



## Utility Committee Meeting

### AGENDA

February 2, 2016

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I. **CALL TO ORDER**

II. **MATTERS BEFORE COMMITTEE**

1. [Discussion - Sanitary Survey Results](#)
2. [Approval - Out of State Travel for SGA Conference](#)

III. **ADJOURN**



## Utility Committee Meeting

### AGENDA

February 2, 2016

**Item:**

Discussion - Sanitary Survey Results

**Department:****Additional Information:****Financial Impact:****Budgeted Item:****Recommendation / Request:**

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

Attachments / click to download

 [Survey Results](#)

# Georgia Department of Natural Resources

Reply To:  
Drinking Water Permitting and Engineering Program  
2 Martin Luther King, Jr. Drive, S.E., Suite 1362  
Atlanta, Georgia 30334

Environmental Protection Division • Watershed Protection Branch  
2 Martin Luther King Jr. Drive • Suite 1152 East • Atlanta • Georgia 30334  
(404) 463-1511; Fax (404) 656-2453  
Judson H. Turner, Director

January 12, 2016

RE: Sanitary Survey  
Monroe  
WSID # GA 2970001

Mr. Rodney Middlebrooks  
Director of Water & Gas  
City of Monroe  
205 E. Marable Street  
Monroe, GA 30655

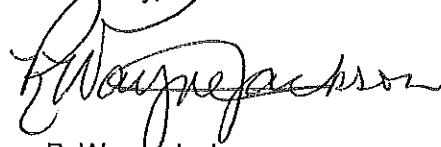
Dear Mr. Middlebrooks

On September 21, 2015 an inspection was conducted of the referenced water system. This system is subject to permit CS 2970001, the Georgia Safe Drinking Water Act of 1977, and the Georgia Department of Natural Resources Rules for Safe Drinking Water, Chapter 391-3-5. The purpose of this sanitary survey is to evaluate 1) the capability of the water system to consistently and reliably deliver an adequate quality and quantity of safe drinking water to the consumer, and 2) the system's compliance with the required drinking water regulations and operational requirements. A score is then assigned to each of the ten components evaluated in the inspection. This score will be used for the purpose of tracking the water system's progress and determining the time frame for a follow-up inspection. The system's overall performance is based on the average of all scores assigned to the applicable components. The Monroe's overall score is 95.7%, which is in the category of "Outstanding Performance".

The findings from the inspection were documented and are summarized on the enclosed "Sanitary Survey." The items that must be addressed are listed under "Deficiencies Noted during the Sanitary Survey." The Water system must respond to these deficiencies within 45 days from the date of this letter.

It is the objective of the Rules for Safe Drinking Water to provide safeguards for public water supplies for the customer. Please respond, in writing, within the forty-five (45) day period of the measures that will be taken to correct the deficiencies noted in the sanitary survey. Should you have any questions, please contact me at (404) 651.5163.

Sincerely,



R. Wayne Jackson  
Environmental Compliance Specialist  
Watershed Compliance Program  
(404) 651.5163 - office  
(404) 861.8563 - cell  
(404) 651.9590 - fax

Cc.

Item # 1

**GEORGIA ENVIRONMENTAL PROTECTION DIVISION****WATERSHED COMPLIANCE PROGRAM****SANITARY SURVEY****DATE:** September 21, 2015

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**SYSTEM NAME:** Monroe**WSID No.:** GA 2970001 **COUNTY:** Walton**NAME(S) OF SURVEY INSPECTOR(S):** Wayne Jackson  
  
  
**NAME(S) OF SYSTEM OFFICIALS  
PRESENT DURING SURVEY:**Rodney MiddlebrooksDoug SamplesRon Hill

## GEORGIA ENVIRONMENTAL PROTECTION DIVISION

## WATERSHED COMPLIANCE PROGRAM

# SANITARY SURVEY REPORT SUMMARY

(OVERALL GENERAL RATINGS)

## PART A - SYSTEM EVALUATION

		SAT	UNSAT	N/A	POINTS		Total Section Points
					Earned	/ Available	
Section I.	Administration	19.0	4.0	0.0	19.0	/ 23.0	23.0
Section II.	Source	194.0	22.0	84.0	194.0	/ 216.0	300.0
Section III.	Treatment	216.0	7.0	55.0	216.0	/ 223.0	278.0
Section IV.	Distribution	150.0	0.0	11.0	150.0	/ 150.0	161.0
Section V.	Storage	138.0	2.0	20.0	138.0	/ 140.0	160.0
Section VI.	Pumps/Pump Facilities/Controls	59.0	1.0	0.0	59.0	/ 60.0	60.0
Section VII.	Monitoring Reports/Records	20.0	0.0	1.0	20.0	/ 21.0	21.0
Section VIII.	System Management/Operations	20.0	0.0	0.0	20.0	/ 20.0	20.0
Section IX	Operator Compliance and Permit Requirements	20.0	0.0	0.0	20.0	/ 20.0	20.0
Section X.	Emergency Plan/Security/Safety	19.5	1.0	0.0	19.5	/ 20.5	20.5
Total Points:		855.5	37.0	171.0	855.5	893.5	1063.5

AVERAGE POINTS:  $\frac{\text{Earned}}{\text{Available}^*} = \frac{855.5}{893.5} = \text{Score } 95.7\%$

\*Available points are obtained by subtracting the non-applicable points (N/A) from the Total Section Points

## PART B - SYSTEM DESCRIPTION

\*\*\*\*\*

Follow-up letter sent: Yes ☐ No ☐  
 Follow-up inspection scheduled: Yes ☐ No ☐

\*\*\*\*\*

Note:  $\geq 90 - 100$  : Outstanding Performance  
 $\geq 75 - 89$  : Satisfactory Performance  
 $\geq 60 - 74$  : Concerned Performance  
 $\leq 59$  : Unsatisfactory Performance

Item # 1

- 1 . The system has a split withdrawal permit: 1) Alcovy River - 10 MGD, 2) John T. Briscoe Reservoir - 16 MGD with a 12 MGD monthly average and 10 MGD annual average restriction.
- 2 . The low water levels and lowest intake elevations are as follows: 1) Alcovy River 709 ' MSL and 706 ' MSL 2) John T. Briscoe Reservoir - 759' MSL and 754' MSL.
- 3 . Section III, Items 10 and 11 deal with filtration systems. Neither of those sections address the operation of membrane filter treatment systems. The component of the score for the survey accounted for by those sections are not applicable therefore will not impact the final evaluation. Regarding the operation of the filtration system, review of the operational records and observation of the operation while on-site indicates the filters are operating within design standards. It should be noted that the recently-issued Permit to Operate does not include details regarding the water plant. The evaluation was made under the assumption the parameters would remain the same when the new permit is reissued. The plant management has been instructed to contact the EPD Drinking Water Permitting and Engineering group to correct this omission.

## **DEFICIENCIES NOTED DURING THE SANITARY SURVEY**

- 1 . Retain the services of additional certified distribution operators in order to meet the demands of the system.
- 2 . Determine a method to reduce aquatic growth in the presedimentation basins.
- 3 . Number or label all pumps (raw water, high service, feed, boosters, etc.)
- 4 . Clean the waste lagoons.
- 5 . Label the phosphate storage tank.
- 6 . Label the pre and post lime pumps.

Item # 1

# **RECOMMENDATIONS MADE AS A RESULT OF THE SANITARY SURVEY**

1 .

Item # 1



# PART A

## SYSTEM EVALUATION

### Section I Administration

NAME of the OPERATOR-IN-RESPONSIBLE CHARGE: <u>Rodney Middlebrooks</u>	
Certification Class: <u>1</u>	Expiration Date: <u>30-Jun-17</u>
Phone Number: <u>770 266.5402</u>	Fax Number: _____
Mailing Address: <u>205 E. Marable Street</u>	
<u>Monroe, GA 30655</u>	
_____	
_____	

- |   |  |
|---|--|
| 1 . Does the system have at least one (1) operator who is properly certified in the classification required by the Rules at each shift of plant operation?  | 1.0 Y _____ N <u>1.0</u> N/A _____   |
| 2 . Does the system have at least two (2) operators who are properly certified in the classification required by the Rules at each shift of plant operation?  | 1.0 Y _____ N <u>1.0</u> N/A _____   |
| 3 . Does the system have at least one (1) certified operator at each shift?   | 2.0 Y <u>2.0</u> N <u>0.0</u> N/A _____  |
| 4 . Does the system have at least two (2) certified operators at each shift?  | 1.0 Y _____ N <u>1.0</u> N/A _____   |
| 5 . Does the classification of the operator in-responsible-charge comply with the State laws and the Rules for Safe Drinking Water?   | 2.0 Y <u>2.0</u> N <u>0.0</u> N/A _____  |
| 6 . Does the system have an adequate number of water plant operators based on the size and complexity of the treatment processes?   | 2.0 Y <u>2.0</u> N <u>0.0</u> N/A _____  |
| 7 . Does the system have a certified Distribution System Operators(s)?<br>Is the number of distribution system operators adequate based on the size and complexity of the distribution network?   | 1.0 Y <u>1.0</u> N <u>0.0</u> N/A _____<br>1.0 Y _____ N <u>1.0</u> N/A _____          |
| 8 . Does the system have a "Standard Operating Procedure" (SOP) manual? (verify)<br><br>Do all the operators follow the established procedures?   | 1.0 Y <u>1.0</u> N <u>0.0</u> N/A _____<br><br>1.0 Y <u>1.0</u> N <u>0.0</u> N/A _____ |
| 9 . Does the system have a "Minimum Construction Standards" manual? (verify)<br><br>Are the construction and material standards being followed during the construction of water system projects?<br>Are all the required operators knowledgeable of these standards | 1.0 Y <u>1.0</u> N <u>0.0</u> N/A _____<br><br>1.0 Y <u>1.0</u> N <u>0.0</u> N/A _____ |
| 10 . Does the system have a "Business Plan"? (verify)   | 2.0 Y <u>2.0</u> N <u>0.0</u> N/A _____  |
| 11 . Does the system have an "Organization Chart"? (verify)   | 1.0 Y <u>1.0</u> N <u>0.0</u> N/A _____  |
| 12 . Is the "Permit to Operate a Public Water System" posted at the treatment plant?<br>Are all the required operators familiar with the permit conditions?   | 1.0 Y <u>1.0</u> N <u>0.0</u> N/A _____<br>1.0 Y <u>1.0</u> N <u>0.0</u> N/A _____     |
| 13 . Is the "NPDES" posted at the water treatment plant?<br>Are all the required operators familiar with the NPDES permit parameters?   | 1.0 Y <u>1.0</u> N <u>0.0</u> N/A _____<br>1.0 Y <u>1.0</u> N <u>0.0</u> N/A _____     |

Sect. Pts. # 1	23.0
Earned Points	<u>19.0</u>

### Names of Water Plant Operators and Certification Classifications

[illegible]

Item # 1

**Section II.****Source**

NAME of WATER SOURCE(S):

- (1) Alcovy River
- (2) John T. Briscoe Reservoir (Beaver Dam Creek)
- (3) Jacks Creek (emergency source)

**1 . Watershed Management Program**

- 1 . Is the entire watershed for the source protected? 4.0 Y        N 4.0 N/A         
 Are efforts being made to purchase all land within the watershed? 1.0 Y        N 1.0 N/A         
 Are the critical elements of the watershed protected or purchased? 4.0 Y        N 4.0 N/A
- 2 . Does the system have an agreement with landowners concerning land use? 1.0 Y        N 1.0 N/A         
 Does the system have a plan to acquire control of land use within the watershed? 1.0 Y        N 1.0 N/A
- 3 . Are all activities with the watershed identified and located? 3.0 Y 3.0 N 0.0 N/A         
 Have there been changes since the last sanitary survey? 2.0 Y        N 2.0 N/A
- 4 . List practices used to mitigate critical activities within the watershed that may degrade water quality: SWAP, state-mandated buffers, limited use of reservoir  
 Are these practices monitored? 4.0 Y 4.0 N 0.0 N/A         
 Should there be any changes to the existing practices? Y        N ✓
- Sub. Pnts Avail.: 20.0  
 Sub. Pnts. Earned: 7.0

**2 . Wellhead Protection Program**

- 1 . Is the Wellhead Protection Area (WHPA) delineated? 5.0 Y        N 0.0 N/A 5.0  
 Are all the potential sources of contaminants identified & located? 4.0 Y        N 0.0 N/A 4.0  
 Did the system develop and implement a strategy to manage the WHPA? 4.0 Y        N 0.0 N/A 4.0  
 Are all sources protected from contamination? 4.0 Y        N 0.0 N/A 4.0  
 Does the system have a "Wellhead Protection Program" developed by EPD/GSB? 3.0 Y        N 0.0 N/A 3.0
- Sub. Pnts Avail.: 20.0  
 Sub. Pnts. Earned: 0.0

**3 . Source Water Vulnerability - Surface Water****Hydrogeologic sensitivity of the source**

- 1 . Are intake(s) located in turbid water or near the shore?(undesired) Y ✓ N         
 Are intake(s) located away from the shore in clear water? 5.0 Y        N 5.0 N/A
- 2 . Is water being fed from steep slopes?(undesired) Y        N ✓  
 Is water being fed from shallow slopes? 5.0 Y 5.0 N 0.0 N/A
- 3 . Is water being fed from land with no vegetation?(undesired) Y        N ✓  
 Is water being fed from land with thick vegetation? 5.0 Y 5.0 N 0.0 N/A
- 4 . Is water being fed from paved surfaces?(undesired) Y        N ✓  
 Is water being fed from highly permeable top soils? 5.0 Y 5.0 N 0.0 N/A
- Sub. Pnts Avail.: 20.0  
 Sub. Pnts. Earned: 15.0

**4 . Source Water Vulnerability - GWDUI**

- 1 . Is the Aquifer shallow or close to the surface?(undesired)  
Is the Aquifer deep and further beneath the surface?

