Assessing Your Drinking Water Systems Capacity
A Self-Administered Exercise*

For Small Public Water Systems

(Serving less than 3,300 persons, but this exercise may also be useful for larger systems)

Self-Assessment of Capacity

(Managerial, Financial, and Technical)

This self assessment questionnaire is intended as a tool to assist a public water supplier (PWS) in developing and maintaining Capacity. Capacity is the adequate technical, managerial, and financial capabilities of a PWS to provide safe drinking water for the foreseeable future. This document is intended as a first step to evaluating your system's current operating capacity. Our feedback follows your answers to the questions. Resources and contacts for technical assistance to strengthen your system's Capacity are the end of the document. MassDEP recommends that water system decision makers at all levels – from operators to governing bodies – use this self assessment to become more aware of and to improve their water system's Capacity.

1. Are you the owner of the system?

Owner- Someone who can make decisions on water system operating policies, personnel, management, budgeting and finances, and regulatory compliance (such as a board member , council member, or sole owner).

☐ Yes
☐ No

If no, did you review these questions with the owner before answering the survey?

☐ Yes
☐ No

Your Answer	Our Feedback
Yes	No Feedback Necessary
No	This assessment tool is designed with the expectation that both the owner and the operator would work together to answer the questions. We consider both owner and operator equally responsible for the success of the operations and maintenance of the system.

* Courtesy of Washington State Department of Public Health, Office of Drinking Water

2. Please rate how strongly you agree with each of the following statements about your system's technical, managerial, and financial capacity.

A. My system has adequate <u>technical</u> capacity.

Technical capacity means the physical and operational ability of the system to serve customers now and in the future. Here are some examples of strong technical capacity:

- The system has qualified operators with the knowledge and skills to operate the system.
- The system's source can meet current and anticipated demand.
- The system's source is adequately protected, treated, and sampled.
- System infrastructure is in good condition.

☐ **1- Strongly disagree**
☐ **2- Disagree**
☐ **3- Neither agree nor disagree**
☐ **4- Agree**
☐ **5- Strongly agree**

B. My system has adequate <u>managerial</u> capacity.

Managerial capacity means the system has the administrative and organizational ability to be successful now and in the future. Here are some examples of strong managerial capacity:

- Owners, managers, and operators are accountable and knowledgeable about the system.
- Owners, managers, and operators receive ongoing training.
- We plan for current and future needs.
- We interact well with customers and regulatory agencies.

☐ **1- Strongly disagree**
☐ **2- Disagree**
☐ **3- Neither agree nor disagree**
☐ **4- Agree**
☐ **5- Strongly agree**

C. My system has adequate <u>financial</u> capacity.

Financial capacity means the system can generate or obtain enough funds to maintain the system and pay for future improvements. Here are some examples of strong financial capacity:

- System revenue pays for the full cost of providing service.
- We know and can measure all costs and revenues.
- Reserves are available for unexpected expenses.
- We use good budgeting and accounting practices.
- We can access capital through public or private sources.

☐ **1- Strongly disagree**
☐ **2- Disagree**
☐ **3- Neither agree nor disagree**
☐ **4- Agree**
☐ **5- Strongly agree**

Your Answer	Our Feedback
1. Strongly Disagree	No feedback necessary. However at the end of the self assessment you may wish to return to this question.
2. Disagree	
3. Neither Agree nor Disagree	
4. Agree	
5. Strongly Agree	

3. How many people have served in the primary certified operator position in the past 10 years?

☐ **1**
☐ **2-3**
☐ **4 or more**

Your Answer	Our Feedback
1 operator	**Congratulations** on keeping an experienced operator employed for your system. In the event this person should leave or retire, what would you do? Having multiple individuals trained in your system's operation and maintenance is essential. We recommend you have other staff cross-trained to keep the system running if your operator is unable to be there. Consider hiring a contract operator (do so while your current operator is still employed) or involve and train volunteers from the community.
2-3 operators	Certified operators are a key asset for your public water system. They help protect public health and contribute to the technical, managerial, and financial capacity of a water system. Attracting and keeping a competent operator is essential to your system's capacity. Here are some ways to help reduce operator turn over: • Provide competitive wages. • Budget for system improvements, maintenance, and operator training. • Support your operator and give them the authority to make decisions in an emergency. • Plan ahead for changes in staff. Train others on system operations. • Involve volunteers from the community for additional support.
4 or more operators	

4. Does your system have a complete written or electronic up-to-date plan (e.g., Water System Master Plan, Comprehensive System Facilities Plan, Asset Management Plan, or other) that is actively used to operate and manage your water system?

