

CAPACITY ASSESSMENT CHECKLIST FOR NEW COMMUNITY WATER SUPPLIES

GENERAL INFORMATION

1. Name of Owner _____
2. Contact Person _____
Address _____
City _____ State _____ Zip Code _____
Phone _____ Fax _____ E-mail _____
3. Engineering Firm _____
Contact Person _____
Address _____
City _____ State _____ Zip Code _____
Phone _____ Fax _____ E-mail _____

OWNER CERTIFICATION

Has a letter of approval been included from the owner? Yes ____ No ____ NA ____

TECHNICAL CAPACITY PLAN

1. Summary of project being proposed (details in Capacity Plan/Engineering Study)

2. Were any alternatives considered and the reason given for the selected alternative?

3. The population to be served: initially _____, in 1 year _____, in 5 years _____
4. Number of service connections: initially _____, in 1 year _____, in 5 years _____
5. Anticipated growth for (population): 5 years _____, 20 years _____
Anticipated growth for (major industrial/commercial users): 5 years _____, 20 years _____
6. Type of Storage (Check one):

| | |
|---|---|
| <input type="checkbox"/> hydropneumatic – bladder tanks | <input type="checkbox"/> gravity – ground storage |
| <input type="checkbox"/> hydropneumatic – conventional | <input type="checkbox"/> gravity – elevated storage |
7. Total storage volume _____ gallons
8. Present (initial) rated pumping capacity _____ mgd
9. Present (initial) rated treatment capacity _____ mgd
10. Estimated average day demand (mgd): Initially _____, in 1 year _____, in 5 years _____
Based on: _____ (population, service connections, other)
11. Maximum day demand used for design purposes (incl desired fire flows) _____ mgd
12. Peak hour demand used for design purposes _____ mgd
13. Peak instantaneous demand used in designing hydropneumatic storage _____ mgd

14. Fire flow demand, if intend to provide fire protection _____ mgd
15. Normal range of system pressures _____ psi
16. Maximum overall system pressure _____ psi
17. Minimum system pressure _____ psi
Are there any expected low pressure areas? Yes ___ No ___
18. Size of chemical feed pump (range) _____ units _____ (gallons/day, gallons/hour)
19. Proposed chemical application rates (ppm): Chlorine _____ PO4 _____ Fluoride _____
20. Chemical analysis of source water attached? Yes ___ No ___
21. Site plan identifying isolation area(s) submitted? Yes ___ No ___
22. Length, diameter, and street location of proposed mains; location of well/storage tank/pumping or treatment facility.

23. Was the technical capacity plan prepared by a professional engineer registered in Michigan? Yes ___ No ___
24. Sealed engineering plans submitted? Yes ___ Date _____ No ___ NA ___
25. Approved standard specifications on file? Yes ___ Date _____ No ___ NA ___
26. Construction specifications submitted? Yes ___ Date _____ No ___ NA ___
27. Were standards and guidelines followed, specifically *Recommended Standards for Water Works, Suggested Practices For Water Works* and AWWA standards/guidelines? Yes ___ No ___
28. Are all coatings, chemical additives and materials in contact with drinking water ANSI/NSF International approved? Yes ___ No ___
29. For groundwater sources:
- a. Large Quantity Water Withdrawal: Is source proposed to be >0.1 mgd cumulative over established baseline? If yes, check one, below. Yes ___ No ___
 >0.1 mgd (70 gpm) and <=2 mgd (1400 gpm).
 >2 mgd (1400 gpm). Quantity/units _____
- 1) If yes, was a water withdrawal authorization granted by CDWU? Yes ___ No ___
- 2) If yes, does the water withdrawal authorization set limitations on the rate or period of operation for the approved capacity? Yes ___ No ___
Describe any limitations or restrictions. _____
- b. Hydrogeological Study for well site submitted? Includes: Yes ___ No ___
- 1) Determination of isolation requirements? Yes ___ No ___
- 2) Identification of aquifer characteristics? Yes ___ No ___
- 3) Availability of water at the site? Yes ___ No ___
- 4) Vulnerability of the site? Yes ___ No ___
- 5) Proposed well design? Yes ___ No ___
- 6) Contributing area based on groundwater flow simulations? Yes ___ No ___
- 7) Well site latitude and longitude? Yes ___ No ___
- c. Control of well isolation area. Check one. Ownership ___ Easement ___

