



Utility Committee Meeting

AGENDA

December 4, 2012

I. CALL TO ORDER

II. MATTERS BEFORE COMMITTEE

1. [Update - Water Meter Replacement](#)
2. [Discussion / Approval - Purchase of Trucks](#)
3. [Discussion / Approval - Watershed Assessment and Protection Plan Bids](#)
4. [Discussion - Utility Policy Changes](#)

III. ADJOURN



Utility Committee Meeting

AGENDA

December 4, 2012

Item:

Update - Water Meter Replacement

Department:

Additional Information:

Financial Impact:

Budgeted Item:

Recommendation / Request:

Viewing Attachments Requires Adobe Acrobat. [Click here](#) to download.

Attachments / click to download



Utility Committee Meeting

AGENDA

December 4, 2012

Item:

Discussion / Approval - Purchase of Trucks

Department:

Additional Information:

Two Ford F-150 4x4 Trucks

Financial Impact:

Budgeted Item:

Recommendation / Request:

Viewing Attachments Requires Adobe Acrobat. [Click here](#) to download.

Attachments / click to download

 [Truck Bid Info](#)

Bids for Ford F-150 4x4 Trucks

Akins Ford of Winder	\$20,628.24
Loganville Ford (2012)	\$21,679.92
Courtesy Ford	\$20,088.24

Rodney Middlebrooks

From: Chad Gravette
Sent: Thursday, November 29, 2012 3:42 PM
To: Rodney Middlebrooks
Subject: FW: F-150 4x4
Attachments: 2013 F-150 4x4.pdf

From: Rodney Bales [<mailto:rbales@akinsonline.motosnap.com>]
Sent: Thursday, November 29, 2012 3:23 PM
To: Chad Gravette
Subject: F-150 4x4

Your price \$20,628.24

Rodney Bales
Commercial & Fleet Manager
Akins Ford of Winder
220 West May St
Winder, GA 30680
(678) 549-8540 Cell
(770) 868-5225 Direct
www.akinsford.com

CNGP530

VEHICLE ORDER CONFIRMATION

11/29/12 15:20:15

==> _____ Dealer: F21480

2013 F-150

Page: 1 of 1

Order No: R102 Priority: A3 Ord FIN: QE731 Order Type: 5B Price Level: 315

Ord PEP: 100A Cust/Flt Name: CITY OF MONRO PO Number:

		RETAIL	DLR INV			RETAIL	DLR INV
F1E	F150 4X4 R/C	\$28310	\$26258.00	50S	CRUISE CONTROL	\$225	\$187.00
	126" WHEELBASE			85A	POWER EQUIP GRP	950	811.00
YZ	OXFORD WHITE				.PWR BLACK MIRR		
A	VINYL 40/20/40				SP DLR ACCT ADJ		(1216.00)
S	STEEL GRAY INT				SP FLT ACCT CR		(381.00)
100A	EQUIP GRP				FUEL CHARGE		14.24
	.XL SERIES			B4A	NET INV FLT OPT	NC	7.00
	.AM/FM RADIO				DEST AND DELIV	995	995.00
	.17" GREY STEEL				TOTAL BASE AND OPTIONS	31480	27528.24
99F	5.0L V8 FFV ENG	1000	853.00		TOTAL	31480	27528.24
446	ELEC 6-SPD AUTO	NC	NC		*THIS IS NOT AN INVOICE*		
	.P235 BSW A-T						
X19	3.55 REG AXLE	NC	NC				
	6800# GVWR						
	26 GAL TANK						

F1=Help

F2=Return to Order

F3/F12=Veh Ord Menu

F5=Add to Library

S005 - INQUIRY IS COMPLETE.

QD00402

Item # 2

CNGP530

VEHICLE ORDER CONFIRMATION

09/05/12 13:16:56

==>

Dealer: F21472

2012 F-150

Page: 1 of 2

Order No: 0000 Priority: H4 Ord FIN: QE731 Order Type: 5B Price Level: 225

Ord PEP: 502A Cust/Flt Name: CITY MONROE PO Number:

	RETAIL	DLR INV		RETAIL	DLR INV
F1E	F150 4X4 SS R/C	\$28140	\$26301.00	FRT LICENSE BKT	NC NC
	126" WHEELBASE			535 TRAILER TOW PKG	375 311.00
YZ	OXFORD WHITE			61X XL PLUS PACKAGE	450 374.00
C	CLOTH 40/20/40	NC	NC	.CRUISE CONTROL	
S	STEEL GRAY INT			.AM/FM/SINGLE CD	
502A	PREF EQUIP PKG			.MY KEY	
	.XL SERIES			85A POWER EQUIP GRP	950 789.00
64C	.17" GREY STEEL				
99F	5.0L V8 FFV ENG	1000	830.00	TOTAL BASE AND OPTIONS	32350 29494.92
446	ELEC 6-SPD AUTO	NC	NC	XL WORK DISCOUNT	(500) (415.00)
T7H	P265 OWL A/T	325	270.00	TOTAL	31850 29079.92
X19	3.55 REG AXLE	NC	NC	*THIS IS NOT AN INVOICE*	
	6800# GVWR				
	SLCT SHFT TRANS			* MORE ORDER INFO NEXT PAGE *	
	26 GAL TANK			F8=Next	

F1=Help F2=Return to Order F3/F12=Veh Ord Menu
 F4=Submit F5=Add to Library

S006 - MORE DATA IS AVAILABLE.

QC095663

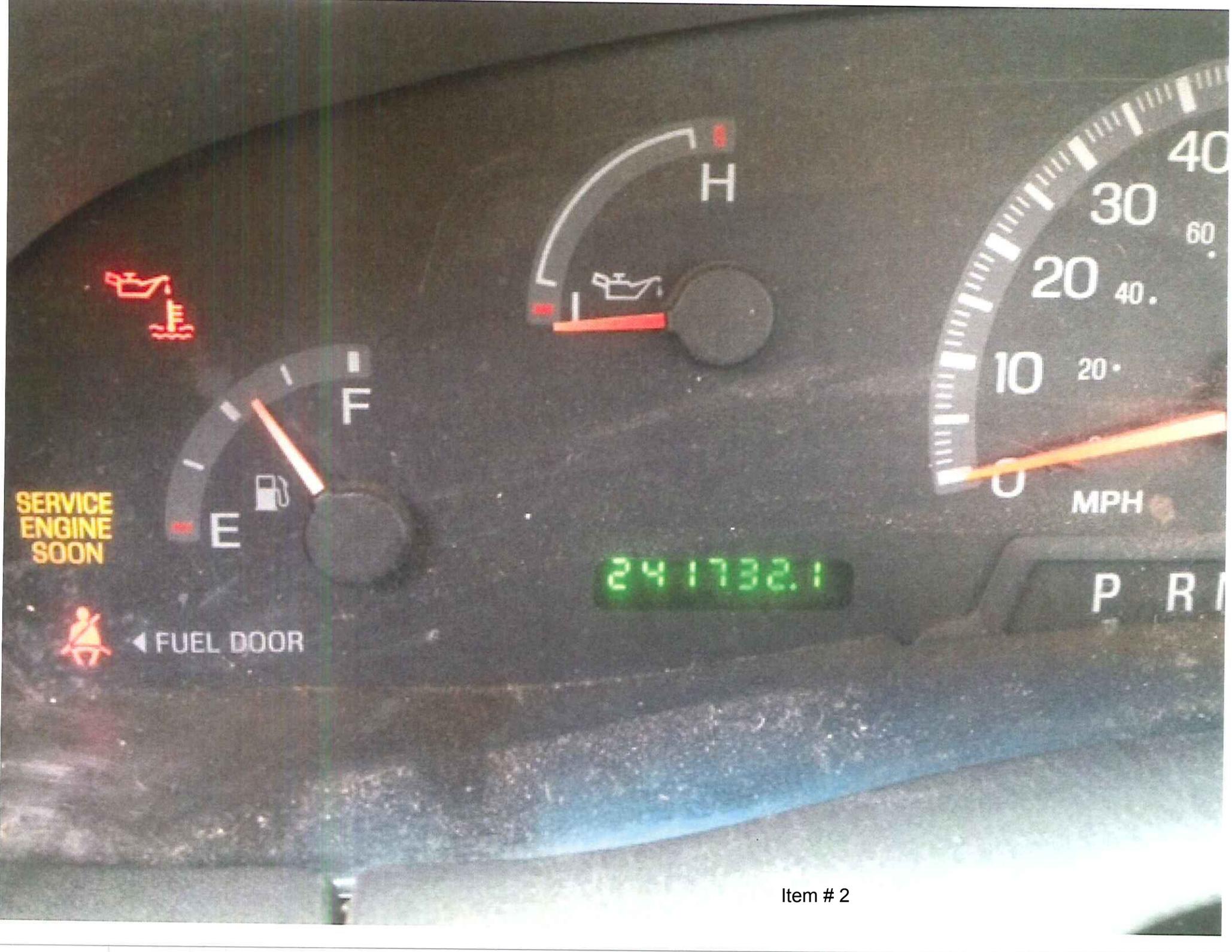
\$ 21679.92 Sale Price

** Factory Order Price Only*

** Includes GPC*



Item # 2



Item # 2



Item # 2

==>

Dealer: F21061

2013 F-150

Page: 1 of 1

Order No: 4000 Priority: A3 Ord FIN: QS060 Order Type: 5B Price Level: 315

Ord PEP: 100A Cust/Flt Name: MONROE PO Number:

		RETAIL	DLR INV		RETAIL	DLR INV
F1E	F150 4X4 R/C	\$28310	\$26258.00	26 GAL TANK		
	126" WHEELBASE			535 TRAILER TOW PKG	375	320.00
YZ	OXFORD WHITE			SP FLT ACCT CR		(372.00)
A	VINYL 40/20/40			FUEL CHARGE		14.24
S	STEEL GRAY INT			DEST AND DELIV	995	995.00
100A	EQUIP GRP			TOTAL BASE AND OPTIONS	30680	28068.24
	.XL SERIES			TOTAL	30680	28068.24
	.AM/FM RADIO			*THIS IS NOT AN INVOICE*		
	.17" GREY STEEL					
99F	5.0L V8 FFV ENG	1000	853.00			
446	ELEC 6-SPD AUTO	NC	NC			
	.P235 BSW A-T					
X19	3.55 REG AXLE	NC	NC			
	6800# GVWR					
	SLCT SHFT TRANS					

F1=Help

F2=Return to Order

F3/F12=Veh Ord Menu

F4=Submit

F5=Add to Library

S099 - PRESS F4 TO SUBMIT

QC00369

Ordered Price

20088.24

10-12 weeks

ETA

Cindy modre //

Courtesy Ford

678-733

0270

Item # 2



Utility Committee Meeting

AGENDA

December 4, 2012

Item:

Discussion / Approval - Watershed Assessment and Protection Plan Bids

Department:

Additional Information:

Financial Impact:

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Recommendation / Request:

Viewing Attachments Requires Adobe Acrobat. [Click here](#) to download.

Attachments / click to download

[Watershed Assessment Bid Info](#)

Bids for Watershed Assessment and Protection Plan

Keck & Wood	\$	30,830.00
Fox Environmental	\$	49,325.00
RubeEco Environmental	\$	77,400.00

City personnel will provide all required sampling



KECK & WOOD, INC.

2750 Premiere Parkway
Suite 900
Duluth, Georgia 30097
Office: (678) 417-4000
Fax: (678) 417-4055
www.keckwood.com

November 28, 2012

Mr. Matthew Chancey, Acting City Manager
City Hall
City of Monroe
215 North Broad Street
P.O. Box 1249
Monroe, GA 30655

**RE: Watershed Assessment and Protection
Plan**
Proposal for Professional Services
Our reference No. 120903.00

Dear Mr. Chancey:

We appreciate the opportunity to provide this proposal for developing a watershed protection assessment and protection plan for the City's wastewater treatment plant permit. Presented below is a review of our Project Understanding, Project Management and Personnel Experience, Project Objectives, Scope of Services, Reports, Cost, and Acceptance of the Proposal.

PROJECT UNDERSTANDING

Keck & Wood, Inc. understands that the City is seeking firms to conduct a Watershed Assessment and develop a Watershed Protection Plan as required by their draft National Pollution Discharge Elimination System (NPDES) permit No. GA0047171. The Watershed Assessment and Protection Plan must be approved by the Georgia Environmental Protection Division (GAEPD). We also understand the City must comply with an October 5th Notice of Violation letter time schedule for submitting the Watershed Assessment within 15 months of October 5, 2012 (or date of receipt of the letter) and to submit the Watershed Protection Plan document within 6 months of GAEPD approval of the Watershed Assessment. We believe this proposal provides time schedules that will meet this requirement, provided authorization to proceed is received by January 10, 2013. Per your staff's direction on November 28th, we have also excluded all sample collections and testing from our services since these activities will be provided by City staff and their selected laboratory.

PROJECT MANAGEMENT AND EXPERIENCE

Keck & Wood (KW) will manage this project from our Duluth, Georgia office utilizing Mike Moffitt, P.E., as project principal for project oversight and client communications and an experienced project manager, John Payne, P.E., to handle the project activities, project scheduling and related matters. Resumes for these staff members are included in Appendix A at the end of this submittal. To provide the City with the resources of an experienced environmental sampling and monitoring company, Keck & Wood will use Professional Service Industries, Inc.

