



MISSISSIPPI STATE DEPARTMENT OF HEALTH

REPORT OF INSPECTION OF DRINKING WATER SUPPLY

PWS: 0360014 **Class:** C

An inspection of the TAYLOR WATER ASSOCIATION water supply in LAFAYETTE county was made on 05/23/2019. Present at the time of inspection was CHAD D MCLARTY, OPERATOR; WRITER. Official JOHN D MILAM Address P O BOX 8 TAYLOR MS 38673 W.W. Operator CHAD D MCLARTY Address 32 CR 3066 OXFORD MS 38655 No. Connections 644 No. Meters Population Served 1700 Field Chemical Analysis: pH 7.2 Cl2(free) 1.4 Cl2(total) H2S N/A Iron Fluoride Point of Sampling Plant Water Rates

COMMENTS

Technical: 3 Managerial: 4 Financial: 5

OVERALL CAPACITY RATING: 4.0 / 5.0

1. The next Sanitary Survey for Taylor Water Association will be in 2020. Any significant deficiencies identified should be corrected before this time.
2. At the time of the inspection, the pH was measured to be 7.2, which is low. The operator stated that the soda ash mixer was not working and needed replacing. Steps should be taken to ensure the soda ash feed is consistent and the pH is raised to an acceptable level. (T2-1)
3. Chlorine bottle, whether empty or full, should be stored upright and out of direct sunlight.
4. The kudzu vines should be cleared off of the fence.
5. This system is currently listed as providing 4-Log inactivation of viruses. The monthly operating reports were available for review at the time of the inspection, however, the records indicated that the minimum residual had not been met on multiple days. Also, the residual was not being measured at the water plant or the first customer. The chlorine residual should be measured daily as the water is leaving the water plant. The minimum residual of free chlorine required to provide 4-Log inactivation of viruses continues to be 0.8 mg/L as it leaves the plant. (T2-2)

6. At the time of the inspection, the operator's logbook was not being properly maintained. The chlorine residual, pH, alkalinity and phosphate residual should be measured routinely and recorded in the operation records. (T3-2)
7. System officials had routine pump tests performed in September 2016. In order to receive credit for T4-4 during the next inspection, up to date pump test results must be available for review.
8. Records indicating the system's tanks interior has been inspected/painted within the past 5 years were not available for review at the time of the inspection. Tanks must be inspected at least every 10 years, or the system will be issued a significant deficiency.
9. This system has an emergency connection with the City of Oxford.
10. No pressure problems were reported.
11. Mr. McClarty stated that the generator runs every Monday for an hour. The generator will help provide water during emergencies.
12. The alkalinity should be checked at least twice per month. These records should be recorded in the system logbook and be available for review during the inspection.
13. When repairs are made on the water distribution system, all lines affected should be properly chlorinated and flushed before they are placed back in service.
14. All dead-end water lines should be flushed on a routine schedule to clear the lines of sediment and stagnant water. Full scale flushing should be carefully planned and carried out, beginning at the well or water plant and going to the outer edges of the distribution system. This flushing should be done during periods of low usage.
15. Pump tests are now required at least every two years on all wells that are greater than three (3) years old, and every year on wells at systems whose design capacity exceeds 80%. The purpose of this change is to ensure that water production and capacity, master meter accuracy, and other information pertaining to the proper functioning of your wells are gathered regularly.
16. Whenever system pressure is lost, even for brief periods of time, contaminants may be introduced to the system through back flow or back-siphonage. When this occurs, system officials should notify all customers in the affected area to boil their drinking water until clear bacteriological samples have been obtained.

Completed by Eric Williams, E.I. on 06/06/2019.

Reviewed by Scooter Lockhart on 06/10/2019.

If you have any questions, please call (601)576-7518.

pc:

JOHN D MILAM, OFFICIAL
CHAD D MCLARTY, OPERATOR



**Mississippi Department of Health
Bureau of Public Water Supply**

STANDARD FORM

FY 2019 Public Water System Capacity Assessment Form

NOTE: This form must be completed whenever a routine sanitary survey of a public water system is conducted by a regional engineer of the Bureau of Public Water Supply

PWS ID#: 0360014 Class: C Survey Date: 05-23-2019 County: LAFAYETTE
 Public Water System: TAYLOR WATER ASSOCIATION Conn: 644
 Certified Waterworks Operator: CHAD D MCLARTY Pop: 1700

