



HISTORIC  
FRANKLIN  
TENNESSEE

ITEM #21  
BOMA  
06/22/2010

# MEMORANDUM

---

June 7, 2010

**TO:** Board of Mayor and Aldermen

**FROM:** David Parker, City Engineer/CIP Executive  
Eric Stuckey, City Administrator

**SUBJECT:** **Amendment No 1 to Smith Seckman Reid, Inc (SSR)  
Professional Services Agreement for Maintenance of  
The Stream Gauging Stations**

### Purpose

This memo is to provide the information to the Franklin Board of Mayor and Aldermen (BOMA) to enable them to make an informed decision as to the proposed Amendment No 1 to the SSR Professional Services Agreement for the Maintenance of the City's Stream Gauging Stations.

### Background

On September 22, 2009, the City entered into an Agreement with SSR for the Operation & Maintenance of the City's Stream Gauging Stations. Due to the recent flooding event (May 1<sup>st</sup> – 3<sup>rd</sup>), we have experienced extensive damage to a number of our stations and are in need to repair or replace the equipment in these stations. The proposed Amendment No 1 is to authorize SSR to do this work under their existing Agreement.

### Financial Impact

The total cost for repair/replacement of the Stream Gauging stations damaged by the flood is estimated to be \$53,720 for equipment, \$2,800 for the removal of damaged equipment and \$21,094 for installation (Total Estimate - \$77,614). We expect that the cost of this work will be reimbursed through the various agencies that cover costs such as this due to a flooding event. What cost that is not covered will be paid from the Stormwater Fund – Reserves.

### Recommendation

Staff recommends approval of Amendment No 1 to the September 22, 2009 Operation & Maintenance Agreement with Smith Seckman Reid, Inc. at an estimated cost of \$77,614.00.

**AMENDMENT NO. 1 TO  
PROFESSIONAL SERVICES AGREEMENT  
FOR STREAM GAUGING STATIONS OPERATION &  
MAINTENANCE (O&M)  
COF Contract No. 2009-0055**

**THIS AMENDMENT** is made and entered into on this the 22<sup>nd</sup> day of June, 2010, by and between the **City of Franklin, Tennessee** ("City") and **Smith Seckman Reid, Inc. (SSR)** ("Consultant").

**WITNESSETH:**

**WHEREAS**, City and Consultant entered into a Professional Services Agreement ("Agreement") entitled Stream Gauging Stations Operation & Maintenance (O&M), dated the 22<sup>nd</sup> day of September, 2009; and

**WHEREAS**, The City needs to have its Stream Gauging Stations equipment repaired or replaced due to the flooding of same that occurred during the May 1<sup>st</sup> - 3<sup>rd</sup>, 2010 flood;

**NOW, THEREFORE**, in consideration of these premises and the mutual promises contained herein, it is agreed by and between the parties as follows:

1. The foregoing recitals are incorporated by reference as if fully stated herein.
2. Consultant's Responsibilities and Duties. Consultant agrees to perform the work as provided in the Scope of Services as established in **Exhibit A** of this Amendment, all of which shall be considered as an integral part hereof.
3. City's Responsibilities and Duties. City shall pay Consultant for the cost of repairing or replacing the equipment as listed in Exhibit A estimated to be **\$53,720.00** and for the removal and installation of said equipment a fee estimated to be **\$23,894.00** based on the actual hours worked. **Total cost for this Amendment is estimated to be \$77,614.00.**

City reserves the right to issue any payments jointly to the Consultant and sub-Consultant(s) when the City receives information that the Consultant has not paid its sub-Consultants.

4. Waiver. Neither party's failure nor delay to exercise any of its rights or powers under this Amendment will constitute or be deemed a waiver or forfeiture of those rights or powers. For a waiver of a right or power to be effective, it must be in writing signed by the waiving party. An effective waiver of a right or power shall not be construed as either (a) a future or continuing waiver of that same right or power, or (b) the waiver of any other right or power.

IN WITNESS WHEREOF, the parties have executed this Amendment.