Y        N         
5.0 Y        N 0.0 N/A 5.0

- 2 . Is the Aquifer overlain by thin unsaturated zone(s)?(undesired)  
Is the Aquifer overlain by thick zones(s)?

Y        N         
5.0 Y        N 0.0 N/A 5.0

- 3 . Is the Aquifer overlain by unconfined layers?(undesired)  
Is the Aquifer overlain by thick confining layer(s)?

Y        N         
5.0 Y        N 0.0 N/A 5.0

- 4 . Does the Aquifer have conduits/sinkholes into or near saturated zones?(undesired)  
Aquifer(s) have no conduits into or near saturated zones.

Y        N         
5.0 Y        N 0.0 N/A 5.0

Sub. Pnts Avail.: 20.0  
Sub. Pnts. Earned: 0.0

**5 . Integrity of the Source Water Structures**

- 1 . Does the infrastructure design meet current EPD Rules & Standards?  
Is the infrastructure design appropriate for permitted pumping rate?

4.0 Y 4.0 N 0.0 N/A         
4.0 Y 4.0 N 0.0 N/A       

- 2 . Does the system have a regular maintenance schedule in place?  
Is the maintenance schedule appropriate for the design & construction?

4.0 Y 4.0 N 0.0 N/A         
4.0 Y 4.0 N 0.0 N/A       

- 3 . Has the infrastructure been operating reliably?  
If not, explain \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

4.0 Y 4.0 N 0.0 N/A       

Sub. Pnts Avail.: 20.0  
Sub. Pnts. Earned: 20.0

**6 . Are Potential Sources of Contamination (PSC) Identified and Managed?**

- 1 . Are PSC's located close to drinking water wells or intakes?

4.0 N 4.0 Y 0.0 N/A       

- 2 . Are there physical barriers to contaminant release?

4.0 Y        N 4.0 N/A       

- 3 . Are the standard operating practices designed to prevent contaminant release?

2.0 Y 2.0 N 0.0 N/A       

- 4 . Are there contingency plans for accidental release?  
Are operations personnel familiar with these plans?

5.0 Y 5.0 N 0.0 N/A         
5.0 Y 5.0 N 0.0 N/A       

Sub. Pnts Avail.: 20.0  
Sub. Pnts. Earned: 16.0

**7 . Source Water Quality**

- 1 . Is the source water quality monitored by the system?  
What water quality parameters are being monitored? (list)  
pH, alkalinity, Fe, Mn, temperature, turbidity, TOC  
\_\_\_\_\_

4.0 Y 4.0 N 0.0 N/A       

- 2 . Is there an emergency spill response plan for events that may effect water quality?

2.0 Y 2.0 N 0.0 N/A       

- 3 . Is the area around the intake restricted? (no access)

4.0 Y 4.0 N 0.0 N/A       

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- 4 . Are there any sources of pollution at or near the intake?  
What is the system doing to mitigate the sources of pollution? (explain)

4.0 N 4.0 Y 0.0 N/A

- 5 . Have there been any significant fluctuations in water quality?  
What are the main causes of water quality fluctuations? (list)

2.0 N 2.0 Y 0.0 N/A

Did the system make improvements to mitigate future fluctuations?

Are the improvements performing satisfactorily?

Are any future improvements needed?

2.0 Y 0.0 N 0.0 N/A 2.0

2.0 Y 0.0 N 0.0 N/A 2.0

Y 0.0 N 0.0

Sub. Pnts Avail.: 20.0

Sub. Pnts. Earned: 16.0

## 8 . Source Water Quantity

- 1 . What is the water quantity required to meet the peak demand of the water system?

2.8 MGD

- 2 . What is the available water quantity of the source?

see comment #1 MG

- 3 . Is the source adequate to meet the current and future expected needs of the system, even during the times of drought?

4.0 Y 4.0 N 0.0 N/A

- 4 . Are other sources being investigated to meet the needs? (list)

2.0 Y 2.0 N 2.0 N/A

- 5 . Has the system developed a written water conservation plan?  
Has the system implemented this water conservation plan as needed?

2.0 Y 2.0 N 0.0 N/A

4.0 Y 4.0 N 0.0 N/A

- 6 . Does the system have a meter to monitor production?  
Does the system measure usage by consumers

4.0 Y 4.0 N 0.0 N/A

4.0 Y 4.0 N 0.0 N/A

Sub. Pnts Avail.: 20.0

Sub. Pnts. Earned: 18.0

## 9 . Location of Source Facilities

- 1 . Can the source facility be flooded?

10.0 N 10.0 Y 0.0 N/A

- 2 . Has the source facility ever been flooded?

If yes, was the operation of the source facility impaired?

If no, what is the access to the source facility during a flood?(explain)

10.0 N 10.0 Y 0.0 N/A

Y 0.0 N 0.0

- 3 . What measures have been taken to prevent contamination of the raw water at the source facility during a flood event?(explain)

Sub. Pnts Avail.: 20.0

Sub. Pnts. Earned: 20.0

## 10 . Capacity of Source Facilities

- 1 . What is the design capacity of the source water facility?  
What is the historical maximum daily demand of the system?  
What is the raw water storage capacity of the system?

7.2 MGD

2.8 MGD

878 MG

Given service connections or population, are they reasonable?

5.0 Y 5.0 Item # 1 N/A

- 2 . Is the system structure silting up?  
Is the sump of the source water supply pumps silting up?  
Are there any dead fish, wildlife animals or manmade debris floating?
- 3 . Are the source water supply facilities capable of meeting the required capacity with the largest raw water pump out of service?
- 4 . Does the system check the operating characteristics of the existing units periodically and compare them to the original operating characteristics?  
Should the capacity of the unit be derated?

If so, what is the new capacity?

2.0	N	2.0	Y	0.0	N/A	
2.0	N	2.0	Y	0.0	N/A	
1.0	N	1.0	Y	0.0	N/A	
5.0	Y	5.0	N	0.0	N/A	
3.0	Y	3.0	N	0.0	N/A	
2.0	N	2.0	Y	0.0	N/A	

MGD

Sub. Pnts Avail.: 20.0  
Sub. Pnts. Earned: 20.0

## 11 . Design of Source Facilities - Ground Water Facilities

- 1 . What is the depth of the well?

Is the well encased in bedrock/unweathered subsurface rock strata?  
Is the annular space around the well casing filled with grout or bentonite clay?

- 2 . Is the well properly sealed at the surface?

Does the casing extend at least 12 inches above the well slab?  
Does the well vent terminate above maximum flood level with a turned-down gooseneck and corrosion-resistant screen?

- 3 . Is there an acceptable tap for raw water sampling?

- 4 . Is the well protected from vandalism and accidents?

- 5 . Do the overall piping, valving, site and electrical system appear to be maintained?  
Does the electrical system have lightning protection?  
Is there an auxiliary power supply?

- 6 . Has the source(s) been evaluated for GWDUI?  
If the well is GWUDI, is proper treatment provided (filtration, disinfection) provided?

- 7 . Well Descriptions: (see attached sheets)

						FT
2.0	Y		N	0.0	N/A	2.0
2.0	Y		N	0.0	N/A	2.0
2.0	Y		N	0.0	N/A	2.0
2.0	Y		N	0.0	N/A	2.0
2.0	Y		N	0.0	N/A	2.0
1.0	Y		N	0.0	N/A	1.0
1.0	Y		N	0.0	N/A	1.0
2.0	Y		N	0.0	N/A	2.0
2.0	Y		N	0.0	N/A	2.0
2.0	Y		N	0.0	N/A	2.0
1.0	Y		N	0.0	N/A	1.0
1.0	Y		N	0.0	N/A	1.0

Sub. Pnts Avail.: 20.0  
Sub. Pnts. Earned: 0.0

## 12 . Design of Source Facilities - Surface Water Supply Facilities

- 1 . Is the source water the best possible?

Can the best quality of water be withdrawn? If so, how?(explain):

multiple gates at the reservoir; switch to reservoir when river quality is compromised

4.0 Y 4.0 N 0.0 N/A

Is there an area around the source facility that is restricted?

How is the area marked? Is marking adequate? (explain):

signage and fencing

4.0 Y 4.0 N 0.0 N/A

Are there any nearby sources of contamination evident?

If so, what is being done to protect the source water? (explain):

4.0 N 4.0 Y 0.0 N/A

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- 2 . What conditions cause fluctuations in the raw water quality? (explain):?

rainfall

Is the system taking any steps to minimize the impact? (explain):

- 3 . Can a unit be taken out of service for maintenance and the facility remain operational?

If so, explain: multiple pumps of adequate capacity

4.0 Y 4.0 N 0.0 N/A

- 4 . Can water be withdrawn during a prolonged drought? (Adjustable intake depth)

What is the minimum projected water level

What is the level of the lowest withdrawal point?

4.0 Y 4.0 N 0.0 N/A

comment FT

comment FT

Sub. Pnts Avail.: 20.0

Sub. Pnts. Earned: 20.0

### 13 . Design of Source Facilities - Springs

- 1 . Is the spring area protected from contact with animals and from vandalism?

4.0 Y N 0.0 N/A 4.0

- 2 . Is the spring box watertight with a lockable, overlapping lid or cover?

Does the spring box have a screened overflow?

Is there a drain with a screen and shutoff valve?

Is the supply intake located at least six (6) inches above the bottom and screened?

2.0 Y N 0.0 N/A 2.0

2.0 Y N 0.0 N/A 2.0

2.0 Y N 0.0 N/A 2.0

2.0 Y N 0.0 N/A 2.0

- 3 . Is there a diversion ditch around the upper end of the spring area?

Is there an impervious barrier over the spring area to keep out rainwater and surface contamination?

2.0 Y N 0.0 N/A 2.0

2.0 Y N 0.0 N/A 2.0

- 4 . Does the spring in general comply with EPD Rules and Minimum Standards?

4.0 Y N 0.0 N/A 4.0

- 5 Spring Descriptions:(see attached sheets)

Sub. Pnts Avail.: 20.0

Sub. Pnts. Earned: 0.0

### 14 . Condition of Source Facilities

- 1 . How often is the facility visited by plant staff? (specify): daily

- 2 . Does the facility appear to be well maintained (grass mowed, equipment painted, facilities kept clean, etc)?

20.0 Y 20.0 N 0.0 N/A

Sub. Pnts Avail.: 20.0

Sub. Pnts. Earned: 20.0

### 15 . Transmission of Source Water

- 1 . Do the transmission lines deliver all of the raw water directly to the treatment plant?

Y ✓ N

- 2 . Are the transmission lines reliable for providing a continuous supply of raw water to the treatment plant?

20.0 Y 20.0 N 0.0 N/A

Sub. Pnts Avail.: 20.0

Sub. Pnts. Earned: 20.0

Sect. Pts: 300.0

Earned Points 194.0

Item # 1

## Section III. Treatment

NAME of WATER TREATMENT PLANT:  
IDENTIFY TREATMENT PROCESS TYPE:

Monroe Water Works

Low pressure cartridge membranes

### 1. Location of Treatment Facilities

1. Is the treatment plant located at a level below the 100-year flood plain? 10.0 N 10.0 Y 0.0 N/A
2. Are there any known sources of contamination in the vicinity of the treatment plant? 10.0 N 10.0 Y 0.0 N/A
- Sub. Pnts Avail.: 20.0  
Sub. Pnts. Earned: 20.0

### 2. Treatment Plant Schematic/Layout

1. Does the drawing(s) show the name of the facility and date of the last modifications made to the drawing(s)? 5.0 Y 5.0 N 0.0 N/A
2. Are the drawings up to date? 5.0 Y 5.0 N 0.0 N/A
3. Does the schematic or layout map(s) identify treatment type(s)? 5.0 Y 5.0 N 0.0 N/A
4. Is there a treatment unit that appears to be inappropriate? 5.0 N 5.0 Y 0.0 N/A
- Sub. Pnts Avail.: 20.0  
Sub. Pnts. Earned: 20.0

### 3. Capacity of Treatment Facilities

1. What is the design capacity of the treatment facilities?  
What is the historical maximum daily demand of the water system?  
What is the source water storage capacity of the system?  
Given the service connections of population, are treatment facilities reasonable? 10 MGD  
2 MGD  
878 MG  
5.0 Y 5.0 N 0.0 N/A
2. Are the treatment facilities capable of meeting the required capacity with the largest unit out of service? 5.0 Y 5.0 N 0.0 N/A
3. Can the treatment processes be interrupted by power outages, etc?  
Is there a backup or standby power available? (identify) generator  
Can the operator demonstrate that backup power system is operational? 2.0 N 2.0 Y 0.0 N/A  
4.0 Y 4.0 N 0.0 N/A  
1.0 Y 1.0 N 0.0 N/A
4. Does the system check the operating characteristics of the existing units periodically and compare them to the original operating characteristics?  
Should the capacity of the unit be derated? 3.0 Y 3.0 N 0.0 N/A  
Y N ✓  
If so, what is the new capacity? MGD
- Sub. Pnts Avail.: 20.0  
Sub. Pnts. Earned: 20.0

