MISSISSIPPI STATE DEPARTMENT OF HEALTH

REPORT OF INSPECTION OF DRINKING WATER SUPPLY

PWS: 0180008 **Class:** B

An inspection of the CITY OF HATTIESBURG water supply in FORREST county was made on 10/30/2025. Present at the time of inspection was WADE J BYRD, OPERATOR; WRITER. Official TOBY BARKER Address P O BOX 1898 HATTIESBURG MS 39403 W.W. Operator WADE J BYRD Address 70 BYRD NEST LANE RICHTON MS 39476 No. Connections 16458 No. Meters ___ Population Served 43449 Field Chemical Analysis: pH ___ Cl2(free) ___ Cl2(total) ___ H2S N/A Iron ___ Fluoride ___ Point of Sampling DISTRIBUTION Water Rates ___

COMMENTS

Technical: 51/51 Managerial: 33/33 Financial: 16/16

OVERALL CAPACITY RATING: 100 / 100

1. This inspection was started on October 22nd and finished on October 30th. On October, several components at multiple plants were being repaired or replaced. These locations were revisited on October 30th at which time the water quality parameters were restored to normal operating levels.

2. Systems officials should be commended for the continuous improvements made to the infrastructure and treatment plants. All required records were well organized and maintained.

3. The following water quality parameters were analyzed during the inspection:
   Plant 1:
   Cl2 Free = 2.08 mg/L, Fe = 0.21 mg/L, pH = 7.7, F = 0.8 mg/L
   Plant 2:
   Cl2 Free = 2.12 mg/L, Fe = 0.04 mg/L, pH = 7.8, F = 0.6 mg/L
   Wesley Plant:
   Cl2 Free = 1.96 mg/L, Fe = 0.06 mg/L, pH = 7.3, F = 0.9 mg/L
   Forrest General:
   Cl2 Free = 0.95 mg/L, F = 0.6 mg/L
   4th Street:
   Offline for repairs
   USM:
   Cl2 Free = 1.25 mg/L, F = 0.8 mg/L

4. The fluoride best practices were discussed during the inspection.

5. The system target pH for Plant 1 is 7.87, the target pH for Plant 2 is 7.98, and the target pH for Wesley Plant is 7.6. These pH residuals were calculated based on the finished water physical and chemical analysis. These pH levels should be maintained as closely as possible.

6. At the time of inspection, critical need areas were discussed. System officials stated that if lines were to fail around the Industrial Park area, then a significant strain would be placed on Plant 2. System officials should consider possible sources in this area to alleviate potential strain and allow for increased capacity.

7. The 28th Ave. pump station pumps was down and a temporary trailered pump was put in place. It was stated this pump station's renovations would be finished in the near future.

8. The city has maintenance contract with American Tank. All steel tanks were recently inspected.

9. The operations record was available for review and appeared to contain the required information. We remind the system officials that all water quality parameters should be checked and recorded at a minimum frequency of 5 days/week at the 3 plants. The D-Class Wells should have the water quality parameters checked and recorded at a minimum frequency of 3days/week.

10. Water loss records were available for review.

11. Pumping Test were conducted in August of 2025. These should continue to be performed once every two years to keep receiving full credit for T4 on the Capacity Assessment. Pumping tests of the James St plant's service pumps were also available for review.

12. During the survey, the recently completed master list of high hazard connections was reviewed. Testing results were available for review. These should continue to be tested on an annual basis.

13. It was noted this system has a maintenance contract to maintain its generators.

14. The city's asset management plan was presented and discussed during the inspection.

General Comments:

15. The Risk and Resilience Assessment and Emergency Response Plan must be updated annually. This will be checked and counted on the capacity assessment at the time of inspection each year.

16. 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. The system should have a routine flushing schedule with documentation showing the schedule is being followed.

17. Whenever system pressure is lost, even for brief periods of time, contaminants may be introduced to the system through back-siphonage and back flow. 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 Taylor Burklow, E.I. on 11/13/2025.

Reviewed by Greg Caraway, P.E. on 11/25/2025.