The CITY OF FRANKLIN, TENNESSEE

SMITH SECKMAN REID, INC.

By: \_\_\_\_\_  
**John C. Schroer**  
Mayor  
Date: \_\_\_\_\_

By: \_\_\_\_\_  
Print: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

**Attest:**

\_\_\_\_\_  
**Eric S. Stuckey**  
City Administrator  
Date: \_\_\_\_\_

**Approved as to form:**

\_\_\_\_\_  
Kristen L. Corn  
Staff Attorney



2995 Sidco Drive  
Nashville, TN 37204  
(615) 383-1113  
FAX (615) 386-8469  
www.ssr-inc.com

# Memorandum

**DATE:** May 12, 2010  
**TO:** File  
**CC:**  
**FROM:** Bo Butler  
**RE:** **FRANKLIN STREAM GAUGE STORM DAMAGE EVALUATIONS**  
SSR No. 09-41-018.0

Nashville

Houston

Fort Lauderdale

Sarasota

Memphis

Phoenix

New Orleans

Dallas

Due to the floods and rain storms of May 1-2, 2010, the stream gauges and samplers that comprise the City of Franklin gauging stations system were evaluated for storm damage. Visits to the installations were made on May 11<sup>th</sup> and 12<sup>th</sup>. The systems were tested for normal operation, and each station was evaluated and recommendations made for any repairs of equipment. The results are listed below.

1. Cotton Lane Station - \$17,825.00

Sampler:

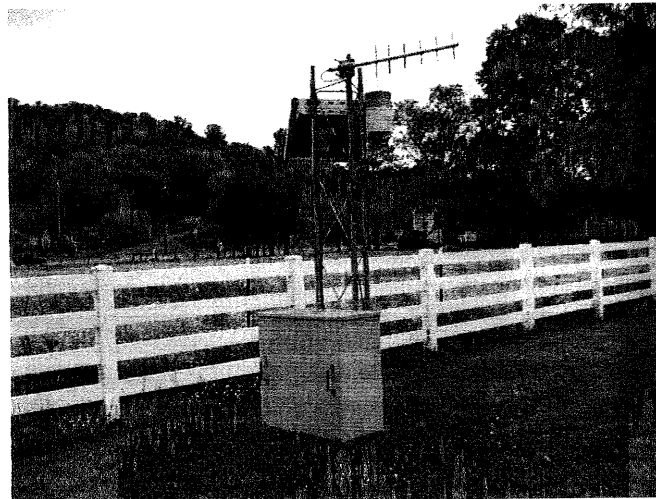
The sampler for the Cotton Lane Station was submerged under approximately 6 feet of water under the bridge on Cotton Lane at the Harpeth River. Water entered and submerged the all-weather refrigerated sampler, broke sampler lines and power lines leading to the sampler, inundated the control head for the sampler operations, and mud was found inside the sampler, coating all surfaces. The power and instrumentation control panel inside the sampler was also inundated with water. Due to the presence of water inside the control head and the power distribution and instrumentation box, this sampler will not be able to be repaired in a cost-effective manner. Earlier repairs to sampler heads alone have ranged from \$400 to \$600 for minor adjustments. The sampler lines that run down the bank into the river were exposed and broken in multiple places and will need to be replaced.

Datalogger:

Inside the datalogger enclosure at Cotton Lane, the bubbler was found not to be operational. There was power to the station and the cell phone does work. We assume that the CR510 datalogger in the station is working, but we will need to check that at a later date to make sure it is still able to record information. The battery appears to be holding a charge. Although it does not appear that water entered the PVC datalogger enclosure, the metal NEMA4 enclosure surrounding it was inundated. It appears that power was