### 4. Treatment Processes and Facilities - Presedimentation

1. Is the total capacity of the presedimentation basins large enough to accomplish the purpose of reducing turbidity? 20.0 Y 20.0 N 0.0 N/A
2. Are the presedimentation facilities cleaned?  
How often? Y N ✓
- Sub. Pnts Avail.: 20.0  
Sub. Pnts. Earned: 20.0



**5 . Treatment Processes and Facilities - Flow Control and Metering Systems**

- 1 . Are flow measurement devices installed at the source water inlet and finished water outlet?  
Are they functioning?  
How often are they calibrated to assure accuracy?(specify) annually 10.0 Y 10.0 N 0.0 N/A \_\_\_\_\_
- 2 . Are here adequate flow control and/or measurement devices throughout the treatment process? 5.0 Y 5.0 N 0.0 N/A \_\_\_\_\_
- Sub. Pnts Avail.: 20.0  
Sub. Pnts. Earned: 20.0

**6 . Treatment Processes and Facilities - Rapid Mix**

- 1 . Does the rapid mix unit visually appear adequate? 3.0 Y 3.0 N 0.0 N/A \_\_\_\_\_
- 2 . Are coagulant chemicals being fed continuously during treatment plant operations? 2.0 Y 2.0 N 0.0 N/A \_\_\_\_\_
- 3 . Does the plant have multiple mix units?  
How often is maintenance done?(specify): by schedule 1.0 Y \_\_\_\_\_ N 1.0 N/A \_\_\_\_\_
- 4 . Is the mechanical equipment working?  
Are their any hydraulic inadequacies? 3.0 Y 3.0 N 0.0 N/A \_\_\_\_\_  
3.0 N 3.0 Y 0.0 N/A \_\_\_\_\_
- 5 . Is the rate of mixing adjustable so that correct mixing can be provided at all flows? 2.0 Y \_\_\_\_\_ N 2.0 N/A \_\_\_\_\_
- 6 . What is the design G ? 1100 sec<sup>-1</sup>
- Is G within the generally accepted range? (700 - 1000 sec<sup>-1</sup>) 2.0 Y \_\_\_\_\_ N 2.0 N/A \_\_\_\_\_
- What is the detention time? 30 sec
- Is detention time within the accepted range? (15 - 60 sec) 2.0 Y 2.0 N 0.0 N/A \_\_\_\_\_
- 7 . Have rapid mix units been evaluated for cross connections? 2.0 Y 2.0 N 0.0 N/A \_\_\_\_\_
- Sub. Pnts Avail.: 20.0  
Sub. Pnts. Earned: 15.0

**7 . Treatment Processes and Facilities - Chemicals and Chemical Feed Systems**

- 1 . What chemicals are used? Pre: alum, lime, chlorine dioxide  
Post: lime, fluoride, phosphate, sodium hypochlorite
- 2 . Do chemicals conform to NSF Standard 60? 5.0 Y 5.0 N 0.0 N/A \_\_\_\_\_
- 3 . Are the chemicals used for treating water appropriate for meeting WQ goals? 2.0 Y 2.0 N 0.0 N/A \_\_\_\_\_
- 4 . Does the plant have the capacity to apply chemicals above the current maximum daily use? 1.0 Y 1.0 N 0.0 N/A \_\_\_\_\_
- 5 . Are the chemical application points appropriate for the various chemicals? 1.0 Y 1.0 N 0.0 N/A \_\_\_\_\_
- 6 . Are the chemical feed systems compatible with the chemical used?  
Is the general condition of the chemical feed equipment acceptable? 1.0 Y 1.0 N 0.0 N/A \_\_\_\_\_  
1.0 Y 1.0 N 0.0 N/A \_\_\_\_\_
- 7 . How often is the chemical feed rate checked for each chemical? daily  
Are there provisions to calibrate the chemical feed equipment? 1.0 Y 1.0 N 0.0 N/A \_\_\_\_\_
- Item # 1

8 . Is the chemical feed equipment adjustable?  
 Is the control of the chemical feed: **Manual:** ✓ **Automatic:** ✓  
 Does the system use day tanks for liquid chemicals that are purchased in large quantities? Y ✓ N     

9 . Is a standby feeder and/or metering pump provided for each chemical?  
 Are they operational? 1.0 Y 1.0 N 0.0 N/A       
 Are they large enough to replace the largest unit that might fail? 1.0 Y 1.0 N 0.0 N/A     

10 . Is backflow prevention provided on the water lines used for chemical feed makeup water? 1.0 Y 1.0 N 0.0 N/A     

11 . Is the chemical storage area capacity adequate to allow space for free access for loading and unloading chemicals? Y ✓ N       
 Is the chemical storage area safe? 1.0 Y 1.0 N 0.0 N/A       
 Is containment provided for a potential spill? 1.0 Y 1.0 N 0.0 N/A       
 Are incompatible chemicals stored together? 1.0 N 1.0 Y 0.0 N/A       
 Are facilities properly labeled? 1.0 Y 1.0 N 0.0 N/A     

12 . Is the general condition of the building/room housing the chemical feed equipment acceptable? 1.0 Y 1.0 N 0.0 N/A       
 Are dusty and dry chemicals and feed equipment housed separately? 1.0 Y 1.0 N 0.0 N/A       
 Is proper and adequate ventilation provided? 1.0 Y 1.0 N 0.0 N/A     

Sub. Pnts Avail.: 24.0  
 Sub. Pnts. Earned: 24.0

## 8 . Treatment Processes and Facilities - Coagulation /Flocculation

1 . What type of flocculation facilities are used?(baffled or mechanical mixers)                     baffled                      
 Does the coagulation/flocculation process visually appear adequate? 4.0 Y 4.0 N 0.0 N/A     

2 . Is there any evidence of clumps of coagulants in the first compartment of the flocculator? 3.0 N 3.0 Y 0.0 N/A     

3 . Is the mechanical equipment working? 3.0 Y      N 0.0 N/A 3.0  
 Are there any hydraulic inadequacies? 2.0 N 2.0 Y 0.0 N/A     

4 . Does a written preventative maintenance program exist? 2.0 Y 2.0 N 0.0 N/A     

5 . Is the rate of mixing adjustable so that the correct mixing can be provided at all flows? 2.0 Y      N 2.0 N/A     

6 . What is the velocity gradient,  $G$ , for the flocculation process? (specify)                     34                      $\text{sec}^{-1}$   
 Is  $G$  within the generally accepted range?(first stage; 50 - 100  $\text{sec}^{-1}$ ; second and third stages; 20 - 50  $\text{sec}^{-1}$ ) 2.0 Y 2.0 N 0.0 N/A       
 What is the peripheral tip speed of the mixers?(if applicable)                     n/a                      $\text{ft/sec}$   
 Is the tip speed within the generally accepted range? (0.5 - 2.0  $\text{ft/sec}$ ) 1.0 Y      N 0.0 N/A 1.0

What is the  $GT$ ?( $G \times$  detention time)                     61200                      
 Is the  $GT$  within the generally accepted range?( 20,000 - 120,000) 1.0 Y 1.0 N 0.0 N/A     

What is the detention time in the flocculation basin(s)? (specify)             30             min.  
 Is the detention time within the generally accepted range?( 20 - 60 min) 2.0 Y 2.0 N 0.0 N/A     

Sub. Pnts Avail.: 22.0  
 Sub. Pnts. Earned: 16.0

## 9 . Treatment Processes and Facilities - Sedimentation/Clarification

1 . What type of sedimentation/clarification process is being used?(horizontal flow, inclined, upflow):                     horizontal flow                     Item # 1

- Does the sedimentation/clarification process visually appear adequate? 3.0 Y 3.0 N 0.0 N/A \_\_\_\_\_
2. Is the flow distributed evenly to all basins?  
Is the inlet flow distributed uniformly over the full cross section? 3.0 N 3.0 Y 0.0 N/A \_\_\_\_\_  
3.0 Y 3.0 N 0.0 N/A \_\_\_\_\_
3. Is the mechanical equipment working?  
Are there any hydraulic inadequacies? 1.0 Y \_\_\_\_\_ N 0.0 N/A 1.0  
2.0 N 2.0 Y 0.0 N/A \_\_\_\_\_
4. Are the basins baffled? 3.0 Y 3.0 N 0.0 N/A \_\_\_\_\_
5. What is the surface overflow rate?(conventional: 0.4 - 0.7, plate settlers: 2 - 6, upflow clarification: 0.7 - 1.8 gal/min/ft<sup>2</sup>) 0.56 gal/min/ft<sup>2</sup>  
What is the detention time?(1.5-4 hr): 3.67 hr  
What is the velocity flow? (1.0 - 3.0 ft/sec): 0.0065 ft/sec  
Are these within the general acceptable ranges? 2.0 Y 2.0 N 0.0 N/A \_\_\_\_\_
6. Does there appear to be too much sludge in the basins?  
Is it impacting settled water performance?  
How is the sludge removed from the clarifiers?(explain:  
manual washdown  
How often is sludge removed?(specify):  
semiannually
7. What is the settled water turbidity? 0.49 NTU

Sub. Pnts Avail.: 21.0  
Sub. Pnts. Earned: 18.0

## 10. Treatment Processes and Facilities - Pressure Filtration Systems

1. What kind of media(um) have/has been installed?(mono medium, dual media, multi-media) \_\_\_\_\_
2. What is the permitted filtration rate? \_\_\_\_\_ gal/min/ft<sup>2</sup>
3. What is the maximum filtration rate at design capacity with one filter out of service? \_\_\_\_\_ gal/min/ft<sup>2</sup>
4. When was the last internal inspection of the filters performed?(specify) \_\_\_\_\_
- Were the media and depths, internal piping, and internal surface of the vessel checked? 3.0 Y \_\_\_\_\_ N 0.0 N/A 3.0
- Can the operator provide the inspection report? 2.0 Y \_\_\_\_\_ N 0.0 N/A 2.0
- If deficiencies were noted in the report, have they been corrected? 4.0 Y \_\_\_\_\_ N 0.0 N/A 4.0
5. Ask the operator to backwash a filter.
- Is the correct backwash procedure followed based on filter media type, etc.? 7.0 Y \_\_\_\_\_ N 0.0 N/A 7.0
- What is the high rate backwash flow? \_\_\_\_\_ gal/min/ft<sup>2</sup>
- Is it adequate? 4.0 Y \_\_\_\_\_ N 0.0 N/A 4.0
6. What is the turbidity of the backwash waste at the end of the backwash process? \_\_\_\_\_ NTU
7. What is the turbidity level of the effluent water following the backwash? \_\_\_\_\_ NTU

Sub. Pnts Avail.: 20.0  
Sub. Pnts. Earned: 0.0

## 11 . Treatment Processes and Facilities - Gravity Filtration System

- 1 . What type of filtration system is being used? (gravity, constant or declining rate:

see comment #3

- 2 . What kind of media has been installed: (mono, dual, multi media)?

- 3 . What is the permitted filtration rate? \_\_\_\_\_ gal/min/ft<sup>2</sup>

- 4 . What is the maximum filtration rate at design capacity with one filter out of service?

\_\_\_\_\_ gal/min/ft<sup>2</sup>

- 5 . Ask the operator to completely drain a filter that will be inspected and backwashed. Visually inspect the filter.

- 6 . Is there any visual indication of problems on the surface of the filter?

2.0 N \_\_\_\_\_ Y 0.0 N/A 2.0

- 7 . What is the depth of each filter medium? (specify)

Medium	Anthracite "	Sand "		
Depth				

Is the medium depth adequate?

2.0 Y \_\_\_\_\_ N 0.0 N/A 2.0

- 8 . Are there any mudballs?

2.0 N \_\_\_\_\_ Y 0.0 N/A 2.0

Is the support gravel mixed with the media?

1.0 N \_\_\_\_\_ Y 0.0 N/A 1.0

Is there any improper stratification of media layers?

1.0 N \_\_\_\_\_ Y 0.0 N/A 1.0

Is there any significant variations in the elevation of the support gravel?

1.0 N \_\_\_\_\_ Y 0.0 N/A 1.0

- 9 . Ask the operator to prepare a filter for backwashing.

What are the means and method for backwashing:

Filtered water: \_\_\_\_\_ Pumped: \_\_\_\_\_

Finished water: \_\_\_\_\_ Tank: \_\_\_\_\_

Is there an established backwash procedure?

2.0 Y \_\_\_\_\_ N 0.0 N/A 2.0

Is the correct backwash procedure followed based on media type?

2.0 Y \_\_\_\_\_ N 0.0 N/A 2.0

What is the high rate backwash flow? \_\_\_\_\_ gal/min/ft<sup>2</sup>

Is the high rate backwash flow adequate? (15-23 gal/min/ft<sup>2</sup>)

1.0 Y \_\_\_\_\_ N 0.0 N/A 1.0

Is the distribution of water/air across the filter even?

2.0 Y \_\_\_\_\_ N 0.0 N/A 2.0

Is there any boiling of the media?

1.0 N \_\_\_\_\_ Y 0.0 N/A 1.0

Are the backwash troughs level?

1.0 Y \_\_\_\_\_ N 0.0 N/A 1.0

Are the backwash troughs evenly separated?

1.0 Y \_\_\_\_\_ N 0.0 N/A 1.0

Are surface wash arms and nozzles operational and functioning appropriately?

2.0 Y \_\_\_\_\_ N 0.0 N/A 2.0

What is the turbidity of the backwash waste at the end of the backwash process?

\_\_\_\_\_ NTU

What is the turbidity level of the effluent water following the backwash?

