ownership:** All materials (written, video, audio) produced or purchased under the contract shall have prior approval from DHHS before printing, production, distribution or use. The DHHS will retain copyright ownership for any and all original materials produced, including, but not limited to, brochures, resource directories, protocols or guidelines, posters, or reports. Contractor shall not reproduce any materials produced under the contract without prior written approval from DHHS.
15. **Operation of Facilities: Compliance with Laws and Regulations:** In the operation of any facilities for providing services, the Contractor shall comply with all laws, orders and regulations of federal, state, county and municipal authorities and with any direction of any Public Officer or officers pursuant to laws which shall impose an order or duty upon the contractor with respect to the operation of the facility or the provision of the services at such facility. If any governmental license or permit shall be required for the operation of the said facility or the performance of the said services, the Contractor will procure said license or permit, and will at all times comply with the terms and conditions of each such license or permit. In connection with the foregoing requirements, the Contractor hereby covenants and agrees that, during the term of this Contract the facilities shall comply with all rules, orders, regulations, and requirements of the State Office of the Fire Marshal and the local fire protection agency, and shall be in conformance with local building and zoning codes, by-laws and regulations.
16. **Equal Employment Opportunity Plan (EEOP):** The Contractor will provide an Equal Employment Opportunity Plan (EEOP) to the Office for Civil Rights, Office of Justice Programs (OCR), if it has received a single award of \$500,000 or more. If the recipient receives \$25,000 or more and has 50 or



more employees, it will maintain a current EEO on file and submit an EEO Certification Form to the OCR, certifying that its EEO is on file. For recipients receiving less than \$25,000, or public grantees with fewer than 50 employees, regardless of the amount of the award, the recipient will provide an EEO Certification Form to the OCR certifying it is not required to submit or maintain an EEO. Non-profit organizations, Indian Tribes, and medical and educational institutions are exempt from the EEO requirement, but are required to submit a certification form to the OCR to claim the exemption. EEO Certification Forms are available at: <http://www.ojp.usdoj/about/ocr/pdfs/cert.pdf>.

17. **Limited English Proficiency (LEP):** As clarified by Executive Order 13166, Improving Access to Services for persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination on the basis of limited English proficiency (LEP). To ensure compliance with the Omnibus Crime Control and Safe Streets Act of 1968 and Title VI of the Civil Rights Act of 1964, Contractors must take reasonable steps to ensure that LEP persons have meaningful access to its programs.
18. **Pilot Program for Enhancement of Contractor Employee Whistleblower Protections:** The following shall apply to all contracts that exceed the Simplified Acquisition Threshold as defined in 48 CFR 2.101 (currently, \$150,000)

CONTRACTOR EMPLOYEE WHISTLEBLOWER RIGHTS AND REQUIREMENT TO INFORM EMPLOYEES OF WHISTLEBLOWER RIGHTS (SEP 2013)

- (a) This contract and employees working on this contract will be subject to the whistleblower rights and remedies in the pilot program on Contractor employee whistleblower protections established at 41 U.S.C. 4712 by section 828 of the National Defense Authorization Act for Fiscal Year 2013 (Pub. L. 112-239) and FAR 3.908.
- (b) The Contractor shall inform its employees in writing, in the predominant language of the workforce, of employee whistleblower rights and protections under 41 U.S.C. 4712, as described in section 3.908 of the Federal Acquisition Regulation.
- (c) The Contractor shall insert the substance of this clause, including this paragraph (c), in all subcontracts over the simplified acquisition threshold.
19. **Subcontractors:** DHHS recognizes that the Contractor may choose to use subcontractors with greater expertise to perform certain health care services or functions for efficiency or convenience, but the Contractor shall retain the responsibility and accountability for the function(s). Prior to subcontracting, the Contractor shall evaluate the subcontractor's ability to perform the delegated function(s). This is accomplished through a written agreement that specifies activities and reporting responsibilities of the subcontractor and provides for revoking the delegation or imposing sanctions if the subcontractor's performance is not adequate. Subcontractors are subject to the same contractual conditions as the Contractor and the Contractor is responsible to ensure subcontractor compliance with those conditions.
- When the Contractor delegates a function to a subcontractor, the Contractor shall do the following:
- 19.1. Evaluate the prospective subcontractor's ability to perform the activities, before delegating the function
 - 19.2. Have a written agreement with the subcontractor that specifies activities and reporting responsibilities and how sanctions/revocation will be managed if the subcontractor's performance is not adequate
 - 19.3. Monitor the subcontractor's performance on an ongoing basis



- 19.4. Provide to DHHS an annual schedule identifying all subcontractors, delegated functions and responsibilities, and when the subcontractor's performance will be reviewed
- 19.5. DHHS shall, at its discretion, review and approve all subcontracts.

If the Contractor identifies deficiencies or areas for improvement are identified, the Contractor shall take corrective action.

DEFINITIONS

As used in the Contract, the following terms shall have the following meanings:

COSTS: Shall mean those direct and indirect items of expense determined by the Department to be allowable and reimbursable in accordance with cost and accounting principles established in accordance with state and federal laws, regulations, rules and orders.