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(PSI) as a member of our team and sub-consultant for the majority of services for this assignment. We have teamed with PSI on other municipal Watershed Assessment and Protection Plans with similar tasks and have every confidence that PSI will be a valuable asset in meeting and exceeding the needs of the County.

PSI is fully licensed to conduct environmental and engineering business in Georgia and has been involved with water quality sampling assessments and remediation since the mid-1970's. The PSI Team has the resources in-house to provide complete water quality and watershed assessments; water quality and watershed modeling; hydraulic and hydrologic modeling; best management practice selection, implementation and monitoring; and, intimate knowledge of GAEPD and EPA rules and policies associated with the watershed program.

PSI's Kennesaw branch office is a short drive to the City of Monroe. This branch is supported by over 60 personnel and by in-house equipment and resources including support vehicles, handheld GPS units, laptop PC's, water quality, water quantity, and biological sampling/monitoring equipment. All water quality and biological monitoring sampling will be performed by PSI staff. Below is the PSI Kennesaw Office location.

- Kennesaw Branch Office
Professional Service Industries, Inc.
95 Chastain Road, Suite 301
Kennesaw, GA 30144
Phone: (770) 424-6200

Performance Record

PSI has well documented experience in the area of environmental sampling and in-situ monitoring. PSI recently completed Watershed Assessments of the lower Ocmulgee River basin in and around Lumber City, Eastman, and East Dublin in Telfair County, Dodge County, and Laurens County, Georgia, respectively. These projects involve a multi-faceted approach, including chemical water quality sampling, in-situ water quality monitoring, habitat assessment, and biological assessment (fish and benthic insects). Water quality sampling and analyses involves parameters similar to those as required in the City's request. These projects also involve microbiological sampling including fecal coliform and *E. coli*, along with data interpretation that includes the geometric mean. PSI is currently conducting a long-term water quality study for the Newnan Utilities in Newnan, Georgia. This project includes water quality sampling and in-situ monitoring to implement the long-term ecological monitoring program as set forth in its Watershed Protection Plan. One-page project descriptions (with reference names and phone numbers) for these projects can be found in Appendix B of this submittal.

Personnel Qualifications

PSI will allocate experienced and knowledgeable environmental scientists to this project. The project team will consist of Mr. Andrew Peiken, C.E. as senior scientist and project manager for this assignment with other staff scientist in supporting roles.

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Mr. Peiken is a Certified Ecologist (CE) with over 20 years experience in ecological monitoring and testing. His environmental experiences include: watershed assessment studies, NEPA environmental assessments, NPDES permit compliance monitoring and sampling, wetland delineation/permitting, threatened/endangered species studies, aquatic organism culturing, fresh water and marine multi-species acute and chronic toxicity testing (solid phase, elutriate, and liquid phase), water quality testing, toxicity source investigations, bench scale polymer treatment studies, and bench scale biodegradation studies of contaminated soils. Mr. Peiken was the director of an ecological testing and consulting laboratory for over 15 years. His resume is available in Appendix B.

PROJECT OBJECTIVES

The objective of this project is to conduct a watershed assessment and develop a GAEPD-approved watershed protection plan for the City's sewer service area. This objective will be accomplished by systematically completing the following tasks (see **Scope of Services** for further detail):

- Collection of background information relevant to the formulation of the watershed protection plan.
- Develop a GAEDP-approved plan for monitoring existing water quality within the service area.
- Conduct a watershed assessment of the physical, chemical, and biological condition of the service area.
- Based upon the results watershed assessment, develop a watershed protection plan for the service area.

SCOPE OF SERVICES

Task 1 Background Information

KW and PSI will collect the necessary background information to aid in the development/implementation of a service area specific Watershed Monitoring Plan (WMP), Watershed Assessment (WA), and Watershed Protection Plan (WPP). This background information will include:

- Quantification/delineation of the service area.
- Identification of existing land use and vegetative cover within the service area.
- Location and summary of industrial and domestic wastewater discharges within the service area.
- Historic land uses and their potential effect on existing hydrology and water quality within the service area.
- Description of the natural features within the service area (physiography, soils, geology, surface water features, erosion features and wetlands).
- Identification of unique environmental stressors (landfills, hazardous waste sites, confined animal feeding operations, and stormwater dischargers)
- Identification and delineation of 303(d) listed stream segments.

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Task 2 Watershed Monitoring Plan Development

PSI will develop a WMP that is consistent with "Watershed Assessment and Protection Plan Guidance: Phase I. Water Monitoring Plans," February 28, 2005, GAEPD. The approach to the development of the WMP will include selection of multi-metric parameters and associated sampling methodologies at levels sufficient to characterize the physical, chemical and biological condition of the service area and provide the foundation necessary to conduct/develop an effective WA and WPP. Environmental stressors, including source and non-source influences, will be reviewed as part of WMP development.

The WMP will include, at a minimum, the following information:

- Sampling locations (both chemical and biological)
- Sampling parameters and methods
- Environmental stressors
- Monitoring schedule

The GAEPD requires that watershed assessments be based upon current and future potential growth patterns. After review of the City's future service area, PSI projected that approximately five (5) sampling locations will be required to adequately characterize the water quality and ecological condition of the present and future service area including the following locations (see figure on next page).:

- Jack's Creek @ Snow Mill Road;
 - Grubby Creek @ Highway 83;
 - Mountain Creek (east fork) @ Vine Street;
 - Mountain Creek (west fork) @ Monroe Jersey Road; and
- One additional location to be determined

The following parameters (at a minimum) will be sampled at these sample locations:

In-situ Physical Parameters

- Temperature (air and water)
- Flow
- Turbidity
- Dissolved Oxygen
- Conductivity
- pH

MONROE SEWER System



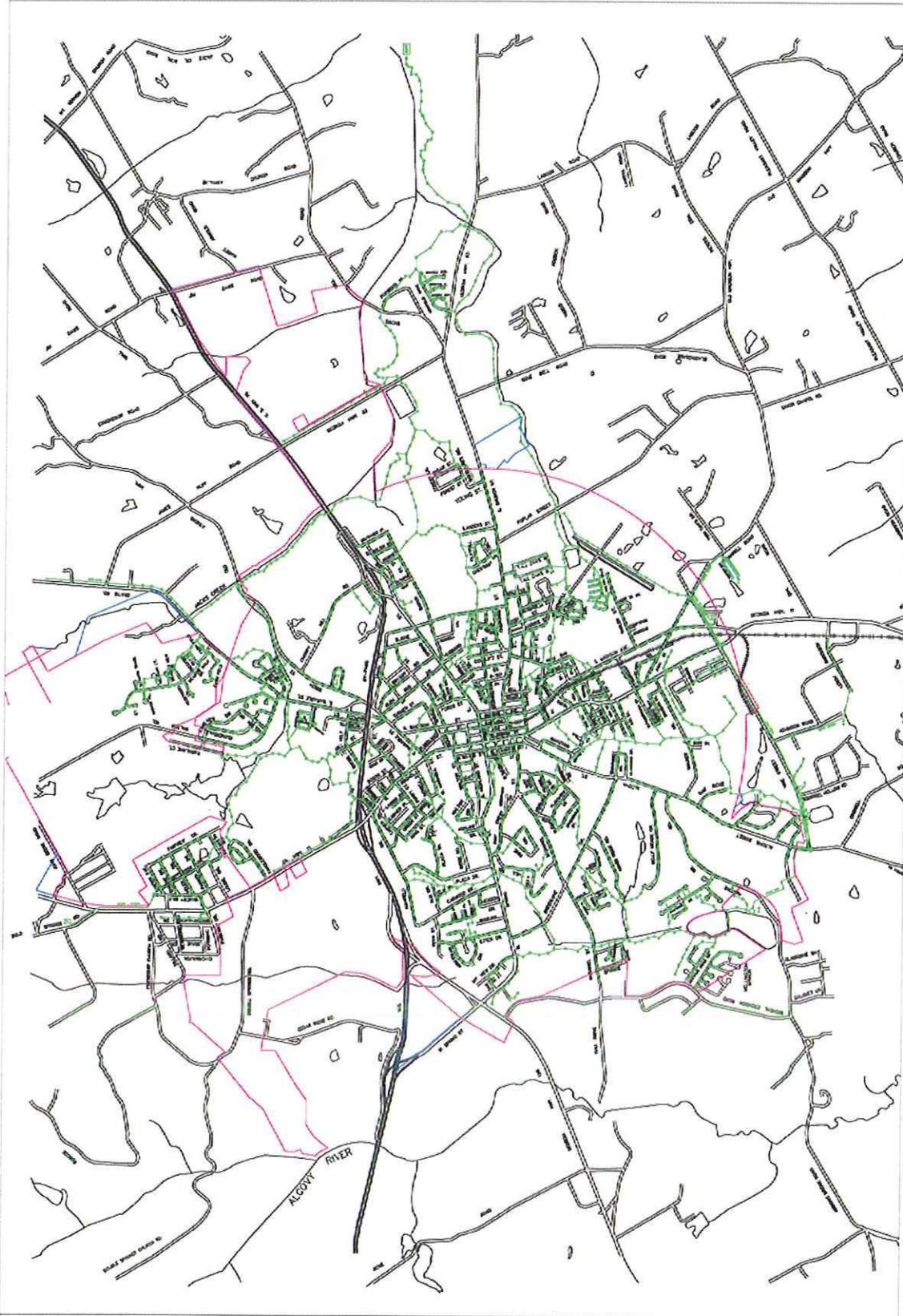
NOVEMBER 2012
SCALE IN FEET
0 1000 2000



Keck & Wood, Inc.
2700 Dunwoody Parkway, Suite 200
Atlanta, Georgia 30328
404.488.1100

- LEGEND
- ANNEXED
 - CITY LIMITS
 - PROPOSED
 - ANNEXATION
 - SANITARY
 - SEWER
 - ROAD R/W
 - RAILROAD
 - TRACKS

Map



Keck and Wood
Watershed Protection Plan
PSI Proposal No.: 513-82990
November 16, 2012
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Water Chemistry Parameters

- Total Suspended Solids
- Color
- Nitrogen (NO₂, NO₃, NH₃, Total Kjeldahl N)
- Phosphorous (Total P and Ortho-P)
- 5-day Biological Oxygen Demand (BOD₅)
- Chemical Oxygen Demand (COD)
- Hardness
- Alkalinity
- Dissolved Metals (Cd, Cu, Pb, and Zn)
- Fecal Coliform and E. coli

Biological Parameters

- Fish Index of Well Being (IWB) and Index of Biological Integrity (IBI)
- Macro-invertebrate pursuant to GAEPD protocols
- In-stream Habitat Assessment pursuant to GAEPD protocols

Following the completion of the draft WMP, KW and PSI will meet with the City of Monroe and the GAEPD to review and seek approval for the Plan. Although it is expected that the sampling parameters and locations specified in this section will be adequate for GAEPD approval of the proposed WMP, should any substantial deviation by GAEPD be required, KW and PSI will submit a Change Order to accommodate these potential GAEPD requested monitoring plan alterations. Based on comments by the City of Monroe and the GAEPD, KW and PSI will finalize the WMP for final concurrence by the GAEPD.

Task 3 Water Quality/Biological Sampling and Laboratory Analysis: Watershed Assessment

The City will conduct field sampling, contract the laboratory analysis, and collect data according to the biological, physical and chemical parameters pursuant to the approved GAEPD WMP (described in **Task 2**). Copies of the results of the water quality and biological monitoring sampling delivered to us will be summarized in a Watershed Assessment report. The report will be consistent with "Watershed Assessment and Protection Plan Guidance: Phase II. Watershed Assessments," May 14, 2004, GAEPD. Following the completion of the draft WA, KW and PSI will meet with City of Monroe and the GAEPD to review and seek approval for the Assessment. Based on comments by City of Monroe and the GAEPD, PSI will finalize the WA for final concurrence by the GAEPD.

City Contractors

- Analytical samples will be analyzed by the City's contractor, Analytical Environmental Services, Inc. (AES) located in DeKalb County, Georgia. AES is a Women Business Enterprise (WBE). AES holds many certifications and is on the GAEPD list of approved labs.

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- Macroinvertebrate identification will be performed by City staff or others. We will discuss the requirements for this work with the City to be sure the results satisfy GAEPD requirements.

Task 4 Develop Watershed Protection Plan

PSI will work with City of Monroe and the GAEPD to develop a WPP that is consistent with "Watershed Assessment and Protection Plan Guidance: Phase III. Watershed Protection Plans," March 23, 2005. The WPP will include GAEPD and City objectives for the long-term protection of the drainage basin within the City sewer service area. The development of the WPP will involve frequent consultation/input from City of Monroe representatives.

The final WPP to be submitted to GAEPD for approval will include:

- Description of the methodologies employed to develop the WPP.
- Watershed characterization and assessment based upon the information and data collected/analyzed as part of **Tasks 2 and 3**.
- Description of the process used to develop City-adopted Best Management Practices (BMP's) for the future protection of the impact basin and its tributaries.
- Description and implementation strategies for BMP's.
- Long term monitoring plan for gauging the qualitative and quantitative success of implementing the BMP's associated with the WPP.