2. Dry Branch Station – No Repairs Needed

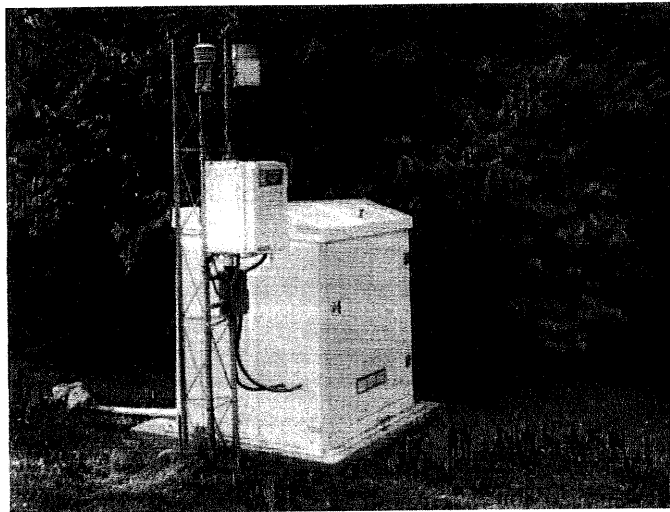
Dry Branch Station was not affected by the flood waters. Water from Dry Branch and the stormwater detention facilities did not reach the datalogger enclosure nor the rain sampler, and that station appeared to be operating as it should.



Solar-Powered Rain Gauge at Dry Branch

4. Liberty Creek Station – No Repairs Needed

The Liberty Creek Station did not sustain any noticeable damage in this rain event and all systems are working properly. When the water level in the creek recedes, additional inspection of the bubbler and sampler lines will be needed.



Liberty Creek Station

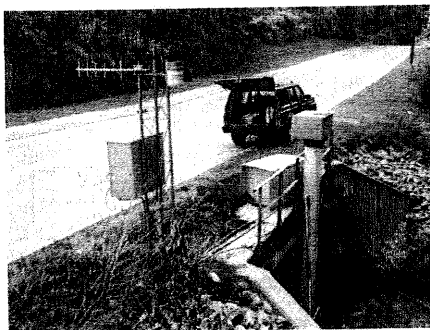
6. Sharps Branch Station - \$20,895.00

**Sampler:**

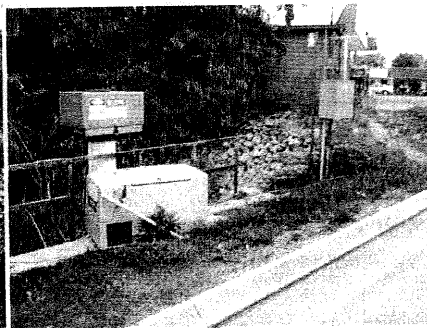
The Sharps Branch Station appeared to be flooded under approximately 8 feet of water according to the high water marks in the area. The sampler was broken loose from its moorings, the power lines and sampler lines were broken as well as the conduit that held these lines. The sampler was inundated and the control head was submerged as well as the power and instrumentation box within the all-weather refrigerated sampler. It appears as though this sampler will not be able to be repaired in a cost-effective manner and will need to be replaced along with the associated power and water lines and conduit.

**Datalogger:**

The all-weather box that contained the electronics for the Sharps Branch Station was also completely submerged. A lot of water got into the box, inundating the cell phone, bubbler, power control box, datalogger and battery. In fact, the rain gauge that is installed approximately 8 feet up on a tower next to the sampler was inundated and mud was found inside the rain gauge. Wires and connections were corroded and mud was found inside the box, as well as the power disconnect box on the tower at the station. This station will not be able to be salvaged and will need to be replaced.



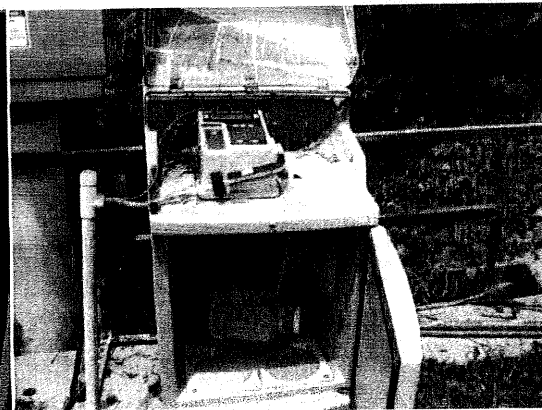
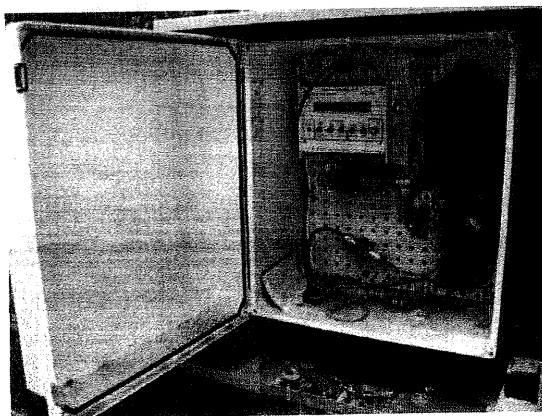
Sharpe's Branch Station



