

AN ORDINANCE 2008-03-06-0177

APPROVING AN AGREEMENT WITH THE U.S. DEPARTMENT OF THE INTERIOR U.S. GEOLOGICAL SURVEY (USGS) FOR USGS TO TEST SEDIMENTS IN LOWER LEON CREEK FOR THE SAN ANTONIO METROPOLITAN HEALTH DISTRICT'S PUBLIC CENTER FOR ENVIRONMENTAL HEALTH FOR THE PERIOD OF FEBRUARY 1, 2008 THROUGH SEPTEMBER 30, 2008 FOR THE AMOUNT OF \$40,000.00.

* * * * *

WHEREAS, the Public Center for Environmental Health (PCEH) of the San Antonio Metropolitan Health District (SAMHD) was established for the purpose of monitoring environmental conditions that could potentially cause adverse health effects within the San Antonio area community; and

WHEREAS, the Lower Leon Creek flows through the former Kelly Air Force Base and part of the surrounding community, and citizens living in the area have expressed concerns about contaminants in Lower Leon Creek; and

WHEREAS, in response to their concerns, the Seafood Safety Division of the Texas Department of State Health Services (TDSHS) tested the edible portion of fish caught in Lower Leon Creek for contaminants; and

WHEREAS, in August 2003, TDSHS issued a Fish Consumption Advisory for Lower Leon Creek due to finding elevated levels of polychlorinated biphenyls (PCBs) in the fish; and

WHEREAS, the Texas Commission on Environmental Quality (TCEQ) is conducting a follow-up study to test for PCB contamination. TCEQ collected fish during November 2007 and will test the edible portions of the fish for PCB contamination; and

WHEREAS, to expand this study, the PCEH and the U.S. Department of the Interior U.S. Geological Survey plan to conduct sediment sampling that will contribute additional important data to be used in the reassessment of the TDSHS Fish Advisory; **NOW THEREFORE:**

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF SAN ANTONIO:

SECTION 1. The City Manager or her designee, or the Director of the San Antonio Metropolitan Health District or his designee, is authorized to execute an agreement with the U.S. Department of the Interior U.S. Geological Survey (USGS) for USGS to test sediments in Lower Leon Creek for the San Antonio Metropolitan Health District's Public Center for Environmental Health for the period of February 1, 2008 through September 30, 2008 for the amount of \$40,000.00. A copy of the agreement is attached hereto and incorporated herein for all purposes as Attachment I.

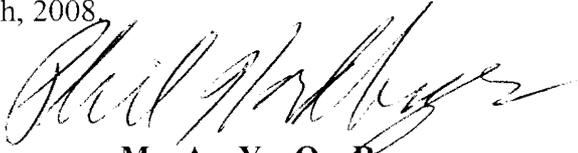
SECTION 2. Fund 2603236001 entitled PCEH 2007-2008 and Internal Order 136000000376, are hereby designated for use in the accounting for the fiscal transaction of this agreement.

SECTION 3. The sum of up to \$40,000.00 is hereby appropriated in the above designated fund and will be disbursed from GL 5201040 entitled Fees to Professional Contractors. Payment is authorized to the U.S. Department of the Interior U. S. Geological Survey.

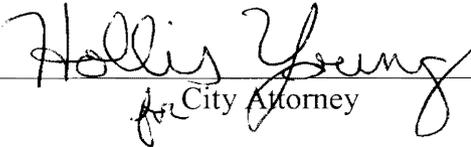
SECTION 4. The financial allocations in this Ordinance are subject to approval by the Director of Finance, City of San Antonio. The Director of Finance may, subject to concurrence by the City Manager or the City Manager's designee, correct allocations to specific SAP Fund Numbers, SAP Project Definitions, SAP WBS Elements, SAP Internal Orders, SAP Fund Centers, SAP Cost Centers, SAP Functional Areas, SAP Funds Reservation Document Numbers, and SAP GL Accounts as necessary to carry out the purpose of this Ordinance.

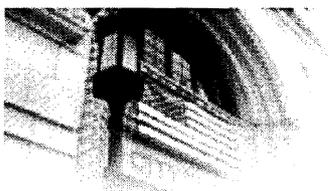
SECTION 5. This ordinance shall be effective on and after March 16, 2008.