CAPACITY RATING DETERMINATION

Technical (T) Capacity Rating: [3] Managerial (M) Capacity Rating [4] Financial (F) Capacity Rating [5]

$$\text{Capacity Rating} = \frac{T+M+F}{3} = \frac{12}{3} = 4$$

Overall Capacity Rating = 4.0

Completed by Eric Williams, E.I. on 06/06/2019

Reviewed by Scooter Lockhart on 06/10/2019

Comments: _____

Technical Capacity Assessment		Point Scale	Point Award
[T1] Does the water system have any significant deficiencies? [<u>Y</u> <u>N</u>]		N - 1pt. Y - 0pt.	1
[T2] 1) Was the water treatment process functioning properly? [<u>Y</u> <u>N</u>] (i.e. Is pH, iron, chlorine, fluoride, etc. within acceptable range?) 2) Was needed water system equipment in place and functioning properly at the time of survey? [<u>Y</u> <u>N</u>] (NOTE: Equipment deficiencies must be identified in survey report.) 3) Were records available to the regional engineer clearly showing that all water storage tanks have been inspected and cleaned or painted (if needed) within the past 5 years? [<u>Y</u> <u>N</u> <u>NA</u>] (NOTE: All YESs required to receive point)		All Y - 1 pt. Else - 0 pt.	0
[T3] 1) Was the certified waterworks operator or his/her authorized representative present for the survey? [<u>Y</u> <u>N</u>] 2) Was log book up to date and properly maintained? [<u>Y</u> <u>N</u>] (Are minimum days being met based on system classification) 3) Was the water system properly maintained at the time of survey? [<u>Y</u> <u>N</u>] 4) Did operator/system personnel satisfactorily demonstrate to the regional engineer that he/she could fully perform all water quality tests required to properly operate this water system? [<u>Y</u> <u>N</u>] (NOTE: All YESs required to receive point)		All Y - 1 pt. Else - 0 pt.	0
[T4] 1) Does water system routinely track water loss and were acceptable record available for review? [<u>Y</u> <u>N</u>] 2) Is water system overloaded? (i.e. serving customers in excess of MSDH approved design capacity)? [<u>Y</u> <u>N</u>] 3) Was there any indication that the water system is/has been experiencing pressure problems in any part(s) of the distribution system? [<u>Y</u> <u>N</u>] (based on operator information, customer complaints, MSDH records, other information) 4) Are well pumping tests performed routinely? [<u>Y</u> <u>N</u> <u>NA</u>] (NOTE: YES FOR #1 & YES OR N/A FOR #4 AND NOs FOR #2 & #3 required to receive point)		1)Y - pt. 2)N - pt. 3)N - pt. 4)Y - pt.	1
[T5] 1) Does the water system have the ability to provide water during power outages? (i.e. generator, emergency tie-ins, etc.) [<u>Y</u> <u>N</u>] 2) Does the water system have a usable backup source of water? [<u>Y</u> <u>N</u>] (NOTE: Must be documented on survey report)		All Y - 1 pt. Else - 0 pt.	1
TECHNICAL CAPACITY RATING = [<u>3</u>] (Total Points)			

Managerial Capacity Assessment	Point Scale	Point Award
[M1] Were all SDWA required records maintained in a logical and orderly manner and available for review by the regional engineer during the survey? <input checked="" type="radio"/> Y <input type="radio"/> N	Y - 1pt. N - 0pt.	1
[M2] 1) Have acceptable written policies and procedures for operating this water system been formally adopted and were these policies available for review during the survey? <input checked="" type="radio"/> Y <input type="radio"/> N 2) Have all board members (in office more than 12 months) completed Board Member Training? <input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/> NA 3) Does the Board of Directors meet monthly and were minutes of Board meetings available for review during the survey? (NOTE: Quarterly meetings allowed if system has an officially designated full time manager) <input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/> NA (NOTE: ALL YESs or NAs required to receive point. NA - Not Applicable)	All Y - 1 pt. Else - 0 pt.	1
[M3] Has the water system had any SDWA violations since the last Capacity Assessment? <input checked="" type="radio"/> Y <input type="radio"/> N	N - 1pt. Y - 0pt.	0
[M4] Has the water system developed a long range improvements plan and was this plan available for review during the survey? <input checked="" type="radio"/> Y <input type="radio"/> N	Y - 1pt. N - 0pt.	1
[M5] 1) Does the water system have an effective cross connection control program in compliance with MSDH regulations? <input checked="" type="radio"/> Y <input type="radio"/> N 2) Was a copy of the MSDH approved bacti site plan and lead/copper site plan available for review during the survey and do the bacti results clearly show that this approved plan is being followed? <input checked="" type="radio"/> Y <input type="radio"/> N (NOTE: All YESs required to receive point)	All Y - 1 pt. Else - 0 pt.	1
MANAGERIAL CAPACITY RATING = [<u>4</u>] (Total Points)		