☐ **Yes – We have a complete plan that is used to manage and operate our system.**
☐ **No – We have started a plan, but it is not complete.**
☐ **No – We have not done any planning, or our planning documents are no longer useful.**

Your Answer	Our Feedback
Yes	**Way to go.** By developing a complete planning document, you help position your system to achieve and maintain regulatory compliance, financial health and sustainability, and adequate physical capacity. Planning is an ongoing process. We encourage you to take a look at your plan. Is it still current? Do your system's revenues allow you to pay all expenses and still grow sufficient reserve levels to fund future improvements? Ongoing, collaborative planning allows your customers to see and understand the full cost of the water you deliver every day. You may find useful information in the EPA's publication Asset Management: A Handbook for Small Water Systems located at: http://www.epa.gov/ogwdw/smallsystems/pdfs/guide_smallsystems_asset_mgmnt.pdf
No - We have started a plan, but it is not complete.	**Good start but you should complete your plan as soon as possible.** A complete planning document will help to position your system to achieve and maintain regulatory compliance, financial health and sustainability, and adequate physical capacity. You may find useful information in the EPA's publication Asset Management: A Handbook for Small Water Systems located at http://www.epa.gov/ogwdw/smallsystems/pdfs/guide_smallsystems_asset_mgmnt.pdf. The Massachusetts Water Resources Commission has developed water conservation standards that include comprehensive planning, periodic system-wide water audits, on-going leak detection, 100% metering of all service connections, full-cost pricing, conservation programming, outdoor conservation, and public education. Massachusetts Water Conservation Standards can be found at http://www.mass.gov/eea/docs/eea/wrc/water-conservation-standards.pdf.
No - We have not done any planning, or our planning documents are no longer useful.	Comprehensive planning is critical to maintaining a safe and successful system. When developing a full planning document, you evaluate the current and future needs of your system. This includes its physical infrastructure, operations and maintenance activities, water quality monitoring, and the budget that keeps it all going. You can use this information to project your system's future budget and capital improvement needs so you can set rates accordingly. Your customers will be more likely to support paying sufficient rates to meet these needs when they see them clearly presented in your planning document. You may find useful information in the EPA's publication Asset Management: A Handbook for Small Water Systems located at

	http://www.epa.gov/ogwdw/smallsystems/pdfs/guide_smallsystems_asset_mgmnt.pdf
If you need help starting or completing your plan please contact us. **See our contact information below.**	

→If you answered: "No"

Does your system have complete, current, and useful plans or programs in the following four areas?

☐ Yes ☐ No Operations and maintenance

Answer	Our Feedback
Yes	**Great job.** By having this critical information clearly outlined in one place, you've helped make sure your system continues to run safely and efficiently. An operation and maintenance plan can also help you predict future financial needs for such things as upcoming facility repair or replacement. Make sure you keep your operation and maintenance plan up to date and that you seek input from your system's operator. See our Preventive Maintenance Card File for Small Public Water Systems Using Ground Water (Guide Booklet & Log Cards) to get started located at http://www.mass.gov/dep/water/drinking/systems.htm#tnc
No	It is likely that you know what it takes to operate your system. However, we encourage you to review all aspects of your water system and document the steps necessary to operate and maintain it. You can keep this simple, summarizing key information in a few pages. Consult your system's operator for input. Your operations and maintenance plan should be accessible and easily understood by others so that the water system can continue to run safely and efficiently. Find Guidance in our Preventive Maintenance Card File for Small Public Water Systems Using Ground Water (Guide Booklet & Log Cards) to get started located at http://www.mass.gov/dep/water/drinking/systems.htm#tnc

☐ Yes ☐ No Component inventory and up to date distribution system map

Answer	Our Feedback
Yes	**Nice work**. You've taken time to document the locations of your system's critical components, such as source, storage and treatment facilities, booster pumps, and distribution lines. Have you also documented each component's approximate age and anticipated useful life? This information allows you to predict and plan for future repair or replacement expenses. A system distribution and facility map is essential if you need to make emergency repairs or respond to a system failure or emergency.
No	Documenting the locations of your system's major components, such as source, storage and treatment facilities, booster pumps, and distribution lines is essential if you need to make emergency repairs or respond to a system failure or emergency. We encourage you to take this initial step. Once you have identified the major facilities and distribution system on a map, consider including each component's approximate age and anticipated useful life. This information will help you predict and plan for future repair or replacement expenses. For guidance refer to EPA's publication Asset Management: A Handbook for Small Water Systems located at http://www.epa.gov/ogwdw/smallsystems/pdfs/guide_smallsystems_asset_mgmnt.pdf

☐ Yes ☐ No Emergency response

Answer	Our Feedback
Yes	**Well done**. By documenting in advance how you'll respond to the many different types of emergencies that can impact your system or its operations, you're positioned to get things back on track as quickly and calmly as possible. Make sure your plan includes how you'll notify your customers about the emergency. It's important to keep your emergency plan updated with current names and contact numbers for system staff, state and local emergency responders, Visit our webpage for more information http://www.mass.gov/dep/water/drinking/systems.htm#emerrespgm
No	Emergency response planning is an essential part of managing a water system. An emergency response plan will help you respond quickly and efficiently to routine malfunctions such as pipe breaks and power outages. A plan can also help you deal with more serious emergencies, such as flooding, earthquake, or a major facility failure. By evaluating your system's vulnerabilities, and establishing procedures to follow, you will be positioned to get things back on track as quickly and calmly as possible. Visit our webpage for more information http://www.mass.gov/dep/water/drinking/systems.htm#emerrespgm