\_\_\_\_\_ NTU

- 10 . Is the monitoring instrumentation (loss-of-head, effluent flow rate, and filter water turbidity working for all filters?

2.0 Y \_\_\_\_\_ N 0.0 N/A 2.0

- 11 . What criteria are used by the operator(s) to determine when a filter requires backwashing? (specify)

Do all the operators of the treatment plant use the same criteria?

1.0 Y \_\_\_\_\_ N 0.0 N/A 1.0

- 12 . Does the system use filter-to-waste in the backwashing procedure?

2.0 Y \_\_\_\_\_ N 0.0 N/A 2.0

- 13 . Are newly washed filters brought back into service at low rates that are gradually increased in order to minimize post-backwash turbidity spikes?

1.0 Y \_\_\_\_\_ N 0.0 N/A 1.0

- 14 . Are filters ever stopped then started up again without backwashing them first?

1.0 N \_\_\_\_\_ Y 0.0 N/A 1.0

Item # 1

Are the filters ever "bumped" to extend filter runs?

Y \_\_\_\_\_ N \_\_\_\_\_

15 . Is there any means of measuring the backwash flow rate?

1.0 Y 1.0 N 0.0 N/A \_\_\_\_\_

Is it working?

Y ✓ N \_\_\_\_\_

When was the flow meter calibrated last? (specify) Jul-05

16 . Is the condition of the piping in the filter gallery adequate?

1.0 Y 1.0 N 0.0 N/A \_\_\_\_\_

Are pipes in the filter gallery color-coded and marked?

Y ✓ N \_\_\_\_\_

Are there any cross connections?

1.0 N 1.0 Y 0.0 N/A \_\_\_\_\_

Is there a floor drain to remove all leaking water from the filter gallery floor?

Y ✓ N \_\_\_\_\_

Sub. Pnts Avail.: 31.0

Sub. Pnts. Earned: 3.0

## 12 . Treatment Processes and Facilities - Disinfection

1 . What type of disinfection process and facilities are used at the treatment plant? (list):

sodium hypochlorite

2 . Do the responsible operators understand the disinfection process?

4.0 Y 4.0 N 0.0 N/A \_\_\_\_\_

3 . Are the responsible operators knowledgeable about the process and equipment?

3.0 Y 3.0 N 0.0 N/A \_\_\_\_\_

4 . How was the  $T_{10}$  determined? (calculated or field tracer study):

Calculated

Tracer: ✓

How was the CT determined at this facility?

calculated

What is the total log inactivation obtained?

1.78 Log

5 . Is continuous disinfectant monitoring being done?

3.0 Y 3.0 N 0.0 N/A \_\_\_\_\_

Are adequate records kept showing compliance with the CT requirements?

3.0 Y 3.0 N 0.0 N/A \_\_\_\_\_

6 . What is the chlorine residual leaving the treatment plant?

1.78 mg/L

Does it meet the SWTR requirements? (0.2 mg/l)

5.0 Y 5.0 N 0.0 N/A \_\_\_\_\_

What is the average chlorine residual throughout the distribution system?

1.04 mg/L

Does the residual provide adequate protection out in the distribution system?

2.0 Y 2.0 N 0.0 N/A \_\_\_\_\_

Sub. Pnts Avail.: 20.0

Sub. Pnts. Earned: 20.0

## 13 . Treatment Processes and Facilities - Waste Streams

1 . How are wastewater from the backwash process and sludge from the sedimentation process managed? (into sewer line, French drain or pond):

2 . Is the filter backwash water wasted or recycled?

Waste:

Recycle: ✓

3 . If recycled, does backwash water receive any treatment to decrease pathogen densities?

Y \_\_\_\_\_ N ✓

4 . What is the volume of the waste stream holding tank?

217000 gal

What is the volume of the waste stream being recycled? (percentage basis)

6 %

Item # 1

5 . How much solids are in the recycled waste streams?

unknown mg/L

How does this compare to the solids in the raw water?

unknown mg/L

6 . Are the coagulant dosages adjusted to accommodate the recycle flows?

Y        N ✓

Are any jar tests performed to determine the impact of the recycle stream?

Y        N ✓

7 . Are all discharge and disposal activities in accordance with the NPDES permit?

Y ✓ N       

#### 14 . In-Plant Cross-Connection Control

1 . Does the system have a cross connection control plan for the plant?

4.0 Y 4.0 N 0.0 N/A       

Is the program active and effective in controlling cross connections?

4.0 Y 4.0 N 0.0 N/A       

2 . Are all water uses in the plant identified?

4.0 Y 4.0 N 0.0 N/A       

Are all potable water lines protected with proper backflow prevention devices?

4.0 Y 4.0 N 0.0 N/A       

3 . Are the appropriate backflow preventers used for all existing cross connections?

4.0 Y 4.0 N 0.0 N/A       

Sub. Pnts Avail.: 20.0

Sub. Pnts. Earned: 20.0

Sect. Pts: 278.0

Earned Points 216.0

Item # 1

**Section IV.****DISTRIBUTION**NAME of the DISTRIBUTION SYSTEM OPERATOR in-responsible-charge: Ronald HillIs the Operator in-responsible-charge properly certified? (verify) Y ✓ N     Names of other CERTIFIED Distribution System Operators(list): Tad Armisted  
Adam Gordon  
Clifford Morrell**1 . Distribution Maps and Records**

- 1 . Are there maps of the distribution system? 5.0 Y 5.0 N 0.0 N/A       
Are all major features shown (line and valve location, size, and material; fire hydrant location; dead ends; pressure zones; storage tanks, booster stations)? 3.0 Y 3.0 N 0.0 N/A
- 2 . When were the maps last updated? ongoing  
How are the changes or additions reported and the map(s) updated?  
(specify): in-house GIS
- 3 . Is there a record system? 3.0 Y 3.0 N 0.0 N/A       
Does it include documentation of operation and maintenance repairs, leak detection, and construction standards? 3.0 Y 3.0 N 0.0 N/A
- 4 . Are customer complaints and investigation reports kept? (verify) 3.0 Y 3.0 N 0.0 N/A       
Is there an apparent/common problem indicated by the customer complaints? 3.0 Y 3.0 N 0.0 N/A       
If yes, what is it? (specify): discolored water

Sub. Pnts Avail.: 20.0  
Sub. Pnts. Earned: 20.0**2 . Field Sampling/Measurements**

- 1 . What is the maximum and minimum residual at the maximum residence time in the distribution system? Max 1.42 mg/L Min 0.32 mg/L  
What is the normal residual range in the distribution system? 50.0 mg/L to 48.0 mg/L  
How often are residual readings taken in the distribution system? 32 per month
- 2 . What is the maximum and minimum pressure range at the highest point in the distribution system? Max 50 psi Min 48 psi  
What is the normal operating pressure in the distribution system? 60 psi  
How often are pressure readings taken in the distribution system? annually per

**3 . Distribution System Design/Material Standards**

- 1 . Did the system establish a "design standard" that specifies minimum requirements for all water lines and appurtenances? (verify) 3.0 Y 3.0 N 0.0 N/A       
Does it specify minimum pipe size? 1.0 Y 1.0 N 0.0 N/A       
Item # 1

- Does it specify minimum line size where fire hydrants are to be provided?  
 Does it specify design flow for each type of connection?  
 Does it specify location or spacing of valves?  
 Does it specify direction of valves? (right or left opening)  
 Does it specify types of valves to be used?  
 Does it specify appurtenances required for flushing dead-end lines?  
 Does it specify minimum cover or depth of bury requirements?  
 Does it specify pressure testing to determine that there are no leaks?  
 Does it specify disinfection of water lines?  
 Does it specify construction or installation requirements?

1.0	Y	1.0	N	0.0	N/A	
1.0	Y	1.0	N	0.0	N/A	
1.0	Y	1.0	N	0.0	N/A	
1.0	Y	1.0	N	0.0	N/A	
1.0	Y	1.0	N	0.0	N/A	
2.0	Y	2.0	N	0.0	N/A	
1.0	Y	1.0	N	0.0	N/A	
	Y	✓	N			
2.0	Y	2.0	N	0.0	N/A	
1.0	Y	1.0	N	0.0	N/A	

2 . What kinds of piping materials are in the distribution system? (specify):

PVC, DI, CI

3 . Does the system have a "construction standards" for water mains?

2.0 Y 2.0 N 0.0 N/A

If the water system does not have "construction standards" for water mains, what criteria is being used for sizing water line, selecting pipe materials, installing the lines, etc.? (specify):

4 . Is the "standard" or "method" adequate to protect the integrity of the distribution system all the time?

2.0 Y 2.0 N 0.0 N/A

5 . Are "standards" actually followed?

2.0 Y 2.0 N 0.0 N/A

Sub. Pnts Avail.: 21.0

Sub. Pnts. Earned: 21.0

#### 4 . Distribution System Maintenance Procedures

1 . Does the system have a maintenance procedure for all components of the distribution system?

6.0 Y 6.0 N 0.0 N/A

If not, is anything being done to maintain the system components?

What?

2.0 Y N 0.0 N/A 2.0

2 . Does the system regularly flush the water mains within the distribution system?

6.0 Y 6.0 N 0.0 N/A

3 . Does the system have a program for inspecting and exercising valves?

4.0 Y 4.0 N 0.0 N/A

4 . Does the system regularly inspect and operate its fire hydrants?

2.0 Y 2.0 N 0.0 N/A

Sub. Pnts Avail.: 20.0

Sub. Pnts. Earned: 18.0

#### 5 . Disinfection of New Water Lines

1 . Does the system have a procedure for disinfecting and flushing new water lines?

8.0 Y 8.0 N 0.0 N/A

If not, what steps does the system follow when installing new water lines?

Do they comply with the acceptable standards and requirements?

8.0 Y 8.0 N 0.0 N/A

2 Are there reports or test results that document the flushing and disinfection of new water mains and the subsequent testing?

4.0 Y 4.0 N 0.0 N/A

Item # 1

Sub. Pnts Avail.: 20.0

Sub. Pnts. Earned: 20.0



**6 . Disinfection of Repaired Water Lines**

- 1 . Does the system have a procedure for disinfecting and flushing repaired water lines? **8.0** Y 8.0 N 0.0 N/A \_\_\_\_\_  
 If not, what steps does the system follow when repairing existing water lines?
- Are there adequate repair materials on hand? **8.0** Y 8.0 N 0.0 N/A \_\_\_\_\_
- 2 . Are there reports or test results, which document disinfection of repaired water mains and any subsequent bacteriological testing? **4.0** Y 4.0 N 0.0 N/A \_\_\_\_\_
- Sub. Pnts Avail.: 20.0  
 Sub. Pnts. Earned: 20.0

**7 . Flushing Procedures**

- 1 . Does the system have a procedure for flushing a portion of the distribution system on a regular basis? **10.0** Y 10.0 N 0.0 N/A \_\_\_\_\_
- 2 . Are there reports or records that document the portions of the system that have been flushed and the date of the flushing? **10.0** Y 10.0 N 0.0 N/A \_\_\_\_\_
- Sub. Pnts Avail.: 20.0  
 Sub. Pnts. Earned: 20.0

**8 . Cross-Connection Control**

- 1 . Does the system have a formal written program to address cross-connections? **3.0** Y 3.0 N 0.0 N/A \_\_\_\_\_  
 If not, what steps does the system take to eliminate cross-connections? (specify):
- 2 . Is the cross-connection program being implemented? **4.0** Y 4.0 N 0.0 N/A \_\_\_\_\_
- 3 . Is there an inspection of new construction as well as follow-up inspections to ensure that at all potential cross connections are eliminated? **3.0** Y 3.0 N 0.0 N/A \_\_\_\_\_  
 Is there a follow-up inspection? **3.0** Y 3.0 N 0.0 N/A \_\_\_\_\_
- 4 . Is there a requirement for the annual testing of the installed backflow prevention devices? **7.0** Y 7.0 N 0.0 N/A \_\_\_\_\_  
 What documentation is available? (specify):  
 **test reports**  
 What qualifications must a tester have? (specify):  
 **Ga. State-approved certification**  
 How many certified testers of cross-connection devices are available? (specify):  
 **list not provided**
- Sub. Pnts Avail.: 20.0  
 Sub. Pnts. Earned: 20.0

**9 . Elimination of Water Loss**

- 1 . Is all water metered at the point of entry into the distribution system? **3.0** Y 3.0 N 0.0 N/A \_\_\_\_\_
- 2 . Are all customers metered? **3.0** Y 3.0 N 0.0 N/A \_\_\_\_\_
- Item # 1

3 . How often are the meters checked and calibrated, if necessary? (specify):

annually (>2")

4 . Is there a leak detection program?

3.0 Y 3.0 N 0.0 N/A       

5 . Is the water loss for the system calculated?

2.0 Y 2.0 N 0.0 N/A       

What is it?        %

Is it <15%?

1.0 Y        N 0.0 N/A 1.0

Is it <10%?

8.0 Y        N 0.0 N/A 8.0

6 . If the water loss for the system is greater than 10%, what is the system doing to reduce its water losses? (specify):

Sub. Pnts Avail.: 20.0

Sub. Pnts. Earned: 11.0

## 10 . Purchased Water / Consecutive System

1 . Is there booster disinfection at the point of connection?

Y        N       

2 . Is there a booster pump station at the point of connection?

Y        N       

3 . Is there a backflow prevention device at the point of connection?

Y        N       

4 . Is there a metering device at the point of connection?