REPORTS

PSI will prepare and submit the WMP, WA, and WPP reports to the City of Monroe and Keck and Wood for initial "draft" approval. Following your approval, PSI will meet with the GAEPD to present our draft reports for initial review. Following GAEPD initial review, PSI will finalize the reports and submit them to the City of Monroe, Keck and Wood, and the GAEPD for final approval. After the GAEPD comments have been incorporated into the final reports, the GAEPD will issue a letter of "concurrence" that indicates their acceptance of the documents. At that time, the WPP will be adequate to fulfill the GAEPD requirements for the new NPDES permit.

SCHEDULE

It is anticipated that the WMP will be submitted to the GAEPD for review within 60 days of acceptance of our proposal. Pending minor comments from the GAEPD, the chemical, in-situ water quality, and ecological assessments will commence immediately after GAEPD acceptance of the WMP. It should be noted that macroinvertebrate assessment is conducted from October to February, fish assessments April to June, and water quality is sampled from May to October (recommended), therefore completion of the field assessments will be dependent on the date KW and PSI are released to begin work on this project. The field assessments, depending on date of commencement, may take approximately 8-12 months to complete. After completion of the field assessment phase, the WA reporting phase will begin, which takes approximately 2 months to complete. After GAEPD approval of the WA report, the WPP reporting phase will begin. The WPP report will take approximately 2-3 months to complete. The complete watershed

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assessment process (Watershed Monitoring Plan → Field Assessments → Watershed Assessment Report → Watershed Protection Plan) typically takes approximately 1-year to complete.

COST

It is proposed that the fee for the performance of the outlined services be determined on a lump sum basis. Based upon the scope of services outlined above (Tasks 1 through 4), it is determined that the total fee will be as follows:

COST OF SERVICES	
Task Description	Cost
Task 1 - Collect Background Information	\$2,450.00
Task 2 - Watershed Monitoring Plan Development	\$3,370.00
Task 3 - Water Quality Sampling	By Others
Laboratory Analysis	By Others
Biological Sampling (Fish, Macroinvertebrate, Habitat)	By Others
Watershed Assessment Analyses and Report	\$9,200.00
Task 4 - Develop Watershed Protection Plan (WPP)	\$9,100.00
All Tasks – Project Management, Communications, Meetings, and Coordination with Monroe and GAEPD	\$6,710.00
Total =	\$30,830.00

Unanticipated Services

In the event the City requires unanticipated services not included in the above Scope of Services or as caused by factors beyond KW’s and PSI’s control, Keck & Wood will work with the City at predetermined rates or agreed upon prices beforehand. Additional work will not be performed without prior authorization.

Invoice and Payment

Invoices will be issued monthly based on the estimated percent of completion for the various tasks in the scope of services. Payment of a properly prepared invoice shall be made within thirty (30) calendar days of receipt. Any invoice that exceeds 30 days from date of invoice will be charged a late fee equal to 1.5 percent of the outstanding invoiced balance per month.

ACCEPTANCE OF PROPOSAL

To accept this proposal, please sign and complete the acceptance blanks at the end of this letter and return one copy of the authorized proposal to our office. We will proceed with the work upon receipt of the proposal authorization. Keck & Wood will perform the work in accordance with the attached Terms and Conditions, which are incorporated into and made a part of this proposal.

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This technical and cost proposal is valid for 60 calendar days after the proposal date. Keck & Wood appreciates the opportunity to submit this proposal and we hope the information is acceptable to you. We are able to commence the work upon your authorization. Please let us know if there are any questions or if you need further information.

Very truly yours,

KECK & WOOD, INC.



Edgar G. Williams, P.E.
President/CEO

Enclosure

This Proposal is accepted on this _____ day of _____, 20_____.

Accepted by Client: **CITY OF MONROE, GEORGIA**

Signature

Name (Printed or Typed)

Title

TERMS AND CONDITIONS OF SERVICE

EFFECTIVE DATE: This Agreement, by and between Keck & Wood, Inc., hereinafter referred to as the Consultant, and the Client identified on the face(s) hereof, is binding and effective upon acceptance by a currently authorized corporate officer of the Consultant.

SCOPE OF SERVICES: Whereas the Consultant has proposed to perform, and the Client desires to have the Consultant perform, the scope of services described on the face side(s) hereof:

AGREEMENT: Now, therefore, in consideration of the premises and the covenants and undertakings hereinafter set forth, and for other good and valuable considerations, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. **PERFORMANCE:** Unless more specifically established on the face side(s) hereof or attachments hereto, the Consultant a) agrees to perform his services in conformity with generally accepted professional practices for the intended project or purpose, and makes no warranty either expressed or implied; b) agrees to correct any defective survey or engineering service performed by the Consultant when brought to its attention in writing; and c) will endeavor to complete its services on a time schedule consistent with needs of the Client.

2. **OWNERSHIP OF DOCUMENTS:** All documents, including original drawings, plats, estimates, field notes, specifications and other data are and shall remain the property of the Consultant. Copies of finished documents furnished to the Client are instruments of service for the specific project or initial purpose indicated, and are not intended to be reused for extensions of the project or for additional purposes without written authorization by the Consultant. Reuse of any of the instruments of service of the Consultant by the Client on any extension of the project or for additional purposes shall be at the Client's risk and the Client agrees to defend, indemnify and hold harmless the Consultant from all claims, damages and expenses including attorney's fees arising out of any unauthorized reuse of the Consultant's instruments of service by the Client or by others acting through the Client.

3. **ESTIMATES OF CONSTRUCTION COST:** Since the Consultant has no control over construction costs or of the methods by which construction contractors determine prices, or over market conditions, any opinion of the Consultant regarding construction cost are to be made on the basis of his best judgment, but Consultant cannot and does not guarantee that actual construction costs will not vary from estimates provided by the Consultant.

4. **FORCE MAJEURE:** Consultant shall not be liable for failures to perform any obligation under this Agreement where such failure arises from causes beyond Consultant's exclusive control, including (but not limited to) such causes as war, civil commotion; force majeure; acts of a public enemy; sabotage; vandalism; accident; statute; ordinances; embargoes; government regulations; priorities or allocations; interruption or delay in transportation; inadequacy, shortage or failure of supply of materials, equipment, fuel or electrical power, labor controversies (whether at Consultant's office or elsewhere); shut-downs for repairs; natural phenomena; whether such cause exists on the effective day hereof, or arises thereafter, or from compliance with any order or request of the United States Government or any officer, department, agency, instrumentality or committee thereof.

5. **CONSTRUCTION RELATED SERVICES:** The Consultant has not been retained or compensated to provide design and construction review services relating to any construction contractor's safety precautions or to means, methods, techniques, sequences, or procedures required for a contractor to perform his work which are not directly a part of the completed project; omitted services include but are not limited to shoring, scaffolding, underpinning, temporary retention of excavations, and any erection methods and temporary bracing.

6. **CONSULTANT'S INSURANCE:** The Consultant shall acquire and maintain statutory workmen's compensation insurance coverage, employer's liability, comprehensive general liability insurance coverage of not less than \$2,000,000 limit, and professional liability insurance coverage of not less than \$2,000,000 limit.

7. **CONTRACTOR'S INSURANCE:** Should the scope of services by the Consultant include planning, design or observation of construction work, the Client shall require the contractor(s) and any subcontractor(s), prior to commencement of such work, to submit evidence that he (they) have obtained for the period of the construction contract, and the guarantee period, comprehensive general liability insurance coverage including completed operations coverage. This coverage shall provide for bodily injury and property damage arising directly or indirectly out of, or in connection with, the performance of construction work, and have a limit of not less than \$500,000 for all damages arising out of bodily injury, sickness or death of one person and an aggregate of \$1,000,000 for damages arising out of bodily injury, sickness and death of two or more persons. The property damage portion shall provide for a limit of not less than \$300,000 for all damages arising out of injury to or destruction of property of others arising directly or indirectly out of or in connection with the performance of construction work in any one occurrence including explosion, collapse and underground exposures. Included in such coverage shall be contractual coverage sufficiently broad to insure the provision of the subsequent paragraph entitled "Contractor's Indemnity". The comprehensive general liability insurance shall include as additional named insureds: the Client; the Consultant; and each of their officers, agents and employees.

8. **CONTRACTOR'S INDEMNITY:** Should the scope of services by the Consultant include planning, design or observation of construction work, the Client shall require that all contractors and subcontractors performing work in connection with services rendered by the Consultant, indemnify and hold harmless, the Client and the Consultant, and each of their officers, agents, and employees from and against all claims, damages, losses and expenses including attorney's fees arising out of or resulting from construction operations, provided that any such claims, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property, including the loss of use resulting therefrom; and is caused in whole or in part, directly or indirectly, by any negligent or willful act or omission of the contractor(s), any subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them are liable. The indemnification required shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the contractor(s) or any subcontractor under workmen's compensation acts, disability benefit acts or other employee benefit acts.

9. **ACCESS:** The Client shall be responsible for providing all rights of access upon public or private property as required by the Consultant to perform authorized services.

10. **BASIS OF PAYMENT:** The Client agrees to compensate the consultant as provided on the face side(s) hereof. In the event a preliminary estimate of compensation is made, the Consultant will endeavor to accomplish services within that estimate, but the Consultant does not guarantee such estimate unless a specific written statement to that effect is given. Should the Consultant become aware that charges will or have exceeded any preliminary estimate, he will promptly notify the Client who may elect to reduce the scope of services or authorize a continuation of services at increased cost.

11. **PAYMENT AND CREDIT:** Progress or partial payments shall be made by the Client in proportion to services rendered by the Consultant unless specific extension of credit to the Client is provided on the face(s) hereof. Statements will be issued from time to time by the Consultant, but no more often than at 4-week intervals, and shall be fully payable within 30 days thereafter. Balances which are unpaid for more than 30 days are subject to a finance or service charge plus collection expenses. Unless stated differently on the face(s) hereof service charges shall be 1.5 percent per month, which amounts to 18 percent per year. If in the exclusive judgment of Consultant, the financial condition of the Client at any time does not appear to justify the commencement or continuance of services on the terms specified herein, Consultant may, in addition to all other remedies it may have at law or in equity, make written demand for full or partial payment in advance, suspend its performance until such payment is made and cancel this Agreement if such payment is not received by the Consultant within 30 days after delivery in person or mailing of said demand by Consultant.

12. **AUDIT, ACCESS TO RECORDS:** For Agreements employing cost as a basis of compensation, the Consultant shall maintain books, records, documents and other evidence directly pertinent to the Agreement in accordance with appropriate accounting standards. From time to time, but not more often than once each calendar year, the Client may have his accounting representative verify costs by examination of pertinent documents at the home office of the Consultant. During such audit, the Consultant shall provide suitable facilities for the Client's representative, and that representative shall organize and conduct his audit in a manner which minimizes special effort by the Consultant.

13. **DELEGATION OF DUTIES:** Neither the Client nor the Consultant shall delegate his duties hereunder without the written consent of the other.

14. **TERMINATION:** Should this Agreement be terminated prematurely by written mutual agreement or as provided elsewhere herein, the Consultant shall be paid for services performed to the termination date plus 15 percent of the total compensation earned to the time of termination to account for Consultant's rescheduling adjustments and related costs.

15. **WARRANTY:** CONSULTANT SERVICES WILL BE PERFORMED, ITS FINDINGS OBTAINED AND ITS REPORTS PREPARED IN ACCORDANCE WITH ITS PROPOSAL, CLIENT'S ACCEPTANCE THEREOF, THESE TERMS AND CONDITIONS, AND WITH GENERALLY ACCEPTED PRINCIPLES AND PRACTICES. IN PERFORMING ITS PROFESSIONAL SERVICES, CONSULTANT WILL USE THAT DEGREE OF CARE AND SKILL ORDINARILY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY MEMBERS OF ITS PROFESSION. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES OR REPRESENTATIONS, EITHER EXPRESS OR IMPLIED. STATEMENTS MADE IN CONSULTANT REPORTS ARE OPINIONS BASED UPON ENGINEERING JUDGEMENT AND ARE NOT TO BE CONSTRUED AS REPRESENTATIONS OF FACT.

SHOULD CONSULTANT OR ANY OF ITS PROFESSIONAL EMPLOYEES BE FOUND TO HAVE BEEN NEGLIGENT IN THE PERFORMANCE OF ITS WORK, OR TO HAVE MADE AND BREACHED ANY EXPRESS OR IMPLIED WARRANTY, REPRESENTATION OR CONTRACT, CLIENT, ALL PARTIES CLAIMING THROUGH CLIENT AND ALL PARTIES CLAIMING TO HAVE IN ANY WAY RELIED UPON CONSULTANT'S WORK AGREE THAT THE MAXIMUM AGGREGATE AMOUNT OF THE LIABILITY OF CONSULTANT, ITS OFFICERS, EMPLOYEES AND AGENTS SHALL BE LIMITED TO \$25,000 OR THE TOTAL AMOUNT OF THE FEE PAID TO CONSULTANT FOR ITS WORK PERFORMED WITH RESPECT TO THE PROJECT, WHICHEVER AMOUNT IS GREATER.