PASSED AND APPROVED this 6th day of March, 2008

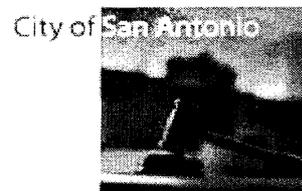

M A Y O R
PHIL HARDBERGER

ATTEST: 
City Clerk

APPROVED AS TO FORM: 
for City Attorney



Request for
COUNCIL



Agenda Voting Results - 24

Name:	7, 9, 10, 11, 17, 19, 20, 21B, 22, 23, 24, 25, 27, 28, 29A, 29B, 29C, 29D, 29E, 29F, 29G						
Date:	03/06/2008						
Time:	10:24:49 AM						
Vote Type:	Motion to Approve						
Description:	An Ordinance approving an agreement with the U.S. Department of the Interior U.S. Geological Survey (USGS) for USGS to test sediments in Lower Leon Creek for the San Antonio Metropolitan Health District's Public Center for Environmental Health for the period of February 1, 2008 through September 30, 2008 for the amount of \$40,000.00. [Frances A. Gonzalez, Assistant City Manager; Dr. Fernando A. Guerra, Director, Health]						
Result:	Passed						
Voter	Group	Not Present	Yea	Nay	Abstain	Motion	Second
Phil Hardberger	Mayor		x				
Mary Alice P. Cisneros	District 1		x				
Sheila D. McNeil	District 2		x				
Jennifer V. Ramos	District 3		x				
Philip A. Cortez	District 4	x					
Lourdes Galvan	District 5		x			x	
Delicia Herrera	District 6		x				
Justin Rodriguez	District 7		x				
Diane G. Cibrian	District 8		x				
Louis E. Rowe	District 9		x				
John G. Clamp	District 10		x				x



CMS or Ordinance Number: CN4600007198

TSLGRS File Code:1000-25

Document Title:
CONT - 4600007198

Commencement Date:
2/1/2008

Expiration Date:
9/30/2008

Form 9-1366
(Oct. 2005)

U.S. Department of the Interior
U.S. Geological Survey
Joint Funding Agreement
FOR
Water Resources Investigations

Agreement #: 08C4TX142000000
Customer #: TX142
Project #:
TIN #: 74-6002070
USGS DUNS #: 128821266

Fixed Cost Agreement Yes No

THIS AGREEMENT is entered into as of the **1st** day of **February, 2008**, by the U.S. GEOLOGICAL SURVEY, UNITED STATES DEPARTMENT OF THE INTERIOR, party of the first part, and the **CITY OF SAN ANTONIO**, party of the second part.

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 **bed-sediment data collection**, 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 \$0.00

(a) **\$0** by the party of the first part during the period
February 1, 2008 to September 30, 2008

(b) **\$40,000** by the party of the second part during the period
February 1, 2008 to September 30, 2008

(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 party 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.

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 cost, 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.).

Form 9-1366
Continued

U. S. Department of the Interior
U. S. Geological Survey
Joint Funding Agreement

Agreement #: 08C4TX142000000
Customer #: TX142
Project #:
TIN #: 74-6002070
USGS DUNS #: 128821266

USGS Technical Point of Contact

Name: George B. Ozuna
Supervisory Hydrologist
Address: U.S. Geological Survey
5563 De Zavala Rd., Suite 290
San Antonio, TX 78249
Telephone: (210) 691-9225
Fax: (210) 691-9270
Email: gbozuna@usgs.gov

Customer Technical Point of Contact

Name: Kyle Cunningham
Program Manager, PCEH
Address: SAMHD
2513 Kennedy Cir., Ste.105
Brooks City-Base, TX 78235-5116
Telephone: (210) 532-5471
Fax: (210) 532-3747
Email: kcunningham@sanantonio.gov

USGS Billing Point of Contact

Name: Dolores G. Stoner
Administrative Officer
Address: U.S. Geological Survey, TX WSC
8027 Exchange Dr
Austin, TX 78754
Telephone: (512) 927-3549
Fax: (512) 927-3590
Email: dgstoner@usgs.gov