☐ Yes ☐ No MassDEP approved wellhead protection and/or surface water protection plan

Answer	Our Feedback
Yes	You are taking steps to protect your drinking water from contamination and loss of supply. To continue maintaining your efforts, we encourage you to review your plan at least every three years to update potential sources of contamination. Updated information will help you target protective actions for your source and educational activities for your customers. You can obtain technical assistance with updating your protection plan from MassDEP staff at 617-556-1070 for wellhead protection and 617-292-5727 for surface water protection.
No	Preventing drinking water contamination and loss of supply costs far less than finding a new source or installing treatment. Preparing a wellhead protection or surface water protection plan for MassDEP approval will help you better understand the threats to your source and take action to prevent threats from occurring in the future. A good place to start is by reviewing MassDEP's guidance documents titled Developing a Local Wellhead Protection Plan at http://www.mass.gov/dep/water/drinking/sourcewa.htm#ground or Developing a Local Surface Water Supply Protection Plan at http://www.mass.gov/dep/water/laws/policies.htm#surfprot . You can obtain technical assistance with developing a protection plan from MassDEP staff at 617-556-1070 for wellhead protection and 617-292-5727 for surface water protection.

5. Does your system own a generator with capacity to power your system and supply water to all your customers during a power outage?

☐ **Yes**
☐ **No – But we have an emergency interconnection that can supply customers with basic water service for at least 24 hours without the need for any pumping.**
☐ **No – But we have gravity storage that can supply customers with basic water service for at least 48 hours without the need for any pumping.**
☐ **No**

Your Answer	Our Feedback
Yes	Operating and maintaining your generator according to manufacture specifications is very important in making sure that it is ready when needed.
No - But we have an emergency interconnection that can supply customers with basic water service for at least 48 hours without the need for any pumping	The maintenance and exercise of interconnections and other components are critical to ensure that these systems are ready to operate when needed
No - But we have gravity storage that can supply customers with basic water service for at least 48 hours without the need for any pumping.	
No	The ability to supply consumers with water during a power outage is an important part of an Emergency response Plan. A generator with adequate capacity to power the essential components of your system can insure your ability to continue to provide your customers with water during a power outage. The generator can be installed with a switchover so that it is automatically activated during a power outage. Alternatively, a portable generator can be used provided it is adequately sized and equipped a proper plug so that it can be installed and activated during a power outage. If you decide to install a generator or use a portable generator, it is important that you exercise the equipment regularly and train your staff on its use so that it will be ready during a power outage.
If you would like further information and guidance about supplying water during a power outage please contact us. **See our contact information below.**	

6. Is your system willing to consider connecting to a nearby water system, forming a consolidated system?

The responsibilities and costs or owning and operating a public water system can be overwhelming. Some water systems are interested in the economic and operational benefits of consolidating facilities and operations with another utility.

"Near" or "Nearby" means your distribution system is within 1,000 feet of the other water utility's distribution system.

Example: Valley Pines Water System is a small system that struggles to afford treatment costs and often faces water outages in summer months. They would like to consolidate their system with a system that has a reliable source. Sweet Meadow Water System is a larger, well-operated system located 300 feet from the Valley Pines' distribution system. Both utilities agree to physically connect their two systems. Valley Pines is no longer responsible for owning and operating a public water system.

☐ **There is not another system near our system.**
☐ **Yes – We would consider consolidating with a nearby system.**
☐ **Maybe – We would need to understand the potential costs and benefits first.**
☐ **No – We are not willing to consolidate with a nearby system, but we would consider an interconnection with another system.**
☐ **No – We are not willing to consolidate with a nearby system.**

Your Answer	Our Feedback
There is not another system near our system.	No Feedback
Yes – We would consider consolidating.	If you need help pursuing this option please contact us. See our contact information below.
Maybe - We would need to understand the potential costs and benefits first.	Consolidation means your system becomes part of another utility through a physical connection. There can be many benefits to consolidating with a utility that has staff in place to provide a high level of managerial, financial, and technical expertise. It could save your customers money, improve the level of service, and increase public health protection.
No - We are not willing to consolidate with a nearby system, but we would consider an interconnection with another system.	An interconnection is a piped connection between two water systems that may be constructed for a couple reasons: • To provide continuous supply (enabling wholesale water purchase, for example). • To provide a reliable standby supply in the event of an emergency (a source failure or to support fire suppression, for example).

	If your water system has trouble continuously maintaining a safe, reliable, and adequate water supply and construction of an interconnection is feasible, the long-term benefits usually outweigh the costs.
No - We are not willing to consolidate with a nearby system.	Consolidation means your system becomes part of another utility through a physical connection. It can save customers money, improve the level of service, and increase public health protection. But this option isn't for everyone. If your utility has staff in place to provide a high level of managerial, financial, and technical expertise, you won't likely see the benefits of consolidating.
If you would like further information and guidance about evaluating and pursuing an interconnection with a nearby utility please contact us. **See our contact information below.**	

7. Is your system willing to consider transferring ownership, management, and operations to another water utility?

Sometimes consolidation isn't possible due to the distance between systems. In these situations, some water systems are interested in the benefits of transferring ownership, management, and operations to another utility (known as partnering or restructuring).

