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):
   _______ hydropneumatic – bladder tanks _______ gravity – ground storage
   _______ hydropneumatic – conventional _______ 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

15. Normal range of system pressures

16. Maximum overall system pressure

17. Minimum system pressure

18. Size of chemical feed pump (range) units (gallons/day, gallons/hour)

19. Proposed chemical application rates (ppm):

20. Chemical analysis of source water attached?

21. Site plan identifying isolation area(s) submitted?

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?

24. Sealed engineering plans submitted?

25. Approved standard specifications on file?

26. Construction specifications submitted?

27. Were standards and guidelines followed, specifically Recommended Standards for Water Works, Suggested Practices For Water Works and AWWA standards/guidelines?

28. Are all coatings, chemical additives and materials in contact with drinking water ANSI/NSF International approved?

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

   b. Hydrogeological Study for well site submitted? Includes:
      - Determination of isolation requirements?
      - Identification of aquifer characteristics?
      - Availability of water at the site?
      - Vulnerability of the site?
      - Proposed well design?
      - Contributing area based on groundwater flow simulations?
      - Well site latitude and longitude?
      - Control of well isolation area. Check one.

   c. Control of well isolation area. Check one.

   Ownership
   Easement

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d. Well construction details:

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<tr>
<td>1)</td>
<td>Well site(s) approved?</td>
<td>Yes ___ Date ________ No ___</td>
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<td>2)</td>
<td>Test wells approved?</td>
<td>Yes ___ Date ________ No ___</td>
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<td>3)</td>
<td>Well over 70 gpm?</td>
<td>Yes ___ Quantity ________ gpm No ___</td>
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<td>a)</td>
<td>Has the policy &quot;Aquifer Test Requirements for Water Supply Wells&quot; been followed?</td>
<td>Yes ___ No ___</td>
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<td>b)</td>
<td>Has Aquifer Analysis Report been submitted?</td>
<td>Yes ___ Date ________ No ___</td>
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<td>-</td>
<td>Date Aquifer Analysis was submitted to CDWU.</td>
<td>Date _________</td>
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<td>-</td>
<td>Date approval was received from CDWU.</td>
<td>Date _________</td>
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4) Information submitted for well permit:

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<td>a)</td>
<td>Detailed site plan?</td>
<td>Yes ___ Date ________ No ___</td>
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<td>b)</td>
<td>Log of test wells and other wells in vicinity?</td>
<td>Yes ___ Date ________ No ___</td>
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<td>c)</td>
<td>Detailed specifications for final production well?</td>
<td>Yes ___ Date ________ No ___</td>
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<td>d)</td>
<td>Laboratory analyses?</td>
<td>Yes ___ Date ________ No ___</td>
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<td>e)</td>
<td>Elevation to 100 year or highest recorded flood level?</td>
<td>Yes ___ No ___</td>
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5) Information submitted for pump permit:

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<tr>
<td>a)</td>
<td>Results and analysis of pumping test?</td>
<td>Yes ___ Date ________ No ___</td>
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<td>b)</td>
<td>Pump &amp; motor specifications?</td>
<td>Yes ___ Date ________ No ___</td>
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<td>c)</td>
<td>Basis of design?</td>
<td>Yes ___ Date ________ No ___</td>
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6) Information submitted for permit for pump house, piping and appurtenances:

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<td>a)</td>
<td>Plans detailing appurtenances required under R 325.10829?</td>
<td>Yes ___ Date ________ No ___</td>
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<td>-</td>
<td>Meters?</td>
<td>Yes ___ No ___</td>
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<td>Pump-to-waste piping?</td>
<td>Yes ___ No ___</td>
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<td>Means to measure drawdown?</td>
<td>Yes ___ No ___</td>
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<td>Sampling taps?</td>
<td>Yes ___ No ___</td>
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<td>Emergency treatment facilities?</td>
<td>Yes ___ No ___</td>
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<td>Casing vents?</td>
<td>Yes ___ No ___</td>
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<td>Air/vacuum relief valve?</td>
<td>Yes ___ No ___</td>
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<td>b)</td>
<td>Plans detailing above grade structure required by R 325.10826.</td>
<td>Yes ___ Date ________ No ___</td>
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<td>c)</td>
<td>Location/design of Check valve(s) in submersible pump installations:</td>
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7) Has the well data been entered into Wellogic? | Yes ___ No ___ |

30. For surface water sources:

a. Large Quantity Water Withdrawal:

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<td>1)</td>
<td>Will the intake or low service pump installation result in a cumulative pumping increase of &gt;2MGD over the established baseline?</td>
<td>Yes ___ Quantity _____ mgd No ___</td>
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<td>2)</td>
<td>If yes, was a water withdrawal authorization granted by CDWU?</td>
<td>Yes ___ No ___</td>
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<td>b.</td>
<td>Assessment of surface water source submitted under R 325.10905?</td>
<td>Yes ___ No ___</td>
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<td>c.</td>
<td>Capacity available as required under R 325.10906?</td>
<td>______________ mgd</td>
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<td>d.</td>
<td>Normal water quality results submitted?</td>
<td>Yes ___ No ___</td>
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<td>e.</td>
<td>Analysis of water quality variability?</td>
<td>Yes ___ No ___</td>
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f. Justification of proposed treatment method? Yes _____ No _____ NA _____
g. Assessment of source water vulnerability? Yes _____ No _____

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<th>Question</th>
<th>Yes</th>
<th>No</th>
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<td>Basis of design submitted for any proposed treatment?</td>
<td>Yes</td>
<td>No</td>
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<td>System Reliability/Standby Power addressed?</td>
<td>Yes</td>
<td>No</td>
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<td>____ by on-site generator</td>
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<td>____ by portable generator</td>
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<td>____ by right angle drive with auxiliary power</td>
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<td>____ by other means. Describe:</td>
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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) Yes ___ Date __________ Amount $_________ No ___
   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 ___