

**Capacity Assessment Form  
Small System Technical Assistant Contract  
Technical and Operational Capacity**

**Water System Information**

Name of Water System \_\_\_\_\_

PWS ID# \_\_\_\_\_

Contact Name \_\_\_\_\_

Contact Title \_\_\_\_\_

Contact Phone \_\_\_\_\_

**Sanitary Survey and Other Related Information**

1. When was your last Health Department sanitary survey? \_\_\_\_\_  
Who from the water system went with the Health Department inspector during the survey? \_\_\_\_\_

2. Since the last survey, have you had major changes in any of the following?
- a. \_\_\_ Management
  - b. \_\_\_ Operators
  - c. \_\_\_ Physical changes in the system
  - d. \_\_\_ Anything else

3. Do you have a copy of the most recent sanitary survey? \_\_\_ Yes \_\_\_ No

4. Were there any deficiencies found? If yes, how have those deficiencies been corrected?  
(Check all that apply)

a.) \_\_\_ All deficiencies were corrected within (circle 1)  
1 mo. 3 mo. 6 mo. 1 year

b.) \_\_\_ The following water system personnel responded to the Health Department  
sanitary survey letter? \_\_\_\_\_

c.) \_\_\_ Some deficiencies have been corrected.

d.) \_\_\_ None of the deficiencies have been corrected.

5. If any deficiencies are still not corrected, why not? \_\_\_\_\_

6. Do you have copies of other letters or notices from the Health Department? Who reads  
and follows up on them? \_\_\_\_\_

7. Has the system ever been put on public notification for bacteriological violations?  
\_\_\_\_\_ Yes \_\_\_\_\_ No

8. List the dates and type of all violations within the last twelve months? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

9. Does the water system have any special monitoring required by the Health Department, for example, VOCs, raw water sampling, interim monitoring under the Surface Water Treatment Rule (SWTR), etc.?  Yes  No

**Maps, Drawings and Other Records**

10. Please indicate on the following table all facilities for which you have as-built plans, drawings, or maps. Please indicate by using the words "plans," "drawings," and "maps," or some combination thereof.

| Facility           | Location | Size | Construction Material | Year of Installation |
|--------------------|----------|------|-----------------------|----------------------|
| Water Source(s)    |          |      |                       |                      |
| Treatment Plant(s) |          |      |                       |                      |
| Transmission Mains |          |      |                       |                      |
| Distribution Mains |          |      |                       |                      |
| Storage Tanks      |          |      |                       |                      |
| Pumping Stations   |          |      |                       |                      |
| Pressure Zones     |          |      |                       |                      |

11. Are your as-built plans, drawings, or maps drawn to scale?  
 Yes  Some (please list)  No  Not Applicable

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

12. Has your water system established a procedure to periodically update your as-built plans, drawings, or maps as system elements are changed (i.e., replaced, repaired, or expanded)?  
 Yes  No  Not Applicable

If yes, please describe (or attach) your system's procedure.

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

If no, please describe (or attach) how you plan to ensure that as-built drawings will be prepared and maintained for all future facilities.

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13. Do you have a map that shows the water system's existing service area?  
 Yes  No  Not Applicable

14. **New systems and existing systems that are consolidating with another existing system** Do you have a map that shows the proposed service area of the new or consolidated system?  
 Yes  No  Not Applicable

15. If your water system is expanding its service boundaries, do you have a map that shows the system's future service area boundaries based on a 10-year growth projection?  
 Yes  No  Not Applicable

16. Does the water system keep a consulting engineer on retainer to assist with technical issues and problems?  
 Yes  No

**Planning Documents**

17. Have you developed:  
a.) A 10-year growth projection of the water system service area and customer base that is consistent with local land use plans?  
 Yes  No  Not Applicable

b.) A 10-year projection of water demand on your system?  
 Yes  No  Not Applicable

18. Have you performed a capacity analysis of your system's current water source(s) to meet the 10-year projection of water demand? *(If no, please check "Not Applicable" for Question 19(a-e) and continue with Question 20)*  
 Yes  No