Example: Volunteers run Pleasant Valley Water System, and there is a lot of turnover. They would like to restructure with another system so they are no longer responsible for owning, managing, and operating a public water system. Sunny Springs is a well-managed utility that owns and operated several small systems. Under an agreement between both parties, Pleasant Valley becomes a satellite system of Sunny Springs. Sunny Springs now owns and operates Pleasant Valley.

☐ **Yes – We could consider transferring ownership of our system to another utility.**
☐ **Maybe- We would need to understand the potential costs and benefits first.**
☐ **No – But we would consider an agreement for operations and management by a Satellite Management Agency.**
☐ **No- We are not willing to transfer ownership of our system to another utility.**

Your Answer	Our Feedback
Yes	If you would like further information and guidance about partnering please contact us. **See our contact information below.**
Maybe - We would need to understand the	Partnering (sometimes called restructuring) means your system becomes part of another utility --as a satellite system --without

potential costs and benefits first.	actually being physically connected to the other system. There can be many benefits to restructuring with a utility that has staff in place to provide a high level of managerial, financial, and technical expertise. It could save your customers money, improve the level of service, and increase public health protection.
Answer: No - But we would consider an agreement for operations and management by another party.	If your utility wants help to achieve and maintain a high level of operations and management, but doesn't feel that restructuring is the answer, entering into an operations and management agreement with another PWS or party that provide contract operator services may be the right choice. This PWS or party can provide a full range of services including planning and policy decision-making, day-to-day operations, preventative maintenance, water quality monitoring, troubleshooting, emergency response, response to complaints, public/press contact, and recordkeeping. Or, you may contract with another party for some of these services while maintaining primary responsibility for operations and management. For a list of self identified contract operators or contract operator companies visit http://www.mass.gov/dep/water/drinking/fscontr.htm
No – we are not willing to partner (transfer ownership etc.)	Partnering (sometimes called restructuring) means your system becomes part of another utility --as a satellite system --without actually being physically connected to the other system. It can save customers money, improve the level of service, and increase public health protection. But this option isn't for everyone. If your utility has staff in place to provide a high level of managerial, financial, and technical expertise, you won't likely see the benefits of partnering.
If you need help pursuing this option please contact us. **See our contact information below.**	

8. Does your system prepare a budget each year?

☐ **Yes**
☐ **No**

Your Answer	Our Feedback
Yes	**Great job** in taking this critical step in building financial capacity for your system. Do you also budget your forecasted needs for the next few years? This can help you better plan for upcoming expenses. You should budget for: • **Operating expenses** --includes salaries or contract management, labor and professional services, power, equipment, chemicals, water quality monitoring, operator training, regulatory fees, and system insurance. • **Operating cash reserve** --protects the system from cash flow problems when you must pay bills before customers have paid for service. • **Emergency reserve --**allows you to replace a major component of your system if it fails unexpectedly. • **Short-lived asset replacement reserve** --allows you to replace assets with a useful life of 5 years or less without disrupting your annual budget.

	Also consider how much you want to contribute to a capital improvements reserve. This reserve will complement other financing for your system's long-term facilities and infrastructure projects. Understanding the full cost of operating and maintaining your system allows you to set rates and other fees to cover all expenses plus regular contributions to reserve accounts.
No	Budgeting annually for water system expenses is a critical step in building financial capacity for your system. You should budget for: • **Operating expenses** --includes salaries or contract management, labor and professional services, power, equipment, chemicals, water quality monitoring, operator training, regulatory fees, and system insurance. • **Operating cash reserve** --protects the system from cash flow problems when you must pay bills before customers have paid for service. • **Emergency reserve** --allows you to replace a major component of your system if it fails unexpectedly. • **Short-lived asset replacement reserve** --allows you to replace assets with a useful life of 5 years or less without disrupting your annual budget. Also consider how much you want to contribute to a capital improvements reserve. This reserve will complement other financing for your system's long-term facilities and infrastructure projects. Once you know the cost to operate and maintain your system, you can set rates and other fees to cover all expenses plus regular contributions to reserve accounts. If you need help pursuing this option please contact us**. See our contact information below.**

9. For the last calendar year, did your system generate enough money to cover all system costs?

☐ **Yes – We broke even or had a surplus last year.**
☐ **No- We had to borrow money or cut expenses.**