Y        N       

5 . List the public water systems from which the water is purchased :

a.	<b>System Name:</b>				<b>WSID #:</b>	GA
	<b>Source Type:</b>	<b>Ground</b>		<b>Surface</b>		
	<b>Amt. Purchased (monthly average):</b>				<b>MG</b>	
b.	<b>System Name:</b>				<b>WSID #:</b>	GA
	<b>Source Type:</b>	<b>Ground</b>		<b>Surface</b>		
	<b>Amt. Purchased (monthly average):</b>				<b>MG</b>	
c.	<b>System Name:</b>				<b>WSID #:</b>	GA
	<b>Source Type:</b>	<b>Ground</b>		<b>Surface</b>		
	<b>Amt. Purchased (monthly average):</b>				<b>MG</b>	

Sect. Pts: 161.0  
Earned Points 150.0

Item # 1

**Section V****FINISHED WATER STORAGE****1 . Types of Storage**

- 1 . List the types of storage facilities in the system: (i.e. clearwell, ground storage, elevated, hydropneumatic):

**clearwell, elevated**

- |   |     |   |            |   |            |     |               |
|---|-----|---|------------|---|------------|-----|---------------|
| 2 . Are the storage facilities covered or otherwise protected?                    | 5.0 | Y | <u>5.0</u> | N | <u>0.0</u> | N/A | <u>      </u> |
| 3 . Does the overflow pipe discharge above ground to an open basin or splash pad? | 3.0 | Y | <u>3.0</u> | N | <u>0.0</u> | N/A | <u>      </u> |
| Is the overflow pipe equipped with a flap valve or screened?                      | 3.0 | Y | <u>3.0</u> | N | <u>0.0</u> | N/A | <u>      </u> |
| 4 . Do the storage facilities have means to drain them?                           | 3.0 | Y | <u>3.0</u> | N | <u>0.0</u> | N/A | <u>      </u> |
| 5 . Do the air and roof vents have a screen?                                      | 3.0 | Y | <u>3.0</u> | N | <u>0.0</u> | N/A | <u>      </u> |
| Are vents covered or face downward to protect the tank from rain?                 | 3.0 | Y | <u>3.0</u> | N | <u>0.0</u> | N/A | <u>      </u> |

Sub. Pnts Avail.: 20.0  
 Sub. Pnts. Earned: 20.0

**2 . Location of Storage**

- |   |     |   |            |   |            |     |               |
|---|-----|---|------------|---|------------|-----|---------------|
| 1 . Are there any potential sanitary hazards in the area?                             | 7.0 | N | <u>7.0</u> | Y | <u>0.0</u> | N/A | <u>      </u> |
| Are the hazards close enough to be of concern to the storage facilities?              | 3.0 | N | <u>3.0</u> | Y | <u>0.0</u> | N/A | <u>      </u> |
| If so, what and where are the hazards?  |     |   |            |   |            |     |               |
|   |     |   |            |   |            |     |               |
| 2 . Are there any physical features on or around the site that could damage the tank? | 5.0 | N | <u>5.0</u> | Y | <u>0.0</u> | N/A | <u>      </u> |
| 3 . Is the site well maintained?  | 5.0 | Y | <u>5.0</u> | N | <u>0.0</u> | N/A | <u>      </u> |

Sub. Pnts Avail.: 20.0  
 Sub. Pnts. Earned: 20.0

**3 . Capacity of Storage Tanks**

- |  |      |   |             |   |            |     |               |
|--|------|---|-------------|---|------------|-----|---------------|
| 1 . Is the total (ground and/or elevated) storage capacity adequate for daily demand?  | 10.0 | Y | <u>10.0</u> | N | <u>0.0</u> | N/A | <u>      </u> |
| 2 . In case of elevated storage tanks, are tanks properly sized and elevated to assure adequate pressure throughout the distribution system? | 10.0 | Y | <u>10.0</u> | N | <u>0.0</u> | N/A | <u>      </u> |

Sub. Pnts Avail.: 20.0  
 Sub. Pnts. Earned: 20.0

**4 . Design and Storage Tank Components**

- |  |     |   |            |   |            |     |               |
|--|-----|---|------------|---|------------|-----|---------------|
| 1 . Check to see if the tank(s) has(have) at least the following components in good condition: |     |   |            |   |            |     |               |
| Roof sloped to prevent standing water.   | 2.0 | Y | <u>2.0</u> | N | <u>0.0</u> | N/A | <u>      </u> |
| No leakage through the roof.   | 2.0 | Y | <u>2.0</u> | N | <u>0.0</u> | N/A | <u>      </u> |
| A lockable access hatch on the roof, with a raised curb.                                       | 2.0 | Y | <u>2.0</u> | N | <u>0.0</u> | N/A | <u>      </u> |
| Vent covered with fine corrosion resistant screen?   | 1.0 | Y | <u>1.0</u> | N | <u>0.0</u> | N/A | <u>      </u> |

Water level measurement device (level indicator, scada system etc.)

1.0 Y 1.0 N 0.0 N/A

Overflow terminates with a flap valve or screened on the end.

2.0 Y 2.0 N 0.0 N/A

Inlet and outlet piping located to ensure proper circulation of water.

2.0 Y N 2.0 N/A

Drain to remove accumulated silt from the bottom of tank.

1.0 Y 1.0 N 0.0 N/A

Access openings on the side.

1.0 Y 1.0 N 0.0 N/A

Access ladder with proper safety equipment.

1.0 Y 1.0 N 0.0 N/A

Valves on inlet and outlet for isolation.

1.0 Y 1.0 N 0.0 N/A

Bypass around the tank for maintenance.

1.0 Y 1.0 N 0.0 N/A

Does the system have a control system to maintain water level in the tank (altitude valve, scada system, etc)?

2.0 Y 2.0 N 0.0 N/A

Alarm system for high/low water levels.

1.0 Y 1.0 N 0.0 N/A

2 . Check to see if a hydropneumatic tank have at least the following components in good condition.

Tank is located completely above ground.

4.0 Y N 0.0 N/A 4.0

Tank meets ASME standards with an ASME nameplate attached.

2.0 Y N 0.0 N/A 2.0

Access port for periodic inspections.

2.0 Y N 0.0 N/A 2.0

Pressure relief device with a pressure gauge.

3.0 Y N 0.0 N/A 3.0

Control system to maintain proper air/water ratio.

3.0 Y N 0.0 N/A 3.0

Air injection lines equipped with filters to remove contaminants from the air line.

2.0 Y N 0.0 N/A 2.0

Sight glass to determine water level for proper air/water ratio.

2.0 Y N 0.0 N/A 2.0

Adequate valving for isolation and bypass for maintenance.

2.0 Y N 0.0 N/A 2.0

Sub. Pnts Avail.: 40.0

Sub. Pnts. Earned: 18.0

## 5 . Painting of Storage Tanks

1 . When was the last time the interior surface of the tank was painted? (specify):

iting page followin

What type of paint was used? (specify):

epoxy

Was the paint used lead-based paint?

6.0 N 6.0 Y 0.0 N/A

2 . Does the paint conform to ANSI/NSF Standard 61 for potable water use?

10.0 Y 10.0 N 0.0 N/A

Is the paint in good condition? (visual observation - exterior surface)

4.0 Y 4.0 N 0.0 N/A

Sub. Pnts Avail.: 20.0

Sub. Pnts. Earned: 20.0

## 6 . Cleaning and Maintenance of Tanks

1 . Do you observe signs of cracks, leaks, rust, corrosion, failure in steel supports, etc?

5.0 N 5.0 Y 0.0 N/A

2 . How often are inspection and cleaning performed? (specify):

every three years

3 . How often does the system have its storage tanks inspected by a qualified contractor?

annually

4 . Does the system have a plan for continued maintenance of distribution system pressure when the tank needs to be removed for maintenance?

10.0 Y 10.0 N 0.0 N/A

5 . After interior maintenance has been performed, are tanks disinfected before used?

5.0 Y 5.0 N 0.0 N/A       

Sub. Pnts Avail.: 20.0

Sub. Pnts. Earned: 20.0

## 7 . Site Security

1 . Is the fence surrounding the tank site intruder-resistant? (active tanks)

10.0 Y 10.0 N 0.0 N/A       

2 . Are access hatches locked? (active tanks)

10.0 Y 10.0 N 0.0 N/A       

Sub. Pnts Avail.: 40.0

Sub. Pnts. Earned: 40.0

Sect. Pts: 160.0

Earned Points 138.0

Item # 1

[illegible]

**Section VI****PUMPS/PUMP FACILITIES/CONTROLS****1 . Pumps in General**

- 1 . Are the types of pumps used by the system appropriate for the intended use? 7.0 Y 7.0 N 0.0 N/A \_\_\_\_\_
- 2 . Do the actual type, number or capacities of the pumps comply with the approved design? If not, when did the modifications to the pumps take place? 3.0 Y 3.0 N 0.0 N/A \_\_\_\_\_
- 3 . In general, are the capacities of the pumps adequate for their intended used? 5.0 Y 5.0 N 0.0 N/A \_\_\_\_\_
- 4 . In general, is the number of pumps located at each facility adequate? 5.0 Y 5.0 N 0.0 N/A \_\_\_\_\_
- 5 . What is the firm capacity of the water plant's pumping station?  
Pumps sheet following this sec MGD
- 6 . What is the total capacity of the water plant's pumping station?  
Pumps sheet following this sec MGD

Sub. Pnts Avail.: 20.0  
Sub. Pnts. Earned: 20.0

**2 . Condition of Pumps**

- 1 . Are all the critical pumps operational?  
If not, when does the system intend to repair or replace the pump(s)? (specify):  
 8.0 Y 8.0 N 0.0 N/A \_\_\_\_\_
- 2 . Are the pumps vibrating excessively, overheated, making excessive noise, or producing an odor? 6.0 N 6.0 Y 0.0 N/A \_\_\_\_\_
- 3 . Are the pumps regularly maintained and lubricated in accordance with the manufacturer's recommendations? 6.0 Y 6.0 N 0.0 N/A \_\_\_\_\_

Sub. Pnts Avail.: 20.0  
Sub. Pnts. Earned: 20.0

**3 . Pumping Station**

- 1 . Is the pumping station subject to flooding?  
If so, what provisions are provided to accommodate the flooding?  
 5.0 N 5.0 Y 0.0 N/A \_\_\_\_\_
- 2 . Is the location of the pump station subject to electrical outages?  
Does the system have an emergency standby power? 4.0 N 4.0 Y 0.0 N/A \_\_\_\_\_  
3.0 Y 3.0 N 0.0 N/A \_\_\_\_\_
- 3 . Is the pumping station secure from unauthorized entry and vandalism? 3.0 Y 3.0 N 0.0 N/A \_\_\_\_\_
- 4 . Is the lighting adequate for security and maintenance? 1.0 Y 1.0 N 0.0 N/A \_\_\_\_\_
- 5 . Can the piping in the pumping station freeze?  
If yes, is heating provided? 1.0 N 1.0 Y 0.0 N/A \_\_\_\_\_  
Y \_\_\_\_\_ N \_\_\_\_\_
- 6 . Is the station equipped with ventilation?  
If so, does it work and is it adequate to maintain a reasonable temperature? 1.0 Y 1.0 N 0.0 N/A \_\_\_\_\_  
Y ✓ N \_\_\_\_\_
- 7 . Is there a floor drain to collect all leaks? (Is the floor drain operable?) 1.0 Y 1.0 N 0.0 N/A \_\_\_\_\_

Item # 1

- 8 . Are the pumps, valving, and other major equipment items tagged?  
If not, how does the system number the equipment for maintenance purposes?