19. Does your capacity analysis include:  
a.) Estimates of the amount of water needed to serve the annual and maximum daily demand over the coming 10-year period?  
 Yes  No  Not Applicable

b.) A description and yield analysis for each surface water source that is currently being used or that you propose to use to meet the projected water demand on your system?  
 Yes  No  Not Applicable

c.) A description of each groundwater source that is currently being used or that you propose to use to meet the projected water demand on your system that includes:

Groundwater levels? \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ Not Applicable  
Drawdown patterns? \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ Not Applicable  
Sustained well yield? \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ Not Applicable

*"Sustained Well Yield" means the amount of water that a well can reliably be expected to produce on a continuous basis without adversely affecting the level of the groundwater in the aquifer.*

d.) A description of the existing source-pumping capacity?  
\_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ Not Applicable

e.) A description of the system's raw and finished water storage capacity?  
\_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ Not Applicable

20. Has a technical engineering evaluation of your water system facilities been conducted with respect to its capacity to reliably meet current drinking water standards and drinking water standards that are proposed and in the process of being adopted?

\_\_\_\_\_ Yes Date: \_\_\_\_\_ \_\_\_\_\_ No

*(If no, please check "Not Applicable" for Question 21(a-e) and continue to question 22.)*

21. Does your technical engineering evaluation:

a.) Document the system's ability to comply with the Arkansas waterworks standards?  
\_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ Not Applicable

b.) Assess all treatment facilities' ability to reliably produce water that meets water quality standards and assess each facility's capacity to meet maximum system demand?  
\_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ Not Applicable

c.) Assess the existing system storage for its capacity to provide water to maintain 20 pounds per square inch (psi) throughout the distribution system under daily demand fluctuations, peak daily and peak monthly demands?  
\_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ Not Applicable

d.) Provide a plan for replacement and improvement of the infrastructure components?  
\_\_\_\_\_ Yes \_\_\_\_\_ No

e.) If yes, is each infrastructure component scheduled for replacement or repair at a point prior to the end of its projected useful life?  
\_\_\_\_\_ Yes \_\_\_\_\_ No

22. Does the system have spare parts on hand for routine repairs for components that are not redundant within the system?

\_\_\_\_\_ Yes \_\_\_\_\_ No

23. Does the system have an emergency plan on file with the Health Department?

\_\_\_\_\_ Yes \_\_\_\_\_ No

**Water Source(s)**

24. What is the classification of your water source?

- a.) Ground
- b.) Surface (Including Springs)
- c.) Ground Water Under the Direct Influence of Surface Water (Also referred to as a Surface Influenced Well or as a GWUDI Well)
- d.) Ground Purchase
- e.) Surface Purchase
- f.) GWUDI Purchase
- g.) Combination of the Above (describe)\_\_\_\_\_

25. Does your water system have any emergency connections or sources other than the sources listed above (if yes, please describe)?      \_\_\_\_\_ No      \_\_\_\_\_ Yes

Describe:\_\_\_\_\_

26. Do you routinely evaluate the water system's source water quality data to identify any increasing concentration in water quality constituents?

\_\_\_\_\_ Yes      \_\_\_\_\_ No      \_\_\_\_\_ Not Applicable

If yes, does the evaluation include anything other than what is performed by the Health Department?

27. If you have identified any water quality constituent with an increasing concentration that has the potential of exceeding an MCL, list the likely source, if known, and the constituent below.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

28. Do you have a map that identifies and locates all potential sources of contamination (e.g., waste disposal sites, landfills, animal feedlots, etc.) within the system's service area or in adjacent areas that might impact your system's water source(s)?

\_\_\_\_\_ Yes      \_\_\_\_\_ No      \_\_\_\_\_ Not Applicable

29. **New systems:** Has an assessment been conducted of your source water that is consistent with the requirements of Arkansas' Source Water Assessment Plan (SWAP)?

\_\_\_\_\_ Yes      \_\_\_\_\_ No      \_\_\_\_\_ Not Applicable

30. Do you have monthly water production records or treatment records that show daily and monthly water production for each source used by your water system?