IN THE EVENT CLIENT IS UNWILLING OR UNABLE TO LIMIT CONSULTANT'S LIABILITY IN ACCORDANCE WITH THE PROVISIONS SET FORTH IN THIS PARAGRAPH, CLIENT MAY UPON WRITTEN REQUEST OF CLIENT RECEIVED WITHIN FIVE DAYS OF CLIENT'S ACCEPTANCE HEREOF, INCREASE THE LIMIT OF CONSULTANT'S LIABILITY TO \$250,000 OR THE AMOUNT OF CONSULTANT'S FEE, WHICHEVER IS THE GREATER, BY AGREEING TO PAY CONSULTANT A SUM EQUIVALENT TO AN ADDITIONAL AMOUNT OF 5% OF THE TOTAL FEE TO BE CHARGED FOR CONSULTANT'S SERVICES. THIS CHARGE IS NOT BE CONSTRUED AS BEING A CHARGE FOR INSURANCE OF ANY TYPE, BUT IS INCREASED CONSIDERATION FOR THE GREATER LIABILITY INVOLVED.

NO ACTION OR CLAIM, WHETHER IN TORT, CONTRACT, OR OTHERWISE, MAY BE BROUGHT AGAINST CONSULTANT, ARISING FROM OR RELATED TO CONSULTANT'S WORK, MORE THAN TWO YEARS AFTER THE CESSATION OF CONSULTANT'S WORK HEREUNDER, REGARDLESS OF THE DATE OF DISCOVERY OF SUCH CLAIM.

16. **HAZARDOUS MATERIALS:** Nothing contained within this agreement shall be construed or interpreted as requiring Consultant to assume the status of an owner, operator, generator, storer, transporter, treater or disposal facility as those terms appear within RCRA or within any Federal or State statute or regulation governing the generation, transportation, treatment, storage and disposal of pollutants. Client assumes full responsibility for compliance with the provisions of RCRA and any other Federal or State statute or regulation governing the handling, treatment, storage and disposal of pollutants.

17. **MISCELLANEOUS:** This Agreement is to be construed in accordance with and enforced under the laws of the principal place of business of the Consultant. This Agreement constitutes the entire agreement between the parties hereto, and all prior negotiations, representations and inducements of every kind are superceded hereby. No waiver, alteration or modification of this Agreement shall be effective unless in writing and signed by an authorized corporate officer of the Consultant. In the event any provision of this Agreement shall be held to be invalid and unenforceable, the remaining provisions shall be valid and binding on the parties. One or more waivers by either party of any provision, term, condition or covenant shall not be construed by the other party as a waiver of a subsequent breach of the same by the other party.

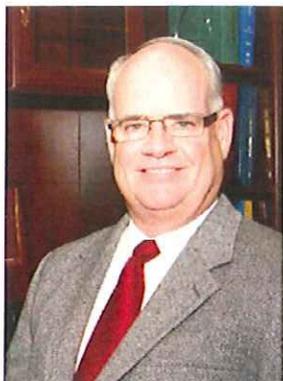
Mr. Matthew Chancey
City of Monroe, Georgia

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APPENDIX A

KECK & WOOD, INC.

PROJECT STAFF RESUMES



MICHAEL J. MOFFITT, PE
Chairman of the Board

J O B D E S C R I P T I O N

In 2009 Mr. Moffitt was elected Chairman of the Board for Keck & Wood, Inc. Mr. Moffitt manages the Public Works Division of Keck & Wood, Inc., supervising the work of six Professional Engineers, three Engineering Interns and two Engineering Technicians. Under his guidance, the Public Works Division produces detailed plans and specifications for major engineering projects, and provides contract administration services during the construction phase of those projects.

Prior to joining Keck & Wood, Inc., Mr. Moffitt was employed as an Environmental Engineer for the Georgia Environmental Protection Division, where his responsibilities included design review for major water supply and water distribution projects. Since joining Keck & Wood, Inc. in 1978, Mr. Moffitt has served as design engineer, project manager, project principal, and Division Manager. He was elected a Vice President of Keck & Wood, Inc. in 1984, and currently serves as the Chairman for the Keck & Wood, Inc. Board of Directors.

R E L E V A N T E X P E R I E N C E

- Project Manager for design, bidding and construction of water transmission mains, raw water pumping stations, raw water reservoir, and 2.0 mgd water treatment plant for the City of Madison, Georgia.
- Project Manager for Lanier Raw Water Pump Station Upgrade, Gwinnett County Department of Public Utilities. Developed scope description and organized engineering discipline assignments for design and evaluation of pump and motor upgrades. Provided project oversight and coordination with Owner needs and schedules for project completion.
- Project Manager and engineer for design and construction of High Rate Water Plant Expansion to 12.0 mgd, Carrollton, Georgia. Renovations included piping and valve upgrades for 3.0 gpm/sf filtration rate, new raw water and high service pumps, chemical feed equipment upgrades, and settling basin weir and plate settler expansions. Managed design activities and construction phase progress.
- Project Manager for design of Water Treatment Plant Expansion for the City of Eatonton, Georgia.
- Project Engineer for water treatment plant modifications and improvements for the City of Dahlonega, Georgia.
- Project Manager for Pateville Road 0.5 MG Elevated Water Storage Tank, Cordele Georgia.

Project Assignment:
Project Principal

Registration:
Professional Engineer, GA, AL, SC,
LA

Education:
Bachelor of Civil Engineering 1977
Georgia Institute of Technology

Professional Associations:
American Society of Civil
Engineers
American Water Works Association
Georgia Association of Water
Professionals
Water Environment Federation

Experience:
With Keck & Wood Inc. since
1978
With Other Firms 1 year



JOHN PAYNE, PE
Project Engineer

J O B D E S C R I P T I O N

Mr. Payne is a project engineer in the Public Works Division of Keck & Wood, Inc. Mr. Payne has extensive experience in the design, drafting, specification preparation, bid process, and construction management and inspection for various aspects water and wastewater systems as well as street and storm water improvement projects. Mr. Payne joined Keck & Wood, Inc. as an intern during his senior year at Southern Polytechnic State University. He has remained with Keck & Wood, Inc. since graduating in August 2001.

R E L E V A N T E X P E R I E N C E

- Project Engineer for construction of the Raw Water Intake Structure for the City of Dahlonega, Georgia. Project consisted of concrete intake structure and pump station wetwell with four vertical turbine pump spaces located on the shores of a new raw water reservoir. Responsibilities included project design drawings and specification production, client meetings, construction contract administration and inspections.
- Project Engineer for a 100,000 gallon elevated water tank and approximately 11,900 feet of 8 inch and 6 inch water lines for the water system improvements for the City of White Plains, Georgia. Responsibilities included surveying water line routes, design, easement exhibit preparation, plan and specification preparation, and construction administration and inspections.
- Project Engineer for two 300,000 gallon elevated water tanks and approximately 15,700 feet of 12 inch and 6 inch water lines for the water system improvements for the City of Clarkesville, Georgia. Responsibilities included surveying routes, design, plan and specification preparation, and construction administration and inspections.
- Project Engineer for a 100,000 gallon elevated water tank for the City of Martin, Georgia. Responsibilities included design, easement exhibit preparation, plan and specification preparation, and construction administration and inspections.
- Project Engineer for the design and hydraulic modeling of a water distribution system pump station in Gheens, LA for the Lafourche Parish Water District.
- Project Engineer for the for the Water Treatment Plant Upgrades for the City of Clarkesville. The Project consisted of upgrades and replacements of various control valves, SCADA system, filtration upgrades, and associated piping, instrumentation, and electrical work. Responsibilities included construction administration and inspections.
- Project Engineer for various site design projects ranging from light industrial site adjacent to the City of Monroe, GA airport, to planned living design for the Baptist Inn Cottages in the City of Palmetto, GA,
- Project Engineer for various water system improvements projects for the Cities of Clarkesville, Woodstock, Palmetto. Responsibilities often included preliminary design, survey coordination, final design, plan and specification preparation, easement drawings, regulatory agency permitting and coordination, and construction contract administration and inspections.

Project Assignment:
Project Engineer

Registration:
Professional Engineer, Georgia

Certifications:
GSWCC Level IA Certified
Professional #11722
GSWCC Level II Certified Plan
Reviewer #11722

Education:
Bachelor of Civil Engineering
Technology, 2001
Southern Polytechnic State
University

Experience:
With Keck & Wood Inc. since
May 2001

KECK & WOOD, INC.
Résumés of Key Personnel
Item # 3

Mr. Matthew Chancey
City of Monroe, Georgia

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APPENDIX B

PROFESSIONAL SERVICES INDUSTRIES, INC. (PSI)

PROJECT EXPERIENCE DESCRIPTIONS AND REFERENCES,

STAFF RESUME

AND LABORATORY CERTIFICATION

Representative Projects

Cobb County Government – Clean Water Act Permitting Marietta, Georgia

Client:	Cobb County Government Property Management Division	
Service Start Date:	August 2008	
Service Completion Date:	February 2009	
Service(s) Provided:	Wetland Delineation; Corps of Engineer Nationwide Permit #39; GAEPD Stream Buffer Variance	
Reference:	Mr. Allen Kronenberger 57 Waddell Street Marietta, Georgia 30090 770-528-2187	

The Cobb County, Georgia, Board of Commissioners has determined that the current Cobb County Courthouse is inadequate to support the present judicial load, therefore, a location has been chosen for a new courthouse facility and secured parking area. The proposed project site includes 2.49 acres of land which is partially wooded and partially developed with an asphalt parking area. Cobb County determined that the proposed project would impact the wooded area, therefore, required the services of a consultant to identify any environmental concerns.

Cobb County retained the services of PSI in order to assess the proposed project site. A PSI Certified Ecologist performed a site assessment and determined that the wooded area contained a flowing water feature, a tributary to Sope Creek, that would likely fall under jurisdiction of the United States Army Corps of Engineers (ACOE) under Section 404 of the Clean Water Act (CWA). Additionally, the wooded buffer (riparian zone) adjacent to the tributary would fall under the jurisdiction of the Georgia Environmental Protection Division (GAEPD) in accordance with the terms and conditions set forth in the GAEPD Erosion and Sediment Control Act of 1975.

Cobb County proposed that the tributary be piped in order to complete the project. PSI determined that this impact would require an ACOE CWA permit prior to commencement of development of the project site. PSI prepared and submitted an ACOE Nationwide Permit No. 39 – Commercial and Institutional Developments, which included research into threatened/endangered species, alternative site analyses, cultural resources, water quality management, floodplain management, storm water management, and a compensatory mitigation plan.

PSI determined that impact to the riparian zone would require a GAEPD Stream Buffer Variance (SBV). PSI completed and submitted a GAEPD Application for a 25-foot Vegetative Buffer Encroachment, which included consultation with local government officials, erosion/sediment control plans, justification of disturbance, public notification, and compensatory mitigation.

Water and Natural Resources

**Lumber City Watershed Assessment and Protection Plan
Lumber City, Georgia**

Client:	Hofstadter and Associates Civil Engineers
Service Start Date:	February 2006
Service Completion Date:	May 2007
Service(s) Provided:	Watershed Assessment and Protection Plan
Reference:	Mr. Charlie Bridges, P.E. 4571 Arkwright Road Macon, Georgia 31210 478-757-1169



The Lumber City Wastewater Treatment Plant (WWTP), which consists of a single oxidation pond, is currently designed to treat a maximum of 0.275 million gallons per day (MGD) of sanitary and storm water waste, which is ultimately discharged into the Ocmulgee River. The WWTP is at hydraulic capacity, receiving an average daily flow of 0.220 MGD of wastewater during dry periods. During wet weather events, the City's WWTP received approximately 0.385 MGD of wastewater, beyond its designed capacity to adequately treat the wastewater, and has been exceeding its effluent limits for flow, biological oxygen demand (BOD₅), and total suspended solids (TSS).

The City's civil engineer, Hofstadter and Associates, Inc., of Macon, Georgia, developed a long term corrective action plan that included upgrading the existing oxidation pond treatment system to an activated sludge mechanical plant. Additionally, the maximum plant design flow was increased to 0.5 MGD. Based on the above modifications, it was anticipated that the City would be able to meet the effluent limits as set forth by its NPDES permit on a regular basis using only 50% of the upgraded plant capacity.

The City was seeking funding for the WWTP upgrades through a grant from the United States Department of Agriculture (USDA). A stipulation of this funding required the City adopt and implement a GAEPD approved Watershed Protection Plan (WPP) for the portions of the Little Ocmulgee and Ocmulgee Rivers located within the Lumber City service area. Hofstadter and Associates utilized the environmental consulting services of *PSI* to develop and implement a long-term ecological monitoring program as set forth in a WPP. Development of the WPP included collection of environmentally relevant background information, seasonal chemical and physical water quality monitoring, and long-term biomonitoring that included habitat assessment, benthic invertebrate sampling, and fish community analyses.

PSI completed the Watershed Assessment and developed the WPP to address contaminants of concern and their potential sources. The WPP included Best Management Practices and ordinances to be adopted by the City and benchmarks that would gauge their effectiveness. The WPP was accepted by the Georgia Environmental Protection Division in May 2007.