Financial Capacity Assessment	Point Scale	Point Award
[F1] Has the water system raised water rates in the past 5 years? <input checked="" type="radio"/> Y <input type="radio"/> N (NOTE: Point may be awarded if the water system provides acceptable financial documentation clearly showing that a rate increase is not needed, i.e. revenue has consistently exceeded expenditures by at least 10%, etc.)	Y - 1pt. N - 0pt.	1
[F2] Does the water system have an officially adopted policy requiring that water rates be routinely reviewed and adjusted as appropriate and was this policy available for review during the survey? <input checked="" type="radio"/> Y <input type="radio"/> N	Y - 1pt. N - 0pt.	1
[F3] Does the water system have an officially adopted cut-off policy for customers who do not pay their water bills, was a copy of this policy available for review by the regional engineer, and do system records (cut-off lists, etc.) clearly show that the water system effectively implements this cut-off policy? <input checked="" type="radio"/> Y <input type="radio"/> N	Y - 1pt. N - 0pt.	1
[F4] Was a copy of the water system's officially adopted annual budget available for review by the regional engineer and does the water system's financial accounting system clearly and accurately track the expenditure and receipt of funds? <input checked="" type="radio"/> Y <input type="radio"/> N	Y - 1pt. N - 0pt.	1
[F5 - Municipal Systems] 1) Was a copy of the latest audit report available for review at the time of the survey? <input type="radio"/> Y <input type="radio"/> N 2) Does this audit report clearly show that water and sewer fund account(s) are maintained separately from all other municipal accounts? <input type="radio"/> Y <input type="radio"/> N (NOTE: Yes answer to all questions required to receive point.)	All Y - 1 pt. Else - 0 pt.	
[F5 - Rural Systems] 1) Was the latest financial report / audit report available for review? <input checked="" type="radio"/> Y <input type="radio"/> N 2) Does the latest financial report show that receipts exceeded expenditures? <input checked="" type="radio"/> Y <input type="radio"/> N (NOTE: Yes answer to both questions required to receive point)	All Y - 1 pt. Else - 0 pt.	1
FINANCIAL CAPACITY RATING = [<u>5</u>] (Total Points)		

MISSISSIPPI DEPARTMENT OF HEALTH
BUREAU OF PUBLIC WATER SUPPLY
DESIGN CAPACITY SHEET

System: TAYLOR WATER ASSOCIATION
ID: 0360014 Class: C County: LAFAYETTE

Date Completed: 06/06/2019
Connections - Actual: 644 Equivalent: 644
Design Capacity: 1166 Percent Design Capacity: $644/1166 = 55.2\%$

06/2019 Pump Tests: #01 - 337 @ 10 psi
#02 - 329 @ 10 psi

Well Capacity = 666 gpm (total)

Treatment Capacity = 700 gpm

Service Pump Capacity = 700 gpm

Limiting Factor = 666 gpm

If service pump is limiting factor, then service pump capacity = useable service pump capacity

Customer Design Capacity = Useable Service Pump Capacity + Elevated Storage / 200
Customer Design Capacity = $666 + 100,000/200$
Customer Design Capacity = 1166

% of Design Capacity = # of Existing Connections / Customer Design Capacity *100
% of Design Capacity = $644/1166$
% of Design Capacity = 55%

GROUNDWATER RULE CALCULATIONS

Useable Service Pump Capacity = 700 gpm
Clearwell = 30,000 (Use baffling efficiency 10%) = 3000 gallons
Temperature of water = 62 degrees Fahrenheit (17 Celsius)

CT = 3.5

Residual = CT/detention time
Residual = $3.5/(3000 \text{ gal}/700 \text{ gpm})$
Residual = $3.5/4.3$
Residual = $3.5/13.7$
Residual = 0.8 mg/L

*Therefore the minimum residual of free chlorine required to achieve 4-Log inactivation of viruses should be 0.8 mg/L leaving the water plant.

**MISSISSIPPI STATE DEPARTMENT OF HEALTH
BUREAU OF PUBLIC WATER SUPPLY
MASTER DATA SHEET**

Name of Supply Taylor Water Association Owner Association % Capacity 55
 County Lafayette Class C Date of Last Inspection 05/23/2019
 Master Meter YES PWS ID Number 0360014 4-LOG YES
 Supply Source: Purchase Surface Ground X Number of Wells TWO

Well Data:

<u>Well ID NO.</u>	<u>Location</u>	<u>Year Const.</u>	<u>Cap. (GPM)</u>	<u>Pres.</u>	<u>Casing</u>	<u>Screen</u>	<u>Depth</u>	<u>Controls</u>
*03	Southeast Corner of Plant	2000	380	22 psi	18"	12"		AUTO
**04	Northwest Corner of Plant	2000	398	22 psi	18"	12"-31'	210'	AUTO

**Latest Pump Test: May 2019

Treatment: Iron Softening Corrosion X Chlorine X Fluoride

	<u>NO.</u>	<u>TYPE</u>	<u>CAPACITY</u>	<u>REMARKS</u>
CHLORINATOR	02	Ecometrics Switchover	50 ppd each	@5 ppd
AERATOR	01	Induced Draft	700 gpm	
SODA ASH	01	Grundfus	300 GPH	

<u>Storage:</u>	<u>Location</u>	<u>Material</u>	<u>Capacity</u>	<u>Remarks</u>
GROUND	Plant	Steel	30,000 gal	
ELEVATED	Plant.	Steel	100,000 gal	

<u>Service Pumps:</u>	<u>No.</u>	<u>Location</u>	<u>Capacity (GPM)</u>	<u>Head</u>	<u>Controls</u>
	02	Plant #1	350 gpm each		AUTO