- d. Well construction details:
- 1) Well site(s) approved? Yes ___ Date _____ No ___
 - 2) Test wells approved? Yes ___ Date _____ No ___
 - 3) Well over 70 gpm? Yes ___ Quantity _____ gpm No ___
 - a) Has the policy "Aquifer Test Requirements for Water Supply Wells" been followed? Yes ___ No ___
 - b) Has Aquifer Analysis Report been submitted? Yes ___ Date _____ No ___
 - Date Aquifer Analysis was submitted to CDWU. Date _____
 - Date approval was received from CDWU. Date _____
 - 4) Information submitted for well permit:
 - a) Detailed site plan? Yes ___ Date _____ No ___
 - b) Log of test wells and other wells in vicinity? Yes ___ Date _____ No ___
 - c) Detailed specifications for final production well? Yes ___ Date _____ No ___
 - d) Laboratory analyses? Yes ___ Date _____ No ___
 - e) Elevation to 100 year or highest recorded flood level? Yes ___ No ___
 - 5) Information submitted for pump permit:
 - a) Results and analysis of pumping test? Yes ___ Date _____ No ___
 - b) Pump & motor specifications? Yes ___ Date _____ No ___
 - c) Basis of design? Yes ___ Date _____ No ___
 - 6) Information submitted for permit for pump house, piping and appurtenances:
 - a) Plans detailing appurtenances required under R 325.10829? Yes ___ Date _____ No ___
 - Meters? Yes ___ No ___
 - Pump-to-waste piping? Yes ___ No ___
 - Means to measure drawdown? Yes ___ No ___
 - Sampling taps? Yes ___ No ___
 - Emergency treatment facilities? Yes ___ No ___
 - Casing vents? Yes ___ No ___
 - Air/vacuum relief valve? Yes ___ No ___
 - b) Plans detailing above grade structure required by R 325.10826. Yes ___ Date _____ No ___
 - c) Location/design of Check valve(s) in submersible pump installations: _____
 - 7) Has the well data been entered into Wellogic? Yes ___ No ___

30. For surface water sources:

- a. Large Quantity Water Withdrawal:
 - 1) Will the intake or low service pump installation result in a cumulative pumping increase of >2MGD over the established baseline? Yes ___ Quantity _____ mgd No ___
 - 2) If yes, was a water withdrawal authorization granted by CDWU? Yes ___ No ___
- b. Assessment of surface water source submitted under R 325.10905? Yes ___ No ___
- c. Capacity available as required under R 325.10906? _____ mgd
- d. Normal water quality results submitted? Yes ___ No ___
- e. Analysis of water quality variability? Yes ___ No ___

- f. Justification of proposed treatment method? Yes ___ No ___ NA ___
- g. Assessment of source water vulnerability? Yes ___ No ___
31. Basis of design submitted for any proposed treatment? Yes ___ No ___
32. System Reliability/Standby Power addressed? Yes ___ No ___
- ___ by on-site generator
- ___ by portable generator
- ___ by right angle drive with auxiliary power
- ___ by other means. Describe: _____
33. Is water purchased from another system? Yes ___ No ___
- a. Purchase agreement or contract submitted? Yes ___ No ___
- b. Does water service contract require water producer/seller to review and approve customer water system construction plans? Yes ___ No ___
- c. Producer/seller approval letter submitted? Yes ___ No ___
- d. Expiration date of the water service contract. Date _____
- e. Is contract long enough to cover incurred debt? Yes ___ No ___
- f. Does the water service contract have any limitations? Yes ___ No ___
- Maximum daily amount of water purchased? Yes ___ Amt _____/day No ___
 - Maximum annual total amount? Yes ___ Amt _____/year No ___
 - Contractual delivery pressure (psi)? Max _____ Min _____ No ___
 - Other, if any: _____

FINANCIAL CAPACITY PLAN

Details of a proposed financial system:

1. Cost analysis comparing the development of a new water system with a reasonably available existing public water system has been submitted. Yes ___ No ___
2. Agree to pay the annual water supply fee at the beginning of the fiscal year after the new system is serving 15 or more living units or 25 or more people. Yes ___ No ___
3. Financial Plan submitted to the Revolving Loan Section: Yes ___ No ___
4. Financial Plan approved by the Revolving Loan Section: Yes ___ No ___

MANAGERIAL CAPACITY PLAN

Details of the proposed system management:

1. Description of the ownership and its organization:
 - a. Name of owner _____
 - b. Organizational structure showing the chain of command. _____

 - c. Operator-in-charge of treatment _____ Certification _____
 - d. Backup OIC of treatment _____ Certification _____
 - e. Operator-in-charge of distribution _____ Certification _____
 - f. Backup OIC of distribution _____ Certification _____
 - e. Responsibilities for each position having management and operational duties:

2. Emergency response plan acceptable? Contains: Yes ___ No ___
- a. Actions, procedures, and identification of equipment that can significantly lessen the impact of emergencies on public health and the safety and supply of drinking water? Yes ___ No ___
- Examples of content elements include:
- 1) Roles and responsibilities of personnel in an emergency. Yes ___ No ___
- 2) An inventory of:
- Emergency response equipment. Yes ___ No ___
 - First aid supplies. Yes ___ No ___
 - Replacement equipment. Yes ___ No ___
 - Chemicals, and other materials for correction of problems. Yes ___ No ___
- 3) Operational procedures to be implemented in an emergency includes:
- Plan for emergency treatment in case of contamination. Yes ___ No ___
 - Mutual aid agreements with other public water supplies. Yes ___ No ___
 - Personnel safety measures, such as evacuation plans and lock down procedures. Yes ___ No ___
 - Water sampling and monitoring plans to identify potential public health threats. Yes ___ No ___
- 4) Plan for alternate water sources available in a short-term situation and long-term duration (e.g., interconnection with adjacent PWS, agreements with water haulers). Yes ___ No ___
- 5) Communications plan includes:
- Means to notify customers or users affected by an emergency. Yes ___ No ___
 - Critical customers list (hospitals etc.). Yes ___ No ___
 - Method to assure DNRE is notified. Yes ___ No ___
 - Plan for assure reporting and public noticing requirements met. Yes ___ No ___
- b. General layout of waterworks system included or the location of the General Plan is indicated in order to access the general layout. Yes ___ No ___
- c. Standby power sources: type, number and capacity. Yes ___ No ___
- d. Critical customers list. Yes ___ No ___
- e. Schedule for updating the plan. Yes ___ No ___
3. General Plan acceptable? Includes: Yes ___ No ___
- a. General layout of treatment and distribution systems; location of valves, hydrants, storage tanks, watermains, pumps, wells, and pumping facilities. Yes ___ No ___
- b. Rated capacity of source, treatment system, storage tanks, pumping facilities, and equipment to maintain system reliability. Yes ___ No ___
- c. For fire protection - hydraulic analysis of the distribution system showing pressure contours under peak demands, inventory of watermain by size, material and age, maps showing existing and future service area boundaries. Yes ___ No ___ N/A ___
- d. For publicly owned - capital improvements plan 5-year ___ 20-year ___ N/A ___
4. Monitoring Plans:
- a. Bacteriological Sample Siting Plan acceptable? Includes: Yes ___ No ___
- 1) Routine sample locations and number of required samples. Yes ___ No ___
 - 2) Repeat sample locations for each routine site. Yes ___ No ___

- 3) Sampling frequency & procedure. Yes ___ No ___
- 4) Triggered Source sample site(s) for each routine site. Yes ___ No ___
- 5) Notification protocol for MCL violations (follows all requirements). Yes ___ No ___
- b. Disinfection Byproducts Monitoring Plan acceptable, if required? Yes ___ No ___
- c. Lead and Copper Sampling Pool / Monitoring Plan acceptable Yes ___ No ___
- 5. Cross Connection Control Program:
 - a. Proposed/final cross connection control ordinance submitted? Yes ___ No ___
 - b. Proposed cross connection control program submitted? Yes ___ No ___
 - c. Is it as described in the Cross Connection Rules Manual? Yes ___ No ___
- 6. Plan for providing legal doctrines (policies, ordinances, practices, etc) Yes ___ No ___
Do the legal doctrines address the following:
 - a. Budget development & rate structure. Yes ___ No ___
 - b. Metering policy. Yes ___ No ___
 - c. Conditions for service. Yes ___ No ___
 - d. Support for continued training. Yes ___ No ___
 - e. Commitment to maintain certified operators. Yes ___ No ___
 - f. Responsibilities of the supply to the customer. Yes ___ No ___
 - g. Responsibilities of the customer to the supply. Yes ___ No ___
 - h. Shut-off policy for nonpayment. Yes ___ No ___
 - i. Inter-municipal contract/agreements to cover service to outside users. Yes ___ No ___

PRIVATE SUPPLIES (additional requirements)

- 1. Local government resolution refusing ownership/waiving responsibility? Date _____
- 2. Owner stipulated to conditions (replaced ACO requirement)? Yes ___ Date _____ No ___
- 3. Escrow (not applicable to licensed facilities, such as Manufactured Housing Communities and health care facilities):
 - a. Required escrow amount # of living units _____ x \$500 = \$_____ (minimum \$10,000)
 - b. Escrow account established? Yes ___ Date _____ Amount \$_____ No ___
 - c. Escrow account form submitted? Yes ___ No ___
- 4. Designated individuals for operation of the system:

Name _____ Name _____

Address _____ Address _____

City _____ City _____

- 5. Certificate signed by a licensed professional engineer that the project was completed as represented on the plans approved by the permit(s) issued by the DEQ. Yes ___ Date _____ No ___