Your Answer	Our Feedback
Yes – We broke even or had a surplus	**Good work**. If you believe that your future total annual revenue will continue to be equal to or greater than your total annual operating expenses, debt payments, taxes, fees, and budgeted annual payments into your reserve accounts and your budget reflects the full cost of service--then your utility is on a sustainable financial path that supports your ability to consistently provide safe and reliable drinking water. If you anticipate changes to either your revenue or expenses that will throw your budget out of balance, contact us and request a referral for specific training and/or on-site technical assistance to develop a full-cost recovery budget and rate/fee structure. **See our contact information below.**
No - We had to borrow money or cut expenses.	Every water purveyor should recover the full cost of service through rates. Other revenues, such as new connection fees and other miscellaneous fees-for-service, may not be as dependable. If you believe your future total annual revenue will continue to be less than your total annual operating expenses, debt payments, taxes, fees, and budgeted annual payments into your reserve accounts--then your utility is on an unsustainable path that threatens your ability to provide safe and reliable drinking water. Contact us and request a referral for specific training

	and/or on-site technical assistance to develop a full-cost recovery budget and rate/fee structure. **See our contact information below.**

10. What is the average monthly rate charged to your system's single-family residential customers?

If your water system doesn't send monthly bills, divide the average bill by the number of months in the billing cycle (for example, if the annual bill is $600, divide that number by 12 for a monthly average of $50).

If drinking water charges are part of another bill (such as rent), please figure as best you can the monthly amount that represents drinking water charges.

- ☐ **Less than $20.00**
- ☐ **$20.01 - $30.00**
- ☐ **$30.01 - $40.00**
- ☐ **$40.01 - $60.00**
- ☐ **$60.01 - $80.00**
- ☐ **Greater than $80.00**

Your Answer	Our Feedback
Less than $20.00	You may find some helpful resources in the EPA guide Setting Small Drinking Water System Rates For a Sustainable Future located at http://www.epa.gov/owm/waterinfrastructure/pdfs/final_ratesetting_guide.pdf Current water and sewer rate data in Massachusetts, compiled by Tighe and Bond, is posted on the New England Water Works Association website at http://www.newwa.org/links/waterratesurveys.htm It may be helpful to compare your rates to the rates of neighboring water systems or to other systems of similar size. If you need help with rate setting please contact us. **See our contact information below.**
$20.01-$30.00	
$30.01-$40.00	
$40.01-$60.00	
$60.01-$80.00	
Greater than $80.00	

11. How many times has the water system's rate been increased in the past 10 years?

- ☐ **0**
- ☐ **1-2**
- ☐ **3-4**
- ☐ **5 or more**

Answer	Our Feedback

0	You should review your rates regularly to make sure they cover the full cost of providing water, including annual inflation costs. Evaluate your rates now--if you increase rates gradually you can help avoid a dramatic rate increase later. Contact us and request a referral for specific training and/or on-site technical assistance to develop a full-cost recovery budget and rate/fee structure. See our contact information below. You may find some helpful resources in the EPA guide Setting Small Drinking Water System Rates For a Sustainable Future located at http://www.epa.gov/owm/waterinfrastructure/pdfs/final_ratesetting_guide.pdf
1-2	It's a good idea to review rates more often (every year or two), to be sure your revenue is keeping up with system expenses. Planning for gradual rate increases can help you avoid a dramatic rate increase down the road. For more information, contact us and request a referral for specific training and/or on-site technical assistance to develop a full-cost recovery budget and rate/fee structure.. See our contact information below. You may find some helpful resources in the EPA guide Setting Small Drinking Water System Rates For a Sustainable Future located at http://www.epa.gov/owm/waterinfrastructure/pdfs/final_ratesetting_guide.pdf
3-4	Periodic rate reviews and increases help ensure revenues are keeping up with expenses. You might consider evaluating the water system's rate on an annual basis. Smaller, more frequent rate increases are usually easier for customers to accept. For more information, contact us and request a referral for specific training and/or on-site technical assistance to develop a full-cost recovery budget and rate/fee structure.. See our contact information below. You may find some helpful resources in the EPA guide Setting Small Drinking Water System Rates For a Sustainable Future located at http://www.epa.gov/owm/waterinfrastructure/pdfs/final_ratesetting_guide.pdf
5 or more	Congratulations on taking proactive steps to ensure system revenues are keeping up with system expenses. More frequent, smaller rate increases also help your customers accept new rates. Do you also involve and educate customers about the full cost of providing water and what their rates pay for? You may find some helpful resources in the EPA guide Setting Small Drinking Water System Rates For a Sustainable Future located at http://www.epa.gov/owm/waterinfrastructure/pdfs/final_ratesetting_guide.pdf

12. Which of the following best describes the rate structure your system uses?

Flat rate based on unmetered consumption – Services are not metered, so each customer pays the same monthly, quarterly, or yearly rate.

Declining block rate – The cost of each billing unit (1,000 gallons or 100 cubic feet of water) decreases as the amount used goes up. The first block of use is charged at one rate, the next block is charged at a lower rate, and so forth. This rate structure gives price breaks to high-volume users.

Uniform block rate – The cost of each billing unit stays the same regardless of how much water is used. For example, a customer using 5,000 gallons per month pays the same price for each 1,000-gallon unit of water as a customer that uses 20,000 gallons per month.