Water and Natural Resources

Newnan Utilities - Watershed Monitoring Newnan, Georgia

Client:	Newnan Utilities
Service Start Date:	May 2007
Service Completion Date:	Ongoing
Service(s) Provided:	Watershed Monitoring; Water Quality Chemical Monitoring; In-situ Water Quality; Macroinvertebrate and Fish Community Assessment; Habitat Assessment
Reference:	Mr. Edward Strong 70 Sewell Road Newnan, Georgia 30264 770-683-0994



Newnan Utilities has implemented a Watershed Protection Plan based on numerous studies of the City's valuable water resources and their health status as a result of both point and non-point pollution sources. One portion of the Protection Plan addresses biological health of the streams within City jurisdiction. Newnan utilized the environmental consulting services of PSI to implement the long-term ecological monitoring program as set forth in its Watershed Protection Plan.

PSI is currently monitoring nine of the City's long-term ecological monitoring stations. The long-term ecological monitoring includes chemical water quality monitoring, habitat assessment, pebble count, benthic macroinvertebrate community assessment, fish community assessment, and in-situ water quality. PSI analyzed data, performed statistical analyses, and populated Georgia Environmental Protection Division (GAEPD) required monitoring forms. PSI will provide the City with yearly monitoring reports that summarize the prior year's ecological studies and make comparisons to present-day results that identified trends in the data. The City will use PSI's report to gauge the effectiveness of the Best Management Practices and ordinances adopted by the City as required by their Watershed Protection Plan.

Water and Natural Resources

City of Eastman Watershed Assessment and Protection Plan Eastman, Georgia

Client:	Hofstadter and Associates Civil Engineers	
Service Start Date:	February 2007	
Service Completion Date:	October 2009	
Service(s) Provided:	Watershed Assessment and Protection Plan	
Reference:	Mr. Charlie Bridges, P.E. 4571 Arkwright Road Macon, Georgia 31210 478-757-1169	

The City of Eastman's sanitary waste is currently treated by two wastewater treatment plants (WWTP): the James Avenue Roach Branch WWTP and the Sugar Creek WWTP. The James Avenue Roach Branch WWTP has not been meeting effluent limitations as required by its National Pollution Discharge Elimination System (NPDES) permit and Section 505(b) of the Clean Water Act. As a result, the Georgia Department of Natural Resources Environmental Protection Division (GAEPD) has issued a Consent Order (No EPD-WQ-4513, dated January 4, 2006), to come into compliance with its permitted effluent limits.

The City's civil engineer, Hofstadter and Associates, Inc., of Macon, Georgia, determined the best course of action for the City was to decommission the James Avenue Roach Branch WWTP and pump the raw sewage to an upgraded and expanded Sugar Creek WWTP. Final effluent limits will be issued via NPDES permit after the GAEPD determines wasteload allocations for the receiving stream. It is anticipated that, as a minimum, the following parameters will be regulated: flow, biological oxygen demand (BOD5), total suspended solids (TSS), ammonia, total residual chlorine (TRC), pH, total phosphorous, and fecal coliform bacteria.

The City was seeking funding for the WWTP upgrades through a grant from the United States Department of Agriculture (USDA). A stipulation of this funding required the City adopt and implement a GAEPD approved Watershed Protection Plan (WPP) for the portions of Gum Swamp Creek and Sugar Creek located within the Eastman service area. Hofstadter and Associates utilized the environmental consulting services of *PSI* to develop and implement a long-term ecological monitoring program as set forth in a WPP. Development of the WPP includes collection of environmentally relevant background information, seasonal chemical and physical water quality monitoring, and long-term biomonitoring that includes habitat assessment, benthic invertebrate sampling, and fish community analyses.

PSI completed the WPP in October 2009. The WPP addressed contaminants of concern and their potential sources. The WPP included Best Management Practices and ordinances to be adopted by the City and benchmarks that will gauge their effectiveness. The WPP was accepted by the Georgia Environmental Protection Division.

Water and Natural Resources

Confidential Client Bulloch County, Georgia

Client:	Confidential Client
Size:	295 Acres
Service Start Date:	April 2006
Completion Date:	May 2006
Service(s) Provided:	Environmental Site Assessment Wetland Delineation Subsurface Exploration Threatened and Endangered Species



The subject property consists of approximately 295 acres of partially cleared and partially undeveloped property. The northwestern and eastern portion of the property is wooded and undeveloped. The northeastern portion of the property is active agricultural property. The southwestern portion of the property is residential and includes abandoned homes and garages.

PSI was contracted to conduct a Phase I Environmental Site Assessment (ESA), wetland delineation, and threatened/endangered species survey of the subject property. The ESA was performed in general accordance with the scope and limitations of the American Society for Testing and Materials (ASTM) Standard E 1527-00. Historical resources depict the subject property to be undeveloped (wooded) with the exception of two single family homes and vacant (or pastured) land located on the south and central areas. An onsite assessment of the subject property did not recognize the presence of hazardous substances or other environmental conditions of concern.

A wetland assessment of the approximate 295-acre subject property was performed in general accordance with the scope and limitations of the *Corps of Engineers Wetland Delineation Manual* (USACE, 1987) as required under Section 404 of the Clean Water Act. Of the 295 acre site, approximately 18 acres were determined to be federally protected jurisdictional waters of the United States as defined in 33 CFR Part 328.3. Those areas determined to be federally protected, including wetlands, ponds, streams and tributary systems, were physically delineated and surveyed using a Global Positioning System (GPS) unit by **PSI** personnel in preparation for USACE and appropriate local and state agency verification.

PSI conducted a threatened and endangered species survey in order to document the presence and/or potential for occurrence of federal and/or state listed plant and animal species within and immediately adjacent to the study area through: 1) the interpretation of existing state and federal databases of known listed species occurrences; and, 2) pedestrian survey of the property for habitat types critical to the occurrence of state and/or federal listed species. The pedestrian survey did indicate the presence of critical habitat; however, there was no indication of the presence of any state and/or federal listed species.

Water and Natural Resources

City of East Dublin Watershed Assessment and Protection Plan East Dublin, Georgia

Client:	Hofstadter and Associates Civil Engineers	
Service Start Date:	February 2007	
Service Completion Date:	May 2010	
Service(s) Provided:	Watershed Assessment and Protection Plan	
Reference:	Mr. Charlie Bridges, P.E. 4571 Arkwright Road Macon, Georgia 31210 478-757-1169	

The City of Eastman's sanitary waste is currently treated by a single facility located on Holmes Road. The Holmes Road Wastewater Treatment Plant (WWTP), a six basin rapid infiltration basin (RIB) land treatment system, is operating at greater than 100% of its permitted flow capacity (0.312 MGD). The WWTP has not been meeting effluent limitations for flow and nitrates as required by its National Pollution Discharge Elimination System Land Application System (NPDES-LAS) permit No. GA02-270 and Section 505(b) of the Clean Water Act. As a result, the City determined that a WWTP upgrade would be necessary to ensure current and future permitted effluent limits.

The City's civil engineer, Hofstadter and Associates, Inc., of Macon, Georgia, determined the best course of action for the City was to expand the existing RIB WWTP from a treatment capacity of 0.312 MGD to 0.750 MGD of treated effluent. Final effluent limits will be issued via NPDES permit after the GAEPD determines wasteload allocations for the receiving stream. It is anticipated that, as a minimum, the following parameters will be regulated: flow, biological oxygen demand (BOD₅), total suspended solids (TSS), ammonia, total residual chlorine (TRC), pH, total phosphorous, and fecal coliform bacteria.

The City was seeking funding for the WWTP upgrades through a grant from the United States Department of Agriculture (USDA). A stipulation of this funding required the City adopt and implement a GAEPD approved Watershed Protection Plan (WPP) for the portions of the Oconee River and its tributary reaches located within the East Dublin service area. Hofstadter and Associates utilized the environmental consulting services of *PSI* to develop and implement a long-term ecological monitoring program as set forth in a WPP. Development of the WPP includes collection of environmentally relevant background information, seasonal chemical and physical water quality monitoring, and long-term biomonitoring that includes habitat assessment, benthic invertebrate sampling, and fish community analyses.

PSI completed the first phase (the Watershed Monitoring Plan), the second phase (the Watershed Assessment), and the third phase (the Watershed Protection Plan). The final WPP addressed contaminants of concern and their potential sources. The WPP included Best Management Practices and ordinances to be adopted by the City and benchmarks that will gauge their effectiveness. The WPP was accepted by the Georgia Environmental Protection Division.

Water and Natural Resources

City of Manchester Manchester, Georgia

Client:	Hofstadter and Associates Civil Engineers
Size:	5 Square Miles
Service Start Date:	May 2006
Service Completion Date:	October 2006
Service(s) Provided:	Environmental Impact Study
Reference:	Mr. Kelvin S. Seagraves, P.E. 4571 Arkwright Road Macon, Georgia 31210 478-757-1169



The City of Manchester Wastewater Treatment Plant (WWTP), which is currently designed to treat a maximum of 0.812 million gallons per day (MGD) of sanitary and storm water waste, is ultimately discharged via a Land Application System (LAS). The WWTP is currently at hydraulic capacity, and has been exceeding its effluent limits for flow, biological oxygen demand (BOD₅), and total suspended solids (TSS). The aging WWTP and LAS have been plagued by equipment malfunctions, which have resulted in multiple unpermitted sewer spills and GAEPD enforcement actions.

The City's civil engineer, Hofstadter and Associates, Inc., of Macon, Georgia, developed a long term corrective action plan that includes upgrading the existing treatment system to an activated sludge mechanical plant with both LAS and National Pollution Discharge Elimination System (NPDES) discharges. Additionally, the maximum plant design flow will be increased to 1.5 MGD. Based on the above modifications, it is anticipated that the City would be able to meet the effluent limits as set forth by its NPDES permit on a regular basis using only 60% of the upgraded plant capacity.

The City is seeking funding for the WWTP upgrades through a grant from the United States Department of Agriculture (USDA). A stipulation of this funding requires the City conduct an Environmental Impact Study (EIS), which addresses the potential environmental impacts of the proposed WWTP upgrade. The EIS will evaluate environmental concerns such as land use and disturbance (i.e. the Farmland Protection Policy Act), formally classified lands (i.e. National or State parks, landmarks, forests, refuges, etc.), floodplains, wetlands (the Clean Water Act Section 404), cultural resources (the National Historic Preservation Act), visual aesthetics, ecological impacts (the Threatened and Endangered Species Act), water quality impacts (the Clean Water Act, NPDES), air quality, noise assessment, and socio-economic impacts.

Hofstadter and Associates utilized the environmental consulting services of *PSI* to develop the EIS for the proposed project. The EIS was accepted by the USDA and the Federal Government prior to authorization for funding of the new WWTP.

Water and Natural Resources

Andrew S. Peiken, C.E.

Principal Consultant/Project Manager

Year started with PSI: 2005

Years experience with other firms: 16

Education:

Bachelors of Science: Biology, University of Georgia, 1989

Professional Registration(s):

Certified Ecologist, Ecological Society of America, Certification #109560 (exp: 6/30/2016)

Certifications/Training:

40 hour OSHA Training, Feb. 1991

40 hour Army Corps of Engineers Wetland Delineation Training, Feb. 2007

16 hour Georgia Environmental Protection Div. Macroinvertebrate Assessment Training, Aug. 2008

8 hour Army Corps of Engineers Regional Supplement Wetland Delineation Training, Jan. 2009

16 hour Army Corps of Engineers Advanced Wetland Delineation Training, Feb. 2009

16 hour Army Corps of Engineers Advanced Hydric Soils and Hydrology Training, June 2009

24 hour US Fish & Wildlife Service Interagency Consultation Course, Nov. 2009

Georgia DNR Scientific Collectors Permit (Lic# 29-WBH-09-144), 2006-2011

32 hr. North Carolina Division of Water Quality Intermittent and Perennial Stream ID, Oct 2010

24 hr. Environmental Institute Phase I Environmental Site Assessment Training, Nov 2010

16 hr. GA Dept. of Transportation Environmental Impacts Analyses Training, Jan 2011

24 hr. GA Dept. of Transportation Plan Development Process Training, Jan 2011

8 hr. GA Dept. of Transportation Worksite Erosion Control Supervision Training, June 2011

Affiliations/Memberships:

Ecological Society of America

Georgia Association of Water Professionals

Professional Experience:

Mr. Peiken is a Certified Ecologist (CE) with over 20 years experience in ecological monitoring and testing. His environmental experiences include: watershed assessment studies, environmental impact statements, NPDES permit compliance monitoring and sampling, fish and macroinvertebrate community assessments, habitat assessments, endangered species studies, wetland delineations, GAEPD Stream Buffer Variances, and Corps of Engineers Section 404 permitting (Nationwide and Individual). Environmental laboratory experience includes aquatic organism culturing, fresh water and marine multi-species acute and chronic toxicity testing (solid phase, elutriate, and liquid phase), water quality testing, toxicity source investigations, bench scale polymer treatment studies, and bench scale biodegradation studies of contaminated soils. Mr. Peiken was the director of an ecological testing and consulting laboratory for over 15 years. His responsibilities included marketing, personnel management and training, business development, QA/QC, certification, project management, and report writing. During his education at the University of Georgia, Mr. Peiken actively participated in the University School of Forest Resources' Fisheries Department, where he contributed to the research of environmental assessments (specializing in benthic macro invertebrate evaluation, which included species diversity and relative abundance, food habitats, and interaction of

Water and Natural Resources

species studies).