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

pc:

TOBY BARKER, OFFICIAL
WADE J BYRD, OPERATOR

MISSISSIPPI STATE DEPARTMENT OF HEALTH

Bureau of Public Water Supply

FY 2026 Public Water System Capacity Assessment Form

Standard Form

PWS ID#	PUBLIC WATER SYSTEM
0180008	CITY OF HATTIESBURG
SURVEY DATE	COUNTY
10-30-2025	FORREST
CONNECTIONS	POPULATION
16458	43449
CLASS	CERTIFIED WATERWORKS OPERATOR
B	WADE J BYRD

A+

100

Overall Score

Technical	Managerial	Financial
51/51	33/33	16/16

Technical Capacity Assessment — 51 of 51 points

			Points
T1	Does the water system have any significant deficiencies?	○ Y ● N	7/7
T2	Was the water treatment process functioning properly?	● Y ○ N	4/4
T3	Was needed water system equipment in place and functioning properly at the time of survey?	● Y ○ N	3/3
T4	Were records available to the RE clearly showing that all water storage tanks have been inspected and cleaned or painted (if needed) within the past 5 years?	● Y ○ N ○ NA	3/3
T5	Was the certified waterworks operator or his/her authorized rep present for survey?	● Y ○ N	3/3
T6	Was PWS Operations record up to date and properly maintained?	● Y ○ N	3/3
T7	Was the water system properly maintained at the time of survey?	● Y ○ N	3/3
T8	Does the system have adequate capabilty for testing the water quality of the system and could operator personnel perform all water quality tests required to properly operate this water system?	● Y ○ N	2/2
T9	Does water system routinely track water loss and were acceptable records available for review?	● Y ○ N	3/3

T10	Is the water system overloaded? Cannot exceed MSDH design capacity, consecutive systems overloaded if supplier overloaded or based on hydraulic calculations or pressure recording. ○ Y ● N	Points **3/3**
T11	Was there any indication that the water system is/has been experiencing low pressure in any part(s) of the distribution system? ○ Y ● N	Points **3/3**
T12	Are well pumping tests performed routinely? ● Y ○ N ○ NA	Points **3/3**
T13	Does the water system have the ability to provide water during power outages? ● Y ○ N	Points **3/3**
T14	Does the water system have a usable backup source of water? ● Y ○ N	Points **3/3**
T15	For Groundwater systems – can the water system meet maximum daily demands with the largest producing source/ treatment facility out of service? OR For Surface Water systems – Can the water system meet maximum daily demands based on 1 in 50-year drought calculations or the extreme drought of record? ● Y ○ N ○ NA	Points **3/3**
T16	Does the system have a functioning control system for facility operations? (SCADA, Automatic Controls, etc.) ● Y ○ N ○ NA	Points **2/2**

Managerial Capacity Assessment — 33 of 33 points

M1 Does the PWS maintain or can the system access, via the PWS Portal, all SDWA required records? (Physical records in logical and orderly manner?)

Points **3/3**

● Y ○ N

M2 Have acceptable written policies and procedures for operating this water system been formally adopted and available for review?

Points **3/3**

● Y ○ N

M3 Have all Board Members (in office more than 12 months) completed Board Member Training?

Points **3/3**

○ Y ○ N ● NA

M4 Does the Board meet monthly and were minutes of Board meetings available for review?

Points **2/2**

● Y ○ N ○ NA

M5 Has the water system had any SDWA violations since the last Capacity Assessment?

Points **6/6**

○ Y ● N

M6 Has the water system developed or is in the process of developing its asset management plan to support its long-range improvements plan and were these plans available for review during the survey?

Points **3/3**

● Y ○ N

M7 Does the water system have an effective cross connection program in compliance with MSDH regulations?

Points **2/2**

● Y ○ N

M8	Were copies of the MSDH approved sample site plans (RTCR, LCR, and DPB) available for review? Do results show site plans are being followed? ● Y ○ N	Points **3/3**
M9	Does the system keep records of all customer complaints? ● Y ○ N	Points **2/2**
M10	Does the system have an adequate backup plan for staffing to ensure that vital operational action are covered? ● Y ○ N	Points **2/2**
M11	Does the System have a up to date Security Vulnerability Analysis or Risk and Resilience Assessment in place and available for review? ● Y ○ N	Points **2/2**
M12	Does the System have an up to date Emergency Response Plan available for review at the time of inspection? ● Y ○ N	Points **2/2**