1.0 Y ☐ N 1.0 N/A ☐

Sub. Pnts Avail.: 20.0  
Sub. Pnts. Earned: 14.0

Sect. Pts: 60.0  
Earned Points 59.0

Item # 1



## Pumps

Location				
	Pump #	Capacity (gpm)	Total(gpm)	Firm(gpm)
Alcovy River Intake	1	6944		
	2	6944		
			13888	6944
John T. Briscoe	1	7222		
Reservoir			7222	0
			0	0
Walton Road	1	750		
Pump Station	2	750	1500	750
Old High Service	1	2847		
	2	2847		
New High Service	1	3500		
	2	3500		
			12694	9194
Backwash Pumps	1	1500		
	2	1500		
			3000	1500
Feed Pumps	1	4750		
	2	4750		
	3	4750		
			14250	9500

Item # 1

**Section VII****MONITORING/REPORTING/DATA VERIFICATION**

- 1 . Check the system's water quality monitoring plan for conformance with regulatory requirements.
- 2 . Does the water quality-monitoring plan for quality control purposes (non-regulatory monitoring) appear to be adequate for this system? 2.0 Y 2.0 N 0.0 N/A \_\_\_\_\_
- 3 . Verify that the water quality-monitoring plan is being followed by checking the test results.  
Are proper testing procedures being followed? 2.0 Y 2.0 N 0.0 N/A \_\_\_\_\_
- 4 . Verify that all in-house testing as well as equipment and reagents being used conform to accepted test procedures.  
Are the equipment and facilities for monitoring adequate? 1.0 Y 1.0 N 0.0 N/A \_\_\_\_\_  
Are the reagents out of date? 1.0 N 1.0 Y 0.0 N/A \_\_\_\_\_  
Are the test results logged? 1.0 Y 1.0 N 0.0 N/A \_\_\_\_\_  
Are past logs stored in a manner they are available or accessible ? (verify) 1.0 Y 1.0 N 0.0 N/A \_\_\_\_\_
- 5 . Are there any MCLs, treatment techniques, monitoring or reporting violations or Orders for the water system? 2.0 N 2.0 Y 0.0 N/A \_\_\_\_\_  
If so, is there a compliance plan? (verify ) Y \_\_\_\_\_ N \_\_\_\_\_
- 6 . Have the required sampling plans been submitted and/or approved by EPD? 1.0 Y 1.0 N 0.0 N/A \_\_\_\_\_  
If no, what action is being taken to prepare and submit plans?
- 7 . Does the system have an up-to-date and reasonable monitoring data? 1.0 Y 1.0 N 0.0 N/A \_\_\_\_\_
- 8 . Do the data reported match field log books? 1.0 Y 1.0 N 0.0 N/A \_\_\_\_\_
- 9 . Does the operator use test results to identify treatment adjustments? 1.0 Y 1.0 N 0.0 N/A \_\_\_\_\_
- 10 . Is there a procedure for calibrating monitoring equipment, both laboratory and on-line? 1.0 Y 1.0 N 0.0 N/A \_\_\_\_\_  
Are the calibration standards acceptable? 1.0 Y 1.0 N 0.0 N/A \_\_\_\_\_
- 11 . Is the system following the regulatory monitoring plans below:  
VOC monitoring (Phase I Rule) Y ✓ N \_\_\_\_\_ 0.0  
SOC/ IOC monitoring (Phase II / V Rule) Y ✓ N \_\_\_\_\_ 0.0  
TCR 1.0 Y 1.0 N 0.0 N/A \_\_\_\_\_  
Lead and Copper Rule Y ✓ N \_\_\_\_\_  
Turbidity and disinfection monitoring plan (SWTR) 1.0 Y 1.0 N 0.0 N/A \_\_\_\_\_  
Disinfection and Filter Profiles, if necessary (IESWTR) 1.0 Y \_\_\_\_\_ N 0.0 N/A 1.0
- 12 . Is a certified laboratory being used for all testing? 2.0 Y 2.0 N 0.0 N/A \_\_\_\_\_

Sect. Pts: 21.0  
Earned Points 20.0

Item # 1

**Section VIII****SYSTEM MANAGEMENT/OPERATION**

- 1 . What changes have been made since the last survey in the system management? (specify)  
none
- 2 . What changes have been made since the last survey in the system personnel? (specify)  
none
- 3 . What changes have been made since the last survey in the system budget? (specify)  
increased due to increased operating costs
- 4 . Are the system's files up-to-date with the latest correspondence on compliance monitoring, plans of the system showing changes made since the last survey, sampling plans, compliance issues, and other management related issues? 2.0 Y 2.0 N 0.0 N/A \_\_\_\_\_
- 5 . Has the system established any water quality goals? 2.0 Y 2.0 N 0.0 N/A \_\_\_\_\_
- 6 . Does the operators know what the plant goals are?  
 Do operators monitor to assess whether goals are being met and then make any appropriate process control adjustments and measure the results of the adjustments? 1.0 Y 1.0 N 0.0 N/A \_\_\_\_\_  
 1.0 Y 1.0 N 0.0 N/A \_\_\_\_\_
- 7 . Does the system have a means of clearly indicating to its own staff who has the responsibility for various functions and who has the authority to make decisions and approve changes to policies, procedures, system operations, and other areas pertinent to treatment plant performance and water supply quality. 2.0 Y 2.0 N 0.0 N/A \_\_\_\_\_
- 8 . Are there any short-term and long-term plans that the system is developing and implementing? 1.0 Y 1.0 N 0.0 N/A \_\_\_\_\_
- 9 . Does open, effective communication occur between management and personnel? 1.0 Y 1.0 N 0.0 N/A \_\_\_\_\_
- 10 . Is the number of personnel adequate to perform the work required? 2.0 Y 2.0 N 0.0 N/A \_\_\_\_\_
- 11 . Is there cross-training required of the individuals within the system? 1.0 Y 1.0 N 0.0 N/A \_\_\_\_\_
- 12 . Is there an O&M manual for the system?  
 Are there SOPs for the system? 1.0 Y 1.0 N 0.0 N/A \_\_\_\_\_  
 Are there SMPs for the system? 1.0 Y 1.0 N 0.0 N/A \_\_\_\_\_  
 Are there SMPs for the system? Y ✓ N \_\_\_\_\_  
 Are these documents readily available to all staff for their use? 1.0 Y 1.0 N 0.0 N/A \_\_\_\_\_  
 Are they being implemented? 2.0 Y 2.0 N 0.0 N/A \_\_\_\_\_
- 13 . Does the system have a Business Plan to demonstrate its financial and managerial capacity to comply with all drinking water regulations in effect, or likely to be in effect? 1.0 Y 1.0 N 0.0 N/A \_\_\_\_\_

Sect. Pts: **20.0**  
 Earned Points **20.0**

Item # 1

**Section IX.****OPERATOR COMPLIANCE and PERMIT REQUIREMENTS**

- |   |     |   |            |   |            |     |       |
|---|-----|---|------------|---|------------|-----|-------|
| 1 . Does the system employ an operator(s) of the appropriate certification level(s), as specified in state requirements?            | 5.0 | Y | <u>5.0</u> | N | <u>0.0</u> | N/A | _____ |
| 2 . Are operator certifications current for all system personnel?   | 3.0 | Y | <u>3.0</u> | N | <u>0.0</u> | N/A | _____ |
| 3 . Are all personnel meeting the minimum renewal requirements for operator certification? (i.e. continuing education requirements) | 4.0 | Y | <u>4.0</u> | N | <u>0.0</u> | N/A | _____ |
| 4 . Are the system personnel adequately trained?  | 3.0 | Y | <u>3.0</u> | N | <u>0.0</u> | N/A | _____ |
| 5 . Do the operators appear to be well informed about various components of their water system?                                     | 3.0 | Y | <u>3.0</u> | N | <u>0.0</u> | N/A | _____ |
| 6 . Does the system appear to be well operated and maintained?  | 2.0 | Y | <u>2.0</u> | N | <u>0.0</u> | N/A | _____ |

Sect. Pts:	<u>20.0</u>
Earned Points	<u>20.0</u>

Item # 1

**Section X.****EMERGENCY PLAN / SECURITY / SAFETY**

- |  |     |   |            |   |            |     |       |
|--|-----|---|------------|---|------------|-----|-------|
| 1 . Does the system have established emergency procedures?   | 0.5 | Y | <u>0.5</u> | N | <u>0.0</u> | N/A | _____ |
| 2 . Are all the system personnel familiar with the emergency plan?   | 0.5 | Y | <u>0.5</u> | N | <u>0.0</u> | N/A | _____ |
| 3 . Does the system have a Safety Program?   | 0.5 | Y | <u>0.5</u> | N | <u>0.0</u> | N/A | _____ |
| 4 . Have the operators been adequately trained in safety procedures and proper handling of all utilized chemicals and materials? | 2.0 | Y | <u>2.0</u> | N | <u>0.0</u> | N/A | _____ |
| 5 . Are operators familiar with the MSDS sheets?   | 0.5 | Y | <u>0.5</u> | N | <u>0.0</u> | N/A | _____ |
| 6 . Does the utility comply with the safety requirements as prescribed by OSHA?  |     | Y | _____      | N | _____      |     |       |
| 7 . Does the utility have a good safety record?  | 1.0 | Y | <u>1.0</u> | N | <u>0.0</u> | N/A | _____ |
| 8 . In general, does security at the facilities appear to be adequate?   | 1.0 | Y | <u>1.0</u> | N | <u>0.0</u> | N/A | _____ |
| 9 . Are chemicals and supplies stored properly?  | 1.0 | Y | <u>1.0</u> | N | <u>0.0</u> | N/A | _____ |
| Are oxidizers, corrosives, and flammables stored in separate areas and in closed, marked containers?                             | 1.0 | Y | <u>1.0</u> | N | <u>0.0</u> | N/A | _____ |
| 10 . Are proper warning signs for "hearing protection" provided at noisy areas?  | 0.5 | Y | <u>0.5</u> | N | <u>0.0</u> | N/A | _____ |
| Are proper "high voltage" signs provided where needed?   | 0.5 | Y | <u>0.5</u> | N | <u>0.0</u> | N/A | _____ |
| In general, are the warning signs provided at the water system facilities adequate?  | 1.0 | Y | <u>1.0</u> | N | <u>0.0</u> | N/A | _____ |
| 11 . Is adequate ventilation provided in necessary areas?  | 0.5 | Y | <u>0.5</u> | N | <u>0.0</u> | N/A | _____ |
| 12 . Is adequate safety equipment provided and required?   | 0.5 | Y | <u>0.5</u> | N | <u>0.0</u> | N/A | _____ |
| 13 . Is a self-contained breathing apparatus available?  | 0.5 | Y | <u>0.5</u> | N | <u>0.0</u> | N/A | _____ |
| Is the breathing apparatus regularly tested?   | 1.0 | Y | <u>1.0</u> | N | <u>0.0</u> | N/A | _____ |
| 14 . Are all chlorine room doors posted with warning?  | 0.5 | Y | <u>0.5</u> | N | <u>0.0</u> | N/A | _____ |
| Do chlorine room doors open outward to outside?  | 1.0 | Y | <u>1.0</u> | N | <u>0.0</u> | N/A | _____ |
| 15 . Is the fan in the chlorine room vent to outside?  | 0.5 | Y | <u>0.5</u> | N | <u>0.0</u> | N/A | _____ |
| Is the exhaust fan operational?  | 1.0 | Y | <u>1.0</u> | N | <u>0.0</u> | N/A | _____ |
| Is the intake located close to the floor?  | 0.5 | Y | <u>0.5</u> | N | <u>0.0</u> | N/A | _____ |
| 16 . Is automatic chlorine leak detector available for the chlorine room?  | 0.5 | Y | <u>0.5</u> | N | <u>0.0</u> | N/A | _____ |
| Are ammonia bottles provided?  | 0.5 | Y | <u>0.5</u> | N | <u>0.0</u> | N/A | _____ |
| 17 . Are the chlorine feed and storages isolated from other facilities?  | 0.5 | Y | <u>0.5</u> | N | <u>0.0</u> | N/A | _____ |
| Are windows provided to view the chlorine room's interior?   | 0.5 | Y | <u>0.5</u> | N | <u>0.0</u> | N/A | _____ |
| 18 . Are the chlorine cylinders adequately restrained?   | 0.5 | Y | <u>0.5</u> | N | <u>0.0</u> | N/A | _____ |
| 19 . Are chlorine leak repair kits available?  | 0.5 | Y | <u>0.5</u> | N | <u>0.0</u> | N/A | _____ |
| 20 . Is there an eye washing station/ safety shower at the water treatment plant?  |     | Y | <u>✓</u>   | N | _____      |     |       |
| 21 . Is there an auxiliary power for the water treatment plant?  | 1.0 | Y | _____      | N | <u>1.0</u> | N/A | _____ |
| 22 . Is the fire department familiar with the facilities and their contents?   | 0.5 | Y | <u>0.5</u> | N | <u>0.0</u> | N/A | _____ |

Item # 1

Sect. Pts: 20.5

Earned Points 19.5



## Utility Committee Meeting

### AGENDA

February 2, 2016

**Item:**

Approval - Out of State Travel for SGA Conference

**Department:**

**Additional Information:**

**Financial Impact:**

**Budgeted Item:**

**Recommendation / Request:**

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

Attachments / click to download

 [Training Info](#)



**To:** Utility Committee  
**From:** Rodney Middlebrooks, Director of Water & Gas  
**Department:** Georgia Utility Training Academy  
**Date:** 2/2/16  
**Description:** Approval is being sought to attend the 14<sup>th</sup> annual Southern Gas Association (SGA) spring gas conference and expo in Columbia, SC between the dates of March 14-16, 2016.

---

**Budget Account/Project Name:** 555-528-07565-00523-523301

**Funding Source:** 2016 Budget – Events

**Budget Allocation:** \$10,000.00

**Budget Available:** \$10,000.00

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***Background:***

Representatives from the City of Monroe, through the Georgia Utility Training Academy (GUTA) have attended this conference in previous years. The conference has allowed GUTA to expand its training opportunities into the Carolina regions by networking with systems from this area. This year, Tommy Arnold has been asked to teach a class on Leak Investigation. Along with providing training at the conference, GUTA will have a presence as a vendor with a booth display for systems to visit and learn more about the opportunities offered by GUTA. The budget allocation has factored in the expense of attending this conference to include registration, booth reservation and travel expenses.

***Attachment(s):***

Conference Agenda – 14 pages



American Public  
Gas Association



## 14th Annual Spring Gas Conference & Expo

March 14 - 16, 2016  
Columbia Metropolitan Convention Center – Columbia, SC

*“Developing People, Relationships, Solutions”*

Conference Chair

Deana Keever, Piedmont Natural Gas

Conference Web Page

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Tuesday Lunch



### This Conference Features

- ✓ Operations and Technical Workshops
- ✓ Professional Development Workshops
- ✓ Sales & Marketing Seminar
- ✓ Over 60 exhibits

### How do I Exhibit

Registration is available on the conference web page.

Questions: Joni Pullen ([jpullen@southerngas.org](mailto:jpullen@southerngas.org); 972-620-4024)

### Conference Registration Information

The fees for these sessions vary. This brochure includes pricing and scheduling information for each offering. Please visit the registration page on the SGA website to register.