Inclining block rate – The cost of each billing unit increases as the amount used goes up. The first block of use is charged at one rate, the next block is charged at a higher rate, and so forth. This rate structure rewards water conservation.

Seasonal rate – The cost of each billing unit increases or decreases according to water demand and weather conditions. Systems usually charge higher prices in the summer months when demand is highest and water supplies are stressed. This rate structure rewards water conservation.

☐ **Flat rate based on unmetered consumption**
☐ **Declining block**
☐ **Uniform block**
☐ **Inclining block**
☐ **Seasonal (combined with another rate structure)**

Your Answer	Our Feedback
Flat rate based on unmetered consumption	This method doesn't allow you or your customers to know how much water they're using. Service meters allow you to charge customers who use more water a higher rate proportional to their use. Charging according to use is more equitable, and it encourages conservation, which in turn puts less strain on your system's facilities so they last longer. Service meters also provide the most accurate assessment of distribution system leakage.
Declining Block	Declining block rates are illegal for municipal water suppliers per Massachusetts General Law Chapter 40 Section 39L (Hampden County is exempt from this law). This law does not apply to private water companies, but even private companies should consider promoting conservation through other rate structures. A declining block rate actually rewards customers who use more water. Charging higher rates for higher use is more equitable, and it encourages conservation, which in turn puts less strain on your system's facilities so they last longer. When setting rates, we encourage you to first determine the total revenue needed each year to cover current expenses. You also need an adequate emergency reserve account and funds for future facility repair and replacement costs. Once you know how much you need to operate and manage your system now and in the future, you can determine the necessary rates to cover those expenses. You may find some helpful resources in the EPA guide Setting Small Drinking Water System Rates For a Sustainable Future located at http://www.epa.gov/owm/waterinfrastructure/pdfs/final_ratesetting_guide.pdf
Uniform Block	This method doesn't charge customers who use more water a higher rate proportional to their use. Charging according to use is more equitable, and it encourages conservation, which in turn puts less strain on your system's facilities so they last longer. When setting rates, we encourage you to first determine the total revenue needed each year to cover current expenses. You also need an adequate emergency reserve account and funds for future facility repair and

	replacement costs. Once you know how much you need to operate and manage your system now and in the future, you can determine the necessary rates to cover those expenses. You may find some helpful resources in the EPA guide Setting Small Drinking Water System Rates For a Sustainable Future located at http://www.epa.gov/owm/waterinfrastructure/pdfs/final_ratesetting_guide.pdf
Inclining Block Rate	**Congratulations.** You understand the importance of charging higher rates for higher uses that put a strain on your system's facilities source. Make sure you are collecting enough to cover your total annual expenses and fund an emergency reserve account and estimated future capital improvement costs. You may find some helpful resources in the EPA guide Setting Small Drinking Water System Rates For a Sustainable Future located at http://www.epa.gov/owm/waterinfrastructure/pdfs/final_ratesetting_guide.pdf.
Seasonal	This rate structure rewards water conservation.

13. How often does your system compare operating expenses with operating revenue?

- ☐ **Monthly**
- ☐ **Quarterly**
- ☐ **Regularly (but not on a set schedule)**
- ☐ **Semi-annually**
- ☐ **Annually**
- ☐ **Rarely or Never**

Your Answer	Our Feedback
Monthly	It is important to regularly (quarterly or more frequently) compare operating expenses with operating revenue and make adjustments as needed.
Quarterly	
Regularly (but not on a set schedule)	
Semi-annually or Annually	
Rarely or Never	

14. Does your system have enough in savings or reserves to cover all of the following?

Operating cash reserve – protects the system from cash flow problems when you must pay bills before customers have paid for service. We recommend setting aside one-eighth of your annual operating expenses.

Emergency reserve – allows you to replace a major, critical component of your system, if it fails unexpectedly.

Short-lived asset replacement reserve – allows you to replace assets with a useful

life of about 5 years or less (such as electrical controls, filter media, computers, and hypochlorinators) without disrupting your annual budget.

☐ **No – we do not have enough to fund ANY of these reserves.**
☐ **No – we have enough to fund ONE of these reserves.**
☐ **No – we have enough to fund TWO of these reserves.**
☐ **Yes – we have enough to fund ALL of these reserves.**

Your Answer	Our Feedback
No - We don't have enough to fund ANY of these reserves.	Each utility should have at least the three dedicated reserve accounts described in this question. These reserve accounts are critical to developing financial capacity. Also consider how much you want to contribute to a capital improvements reserve. These funds cover cash expenditures toward long-term capital investments to the system, and often complement other financing options, such as a loan. We suggest determining the needed size of each of these accounts in your next budget-setting cycle, and commit to fully funding these reserves.
No - We have enough to fund ONE of these reserves.	
No - We have enough to fund TWO of these reserves.	You're making progress. Each utility should have at least the three dedicated reserve accounts described in this question. These reserve accounts are critical to developing financial capacity. Also consider how much you want to contribute to a capital improvements reserve. These funds cover cash expenditures toward long-term capital investments to the system, and often complement other financing options, such as a loan. We suggest determining the needed size of each of these accounts in your next budget-setting cycle, and commit to fully funding these reserves.
Yes	Congratulations. Each utility should have at least the three dedicated reserve accounts described in this question. These reserve accounts are critical to developing financial capacity. Keep up the good work of funding these reserves. Also consider how much you want to contribute to a capital improvements reserve. These funds cover cash expenditures toward long-term capital investments to the system, and often complement other financing options, such as a loan.