Customer Billing Point of Contact

Name: Kyle Cunningham
Program Manager, PCEH
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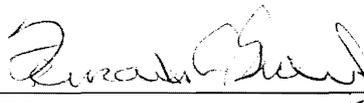
**U.S. GEOLOGICAL SURVEY
UNITED STATES
DEPARTMENT OF THE INTERIOR**

CITY OF SAN ANTONIO

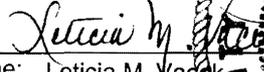
Signature

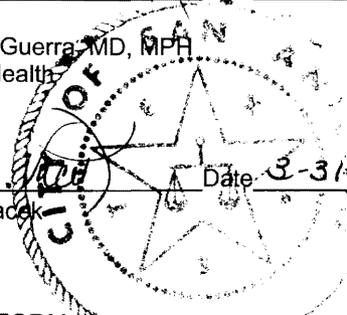
By  Date FEB 07 2008
Name: **Ann F. Ardis**
Title: **Acting Director**

Signatures

By  Date 3-22-08
Name: **Fernando A. Guerra MD, MPH**
Title: **Director of Health**

ATTEST:

By  Date 3-31-08
Name: **Leticia M. Yack**
Title: **City Clerk**



APPROVED AS TO FORM:

By  Date 3/19/08
Name: **Michael D. Bernard**
Title: **City Attorney**

CHARACTERIZATION OF SEDIMENT QUALITY IN THE SAN ANTONIO AREA, SOUTH-CENTRAL TEXAS

by
Rebecca B. Lambert and Jennifer T. Wilson

INTRODUCTION

Recent growth in the San Antonio metropolitan area has propelled the region to a ranking of the ninth most populous city in the United States (U.S. Census, 2001). Accompanying this growth is the rapid urbanization of previously undisturbed watersheds. Cores of bottom sediments collected in Lorence Creek Lake in the Upper Salado Creek watershed in August 1996 (Ging and others, 1999) have shown that there are increasing concentrations of zinc, polycyclic aromatic hydrocarbons (PAHs), and chlordane through time. These concentrations are expected to increase as urbanization of the watersheds in the San Antonio area increases. The coring of the bottom samples also showed that there were detectable concentrations of lead, DDT, and PCBs in the sediment. The steady increases in chlordane and PAHs raise long-term concerns for the health of aquatic life in the watershed and for the quality of urban runoff (Ging and others, 1999; Agency for Toxic Substances and Disease Registry, 2001). The increases in chlordane and PAHs may be an indicator of water-quality degradation from urbanization (Ging and others, 1999). In the Lower Leon Creek watershed, PCB's have been detected in fish tissue samples collected in the Leon Creek watershed (S.A. Express-news, written commun.).

Most of these trace elements and many anthropogenic organic compounds are known to associate with sediments. For this reason, some researchers have recognized that studies of water quality that include hydrophobic constituents must necessarily include studies of sediment chemistry. Bradford and Horowitz (1982, p. 1) note that, "The strong association of numerous toxic chemicals--both organic (such as PCB's, DDT, Mirex, and Kepone) and inorganic (such as arsenic, mercury, cadmium, and lead)--with sediment means that much of the downstream transport of these materials can not be detected or evaluated solely through the sampling and analysis of water."

Many of these contaminants may be derived from intermittent or storm-related sources, thus single or periodic water sampling(s) may not detect the contaminants. Most of these trace elements and many anthropogenic organic compounds are known to associate with sediments. For this reason, some researchers have recognized that studies of water quality that include hydrophobic constituents must necessarily include studies of sediment chemistry. Bradford and Horowitz (1982, p. 1) note that, "The strong association of numerous toxic chemicals--both organic (such as PCB's, DDT, Mirex, and Kepone) and inorganic (such as arsenic, mercury, cadmium, and lead)--with sediment means that much of the downstream transport of these materials can not be detected or evaluated solely through the sampling and analysis of water." Streambed sediments can provide a time-integrated sample of particulates transported by a stream. Additionally, streambed sediments can be used to characterize the geographic distributions of contaminants in relation to contaminant sources.

OBJECTIVE

The objective of this study is to determine the occurrence and distribution of selected inorganic and organic hydrophobic (sediment-bound) constituents in watersheds in the San Antonio Area, south-central Texas (fig. 1). The geographic scope of the study includes the Medio Creek, Elm Creek, Leon Creek, Salado Creek, Calaveras Creek, Martinez Creek, and San Antonio River watersheds and will be accomplished by sampling both the surficial bed sediment and suspended sediment in streambeds in the study area.