Financial Capacity Assessment — 16 of 16 points

	Question	Points
F1	Has the water system raised water rates in the past 3 years? ● Y ○ N	3/3
F2	Has the water system performed a rate study within the past 5 years ? ● Y ○ N	2/2
F3	If the rate study was performed, did the system act upon its recommendations? ● Y ○ N ○ NA	2/2
F4	Is the water system following an official cut-off policy? ● Y ○ N	3/3
F5	Was a copy of system's adopted annual budget available for review and does financial accounting system clearly and accurately track receipts and expenditures? ● Y ○ N	2/2
F6	Was the latest financial report/audit report available for review? ● Y ○ N	2/2
F7	Does the latest report show that receipts exceed expenditures? Excluding out of pocket for major improvements or for Municipal govts - Are the water and sewer fund accounts separate from other accounts? ● Y ○ N	2/2

Completed by Taylor Burklow, E.I. on 11/12/2025

Reviewed by Greg Caraway, P.E. on 11/25/2025

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

System: **CITY OF HATTIESBURG**
ID: **0180008** Class: **B** County: **FORREST**

Date Completed: **11/12/2025**
Connections - Actual: **16458** Equivalent: **18595**
Design Capacity: **47584** Percent Design Capacity: **18595/47584 = 39.1%**

Plant 1:
Well Capacity:
Well 14 (P1W4)- 1302 gpm
Well 15 (P1W5)- 875 gpm
Well 17 (P1W2)- 895 gpm
Well 18 (P1W3)- 1725 gpm
Well 24 (P1W1)- 1404 gpm
Total Well Capacity = 6,201 gpm

Plant 1 Treatment Capacity:
Aerators = 5500 gpm
Filters = 5 MGD = 3470 gpm
Service Pump Capacity = 3000 + 3000 + 3000 + 3000 = 12,000 gpm
Plant 1 Limiting Factor = 3470 gpm (filters)
Useable Clear Well Capacity = 3470 * 6 * 60 = 1,249,920 gallons
Useable Service Pump Capacity = 3470 + 1,249,920/200 = 9,722 gpm
Design Capacity Plant 1 = 9,722 gpm

Plant 2:
Well Capacity:
Well 13 (P2W5)- 1000 gpm
Well 19 (P2W4)- 969 gpm
Well 21 (P2W1)- 1261 gpm
Well 22 (P2W2)- 1229 gpm
Well 23 (P2W3)- 681 gpm - Offline
Total Well Capacity = 4,459 gpm

Plant 2 Treatment Capacity:
Aerators = ?
Filters = 5 MGD = 3470 gpm
Service Pump Capacity = 1000 + 2000 + 2000 + 2100 = 7100 gpm
Plant 2 Limiting Factor = 3470 gpm (filters)
Useable Clear Well Capacity = 3470 * 6 * 60 = 1,249,920 gallons
Useable Service Pump Capacity = 3470 + 1,249,920/200 = 9,722 gpm > 7100 gpm
Design Capacity Plant 2 = 7100 gpm

Weathersby Plant:
Well Capacity:
Well 16 - 1613 gpm
Well 25 - 1725 gpm
Total Well Capacity = 3338 gpm

Aerator Capacity = 1500 gpm
Filter Capacity= 1416 (limiting factor)
Clear Well Capacity = 42,850 gallons
Service Pump Capacity = 1500 gpm
Design Capacity Weathersby Plant = 1500 gpm

D Class Plants:
Well 11 - 1158 gpm
Well 12 - 663 gpm
Well 20 - 1191 gpm
Total Well Capacity = 3,012 gpm

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

CITY OF HATTIESBURG 11/12/2025

Total Capacity:
Plants: 9,722 + 7,100 + 1,500 + 3,012 = 21,334 gpm
Total Elevated Tank Capacity = 5,250,000 gallons
NOTE:
Credit was given for The tanks at USM, Weathersby, Lincoln Rd Extension, Forrest General, and Industrial park. The other storage for the system is part of booster stations and are not calculated in this design. Excess elevated storage is allowed due to large distribution mains and the existing booster stations located throughout the system.

Design Capacity = 21,334 + 5,250,000/200 = 47,584 Connections

Equivalent Connections:
Apartments = 6,696 * 2/3 = 4,464(# meters serving the apartments unknown)
CIU Calculation: 16458 + (16458 *.5 * [863,388,000/3,323,566,048]) = 18595 Connections
Schools = 8343 * 40gpcd/400 gpd = 835 connections
Equivalent Connections = 18595 + 4464 + 835 = 23,894 Connections

% Design Capacity = 23,894/47,584 * 100 = 50.2%

The calculations above were made using MSDH guidelines.