DEPARTMENT: NH Department of Health and Human Services.

FINANCIAL MANAGEMENT GUIDELINES: Shall mean that section of the Contractor Manual which is entitled "Financial Management Guidelines" and which contains the regulations governing the financial activities of contractor agencies which have contracted with the State of NH to receive funds.

PROPOSAL: If applicable, shall mean the document submitted by the Contractor on a form or forms required by the Department and containing a description of the Services to be provided to eligible individuals by the Contractor in accordance with the terms and conditions of the Contract and setting forth the total cost and sources of revenue for each service to be provided under the Contract.

UNIT: For each service that the Contractor is to provide to eligible individuals hereunder, shall mean that period of time or that specified activity determined by the Department and specified in Exhibit B of the Contract.

FEDERAL/STATE LAW: Wherever federal or state laws, regulations, rules, orders, and policies, etc. are referred to in the Contract, the said reference shall be deemed to mean all such laws, regulations, etc. as they may be amended or revised from the time to time.

CONTRACTOR MANUAL: Shall mean that document prepared by the NH Department of Administrative Services containing a compilation of all regulations promulgated pursuant to the New Hampshire Administrative Procedures Act. NH RSA Ch 541-A, for the purpose of implementing State of NH and federal regulations promulgated thereunder.

SUPPLANTING OTHER FEDERAL FUNDS: The Contractor guarantees that funds provided under this Contract will not supplant any existing federal funds available for these services.



REVISIONS TO GENERAL PROVISIONS

1. Subparagraph 4 of the General Provisions of this contract, Conditional Nature of Agreement, is replaced as follows:
 4. **CONDITIONAL NATURE OF AGREEMENT.**
Notwithstanding any provision of this Agreement to the contrary, all obligations of the State hereunder, including without limitation, the continuance of payments, in whole or in part, under this Agreement are contingent upon continued appropriation or availability of funds, including any subsequent changes to the appropriation or availability of funds affected by any state or federal legislative or executive action that reduces, eliminates, or otherwise modifies the appropriation or availability of funding for this Agreement and the Scope of Services provided in Exhibit A, Scope of Services, in whole or in part. In no event shall the State be liable for any payments hereunder in excess of appropriated or available funds. In the event of a reduction, termination or modification of appropriated or available funds, the State shall have the right to withhold payment until such funds become available, if ever. The State shall have the right to reduce, terminate or modify services under this Agreement immediately upon giving the Contractor notice of such reduction, termination or modification. The State shall not be required to transfer funds from any other source or account into the Account(s) identified in block 1.6 of the General Provisions, Account Number, or any other account, in the event funds are reduced or unavailable.
2. Subparagraph 10 of the General Provisions of this contract, Termination, is amended by adding the following language:
 - 10.1 The State may terminate the Agreement at any time for any reason, at the sole discretion of the State, 30 days after giving the Contractor written notice that the State is exercising its option to terminate the Agreement.
 - 10.2 In the event of early termination, the Contractor shall, within 15 days of notice of early termination, develop and submit to the State a Transition Plan for services under the Agreement, including but not limited to, identifying the present and future needs of clients receiving services under the Agreement and establishes a process to meet those needs.
 - 10.3 The Contractor shall fully cooperate with the State and shall promptly provide detailed information to support the Transition Plan including, but not limited to, any information or data requested by the State related to the termination of the Agreement and Transition Plan and shall provide ongoing communication and revisions of the Transition Plan to the State as requested.
 - 10.4 In the event that services under the Agreement, including but not limited to clients receiving services under the Agreement are transitioned to having services delivered by another entity including contracted providers or the State, the Contractor shall provide a process for uninterrupted delivery of services in the Transition Plan.
 - 10.5 The Contractor shall establish a method of notifying clients and other affected individuals about the transition. The Contractor shall include the proposed communications in its Transition Plan submitted to the State as described above.
3. The Department reserves the right to renew the contract for up to two (2) additional years, subject to the continued availability of funds, satisfactory performance of contracted services and Governor and Executive Council approval.
4. Subparagraph 9 of Exhibit C, Special Provisions of this contract, is deleted and the following paragraph is added:
 9. **Audit:** Contractor shall submit an annual audit to the Department within 120 days after the close of the agency fiscal year. It is recommended that the report be prepared in accordance with the provision of Office of Management and Budget Circular A-133,



"Audits of States, Local Governments, and Non Profit Organizations" and the provisions of Standards for Audit of Governmental Organizations, Programs, Activities and Functions, issued by the US General Accounting Office (GAO standards) as they pertain to financial compliance audits.

- 9.1. Audit and Review: During the term of this Contract and the period for retention hereunder, the Department, the United States Department of Health and Human Services, and any of their designated representatives shall have access to all reports and records maintained pursuant to the Contract for purposes of audit, examination, excerpts and transcripts.
- 9.2. Audit Liabilities: In addition to and not in any way in limitation of obligations of the Contract, it is understood and agreed by the Contractor that the Contractor shall be held liable for any state or federal audit exceptions and shall return to the Department, all payments made under the Contract to which exception has been taken or which have been disallowed because of such an exception.