### Hotel Reservations

#### Hyatt Place Columbia

819 Gervais Street, Columbia, SC 29201

Call (803) 978-2013 (\*Ask for Southern Gas Association or SGA Rate) or [click here](#) to make a reservation

Room Rate: \$146 single & double occupancy

#### Hilton Columbia Center

924 Senate St, Columbia, SC 29201

Call (803) 744-7800 (\*Ask for Southern Gas Association or SGA Rate) or [click here](#) to make a reservation

Room Rate: \$179 single & double occupancy

#### Hampton Inn Downtown Columbia

822 Gervais St, Columbia, SC 29201

Call (803) 545-0001 (\*Ask for Southern Gas Association or SGA Rate) or [click here](#) to make a reservation

Room Rate: \$169 single & double occupancy

### Parking

- Columbia Convention Center
  - Free guest parking
- Hyatt Place Columbia
  - Self-park - \$12 per overnight
- Hampton Inn Downtown Historic Columbia
  - Self-park - \$12 per overnight
- Hilton Columbia Center
  - Valet - \$24 per overnight, Self-park - \$13 per overnight



## 2016 Spring Gas Conference & Expo

Monday: March 14, 2016

	8:00 to 11:30 am	11:30 to 1 pm	1:00 to 4:30 pm	4:30 to 6:30 pm
	IRNGA		IRNGA	
	The Ratemaking Process		The Ratemaking Process	
	LDC Transmission Integrity Roundtable		LDC Transmission Integrity Roundtable (cont.)	
	Gas 101		Gas 101 (cont.)	
	Women & Leadership		Women & Leadership	
	Leak Investigation and Grading (OFF SITE)		Leak Investigation and Grading (cont.) (OFF SITE)	
	CPGA Operators Meeting		CPGA Spring Board Meeting (12 PM Start)	
			Locating Methods & Technology	
			DIMPOLOGY 101	
			Get your feet wet in basic instrumentation and SOADA	
			Basic Service Tech	
			Tapping and Stopping (2 hr Mueller/2 hr TDW) - Offsite	

Tuesday: March 15, 2016

7 to 8 am	8:00 to 11:30 am	11:30 to 1 pm	1:00 to 4:30 pm	4:30 to 6:30 pm
Breakfast with Exhibitors	Accounting Roundtable	Lunch	Accounting Roundtable	Reception with Exhibitors
	Everything DIM Workshop		Everything DIM Workshop	
	Sales & Marketing Seminar		Sales & Marketing Seminar	
	Gas 201		Gas 201	
	Inline Inspection Overview (Piggability)		Measurement & Meters Fundamentals (hands on)	
	Regulator/Relief Valves (hands on)		Valve School	
	Emergency Response, Liaisoning and Incident Investigation		Cathodic Protection	
	Work Zone Safety		Creative Safety Engagement	
	Materials Management, Traceability & Contract Administration		Excavation Safety & Competent Person	
	Advanced Service Tech		HDB	

Wednesday: March 16, 2016

7 to 8 am	8:00 to 11:30 am	11:30 to 12:30 pm	12:30 to 4:00 pm	<b>COLOR KEY</b> 1/2 Day Class 1 Day Class 1 and 1/2 Day Class 2 Day Class
Breakfast with Exhibitors	Inspecting the Installation of Pipelines		Welding Inspection	
	Control Room Management		Locating Methods & Technology	
	Everything DIM Workshop		Abnormal Operating Conditions	
	Gas 201		Gas 201 (cont.)	
	Sales & Marketing Seminar			

## Spring Gas Conference & Expo

March 14 - 16, 2016

### Program Outline

**Abnormal Operating Conditions** Member: \$100/ Non-Member: \$150

*Wednesday, March 16 (12:30 p.m. to 4:00 p.m.)*

Instructor: Columbia Gas of VA Employee

Description: Abnormal Operating Conditions – Recognition and evaluation of your system. Born out of a settlement order with the Virginia State Commission, NiSource will tell of their journey to develop an Abnormal Operating Conditions Program that has increased the effectiveness of identifying needs across their system on above ground facilities.

**Accounting Roundtable** Member: \$200/ Non-Member: \$300

*Tuesday, March 15 (8:00 a.m. to 4:30 p.m.)*

- ✓ 8:30 Welcome and Introductions – Quynh Bowman, Piedmont Natural Gas & Charlie Evans, Liberty Utilities
- ✓ Topics:
  - 8:45 Deloitte Update with Q&A –
  - 9:45 Operations side of business speaker
  - 10:15 Break
  - 10:30 Accounting Update – Raul Pina, PwC, AGA Accounting Fellow
  - 11:30 Networking Activity – Quynh Bowman, Piedmont Natural Gas
  - 12:00 Lunch
  - 1:00 Panel Discussion – Fixed Assets & Depreciation Studies
  - 2:00 Break
  - 2:15 Industry Update
  - 3:15 Open Discussions.
- ✓ 4:00 Adjourn

**Cathodic Protection** Member: \$100/ Non-Member: \$150

*Tuesday, March 15 (1:00 p.m. to 4:30 p.m.)*

Instructor: Travis LeFever (Team Dynamics)

- ✓ Stray Current Interference
  - Stray Current
  - Definition of Interference
  - Definition of Stray Current
  - Sources
  - Types of Stray Current
- ✓ Installing CP Components
  - Test Stations – Handley Industries
  - Isolation
  - Casing Installation
  - Impressed and Galvanic Systems
- ✓ Troubleshooting CP Systems
  - Troubleshooting
  - Electrical Isolation
  - Short Location
  - Casing Shorts

**Control Room Management** Member: \$100/ Non-Member: \$150  
*Wednesday, March 16 (8:00 a.m. to 11:30 a.m.)*

Instructor: Brad Holbrook (Piedmont Natural Gas)

This session will expose the "Hidden Gems" of the Control Room Management rule 49 CFR Parts 192 and 195. How this rule has evolved over the past 5 years. How this rule has impacted companies and how the scope of the rule has migrated to touch far more company resources than originally understood. You will leave this session with a greater understanding of the impacts of the CRM rule in the mature state it currently exists and understand the scope of stakeholders which need to be included and are ultimately responsible for compliance.

**CPGA Operators Meeting** Member: \$100/ Non-Member: \$150  
*Monday, March 14 (8:00 a.m. to 11:30 a.m.)*

Carolinas Public Gas Association's Spring Meeting, this session is open to CPGA system and associate members only

**CPGA Spring Board Meeting** Member: \$100/ Non-Member: \$150  
*Monday, March 14 (12:00 p.m. to 4:30 p.m.)*

Carolinas Public Gas Association's Spring Meeting, this session is open to CPGA system and associate members only.

**Creative Safety Engagement** Member: \$100/ Non-Member: \$150  
*Tuesday, March 15 (1:00 p.m. to 4:30 p.m.)*

Instructor: ERM and the Learning Factory

Participants will experience programs to help create an engaging and effective safety environment in the field in order to increase safety. Presenters will share best practices on creating engaging safety meetings where employees see the value of learning, sharing and deploying healthy safety behaviors. This interactive session will show participants how to hold meaningful field conversations and hold an engaging safety meeting topic with the audience in the room. The new confined space rule will be presented in an interactive way equipping attendees to facilitate similar meetings where audiences connect the impacts of safety requirements to themselves.

**DIMPOLOGY 101: The Distribution Integrity Rule & It's Impact** Member: \$100/ Non-Member: \$150  
*Monday, March 14 (1:00 p.m. to 4:30 p.m.)*

Instructor: Chris McLaren (PHMSA), Connie Waterman (Nicor) & Lauren Basham (Virginia Natural Gas)

Who decided to do DIMP? Chris McLaren with PHMSA will offer important history and/or incidents throughout the nation that triggered SubPart P and how operators will be evaluated in their compliance with DIMP using Form 24. In addition, participants will experience the seven elements of DIMP and their impact on field operations with a discussion lead by representatives from Nicor Gas and Virginia Natural Gas.

**Emergency Response, Liaisoning and Incident Investigation** Member: \$100/ Non-Member: \$150  
*Tuesday, March 15 (8:00 a.m. to 11:30 a.m.)*

Instructor: Glen Boatwright (York Country Natural Gas) & Tom Burruss (Burruss Consulting)

This session will cover key concepts related to effective response to pipeline emergencies. Topics will include an overview of the Incident Command System, effective scene size-up, and tactical decision making. The session will also include case studies of actual pipeline incidents as well as recommendations for coordination with public sector responders.

Effective liaison with public sector responders is a key element of a sound pipeline public awareness program. This session will include recommendations for proactive programs to enhance coordination with those key individuals that will respond in the event of a pipeline emergency. Included in the program will be an overview of various state initiatives related to enhancing coordination with emergency responders.

There are steps to be taken during the initial phase of a pipeline related incident investigation that are critical in determining the root cause. This portion of the session will cover elements that should be addressed such as effective evidence discovery and protection, leak survey patterns, and investigation coordination with public officials. Case studies will be used to enhance learning objectives.

**Everything DIM Workshop** Member: \$395/ Non-member: \$595

*Tuesday, March 15 (8:00 a.m. to 4:30 p.m.) and Wednesday, March 16 (8:00 a.m. to 11:30 p.m.)*

- ✓ Identifying Threats
  - What threat related field data are you currently collecting?
  - Threat Examples
    - National Level Threats/Incidents
    - DIMP Committee Identified Threats
    - Unique Events to consider as Threats
  - Would your current data collection processes expose these Threat Examples?
  - The possibilities of developing a shared "Threat Reference Database"
- ✓ Regulatory Update
  - DOT Regulatory Update
  - Form 24 Implementation Audits & PHMSA Feedback
  - Mechanical Fitting Failure Reporting
  - Q/A Session
- ✓ Graphical Risk Modeling
  - Methods
  - Creation/Development
    - Templates
    - Considerations
  - Managing Data for your Model
  - Evaluation of Model Results
    - Subdividing
    - Targeting Threat Areas
    - Likelihood of Failure (LoF)
    - Consequence of Failure (CoF)
  - Using the Risk Information in DIMP
- ✓ QA/QC Programs
  - QA/QC Inspection Overview
  - Technology used to Capture Data (DEMO)
  - Types of Inspections Completed (e.g. safety, construction, leakage, service, etc.)
  - Data Reports
  - Communication
  - Remediation
- ✓ Safety Culture – RP 1173
  - What is Safety Culture?
  - Why is it important to have a "Culture of Safety"?
- ✓ Open Roundtable
  - DOT Annual Reports – 2015 Changes
  - Mechanical Fittings – What are we seeing?
  - DIM Workshop Sessions – Follow Up Discussions and Q/A Time

**Excavation Safety and Competent Person** Member: \$100/ Non-Member: \$150*Tuesday, March 15 (1:00 p.m. to 4:30 p.m.)*

Instructor: Thom Wilson &amp; Milfred Brock, Sr. (Piedmont Natural Gas Technical Trainers)

This in-depth course is designed to familiarize the student with OSHA Regulation 1926. Topics include job planning, locating underground utilities, soil classification, testing for hazardous atmosphere, proper sloping, shielding, and equipment inspections and recognizing any potential hazards.

- ✓ To understand the serious nature of excavation hazards.
- ✓ To provide a review of basic concepts of soil mechanics.
- ✓ To understand OSHA general excavation requirement.
- ✓ To review various means of soil analysis.
- ✓ To review options for sloping or shoring specific soil type.
- ✓ To understand the duties of the excavation competent person.
- ✓ To understand the potential for hazardous atmospheres in excavation.

**Gas 101** Member: \$200/ Non-Member: \$300*Monday, March 14 (8:00 a.m. to 4:30 p.m.)*

Instructor: EYSCO &amp; Magnolia River

Students will leave this class with a thorough understanding of a utility's natural gas distribution system. Initially conceptualized as an explanation of the system for LDC supply chain employees, the course has been expanded to meet the needs of anyone who would benefit from a basic understanding of how the system is constructed, maintained and operated.

Course content will include an overview of the many physical components and work activities used in construction and operation of a local distribution system:

- ✓ Section I : How Does the Natural Gas Delivery System Work?
  - A Brief History of Natural Gas
  - Gathering Systems
  - Transmission Systems
  - Compressor Stations
  - Linepack
  - Gate Stations
  - The Distribution System
  - Moving Natural Gas Into the Home
- ✓ Section II: The Components & Systems of a Natural Gas Transmission and Distribution
  - Components & Systems Overview
  - Steel Pipe
  - Pipe Coating
  - Pipe SMYS and Hydrotesting
  - Polyethylene Pipe
  - Fittings (Steel & Polyethylene)
  - Valves
  - Meters
  - Regulators
  - Meter & Regulator Sets
  - Stations - M&R, Gate, Border
  - Odorizers - Gas Conditioning
  - Launcher/Receiver Facilities
  - Purging & Pigging
  - Horizontal Directional Drilling (HDD)
  - Tapping & Stopping
  - Cathodic Protection
  - AC Mitigation

- Filters & Strainers
- Gas Instruments

### **Gas 201: Distribution System Design for System Expansion and Reinforcement**

Member: \$395/ Non-Member: \$595

*Tuesday, March 15 (8:00 a.m. to 4:30 p.m.) & Wednesday, March 16 (8:00 a.m. to 4:00 p.m.)*

Instructor: EYSCO & Magnolia River

This workshop takes the student through the system design process and will provide opportunities for hands on application of the concepts being presented. An excellent starting point for the new engineering professional or a refresher for the more seasoned employee. Course content will include the following:

- ✓ System Modeling + Planning
  - Load Requirements for Expansion & System Reinforcement
  - Line + equipment Sizing
  - Project determinations:
    - Facility:
      - Flow requirements
      - Pressure requirements
      - Control requirements
    - Pipeline:
      - Route Determination
      - Constructability review
      - Prelim cost estimate
- ✓ Project Design
  - Environmental Due Diligence
  - Permitting & Right-of-Way requirements
  - Survey/Data collection
  - Facilities Design (M&R Stations)
    - P&ID
    - Long Lead Materials Procurement
    - Civil/Site Design
    - Mechanical Design
    - SCADA/Electrical considerations
  - Pipeline Design
    - Construction method
    - Environmental Design
    - Geotechnical evaluations (as appropriate)
    - Prepare construction plans
      - Tie-in Design
      - Appurtenance design (block valves, isolation valves, etc)
      - CP/AC mitigation design
  - Easement, work space documentation, permit preparation
  - Bid documents prepared
- ✓ Project Execution
  - Material procurement
  - Permitting
  - Land acquisition
  - Construction/Inspection
  - As-builts
  - Project Close-Out

### **Get Your Feet Wet in Basic Instrumentation and SCADA** Member: \$100/ Non-Member: \$150

*Monday, March 14 (1:00 p.m. to 4:30 p.m.)*

Instructor: TBD

Description: TBD

**Horizontal Directional Drilling** Member: \$100/ Non-Member: \$150

*Tuesday, March 15 (1:00 p.m. to 4:30 p.m.)*

Instructor(s): Billy Cleveland, Delta Directional Drilling, LLC  
Robert McCrary, Delta Directional Drilling, LLC

Why use HDD? How does it work?