Pertinent Project Experience:

Watershed Assessments

Mr. Peiken is currently conducting watershed assessment projects throughout Georgia. This includes watershed characterization, water quality and biological monitoring. This project involves coordination with various state agencies including: EPD, EPA, DNR, and local government agencies.

Representative clients include: Lumber City, GA; City of Eastman, GA; City of Douglas, GA; City of Vidalia, GA; City of Hazlehurst, GA; City of Glenwood, GA; Union City, GA; and City of East Dublin, GA.

Environmental Assessments

Mr. Peiken has experience with the preparation and review of environmental documentation required by the National Environmental Protection Act (NEPA) and United States Department of Agriculture (USDA) Rural Development. He has experience in conducting environmental assessments for new wastewater treatment plant construction and aquatic assessments of stream habitats. These projects involved collection of information involving environmental justice, community cohesion, and coordination with various state and federal agencies including U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, State Historic Preservation Officers, tribal agencies, and local government agencies.

Representative clients include: City of Manchester, GA; and City of Alamo, GA.

Benthic Macroinvertebrate/Fish Assessment Studies/Habitat Assessments

Mr. Peiken has experience in benthic macroinvertebrate sampling, fish community studies, and habitat assessments including: D-framed net, backpack shocking, and seine nets following the GAEPD Rapid Bioassessment Protocols. Mr. Peiken also has experience with interpretation of data including statistical analyses, Index of Well Being, Hilsenhoff Biotic Index, and Index of Biotic Integrity.

Representative clients include: City of Lumber City, GA; City of Eastman, GA; City of Douglas, GA; City of Vidalia, GA; City of Hazlehurst, GA; City of Glenwood, GA; Union City, GA; City of East Dublin, GA; City of Hinesville, GA; Albany, GA; Newnan Utilities, GA; Harlem, GA; Douglasville-Douglas County WSA.

Environmental Sampling and Analyses

Mr. Peiken has experience with water quality sampling and analyses that comply with Federal Clean Water Act and NPDES permit regulations. Experience includes the calibration and use of multi-parameter water quality meters, pH, oxygen, turbidity, and conductivity meters as well as spectrophotometers, microbalances, photometers, microscopes, and laboratory water systems. Sampling experience includes the use of autosamplers (ISCO, Sigma, etc.) and ultra clean techniques for metals sampling.

Wetlands Delineation and Permitting

Mr. Peiken has experience with Army Corps of Engineers required wetland delineations associated with land acquisitions. He has experience with wetland permit requirements and submittals including Nationwide Permits (<1/2 acre of impact) and Individual Permits (>1/2 acre of impact). Experience also includes coordination and negotiation with ACOE project

Water and Natural Resources

managers over Jurisdictional Determinations and mitigation. ACOE permits in Georgia may also require identification of State controlled stream buffers, which require a variance if they will be disturbed. Mr. Peiken has experience in identifying these buffers, submitting the necessary documentation to the State, and receiving variances for their impact.

Representative clients include: LAI Engineers (Walmart Supercenter, Griffin, GA); Developers Diversified (Douglasville Depot, Douglasville, GA); H&M Architects and Engineers (Confidential Client, Statesboro, GA); Value Place (Biloxi, MS and Mobile, AL); Midland Dale Apartments, LLC (Dothan, AL); Centurion, LLC (Walmart Supercenter, Covington, GA); Lyman Davidson (Bartow County Civic Center, Rome, GA); Columbia Engineers (Watson Creek Restoration, Gwinnett County, GA); Cobb County Government (Cobb County Courthouse, Marietta, GA); Columbia Engineers (Windsor Lake Dam Restoration, Gwinnett County, GA); Highwoods Properties (River Point Development, Rome, GA); Dade County Industrial Development (Cloudland Development, Dade County, GA); Union City (WWTP, Union City, GA); and RaceTrac Petroleum (Granbury, TX).

Environmental Sampling and Analyses

Mr. Peiken has experience with water quality sampling and analyses that comply with Federal Clean Water Act and NPDES permit regulations. Experience includes the calibration and use of multi-parameter water quality meters, pH, oxygen, turbidity, and conductivity meters as well as spectrophotometers, microbalances, photometers, microscopes, and laboratory water systems. Sampling experience includes the use of autosamplers (ISCO, Sigma, etc.) and ultra clean techniques for metals sampling.

Representative clients include: City of Smyrna, GA; and United Parcel Service, multiple GA facilities; DeKalb County Government (MS4 Storm-water Sampling and Consulting, DeKalb County, GA).

Threatened and Endangered Species

Mr. Peiken has experience with U.S. Fish and Wildlife Service threatened and endangered species studies under jurisdiction of the Endangered Species Act (ESA) of 1973. The ESA establishes a national program for the conservation and protection of threatened and endangered species of plants and animals and the preservation of the habitats upon which they depend. Section 7 of the ESA requires that Federal agencies, such as the RD/RUS, consult with the USFWS to be reasonably sure that a federally funded project does not jeopardize the continued existence of any Federally-listed threatened and endangered species or result in the destruction or adverse modification of suitable habitat. If a project can not avoid critical habitat areas, the ESA requires mitigation measures or alternatives to reduce the impact.

Representative clients include: Developers Diversified (Douglasville Depot, Douglasville, GA); H&M Architects and Engineers (Confidential Client, Statesboro, GA); and Koll Development (York County, SC).

NPDES Construction Stormwater Permit Applications/Stormwater Pollution Prevention Plans (SWPPP)

Mr. Peiken has experience with preparing construction stormwater applications and SWPPPs as required by Federal and State NPDES guidelines. Includes submission of the permit application (Notice of Intent), preparation of a site-specific SWPPP, and stormwater erosion and sediment control training of on-site general contractors and developers.



FOX Environmental, LLC

262 Forkner Drive
Decatur, GA 30030
cfox@foxenvironmental.net

404-441-7568 phone
404-370-0790 fax
www.foxenvironmental.net

July 20, 2009

Mr. Rodney Middlebrooks
Director of Water and Gas
215 North Broad Street
Post Office Box 725
Monroe, Georgia 30655

**Re: PROPOSAL FOR WATERSHED ASSESSMENT AND PROTECTION PLAN FOR
THE CITY OF MONROE, GEORGIA**

Dear Rodney:

FOX Environmental, LLC is pleased to present this proposal to conduct a Watershed Assessment for the City of Monroe, Georgia. The proposed approach is designed to we will provide the City with a high quality and informative, yet cost-effective characterization of local streams in the City's sewer service area. This study will enable the City to meet the requirements set forth by GA Environmental Protection Division (EPD) for the current permit as well as planned future expansion of the City of Monroe Wastewater Treatment Plant.

The project will involve the direct participation of two firms:

- As Principal of FOX Environmental, LLC, I will serve as project lead and be responsible for overall project planning and coordination, water quality collection and analysis (as needed); QA/QC, data evaluation, watershed protection plan formulation, stakeholder education and outreach, as well as meeting materials/report preparation. FOX has performed successful watershed assessments and prepared watershed protection plans for numerous other jurisdictions in Georgia including: Paulding County; Bartow County; Lee County and the Cities of Dallas; Buford; Cedartown; Griffin; Temple; McRae; Cochran; Cumming; and Carrollton, GA. In addition, FOX has designed stormwater management programs (essentially watershed protection plans) for these and other NPDES Phase II Communities in and around metro Atlanta. A listing of all clients, example projects and additional information may be found at www.foxenvironmental.net. The resulting cost-effective studies, plans and programs have all been approved by EPD as meeting all NPDES requirements.
- CCR Environmental, Inc. or Register Nelson, Inc. both located in Atlanta, GA will assist FOX on the biological field portion of the project, namely: benthic macroinvertebrate, fish and habitat assessment. FOX has teamed with CCR or Register Nelson on at least ten other

watershed assessments and long-term monitoring studies over the past several years. Both firms have conducted similar assessments at various locations within and near Walton County, as well as other locations throughout Georgia.

I have compiled the following Scope of Services for the referenced project. These services are outlined in Attachment "A". Sample projects performed by FOX and CCR are presented in Attachment B. Resumes of key staff are included in Attachment C. This Scope of Services will be executed per the Terms and Conditions outlined in Attachment "D".

I hope the schedule and cost as described herein are acceptable to you. The schedule will depend, in part, on how soon we are given the go-ahead to initiate the study and sufficient rainfall for our wet sampling events. The final project cost may change slightly depending upon input from GA Environmental Protection Division (EPD) on the proposed watershed monitoring plan (i.e., lower cost for fewer sampling locations, higher cost for more sampling locations). Therefore, I suggest scheduling a meeting with EPD in the near future to discuss and finalize the City's proposed monitoring plan.

Please let me know if you have any additional questions or suggestions for improving this proposal to ensure that it meets your needs. If this proposal is acceptable to you and the City of Monroe, please sign and date the following Authorization Section, initial the Terms and Conditions, and return one original copy to our office. By signing below you have indicated that you understand and agree to the Scope of Services (Attachment "A") and the Terms and Conditions (Attachment "B") herein. FOX Environmental is prepared to initiate these services immediately upon receipt of the following notice to proceed. Thanks very much for the opportunity to provide these services to you.

Sincerely,

Catherine A. Fox /s/

Catherine A. Fox, Principal
FOX Environmental, LLC

AUTHORIZATION SECTION

**Proposal accepted for: WATERSHED ASSESSMENT AND PROTECTION PLAN FOR THE
CITY OF MONROE, GEORGIA**

WITH WATER QUALITY ASSESSMENT **WITHOUT WATER QUALITY ASSESSMENT**

By: _____

Title: _____

Date: _____

ATTACHMENT A

SCOPE OF SERVICES *WATERSHED ASSESSMENT AND PROTECTION PLAN FOR THE CITY OF MONROE, GEORGIA*

I. PROJECT UNDERSTANDING

The City of Monroe, Georgia is currently planning to expand of the Jacks Creek Wastewater Treatment Plant (Permit No. GA0031933). The anticipated permit will enable the City to release up to 6 or more MGD of treated wastewater, a significant increase over the current limit of 3.4 MGD. As a condition of the current permit as well as an expanded discharge permit, GA Environmental Protection Division (EPD) requires the City to conduct a comprehensive assessment of the streams located in the City's sewer service area. The Watershed Assessment and Protection Plan must be approved by EPD prior to March 2010.

It is our understanding that the City is interested in a scope that meets minimum state requirements, and that EPD will not require the City to construct a model as a component of this effort. This scope of work defines a project that will produce an acceptable submittal to EPD in accordance with the watershed assessment requirement and also meet the expectations of the City of Monroe. FOX Environmental, LLC recommends conducting the assessment as soon as possible to minimize potential delays in permitting process.

II. PROPOSED SCOPE OF WORK

This scope of work has been formulated to achieve two important goals. One goal is to assess the general water quality within the City of Monroe's sewer service area. The second goal is to develop a watershed protection plan as required by EPD for the future expansion of the Jacks Creek WWTP. This will give the City of Monroe a solid negotiating position based on recently collected water quality data from which to concur or contest watershed management options that GA EPD and other local stakeholders may recommend for implementation within the Monroe service area.

Phase 1 – Development of the Watershed Monitoring Plan

The City of Monroe is located in the Upper Oconee Watershed. Two smaller streams, Mountain Creek and an unnamed tributary drain the western and southwestern portion of City and service area and flow to the Alcovy River. Land located northeast of State Road 11 drains to Jacks Creek and on to the Apalachee River.

FOX Environmental, LLC will first conduct a limited search to identify and obtain any recent water quality data from the City of Monroe along with readily available data from Walton County, GA EPD, etc. on the subject streams to get a better understanding of what is known about the historical health and impacts to local water resources. FOX will use applicable recent water quality monitoring data and reports obtained from neighboring jurisdictions, digital and hard copy

information supplied by your firm as well as any additional information offered by the City of Monroe to prepare detailed Watershed Monitoring Work Plan for review and approval by EPD. One meeting with appropriate EPD staff (probably Dr. Elizabeth Booth) will be held to discuss the work plan and identify necessary changes to ensure EPD support of the proposed study. Although there is the potential for revising this project scope as a result of EPD discussion, this scope has been written based on previous experience with similar projects for other local governments in Georgia. If there is substantial scope revision required as a result of the meeting with EPD, we will discuss these in detail with you before taking major action in revising the work-plan.