The study QAPP will be modified from the existing QAPP "The Quality Assurance Project Plan, Revision 01, for the Leon Creek Watershed Texas Interim Feasibility Study Stormwater Collection and Analysis prepared by the San Antonio River Authority (Effective period: November 1, 2006 to November 1, 2008)" that exists for sediment sampling in the Leon Creek watershed. If possible, an appendix will be added/referenced to the current QAPP to cover the additional sediment sampling in the other watersheds in the San Antonio area. Input from the Texas Water Science Center's (WSC's) Quality Assurance Plan (QAP) team will be incorporated into the appendix along with input from the QAP teams at SARA and TCEQ.

Task 3 – Collect surficial bed sediment and large-volume suspended sediment (LVSS) samples.

A field reconnaissance will be conducted prior to collection of the environmental samples to determine suitable sample sites. Information obtained from the historical data review (Task 1) will be used to help determine locations of sample sites. Other factors used in selecting sample sites will include range in streamflow discharge, sediment concentration, and site access. Surficial bed sediment samples and large-volume suspended sediment (LVSS) samples will be collected from selected watersheds in the San Antonio Area using a strategy similar to the one used to sample for PCB's in Donna Canal in South Texas (Mahler and others, 2002). Up to 36 samples – 32 environmental and 4 quality assurance samples will be collected from the watersheds. Eight samples (3 bed sediment and 5 LVSS) will be collected from each of the more highly urbanized areas of 1) Leon Creek, 2) Salado Creek and 3) San Antonio River watersheds. The Leon Creek samples will be collected in FY07 and, where possible, sampling locations will be co-located with the fish tissue collection work that is to be conducted in the late summer 2007 by the Texas Commission on Environmental Quality (TCEQ – Kerry Niemann). Four samples (2 bed sediment and 2 LVSS) will be collected from each of the less urbanized watersheds including 1) Medio Creek, 2) Elm Creek, 3) Martinez Creek, and 4) Calaveras Creek. The less urbanized watersheds will provide information on regional background concentrations of these constituents. One QA sample will be a field split sample and the remaining QA samples will be sequential replicates. Results from the sediment analyses will allow for the comparison of sediment chemistry between watersheds. Some of these variations in chemistry may be the result of variations in land use between the watersheds.

Depending on the flow characteristics and sediment load in each of the streams, collection of bed sediment and suspended sediment samples will be collected following and during storms that generate sufficient runoff and sediment. Bed sediment samples will be collected during from fine-grained surficial sediments from several depositional zones in a stream reach and then composited into a single sample for that reach. The LVSS sampling will be done at baseflow if there is a sufficient sediment load or soon after a storm when there is access to the sampling site.

Bed sediment samples for inorganic and organic analyses will be wet-sieved using native water and will be processed through a 2.0-millimeter stainless-steel-mesh sieve for organic contaminant analysis and a 63-micrometer nylon-cloth sieve for trace-element analysis. Samples for inorganic analyses will be freeze dried and pulverized before sending to the analytical laboratory. Field sieving will be done to reduce the natural variability among samples caused by variations in particle size, thus allowing more informative comparisons among samples. Organic carbon and grain-size distributions will be measured, allowing for the normalization of concentrations with respect to these variables to facilitate comparisons among samples.

Large-volume suspended sediment sample collection and processing will be done following the methods of Mahler and Van Metre (2003). A passive suspended-sediment sampler consisting of a 25-L polyethylene bottle inside a steel cylinder with an intake line pointed upstream and an air exhaust line will be used to collect "first flush" grab samples at the sampling sites. The LVSS sample is removed from the passive sampler after the creek stormflow has subsided and transported to the local USGS laboratory for processing. Each LVSS sample will be filtered using a 0.45 Teflon membrane to isolate the sediment. The sediment then is gently scraped from the filter and transferred into a sample jar for shipment to the analytical laboratory. Samples for inorganic analyses will be freeze dried and pulverized before sending to the analytical laboratory.