- ✓ Feasibility
  - Discuss issues that impact successful HDD construction.
  - Consider what makes HDD impractical or just challenging.
  - Brief coverage of geotechnical conditions and their impact on HDD construction.
- ✓ Discuss the basic components of a horizontal directional drilling system and the various stages of HDD (e.g., pilot hole, ream, and pullback).
  - Overview of various drill rigs and drilling fluid systems
- ✓ Construction monitoring & inspection
  - Will cover procedures for monitoring and inspection of HDD construction.
  - Discussions will cover some basic field calculations to help verify the surveying data, key drilling practices, and key items to watch for in the field that often lead to problems.

**Inline Inspection Overview (Piggability)** Member: \$100/ Non-Member: \$150

*Tuesday, March 15 (8:00 a.m. to 11:30 a.m.)*

Instructor: Mark Mattox (Greenes Energy)

Agenda topics will include, but are not limited to:

- ✓ Determining piggability, a discussion around records research and field verification to ensure pigs will pass through a pipeline
- ✓ Considerations when setting Above Ground Markers (AGMS)
- ✓ Cleaning process and considerations to make when cleaning in-service pipelines and waste disposal
- ✓ Tracking cleaning tools, caliper and MFL tools and finding inspection tools in the event they become stationary
- ✓ Methods and processes for running inspection tools and considerations to make when running inspection tools on live lines with multiple feeds/taps
- ✓ Lessons learned

**Inspecting the Installation of Pipelines** Member: \$100/ Non-Member: \$150

*Wednesday, March 16 (8:00 a.m. to 11:30 a.m.)*

Instructor: Larry Dodson (LG&E-KU)

Topics covered include:

- ✓ Processes prior to construction
- ✓ Safety on the job
- ✓ Priority management and documentation
- ✓ Environmental concerns
- ✓ Pre-project planning
- ✓ Material handling
- ✓ OQ compliance



- ✓ Proper installation procedures
- ✓ Quality control

**Introduction to Regulated Natural Gas Accounting** Member: \$395/ Non-Member: \$595

*Monday, March 14 (8:00 a.m. to 4:30 p.m.)*

Instructor: Jim Mayhew (MCR Group)

This course provides an overview of various functions related to gas industry accounting. It covers key elements, explores the relationship between various departments and how interaction and accurate communication between business units is critical for success.

**Leak Investigation and Grading** Member: \$215/ Non-Member: \$315

*Monday, March 14 (8:00 a.m. to 4:30 p.m.)*

*This hands on class will be offerece offsite, at SCANA's training center. Transportation is on your own.*

Instructor: Tommy Arnold, Georgia Utility Training Academy

Course Description: This course designed by the APGA 's Security and Integrity Foundation will include an afternoon of classroom instruction followed the next morning by hands on evaluation leading to Operator Qualification. The following tasks will be covered:

- ✓ Inside Gas Leak Investigation
- ✓ Outside Gas Leak Investigation
- ✓ Walking Gas Leakage Survey

**Locating Methods & Technology** Member: \$100/ Non-Member: \$150

*This Class will be offered twice, please pick one.*

*Monday, March 14 (1:00 p.m. to 4:30 p.m.)*

*Wednesday, March 16 (12:30 p.m. to 4:00 p.m.)*

Instructor: Ken Hardwick (USIC)

Description: How to mitigate difficult to locate facilities and AOC's, new technology and methods/techniques to use based on situations.

**Materials Management, Traceability & Contract Administration** Member: \$100/ Non-Member: \$150

*Tuesday, March 15 (8:00 a.m. to 11:30 a.m.)*

Instructors: Alcía Farag (LocusView), Dennis Ivey (Piedmont Natural Gas), Karen Lively (Performance Pipe) & Barry Timmerman (SCANA)

LocusView Solutions, a Chicago-based subsidiary of the Gas Technology Institute (GTI), provides mobile and GIS solutions to the natural gas industry. Their technology is the result of industry-funded programs to develop next generation tools to ensure regulatory compliance, improve integrity and public safety, and reduce O&M costs. They bring deep industry knowledge of codes, standards, and industry practices to provide comprehensive solutions for our clients.

Manufacturers Perspective -- Karen Lively, Technical Manager at Performance Pipe (tentative)

Case Study #1 – Dennis Ivey, Operations Manager at Piedmont Natural Gas

## Case Study #2 – Barry Timmerman, Division Engineer at SCANA

We will cover a broad overview on the topic with a focus on barcoding and data capture technology. Get a deeper understanding of the new ATSM Standards and discuss challenges and lessons learned through real life case studies by Piedmont Natural Gas and SCANA. Performance Pipe will also report on their experience with traceability from a manufacturer's perspective.

### Measurement and Meters Fundamentals Member: \$100/ Non-Member: \$150

*Tuesday, March 15 (1:00 p.m. to 4:30 p.m.)*

Instructors: Diaphragm = American = Bob Bennett/Elster  
 Rotary = Dresser Roots = Mark Holland/Bartlett Controls  
 Turbine = Sensus = Paul Honchar/Sensus  
 Ultrasonic = Sick = Dave Manfroni/Marie Co.

- ✓ Basic Gas Laws
- ✓ Hands-on
  - Group A – Diaphragm meters
  - Group B – Rotary meters
  - Group C – Turbine meters
  - Group D – Ultrasonic meter
- ✓ Hands-on
  - Group A – Rotary meters
  - Group B – Turbine meters
  - Group C – Ultrasonic meters
  - Group D – Diaphragm meters
- ✓ Hands-on
  - Group A – Turbine meters
  - Group B – Ultrasonic meters
  - Group C – Diaphragm meters
  - Group D – Rotary meters
- ✓ Hands-On
  - Group A – Ultrasonic meters
  - Group B – Diaphragm meters
  - Group C – Rotary meters
  - Group D – Turbine meters
- ✓ Questions, Meter Selection Example, and Review

### The Ratemaking Process Member: \$395/ Non-member: \$595

*Monday, March 14 (8:00 a.m. to 4:30 p.m.)*

Instructor: Mark Caudill (MCR Group)

The first day provides information on the basic components of the rate process from the pipeline and LDC perspective, including fundamentals of the ratemaking process such as:

- ✓ Rate of return issues
- ✓ Mock rate case exercises
- ✓ Revenue requirements
- ✓ Cost of service issues
- ✓ Rate design components
- ✓ Regulatory considerations
- ✓ Future trends in ratemaking

The day concludes with an interactive group exercise, the Van Go Transportation Company, which illustrates issues companies face when structuring their rates and determining if services are fixed, variable or both.

The second part of the program provides an opportunity for participants to apply the information they received the previous day in a series of case studies and role playing exercises. The Ratemaking Game - a set of case studies based on actual rate cases - divides participants into role-playing groups comprised of gas company representatives, commissioners, consumer advocates and interveners.

**Regulator/ Relief Valves** Member: \$100/ Non-Member: \$150

*Tuesday, March 15 (8:00 a.m. to 11:30 a.m.)*

Instructors: Bob Bennet (Elster Amco), Manufacturer – American Regulators  
Mark Holland (Bartlett Controls), Manufacturer - Mooney  
Kyle Richard and Dan Fisher (RE Mason), Manufacturer - Fisher

Maintenance/ Troubleshooting of the Regulators/ Reliefs. We will have representatives from Fisher, Mooney, and American. Each manufacturing representative will demonstrate how to take apart and put back together the regulators selected for the training. As this is completed the presenter will cover basic operational functions/features and troubleshooting concepts. The class will be divided into 3 groups and the time of the class divided into 3 as well. Each group will spend 1/3 of the time with each manufacturing representative and then rotate to the next area. The manufacturing representative will perform most of the hands-on, but class participants will be able to participate and ask questions in the small group setting. We encourage questions, sharing of experiences to get the most out of the class.

**Sales and Marketing Seminar** Member: \$295/ Non-member: \$445

*Tuesday, March 15 (8:00 a.m. to 4:30 p.m.) and Wednesday, March 16 (8:00 a.m. to 11:30 a.m.)*

**Roundtable Discussion Time**

Join approximately 40 natural gas sales and marketing supervisors and representatives (commercial and residential) for 1 ½ days of presentations, open roundtable discussion and networking.

**Service Tech - Advanced** Member: \$100/ Non-Member: \$150

*Tuesday, March 15 (8:00 a.m. to 11:30 a.m.)*

Instructor: Jim Potter (Technical Training Consultant)

- ✓ Chemistry for Combustion, Primary, Secondary & Make-Up Air
- ✓ Gas Burners, Design & Operation
- ✓ Venting Problems, Back Draft, Blocked, Sizing, Diverter Placement, Design Problems, Excess Fittings, Height, Vertical & Lateral runs
- ✓ Types of Appliance Controls and Their Functions
- ✓ Utilizing the NFPA 54 Handbook

**Service Tech - Basic** Member: \$100/ Non-Member: \$150

*Monday, March 14 (1:00 p.m. to 4:30 p.m.)*

Instructor: Jim Potter (Technical Training Consultant)

- ✓ Fundamentals of gas combustion
- ✓ Properties & characteristics of natural gas
- ✓ Carbon monoxide
- ✓ AGA – video "Fundamentals Of Venting"
- ✓ Types of vents A, B, BW, L, high temp plastic, PVC
- ✓ Installing new meter sets
- ✓ Testing house lines, setting service regulators, H-2 regulator installation
- ✓ Dress, speech, attitude, handling unsafe situations

**Tapping and Stopping** Member: \$100/ Non-Member: \$150*Monday, March 14 (1:00 p.m. to 4:30 p.m.) - OFFSITE**This hands on class will be offerece offsite, at SCANA's training center. Transportation is on your own.*

Instructors: TBD

- ✓ Hot Tapping and Plugging (HT&P) overview
- ✓ Low pressure applications < 150 psi with Hands-on equipment training
- ✓ High pressure applications up to 1480 psi

**Transmission Integrity Roundtable – LDC** Member: \$245/ Non-Member: \$380*Monday, March 14 (8:00 a.m. to 4:30 p.m.)*

Instructor: TBD

Description: TBD

**Valve School** Member: \$100/ Non-Member: \$150*Tuesday, March 15 (1:00 p.m. to 4:30 p.m.)*

Instructor: Wally Todd (Ed Young Sales Co.)

Due to the shortened length of the class, we will focus on the plug valves most commonly found in gas distribution.

- ✓ Plug valves
  - Design and function
    - 3 Different styles / types
      - Commonalities / difference
      - Adjustments
  - Maintenance
    - Flushing vs greasing
    - Reading the gun gauge
    - Troubleshooting
    - Internal vs external common problems
    - Tools and grease guns to use

This will take all 3.5 hrs to include introduction, a break and Q&A

**Welding Inspection** Member: \$100/ Non-Member: \$150*Wednesday, March 16 (12:30 p.m. to 4:00 p.m.)*

Instructor: Perry Vezina, SM&amp;E

This course is suitable for welders, operators, line inspectors and foremen who want to learn about visual examination of welded joints.

This welding inspection course covers:

- ✓ Visual inspection procedures
- ✓ Abnormal working condition
- ✓ Safety
- ✓ Typical welding defects
- ✓ Compliance

**Women & Leadership** Member: \$200/ Non-Member: \$295  
*Monday, March 14 (8:00 a.m. to 4:30 p.m.)*

Agenda topics will include, but are not limited to:

- ✓ Work Life Balance
- ✓ The Power of Nice
- ✓ Networking Tips
- ✓ Product Demo

**Work Zone Safety** Member: \$100/ Non-Member: \$150  
*Tuesday, March 15 (8:00 a.m. to 11:30 a.m.)*

Instructor: TBD

This course provides instructions on the proper flagging and barricading procedures for street and highway construction.

- ✓ The importance of Planning
- ✓ Traffic control devices
- ✓ Traffic Control zones
- ✓ Hands on work zone Drawings
- ✓ Flagging
  - Characteristics of a good flagger
  - Standard Signals
  - Communicating with Public
  - Flagger operations