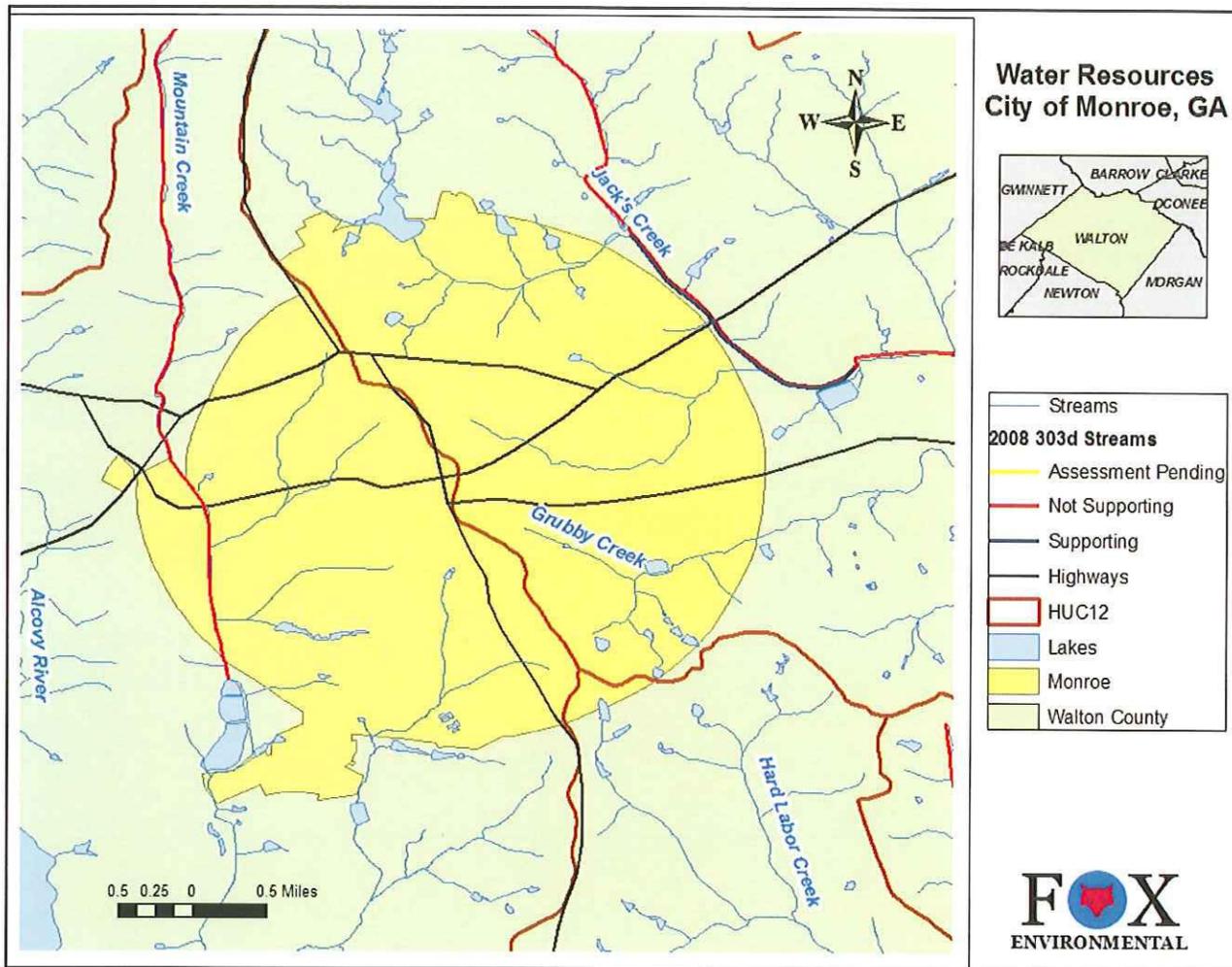
Phase 2 – Watershed Assessment and Characterization

A. Data Collection and Analysis

Study sampling locations will be chosen to reflect the diversity of land uses within and outside the City of Monroe. The City appears to be located on a ridge with streams originating from the Center of Town to all directions. There occur at least one, possibly two streams within the City of Monroe Sewer Service Area which are included on the State's 303(d) list. These include a five mile segment of Mountain Creek that is listed for impacts to fish caused by elevated sediment levels and portions of Jacks Creek which is listed for elevated fecal coliform levels. Current land use within the City is predominately residential, with some commercial and industrial activity. Commercial and industrial land uses, as well as residential areas are expected to increase in the future. Expansion of the Jacks Creek will ensure capacity for the anticipated future growth within the City of Monroe.

This information suggests that the City may be required to collect samples at four locations, three on streams which flow from the City in the northeastern and southwestern directions. As shown in the figure on the next page, these include Mountain Creek, Jacks Creek, Grubby Creek and an unnamed tributary in the southeastern portion of the City. It is important to note the possibility that EPD will approve a final monitoring plan with greater or fewer sampling locations.

Depending upon staff availability and cost, either FOX Environmental or the City of Monroe will be responsible for all water quality sampling and analysis. Water quality monitoring will be conducted at all four study locations. Sampling will be performed for three dry events and one wet event. The wet event will be defined as 0.2 inches of rain with dry conditions (< 0.1 inches of rain) for 72 hours prior. Single, discreet grab samples will be collected for all events. Two of the dry events will be conducted in the summer season (May – October). The other dry event and the wet event will be performed during the winter season (November – April). The wet event will be collected via grab samples and will target the summer season (May – October). Please note that grab samples are currently acceptable for wet weather sampling although EPD encourages the use of a composite sampling approach where possible. If the City chooses to conduct the water quality sampling and analysis, all results, including photographs, will be provided to FOX in hard copy and electronic format for use in the watershed assessment report.



Biological monitoring will be conducted one time at each study location. The primary components of the biological monitoring plan included physical habitat assessments (including pebble counts) and benthic macroinvertebrate and fish sampling. Macroinvertebrate, fish, and habitat monitoring/assessments will be conducted according to the most recent methodologies identified by GA EPD.

Macroinvertebrate and habitat monitoring/assessments will be by a two-person crew. A three-person crew will perform fish monitoring. Biological sampling for fish will occur in May through October, and macroinvertebrate sampling will occur in October through December, as per the state protocols. In general, benthic macroinvertebrates will be collected via dip netting, and fish will be sampled by (backpack) electrofishing. Habitat will be assessed and macroinvertebrates sampled during one field trip, while the fish will be sampled during a subsequent trip to allow for the previous sampling perturbations to subside. Prior to biological surveys, water quality will be assessed via *in situ* measurements of the following parameters: water temperature, dissolved oxygen (DO), pH, turbidity, and specific conductance.

Macroinvertebrate samples will be preserved and analyzed in the laboratory; whereas, the fish will be primarily processed (enumerated and identified) in the field and returned to the collection area of the stream. Some voucher fish specimens may be preserved and taken to the laboratory for

identification. No reference site is required for biological monitoring because reference data are incorporated in the scoring criteria and/or the state will supply ecoregion reference data to use for comparative purposes.

B. Database Management and GIS

All collected and compiled data will be compiled in a database spreadsheet format and incorporated into a GIS environment (ArcGIS) for overlay on planimetric mapping, if available. Specific planimetric mapping may include: 1) Geo-referenced existing and future land use within the Monroe service area, 2) Geo-referenced aerial photography of the Monroe service area, and 3) Geo-referenced contour topography of the Monroe service area. We assume in our cost estimate the GIS data layers will be readily available from the City of Monroe, Walton County, GIS Clearinghouse and/or the Atlanta Regional Commission.

C. Preparation of the Watershed Assessment Report Preparation

Using the results of the water quality, habitat and biological assessments, we will produce a Watershed Assessment Report for the Monroe Sewer Service Area. The process will involve the preparation of a Preliminary Draft Report (in hard copy and electronic format) for distribution and review by the City of Monroe's designated representatives. All review comments received will be incorporated into a Final Draft Report to be sent to the City representatives for review and approval and then to EPD for final review and approval. Review by EPD typically takes up six months to one year. If any comments are obtained from EPD as a result of their review, they will be addressed in a final watershed assessment to be formally submitted to EPD as a component of the final Watershed Assessment and Protection Plan Report.

Phase 3 – Watershed Management and Protection Plan

A. Preparation of the Watershed Protection Plan

Once the Watershed Assessment is complete, a Watershed Protection Plan will be developed that meets the City's needs as well as the requirements of EPD. The Plan will contain recommendations for maintenance and improvement of the area's water quality including: public education and outreach activities; local ordinances related to existing land-use practices and future development; improved inspections, operations, maintenance and enforcement programs to control non-point source pollution; as well as other specific Best Management Practices (BMPs) designed to improve water quality in the area. The Plan will also include a monitoring program to assess improvements or degradations within the area over time once the initial assessment is complete, and a summary of sources of funding that may be solicited to support implementation of the Plan over the next five years. FOX will produce one Preliminary Draft (hard copy and electronic format) for distribution and review by the City of Monroe's designated representatives.

B. Public Education and Outreach

Once internal comments and edits are incorporated into the Watershed Protection Plan, it is assumed there will be one meeting scheduled to present the Plan to the City Council and the general public. FOX Environmental will work with you and the City of Monroe to coordinate scheduling

and publicize these meetings. FOX anticipates that a press release will be sent to a local newspaper to advertise the public meeting and project fact sheets will be distributed at the meeting. We anticipate that you and representatives from the City of Monroe (in addition to myself) will be available to answer any questions received regarding the watershed assessment and protection plan, expanded wastewater facilities, new regulations, financial issues, etc.

C. Finalize Watershed Protection Plan

All comments received will be addressed by FOX in a final Watershed Protection Plan. This Plan will be sent to City representatives and the EPD for final review. Once all parties provide approval of the final draft, the Plan will be finalized and sent to the City of Monroe for formal adoption and submittal to EPD. [If EPD has any additional comments on this Plan prior giving it their approval, FOX will once again revise the document per EPD’s suggestions and produce a second final report. All comments received on this draft will be addressed in a Final Report to once again be submitted to EPD.] A total of three hard copies and 3 CDs (document in pdf) of the entire Watershed Assessment and Protection Plan will be provided to the City of Monroe at the conclusion of this project.

III. SCHEDULE

Task	2009			2010		
Phase 1 – Watershed Monitoring Plan						
Phase 2 – Watershed Assessment and Characterization						
Phase 3 – Watershed Management and Protection Plan						
<i>Final Phase - Review and Approval by EPD</i>						

IV. COST ESTIMATE

FOX Environmental, LLC will perform the previously described Tasks for a fee of \$105 per hour for Senior Level Scientist and \$65 per hour for Watershed Field Technician. Hourly estimates for each task are presented below. Lump-sum fees for the sample collection/assessment and laboratory analyses are also presented below.

PHASE	TASK	HOURS	FEE PER TASK	FEE SUBTOTAL
All Phases	Project Management and Coordination with WCWSA, GA EPD, Precision Planning , etc.	50	\$5,250	\$5,250
I	Preparation of the Monitoring Work Plan	30	\$3,150	\$3,150
II	<i>Water Quality Assessment (4 sites at \$4,500 per site) (Optional Task)</i>	NA	\$18,000	\$28,850 to \$46,850
	Biological Assessment (4 sites at \$2,750 each)	NA	\$11,000	
	Database Management and GIS	50	\$5,250	
	Preparation of the Watershed Assessment Report	120	\$12,600	
III	Preparation of the Draft Watershed Protection Plan	75	\$7,875	\$12,075
	Public Education and Outreach	15	\$1,575	
	Preparation of the Final Watershed Protection Plan	25	\$2,625	
<i>Cost Estimate <u>without</u> Water Quality Assessment</i>				\$49,325
<i>Cost Estimate <u>with</u> Water Quality Assessment</i>				\$67,325

ATTACHMENT B

EXAMPLES OF SIMILAR PROJECTS



Project: Watershed Assessment and Watershed Protection Plan for Walton County, GA

Location: Walton County, Georgia

Reference Name & Number: Precision Planning, Mr. Chad Olstrum, 770-338-8166

Description: Project included all aspects of project planning and implementation, including meetings with Georgia Environmental Protection Division, developing the scope and project plan, station identification, sample collection, data interpretation, development and analysis of Geographic Information Systems (GIS) Arcview Project. Recently

completed all field activities including: water quality assessment and biological and habitat assessments at four locations in western Walton County. Future activities involve preparation of the Watershed Assessment Report as well as the Watershed Protection Plan. The assessments were performed under methods outlined in the Georgia Department of Natural Resources' *Standard Operating Procedures: Freshwater Macroinvertebrate Biological Assessment*, and the Wildlife Resources Division's *Standard Operating Procedures for Conducting Biomonitoring on Fish Communities in the Piedmont Ecoregion of Georgia*, latest edition.



Project: Comprehensive watershed assessment for City of Griffin

Location: Spalding County, Georgia

Reference Name & Number: City of Griffin Dr. Brant Keller, 770-233-4138

Description: Conducted EPD-approved biological and habitat assessments at three locations in the City of Griffin, Spalding County, Georgia. Monitoring stations were located within the Flint and Ocmulgee rivers' watersheds, and a reference site was located in Meriwether County, Georgia, within the Flint River watershed. Conducted analyses of water quality, sediment quality and biological data to identify locations

of concern in an 11-mile segment of Potato Creek, Griffin Georgia. Prepared a comprehensive watershed management plan that included recommendations for structural and non-structural best management practices for reducing non-point source impacts of the 303(d) listed stream to restore designated uses. Also worked closely with representatives from GA EPD to prepare and submit a Section 319(h) Grant Proposal requesting \$160,000 to conduct an innovative assessment of genetic signatures of in-stream and host material to enable identification and control of specific sources of fecal coliform within the impaired watershed. The grant proposal was successfully funded.



Project: Comprehensive watershed assessment for City of Cochran

Location: Bleckley County, Georgia

Reference Name & Number: Botts and Associates, Mr. Mervin Botts, 706-660-0059

Description: Conducted biological and habitat assessments at three locations in the City of Cochran, Bleckley County, Georgia. Monitoring stations and a reference site were located within the Ocmulgee River basin. The assessments were performed under methods outlined in the Georgia Department of Natural Resources' 1999

Draft Standard Operating Procedures: Freshwater Macroinvertebrate Biological Assessment, and the Wildlife Resources Division's Standard Operating Procedures for Conducting Biomonitoring on Fish Communities in the Piedmont Ecoregion of Georgia.

