GEORGIA LARGE WATER SYSTEM
WATER LOSS CONTROL TECHNICAL ASSISTANCE – PHASE IIB
2015 Application for Technical Assistance

Part 1 Application – Introduction and Applicant Information

Introduction

The Georgia Environmental Finance Authority (GEFA) invites all eligible Georgia water systems to apply for water loss technical assistance from the federal Drinking Water State Revolving fund program. Eligible water systems include: 1) systems that serve 10,000 – 100,000 individuals and 2) systems that submitted a 2014 Water Audit to the Georgia Environmental Protection Division (EPD) by the deadline (see list of systems attached). The size and number of projects completed through this technical assistance program will be determined based on the number of applicants and available funding. For more information on the Phase IIB technical assistance program please visit www.gefa.org.

Submittal Process

1) Complete application and compile all supporting documentation noted on this application
2) Submit completed application with all supporting documents by **August 3, 2015:**
   a. By email: rachel.harris@cavanaughsolutions.com (must arrive by August 3, 2015 at 5:00 pm)
   b. By post: **GEFA c/o Cavanaugh & Associates, PA**
   37 Montford Avenue, Suite 201
   Asheville, NC 28801 (must be postmarked by August 3, 2015)

Please fill out the following information completely. If you have questions regarding this application, you may call 1-877-557-8925 or email rachel.harris@cavanaughsolutions.com.

Utility Name					
Water System ID #					
Key Contact Person		**Title**			
Street Address or Post Office Box					
Street Address 2					
City and Zip Code	(City)	(Zip Code)	**County**		
Telephone Number		**Fax Number**			
Primary E-Mail Address					
Alternate Contact Person					
Alternate Telephone Number					
Alternate E-Mail Address					

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Part 2 Application – Project Information

Available Project Types

1. *Finished Water Meter Testing*
   Hydraulic flow verification of finished water meters (FWMs).

2. *Customer Water Meter Testing*
   Accuracy testing of select mid and large size customer meters.

3. *Pilot Leak Detection*
   Acoustic leak detection of a portion of the distribution system. Applies to distribution mains (<12”).

4. *Large Diameter Condition Assessment & Leak Detection*
   Applies to transmission mains (>12”).

5. *Pilot District Metered Area (DMA) Evaluation*
   Evaluation of feasibility for implementing a pilot district metered area.

6. *Pilot Pressure Management Evaluation*
   Evaluation of feasibility for implementing a pressure management pilot zone.

Site Specific Information

Please place a check mark in the space(s) next to the project type(s) for which you are applying. If you indicate more than one project type, you must indicate your preference ranking (1 is highest preference, 6 is lowest preference).

Project Type		Rank (1-6)
Finished Water Meter Testing	☐	
Customer Meter Testing	☐	
Pilot Leak Detection	☐	
Large Diameter Condition Assessment & Leak Detection	☐	
Pilot District Metered Area Evaluation	☐	
Pilot Pressure Management Evaluation	☐	

On the following pages, please complete the site specific data sheet on each project type for which you are applying.

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Part 3 Application – Project Type Data Sheets

1) Finished Water Meter Testing Data Sheet

Please fill out a Finished Water Meter Data Sheet for EACH Finished Water Meter for which you are applying.

Existing Conditions

1a. Finished Water Meter identifier number (so we can distinguish between multiple meters)

1b. Size of existing meter:	**1c. Type of existing meter (Turbine, Venturi, Magmeter, etc):**

1d. Piping configuration

Distance upstream to nearest fitting* (ft)	
Type of upstream fitting*	
Distance downstream to nearest fitting* (ft)	
Type of downstream fitting*	
Pipe material	
Pipe outer diameter (in)	
Total length of pipe between pump and FWM[a]	
Straight length of pipe upstream of FWM[b]	
Straight length of pipe downstream of FWM[b]	

**A fitting would include a tee, elbow, reducer, strainer and any other appurtenance that may cause turbulence in the flow*

[a]The total lay length of the pipe, including all joints, fittings and valves from the discharge side of the nearest pump to the FWM.
[b]The straight length of pipe with no flow disturbances can include concentric reducers and straight joints, such as mechanical joints. However, the location of joints and reducers is desirable because they can conflict with installation of temporary flow meters. In general, flow disturbances include fittings with bends and valves.

1e. Make, model and age of existing meter(s):

1f. Date of last flow verification test:

1g. Date of last electronic meter calibration:

1h. Other notes or special considerations:

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Please also attach the following information, if available, for EACH Finished Water Meter for which you are applying.

- **Historical water supply data:**
  - **Indicate the method of measuring or recording the water volume or flow rate for each FWM.**
  - **Provide a minimum of one (1) year of data to determine the annual flow patterns.**
  - **For volume based records, also provide the pump schedule.**
  - **Whenever possible provide average flow at 1 hour intervals or the next shortest measurement available.**
- **Photographs of each meter to be tested**
- **Field measurements and a piping configuration exhibit with pipe sizes and valving (see Exhibit A for example)**
- **Documentation from last flow verification test or electronic meter calibration, if available**

2) Customer Water Meter Testing Data Sheet

Please fill out Customer Meter Testing Data Sheet and attach requested information.