15. Does your system have a plan to make capital improvements (such as replace water mains, construct/ rehabilitate a well, or construct/rehabilitate a reservoir) in the next 6 years?

☐ **Yes**
☐ **No – we assessed our facilities and no improvements are needed in the next 6-year period.**
☐ **No – we assessed our facilities and need to make improvements, but have no plans to do so in the next 6-year period.**

☐ **No – we have not assessed our facilities.**

Answer	Our Feedback
Yes	Congratulations on assessing your facilities. As you already know, assessing your long-lived assets and prioritizing their replacement within the financial capacity of your system can be a time-consuming task. To better manage this task, asset management should be done on an annual basis as part of your planning and budgeting. If you would like to consult with an asset management expert, please contact us and request a referral for specific training and/or on-site technical assistance to develop an updated asset management plan specific to your water system needs. See our contact information below. You can get started by reviewing EPA's publication Asset Management: A Handbook for Small Water Systems located at http://www.epa.gov/ogwdw/smallsystems/pdfs/guide_smallsystems_asset_mgmnt.pdf
No - We assessed our facilities and no improvements are needed in the next 6-year period.	**Congratulations** on assessing your facilities. As you already know, assessing your long-lived assets and prioritizing their replacement within the financial capacity of your system can be a time-consuming task. To better manage this task, asset management should be done on an annual basis as part of your planning and budgeting. If you would like to consult with an asset management expert, contact your DOH regional office and request a referral for specific training and/or on-site technical assistance to develop an updated asset management plan specific to your water system needs. You can get started by reviewing EPA's publication Asset Management: A Handbook for Small Water Systems located at http://www.epa.gov/ogwdw/smallsystems/pdfs/guide_smallsystems_asset_mgmnt.pdf
No - We assessed our facilities and need to make improvements, but have no plans to do so in the next 6-year period.	Long-lived assets such as buildings, pipelines, reservoirs, wells, meters, valves, vehicles, pumping systems, and treatment plants have limited useful lives. To provide safe and reliable drinking water to your customers on an ongoing basis, it is necessary to plan ahead for replacement of these assets before maintenance can no longer sustain them and they fail. Planning for asset replacement can be a time-consuming task. please contact us and request a referral for specific training and/or on-site technical assistance to develop an updated asset management plan specific to your water system needs. . You can get started by reviewing EPA's publication Asset Management: A Handbook for Small Water Systems located at http://www.epa.gov/ogwdw/smallsystems/pdfs/guide_smallsystems_asset_mgmnt.pdf
No - We have not assessed our facilities.	Long-lived assets such as buildings, pipelines, reservoirs, wells, meters, valves, vehicles, pumping systems, and treatment plants have limited useful lives. To provide safe and reliable drinking water to your customers on an ongoing basis, it is necessary to plan ahead for replacement of these assets before maintenance can no longer sustain them and they fail. Planning for asset replacement can be a time-consuming task. Please contact us and request a referral for specific training and/or on-site technical assistance to develop an updated asset management plan specific to your water system needs. You can get started by reviewing EPA's publication Asset Management: A Handbook for Small Water Systems located at http://www.epa.gov/ogwdw/smallsystems/pdfs/guide_smallsystems_asset_mgmnt.pdf

16. Which source would likely contribute the most funds to complete future capital improvements? (please answer regardless of whether you have a plan to make improvements)