Bed sediment samples will be analyzed for grain size and selected inorganic and organic compounds. LVSS samples will be analyzed for grain size, suspended-sediment concentrations, and selected inorganic and organic compounds. The inorganic compounds include major and trace elements (including mercury and forms of carbon) and the organic compounds include organochlorine pesticides (DDT, Chlordane, etc.), PCB Aroclors, and selected PAHs. Bed sediment

and LVSS samples will be sent to the National Water Quality Lab (NWQL) for chemical analysis. Streambed sediment samples will be sent to the Iowa sediment lab for grain size analysis. Suspended sediment concentrations will be determined from samples submitted to the Louisiana sediment lab.

Task 4 – Prepare summary report.

Data results will be provided to the cooperating agencies in a digital spreadsheet format. The chemical data will be interpreted and presented in a USGS Scientific Investigations Report (SIR) that will describe the spatial distribution of compounds detected and the concentrations of the compounds analyzed. A USGS factsheet summarizing the data for a lay audience may be produced at a later date if funds permit.

Budget

Funding for the project is a cooperative effort between the City of San Antonio Metropolitan Health District (MHD), the San Antonio River Authority (SARA), and the U.S. Geological Survey (USGS)(table 1).

Table 1. Funding for San Antonio Sediment Study

SOURCE	FY07	FY08	FY09	TOTAL
USGS	\$15,000	\$44,450 ¹	\$21,100	\$80,550
City of San Antonio (MHD)	\$38,000	\$40,000	--	\$78,000
San Antonio River Authority (SARA)	--	\$111,500	\$53,700	\$165,200
Total	\$53,000	\$195,950	\$74,800	\$323,750

¹ The \$44,450 in funds from the USGS are matched with the funding received from the San Antonio River Authority (SARA). There are no USGS funds matched with the \$40,000 from the City of San Antonio in Fiscal Year 2008.

Human Resources

Rebecca Lambert, USGS-South Texas Programs Office, will serve as project chief for the study. Technical and research assistance will be provided by staff of the USGS-Reconstructed Trends National Synthesis Study located in the Texas Water Science Center office in Austin, Texas and the San Antonio Programs Office .

Timeline

Tasks	FY07		FY08				FY09			
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1. Historical data										
2. Prepare QAPP										
3. Collect samples										
4. Prepare report										
5. Review/publish										

SELECTED REFERENCES

Agency for Toxic Substances and Disease Registry, 2001, ToxFAQ for polychlorinated biphenyls (PCBs): Accessed February 16, 2007, at URL <http://www.atsdr.cdc.gov/tfacts17.html>.

Bradford, W.L., and Horowitz, A.J., 1982, The role of sediments in the chemistry of aquatic systems--Proceedings of the Sediment Chemistry Workshop, February 8-12, 1982: U.S. Geological Survey Circular 969, 75 p.

Ging, P.B., Van Metre, P.C., and Callender, Edward, 1999, Bottom sediments of Lorence Creek Lake, San Antonio, Texas, reflect contaminant trends in an urbanizing watershed: U.S. Geological Survey Fact Sheet FS-149-99, 4 p.

Mahler, B.J., P.C. Van Metre, and Miranda, R.M., 2002, Occurrence of polychlorinated biphenyls (PCBs) on suspended sediment in the Donna Canal, Hidalgo County, Texas, 1999-2001: U.S. Geological Survey Fact Sheet 016-02, 4 p.

Mahler, B.J., and P.C. Van Metre, 2003, A simplified approach for monitoring hydrophobic organic contaminants associated with suspended sediment: Methodology and applications: Environmental Contamination and Toxicology, v. 44, p. 288-297.

Shelton L.R., and Capel, P.D., 1994, Guideline for collecting and processing samples of streambed sediment for analysis of trace elements and organic contaminants for the National Water-Quality Assessment Program: U.S. Geological Survey Open-File Report 94-458, 20 p.

United States Census Bureau, 2001, Ranking Tables for Incorporated Places of 100,000 or More: Population in 2000 and Population Change from 1990 to 2000 (PHC-T-5): Table 2, Incorporated Places of 100,000 or More Ranked by Population: Accessed May 1, 2007, at URL <http://www.census.gov/population/www/cen2000/phc-t5.html>.



CMS or Ordinance Number: OR00000200803060177

TSLGRS File Code: 1000-05

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ORD - 00000200803060177

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3/6/2008