\_\_\_\_\_ Yes      \_\_\_\_\_ No      \_\_\_\_\_ Not Applicable

31. Does the system keep records on the number of hours the pumps are run each day?

\_\_\_\_\_ Yes      \_\_\_\_\_ No      \_\_\_\_\_ Not Applicable

32. What are your systems warning signs of inadequate pumping capacity? \_\_\_\_\_

\_\_\_\_\_

How long does it take for the operator to respond to the warning signs? \_\_\_\_\_

\_\_\_\_\_

33. Has the Health Department directed the water system to find another water source or find better treatment methods for the current water source?  
\_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ Not Applicable

34. Does the water have taste and odor problems? \_\_\_\_\_ Yes \_\_\_\_\_ No  
Secondary standard violations? \_\_\_\_\_ Yes \_\_\_\_\_ No  
If yes, please describe, if possible, the source of the problems? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

35. If yes to 33 or 34, have any treatment methods been investigated and/or implemented to improve the raw water quality? \_\_\_\_\_ Yes \_\_\_\_\_ No  
If yes, describe the alternatives being considered. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Surface Sources:**

36. Has your system been through the CPE program or some other optimization program? If some other program, please describe.  
\_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ Not Applicable

Describe: \_\_\_\_\_

\_\_\_\_\_

If yes, what were the major limiting factors identified? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Ground and Spring Sources:**

37. Does the system have maps of the aquifer and aquifer recharge areas?  
\_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ Not Applicable

38. Does the system know of other water systems using the same aquifer?  
\_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ Not Applicable

39. Does the system know the recharge rate of the aquifer and the total water pumped from the aquifer on an annual basis?  
\_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ Not Applicable

**Wells:**

40. Does the system have the well driller's logs and other construction data for each well?  
\_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ Not Applicable
41. Does the system prepare and keep records of the static, pumping and drawdown levels of its well(s)?  
\_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ Not Applicable

**Purchased Sources:**

42. Do you have a contract for your purchased water? \_\_\_\_\_ Yes \_\_\_\_\_ No  
How long is it for? \_\_\_\_\_ Is there a limit to the amount of water you purchase?  
\_\_\_\_\_ Yes \_\_\_\_\_ No What happens if you need more? \_\_\_\_\_
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43. Does the wholesaler meet current drinking water standards?  
\_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ Don't Know
44. Do both the wholesaler and the purchaser keep a record of master meter readings?  
\_\_\_\_\_ Yes \_\_\_\_\_ No
45. Are these sets of readings compared? \_\_\_\_\_ Yes \_\_\_\_\_ No
46. Who retains the records of the readings? \_\_\_\_\_
47. Are there any accounts that are past due to the wholesaler? \_\_\_\_\_ Yes \_\_\_\_\_ No  
If yes, how much is past due? \_\_\_\_\_  
Have payments consistently been on time during the last 5 years?  
\_\_\_\_\_ Yes \_\_\_\_\_ No
48. Is there a plan for a backup or emergency source of water (describe)?  
\_\_\_\_\_ Yes \_\_\_\_\_ No

Description: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_





53. Has the water system ever violated the Surface Water Treatment Rule (e.g., turbidity MCL, CT violation, lack of qualified operator, or other treatment technique violation)?  
 Yes  No If yes, when, and what was the violation? \_\_\_\_\_

54. Has the water system received water quality complaints within the last year?  
 Yes  No The last 5 years?  Yes  No  
If yes, please describe the nature and frequency of the complaints. \_\_\_\_\_

55. Is the chlorine dosing equipment inspected and maintained on a regular basis?  
 Yes  No (Look for evidence of maintenance or inspection) What is regular? \_\_\_\_\_

56. Can residual chlorine be detected at taps throughout the distribution system?  
 Yes  No  
Do you take regular chlorine samples in different parts of the distribution system?  
 Yes  No  
Do you always have a chlorine residual at the far reaches of the distribution system?  
 Yes  No

57 Do you have any treatment for iron, manganese, hard water, etc.  
 Yes  No  
If yes, please describe. \_\_\_\_\_

58. Is the plant flow rate read or calculated and monitored on a regular basis?  
 Yes  No If yes, by what means? \_\_\_\_\_

59. Are water quality parameters monitored and used on a regular basis as a means of process control?  
 Yes  No

If yes, please list, and the location of the sample, and parameter being monitored, and the laboratory equipment being used.