Independently researched and developed a comprehensive Watershed Protection Plan. The plan included the development of a watershed management decision-making process, an approach for improving affected areas (basin prioritization and integration of best management practices), new development requirements, a long-term monitoring plan, and implementation and funding options. Future activities will include working directly with the Mayor and City Engineer to implement the Watershed Management Plan, including the preparation of a Section 319 Grant Proposal requesting funds to construct and evaluate the pollutant control efficiency of a stormwater management pond and wetland.



Project: Watershed assessment planning, management, and preparation of Watershed Protection Plan for Lee County

Location: Lee County, Georgia

Reference Name & Number: Geosciences Engineering, Dr. Sam Asady, 770-428-9570

Description: Assisted Project Manager in all aspects of project, especially: data interpretation; modeling; and preparation of final assessment report. Worked closely with Lee County Planners to evaluate current polices and practices. Used all information to prepare

and present a comprehensive watershed management plan that included detailed recommendations on watershed-wide and site-specific best management practices, such as new development and stream buffer ordinances, improved erosion and sediment control inspection and enforcement procedures, and public education and outreach programs. The report also included recommendations for a long-term monitoring program as well as implementation and funding strategies for enhancing and preserving the health of Lee County's streams. This information was used by the County to help develop their NPDES Stormwater Phase II permit.

ATTACHMENT C

RELEVANT EXPERIENCE OF KEY STAFF

Catherine A. Fox, FOX Environmental, LLC

Discipline/Title/Project Assignment: Senior Environmental Scientist / Principal / Project Manager

Years of Experience: 20+ years

Education: A.B. Biology, University of Missouri, 1982; M.S., Oceanography, Texas A&M, 1985; Four Years Doctoral Study in Ecology, University of Georgia

Office Location: Decatur, GA

Relevant Experience: Catherine A. Fox is the Principal and Senior Environmental Scientist at FOX Environmental, LLC, a small, female-owned business located in Decatur, Georgia. She has a Bachelors Degree in Biology from the University of Missouri, a Masters Degree in Oceanography from Texas A&M University, and four years doctoral study in Ecology at the University of Georgia. Ms. Fox has over seventeen years of experience in environmental program and project management at the national, regional and local levels both within federal government (US Environmental Protection Agency) and as a private consultant. Ms. Fox currently provides regulatory compliance and community development services to approximately twenty local governments in Georgia, including: Paulding County; Bartow County; Douglasville-Douglas County Water & Sewer Authority; and Lee County; and the Cities of Cumming; Cedartown; Hiram; Dallas; Tyrone; Cartersville; Emerson and Temple, Georgia. The following are descriptions of selected projects that illustrate our experience in water resources management.

- Paulding County, Georgia – Provided stormwater and watershed assessment technical support since 2002. Prepared the Paulding County Watershed Protection Plan and helped negotiate funding of the Plan from neighboring jurisdictions. Designed and implemented all aspects of the County's Stormwater Management Program including: Notice of Intents for NPDES industrial and MS4 Stormwater Permits, MS4 Annual Reports for 2004 and 2005; Stormwater Pollution Prevention Plans for a landfill and wastewater treatment plant; Illicit Discharge Detection and Elimination Program; New Development Plan Review and Site Inspection and Procedures; staff training; etc. Also assisted the County in meeting all requirements of the MNGWPD Compliance Audit for Wastewater, Water Supply and Stormwater Programs. Currently supporting implementation of the NPDES Stormwater Management Program and the Paulding County Watershed Protection Plan.
- Bartow County, Georgia – Recently developed a comprehensive watershed monitoring plan to evaluate twenty-three watersheds using recommended approaches from the MNGWPD and EPD (WPP). Sampling to begin within the next six weeks. Provided support to help the County pass the MNGWPD/EPD Audit in November 2006. Currently serve as the County's Stormwater Consultant in all aspects of Stormwater Management Program planning and implementation. Activities include: design of the County's Stormwater Web Page; IDDE Program and Procedures; Business Education and Inspections Program; and water quality monitoring to meet MNGWPD and Watershed Protection Plan requirements.

- Lee County, Georgia – Served as the County’s Water Resource Consultant since 2001. Responsible for preparation of the County’s Watershed Protection Plan that included detailed recommendations on watershed-wide and site-specific best management practices, such as new development and stream buffer ordinances, improved erosion and sediment control inspection and enforcement procedures, long-term monitoring program as well as implementation and funding strategies for enhancing and preserving the health of Lee County’s streams. Also provide stormwater planning and implementation assistance to the County Manager and staff to ensure compliance with the Lee County NPDES MS4 Permit. Project areas include: dry weather outfall screening program; business inspections; pollution prevention training; industrial stormwater compliance; development plan review and site inspection program and the storm sewer system inspections, operations and maintenance program.
- City of Cumming, Georgia – Currently serve as the City’s Stormwater Consultant and assist in development and implementation of all aspects of the program including: Illicit Discharge Detection and Elimination Program; storm sewer inspection, operations and maintenance policies; GIS mapping; development plan review and site inspection procedures; and industrial stormwater compliance. Also assisted the City in successfully navigating the MNGWPD/EPD Audit in 2006. Recently completed the City of Cumming Watershed Protection Plan and Bethelview Advanced Water Reclamation Facility Stormwater Pollution Prevention Plan.
- City of Temple, Georgia - Prepared a detailed monitoring plan for a watershed assessment, including: station selection; water quality assessment; Geographic Information Systems (GIS); preparation and presentation of the final assessment report and management plan. FOX recently revised the City’s Development Fee Schedules; prepared a Vulnerability Assessment and Emergency Response Plan. Currently updating the City’s development regulations and conducting a long-term monitoring of local streams per the City’s Watershed Protection Plan.
- City of Dallas, Georgia – Served as the City’s Water Resource Consultant since 2003. Completed a watershed assessment as required to permit a new WWTP. Currently assisting the City in the planning and implementation of a comprehensive Stormwater Management Program and conducting a watershed assessment in anticipation of the construction of a new wastewater treatment facility. Also providing technical support to help the City meet all MNGWPD wastewater, water supply and stormwater requirements to achieve compliance with the MNGWPD Audit in early 2007.
- City of Cedartown, Georgia - Recently completed a comprehensive watershed assessment of streams in the sewer service area for use in creating a watershed protection plan to ensure long-term management of the City’s water resources. Also prepared an Emergency Response Plan as required under the Public Health Security and Bioterrorism Preparedness and Response Act of in 2002 to review potential vulnerability issues and facilitate understanding of new emergency response procedures. Recently prepared a stormwater pollution prevention plan for the City’s wastewater treatment plant.
- City of Griffin, Georgia - Evaluated water quality, sediment quality and biological data to identify locations of concern and to identify recommended best management practices in an 11-mile segment of Potato Creek. Prepared a comprehensive watershed management plan that included recommendations for structural and non-structural best management practices for reducing non-point source impacts of the 303(d) listed stream to restore designated uses. Also worked closely with representatives from GA EPD to prepare a successful Section 319(h) Grant Proposal requesting \$160,000 to conduct an innovative assessment of genetic signatures of in-stream and host material to enable identification and control of specific sources of fecal coliform within the impaired watershed.

ATTACHMENT D

TERMS AND CONDITIONS

FOX Environmental, LLC shall perform the services outlined in this agreement for the stated fee arrangement.

Billings/Payment: Invoices for FOX Environmental's services shall be submitted, at FOX's option, either upon completion of such services or on a monthly basis (unless noted otherwise and are due when rendered. Invoices shall be considered "Past Due" if not paid within 30 days after the invoice date. If the invoice is not paid within 30 days, FOX Environmental, LLC may, without waiving any claim or right against the Owner, and without liability whatsoever to the Owner, terminate the performance of the service. Unpaid accounts shall be subject to a monthly service charge of 1.5% on the unpaid balance at the sole election of FOX Environmental. In the event any portion or all of an account remains unpaid 90 days after billing, the Owner shall pay all costs of collection, including attorney's fees.

Additional Services: Additional services include increase or change in scope of project, major revisions when such revisions are inconsistent with written approvals or instructions previously given, services after award of contract in evaluation of substitutions proposed by the construction contractor, and other services that are not included under professional services; provided, however, that additional services shall not be classified as reimbursable expenses and will be billed at FOX Environmental's cost incurred or normal prevailing rate. FOX Environmental will only perform additional services when authorized in writing by the Owner.

Reimbursable Expenses: Any expenses that are required beyond those identified under professional services will be billed at a multiple of 1.15 times the cost incurred.

Indemnification: The Owner shall indemnify and hold harmless FOX Environmental and all of its personnel from and against any claims, damages, losses and expenses (including attorney's fees) arising out of or resulting from the performance of the services, provided that any such claim, damage, loss or expense is caused by the negligent act, omission, and/or strict liability of the Owner, anyone directly employed by the Owner (except FOX Environmental), or anyone for whose acts any of them may be liable. FOX Environmental shall indemnify and hold harmless Owner and all of Owner's personnel from and against any claims, damages, losses and expenses (including attorney's fees) arising out of or resulting from the performance of the services, provided that any such claim, damage, loss or expense is caused by the negligent act, omission, and/or strict liability of FOX Environmental, anyone directly employed by FOX Environmental, or anyone for whose acts any of them may be liable.

Termination of Services: This agreement may be terminated by written notice by either the Client or FOX Environmental should the other fail to perform its obligations hereunder. In the event of termination, the Client shall pay FOX Environmental for all services rendered to the date of termination and all reimbursable expenses.

Ownership of Documents: All documents produced by FOX Environmental pursuant to this agreement will not be used by the Client at any location or for any project not provided for in this agreement without FOX Environmental's written approval. Any unauthorized use or distribution shall be at Client's and Recipient's sole risk and without liability to FOX Environmental.

Client Initial _____

FOX Environmental, LLC Initial **CFox**

RubeEco Environmental, LLC

2454 Fernleaf Lane
Decatur, GA 30033
marubenstein@gmail.com
404-633-8810 phone

September 27, 2012

Mr. Rodney Middlebrooks
Director of Water and Gas
215 North Broad Street
Post Office Box 725
Monroe, Georgia 30655

Re: Watershed Assessment and Protection Plan
City of Monroe
Walton County, Georgia

Dear Mr. Middlebrooks:

RUBE-ECO, LLC is pleased to present this proposal to perform services for the above referenced project. We understand our role would be to prepare and implement a Watershed Assessment and Watershed Protection Plan, in an effort to fulfill requirements of the National Pollutant Discharge Elimination System (NPDES) for Wastewater Facilities in the City of Monroe, Walton County, Georgia. The project involves the following services:

- Phase 1 – Prepare the Watershed Monitoring Plan
- Phase 2 – Prepare the Watershed Assessment and Characterization
- Phase 3 – Prepare a Watershed Protection Plan

The successful implementation of these plans begins with establishing a well coordinated approach involving ongoing collaboration between City and the Environmental Protection Division (EPD). The continued approach will ensure the City with a high quality and informative, yet cost-effective characterization of local streams in the City's sewer service area. The process, the deliverable reports, and the services of RUBE-ECO, LLC will provide great value to the City, while meeting all of EPD's current protocols and procedures.

Should you have any additional questions, comments or suggestions for improving this proposal to ensure that it meets your needs, please don't hesitate to contact me at your convenience. If this proposal is acceptable to you and the City of Monroe, I will present terms and conditions for your review and Authorization. By signing below you have indicated that you understand and agree to the Scope of Services (Attachment "A"). RUBE-ECO, LLC is prepared to initiate these services immediately upon receipt of the following notice to proceed. Thanks very much for the opportunity to provide these services to you.

Respectfully,



Marcus Rubenstein, CPESC
President
RUBECO, LLC

RUBE-ECO, LLC will perform the following Tasks for the lump sum fees presented below. Hourly estimates for each task are presented below. Lump-sum fees for the sample collection/assessment and laboratory analyses are also presented below.

PHASE	TASK	FEE PER TASK	FEE SUBTOTAL
All Phases	Project Management and Coordination with City staff, GA EPD, subcontractors, etc.	\$6,050	\$6,050
I	Preparation of the Monitoring Work Plan	\$3,500	\$3,500
II	Water Quality Assessment (5 sites at \$4,500 per site) (Optional Task)	\$22,500	\$55,350
	Biological Assessment (4 sites at \$3,000 each)	\$14,000	
	WQ and Bio Database Management and GIS	\$4,800	
	Preparation of the Watershed Assessment Report	\$14,050	
III	Preparation of the Draft Watershed Protection Plan	\$8,500	\$12,500
	Preparation of the Final Watershed Protection Plan	\$4,000	
Total Cost Estimate			\$77,400

AUTHORIZATION SECTION

Proposal accepted for: **Watershed Assessment and Protection Plan
City of Monroe
Walton County, Georgia**

By: _____

Title: _____

Date: _____



Utility Committee Meeting

AGENDA

December 4, 2012

Item:

Discussion - Utility Policy Changes

Department:

Additional Information:

Financial Impact:

Budgeted Item:

Recommendation / Request:

Viewing Attachments Requires Adobe Acrobat. [Click here](#) to download.

Attachments / click to download