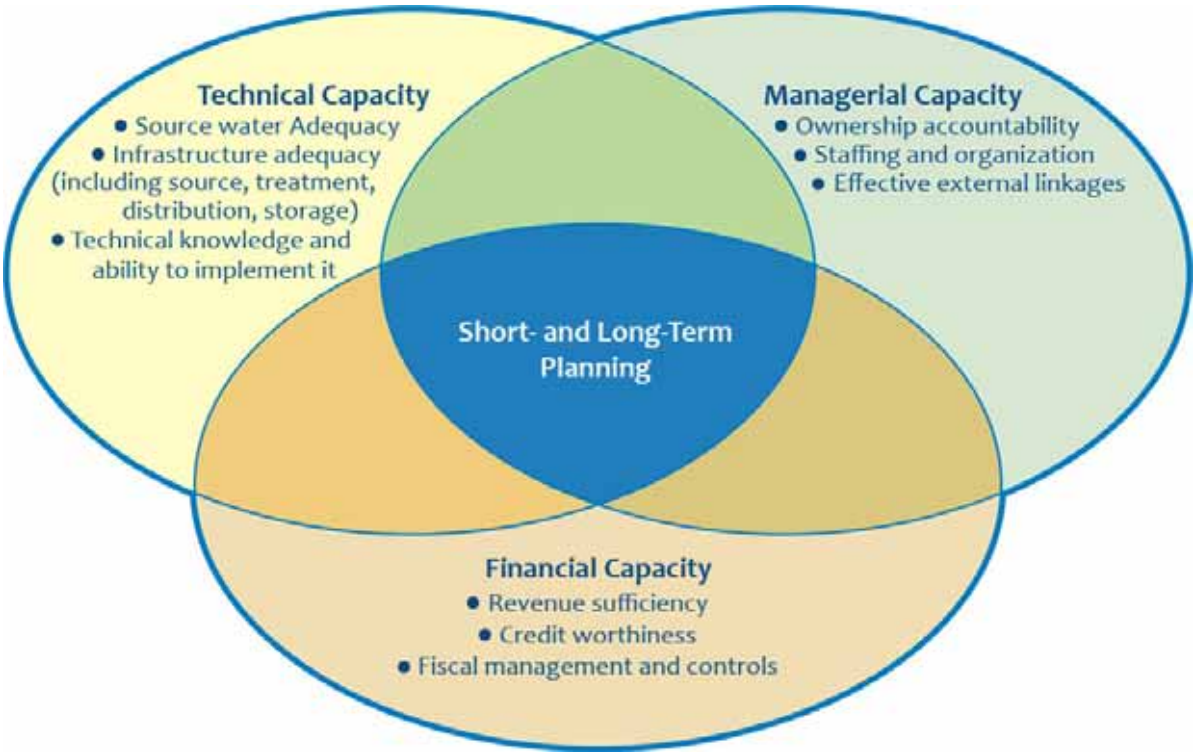
☐ **Water System Funds (example: savings or reserves)**
☐ **Line of Credit/ Private Loan (example: bank loan)**
☐ **Government Loan (example: State Revolving Loan Fund)**
☐ **Government Grant (example: Community Development Block Grant)**

Answer	Feedback
Water System Funds (example: savings or reserves)	**Congratulations** on achieving the financial capacity to secure a good credit rating with a commercial lender, and/or accumulating adequate reserves to meet most or all of your capital improvement funding needs. Grant and loan funding is extremely limited and competitive, so it's important to continue to build your financial capacity so you can finance future improvements.
Line of Credit/Private Loan (example: bank loan)	Congratulations on achieving the financial capacity to secure a good credit rating with a commercial lender, and/or accumulating adequate reserves to meet most or all of your capital improvement funding needs. Massachusetts General Laws Chapter 44, section 8 (MGL c.44 s.8) specifies various timeframes to borrow monies for the completion of drinking water projects by PWSs. These vary from 10 years for capital projects such as purchasing and installing water meters to 40 years for projects such as extending water mains.
Government Loan	Loan funding is extremely competitive, and local, state, and federal budget deficits are expected to create greater demand for these funds. Please keep in mind, even water systems that meet all the eligibility criteria for loans have been, and will continue to be, denied because of the limited loan funds available and the high demand for them. See our Drinking Water State Revolving Program at http://www.mass.gov/dep/water/wastewater/wastewat.htm for information on DWSRF and other funding sources as well as contact us. See our contact information below.
Government Grant (example: Community Development Block Grant)	Grant funding is extremely competitive, and local, state, and federal budget deficits are expected to create greater demand for these funds. Please keep in mind, even water systems that meet all the eligibility criteria for grant funding could be denied because of the limited grant funds available and the high demand for them. See our Drinking Water Sate Revolving Program at http://www.mass.gov/dep/water/wastewater/wastewat.htm for information on DWSRF and other funding sources as well as contact us. See our contact information below.

17. Has your system implemented an outreach plan to educate and gain the support of your stakeholders/customers in the improvement of your water system?

☐ **Yes – We have implemented a plan.**
☐ **No – We have started a plan, but it is not complete.**
☐ **No – We have not done any planning**

Answer	Feedback
Yes – We have implemented a plan	**Good Work.** A comprehensive public outreach program is critical to ensuring the capacity of your system.
No – We have started a plan, but it is not complete.	A completed program will help you to keep your stakeholders aware and supportive of your efforts to maintain your water system.
No – We have not done any planning	An outreach program is necessary to keep your stakeholder/customers aware and supportive of your efforts to maintain your water system. Please call us to help you set up your outreach plan. See contact information below.



Let Us Help You Build or Maintain Your System's Capacity

Our staff and programs are here to help you build your system's capacity.
Use this feedback sheet to get instant feedback on your answers and to identify areas where you need to update your plans or could benefit from assistance. If you need assistance please contact us.

Contact the MassDEP Drinking Water Program for Technical Assistance and Referrals:			
Email: Program.Director-DWP@state.ma.us with the subject line: Capacity.			
Website: http://www.mass.gov/dep/water/drinking.htm			
Staff:	Margaret Finn	617-292-5746	Margaret.Finn@state.ma.us
	Michael Maynard	508-767-2735	Michael.Maynard@state.ma.us