Sampler on its side



Disconnect



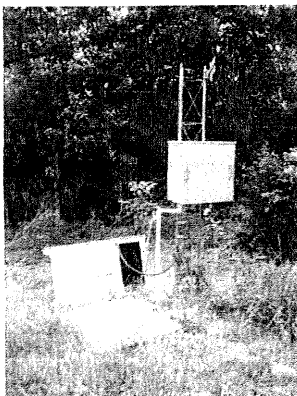
7. Spencer Creek Station - \$14,361

Sampler:

The Spencer Creek Station sustained major damage to the all-weather sampler. It was found down the hill from the original location, held in place by the power lines. Sampler lines and conduit were broken, and the all-weather sampler was submerged in floodwater from Spencer Creek. Water has entered the control head and the compressor, and it appears that it will not be able to be salvaged. The power instrumentation box on the back of the sampler was also inundated with water and all the electronics were exposed to creek water.

Datalogger:

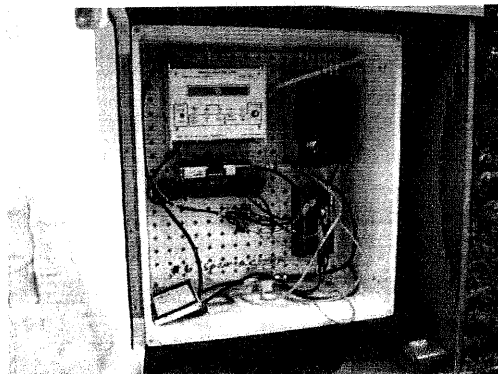
The bubbler at Spencer Creek was also damaged and does not appear to be working. The cell phone is operating. Although water entered the PVC enclosure, it appears as though it did not get high enough to damage the charger and the battery. We feel like this station is repairable, although the sampler will need to be replaced as well as the bubbler at this location.



