



MISSISSIPPI STATE DEPARTMENT OF HEALTH

REPORT OF INSPECTION OF DRINKING WATER SUPPLY

PWS: 0430002 Class: C

An inspection of the CITY OF BROOKHAVEN water supply in LINCOLN county was made on 07/16/2024. Present at the time of inspection was ASHLEY M PERRIN, OPERATOR; WRITER . Official JOE C COX Address 301 S FIRST STREET BROOKHAVEN MS 39601 W.W. Operator ASHLEY M PERRIN Address 1143 S. CHURCH ST. BROOKHAVEN MS 39601 No. Connections 5420 No. Meters ___ Population Served 12513 Field Chemical Analysis: pH ___ Cl2(free) ___ Cl2(total) ___ H2S N/A Iron ___ Fluoride ___ Point of Sampling DISTRIBUTION Water Rates ___

COMMENTS

Technical: 5 Managerial: 5 Financial: 5

OVERALL CAPACITY RATING: 5.0 / 5.0

- 1. The target pH for the treatment plant is 8.3 (+/- 0.5). The chemical analysis of the finished water at the time of the inspection was as follows: Treatment plant: pH = 7.54 free chlorine = 1.54 mg/L fluoride = 0.7 mg/L Well 07: free chlorine = 2.03 mg/L fluoride = 1.1 mg/L Well 08: free chlorine = 1.94 mg/L fluoride = 1.1 mg/L Well 09: free chlorine = 1.97 mg/L fluoride = 1.0 mg/L Well 12: free chlorine = 1.89 mg/L
2. Since the last inspection, the system has completed a new well near the King's Daughter Medical Center. At the time of inspection, Well 12 was online, but closeout documents had not been submitted to our office for review and approval. The well will not be included in the design capacity until closeout documents are submitted and approved. This should be done as soon as possible.
3. Wells 01 & 02 are currently pumping sand and are offline. Please keep this agency updated of the status of these wells.

4. Well 05 was down at the time of inspection. The system stated that it would be repaired and placed back online.
5. In order to maintain credit for T2-3, the elevated tanks should be inspected prior to the next annual inspection. The Homeseeker's tank has been approved for rehabilitation and work should begin soon.
6. This system is now serving 86% of its design capacity. System officials should begin making plans to increase this system's supply capacity in order to accommodate future growth in the area. The new well will add additional capacity.
7. The system's fluoride pumps are capable of producing fluoride residuals above the maximum contaminant level. The system should closely monitor their fluoride residuals as this poses a danger to the customers of the City of Brookhaven water supply. Since the last inspection, the fluoride pump at Well 09 had been replaced with a smaller capacity pump.
8. As a reminder, fences should be upright and free from vegetation.
9. As a reminder, the system should have a completed, working Asset Management Plan for review during the annual inspection.
10. The Brignal system is offline at this time. The operator stated this may be used in the future if more development occurs and capacity is needed or it could be used as a backup only. Please keep this agency informed of the status of this facility.
11. The following items should be completed in preparation for annual inspections:
 - The Security Vulnerability Self-Assessment and Emergency Response Plan should be updated annually.
 - For systems under 80% capacity, pump tests must be conducted on the wells every other year. This must be done in order to continue to receive full credit for question T4.
12. Whenever system pressure is lost, even for brief periods of time, contaminants may be introduced to the system through back-flow or back-siphoning. 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.
13. All dead-end water lines should be flushed on a routine schedule to clear the lines of sediment and stagnant water.
14. 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.
15. Records that are required in accordance with the Safe Drinking Water Act include:
 - Bacti Site Plan with map & sample results - 5 yrs.
 - Other water quality analysis - 10 yrs.
(THMs, HAA5s, nitrates, inorganics, VOCs, etc.)
 - Lead and Copper Site Plan & sample results - 12 yrs.
 - Inspection Reports - 10 yrs.
 - Annual Report - 3 yrs.
 - Operator's Logbook - 5 yrs.
 - Actions taken by the system to correct violations - 3 yrs.
 - Records concerning a variance or exemption - 5 yrs.
 - All other MSDH correspondence - 3 yrs.