| <u>Sample Location</u> | <u>Parameter</u> | <u>Equipment</u> |
|------------------------|------------------|------------------|
| _____                  |                  |                  |
| _____                  |                  |                  |
| _____                  |                  |                  |
| _____                  |                  |                  |
| _____                  |                  |                  |

60. How are chemical feed rates adjusted in response to the process control evaluation?  
 Manually  Automatically  Not Applicable

61. Has an evaluation been conducted to document the condition and remaining service life of existing treatment facilities?  
 Yes  No

**Distribution, Pumping and Storage**

62. Are all water connections metered?  
 Yes  No

63. Are all the meters read on a monthly basis?  
 Yes  No

64. Does anyone evaluate the readings for possible leaks on the homeowners' side of the meter?  Yes  No If yes, are the readings evaluated in the field or in the office? \_\_\_\_\_

65. Does the water system have a properly working master meter?  
 Yes  No

66. Is the unaccounted for water calculated each month?  
 Yes  No

67. What is the % of unaccounted for water? \_\_\_\_\_ %

68. Is an operating pressure of at least 20 psi maintained under all normal service conditions (including times of fire flow if your system is used for fire protection) in your system's distribution system?  Yes  No

69. If no to 68, do you have a map that identifies the areas in your distribution system that do not maintain an operating pressure of at least 20 psi?  
 Yes  No

70. Is an operating pressure of at least 5 psi maintained in all transmission lines under all normal service conditions (including times of fire flow if your system is used for fire protection) in your system's transmission lines?  Yes  No

71. If no to 70, do you have a map that identifies those transmission lines that do not maintain an operating pressure of at least 5 psi?  Yes  No

72. Has the water system issued a boiled water notice in the last year?  Yes  No. If yes, what was the cause(s) of the boil water notice(s)? \_\_\_\_\_

73. Has a pressure survey been conducted on the distribution system?  
 Yes  No

74. Has a hydraulic computer analysis been conducted on the transmission and distribution system?  Yes  No

75. Does the water system have a cross-connection control program that meets the requirements of the *Rules and Regulations Pertaining to Public Water Systems*?

Yes  No

If yes, please provide a brief description. \_\_\_\_\_

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If no, describe any plans to meet the requirements, along with any proposed time lines \_\_\_\_\_

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76. Are the system's pumping stations in good physical condition?

Yes  No

77. Are the system's pumping stations able to accomplish their tasks, such as filling tanks?

Yes  No  Not Applicable

If no, please describe \_\_\_\_\_

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78. Are the system's pumping stations equipped with auxiliary power?

Yes  Some  No  Not Applicable

If "some," please list the pump stations and indicate which ones have auxiliary power. \_\_\_\_\_

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79. Is the following information collected on the system's pumping stations:

a.) Pump run time  Yes  No  Not Applicable  
b.) Pump electrical power usage  Yes  No  Not Applicable  
c.) Pump starts per day  Yes  No  Not Applicable

80. Are the water storage tanks inspected for corrosion or pitting at least every 3 years?

Yes  No If No, how often? \_\_\_\_\_

81. Does the inspector see any corrosion or pitting in the tanks?  Yes  No

82. Is the tank capacity enough to meet current and projected demand (24 hours of storage at average day demand)?  Yes  No

83. Has an evaluation been conducted to document the condition and remaining service life of existing distribution, pumping and storage facilities?  Yes  No

**Technical Knowledge**

List the name, license grade and license number for each individual who operates your system.

Name Grade and Type License Number

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84. Is an operator(s) accessible at all times?  Yes  No

85. Does the water system use remote monitoring devices (e.g., Cl<sub>2</sub> levels, tank levels, turbidity levels, etc.), and are the devices in working order?  Yes (Please list)  No

**Device**

**Working Order? (Y/N)**

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86. Is the operator(s) aware of the EPA proposals for new standards that could affect the water system?  Yes  No

87. Have bacteriological, lead/copper, fluoride, or other water samples taken by the water system, been rejected by the Health Department's laboratories?  Yes  No

If yes, why? \_\_\_\_\_

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88. Does the operator maintain an operations and maintenance manual or document on what needs to be done if he is not there?  Yes  No