Spencer Creek Station



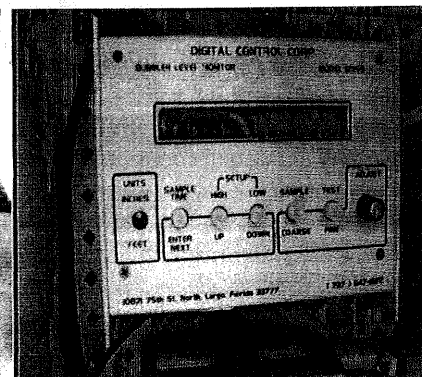
Sampler Line



Control Box



Sampler Head



Bubbler Level Sensor



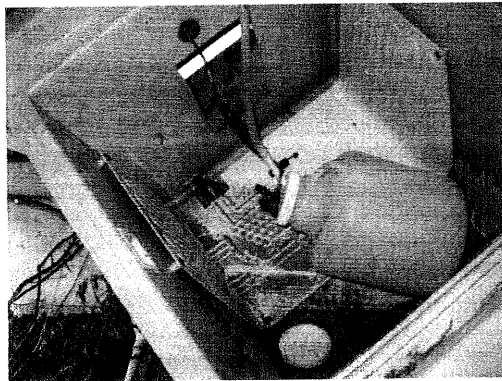
8. Arno Road Station - \$19,480.00

**Sampler:**

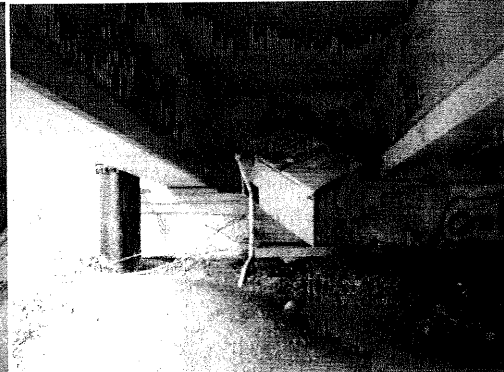
The Arno Road Sampler was partially submerged under the Arno Road bridge. The conduit containing the sampler and bubbler lines was broken, and further inspection will reveal whether this sampler can be cleaned and repaired for future use. It appears as though the control head was not submerged.

**Datalogger:**

The datalogger at this location was not damaged by the flood as it was located well above the road elevation here. This datalogger has been offline for some time due to a previous power surge that damaged the power supply and battery. New power equipment has been installed and the datalogger is being tested to determine whether it was also damaged in the power surge.



Arno Road Sampler



Sampler

Equipment Cost		Installation Cost
<b>Arno Road Station</b>		
Sampler	\$11,500	
Sampler Line	\$250	
Conduit	\$65	
Bubbler Line	\$25	
Weighted ends, Stilling well	\$90	
Data Logger - update	\$1,300	
<b>Total</b>	<b>\$13,230</b>	<b>\$6,250</b>

<b>City of Franklin, Tennessee</b>		
<b>Stream Gauging Station Program</b>		
<b>Estimated Station Renovation Costs Due to Flood of 2010</b>		
	<b>Equipment Cost</b>	<b>Installation Cost</b>
<b>Cotton Lane</b>		
Sampler	\$11,500	
Sampler Line	\$200	
Conduit	\$50	
Bubbler Line	\$20	
DataLogger - update	\$1,300	
Power Supply / battery	\$290	
Stilling Well / Weighted ends	\$90	
<b>TOTAL</b>	<b>\$13,450</b>	<b>\$4,375</b>
<b>Liberty Creek</b>		
Bubbler Line	\$20	
Sampler Line	\$200	
Conduit	\$50	
Stilling Well / weighted ends	\$90	
<b>TOTAL</b>	<b>\$360</b>	<b>\$781</b>
<b>Cool Springs Station</b>		
Bubbler Line	\$20	
Sampler Line	\$200	
Conduit	\$20	
Stilling Well / weighted ends	\$90	
<b>TOTAL</b>	<b>\$330</b>	<b>\$781</b>
<b>Sharpe's Branch Station</b>		
New Power Disconnect and breakers (installed)	\$450	
Bubbler		
Power Supply / battery	\$290	
Power distribution/ charger strip	\$125	
Datalogger	\$1,300	
cell phone (will try to re-activate)		
antenna	\$45	
Bubbler line	\$20	
Sampler line	\$200	
Sampler	\$11,500	
Weighted ends, Stilling well	\$90	
<b>TOTAL</b>	<b>\$14,020</b>	<b>\$6,875</b>
<b>Spencer Creek Station</b>		
Sampler	\$11,500	
Sampler Line	\$200	
Conduit	\$65	
Bubbler Line	\$25	
Weighted ends, Stilling well	\$90	
Power disconnect and breakers (installed)	\$450	
<b>TOTAL</b>	<b>\$12,330</b>	<b>\$2,031</b>
<b>Arno Road Station</b>		
Sampler	\$11,500	
Sampler Line	\$250	
Conduit	\$65	
Bubbler Line	\$25	
Weighted ends, Stilling well	\$90	
Data Logger - update	\$1,300	
<b>TOTAL</b>	<b>\$13,230</b>	<b>\$6,250</b>
<b>Total Cost of Equipment</b>	<b>\$53,720</b>	
<b>Total Installation Cost</b>		<b>\$21,094</b>
<b>Total Cost to Renovate Stations</b>	<b>\$74,814</b>	