Completed by Colleen Cook on 07/29/2024.

Reviewed by William F. Moody, Bureau Director on 08/03/2024.

If you have any questions, please call (60) 576-7518.

pc:

JOE C COX, OFFICIAL

ASHLEY M PERRIN, OPERATOR

Mississippi State Department of Health
Bureau of Public Water Supply

FY 2025 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#: 0430002 Class: C Survey Date: 07-16-2024 County: LINCOLN
Public Water System: CITY OF BROOKHAVEN Conn: 5420
Certified Waterworks Operator: ASHLEY M PERRIN Pop: 12513

CAPACITY RATING DETERMINATION

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

Capacity Rating = (T+M+F) / 3 = (5+5+5) / 3 = 5

Overall Capacity Rating = 5.0

Completed by Colleen Cook on 07/23/2024
Reviewed by William F. Moody, Bureau Director on 08/03/2024

Comments:

Table with 3 columns: Question, Point Scale, Point Award. Rows include technical capacity assessment questions [T1] through [T5] and a final row for TECHNICAL CAPACITY RATING = [5] (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 type="radio"/> Y <input checked="" type="radio"/> N]	N - 1pt. Y - 0pt.	1
[M4] Has the water system developed or is in process of developing its asset management plan to support its long range improvements plan and were these plans 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>5</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 checked="" 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 checked="" type="radio"/> Y <input type="radio"/> N] (NOTE: Yes answer to all questions required to receive point.)	All Y - 1 pt. Else - 0 pt.	1
[F5 - Rural Systems] 1) Was the latest financial report / audit report available for review? <input type="radio"/> Y <input type="radio"/> N] 2) Does the latest financial report show that receipts exceeded expenditures? <input 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: **CITY OF BROOKHAVEN**ID: **0430002** Class: **C** County: **LINCOLN**Date Completed: **07/29/2024**Connections - Actual: **5420** Equivalent: **7502**Design Capacity: **8693** Percent Design Capacity: **7502/8693 = 86.3%**

Well 7 Capacity = 560 gpm

Treatment Plant Well Capacity = 421 + 457 = 878 gpm (Well 05 was down during inspection)

Aerator Capacity = 2 * 1,500 = 3,000 gpm

Service Pump Capacity = 2 * 1,280 = 2,560 gpm

Limiting Factor = Well Capacity = 878 gpm

Treatment Plant Capacity = 878 + (250,000/200) = 2,128 gpm

Source Capacity = Well 7 Capacity + Treatment Plant Capacity = 560 + 2,128 = 2,688 gpm

Design capacity is limited to 2x the source capacity since elevated storage is not usable.

Design capacity (Well 7 & Treatment Plant) = 2 * 2,688 = 5,376 gpm

Credit for elevated storage can be given at the Industrial Park Road tank since well #8 is located onsite.

Well 8 Capacity = 517 gpm

Usable Elevated Storage = 495 * 6 * 60 = 186,120 gallons

Design Capacity (Well 8) = 517 + 186,120 / 200 = 1,447 gpm

Credit for elevated storage can be given at the Crete Rd. tank since well #9 is located onsite.

Well 9 Capacity = 668 gpm

Usable Elevated Storage = 668 * 6 * 60 = 240,480 gallons

Design Capacity (Well 9) = 668 + 240,480 / 200 = 1,870 gpm

Total Design Capacity = 5,376 + 1,447 + 1,870 = 8,693 gpm

Number of connections = 5,420 + 491 - 27 = 5,884 gpm

This system has 491 apartments served by 27 meters.

This system serves several non-residential users. This calculation is based on information received at the inspection on 7/28/08.

Average monthly usage (non-residential) = 21,916,000 gallons

Average monthly usage (all users) = 39,764,580 gallons

CIU = non-residential usage/total usage = 21,916,000 / 39,764,580 = 0.55

Equivalent Connections = Number of Connections + (Number of Connections * 0.5 * CIU)

Equivalent Connections = 5,884 + (5,884 * 0.5 * 0.55) = 7,502

% Design Capacity = Equivalent Connections / Design Capacity

% Design Capacity = 7,502 / 8,693 = 86%