Existing Conditions
2a. Any known maintenance issues for your customer meters (2" and larger), such as access restrictions, inoperable shutoff valves, or other issues that may limit their testability?

Please also attach the following information:

- **A listing of all 2" and larger customer meters including the following information for each meter (Excel format preferred):**
    1. **Meter identification number**
    2. **Meter address**
    3. **Meter Size**
    4. **Usage history (total for past 12 months; see Exhibit B for example)**
    5. **Manufacturer (if available)**
    6. **Meter type (i.e. compound, turbine, positive displacement, multi-jet, magmeter, propeller)**
    7. **Installation Date**

3) Pilot Leak Detection Data Sheet

Please fill out a Pilot Leak Detection Data Sheet and attach requested information.

Existing Conditions

3a. Fill in approximate percentages of pipe material for your distribution system:

Pipe Material Type	% of the system
3a-1. DIP –	
3a-2. CIP –	
3a-3. PVC –	
3a-4. AC –	
3a-5. Galvanized –	
3a-6. Other –	

3b. How many miles of water main are in the system?

Please also attach the following information, if available:

- **A summary of historical leak repairs, as available**
- **Mapping of the distribution system containing:**
  - **Valve and hydrant locations**
  - **Highlighted known areas of concern**
  - **Pressure zones delineated (if known)**

**It is understood that mapping quality, completeness and format will vary among water systems. Please provide the best mapping available.*

4) Large Diameter Condition Assessment & Leak Detection Data Sheet

Please fill out a Large Diameter Condition Assessment & Leak Detection Data Sheet and attach requested information.

Existing Conditions

4a. How many total miles of main are in the water system?

4b. How many miles of main of pipe >12”?

4c. Fill in approximate percentages of pipe material in your distribution system, >12”:

Pipe Material Type	Pipe diameters (inches)	main length (miles)	approximate age (years)
4c-1. DIP			
4c-2. CIP			
4c-3. Steel			
4c-4. Concrete			
4c-5. PVC			
4c-6. PE			
4c-7. AC			
4c-8. Other			

Please also attach a map of pipe containing line sizes >12”, with line size designations.

4d. Other relevant information on transmission mains.

Please also attach the following information, if available:

- **Any additional asset management records for pipes sized >12”**
- **Photos of any large diameter pipes that have been removed from the system**

5) Pilot District Metered Area Evaluation, Data Sheet

Please attach the following information, if available:

- **Paper mapping of the distribution system*:**
- **GIS shapefiles, if available:**
  - **Tank and Pump station locations**
  - **Waterlines**
  - **Valves (particularly valves that are currently closed)**
  - **Pressure zones delineated**
  - **Water treatment plant(s)**
- **Inventory of major customers**
- **Inventory of critical customers (i.e. hospitals, dialysis patients/centers, etc.)**
- **Inventory of Water Storage Tanks with capacity and identifier (address, name, etc.)**
- **Inventory of Pump Stations**

**It is understood that mapping quality, completeness and format will vary among water systems. Please provide the best mapping available.*

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6) Pressure Management Data Sheet

Please attach the following information, if available:

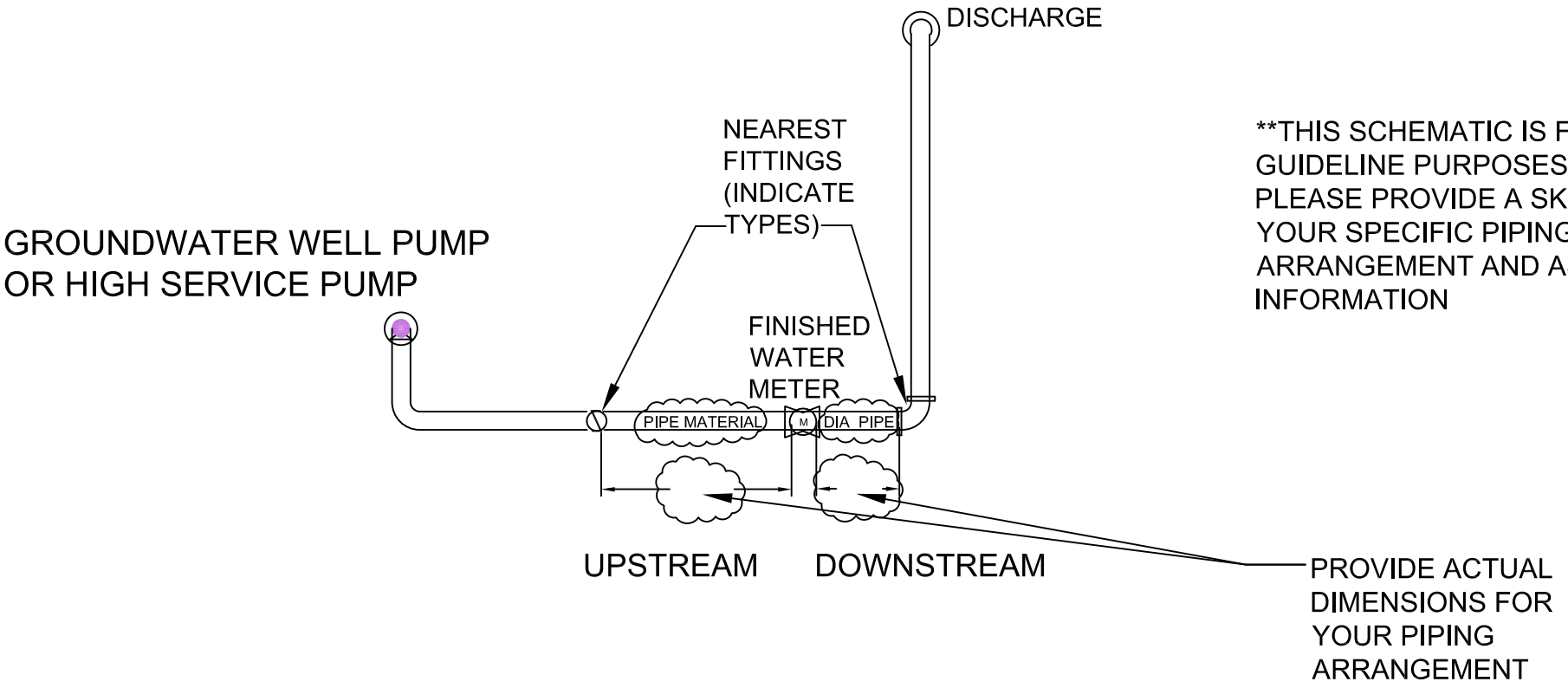
- **Break repair history for the past 5 years, including: location, repair type (main versus service), line size, material, date of repair, pressure zone**
- **Leak Detection History**
  - **What areas were surveyed, during what timeframe and # of leaks found**
- **Mapping of the distribution system containing*:**
  - **Tank and Pump station locations**
  - **Waterlines**
  - **Valves (particularly valves that are currently closed)**
  - **Pressure zones delineated**
  - **Water treatment plant(s)**
- **A separate water system map with elevations**
- **Inventory of Water Storage Tanks with capacity and identifier (address, name, etc.)**
- **Inventory of Pump Stations**
- **Available pressure data (from hydrant flow tests, SCADA or pressure logging)**
- **Inventory of major customers**
- **Inventory of critical customers (i.e. hospitals, dialysis patients/centers, etc.)**

**It is understood that mapping quality, completeness and format will vary among water systems. Please provide the best mapping available.*

PROVIDE THE DISTANCE UPSTREAM AND DOWNSTREAM FROM THE METER TO THE NEAREST FITTINGS, I.E. ELBOWS, TEES, REDUCERS, GATE VALVE, CHECK VALVE, ETC.

PLEASE INDICATE THE FITTING TYPE(S)

PROVIDE THE PIPE MATERIAL AND THE PIPE DIAMETER



**THIS SCHEMATIC IS FOR GUIDELINE PURPOSES ONLY. PLEASE PROVIDE A SKETCH OF YOUR SPECIFIC PIPING ARRANGEMENT AND ASSOCIATED INFORMATION

SAMPLE SCHEMATIC - EXHIBIT A
FWM PIPING ARRANGEMENT

EXHIBIT B – SAMPLE LARGE METER INVENTORY

METER ID#	ADDRESS	METER SIZE	2014 USAGE (GAL)	MAKE*	TYPE	INSTALLATION DATE
102030	34 HICKORY RD	2"	50,000	BADGER	COMPOUND	10-3-1998
101030	26 EASTWOOD RD	2"	100,000	SENSUS	COMPOUND	10-3-1998
302050	54 FAIRVIEW RD	2"	250,000	MUELLER	MAGMETER	10-3-1998
528095	73 PARSLEY DR	3"	265,000	MASTER METER	MAGMETER	10-3-1998
203040	58 LOCKLEAR CT	4"	300,000	BADGER	TURBINE	10-3-1998
405060	39 BRENTWOOD RD	4"	250,000	SENSUS	COMPOUND	10-3-1998
506070	42 HICKORY RD	3"	265,000	MUELLER	MULTI-JET	10-3-1998
708090	59 EASTWOOD RD	6"	300,000	MASTER METER	MULTI-JET	5-9-2007
901001	138 FAIRVIEW RD	6"	800,000	BADGER	MULTI-JET	5-9-2007
101020	168 PARSLEY DR	8"	1,000,000	SENSUS	PROPELLER	5-9-2007
202030	60 LOCKLEAR CT	4"	500,000	MUELLER	COMPOUND	5-9-2007
303040	110 BRENTWOOD RD	2"	200,000	MASTER METER	POSITIVE DISPLACEMENT	5-9-2007
404050	120 HICKORY RD	10"	10,000,000	BADGER	TURBINE	5-9-2007
505060	100 EASTWOOD RD	6"	1,000,000	SENSUS	COMPOUND	5-9-2007

**if available*